

# California Fish and Game Commission Meeting Binder



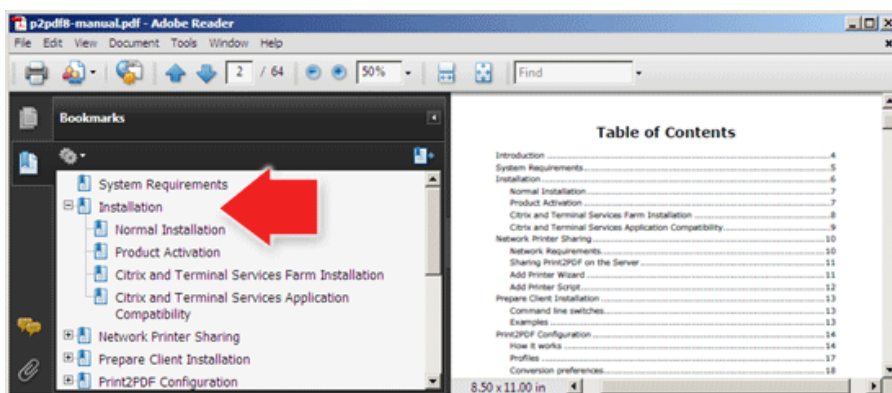
**October 14, 2021**  
**Webinar/Teleconference**


## **EASY GUIDE TO USING THE BINDER**

1. Download and open the binder document using your Adobe Acrobat program/app.
2. If a bookmark panel does not automatically appear on either the top or left side of the screen, click/tap on the “bookmark symbol” located near the top left-hand corner.



3. To make adjustments to the view, use the Page Display option in the View tab. You should see something like:



4. We suggest leaving open the bookmark panel to help you move efficiently among the staff summaries and numerous supporting documents in the binder. It's helpful to think of these bookmarks as a table of contents that allows you to go to specific points in the binder without having to scroll through hundreds of pages.
5. You can resize the two panels by placing your cursor in the dark, vertical line  located between the panels and using a long click /tap to move in either direction.
6. You may also adjust the sizing of the documents by adjusting the sizing preferences located on the Page Display icons found in the top toolbar or in the View tab.
7. Upon locating a staff summary for an agenda item, notice that you can obtain more information by clicking/tapping on any item underlined in blue.
8. Return to the staff summary by simply clicking/tapping on the item in the bookmark panel.
9. Do not hesitate to contact staff if you have any questions or would like assistance.

## OVERVIEW OF CALIFORNIA FISH AND GAME COMMISSION TELECONFERENCE MEETING

- Welcome to a meeting of the California Fish and Game Commission. This is the 151st year of operation for the Commission, in partnership with the California Department of Fish and Wildlife. Both organizations originated from the Board of Fish Commissioners and we collectively celebrated our 150<sup>th</sup> anniversary last year.
- The Commission's goals include preserving our wildlife heritage and conserving our natural resources through informed decision making. These meetings are vital in achieving those goals and, in that spirit, we provide the following information to be as effective and efficient toward that end.
- We are operating under the Bagley-Keene Open Meeting Act and these proceedings are being recorded and broadcast.
- In the unlikely event of an emergency, please note the location of the nearest emergency exits at your location.
- Items may be heard in any order pursuant to the determination of the presiding commissioner.
- The amount of time for each agenda item may be adjusted based on time available and the number of speakers.
- We will ask how many speakers we have before taking public comment; please be prepared and listen closely for your name or phone number to be called.
- When you speak, please state your name and any affiliation. Please be respectful and note that disruptions will not be tolerated. Time is precious so please be concise.
- To receive meeting agendas and regulatory notices about those subjects of interest to you, please visit the Commission's website, [www.fgc.ca.gov](http://www.fgc.ca.gov), and sign up for our electronic mailing lists.
- If you want the Commission to consider a regulation change, note that all petitions for regulation change must be submitted in writing on the authorized form, FGC 1, Petition to the California Fish and Game Commission for Regulation Change, available on the Commission's website or directly from staff.
- For members of the public, if you have access to the Internet and are not planning to make public comment, you may listen to the meeting via our regular webcast by visiting the commission website at [www.fgc.ca.gov](http://www.fgc.ca.gov) (link is on right side). We ask that only those who plan to make public comment or who do not have Internet access to listen the meeting, participate by phone.
- **Reminder!** Please silence your mobile devices and computers to avoid interruptions.

# INTRODUCTIONS FOR FISH AND GAME COMMISSION MEETINGS

## **Fish and Game Commission**

Peter Silva	President (Jamul)
Samantha Murray	Vice President (Del Mar)
Jacque Hostler-Carmesin	Member (McKinleyville)
Eric Sklar	Member (Saint Helena)
Erika Zavaleta	Member (Santa Cruz)

## **Commission Staff**

Melissa Miller-Henson	Executive Director
Rachel Ballanti	Deputy Executive Director
Mike Yaun	Legal Counsel
Susan Ashcraft	Marine Advisor
Ari Cornman	Wildlife Advisor
Chuck Striplen	Tribal Advisor and Liaison
Sherrie Fonbuena	Associate Analyst
Cynthia McKeith	Staff Services Analyst

## **California Department of Fish and Wildlife Staff**

Chuck Bonham	Director
Wendy Bogdan	General Counsel
Chad Dibble	Deputy Director, Ecosystem Conservation
David Bess	Deputy Director and Chief, Law Enforcement Division
Garry Kelley	Deputy Director, Wildlife and Fisheries Division (Acting)
Jordan Traverso	Deputy Director, Office of Communication, Education and Outreach
Scott Gardner	Chief, Wildlife Branch
Valerie Cook	Chief, Fisheries Branch (Acting)
Craig Shuman	Regional Manager, Marine Region

I would also like to acknowledge special guests who are present:  
*(i.e., elected officials, including tribal chairpersons, and other special guests)*

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**Commissioners**  
**Peter S. Silva**, President  
Jamul

**Samantha Murray**, Vice President  
Del Mar

**Jacque Hostler-Carmesin**, Member  
McKinleyville

**Eric Sklar**, Member  
Saint Helena

**Erika Zavaleta**, Member  
Santa Cruz

STATE OF CALIFORNIA  
Gavin Newsom, Governor

## Fish and Game Commission



*Wildlife Heritage and Conservation  
Since 1870*

**Melissa Miller-Henson**  
**Executive Director**  
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### **REVISED\* MEETING AGENDA** **October 14, 2021, 9:00 AM**

#### **Webinar and Teleconference**

Pursuant to California Government Code Section 11133, the California Fish and Game Commission is conducting this meeting by webinar and teleconference. Commission members will participate remotely. The public may provide public comment during the public comment periods and otherwise observe remotely, consistent with the Bagley-Keene Open Meeting Act.

**\*This agenda was revised on October 1 to continue items 10 and 11 to a future meeting.**

***The meeting will be live streamed; visit [www.fgc.ca.gov](http://www.fgc.ca.gov) the day of the meeting to watch or listen. To provide public comment during the meeting, please join via Zoom Webinar or by telephone; [click here for instructions on how to join](#).***

**Note: See important meeting deadlines and procedures, including written public comment deadlines, starting on page 9. Unless otherwise indicated, the California Department of Fish and Wildlife is identified as Department.**

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#### **CALL TO ORDER/ROLL CALL TO ESTABLISH QUORUM**

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- 1. Consider approving agenda and order of items**

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#### **GENERAL PUBLIC COMMENT**

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- 2. General public comment for items not on the agenda**

Receive public comment regarding topics within the Commission's authority that are not included on the agenda. New petitions for regulation change submitted since the previous meeting are received under this item.

Note: The Commission may not discuss or take action on any matter raised during this item, except to decide whether to place the matter on the agenda of a future meeting (sections 11125 and 11125.7(a), Government Code).

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## CONSENT ITEMS

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Note: Items on the consent calendar are expected to be routine and non-controversial. After public comment, the Commission will consider approving items on the consent calendar in a single vote without discussion. The presiding commissioner may choose to remove any item from the consent calendar and allow a separate discussion and potential action on that item in response to a request by a Commission member, staff, or an interested person.

**3. Cascades frog**

Receive the Department's one-year status review report on the petition to list Cascades frog (*Rana cascadae*) as threatened or endangered under the California Endangered Species Act (CESA).

(Pursuant to Section 2074.6, Fish and Game Code)

***Staff will recommend that this item be continued to a future meeting.***

**4. San Bernardino kangaroo rat**

Receive the Department's one-year status review report on the petition to list San Bernardino kangaroo rat (*Dipodomys merriami parvus*) as endangered under CESA.

(Pursuant to Section 2074.6, Fish and Game Code)

***Staff will recommend that this item be continued to a future meeting.***

**5. Desert pupfish**

Receive the Department's five-year status review report for desert pupfish (*Cyprinodon macularius*), which is listed as endangered under CESA.

(Pursuant to Section 2077, Fish and Game Code)

***Staff will recommend that this item be continued to a future meeting.***

**6. Mohave desert tortoise**

Consider approving the Department's request for a six-month extension to deliver the one-year status review report on the petition to change the status of Mohave desert tortoise (also known as Agassiz's desert tortoise) (*Gopherus agassizii*) from threatened to endangered under CESA.

(Pursuant to Section 2074.6, Fish and Game Code)

**7. Recreational clam, sand crab, and shrimp gear emergency**

Discuss and consider adopting a 90-day extension of emergency regulations to prohibit use of hydraulic pump gear for recreational take of clams, including clarifying amendments to apply the gear restriction to sand crab and shrimp.

(Amend sections 29.20 and 29.80, Title 14, CCR)

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## DISCUSSION, ACTION, AND INFORMATIONAL ITEMS

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**8. Executive director's report**

Receive updates from the executive director on items of note since the previous Commission meeting, including a resolution recognizing Stafford Lehr, the Department's former liaison to the Commission.

**9. Department informational items: Director's and Law Enforcement Division reports**

The Department will highlight items of note since the last Commission meeting.

**10. Upper Klamath-Trinity river spring Chinook salmon**

Consider ratifying findings on the decision to list upper Klamath-Trinity river spring Chinook salmon (*Oncorhynchus tshawytscha*) as threatened under CESA.  
(Pursuant to Section 2075.5, Fish and Game Code)

***Staff will recommend that this item be continued to a future meeting.***

**11. Northern California summer steelhead**

Consider ratifying findings on the decision to list northern California summer steelhead (*Oncorhynchus mykiss irideus*) as endangered under CESA.  
(Pursuant to Section 2075.5, Fish and Game Code)

***Staff will recommend that this item be continued to a future meeting.***

**12. Western Joshua tree**

- (A) Discuss and consider adopting a 90-day extension of emergency regulations for a process to take western Joshua tree (*Yucca brevifolia*) during the CESA candidacy period.  
(Amend Section 749.11, Title 14, CCR; Pursuant to Sections 399 and 2084, Fish and Game Code)
- (B) Discuss and consider adopting a 90-day extension of emergency regulations for incidental take of a limited number of western Joshua tree during its candidacy period under certain circumstances.  
(Amend Section 749.12, Title 14, CCR; Pursuant to Sections 399 and 2084, Fish and Game Code)

**13. Department informational item: Wildlife and Fisheries Division, and Ecosystem Conservation Division reports**

The Department will highlight items of note since the last Commission meeting.

**14. Wildlife Resources Committee**

Receive summary and consider approving recommendations from the September 16, 2021 committee meeting. Discuss referred topics and consider revisions to topics and timing.

- (A) Previous committee meeting report
- (B) Committee work plan

**15. Mammal hunting preference points and tag refunds**

Consider authorizing publication of notice of intent to amend regulations for big game species preference points and tag refunds.  
(Amend Section 708.14, Title 14, CCR)

**16. Tribal Committee**

Discuss referred topics and consider revisions to topics and timing. Consider approving draft agenda topics for the next committee meeting on December 14, 2021.

- (A) Committee work plan
- (B) Next committee meeting

- 17. Legislation and other agency regulations**  
Receive updates on recent legislative activity, status of letters of support, and regulatory actions under consideration by other agencies. Consider providing direction to staff on potential actions.
- 18. Committee workload prioritization**  
Receive an update on the committee workload prioritization tool and its application.
- 19. Justice, equity, diversity and inclusion**  
Receive and discuss an update on developing the justice, equity, diversity, and inclusion plan.
- 20. Departmental informational item: Marine Region report**  
The Department will highlight items of note since the last Commission meeting.
- 21. Marine Resources Committee**  
Discuss referred topics and consider revisions to topics and timing. Consider approving draft agenda topics for the next committee meeting on November 9, 2021.
  - (A) Committee work plan
  - (B) Next committee meeting
- 22. California grunion**  
Consider authorizing publication of notice of intent to amend regulations for grunion limits and season.  
(Amend subsection 27.60(b) and Section 28.00, Title 14, CCR)
- 23. Experimental Fishing Permit (EFP) Program, Phase II**  
Discuss proposed Experimental Fishing Permit (EFP) Program, Phase II regulations.  
(Add Section 91, amend sections 90, 120.1, 149, 180, and 704, and repeal Section 149.3, Title 14, CCR)
- 24. Commercial kelp harvest permit**  
Consider approving permit for Lance (Jeff) Maassen to commercially harvest *Sargassum horneri* at Anacapa Island, Ventura County, and Santa Rosa Island, Santa Barbara County, and approve permit conditions and royalty fee.  
(Pursuant to subsection 165(f)(1), Title 14, CCR)
- 25. Pacific leatherback sea turtle**  
Consider the petition, Department's status review report, and comments received to determine whether listing Pacific leatherback sea turtle (*Dermochelys coriacea*) as threatened or endangered under CESA is warranted.  
(Pursuant to sections 2075 and 2075.5, Fish and Game Code)

**26. Petitions for regulation change received at previous meetings**

Consider whether to grant, deny, or refer for additional review petitions for regulation change received under general public comment at previous meetings.

Note: New petitions for regulation change will be received under general public comment. Any petitions granted today will be added to the Commission's rulemaking calendar for development and future consideration.

(Pursuant to Section 662, Title 14, CCR)

(A) Action on current petitions

- I. Petition 2021-013: Request to revise regulations for commercial market squid fishing in Monterey Bay, including changes to allowed days, times, and lighting

(B) Action on pending regulation petitions referred to staff or the Department for review

- I. Petition 2020-015: Request to amend Pacific herring regulations to exempt lampara bait nets from gear restrictions
- II. Petition 2021-001: Request to restore recreational and commercial red abalone harvest at San Miguel Island, Santa Barbara County

**27. Non-regulatory requests from previous meetings**

Consider and potentially act on non-regulatory requests submitted by members of the public at previous meetings.

**28. Commission administrative items**

- (A) Rulemaking timetable updates
- (B) Next meeting – December 15-16, 2021
- (C) New business

Adjourn

## EXECUTIVE SESSION

(Not Open to Public)

At a convenient time during the regular agenda of the meeting listed above, the Commission will recess from the public portion of the agenda and conduct a closed session on the agenda items below. The Commission is authorized to discuss these matters in a closed session pursuant to Government Code Section 11126, subdivisions (a)(1), (c)(3), and (e)(1), and Fish and Game Code Section 309. After closed session, the Commission will reconvene in public session, which may include announcements about actions taken during closed session.

- (A) Pending litigation to which the Commission is a Party
  - I. Almond Alliance of California et al. v. California Fish and Game Commission and California Department of Fish and Wildlife (bumble bees California Endangered Species Act determination)
  - II. The Ballona Wetlands Land Trust v. California Fish and Game Commission (Ballona Wetlands Ecological Reserve petition for regulation change)
  - III. California Construction and Industrial Materials Association et al. v. California Fish and Game Commission (western Joshua tree California Endangered Species Act determination)
  - IV. Albert Thomas Paulek v. California Fish and Game Commission (CEQA determination regarding Section 749.10, Title 14, CCR authorizing take of western Joshua tree under section 2084)
  - V. Albert Thomas Paulek v. California Fish and Game Commission (CEQA determination regarding Sections 749.11 and 749.12, Title 14, CCR authorizing take of western Joshua tree under section 2084)
  - VI. Fall River Conservancy and California Trout v. California Fish and Game Commission and California Department of Fish and Wildlife (CEQA determination regarding amendments to inland trout regulations)
- (B) Possible litigation involving the Commission
- (C) Staffing
  - I. Executive director performance review process
- (D) Deliberation and action on license and permit items

## California Fish and Game Commission Meeting Schedule

**Note: As meeting dates and locations can change, please visit [www.fgc.ca.gov](http://www.fgc.ca.gov) for the most current list of meeting dates and locations.**

Meeting Date	Commission Meeting	Committee Meeting
November 9, 2021		<b>Marine Resources</b> Teleconference
December 14, 2021		<b>Tribal</b> Teleconference
December 15-16, 2021	Teleconference	
January 13, 2022		<b>Wildlife Resources</b> Sacramento
February 16-17, 2022	Sacramento	
March 24, 2022		<b>Marine Resources</b> Sacramento
April 19, 2022		<b>Tribal</b> Monterey/Santa Cruz area
April 20-21, 2022	Monterey/Santa Cruz area	
May 19, 2022	Teleconference	
May 19, 2022		<b>Wildlife Resources</b> Redding
June 15-16, 2022	Los Angeles/Orange County	
July 14, 2022		<b>Marine Resources</b> San Diego area
August 16, 2022		<b>Tribal</b> Fortuna
August 17-18, 2022	Fortuna	
September 15, 2022		<b>Wildlife Resources</b> Los Angeles/Inland Empire area
October 12-13, 2022	Truckee	
November 17, 2022		<b>Marine Resources</b> Monterey area
December 13, 2022		<b>Tribal</b> San Diego area
December 14-15, 2022	San Diego area	

## **Other Meetings of Interest**

### **Association of Fish and Wildlife Agencies**

- September 18-21, 2022, Fort Worth, TX

### **Pacific Fishery Management Council**

- November 15-22, 2021, Costa Mesa, CA
- March 8-14, 2022, San Jose, CA
- April 6-13, 2022, San Jose, CA
- June 7-14, 2022, Vancouver, WA
- September 7-14, 2022, Boise, ID
- November 2-8, 2022, Orange County, CA

### **Pacific Flyway Council**

- February 2022 – Dates and location TBD
- August 2022 – Dates and location TBD

### **Western Association of Fish and Wildlife Agencies**

- January 6-10, 2022, Tucson, AZ
- July 10-15, 2022 – Oklahoma City, OK

### **Wildlife Conservation Board**

- November 18, 2021, Webinar
- 2022 – Dates and locations TBD

# Important Commission Meeting Procedures Information

## Welcome to a Meeting of the California Fish and Game Commission

This year marks the 152<sup>nd</sup> year of operation of the Commission in partnership with the California Department of Fish and Wildlife. Our goal is the preservation of our heritage and conservation of our natural resources through informed decision making; Commission meetings are vital in achieving that goal and we provide this information to be as effective and efficient toward that end. Welcome, and please let us know if you have any questions.

## Persons with Disabilities

Persons with disabilities needing reasonable accommodation to participate in public meetings or other Commission activities are invited to contact the Department's Equal Employment Opportunity (EEO) Office at [EEO@wildlife.ca.gov](mailto:EEO@wildlife.ca.gov). Accommodation requests for facility and/or meeting accessibility and requests for American Sign Language (ASL) interpreters should be submitted at least two weeks prior to the event. Requests for real-time captioners should be submitted at least four weeks prior to the event. These timeframes are to help ensure that the requested accommodation is met. If a request for an accommodation has been submitted but is no longer needed, please contact the EEO Office immediately.

## Stay Informed

To receive meeting agendas and regulatory notices about those subjects of interest to you, visit the Commission's website, [www.fgc.ca.gov](http://www.fgc.ca.gov), to sign up on our electronic mailing lists.

## Submitting Written Comments

The public is encouraged to comment on any agenda item. Submit written comments by one of the following methods: E-mail to [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov); mail to California Fish and Game Commission, P.O. Box 944209, Sacramento, CA 94244-2090; deliver to California Fish and Game Commission, 715 P Street, 16<sup>th</sup> Floor, Sacramento, CA 95814 (you must call at least 24 hours in advance to arrange delivery). Materials provided to the Commission may be made available to the general public.

## Comment Deadlines

The **Comment Deadline** for this meeting is **5:00 p.m. on September 30, 2021**. Written comments received at the Commission office by this deadline will be made available to Commissioners prior to the meeting.

The **Supplemental Comment Deadline** for this meeting is **noon on October 8, 2021**. Comments received by this deadline will be made available to Commissioners at the meeting.

## Petitions for Regulation Change

Any person requesting that the Commission adopt, amend, or repeal a regulation must complete and submit form FGC 1, *Petition to the California Fish and Game Commission for Regulation Change* (as required by Section 662, Title 14, CCR), available at <https://fgc.ca.gov/Regulations/Petition-for-Regulation-Change>. To be received by the Commission at this meeting, petition forms must have been delivered by the **Supplemental Comment Deadline**. Petitions received at this meeting will be scheduled for consideration at the next regularly scheduled business meeting, unless the petition is rejected under staff review pursuant to subsection 662(b), Title 14, CCR.

## Non-Regulatory Requests

All non-regulatory requests will follow a two-meeting cycle to ensure proper review and thorough consideration of each item. All requests submitted by the **Supplemental Comment Deadline** (or heard during general public comment at the meeting) will be scheduled for receipt at this meeting and scheduled for consideration at the next regularly scheduled business meeting.

## Speaking at the Meeting

To speak on an agenda item, please “raise” your hand either through the Zoom function or by pressing \*9 once on your phone when prompted at the beginning of the agenda item.

1. Speakers will be called one at a time; please pay attention to when your name is called.
2. When addressing the Commission, give your name and the name of any organization you represent, and provide your comments on the item under consideration.
3. If there are several speakers with the same concerns, please appoint a spokesperson and avoid repetitive testimony.
4. The presiding commissioner will allot between one and three minutes per speaker per agenda item, subject to the following exceptions:
  - a. Individuals may receive advance approval for additional time to speak if requests for additional time to speak are received by email or delivery to the Commission office by the **Supplemental Comment Deadline**. The president or designee will approve or deny the request no later than 5:00 p.m. two days prior to the meeting.
  - b. An individual requiring an interpreter is entitled to at least twice the allotted time pursuant to Government Code Section 11125.7(c).
  - c. An individual may receive additional time to speak to an agenda item at the request of any commissioner.

## Visual Presentations/Materials

All electronic presentations must be submitted by the **Supplemental Comment Deadline** and approved by the Commission executive director before the meeting.

1. Electronic presentations must be provided by email to [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov).
2. All electronic formats must be Windows PC compatible.

## STAFF SUMMARY FOR OCTOBER 14, 2021

**2. GENERAL PUBLIC COMMENT****Today's Item****Information** ☒**Action** ☐

Receive public comment regarding topics within FGC authority that are not included on the agenda. New petitions for regulation change submitted since the previous meeting are received under this item.

**Summary of Previous/Future Actions**

- **Today's receive requests, petitions and comments**      **Oct 14, 2021; Webinar/Teleconference**
- Consider granting, denying, or referring      Dec 15-16, 2021; Webinar/Teleconference

**Background**

This item is to provide the public an opportunity to address FGC on topics not on the agenda. Staff may include written materials and comments received prior to the meeting as exhibits in the meeting binder (if received by written comment deadline), or as supplemental comments at the meeting (if received by the supplemental comment deadline).

General public comments are categorized into three types: (1) petitions for regulation change; (2) requests for non-regulatory action; and (3) informational-only comments. Under the Bagley-Keene Open Meeting Act, FGC cannot discuss or take action on any matter not included on the agenda, other than to schedule issues raised by the public for consideration at future meetings. Thus, petitions for regulation change and non-regulatory requests generally follow a two-meeting cycle (receipt and direction); FGC will determine the outcome of the petitions for regulation change and non-regulatory requests received at today's meeting at the next regularly-scheduled FGC meeting, following staff evaluation (currently Dec 15-16, 2021).

As required by the Administrative Procedure Act, petitions for regulation change will be either denied or granted and notice made of that determination. Action on petitions received at previous meetings is scheduled under a separate agenda item, "Petitions for regulation change received at previous meetings." Action on non-regulatory requests received at previous meetings is scheduled under a separate agenda item, "Non-regulatory requests from previous meetings."

**Significant Public Comments**

1. New petitions for regulation change are summarized in Exhibit 1, and the original petitions are provided as exhibits 2 through 6.
2. New non-regulatory requests are summarized in Exhibit 7, and the original requests are provided in exhibits 8 and 9.
3. Additional informational comments are provided in exhibits 10 through 20.

**Recommendation**

**FGC staff:** Consider whether to add any future agenda items to address issues that are raised during public comment.

## STAFF SUMMARY FOR OCTOBER 14, 2021

**Exhibits**

1. [Summary of new petitions for regulation change received by Sep 30, 2021 at 5:00 p.m.](#)
2. [Petition 2021-015: Make shortfin corvina an official California game fish and change the size limit to 15 inches, received Aug 21, 2021](#)
3. [Petition 2021-017: Amend hunting regulations for hunts and seasons to better serve the outdoor enthusiast. Suggested changes include preference point management, boundaries, and dates for muzzleloader, archery, etc., received Sep 2, 2021](#)
4. [Petition 2021-018: Allow the take of barred owls, a non-native species that is endangering the northern spotted owl, as a wildlife management tool if authorized by DFW through a revocable permit, received Sep 24, 2021](#)
5. [Petition 2021-019: Revert Martis Creek fishing regulations to pre-2020 regulations that allowed catch and release only, received Sep 30, 2021](#)
6. [Petition 2021-21: Amend fishing regulations to reduce the recreational daily bag limit from 3 to 1 for California halibut in state waters between Point Reyes and Bodega Head, received Sep 9, 2021](#)
7. [Summary of requests for non-regulatory action received by Sep 30, 2021 at 5:00 p.m.](#)
8. [Email from Jeanne Panek requesting FGC suspend the hunting season this year due to extreme fire danger, received Aug 19, 2021](#)
9. [Email from Jim Ahrens requesting FGC place Kern River management issues on the agenda for the next FGC meeting, with attached letter correspondence providing details of his concerns, received Sep 27, 2021](#)
10. [Email from George Burkhardt stating that predatory, non-native striped bass should not continue to be protected at the detriment of other native species, and requesting that that striped bass be eradicated in a manner similar to northern pike, received Aug 17, 2021](#)
11. [Email from Eric Mills forwarding his letter to the editor published in the East Bay Times regarding Oakland Zoo's threatened yellow-legged frog project, received Aug 22, 2021](#)
12. [Email from Eric Mills forwarding a link to a news article about Florida fresh-water turtles being affected by a fatal virus, received Sep 4, 2021](#)
13. [Email from Eric Mills calling for an end to the import of non-native frogs and turtles, and forwarding a link to a news article on global species extinctions, received Sep 4, 2021](#)
14. [Email from Lance Evans writing in support of Petition 2021-007, which asks to revise authorized methods of take and the designation for wild pig](#)
15. [Email from Mitchell Pearce expressing concern over possible consideration of a hunting ban in all California state lands in response to fires, received Sep 12, 2021](#)
16. [Email from Mike Wiens stating that the recreational crab fishery does not impact whale mortality, received Sep 17, 2021](#)
17. [Email from Andrew Guiliano expressing concern over pending changes to the recreational Dungeness crab season and specifically FGC's economic impact statement for the regulation change. He states that the new regulations have the](#)

STAFF SUMMARY FOR OCTOBER 14, 2021

potential to devastate the commercial passenger fishing vessel fleet that is already struggling with salmon season closures, proposed California Air Resources Board requirements, and COVID-19 impacts, received Sep 19, 2021

18. Email from Eric Mills forwarding a link to a news article regarding Singapore banning the sale of frogs and turtles in live markets, received Sep 21, 2021
19. Email from Jeff Aardahl, Defenders of Wildlife, forwarding a report from the International Union for Conservation of Nature which placed Mohave Desert tortoise on its critically endangered species list, received Sep 24, 2021

**Motion (N/A)**

## STAFF SUMMARY FOR OCTOBER 14, 2021

**3. CASCADES FROG (CONSENT)****Today's Item****Information** ☒**Action** ☐

Receive DFW's one-year status review report on the petition to list Cascades frog (*Rana cascadae*) as threatened or endangered under the California Endangered Species Act.

***This item is not ready for FGC consideration. Staff recommends continuing this item to a future meeting.***

**Summary of Previous/Future Actions (N/A)**

**Background (N/A)**

**Significant Public Comments (N/A)**

**Recommendation**

***FGC staff:*** Under Agenda Item 1, continue this item to a future meeting.

**Exhibits (N/A)**

**Motion (N/A)**

## STAFF SUMMARY FOR OCTOBER 14, 2021

**4. SAN BERNARDINO KANGAROO RAT (CONSENT)****Today's Item****Information** ☒**Action** ☐

Receive DFW's one-year status review report on the petition to list San Bernardino kangaroo rat (*Dipodomys merriami parvus*) as endangered under the California Endangered Species Act.

***This item is not ready for FGC consideration. Staff recommends continuing this item to a future meeting.***

**Summary of Previous/Future Actions (N/A)**

**Background (N/A)**

**Significant Public Comments (N/A)**

**Recommendation**

***FGC staff:*** Under Agenda Item 1, continue receipt of DFW's one-year status review report to a future meeting.

**Exhibits (N/A)**

**Motion (N/A)**

## STAFF SUMMARY FOR OCTOBER 14, 2021

**5. DESERT PUFFISH (CONSENT)****Today's Item****Information** ☒**Action** ☐

Receive DFW's five-year status review report for desert pupfish (*Cyprinodon macularius*), which is listed as endangered under the California Endangered Species Act.

***This item is not ready for FGC consideration. Staff recommends continuing this item to a future meeting.***

**Summary of Previous/Future Actions (N/A)**

**Background (N/A)**

**Significant Public Comments (N/A)**

**Recommendation**

***FGC staff:*** Under Agenda Item 1, continue receipt of DFW's five-year status review report to a future meeting.

**Exhibits (N/A)**

**Motion (N/A)**

## STAFF SUMMARY FOR OCTOBER 14, 2021

**6. MOHAVE DESERT TORTOISE (CONSENT)****Today's Item****Information** ☐**Action** ☒

Consider granting DFW's request for a six-month extension to deliver the one-year status review report on the petition to list Mohave desert tortoise (also known as Agassiz's desert tortoise) (*Gopherus agassizii*) from threatened to endangered under the California Endangered Species Act (CESA).

**Summary of Previous/Future Actions**

- |   |   |
|---|---|
| • Received petition   | Mar 23, 2020                                |
| • Transmitted petition to DFW   | Apr 13, 2020                                |
| • Published notice of receipt   | May 1, 2020                                 |
| • Received DFW 90-day evaluation report   | Aug 19-20, 2020; Webinar/Teleconference     |
| • FGC determined petitioned action may be warranted                                   | Oct 14-15, 2020; Webinar/Teleconference     |
| • <b>Today consider granting six-month extension to complete status review report</b> | <b>Oct 14, 2021; Webinar/Teleconference</b> |

**Background**

On Mar 23, 2020, FGC received a petition to change the status of Mohave desert tortoise from a threatened species to an endangered species under CESA.

At its Aug 2020 meeting, FGC determined that the petition contains sufficient information to indicate that the petitioned action may be warranted. FGC published a notice of that determination on Oct 30, 2020. Pursuant to California Fish and Game Code Section 2074.6, DFW has one year from the date of notice to complete a status review, unless FGC grants an extension of time.

Today, FGC will consider a request by DFW for a six-month extension to complete its status review, per Fish and Game Code Section 2074.6, to further analyze and evaluate the available science, to undergo the peer review process, and to complete its status review (Exhibit 1). FGC must receive the DFW status review report before FGC can make a final listing decision.

**Significant Public Comments (N/A)****Recommendation**

**FGC staff:** Approve request for a six-month extension to complete the status review report for Mohave desert tortoise under a motion to adopt the consent calendar.

**DFW:** Approve request for a six-month extension to complete the status review report for Mohave desert tortoise.

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**Exhibits**

1. [DFW memo, received Aug 9, 2021](#)

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_, that the Commission adopts the staff recommendations for items 3-7 on the consent calendar.

## STAFF SUMMARY FOR OCTOBER 14, 2021

**7. RECREATIONAL CLAM, SAND CRAB, AND SHRIMP GEAR EMERGENCY****Today's Item****Information** ☐**Action** ☒

Discuss and consider adopting a 90-day extension of emergency regulations to prohibit use of hydraulic pump gear for recreational take of clams, including clarifying amendments to apply the gear restriction to sand crab and shrimp.

**Summary of Previous/Future Actions**

- Adopted emergency regulations Feb 10, 2021; Webinar/Teleconference
- **Today's potential emergency re-adoption** **Oct 14, 2021; Webinar/Teleconference**

**Background**

At its Feb 2021 meeting, FGC adopted emergency regulations to prohibit the use of hydraulic hand pumps to harvest clams, sand crabs, and shrimp, clarify permissible methods for the take of those species, and require each individual partaking in clamming to store their catch separately from others for ease of enforcing individual bag and possession limits. The action was taken in response to observational and scientific data indicating the potential for hydraulic hand pumps to facilitate overharvesting of clams and cause damage to the estuarine environment where recreational clamming occurs. See Exhibit 1 for background information.

The emergency regulations went into effect on Mar 8, 2021 and will expire on Jan 8, 2022. Wildlife officers indicate that the emergency regulations have been effective at reducing the use of hydraulic pumps, and the requirement to keep individual bag limits separate has improved enforcement and discouraged illegal commercialization. COVID-19 remains a concern, and the relative safety of outdoor activities is likely to continue to increase interest and participation in the fishery.

A certificate of compliance rulemaking to make the emergency regulations permanent is currently in development; however, the emergency's expiration date precedes the anticipated effective date of the permanent regulation. An emergency extension is necessary to avoid a lapse in regulatory protection for clams, sand crabs, shrimp, and the estuarine environment in which they live.

**Significant Public Comments (N/A)****Recommendation**

**FGC staff:** Under a motion to adopt the consent calendar: (1) Determine, pursuant to Section 11346.1 of the California Government Code and Section 399 of the California Fish and Game Code, that re-adopting the regulation is necessary for the immediate conservation and protection of clams, sand crabs, shrimp, and the estuarine environment in which they live, and (2) re-adopt the emergency regulation as reflected in the statement of proposed emergency regulatory action (Exhibit 3).

**DFW:** Extend the emergency action to prohibit the use of hydraulic pumps for the take of affected species for the reasons set forth in Exhibit 3.

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**Exhibits**

1. [Staff summary from Feb 10, 2021 FGC meeting \(for background purposes only\)](#)
2. [DFW memo, received Sep 28, 2021](#)
3. [Draft statement of proposed emergency regulatory action](#)
4. [Draft economic and fiscal impact statement \(STD 399\)](#)

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission adopts the FGC staff recommendations for items 3-7 on the consent calendar.

## STAFF SUMMARY FOR OCTOBER 14, 2021

**8. EXECUTIVE DIRECTOR'S REPORT****Today's Item**Information ☐Action ☒

Receive updates from the executive director on staffing, the new office move, regulatory actions, and other information of interest.

**Summary of Previous/Future Actions (N/A)****Background**

The wide range of FGC responsibilities and authorities require daily actions to fulfill; hence, FGC employs an executive director and other staff to assist in conducting FGC's operations. To ensure that its staff has the ability to maintain full functionality in all its capacities, FGC has delegated various authorities to its executive director, who "...shall report to the Commission at each regular meeting on important delegated actions."

Today's report includes updates on a variety of delegated authorities, as well as some recognitions:

- Resolution and thanks for Stafford Lehr, former DFW deputy director and liaison to FGC
- Cultural heritage months
- National Disability Awareness Month (Oct)
- New Natural Resources Headquarters building
- Staffing and contracts
- Regulatory actions
- Appeal actions
- Aquaculture leases

***Recognizing Stafford Lehr***

DFW Deputy Director Stafford Lehr retired at the end of Jun after 35 years of public service, including over 30 with DFW and the last five as DFW's liaison to FGC. Stafford's passion for his work was apparent to all who know him and he has left an indelible mark on DFW, including as a mentor to many who are rising through the ranks of DFW. Today, FGC will present a resolution to Stafford in thanks for all his contributions to the work of FGC.

***Cultural Heritage Months******Hispanic, Latino and Latinx Heritage Month (Sep 15 – Oct 15)***

Originally started as a heritage celebration week in 1968 after California Representative George E. Brown introduced the idea in Congress, the Hispanic, Latino and Latinx observation was expanded to a full month in 1988. Brown, who represented East Los Angeles and a large portion of the San Gabriel Valley—both heavily populated by members of the Hispanic, Latino and Latinx communities—wanted to recognize the role played by those communities throughout American history. The first day of the month-long celebration was chosen because

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it is the “independence day” for Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua. In addition, Mexico and Chile celebrate their independence just days later, on Sep 16 and 18, respectively.

Hispanic, Latino and Latinx heritage is rooted in California’s identity, with almost four in ten Californians identifying as such. Throughout California’s history, Hispanic, Latino and Latinx communities have endured and fought inequalities and injustices, all the while shaping the state’s social, political and economic landscapes. This month is an opportunity to reflect on and celebrate the remarkable contributions of our Hispanic, Latino and Latinx communities.

### *Native American Heritage Month (Nov)*

Native Americans are the indigenous peoples of North America; the term encompasses hundreds of different tribes, each of which has its own unique culture and language. The quest for national recognition of Native Americans’ contributions to the country began in the early twentieth century, with the state of New York becoming the first to establish an “American Indian Day” in 1916. Since that time more states established similar commemorative days, including California; in 1968 Governor Ronald Reagan signed a resolution designating the fourth Friday in Sep as American Indian Day. Over 50 years later, the California State Legislature would codify this day as an official judicial holiday to replace Columbus Day.

In Nov 2021, together with the nearly 200 tribes and tribal communities in the state, California will celebrate Native American Heritage Month and the immeasurable contributions that Native Americans have made to our state and nation. In his Sep 2021 Native American Day Proclamation, Governor Newsom noted that, “In a time when we are all turning to each other for hope, reassurance and resurgence, we need look no further than California tribal communities, who have persisted and thrived in the face of unimaginable challenges.” As a state, we are seeking to change the paradigm for engaging with tribes, reckoning with our past, making space for healing, and promoting equity. To help advance the desired changes, FGC’s tribal advisor and liaison will present staff with resources of interest for the month, especially listening sessions convened by the California Truth and Healing Council.

### ***National Disability Employment Awareness Month (Oct)***

This month is National Disability Employment Awareness Month (NDEAM). Held each Oct, NDEAM aims to educate about disability employment issues and celebrate the many and varied contributions of employees with disabilities. There are innumerable types of disabilities that can affect people and that come in many forms—mobility, vision, auditory, psychological and more—some of which are not always clearly visible.

The theme for NDEAM 2021, *America’s Recovery: Powered by Inclusion*, reflects the importance of ensuring that people with disabilities have full access to employment and community involvement during the national recovery from the COVID-19 pandemic. In support of this effort, staff has prepared a resolution (Exhibit 1) recognizing NDEAM and to raise awareness about disability employment issues, celebrate the many and varied contributions of people with disabilities, promote enjoyment of California’s fish and wildlife resources by people with disabilities, and urge everyone to dedicate themselves to empowering and fully including individuals in all aspects of community life all year long.

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DFW established the Director's Disability Advisory Committee (DAC) to promote and enhance opportunities and accessibility to DFW programs, services, activities, and facilities for persons with disabilities, and to advise the DFW director on issues of concern to persons with disabilities. The DAC regularly publishes a newsletter with helpful information (Exhibit 2). Since the DAC's re-establishment in 2016, FGC has participated with a representative, until Jon Snellstrom's retirement in the spring; thanks to our new representative, Cynthia McKeith, for volunteering to be part of this important committee.

***New California Natural Resources Headquarters Building***

The new Natural Resources Headquarters building at 715 P Street was completed in early summer. FGC staff moved in early Sep, dedicating several days to unpacking and organizing the new office space. We were fortunate to be assigned adequate workspace for all our staff, including a workspace for Commissioner use when in Sacramento. We are grateful for the DFW facilities staff who provided remarkable assistance, communication, and organization throughout the move, making the daunting task a little easier.

With a continued telework directive, there is currently minimum office coverage (usually one or two staff per day) to complete basic office duties. Staff looks forward to resuming in-person office days and the associated efficiencies and camaraderie. All hard copy correspondence should be sent to the post office box (California Fish and Game Commission, P.O. Box 944209, Sacramento, CA 94244-2090). The phone number is also unchanged (916-653-4899).

***Staffing and Contracts***

For the last several months, FGC has had no position vacancies nor any staff on contract tracing assignments, which contributed to advancing high-priority special projects (e.g., preparations for the move to P Street, committee workload prioritization) and several emergency rulemakings. See Exhibit 3 for more details about the various activities in which staff has been engaged to advance the work of FGC, and how staff has allocated its time generally.

With DFW's support, staff is developing a scope of work for a contractor to assist in developing FGC's justice, equity, diversity and inclusion plan as well as a duty statement for a new environmental scientist position to assist with the significant workload associated with the MRC and marine-related subjects in general.

***Rulemakings***

Following the Dec 2020 meeting when FGC adopted the recreational crab rulemaking (2021-0601-01S), staff made minor technical changes to regulatory text to provide clarity and, therefore, issued a 15-day notice to the public. Upon submission, staff communicated to OAL via memo the delegated authority for these types of actions. The rulemaking was subsequently approved and is on schedule for a Nov 1 effective date.

***Appeals Actions***

Consistent with California Fish and Game Code and Title 14 of the California Code of Regulations, certain actions by DFW may be appealed to FGC. In proceedings where the parties agree to a settlement or in an otherwise uncontested matter, FGC has delegated

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authority to its executive director to enter orders terminating those proceedings. Since the Aug 2021 FGC meeting, your executive director took action to:

- Grant 14 commercial trappers' appeals for reinstatement of their licenses after untimely submission of their annual reports or, in two cases, on the condition that they submit an annual report.
- Grant Scott J. Butcher's appeal for reinstatement of Salmon Vessel Permit #SA0989 upon payment of all license, permit and late fees owed for the 2021 -22 permit year.
- Grant Connor Dooley's appeal for reinstatement of Deeper Nearshore Species Fishery Permit #DNS062 upon payment of all license, permit and late fees owed for the 2021-22 permit year.

### ***Aquaculture Leases***

FGC has delegated authority to its executive director to take all actions necessary to comply with the California Environmental Quality Act (CEQA), guidelines generally implementing CEQA, and FGC's Certified Regulatory Program approved under CEQA, including conducting or causing to be conducted an initial study and deciding whether to prepare a draft environmental impact report or negative declaration.

Since the Aug 2021 FGC meeting, your executive director determined that an environmental impact report will be prepared for the Santa Barbara Sea Ranch, Inc. Shellfish Aquaculture Operations Project on State Water Bottom Lease Offshore Santa Barbara, California.

### **Significant Public Comments (N/A)**

### **Recommendation (N/A)**

### **Exhibits**

1. [Resolution recognizing National Disability Employment Awareness Month](#)
2. [DFW Disability Advisory Committee newsletter, dated Jul-Aug](#)
3. [Staff Time Allocation and Activities, dated Oct 5, 2021](#)

### **Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission adopts the resolution recognizing October as National Disability Employment Awareness Month as proposed in Exhibit 1.

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**9. DEPARTMENT INFORMATIONAL ITEMS: DIRECTOR'S AND LAW ENFORCEMENT DIVISION REPORTS****Today's Item**Information ☒Action ☐

DFW will highlight items of note since the last FGC meeting.

**Summary of Previous/Future Actions (N/A)****Background**

Verbal reports are expected for the Director's report and Law Enforcement Division report. A DFW news release of interest is provided as Exhibit 1.

Related to the oil spill in southern California, a unified command that includes DFW's Office of Spill Prevention and Response was established to respond. Shortly after, the Office of Environmental Health Hazard Assessment determined that fishing in the affected area or consuming fish or shellfish that may have been affected by the spill is a threat to public safety and recommended a fishery closure to DFW. Under the director's authority in California Fish and Game Code Section 5654, DFW declared a fisheries closure on Oct 3 and amended the closure on Oct 5 (exhibits 2-3). The fisheries closure will continue to change as conditions and factors in the area change; for details about the current and previous closures, visit <https://socalspillresponse.com/fisheries-closure/>.

**Significant Public Comments (N/A)****Recommendation (N/A)****Exhibits**

1. [DFW news release: Celebrate The Outdoors On National Hunting And Fishing Day, dated Sept 25, 2021](#)
2. [DFW news release: Southern California Fisheries Closure Implemented Due to Oil Spill, dated Oct 4, 2021](#)
3. [DFW informational notice: Oil Spill Fishing Closure Area Expanded off Orange County in Southern California, dated Oct 5, 2021](#)

**Motion (N/A)**

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**10. UPPER KLAMATH-TRINITY RIVER SPRING CHINOOK SALMON****Today's Item****Information** ☒**Action** ☐

Consider ratifying findings on the decision to list upper Klamath-Trinity river spring Chinook salmon (*Oncorhynchus tshawytscha*) as threatened under the California Endangered Species Act.

***This item is not ready for FGC consideration. Staff recommends continuing this item to a future meeting.***

**Summary of Previous/Future Actions (N/A)****Background (N/A)****Significant Public Comments (N/A)****Recommendation**

***FGC staff:*** Under Agenda Item 1, continue ratification of findings on the decision to list upper Klamath-Trinity river spring Chinook salmon to a future meeting.

**Exhibits (N/A)****Motion (N/A)**

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**11. NORTHERN CALIFORNIA SUMMER STEELHEAD****Today's Item****Information** ☒**Action** ☐

Consider ratifying findings on the decision to list northern California summer steelhead (*Oncorhynchus mykiss irideus*) as endangered under the California Endangered Species Act.

***This item is not ready for FGC consideration. Staff recommends continuing this item to a future meeting.***

**Summary of Previous/Future Actions (N/A)**

**Background (N/A)**

**Significant Public Comments (N/A)**

**Recommendation**

***FGC staff:*** Under Agenda Item 1, continue ratification of findings on the decision to list northern California summer steelhead to a future meeting.

**Exhibits (N/A)**

**Motion (N/A)**

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**12. WESTERN JOSHUA TREE****Today's Item****Information** ☐**Action** ☒

- (A) Discuss and consider adopting a 90-day extension of emergency regulations for a process to take hazard western Joshua trees (*Yucca brevifolia*) during the California Endangered Species Act (CESA) candidacy period.
- (B) Discuss and consider adopting a 90-day extension of emergency regulations for incidental take of a limited number of western Joshua tree during its candidacy period related to hazard trees, public works projects, and single-family residences and accessory structures.

**Summary of Previous/Future Actions**

- |  |   |
|--|---|
| • Adopted emergency regulations                  | Dec 9-10, 2020; Webinar/Teleconference      |
| • <b>Today's potential emergency re-adoption</b> | <b>Oct 14, 2021; Webinar/Teleconference</b> |

**Background**

In Sep 2020, FGC granted western Joshua tree (WJT) endangered species status protection under CESA, by determining that WJT is a candidate species. As a candidate species, take of WJT is prohibited unless otherwise authorized by FGC. At its Dec 2020 meeting, FGC adopted two emergency regulations to temporarily authorize the take of WJT in certain situations: Section 749.11, establishing DFW permits to trim or take hazard trees, and Section 749.12, authorizing specified local governments to allow trimming and other take related to hazard trees, public works projects, and single-family residences and accessory structures (Exhibit 1).

The emergency regulations went into effect on Jan 7, 2020 for a period of 180 days; with automatic extensions pursuant to executive orders N-40-20 and N-71-20, the emergency regulations remain in effect until Nov 9, 2021. Both emergency regulations were necessary to reduce public safety hazards.

**Section 749.11**

DFW staff has issued 44 permits under Section 749.11 since its adoption. The most common requests are for trimming limbs or removing fallen trees that threaten public safety. DFW anticipates issuing several dozen more permits prior to the emergency regulation expiring. The emergency continues to exist; after Nov 9, 2021, the continued candidacy protections for WJT will hinder the mitigation of threats to human safety and property resulting from particular trees that create a hazard. Not extending the emergency regulation could create excessive permitting delays that could be detrimental to public safety, and municipalities or individuals could incur significant costs and potential property damage. Minor, clarifying changes to specific regulatory language are proposed as part of the emergency 90-extension. A draft emergency statement provides a full overview of the proposed changes (Exhibit 3).

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**Section 749.12**

After the Section 749.12 emergency regulation went into effect, the Town of Yucca Valley and the City of Palmdale adopted ordinances required to enable them to implement Section 749.12, and provided initial \$10,000 deposits to the Western Joshua Tree Mitigation Fund as required in the regulation. The County of San Bernardino opted to not participate in the implementation of Section 749.12; therefore, DFW and FGC staff recommend deleting references to San Bernardino County from the regulation.

Since the adoption of the ordinances, the City of Palmdale has reported zero take of WJT and, therefore, has not made any additional contributions to the mitigation fund. In the same time frame, the Town of Yucca Valley has issued 64 WJT take permits, 36 of which were issued in support of connecting homes to the High Desert Water District's wastewater treatment system. Consequently, the Town of Yucca Valley has paid an additional \$80,000 to the mitigation fund. DFW anticipates receiving bi-monthly reports from the Town of Yucca Valley and the City of Palmdale during the next 90-day re-adoption period.

Projects addressing health and safety concerns within the jurisdictions of the City of Palmdale and the Town of Yucca Valley continue to move forward and require the removal, relocation, and/or trimming of WJT. Eligible projects are outlined in the emergency statement for Section 749.12 (Exhibit 6). Similar to Section 749.11, minor, clarifying changes to specific regulatory language have been proposed as part of the emergency 90-extension of Section 749.12. A full overview of all proposed changes is also provided in the emergency statement.

**California Environmental Quality Act (CEQA)**

*Section 749.11* relates to the limited trimming or removal of trees to address threats to human health or property. The regulation falls within the statutory exemption to CEQA under California Public Resources Code Section 21080(b)(4) and Title 14 of the California Code of Regulations Section 15269(c) (known as CEQA Guidelines). The exemption applies to actions necessary to prevent or mitigate an emergency. An emergency is defined under CEQA as a "sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services." DFW has articulated risk to the public caused by certain trees vulnerable to severe winter conditions or dead trees. The regulation addresses removal and trimming of trees in instances where a threat is imminent. Based on this and other evidence in the record, FGC relied on the statutory exemption for emergencies in adopting the emergency regulation. DFW has documented, in exhibits 2 and 3, that the emergency still exists and that FGC authorization of limited take is still necessary to address the emergency. Therefore, FGC staff believes the same exemption should again be relied upon in the re-adoption of Section 749.11.

*Section 749.12* permits the City of Palmdale, County of San Bernardino and the Town of Yucca Valley (participating agencies) to continue work on certain projects within their jurisdictions that address health and safety concerns and may cause take of WJT; this section also includes mitigation measures to avoid or substantially lessen the significant environmental effects. When originally adopting the regulation, FGC relied on a program environmental impact report from San Bernardino County, an environmental impact report from the Town of Yucca Valley, and a mitigated negative declaration from the City of Palmdale, and addenda

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from each of the local governments supplementing the respective CEQA documents; all of those documents are part of the record of FGC's Dec 2020 decision to adopt Section 749.12, and copies are maintained by both FGC and the local governments. The extension of Section 749.12 for the remainder of the WJT candidacy, with the modifications proposed by DFW, is consistent with FGC's previous decision and consistent with the CEQA documents and addenda from the Town of Yucca Valley and the City of Palmdale.

### Significant Public Comments

1. A commenter expresses concern over the cost for homeowners to comply with the High Desert Water District's sewer project in Yucca Valley and the protection of WJT (Exhibit 8).

### Recommendation

**FGC staff:** Adopt a 90-day extension of the WJT emergency regulations as recommended by DFW.

**DFW:** Adopt a 90-day extension of the WJT emergency regulations as described in exhibits 3 and 6.

### Exhibits

1. [Staff summary from Dec 9-10, 2020 FGC meeting \(for background purposes only\)](#)
2. [DFW memo for Section 749.11, received Oct 5, 2021](#)
3. [Draft statement of proposed emergency regulatory action for Section 749.11](#)
4. [Draft economic and fiscal impact statement \(STD 399\) and addendum for Section 749.11](#)
5. [DFW memo for Section 749.12, received Oct 5, 2021](#)
6. [Draft statement of proposed emergency regulatory action for Section 749.12](#)
7. [Draft economic and fiscal impact statement \(STD 399\) and addendum for Section 749.12](#)
8. [Email from Susan Simmons, received Aug 18, 2021, with FGC staff response](#)

### Motion

#### **Motion 1 (Section 749.11)**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission finds, pursuant to Section 399 of the California Fish and Game Code, that adopting the proposed Section 749.11 emergency regulation is necessary for the immediate preservation of the public peace, health and safety, or general welfare.

The Commission further determines, based on the record, that this approval is exempt from the California Environmental Quality Act as an action necessary to prevent or mitigate an emergency as specified in California Public Resources Code Section 21080(b)(4) and Section 15269(c) of the CEQA Guidelines.

The Commission further determines, pursuant to Section 11346.1 of the California Government Code, that an emergency situation continues to exist and finds the proposed regulation is necessary to address the emergency.

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Therefore, the Commission authorizes re-adoption of the emergency regulation in Section 749.11 of Title 14, for an additional 90 days.

**AND*****Motion 2 (Section 749.12)***

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission finds, pursuant to Section 399 of the California Fish and Game Code, that adopting the proposed Section 749.12 emergency regulation is necessary for the immediate preservation of the public peace, health and safety, or general welfare.

The Commission, acting under authority of sections 15091 and 15096 of the CEQA Guidelines, finds that the measures required by the proposed regulation and the additional measures that would be undertaken as part of the required local ordinance, avoid or substantially lessen the significant environmental effect as identified in the two lead agencies' CEQA documents as supplemented by the relevant addenda. The Commission, having considered the lead agencies' environmental impact report and mitigated negative declaration, as supplemented by the relevant addenda, adopts the project.

The Commission further determines, pursuant to Section 11346.1 of the California Government Code, that the emergency situation continues to exist and finds the proposed regulation is necessary to address the emergency.

Therefore, the Commission authorizes re-adoption the emergency regulation in Section 749.12 of Title 14, for an additional 90 days.

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**13. DEPARTMENT INFORMATIONAL ITEM: WILDLIFE AND FISHERIES DIVISION, AND ECOSYSTEM CONSERVATION DIVISION REPORTS****Today's Item**Information ☒Action ☐

DFW will highlight items of note since the last FGC meeting.

**Summary of Previous/Future Actions (N/A)****Background**

A verbal report is expected for the Wildlife and Fisheries Division, and Ecosystem Conservation Division report. DFW news releases of interest are provided as exhibits 1-2.

**Significant Public Comments (N/A)****Recommendation (N/A)****Exhibits**

1. [DFW news release: Hatchery Coho Salmon Temporarily Relocated Amid Heat Stress And Drought Conditions In Sonoma County, dated Aug 20, 2021](#)
2. [DFW news release: Waterfowl Hunting Seasons Opening Soon; Drought Conditions May Limit Opportunities, dated Aug 25, 2021](#)

**Motion (N/A)**

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**14. WILDLIFE RESOURCES COMMITTEE (WRC)****Today's Item**Information ☐Action ☒

Receive summary and consider approving recommendations from Sep 16, 2021 committee meeting. Discuss referred topics and consider revisions to topics and timing.

**Summary of Previous/Future Actions**

- |  |   |
|--|---|
| • Previous meeting                       | Sep 16, 2021; WRC, Sacramento               |
| • <b>Today discuss topics and timing</b> | <b>Oct 14, 2020; Webinar/Teleconference</b> |
| • Next meeting                           | Jan 13, 2022; WRC, Sacramento               |

**Background**

WRC works under FGC direction to set and accomplish its work plan.

***Previous Committee Meeting Report***

WRC met on Sep 16 via webinar and teleconference and covered three main topics:

- Received updates and discussed proposals for six periodic rulemakings (upland game bird hunting, mammal hunting, waterfowl hunting, Central Valley sport fishing, Klamath river basin sport fishing, and inland sport fishing);
- Discussed two proposals to reinstate preference points and refund tag fees for big game hunts that suffer a substantial loss of opportunity due to wildfires; and
- Received an update on the bullfrog and non-native turtle stakeholder engagement process.

A written summary of the meeting is provided as Exhibit 1.

***WRC Recommendations***

WRC developed two recommendations for FGC consideration:

1. Support the proposed regulation changes for waterfowl hunting, Central Valley sport fishing, and Klamath River Basin sport fishing, as recommended by DFW.
2. Support the proposed regulation changes to restore preference points for certain hunts and to refund certain tag fees in instances where public lands were closed due to wildfires during the 2021 and 2022 mammal hunting seasons, as recommended by DFW.

***Committee Work Plan***

Topics that have been referred from FGC to WRC are displayed within a work plan for scheduling and tracking (Exhibit 2). No additional topics or modifications are proposed at this time.

**Significant Public Comments (N/A)**

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**Recommendation**

**FGC staff:** Approve the two WRC recommendations.

**Exhibits**

1. [Summary of Sep 16, 2021 WRC meeting](#)
2. [WRC work plan, updated Oct 6, 2021](#)

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission approves the recommendations from the September 16, 2021 Wildlife Resources Committee meeting.

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**15. PREFERENCE POINTS AND TAG REFUNDS****Today's Item****Information** ☐**Action** ☒

Consider authorizing publication of notice of intent to amend regulations for big game species preference points and tag refunds.

**Summary of Previous/Future Actions**

- |                                 |   |
|---------------------------------|---|
| • WRC vetting                   | Sep 16, 2021; WRC, Webinar/Teleconference   |
| • <b>Today's notice hearing</b> | <b>Oct 14, 2021; Webinar/Teleconference</b> |
| • Discussion hearing            | Dec 15-16, 2021; Webinar/Teleconference     |
| • Adoption hearing              | Feb 16-17, 2022; Sacramento                 |

**Background**

FGC authorizes a modified preference point drawing system for hunting tags—proposed and implemented by DFW—for deer, bighorn sheep, pronghorn antelope and elk in California (see Section 708.14(a)). Public demand for certain hunting tags exceeds the available opportunities; to address this excess demand, the modified preference point system gives a drawing advantage to hunters who have applied for, but not obtained, tags in past drawings. The points accumulate until the hunter obtains the applied for tag, incrementally improving the chances for these rare hunt opportunities each season.

This summer, early-season, large-scale wildfires closed the majority of public lands in the state accessible for hunting. While wildfire has often impacted hunting opportunities, the scale and magnitude has increased dramatically in recent years. Many hunters who have waited years to draw tags have lost their accumulated preference points and their ability to hunt this season due to extensive areas of the state being closed to hunting for large portions of the season.

In 2020, FGC approved regulations to allow the reinstatement of preference points and the refund of tag fees for certain bighorn sheep, pronghorn antelope, and elk hunts; that regulation was for the 2020 license year only.

Similar to the previous regulation, today's proposed amendments would authorize DFW in the current (2021) and next (2022) license years to reinstate preference points, and award one preference point for the license year, for certain deer tags, and to refund tag fees, reinstate preference points, and award one preference point for the license year for bighorn sheep, pronghorn antelope, and elk tags when hunt zones are inaccessible for 66% or more of the season as a result of public land closures caused by wildfires. The regulation text provides specific dates by which affected hunters must return tags and apply for refunds and/or reinstatement of points.

***Summary of Potentially Eligible Tag Returns by Species***

As proposed, hunters affected by closures who are drawn for certain bighorn sheep, pronghorn antelope and elk hunts may be eligible for refunds and/or preference point reinstatement.

## STAFF SUMMARY FOR OCTOBER 14, 2021

1. *Potentially eligible deer tags:* Those deer zones defined in Section 708.1 and described as premium deer hunt tags. There are approximately **15,037** premium deer hunt tags eligible for point reinstatement (as of Sep 16, 2021) across 14 archery zones and 6 general zones.
2. *Potentially eligible bighorn sheep tags:* Those zones defined in Section 362. As of Sep 16, 2021, no sheep hunts are affected by known public land closures.
3. *Potentially eligible pronghorn antelope tags:* Those zones defined in Section 363. There are approximately **106** pronghorn antelope hunt tags affected (as of Sep 16, 2021).
4. *Potentially eligible elk tags:* Those zones defined in Section 364. There are approximately **113** elk hunt tags affected (as of Sep 16, 2021) across 7 general zones, 1 archery zone, and 2 apprentice zones.

Note that the numbers of tags above are estimations based on current information and could change due to varying wildfire conditions and any future land closures.

Today's proposed regulatory amendments (exhibits 1 and 2) apply to the current (2021) and next (2022) license years only. At its Sep 16, 2021 meeting, the Wildlife Resources Committee vetted with the public DFW's proposal (Exhibit 4) as well as a more permanent authority for hunting tag refunds and/or preference point reinstatement, and eventually may recommend that FGC pursue another rulemaking in consultation with stakeholders and DFW staff.

### Significant Public Comments

A hunter expressed support for reinstating premium deer tag points plus one additional point to all holders of premium tags who were affected by 2021 forest closures (Exhibit 5).

### Recommendation

**FGC staff:** Authorize publication of a notice as recommended by DFW.

**WRC:** Authorize publication of a notice as recommended by DFW.

**DFW:** Authorize publication of a notice as proposed in the ISOR.

### Exhibits

1. [DFW memo, received Oct 4, 2021](#)
2. [Draft initial statement of reasons](#)
3. [Draft economic and fiscal impact statement \(STD 399\)](#)
4. [DFW presentation from Sep 16, 2021 WRC meeting](#)
5. [Email from Stephen Russell, received Sep 7, 2021](#)

### Motion

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission authorizes publication of a notice of its intent to amend Section 708.14, related to big game preference points reinstatement and tag refunds.

## STAFF SUMMARY FOR OCTOBER 14, 2021

**16. TRIBAL COMMITTEE (TC)****Today's Item****Information** ☐**Action** ☒

Discuss referred topics and consider revisions to topics and timing. Consider approving draft agenda topics for next TC meeting on Dec 14, 2021.

**Summary of Previous/Future Actions**

- |   |   |
|---|---|
| • Previous TC meeting                           | Aug 17, 2021; TC, Webinar/Teleconference    |
| • <b>Today consider approving agenda topics</b> | <b>Oct 14, 2021; Webinar/Teleconference</b> |
| • Next TC meeting                               | Dec 14, 2021; TC, Webinar/Teleconference    |

**Background**

TC works under FGC direction to set and accomplish its work plan (Exhibit 1). Today FGC will be asked to consider the agenda topics and any recommendations, as well as provide direction for any referred topics and revisions to TC topics and timing for the next TC meeting in Dec 2021.

***Committee Work Plan***

Topics that have been referred from FGC to TC are displayed within a work plan to help with scheduling and tracking (Exhibit 1). At FGC's Aug 2021 meeting, TC recommended and FGC approved a number of modifications to the work plan based on discussions at the prior day's TC meeting (see Exhibit 2 for a summary prepared by staff).

***Next Committee Meeting***

The next TC meeting is scheduled for Dec 14, 2021 as a webinar/teleconference. In addition to the standing agenda items (annual tribal planning meeting, updates on species management plans, committee cross-pollination, staff and other agency updates, FGC rulemaking timetable, and future agenda topics), five discussion topics are proposed:

1. *FGC justice, equity, diversity and inclusion (JEDI) plan*: Discuss the status of and provide input on FGC's JEDI plan currently under development.
2. *Co-management implementation*: Discuss co-management implementation with tribal representatives who can share their co-management experiences.
3. *Definition of "tribal subsistence", and related management mechanisms*: Receive a presentation and discuss progress on scoping this new topical area.
4. *Coastal Fishing Communities Project*: Receive an update on recent stakeholder meetings held to discuss a potential FGC policy on coastal fishing communities.

In addition, staff recommends including under the JEDI agenda item a discussion pertaining to tribal land acknowledgements, consistent with the JEDI work plan. Several commissioners have expressed interest in further exploring this topic, and staff believes TC is the most appropriate venue to begin the conversation and report back to FGC.

STAFF SUMMARY FOR OCTOBER 14, 2021

**Significant Public Comments (N/A)**

**Recommendation**

**FGC staff:** Approve the identified agenda topics for the Dec 2021 TC meeting.

**Exhibits**

1. [TC work plan, updated Aug 18, 2021](#)
2. [Aug 17, 2021 TC meeting summary, as prepared by staff](#)

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission approves the topics for the Dec 14, 2021 Tribal Committee meeting, as discussed today.

## STAFF SUMMARY FOR OCTOBER 14, 2021

**17. LEGISLATION AND OTHER AGENCY REGULATIONS****Today's Item****Information** ☒**Action** ☐

Receive updates on recent legislative activity, status of letters of support, and regulatory actions under consideration by other agencies. Consider providing direction to staff on potential actions.

**Summary of Previous/Future Actions (N/A)****Background*****State Legislation***

FGC staff has identified state legislation that may affect FGC's resources and workload, or may be of interest to commissioners, and provides bill status during this post-legislative session, as of Oct 10 (the last day for the governor to sign or veto bills). DFW has provided a report on bills its staff tracked during the legislative session that were signed by the governor (Exhibit 1).

At any meeting, FGC may direct staff to provide information to, or share concerns with, legislators and their staffs. Today is an opportunity for FGC to provide direction to staff on two-year bills and potential future legislation.

***Legislative Calendar Highlights***

- Oct 10: Last day for governor to sign or veto bills passed by the legislature by Sep 10
- Jan 1: Most statutes take effect unless identified as urgent
- Jan 3: Legislature reconvenes for second half of 2021-22 session

***Bills Introduced during the 2021-2022 Session***

There are two California State Senate bills (SB) and seven Assembly bills (AB) of interest that DFW tracked and were signed by the governor:

- SB 80 – Commercial fishing: inspection: crab traps
- SB 822 – Marine resources
- AB 63 – Marine resources: Marine Managed Areas Improvement Act: restoration activities
- AB 223 – Wildlife: dudleya: taking and possession
- AB 379 – Wildlife conservation: conservation lands
- AB 614 – Wildlife habitat: birds
- AB 817 – Sport fishing licenses: 12-consecutive-month licenses
- AB 1183 – California Desert Conservation Program
- AB 1298 – Pesticides: use of 2nd generation anticoagulant rodenticides

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One California State Assembly bill (AB) of interest to several commissioners that was not tracked by DFW was signed by the governor:

- AB 818 (Bloom): This bill requires that certain premoistened, nonwoven, disposable wipes manufactured on or after July 1, 2022 to be labeled clearly and conspicuously with “Do Not Flush” and a related symbol. This bill also prohibits companies selling these wipes from making claims about the flushable attributes, benefits, performance or efficacy of the wipes. The bill establishes enforcement provisions, including authorizing a civil penalty not to exceed \$2,500 per day, up to a maximum of \$100,000 per violation, to be imposed on a company that violates those provisions.

There are two senate bills and three assembly bills of potential interest that DFW tracked and have become two-year bills (can be taken up again in Jan 2022 during the second half of session):

- SB 17 – Office of Racial Equity
- SB 470 – Fishing and hunting: annual combined hunting and fishing licenses
- AB 125 – Equitable Economic Recovery, Healthy Food Access, Climate Resilient Farms, and Worker Protection Bond Act of 2022
- AB 334 – Workers’ compensation: skin cancer
- AB 564 (Lorena Gonzalez) Biodiversity Protection and Restoration Act. May be acted upon Jan 2022.
- AB 645 (Gallagher) Fish and wildlife: poaching: penalties: probation period. May be acted upon Jan 2022.
- AB 1429 – State agency records: management coordinator duties: personnel training

In addition, one bill not tracked by DFW has become a two-year bill:

- AB 1279 (Muratsuchi): This bill would require the Ocean Protection Council to work with private and nonprofit entities to bring sustainable kelp to the coastal waters of the state and review and assess data from existing research and ongoing pilot projects to identify critical knowledge gaps related to kelp forest ecosystems, kelp and sea urchin biological processes, kelp forest stressors, kelp-urchin population dynamics, incorporating carbon dioxide removal, and long-term carbon sequestration considerations. May be acted upon Jan 2022.

The most current versions of individual bills, and their history and status, can be found at [www.leginfo.legislature.ca.gov](http://www.leginfo.legislature.ca.gov).

### ***Letters of Support for Concepts in State Legislation***

At its June 2021 meeting, FGC authorized staff to work with President Silva to write letters identifying goals and concepts that FGC endorses, in support of specific bills intended to achieve those particular goals. A letter was sent to the members of the California State Legislature to advocate for reducing plastic pollution and waste in California (Exhibit 2).

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In the second half of the legislative session, staff will watch for activity on two-year bills for which conceptual letters of support would be appropriate, given FGC's previous direction.

***Other Agency Regulations***

This summer, stakeholders brought to staff's attention that the California Air Resources Board (CARB) is considering potential amendments to commercial harbor craft regulations. In Dec 2018, CARB initiated a public discussion about potential amendments in public workshops that continued through Mar 2021. A notice of proposed action, which begins the formal rulemaking process, has been published (Exhibit 3). CARB will hold a hearing on Nov 19, 2021 to take public comment.

The proposed amendments represent a major re-write of the commercial harbor craft (CHC) regulations to apply more stringent requirements for CHC engines to existing and new vessels and accelerate deployment of zero-emission and advanced technology; expand the regulatory requirements to vessel categories that were previously exempt from in-use vessel requirements; and apply reporting, infrastructure, and other requirements onto facilities, such as seaports, terminals, marinas, and harbors that conduct business with CHC. Two specific, proposed amendments are to:

- As early as Jan 1, 2023, require installing more advanced (Tier 4) marine diesel engines and diesel particulate filters within commercial passenger fishing vessels (CPFV), and
- for the first time, establish separate regulatory requirements for CPFV and commercial fishing vessels.

The proposed amendments are intended to assist California in achieving its National Ambient Air Quality Standards set by the U.S. Environmental Protection Agency. Most of the emission reductions expected from implementing the proposed amendments will occur in areas with significant challenges with air quality, and reductions will assist the State in attaining air quality standards. While the proposed amendments will assist in attaining air quality standards overall, the anticipated contribution from CPFVs is very small.

Today, FGC is expected to receive comments from the CPFV fleet and others. FGC has made a significant commitment to identifying and, where it can, addressing issues facing California's coastal fishing communities. FGC does not have authority to modify the proposed CARB regulations, but may direct staff to submit comments that identify any concerns with the proposal and suggest potential modifications.

**Significant Public Comments**

***Other agency regulations:*** CARB has received numerous comments outlining concerns with the proposed regulation changes, including from Senator Mark McGuire (chair of the California State Legislature Joint Committee on Aquaculture and Fisheries) plus 16 other state senators and assembly members, and the Truck and Engine Manufacturer's Association representing the leading manufacturers of commercial marine engines (exhibits 4-5). Some of the comments include concerns that:

- a number of the assumptions made in developing the CPFV element of the new rules are inaccurate and will not lead to the desired levels of pollution reduction;

## STAFF SUMMARY FOR OCTOBER 14, 2021

- both CPFVs and commercial fishing vessels are required to purchase commercial fishing licenses, use similar sizes and types of boats, operate in similar offshore areas, and spend most of their operating time relatively far from population centers, so should be subject to the same CARB regulations;
- the technology required to meet the new rules for smaller engines—such as those used for CPFVs—does not exist and/or has not been proven (as acknowledged by CARB staff), and installation of larger, compliant technology can be unsafe in CPFVs;
- future sales volumes of engines for the relatively low number of California fishing vessels will be insufficient to justify industry development of unique engines for this market, so new technologies are unlikely to be developed or integrated into newer generation CPFV engines; additionally, innovative technology to retrofit existing vessels is not likely to be forthcoming for many years, if at all;
- vessels that do not meet CARB's standards would have little-to-no resale value in California, making the financing of a new boat impossible for many;
- CARB staff anticipate that the number of CPFVs and, hence, paying passengers, will be reduced, which will have negative economic impacts to local communities as well as fiscal impacts to DFW;
- the reduction in CPFVs will have an adverse impact on affordable public access to ocean fishing and whale watching, especially for families and those with low or average incomes who cannot afford their own boats.

**Recommendation**

**FGC staff:** Direct staff, in consultation with President Silva, to write a letter to CARB outlining concerns with the proposed regulation as discussed today.

**Exhibits**

1. [DFW legislative report, dated Oct 11, 2021](#)
2. [FGC letter to legislature regarding plastic pollution prevention and waste, dated Sep 7, 2021](#)
3. [CARB staff report: initial statement of reasons for commercial harbor craft, dated Sep 21, 2021](#)
4. [Letter to CARB from Senator Mark McGuire and 16 other legislators, Sep 13, 2021](#)
5. [Letter To CARB from the Truck & Engine Manufacturer's Association, dated Oct 9, 2020](#)

**Motion (N/A)**

## STAFF SUMMARY FOR OCTOBER 14, 2021

**18. COMMITTEE WORKLOAD PRIORITIZATION****Today's Item****Information** ☒**Action** ☐

Discuss the working prioritization tool and provisional ranking for MRC projects.

**Summary of Previous/Future Actions**

- |  |   |
|--|---|
| • Provided feedback on draft prioritization tool     | Feb/Apr 2021; Webinar/Teleconference        |
| • Directed staff to apply the prioritization tool    | Jun 16-17, 2021; Webinar/Teleconference     |
| • Provided update on prioritization tool application | Aug 18, 2021; Webinar/Teleconference        |
| • <b>Today's update and discussion</b>               | <b>Oct 14, 2021; Webinar/Teleconference</b> |

**Background**

FGC staff has been developing a committee workload prioritization framework to help evaluate which topics and projects are of highest priority for committee focus (see Exhibit 1 for background). The prioritization framework (Exhibit 2) includes an initial topic or project characterization, during which the scope, committee role, and key assumptions are defined. Evaluation of the topic or project is based on a series of scored evaluation criteria (see exhibits 2 and 3) which are organized into seven categories; the highest value among the criteria in each category is selected, and these are averaged to obtain a numeric ranking score. The tool weighs the natural resources category (i.e., impacts or benefits to wildlife) more heavily than the others.

At the Aug 2021 FGC meeting, staff presented the outcomes of the prioritization framework on a subset of current and past MRC committee topics and projects (hereinafter referred to simply as projects); this evaluation weighted the natural resources category by a factor of two. Following discussion and feedback, FGC directed staff to apply the framework to all the current MRC projects and to explore various weighting scenarios for natural resources. Note that since the August 2021 meeting, non-substantive changes have been made to the prioritization framework for ease of use and clarity.

**Rankings**

Based on FGC direction, staff applied the framework to current MRC projects, generating a numerical ranking for each. Exhibit 4 presents the rankings and includes a summary of the key factors that contributed to each project's prioritized rank.

Note that any MRC topics characterized as subject-matter tracking or updates were excluded from prioritization, as they do not reflect a true committee "project" and are expected to require minimal commitment of MRC or staff resources. Importantly, staff has not had an opportunity to fully consider DFW's perspectives on priority ranking, though one criterion (concern and attention from partner agencies) does take DFW's assessment of project importance into account.

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***Weighting***

At its Aug 2021 meeting, FGC expressed concerns that the natural resources category may not be weighted highly enough at two times (2x), relative to other categories and asked staff to explore various weighting scenarios. Staff calculated scores and rankings for MRC projects using four different weightings (2x, 3x, 4x, and 6x) for the natural resources category scores. See Exhibit 5 for outcomes and an analysis of the scenarios.

Staff reviewed the outcomes of different weighting scenarios and found that the results from the 3x weighting appears to best reflect the actual priorities of MRC. More broadly, staff believes that a 3x weighting would appropriately reflect an added emphasis on natural resource risks and benefits without overshadowing other important criteria. Weighting above 3x appears to place disproportionate emphasis on this criterion at the exclusion of other considerations and values that FGC is charged with, or has committed to taking into account.

***Overriding Considerations***

Staff recognizes that certain considerations outside the prioritization framework may lead FGC to override the final score and ranking. There may be important aspects not adequately captured by the criteria or other factors that FGC determines are sufficient to prioritize (or deprioritize) a project, irrespective of its ranking. While FGC staff advises that this option be used sparingly, it provides an important way for FGC to integrate its discretionary judgment into priorities, while ensuring that all projects are methodically evaluated. Even if overriding considerations change the prioritization on occasion, there is inherent value in transparently standardizing the evaluation process. The framework also provides a functional “common language” for DFW, tribes, or stakeholders to express to FGC why they believe a project should be prioritized over others.

For example, depending on which weighting scenario FGC selects, FGC may staff recommend that the Coastal Fishing Communities project be afforded an overriding consideration, granting it a relatively high priority. The project is nearing completion and so should not be deprioritized at this moment, to capitalize on the current momentum and collaboration with other organizations.

***Future Refinements***

FGC staff also recognizes that the framework would benefit from review by a specialist in workload prioritization schemes to identify ways to enhance the tool’s effectiveness in supporting FGC’s prioritization goals. When feasible, staff plans to consult with such a specialist, as well as to solicit formal input from DFW. Additional refinements of this tool may be justified based on these tasks.

***Application to Other Committee Work Plans***

Staff believes that the prioritization framework is well-suited to evaluating the Wildlife Resources Committee (WRC) portfolio of projects and is prepared to evaluate the WRC work plan for a future FGC meeting if directed by FGC. However, staff advises that the framework’s application to Tribal Committee (TC) projects may not be appropriate at this time, as the work

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of TC is based in part on formal and informal consultation with California's Native American tribal governments and communities.

***Today's Meeting***

Today's meeting is an opportunity for FGC to provide guidance on the applicability of the prioritization tool, choose an appropriate weighting for natural resources, reflect on the practical consequences of the final rankings, and discuss any next steps. FGC also may wish to discuss potential overriding considerations for the evaluated MRC projects.

**Significant Public Comments (N/A)****Recommendation**

**FGC staff:** Direct staff to update the prioritization framework to use a natural resources category score weighting of 3x and apply the tool for prioritizing future projects referred to MRC.

**Exhibits**

1. [Background document: Staff summary from Aug 2021 FGC meeting, agenda item 23](#)
2. [Working Framework to Prioritize Committee Work Plan Topics and Projects, dated Oct 8, 2021](#)
3. [Working Committee Workload Prioritization Rubric, dated Oct 8, 2021](#)
4. [Results of Applying the Committee Prioritization Framework to Marine Resources Committee Work Plan Projects, dated Oct 10, 2021](#)
5. [MRC Project Scores and Ranking under Different Weighting Scenarios for the Natural Resources Category, dated Oct 10, 2021](#)

**Motion (N/A)**

## STAFF SUMMARY FOR OCTOBER 14, 2021

**19. JUSTICE, EQUITY, DIVERSITY AND INCLUSION****Today's Item****Information** ☐**Action** ☒

Receive and discuss an update on developing the justice, equity, diversity and inclusion (JEDI) plan and consider approving a “working” JEDI vision statement.

**Summary of Previous/Future Actions**

- |  |   |
|--|---|
| • Approved work plan   | Apr 14, 2021; Webinar/Teleconference    |
| • Received updates on JEDI plan and discussed potential vision statement                                       | Jun 16-17, 2021; Webinar/Teleconference |
| • Received updates on JEDI plan, and discussed potential vision statement and example policy statements        | Aug 18, 2021; Webinar/Teleconference    |
| • <b>Today consider approving “working” JEDI vision statement, and discuss policy concepts and definitions</b> | Oct 14, 2021; Webinar/Teleconference    |
| • Consider adopting JEDI policy statement and definitions  | Dec 15-16, 2021; Webinar/Teleconference |

**Background**

FGC has expressed a commitment to creating mechanisms for more inclusive engagement and making the impacts of FGC decisions more equitable, in part through developing and implementing a JEDI plan. In Apr 2021, after several months of development, deliberation, and public input, FGC approved a work plan for developing its JEDI plan (Exhibit 1). The work plan guides FGC and its staff as it develops the JEDI plan and organizes the work into four phases and ten components. FGC approved the work plan with the understanding that additional revisions may be necessary to incorporate new information as FGC develops its full JEDI plan, and directed staff to begin implementation.

***Work Plan Implementation***

Consistent with FGC direction, staff has continued to work on multiple tasks that begin to implement the JEDI work plan, including:

***Purpose or Vision Statement and Key Definitions (Component 1)***

The first step in the JEDI work plan is to develop a purpose or vision statement and key definitions. The goal of this task is to develop a shared understanding of what justice, equity, diversity and inclusion are for FGC and why it is developing a JEDI plan, to help facilitate future discussions and plan development.

At the Jun 2021 FGC meeting, staff presented several initial drafts for a potential JEDI vision statement for discussion. FGC discussed these options and directed staff to refine the statements, noting that the JEDI vision statement would be approved as a “working” statement, with potential refinement as FGC continues its work in this area. At the Aug 2021 FGC meeting, staff presented three vision statements that had been refined based on previous

## STAFF SUMMARY FOR OCTOBER 14, 2021

Commission discussion. FGC discussed the three options and directed staff to revise them once more and narrow them down to two options. Staff has prepared two options for a working JEDI vision statement for FGC consideration today (Exhibit 2).

Additionally, staff prepared a list of sample definitions used by four other government organizations that FGC may wish to use as a starting point for discussion and consideration today. A more extensive initial list of sample definitions used by other organizations is included in FGC's approved JEDI work plan. The definitions presented today are samples from other agencies, including from the city of Portland, Oregon, which has developed a *Shared City-Wide Definitions of Racial Equity Terms*, through its Office of Equity and Human Rights. A next step in developing key definitions may be to hold a workshop with Commissioners, stakeholders, tribes and tribal communities, and other government agencies, including our primary partner, the California Department of Fish and Wildlife.

*Policy Statement (Component 2)*

Component 2 of the JEDI work plan is to develop an overarching policy statement to clearly articulate FGC's policy position regarding JEDI and actively opposing discrimination of any type. The statement will also provide guidance and consistency for developing and implementing all other plan components.

At the Aug 2021 FGC meeting, staff provided examples of JEDI policy statements from other agencies and organizations to prompt FGC discussion of initial ideas for a potential FGC statement. Following FGC discussion and feedback, staff developed a list of draft policy concepts to consider for inclusion in a potential FGC JEDI policy (Exhibit 3).

*Shared Pathways with CDFW (Component 3)*

Component 3 of the JEDI work plan is to establish pathways for FGC coordination with DFW to foster and maintain a working relationship that cultivates knowledge exchange and facilitates implementation of JEDI principles. FGC staff has coordinated with DFW's JEDI initiative on an ad hoc basis throughout the development of the JEDI plan; however, since the Aug 2021 FGC meeting, FGC staff and DFW staff have established regular pathways for communication and coordination. FGC staff have met twice with DFW staff working on JEDI, established recurring meetings with DFW's JEDI coordinators, and will attend regular DFW JEDI meetings. In addition, FGC's tribal advisor and liaison now meets regularly with DFW's acting tribal liaison and its regional liaisons, coordinating closely with DFW on a number of related issues.

*Learning Opportunities (Component 4)*

Component 4 highlights the need to provide learning opportunities to increase Commissioners' and staff's knowledge on JEDI topics. In Sep 2021, FGC hosted a public webinar on environmental justice featuring a guest speaker, Dr. Jill Lindsey Harrison from the University of Colorado at Boulder. Dr. Harrison shared work associated with her recent book *From the Inside Out: The Fight for Environmental Justice within Government Agencies*. The one-hour webinar was attended by over 130 people, including leaders within the California Natural Resources Agency. The webinar was recorded and can be accessed by contacting FGC staff at [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov).

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*Contract Development*

In addition to implementing components of the JEDI work plan, staff has begun developing the scope of work for a JEDI contractor. Staff has met with California Natural Resources Agency officials, DFW staff, and outside experts to refine tasks to be included in a scope of work and to explore potential contracting pathways.

**Today's Meeting**

At this meeting, staff will: (1) give an update on implementation of the JEDI work plan, (2) present the two refined options for a draft "working" vision statement for potential adoption, (3) describe draft potential concepts for a JEDI policy, and (4) provide a list of sample definitions for key terms.

**Next Steps**

Staff will continue to work on a potential policy statement based on feedback received at this meeting, as well as a refined list of key definitions for discussion. The Commission may wish to direct staff to explore options for a public workshop to hear and incorporate public input on the policy statement and definitions prior to the Dec 2021 FGC meeting.

Additionally, staff will complete the scope of work for a contract and determine the appropriate procurement pathway.

**Significant Public Comments (N/A)****Recommendation**

**FGC staff:** Adopt a working JEDI vision statement. Discuss and provide feedback on the draft policy statement concepts and definitions.

**Exhibits**

1. [Approved JEDI work plan, dated Apr 14, 2021](#)
2. [Options for a working vision statement, dated Oct 7, 2021](#)
3. [Draft policy statement concepts, dated Oct 8, 2021](#)
4. [Sample definitions for key terms, dated Oct 8, 2021](#)

**Motion**

Moved by \_\_\_\_\_ and the seconded by \_\_\_\_\_ that the Commission adopts this working JEDI vision statement: \_\_\_\_\_.

## STAFF SUMMARY FOR OCTOBER 14, 2021

**20. DEPARTMENT INFORMATIONAL ITEMS: MARINE REGION REPORT****Today's Item****Information** ☒**Action** ☐

DFW will highlight items of note since the last FGC meeting.

**Summary of Previous/Future Actions (N/A)****Background**

A verbal report is expected for the Marine Region report. DFW has provided documents for FGC background information including an update on funding through the Consolidated Appropriations Act of 2021 to support commercial fishing and associated activities previously authorized under the Coronavirus Aid, Relief, and Economic Security (CARES Act) (Exhibit 1), and an article on the status of the sunflower sea star, *Pycnopodia helianthoides* (Exhibit 2).

A DFW news release of interest is provided as Exhibit 3.

**Significant Public Comments (N/A)****Recommendation (N/A)****Exhibits**

1. [DFW: California Consolidated Appropriations Act Fisheries Relief Spend Plan Update, dated Oct 2021](#)
2. [Article from Royal Society Publishing, Proceedings B, Disease-driven mass mortality event leads to widespread extirpation and variable recovery potential of a marine predator across the eastern Pacific, Hamilton SL et al, dated Aug 2021](#)
3. [DFW news release: 2021 Recreational Pacific Halibut Fishery To Reopen Sept. 3, dated Aug 31, 2021](#)

**Motion (N/A)**

## STAFF SUMMARY FOR OCTOBER 14, 2021

**21. MARINE RESOURCES COMMITTEE (MRC)****Today's Item****Information** ☐**Action** ☒

Discuss referred topics and consider revisions to topics and timing. Consider approving draft agenda topics for the next committee meeting on Nov 9, 2021.

**Summary of Previous/Future Actions**

- |   |   |
|---|---|
| • Previous MRC meeting                          | Jul 21, 2021; MRC, Webinar/Teleconference   |
| • <b>Today consider approving agenda topics</b> | <b>Oct 14, 2021; Webinar/Teleconference</b> |
| • Next MRC meeting                              | Nov 9, 2021; MRC, Webinar/Teleconference    |

**Background**

MRC works under FGC direction to set and accomplish its work plan.

***Committee Work Plan***

Topics that have been referred by FGC to MRC are displayed in a work plan for scheduling and tracking (Exhibit 1). No new topics are proposed at this time.

***Revisions***

The topic “moratorium on new aquaculture lease applications,” for which MRC provided a final recommendation that FGC supported, has been removed from the work plan.

In Jun 2021, FGC approved adding a discussion of sea palm harvest to the MRC work plan, based on public comment. Staff recommended scheduling the topic for Nov 2021 for discussion “concurrently with a planned review of edible algae commercial harvest regulations.” Staff highlighted that time was needed for DFW to evaluate the available monitoring data to support discussion and potentially provide a recommendation. However, after conferring with DFW, staff now recommends deferring both topics to Mar 2022, based on DFW staff’s current focus on the bull kelp rulemaking.

***Next Committee Meeting***

The next MRC meeting is scheduled for Nov 9, 2021 as a webinar and teleconference. Four discussion topics and four staff and other agency update topics are proposed. Based on committee direction at its Jul 2021 meeting, updates will be provided in written format.

***Discussion Topics (including potential recommendations)***

1. Marine protected area network: 2022 decadal management review
2. California halibut fishery management plan (FMP) planning
3. Hydraulic pump gear ban for recreational take of clam and other invertebrates
4. California’s Coastal Fishing Communities Project, including updates on progress in developing a potential policy and completing draft analyses of staff recommendations

STAFF SUMMARY FOR OCTOBER 14, 2021

*Updates from Staff and Other Agencies (written updates)*

1. Kelp restoration and recovery tracking/urchin removal projects update
2. Red Abalone FMP
3. Market squid management review
4. Aquaculture – Current and future lease planning

**Significant Public Comments (N/A)**

**Recommendation**

**FGC staff:** Approve the updated work plan and the identified agenda topics for the Nov 2021 MRC meeting.

**Exhibits**

1. [MRC work plan, updated Oct 1, 2021](#)

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission approves the updated Marine Resources Committee work plan and topics for the November 9, 2021 committee meeting, as discussed today.

## STAFF SUMMARY FOR OCTOBER 14, 2021

**22. RECREATIONAL TAKE OF CALIFORNIA GRUNION****Today's Item****Information** ☐**Action** ☒

Consider authorizing publication of notice of intent to amend regulations for recreational take of grunion limits and season.

**Summary of Previous/Future Actions**

- |  |   |
|--|---|
| • FGC granted petition 2019-014 in concept and referred to MRC | Feb 21, 2020; Sacramento                    |
| • MRC vetted and developed recommendation                      | Nov 10, 2020; MRC, Webinar/Teleconference   |
| • FGC approved MRC recommendations                             | Dec 9-10, 2020; Webinar/Teleconference      |
| • FGC approved schedule for rulemaking                         | Aug 18, 2021; Webinar/Teleconference        |
| • <b>Today's notice hearing</b>                                | <b>Oct 14, 2021; Webinar/Teleconference</b> |
| • Discussion hearing   | Dec 15-16, 2021; Webinar/Teleconference     |
| • Adoption hearing   | Feb 16-17, 2022; Sacramento                 |

**Background**

Current regulations governing the recreational take of California grunion include an open season of Jun 1 through Mar 31, with a two-month closure Apr 1 to May 31, and unlimited take. Proposed changes are the result of a public petition for regulation change (Petition 2019-014) seeking to increase protection of the species through more restrictive regulations. Data provided in the petition as well as DFW's independent analysis indicate that grunion populations have declined significantly over the past decade. The petition proposed, and DFW concurred, that a reduction in take of grunion was warranted to protect its population and halt the trend.

At the Nov 2020 MRC meeting, DFW proposed establishing a bag and possession limit and reducing the season length. MRC recommended that FGC establish a bag and possession limit of between 10 and 20 fish and reduce the fishing season by one month, leading to a revised open season of Jul 1–Mar 31 and a three-month closure; FGC approved this recommendation in Dec 2020. See Exhibit 1 for additional background information.

The draft proposed regulations specify a three-month season closure from Apr 1 through Jun 30. For the bag and possession limit, however, subsequent to FGC's approval of the MRC recommendation, DFW proposed an increased range of 10 to 50 fish from which FGC will need to select a limit (exhibits 2 and 3). The revised proposed range is based upon DFW surveys of grunion harvesters that suggest a bag and possession limit of 50 fish is more aligned with the needs of subsistence harvesters, while still providing species protection. The revised proposed bag and possession limit, in conjunction with the shortened season, will provide grunion with a twofold form of regulatory protection by capping the currently-unlimited take and prohibiting take during more of the peak spawning season.

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At this meeting DFW will present its recommendations, including a preferred bag and possession limit of 30 fish (Exhibit 5). FGC will need to identify a bag and possession limit to include in the public notice.

**Significant Public Comments**

A commenter supports the extended closure of the grunion season, and advocates for a stricter bag and possession limit of five fish (Exhibit 6).

**Recommendation**

**FGC staff:** Select a bag and possession limit to specify in the notice and authorize publication of a notice as otherwise recommended by DFW.

**Committee:** Authorize publication of a notice as recommended by DFW, with a bag and possession limit in the range of 10-20 fish.

**DFW:** Authorize publication of a notice as detailed in the initial statement of reasons (Exhibit 3), with a bag and possession limit of 30 fish and a closed season from Apr 1 through Jun 30.

**Exhibits**

1. [Staff summary from Nov 10, 2020 MRC meeting \(for background purposes only\)](#)
2. [DFW memo, received Sep 27, 2021](#)
3. [Draft initial statement of reasons](#)
4. [Draft economic and fiscal impact statement \(STD. 399\)](#)
5. [DFW presentation](#)
6. [Email from John Phibbs, received Sep 18, 2021](#)

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission authorizes publication of a notice of intent to amend subsection 27.60(b) and Section 28.00 related to recreational take of California grunion, as recommended by staff with a bag and possession limit of \_\_\_\_ fish.

## STAFF SUMMARY FOR OCTOBER 14, 2021

**23. EXPERIMENTAL FISHING PERMIT (EFP) PROGRAM, PHASE II****Today's Item****Information** ☒**Action** ☐

Discuss proposed Experimental Fishing Permit (EFP) Program, Phase II regulations.

**Summary of Previous/Future Actions**

- |  |   |
|--|---|
| • FGC approved two-phase rulemaking approach           | Jun 12-13; Redding                          |
| • MRC received overview of Phase II                    | Nov 5, 2019; MRC, Sacramento                |
| • FGC adopted Phase I regulations                      | Mar 23, 2020; Teleconference                |
| • MRC received update on Phase II                      | Apr 29, 2020; Webinar/Teleconference        |
| • MRC received DFW update and developed recommendation | Jul 29, 2020; MRC, Webinar/Teleconference   |
| • Notice hearing                                       | Aug 18, 2021; Webinar/Teleconference        |
| • <b>Today's discussion hearing</b>                    | <b>Oct 14, 2021; Webinar/Teleconference</b> |
| • Adoption hearing                                     | Dec 15-16, 2021; Webinar/Teleconference     |

**Background**

The California Fisheries Innovation Act of 2018(Chapter 477, Statutes of 2018) gives FGC the authority to approve EFPs for commercial or recreational marine fishing activities that would otherwise be prohibited, upon adopting regulations establishing an EFP program. Permits must be for one or more of the following purposes: research, education, limited testing, data collection, compensation fishing, conservation engineering, or exploratory fishing.

In 2019, FGC approved a two-phased rulemaking approach to implementing an EFP program. Phase I focused on authorizing EFPs to continue experimental brown box crab fishing as previously authorized under experimental gear permits, while a larger, programmatic rulemaking could be developed to build out the Marine Fisheries EFP Program under Phase II (see Exhibit 1 for background).

The proposed regulations for the Marine Fisheries EFP Program will establish a comprehensive regulatory framework for experimental marine fishing activities pursuant to California Fish and Game Code Section 1022. At its Aug 2021 meeting, FGC authorized publishing a notice of intent to adopt the EFP Phase II regulation.

The regulation text approved at the Aug 2021 meeting included a process for applicants to appeal a DFW permit decision to FGC. Following the meeting, FGC staff, in consultation with DFW, revised the text to create a dispute resolution process within DFW (subsection 91(p) in Exhibit 4). The change will allow for a faster process, consistent with direction in statute to establish an overall expeditious process.

**Significant Public Comments (N/A)****Recommendation (N/A)**

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**Exhibits**

1. [Staff summary from Aug 18, 2021 \(for background purposes only\)](#)
2. [DFW memo, received Aug 9, 2021](#)
3. [Initial statement of reasons](#)
4. [Noticed regulation text](#)

**Motion (N/A)**

## STAFF SUMMARY FOR OCTOBER 14, 2021

**24. COMMERCIAL KELP HARVEST PERMIT****Today's Item****Information** ☐**Action** ☒

Consider approving Lance (Jeff) Maassen's permit application for commercial harvest of *Sargassum horneri* (*S. horneri*) at Anacapa Island, Ventura County, and Santa Rosa Island, Santa Barbara County, including the permit conditions and royalty amount.

**Summary of Previous/Future Actions**

- |  |   |
|--|---|
| • FGC received application for permit to harvest <i>S. horneri</i>     | Oct 14, 2020; Webinar/Teleconference        |
| • FGC referred application to DFW for review and recommendation        | Dec 9-10, 2020; Webinar/Teleconference      |
| • FGC received DFW recommendation and continued action to next meeting | Aug 18, 2021; Webinar/Teleconference        |
| • <b>Today consider approving application</b>                          | <b>Oct 14, 2021; Webinar/Teleconference</b> |

**Background**

Section 165, Title 14 defines the provisions for commercially harvesting kelp and other marine aquatic plants. Subsections 165(a) and (b) provide general permitting and harvesting provisions, while subsections 165(c) – (e) define provisions specific to harvest of giant and bull kelp, specified agar-bearing marine plants, and specified edible seaweed species, respectively. For all other species of kelp not specified, subsection 165(f) provides a pathway for an applicant to apply to FGC for commercial harvest authorization for specific amounts and locations. FGC may set the conditions and royalty amount after reviewing the application.

In Oct 2020, FGC received an application from Lance (Jeff) Maassen requesting authorization pursuant to subsection 165(f) to commercially harvest *S. horneri*, a non-native, invasive marine algal species not specified in Section 165 (Exhibit 1). Mr. Maassen proposed to harvest by hand at Anacapa and Santa Rosa islands in Southern California. In applying for the permit, Mr. Maassen acknowledged the ecological impacts *S. horneri* has already had on native algal communities, and suggested commercial harvest to contribute to removal efforts for this invasive species. Mr. Maassen offered to collaborate closely with DFW staff to ensure the hand harvesting methods used are appropriate for removing an invasive species. He believes collaboration will “facilitate efficient scaling and enable measured ecological outcomes.” In Dec 2020, FGC referred the request to DFW for review and recommendation.

**DFW Review**

At its Aug 2021 meeting, FGC received DFW's review and recommendation for consideration and potential action (Exhibit 2). DFW noted it had conferred with the applicant regarding specific harvest conditions, amounts, and locations. DFW has identified seven precautionary harvest conditions to prevent the inadvertent spread or increased distribution of this species; with these measures in place, DFW does not consider the commercial harvest likely to increase the risk of perpetuating or expanding *S. horneri* populations, nor does it expect the

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proposed level of take to have any measurable impact on the species in the proposed harvest locations.

DFW recommends that harvest locations be defined through boundary coordinates, reporting be required via harvest logs, and the same royalty rate be set as for edible seaweed harvest, which is \$24 per wet ton. The royalty rate would be reviewed with rates for other kelp and seaweeds during the future review of marine algae regulations. If the application is approved, DFW intends to continue working closely with the applicant to evaluate the effectiveness and practicality of the harvest conditions, and notes that in the future it may be necessary to adaptively modify the permit conditions regarding harvest methods.

At its Aug 2021 meeting, FGC discussed the application and DFW's review. FGC continued action on this item to today, to allow time for further FGC deliberation after FGC staff responded to inquiries made at the meeting..

**FGC Staff Analysis**

FGC has previously considered and denied public petitions to authorize fisheries for non-native, invasive species. A notable example is Chinese mitten crab. In the late 1980s, late 1990s, and again in 2013, FGC received requests to commercially harvest Chinese mitten crab for economic gain while helping "to control/eradicate," and "to curb poaching/harvesting which otherwise could lead to illegal local sales." A highly prized delicacy in other areas of the globe, the species was spreading along the Pacific coast's waterways, damaging habitat, and causing ecological and economic devastation, resulting in an active West Coast-wide eradication effort. FGC received letters in strong opposition to opening a commercial fishery for Chinese mitten crab from the states of Oregon and Washington, academics, and the public. FGC denied the petitions to prevent risk of further inadvertent or intentional spread and avoid an expectation for DFW to maintain a fishery for which economic value has been established.

Today's consideration of a kelp harvest permit is similar in that it seeks to commercially harvest an invasive species, *S. horneri*. However, there are several important differences: (1) At the time of FGC's denial, eradication of mitten crab was still considered a possibility and being actively pursued. In contrast, *S. horneri* populations have already supplanted stressed native kelp and algae in vast areas through the Northern Channel Islands, and managers consider eradication there infeasible; the ecological consequences have already been realized. (2) There have been many recent, massive shifts in the ocean ecosystem. We are leveraging new approaches to help us adapt management practices and develop new management tools as we face unprecedented, and in many cases previously unimaginable, conditions or management responses. (3) Currently, there is minimal commercial market for *S. horneri*.

There are risks associated with potential approval of this permit. There is the risk of unintentional spread of the species. Additionally, there is a risk of developing a local commercial market for an invasive species that would increase demand for harvest, and potentially incentivize spread of the species to maintain the economic opportunity through harvest. However, staff believes the risks are relatively low and well mitigated through the measures proposed by DFW. The permit would allow for tightly-controlled harvest for a single individual, as opposed to a general commercial harvest regulation, and would not allow or set any precedent that would require FGC to allow general commercial harvest in the future. DFW has proposed tight sideboards for the

## STAFF SUMMARY FOR OCTOBER 14, 2021

project as described in the DFW review and analysis in Exhibit 2. Should monitoring reveal negative consequences, the permit can be canceled at any time.

Additionally, the project provides potential benefits. The project represents an opportunity to gather information about the feasibility of managing an invasive species in partnership with a commercial harvester. Outcomes may help inform potential future projects, policies or regulations, including approaches to apply in areas where eradication of *Sargassum* is still a possibility.

Approval as recommended would represent an opportunity to test a novel approach to addressing non-native invasive algal species in specific defined geographies, rather than representing a shift in policy or a departure from FGC and DFW's long-standing actions to disincentivize perpetuating the spread of invasive species. Should FGC choose to approve this approach, it is doing so as a pilot project with no assurance of a long-term commercial fishing opportunity for this species.

### Significant Public Comments (N/A)

### Recommendation

**FGC staff:** Approve the application for commercial harvest of *S. horneri* on an annual basis, subject to renewal, as recommended by DFW, and notify FGC's executive director of any changes to harvest methods specified in permit conditions.

**DFW:** Approve the application for commercial harvest of *S. horneri* with permit conditions, authorized harvest locations and amounts, and royalty amounts as specified in Exhibit 2. Authorize DFW to work with the applicant to develop more specific harvest areas with boundaries represented by coordinates, and authorize DFW to adaptively modify the harvest conditions as necessary.

### Exhibits

1. [Email and application from Lance \(Jeff\) Maassen, including attachment and addendum, received Oct 1 and 10, 2020](#)
2. [DFW memo, received Aug 2, 2021](#)

### Motion

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission approves the application for a commercial permit to harvest *Sargassum horneri* at Anacapa Island, Ventura County, and Santa Rosa Island, Santa Barbara County, consistent with 165 (a) and (b) and in specific locations and amounts specified, approves the permit conditions and royalty amount as recommended by the Department, and authorizes the Department to make modifications to harvest methods as needed, in consultation with the permittee and with notification to the Commission's executive director.

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**25. PACIFIC LEATHERBACK SEA TURTLE****Today's Item****Information** ☐**Action** ☒

Consider the petition, DFW's status review report, and comments received to determine whether listing Pacific leatherback sea turtle (*Dermochelys coriacea*) as threatened or endangered under the California Endangered Species Act (CESA) is warranted.

**Summary of Previous/Future Actions**

- |   |   |
|---|---|
| • Received petition   | Jan 23, 2020                                |
| • Transmitted petition to DFW                                   | Feb 3, 2020                                 |
| • Published notice of receipt of petition                       | Feb 14, 2020                                |
| • Public receipt of petition                                    | Feb 21, 2020; Sacramento                    |
| • Received DFW's 90-day evaluation report                       | Jun 24-25, 2020; Webinar/Teleconference     |
| • Determined listing may be warranted                           | Aug 19-20, 2020; Webinar/Teleconference     |
| • Received DFW's status report                                  | Aug 18, 2021; Webinar/Teleconference        |
| • <b>Today take action to determine if listing is warranted</b> | <b>Oct 14, 2021; Webinar/Teleconference</b> |
| • Adopt findings  | TBD   |

**Background**

A petition to list Pacific leatherback sea turtle as endangered under CESA was submitted to FGC by the Center for Biological Diversity and the Turtle Island Restoration Network on Jan 23, 2020. On Feb 3, 2020, FGC staff transmitted the petition to DFW for review. A notice of receipt of petition was published in the California Regulatory Notice Register on Feb 14, 2020. At its Aug 2020 meeting, FGC determined that the petitioned action may be warranted pursuant to Section 2074.2 of the California Fish and Game Code. FGC subsequently provided notice regarding Pacific leatherback's protected candidate species status, which prompted DFW's status review of the species.

At FGC's Aug 18, 2021 meeting, FGC formally received DFW's completed status review report (exhibits 1 and 2). The report represents DFW's final written review of the status of Pacific leatherback sea turtle and delineates each of the categories of information required for a petition, evaluates the sufficiency of the available scientific information for each of the required components, and incorporates additional relevant information that DFW possessed or received during its review. Based on the information provided, possessed, or received, DFW concluded that the petitioned action to list Pacific leatherback sea turtle as an endangered species is warranted.

At today's meeting, FGC may consider the petition, DFW's written evaluation and status review report, written and oral comments received, and the remainder of the administrative record, to determine if listing is warranted. Findings will be adopted at a future meeting.

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**Significant Public Comments**

1. A commenter supports DFW's recommendation to list Pacific leatherback sea turtle as an endangered species, stating that listing the species is a step toward recovery (Exhibit 4).
2. A non-governmental organization submitted a letter signed by 2155 Californians supporting listing Pacific leatherback sea turtle as endangered under CESA, and cites the need to prioritize monitoring and research efforts (Exhibit 5).

**Recommendation**

**FGC staff:** Determine that listing Pacific leatherback sea turtle as endangered is warranted, as recommended by DFW.

**DFW:** List Pacific leatherback sea turtle as endangered under CESA.

**Exhibits**

1. [DFW memo, received Jul 20, 2021](#)
2. [DFW status review report, received Jul 20, 2021](#)
3. [DFW presentation](#)
4. [Email from Robert Rutkowski, received Aug 16, 2021](#)
5. [Letter from Oceana, on behalf of 2,155 California residents, received Sep 30, 2021](#)

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that that the Commission, pursuant to Section 2075.5 of the California Fish and Game Code, finds the information contained in the petition to list the Pacific leatherback sea turtle, and the other information in the record before the Commission, **warrants** listing Pacific leatherback sea turtle as an endangered species under the California Endangered Species Act. (Note: findings will be adopted at a future meeting.)

**or**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission, pursuant to Section 2075.5 of the California Fish and Game Code, finds that the information contained in the petition and other information before the Commission, **does not warrant** listing Pacific leatherback sea turtle as an endangered species under the California Endangered Species Act. (Note: findings will be adopted at a future meeting.)

## STAFF SUMMARY FOR OCTOBER 14, 2021

**26. PETITIONS FOR REGULATION CHANGE****Today's Item****Information** ☐**Action** ☒

This is a standing agenda item for FGC to act on regulation petitions received from the public at previous meetings. For this meeting:

- (A) Action on petitions received at the Aug 2021 meeting
- (B) Pending regulation petitions referred to staff or DFW for review

**Summary of Previous/Future Actions**

(A)

- FGC received petitions Aug 18, 2021; Webinar/Teleconference
- **Today's action on petitions Oct 14, 2021; Webinar/Teleconference**

(B)

- FGC received petition 2020-015 Dec 9-10, 2020; Webinar/Teleconference
- Petition 2020-015 referred to DFW Feb 10, 2021; Webinar/Teleconference
- FGC received petition 2021-001 Apr 14, 2021; Webinar/Teleconference
- Petition 2021-001 referred to DFW and FGC staff Jun 16-17, 2021; Webinar/Teleconference
- **Today's action on petitions Oct 14, 2021; Webinar/Teleconference**

**Background**

Regulation change petitions received at an FGC meeting are scheduled for consideration at the next regularly-scheduled business meeting under (A), unless the petition is rejected under 10-day staff review as prescribed in Title 14, subsection 662(b).

A petition may be (1) denied, (2) granted, or (3) referred to a committee, staff, or DFW for further evaluation or information-gathering. Referred petitions are scheduled for action under (B) once the evaluation is completed and a recommendation made.

- (A) ***Petitions for regulation change.*** One petition received at the Aug 2021 meeting is scheduled for action.

- I. *Petition 2021-013:* Request to revise regulations for commercial market squid fishing in Monterey Bay, including changes to allowed days, times, and lighting

The staff recommendation and rationale, developed with input from DFW staff, is provided in Exhibit A1.

- (B) ***Pending regulation petitions.*** This is an opportunity for staff to provide recommendations on petitions previously referred to staff, DFW, or a committee for review. Two referred petitions are scheduled for action today (Exhibit B1).

- I. *Petition 2020-015:* Request to amend Pacific herring regulations to exempt lampara bait nets from gear restrictions for commercial take (Exhibit B2). Previously referred to DFW.

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This petition requests to authorize lampara bait net gear for commercial take of Pacific herring, allowing the applicant to take small quantities of Pacific herring in Humboldt Bay. Currently take is only authorized by gill net. DFW's review and recommendation is provided in Exhibit B3.

*DFW Review and Recommendation*

In its review, DFW notes the historic phasing out of round haul nets (of which lampara net gear is a subset) in the roe herring fishery and describes how the proposed small scale use of lampara net gear to target whole fish contrasts with historic use. DFW notes that *California Pacific Herring Fishery Management Plan* (FMP) allows changes in gear type through FGC rulemaking to allow for flexibility and market access, on condition of evaluating potential impacts through an experimental fishing permit. DFW has previously conducted collaborative sampling with the petitioner, which enabled DFW to evaluate the potential gear impacts, as intended by the FMP condition. DFW does not anticipate resource concerns related to gear selectivity, reproductive health of the stock, or habitat impacts, nor does it anticipate a high bycatch risk resulting from use of the gear as proposed.

- II. *Petition 2021-001*: Request to restore recreational and commercial red abalone harvest at San Miguel Island, Santa Barbara County, based on guidance in Appendix H of *Abalone Recovery and Management Plan* (ARMP) (Exhibit B4). Previously referred to DFW and FGC staff.

This petition requests to open a fishery for red abalone at San Miguel Island to be conducted in accordance with Appendix H of the ARMP, including a three-month season, total allowable catch limit, and biological sampling requirements. Petitioner proposes "habitat resource recovery and mitigation" actions and offers to conduct cooperative research with partner agencies. DFW's review and recommendation is provided in Exhibit B5.

*DFW Review and Recommendation*

DFW notes that FGC determined in 2012 that red abalone densities at San Miguel Island were insufficient to support a fishery, based on two reports that summarized several years of collaborative evaluation at the island. DFW finds that the current petition does not provide sufficient information to warrant consideration of a red abalone fishery at San Miguel Island at this time.

In its review, DFW highlights that declines in red abalone density have recently been documented at the island by Channel Islands National Park's Kelp Forest Monitoring Program surveys (2018-2019). The surveys document poor environmental conditions with dramatic loss of giant and understory kelp and new areas characterized as urchin barrens.

While DFW concludes that a fishery cannot be supported at this time, it is interested in working with partners to further assess the situation at San Miguel Island to determine if there any effective ways to improve conditions.

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*FGC Staff Review*

At the request of the petitioner, FGC referred the petition to its legal counsel to evaluate reliance on Appendix H of the ARMP for opening the fishery immediately. FGC legal counsel advises that the petition to open a fishery as proposed is a resource management determination, not a legal one.

Additionally, FGC staff reviewed Channel Islands National Park's survey data and analysis (Exhibit B6) relied upon by DFW in its review. FGC staff concurs with DFW's conclusions based on currently available data related to local red abalone density and condition, and kelp forest ecosystem health, and supports DFW working with partners to further assess the situation at San Miguel Island.

**Significant Public Comments**

Two previous commercial abalone divers support Petition 2021-001 and report their personal underwater observations of abundant abalone at San Miguel Island (exhibits B7 and B8).

**Recommendation**

**FGC staff:** (A) Deny Petition 2021-013 for the reasons explained in Exhibit A1.

(B) Staff concurs with DFW evaluations and recommendations to grant Petition 2020-015 in concept, and to deny Petition 2021-001.

**DFW:** (B) Grant Petition 2020-015 in concept, with details of a proposal to be developed by DFW with petitioner and interested parties, and schedule for a future rulemaking (exhibits B1 and B3). Deny Petition 2021-001 for the reasons described in exhibits B1 and B5.

**Exhibits**

- A1. [Table of petitions for regulation change, updated Oct 7, 2021](#)
- A2. [Petition 2021-013, regarding commercial market squid fishing in Monterey Bay, received Jun 18, 2021](#)
- B1. [Table of referred petitions for regulation change, updated Oct 7, 2021](#)
- B2. [Petition 2020-015, regarding use of lampara nets to take Pacific herring, received Nov 3, 2020](#)
- B3. [DFW memo regarding petition 2020-015, received Sep 21, 2021](#)
- B4. [Petition 2021-001, to authorize red abalone harvest at San Miguel Island, received Feb 22, 2021](#)
- B5. [DFW memo regarding petition 2021-001, received Sep 24, 2021](#)
- B6. [Synopsis of Channel Islands National Park's Kelp Forest Monitoring Sites at San Miguel Island – 2018, 2019, and red abalone density and size frequency data, 1997-2019](#)
- B7. [Letter from Jeff Baldwin regarding petition 2021-001, received Jul 12, 2021](#)
- B8. [Letter from Robert McKinley regarding petition 2021-001, received Jul 26, 2021](#)

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**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission adopts the staff recommendations to deny petitions 2021-013 and 2021-001, and grant petition 2020-015 as reflected in exhibits A1, B1, B3, and B5.

**OR**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission adopts the staff recommendations as reflected in exhibits A1, B1, B3, and B5, except for petition(s) \_\_\_\_\_ for which the action is \_\_\_\_\_.

## STAFF SUMMARY FOR OCTOBER 14, 2021

**27. NON-REGULATORY REQUESTS****Today's Item****Information** ☐**Action** ☒

This is a standing agenda item for FGC to act on non-regulatory requests from the public.

**Summary of Previous/Future Actions**

- FGC received requests Aug 18, 2021; Webinar/Teleconference
- **Today's potential action on requests** **Oct 14, 2021; Webinar/Teleconference**

**Background**

FGC provides direction regarding requests from the public received by mail, email, and during general public comment at the previous FGC meeting. Public requests for non-regulatory action follow a two-meeting cycle to ensure proper review and consideration.

- (A) **Non-regulatory requests.** Non-regulatory requests scheduled for consideration today were received at the Aug 2021 meeting in one of three ways: (1) submitted by the comment deadline and published in a table in the meeting binder, (2) submitted by the supplemental comment deadline and delivered at the meeting, or (3) received during public comment at the meeting. One request received in Aug, is a regulatory petition that was rejected under staff review pursuant to Section 662(b), Title 14 of the California Code of Regulations (Exhibit A2); because the petition does not request a change to regulatory text it is being processed as a non-regulatory request for FGC's consideration.

Today, five non-regulatory requests are scheduled for action. Exhibit A1 summarizes the requests and contains staff recommendations, developed with input from DFW staff.

- (B) **Pending non-regulatory requests.** This item is an opportunity for staff to provide an update or recommendation on non-regulatory requests that were scheduled for action at a previous meeting and referred by FGC to staff or DFW for further review.

There are no pending non-regulatory requests.

**Significant Public Comments (N/A)****Recommendation (N/A)**

**FGC staff:** (A) Adopt the staff recommendations as reflected in Exhibit A1.

**Exhibits**

- [Summary of non-regulatory requests and staff recommendations for requests received through Aug 18, 2021](#)
- [Petition from Patricia McPherson \(being processed as a non-regulatory request\) requesting FGC revisit the rulemaking documentation for the designation of Ballona](#)

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[Wetlands Ecological Reserve to emphasize its freshwater nature, received Jun 14, 2021 and additional supporting documentation, received Aug 2, 2021](#)

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission adopts the staff recommendations for action on the October 2021 non-regulatory requests.

**OR**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission adopts the staff recommendations for action on the October 2021 non-regulatory requests, except for item(s) \_\_\_\_\_ for which the action is \_\_\_\_\_.

## STAFF SUMMARY FOR OCTOBER 14, 2021

**28A. ADMINISTRATIVE ITEMS: RULEMAKING TIMETABLE UPDATES****Today's Item**Information ☐Action ☒

Review and potentially approve changes to the perpetual timetable for anticipated regulatory actions.

**Summary of Previous/Future Actions**

- FGC approved rulemaking timetable Aug 18, 2021; Webinar/Teleconference
- **Today consider approving changes to rulemaking timetable Oct 14, 2021; Webinar/Teleconference**

**Background**

This is a standing agenda item for FGC staff and DFW to request changes to the FGC rulemaking timetable, confirm changes made by FGC during this meeting, and highlight changes made by FGC staff.

DFW requests three changes to the regulatory timetable (Exhibit 1):

1. Add "Emergency Low Flow Restrictions Due to Drought Conditions" rulemaking, amending subsections (a) and (b) of Section 8.00 and subsection (b)(40)(A)(1) of Section 7.40, to extend the end date of the current low flow restrictions through Apr 30, 2022 due to extreme drought conditions. The emergency rulemaking is intended to increase the survival of adult steelhead trout, Coho salmon and coastal Chinook salmon. DFW proposes notice and adoption at the Dec 2021 meeting with a target effective date prior to Jan 31, 2022.
2. Delay the "Pink Shrimp Fishery Management Plan Implementing Regulations" rulemaking, adding new Article 7 in Chapter 5.5 under Fishery Management Plans (FMPs) and amending sections 120.1 and 120.2, to implement the pink shrimp FMP. The FMP has been delayed from an anticipated receipt in Oct 2021 and adoption in Dec 2021 to receipt at the Dec 2021 meeting and adoption at the Apr 2022 meeting. The timeline for the implementing regulations is likewise proposed for delay; DFW proposes notice at the Feb 2022 meeting and adoption at the Jun 2022 meeting.
3. Add "Game Fish Contests" rulemaking, amending Section 230, to set forth the process by which permits may be issued for contests offering prizes for the take of game fish. The rulemaking will establish guidelines that have been utilized for the past several years to successfully facilitate the tournament scheduling process. DFW proposes notice at the Feb 2022 meeting, discussion at the Apr 2022 meeting, and adoption at the May 2022 teleconference meeting.

FGC staff recommends several changes to the regulatory timetable (Exhibit 2):

1. Change the anticipated effective dates for three regulations to reflect current regulation developments, pertinent season dates, and workload prioritization. FGC staff proposes an effective date of Jan 8, 2022 for *Recreational Clam, Sand Crab, and Shrimp Gear Emergency (First 90-day Extension)*, Jul 16, 2022 for *Central Valley Sport Fishing (Annual)*, and Aug 15, 22 for *Klamath River Basin Sport Fishing (Annual)*.

## STAFF SUMMARY FOR OCTOBER 14, 2021

2. For the *Big Game Preference Points Reinstatement and Tag Refunds* rulemaking, change the amended section from 708.19 to 708.14.
3. For the *Harvesting of Kelp and Other Aquatic Plants, Commercial Marine Algae Management Policies* rulemaking, change the amended sections from 165, 165.5, 705 to 165, 165.5, 705.1.

**Significant Public Comments (N/A)****Recommendation**

**FGC staff:** Adopt proposed changes to the timetable for anticipated regulatory actions and any rulemaking changes identified during this meeting.

**Exhibits**

1. [DFW memo, received Sep 29, 2021](#)
2. [Perpetual Timetable for Anticipated Regulatory Actions, dated Oct 6, 2021](#)

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission approves the proposed changes to the rulemaking timetable as discussed today.

## STAFF SUMMARY FOR OCTOBER 14, 2021

**28B. ADMINISTRATIVE ITEMS: NEXT MEETING AND LOCATION****Today's Item**Information ☐Action ☒

This is a standing agenda item to review logistics and approve draft agenda items for the next FGC meeting and consider any changes to meeting dates or locations.

**Summary of Previous/Future Actions (N/A)****Background**

The next Commission meeting is scheduled for Dec 15-16, 2021. In consultation with President Silva and in recognition of the ongoing and evolving health concerns related to COVID-19, the meeting will be held by webinar and teleconference pursuant to Government Code Section 11133.

Potential agenda items for the Dec meeting are provided in Exhibit 1 for consideration and potential FGC approval.

**Significant Public Comments (N/A)****Recommendation**

**FGC staff:** Approve agenda items for the Dec 15-16, 2021 FGC meeting as presented in Exhibit 1 and amended today.

**Exhibits**

1. [Potential agenda items for the Dec 15-16, 2021 FGC meeting](#)

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission approves the draft agenda items for the December 15-16, 2021 Commission meeting, as amended today.

STAFF SUMMARY FOR OCTOBER 14, 2021

**28C. COMMISSION ADMINISTRATIVE ITEMS: NEW BUSINESS**

**Today's Item**

**Information** ☒

**Action** ☐

This is a standing agenda item to allow Commissioners to bring new items of business to FGC.

**Summary of Previous/Future Actions (N/A)**

**Background (N/A)**

**Significant Public Comments (N/A)**

**Recommendation (N/A)**

**Exhibits (N/A)**

**Motion (N/A)**

## STAFF SUMMARY FOR OCTOBER 14, 2021

**EXECUTIVE SESSION****Today's Item**Information ☐Action ☒

Executive session will include four standing topics:

- (A) Pending litigation to which FGC is a party
- (B) Possible litigation involving FGC
- (C) Staffing
- (D) Deliberation and action on license and permit items – *none scheduled*

**Summary of Previous/Future Actions (N/A)****Background**

During the public portion of its meeting, FGC will call a recess and reconvene in a closed session pursuant to the authority of California Government Code subsections 11126 (a), (c)(3), and (e)(1). FGC will address three items in closed session:

**(A) Pending litigation to which FGC is a party**

See agenda for a complete list of pending civil litigation to which FGC is a party, at the time the agenda was made public.

**(B) Possible litigation involving FGC****(C) Staffing***Executive director performance review*

FGC appointed the current executive director in Sept 2019 and has not conducted a performance review since that appointment; FGC initiated a review at the request of the executive director. FGC will discuss the executive director's performance at this meeting.

For details about staffing generally, see the executive director's report under Agenda Item 8 for today's meeting.

**Significant Public Comments (N/A)****Recommendation (N/A)****Exhibits (N/A)****Motion (N/A)**

# CALIFORNIA FISH AND GAME COMMISSION

## RECEIPT LIST FOR PETITIONS FOR REGULATION CHANGE: RECEIVED BY 5:00 PM ON SEPTEMBER 30, 2021

FGC - California Fish and Game Commission   DFW - California Department of Fish and Wildlife

WRC - Wildlife Resources Committee   MRC - Marine Resources Committee

Tracking No.	Date Received	Name of Petitioner	Subject of Request	Short Description	FGC Receipt Scheduled	FGC Action Scheduled
2021-015	8/23/2021	George Pusey	Sport fishing: Shortfin corvina	Make shortfin corvina an official California game fish and change size limit to 15 inches.	10/14/21	12/15-16/2021
2021-017	8/30/2021	Dan Ryan	Mammal hunting, big game	Amend hunting regulations for hunts and seasons to better serve the outdoor enthusiast. Suggested changes include preference point management, boundaries, and dates for muzzleloader, archery, etc.	10/14/21	12/15-16/2021
2021-018	9/24/2021	Tom Wheeler, Environmental Protection Information Center	Non-game birds: Barred owl	Allow the take of barred owls, a non-native species that is endangering the northern spotted owl, as a wildlife management tool if authorized by DFW through a revocable permit.	10/14/21	12/15-16/2021
2021-019	9/30/2021	John Riina	Inland sport fishing: Martis Creek	Revert Martis Creek fishing regulations to pre-2020 regulations that allowed catch and release only.	10/14/21	Petition currently under review by staff and has not yet been formally accepted. If accepted, action will be scheduled for December 15-16, 2021.
2021-021	9/9/2021	Alastair Bland	Ocean sport fishing: Pacific halibut	Reduce the recreational daily bag limit from 3 to 1 for California halibut in state waters between Point Reyes and Bodega Head.	10/14/21	12/15-16/2021



Tracking Number: (2021-015)

To request a change to regulations under the authority of the California Fish and Game Commission (Commission), you are required to submit this completed form to: California Fish and Game Commission, (physical address) 1416 Ninth Street, Suite 1320, Sacramento, CA 95814, (mailing address) P.O. Box 944209, Sacramento, CA 94244-2090 or via email to [FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov). Note: This form is not intended for listing petitions for threatened or endangered species (see Section 670.1 of Title 14).

Incomplete forms will not be accepted. A petition is incomplete if it is not submitted on this form or fails to contain necessary information in each of the required categories listed on this form (Section I). A petition will be rejected if it does not pertain to issues under the Commission's authority. A petition may be denied if any petition requesting a functionally equivalent regulation change was considered within the previous 12 months and no information or data is being submitted beyond what was previously submitted. If you need help with this form, please contact Commission staff at (916) 653-4899 or [FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov).

## **SECTION I: Required Information.**

*Please be succinct. Responses for Section I should not exceed five pages*

### **1. Person or organization requesting the change (Required)**

Name of primary contact person: George Pusey.

Address:

Telephone number:

Email address:

### **2. Rulemaking Authority (Required) - Reference to the statutory or constitutional authority of the Commission to take the action requested: **Title 14 CCR 230, Sections 1050 and 2003 of the Fish and Game Code (to add shortfin corvina to the list of gamefish). Title 14 CCR 27.60, Sections 200, 205, 265, 7071 and 8587.1 (to create a size limit for shortfin corvina).****

### **3. Overview (Required) - Summarize the proposed changes to regulations: Make shortfin corvina an official California gamefish and change size limit to 15".**

### **4. Rationale (Required) - Describe the problem and the reason for the proposed change: The fishery for shortfin corvina in southern California is growing rapidly and quite a few people are taking them at any size as they are highly sought after as food fish. There is currently no written regulation on them falling under the general rule of 10 fish at any size. Shortfin corvina mature in 2 years around 12-13" so a 15" size limit would allow them the chance to spawn at least once before possibly being harvested. Shortfin corvina is an established fishery in southern California and lives in the bays and lagoons of San Diego county year round.**

## **SECTION II: Optional Information**

### **5. Date of Petition: 8/21/21**



**6. Category of Proposed Change**

Sport Fishing

- 7. The proposal is to:** *(To determine section number(s), see current year regulation booklet or <https://govt.westlaw.com/calregs>).* **Change Title 14 CCR 230, Sections 1050 and 2003 of the Fish and Game Code to add shortfin corvina to the list of gamefish. Change Title 14 CCR 27.60, Sections 200, 205, 265, 7071 and 8587.1 (to create a size limit for shortfin corvina).**

Add New Title 14 Section(s):

- 8. If the proposal is related to a previously submitted petition that was rejected, specify the tracking number of the previously submitted petition** [Click here to enter text.](#)  
Or ☒ Not applicable.
- 9. Effective date:** If applicable, identify the desired effective date of the regulation.  
If the proposed change requires immediate implementation, explain the nature of the emergency: [Click here to enter text.](#)
- 10. Supporting documentation:** Identify and attach to the petition any information supporting the proposal including data, reports and other documents:  
[https://animaldiversity.org/accounts/Cynoscion\\_parvipinnis/](https://animaldiversity.org/accounts/Cynoscion_parvipinnis/)
- 11. Economic or Fiscal Impacts:** Identify any known impacts of the proposed regulation change on revenues to the California Department of Fish and Wildlife, individuals, businesses, jobs, other state agencies, local agencies, schools, or housing:  
Bay fishing is growing and becoming more important to the Southern California sportfishing economy every year attracting inshore anglers from around the country. Boosting the shortfin corvina fishery will only benefit this.
- 12. Forms:** If applicable, list any forms to be created, amended or repealed:  
[Click here to enter text.](#)

**SECTION 3: FGC Staff Only**

Date received: August 23, 2021

FGC staff action:

- ☒ Accept - complete  
☐ Reject - incomplete  
☐ Reject - outside scope of FGC authority

Date petitioner was notified of receipt of petition and pending action: \_\_\_\_\_



Meeting date for FGC consideration: \_\_\_\_ October 14, 2021 \_\_\_\_

FGC action:

- ☐ Denied by FGC
- ☐ Denied - same as petition \_\_\_\_\_  
Tracking Number
- ☐ Granted for consideration of regulation change



Tracking Number: (2021-017)

To request a change to regulations under the authority of the California Fish and Game Commission (Commission), you are required to submit this completed form to: California Fish and Game Commission, (physical address) 1416 Ninth Street, Suite 1320, Sacramento, CA 95814, (mailing address) P.O. Box 944209, Sacramento, CA 94244-2090 or via email to FGC@fgc.ca.gov. Note: This form is not intended for listing petitions for threatened or endangered species (see Section 670.1 of Title 14).

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## **SECTION I: Required Information.**

*Please be succinct. Responses for Section I should not exceed five pages*

### **1. Person or organization requesting the change (Required)**

Name of primary contact person: Dan Ryan

Address: [REDACTED]

Telephone number: [REDACTED]

Email address: [REDACTED]

### **2. Rulemaking Authority (Required) - Reference to the statutory or constitutional authority of the Commission to take the action requested: Sections 200, 203, 265, 460, 3051, 3452, 3453, 3953 and 4334, Fish and Game Code. Also see attached for more details**

### **3. Overview (Required) - Summarize the proposed changes to regulations: See Attached. I was a part of an R# subcommittee with the department where we looked at creative ways to change the licensing system. Adding change to the big Game structure was one topic discussed but not finalized. I have been working with Department staff on new ideas for solving problems with the Big Game draw as well as providing additional opportunity for hunters. The Department needs to be adaptable and flexible. In the attachment I have provided a number of Big Game changes including new hunts and seasons. I am not asking that we try and implement all in 2022 however I would like to start the discussion and have a phased approach.**

### **4. Rationale (Required) - Describe the problem and the reason for the proposed change: Though the department has seen a decline in hunting license sales it has seen a substantial increase in hunter participation/demand in big game tags. To better serve the outdoor enthusiast in the state as well as provide additional opportunity with no incremental increase in harvest the department must adapt and make changes.**

#### **Why is this important?**

- Millions of dollars are generated through the Big Game application and tag system. This system should evolve to meet demands and increase opportunity, or it will be at risk of losing participation. From 2014 to 2020 there has



been over 17,500 additional applications, this is a substantial amount of money and interest generated. It would not make sense to not try and adapt to the increase.

- CDFW needs to manage Big Game herds and hunters in a flexible manner. Not making adjustments on an annual or bi-annual basis is not effective, nor is that method of active management in responding to changing resource conditions/hunter preferences.
- The Big Game opportunities are stagnant and have not changed or been modified (other than annual season dates and tag allocations) for years. Stagnant environments tend to lead to decreased participation and missed opportunities for improvement.
- Other states such as Idaho, Nevada, Arizona and Wyoming are constantly adding opportunities based on biological resources and hunter demand and have been successful. The results speak for themselves and this approach has been proven to work.
- Big Game hunters as a whole are incredibly frustrated with the preference point system and the number of years it takes to draw a “premium hunt”.
- Simply changing dates or adding a few premium hunts in general zones can increase draw odds and spread the point pool of applicants.
- Builds rapport with hunters and CDFW. Adds to the benefit of active management and responsiveness of the department to hunters.
- By spreading the already allocated tags to new hunts, this method should result in little change to overall harvest.

## **SECTION II: Optional Information**

**5. Date of Petition: 8/30/2021**

**6. Category of Proposed Change**

☐ Sport Fishing

☐ Commercial Fishing

☒ Hunting

☐ Other, please specify: [Click here to enter text.](#)

**7. The proposal is to:** *(To determine section number(s), see current year regulation booklet or <https://govt.westlaw.com/calregs>)*

☒ Amend Title 14 Section(s) Sections 200, 203, 265, 460, 3051, 3452, 3453, 3953 and 4334, Fish and Game Code. Also see attached for more details

☒ Add New Title 14 Section(s): Sections 200, 203, 265, 460, 3051, 3452, 3453, 3953 and 4334, Fish and Game Code. Also see attached for more details

☐ Repeal Title 14 Section(s): [Click here to enter text.](#)

**8. If the proposal is related to a previously submitted petition that was rejected, specify the tracking number of the previously submitted petition** [Click here to enter text.](#)  
Or ☒ Not applicable.

**9. Effective date:** If applicable, identify the desired effective date of the regulation.  
If the proposed change requires immediate implementation, explain the nature of the emergency: [The 2022 changes should be voted on in December in order for implementation to occur..](#)



10. **Supporting documentation:** Identify and attach to the petition any information supporting the proposal including data, reports and other documents: Attached proposal showing justification and work with CDFW, partners and members of the public.
11. **Economic or Fiscal Impacts:** Identify any known impacts of the proposed regulation change on revenues to the California Department of Fish and Wildlife, individuals, businesses, jobs, other state agencies, local agencies, schools, or housing: All of these changes have direct and indirect impacts with communities, individuals, businesses, jobs and the department. They would generate additional revenue for the department as well as increase customer satisfaction.
12. **Forms:** If applicable, list any forms to be created, amended or repealed:  
[Click here to enter text. ]

### SECTION 3: FGC Staff Only

Date received: [9/02/21 ]

FGC staff action:

- ☐ Accept - complete  
☐ Reject - incomplete  
☐ Reject - outside scope of FGC authority

Tracking Number

Date petitioner was notified of receipt of petition and pending action: [\_\_\_\_\_ ]

Meeting date for FGC consideration: [10/14/21 receive, 12/15-16/21 action]

FGC action:

- ☐ Denied by FGC  
☐ Denied - same as petition [\_\_\_\_\_] Tracking Number  
☐ Granted for consideration of regulation change



Tracking Number: (2021-018\_)

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## **SECTION I: Required Information.**

*Please be succinct. Responses for Section I should not exceed five pages*

### **1. Person or organization requesting the change (Required)**

Name of primary contact person: Tom Wheeler, Environmental Protection Information Center

Address: [REDACTED]

Telephone number: [REDACTED]

Email address: [REDACTED]

### **2. Rulemaking Authority (Required) - Reference to the statutory or constitutional authority of the Commission to take the action requested:**

**3.**

Fish and Game Code sections 3503.5 and 3800 provide ample authority for the Commission to issue the requested regulations. While section 3503.5 ordinarily prohibits taking of "any birds in the orders Falconiformes or Strigiformes," the same section provides an explicit exception for any regulation adopted pursuant thereto the code. The Department of Fish and Wildlife already understand that this prohibition on take is not complete, as the Department currently issues take scientific collection permits for species otherwise protected by this section. The same logic applies for section 3800. Section 3800 prohibits the taking of nongame birds except "in accordance with regulations of the commission."

The Fish and Game Code should also be read in its entirety, as a whole, and to give effect to every word of the statute. Further, to the extent possible, the code should be harmonized and not read as creating a conflict. In reading the Fish and Game Code together, as a whole, the Commission's authority likewise becomes clearer. Fish and Game Code § 200 gives the Commission broad authority to regulate the taking of wildlife within the state.

### **4. Overview (Required) - Summarize the proposed changes to regulations: The proposed regulation would allow for the taking of barred owls, a non-native species that is endangering the northern spotted owl, as a wildlife management tool if authorized by the California Department of Fish and Wildlife through a revocable permit.**



**Add 14 CCR § 486:**

(a) Application. A person who is a property owner or tenant may apply to the department for a permit to take barred owls (*Strix varia*) for the purposes of benefiting northern spotted owls or California spotted owls.

(b) Permit Period. Permits shall be valid for a period not to exceed three years.

(c) Required Information and Conditions of Permit.

(1) The department shall collect the following information before issuing a barred owl take permit:

(A) The name, mailing address, and contact information of the property owner, including telephone, facsimile, and email. If the owner is a business entity, contact information for the person acting on behalf of the business.

(B) The name, mailing address, and contact information of the person(s) responsible for removing barred owls.

(2) The department may add terms and conditions to the permit necessary to protect wildlife and ensure public safety. To be valid, the permit shall contain a statement signed by the applicant that he/she has read, understands, and agrees to be bound by all the terms of the permit.

(d) Methods of Take.

(1) The Department shall prescribe the method of taking as part of the permit.

(2) The permittee and/or agent shall ensure that all animals are killed in a humane manner instantly and prevent any injured animal from escaping.

(3) The Department shall ensure that the applicant or their agent will follow all best available management practices for locating and removing barred owls.

(e) Utilization of Carcass. Barred owls taken pursuant to this permit must be disposed of as required in the permit.

(f) Suspension and Revocation of Permits. The Department may suspend or revoke a barred owl take permit at any time.

(g) It is unlawful for a permittee or agent to violate any of the terms or conditions of a permit issued pursuant to this section.

(h) The permit does not invalidate any city, county, or state firearm regulation.

**Amend 14 CCR § 475.**

Methods of Take for Nongame Birds and Nongame Mammals.

Nongame birds and nongame mammals may be taken in any manner except as follows:

(a) Poison may not be used.

(b) Recorded or electrically amplified bird or mammal calls or sounds or recorded or electrically amplified imitations of bird or mammal calls or sounds may not be used to take any nongame bird or nongame mammal except coyotes, bobcats, barred owls American crows and starlings.

(c) Fallow deer, sambar deer, axis deer, sika deer, aoudad, mouflon, tahr and feral goats may be taken only with the equipment and ammunition specified in Section 353 of these regulations.

(d) Traps may be used to take nongame birds and nongame mammal only in accordance with the provisions of Section 465.5 of these regulations and sections 3003.1 and 4004 of the Fish and Game Code.



(e) No feed, bait or other material capable of attracting a nongame mammal may be placed or used in conjunction with dogs for the purpose of taking any nongame mammals. Nothing in this section shall prohibit an individual operating in accordance with the provisions of Section 465.5 from using a dog to follow a trap drag and taking the nongame mammal caught in that trap.

(f) The take or attempted take of any nongame bird or nongame mammal with a firearm shall be in accordance with the use of nonlead projectiles and ammunition pursuant to Section 250.1 of these regulations.

**5. Rationale (Required) –**

Barred owls are not native to the Western United States and are a threat to our native northern spotted owl and likely a threat to California spotted owls. The science is clear: Barred owl removal is necessary to prevent the extinction of the northern spotted owl. Current state law broadly prohibits the taking “any nongame bird” (FGC § 38000) and “any birds in the orders Falconiformes or Strigiformes” (FGC § 3503.5). Both prohibitions limit the ability of wildlife managers to take invasive barred owls to benefit native species, like the northern spotted owl and California spotted owl. The proposed regulation would allow for the California Department of Fish and Wildlife to permit the taking of non-native barred owls for the benefit of northern spotted owls or California spotted owls.

**SECTION II: Optional Information**

**6. Date of Petition:** September 24, 2021

**7. Category of Proposed Change**

☐ Sport Fishing

☐ Commercial Fishing

☐ Hunting

☒ Other, please specify: Take prohibitions for non-game species

**8. The proposal is to:** *(To determine section number(s), see current year regulation booklet or <https://govt.westlaw.com/calregs>)*

☒ Amend Title 14 Section(s): 475

☒ Add New Title 14 Section(s): 486

☐ Repeal Title 14 Section(s): [Click here to enter text.](#)

**9. If the proposal is related to a previously submitted petition that was rejected, specify the tracking number of the previously submitted petition** [Click here to enter text.](#)

Or ☒ Not applicable.

**10. Effective date:** If applicable, identify the desired effective date of the regulation.

If the proposed change requires immediate implementation, explain the nature of the emergency: [Click here to enter text.](#)

**11. Supporting documentation:** Identify and attach to the petition any information supporting the proposal including data, reports and other documents:

Attached to this petition, please find:



Peery, Zach; Wiens, David; Bown, Robin; Carlson, Peter C.; Dugger, Katie; Dumbacher, Jack; Franklin, Alan B.; Hamm, Keith A.; Higley, Mark; Keane, John J. 2018. Barred owl research needs and prioritization in California. Sacramento, CA: California Department of Fish and Wildlife.

Wiens, J. David, Katie M. Dugger, J. Mark Higley, Damon B. Lesmeister, Alan B. Franklin, Keith A. Hamm, Gary C. White et al. "Invader removal triggers competitive release in a threatened avian predator." Proceedings of the National Academy of Sciences 118, no. 31 (2021).

**12. Economic or Fiscal Impacts:** Identify any known impacts of the proposed regulation change on revenues to the California Department of Fish and Wildlife, individuals, businesses, jobs, other state agencies, local agencies, schools, or housing: [Click here to enter text.](#)

**13. Forms:** If applicable, list any forms to be created, amended or repealed:  
Permit application for barred owl removal permit.

### SECTION 3: FGC Staff Only

Date received: Oct 14, 2021 |

FGC staff action:

☒ Accept - complete

☐ Reject - incomplete

☐ Reject - outside scope of FGC authority

Tracking Number

Date petitioner was notified of receipt of petition and pending action: \_\_\_\_\_ |

Meeting date for FGC consideration: Dec 15-16, 2021 \_\_\_\_\_ |

FGC action:

☐ Denied by FGC

☐ Denied - same as petition \_\_\_\_\_ |

Tracking Number

☐ Granted for consideration of regulation change



Received by CA Fish and Game  
Commission on 9/30/21

**Note: This petition is currently under review by FGC staff  
and has not been formally accepted**

Tracking Number: (2021-019)

To request a change to regulations under the authority of the California Fish and Game Commission (Commission), you are required to submit this completed form to: California Fish and Game Commission, (physical address) 1416 Ninth Street, Suite 1320, Sacramento, CA 95814, (mailing address) P.O. Box 944209, Sacramento, CA 94244-2090 or via email to FGC@fgc.ca.gov. Note: This form is not intended for listing petitions for threatened or endangered species (see Section 670.1 of Title 14).

Incomplete forms will not be accepted. A petition is incomplete if it is not submitted on this form or fails to contain necessary information in each of the required categories listed on this form (Section I). A petition will be rejected if it does not pertain to issues under the Commission's authority. A petition may be denied if any petition requesting a functionally equivalent regulation change was considered within the previous 12 months and no information or data is being submitted beyond what was previously submitted. If you need help with this form, please contact Commission staff at (916) 653-4899 or FGC@fgc.ca.gov.

## SECTION I: Required Information.

*Please be succinct. Responses for Section I should not exceed five pages*

### 1. Person or organization requesting the change (Required)

Name of primary contact person: John Riera

Address:

Telephone number:

Email address:

### 2. Rulemaking Authority (Required) - Reference to the statutory or constitutional authority of the Commission to take the action requested: [Click here to enter text](#)

California Fish and Game Commission

### 3. Overview (Required) - Summarize the proposed changes to regulations: [Click here to enter text](#)

For 30 years it was Catch and Release  
This year it went to Kill 5 fish and bait

### 4. Rationale (Required) - Describe the problem and the reason for the proposed change: [Click here to enter text](#)

why did it go from catch  
and release no bait to catch and kill  
in 2021?

## SECTION II: Optional Information

### 5. Date of Petition: [Click here to enter text](#) 9/2/2021

### 6. Category of Proposed Change

☒ Sport Fishing

☐ Commercial Fishing

☐ Hunting

☐ Other, please specify: [Click here to enter text](#)

Martis Creek Reservoir



Mantis Creek Reservoir

7. **The proposal is to:** (To determine section number(s), see current year regulation booklet or <https://govt.westlaw.com/calregs>)

- ☐ Amend Title 14 Section(s): Click here to enter text.  
☐ Add New Title 14 Section(s): Click here to enter text.  
☐ Repeal Title 14 Section(s): Click here to enter text.

change the Regulations they were in 2020 back to what

8. **If the proposal is related to a previously submitted petition that was rejected, specify the tracking number of the previously submitted petition** Click here to enter text.  
Or ☒ Not applicable.

9. **Effective date:** If applicable, identify the desired effective date of the regulation. If the proposed change requires immediate implementation, explain the nature of the emergency: Click here to enter text. April 1st, 2022

10. **Supporting documentation:** Identify and attach to the petition any information supporting the proposal including data, reports and other documents: Click here to enter text.

last years regulations - zero limit bait

11. **Economic or Fiscal Impacts:** Identify any known impacts of the proposed regulation change on revenues to the California Department of Fish and Wildlife, individuals, businesses, jobs, other state agencies, local agencies, schools, or housing: Click here to enter text.  
none

12. **Forms:** If applicable, list any forms to be created, amended or repealed:  
Click here to enter text.

### SECTION 3: FGC Staff Only

Date received: Click here to enter text.

FGC staff action:

- ☐ Accept - complete  
☐ Reject - incomplete  
☐ Reject - outside scope of FGC authority

Tracking Number

Date petitioner was notified of receipt of petition and pending action: \_\_\_\_\_

Meeting date for FGC consideration: \_\_\_\_\_

FGC action:

- ☐ Denied by FGC  
☐ Denied - same as petition \_\_\_\_\_  
Tracking Number  
☐ Granted for consideration of regulation change

on River TO:

P.O. Box 944209

27 SEP 2021 PM 3 L

Sacramento, CA

94244-2090

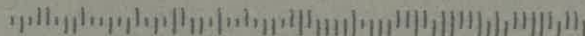
Calif. Game Fish and Game

Commission

1416 Ninth Street, Suite 1320

Sacramento, CA 95814

9581435515 C079



ysical -

cd  
9/30/21



Tracking Number: (2021-021)

To request a change to regulations under the authority of the California Fish and Game Commission (Commission), you are required to submit this completed form to: California Fish and Game Commission, (physical address) 1416 Ninth Street, Suite 1320, Sacramento, CA 95814, (mailing address) P.O. Box 944209, Sacramento, CA 94244-2090 or via email to FGC@fgc.ca.gov. Note: This form is not intended for listing petitions for threatened or endangered species (see Section 670.1 of Title 14).

Incomplete forms will not be accepted. A petition is incomplete if it is not submitted on this form or fails to contain necessary information in each of the required categories listed on this form (Section I). A petition will be rejected if it does not pertain to issues under the Commission's authority. A petition may be denied if any petition requesting a functionally equivalent regulation change was considered within the previous 12 months and no information or data is being submitted beyond what was previously submitted. If you need help with this form, please contact Commission staff at (916) 653-4899 or FGC@fgc.ca.gov.

## **SECTION I: Required Information.**

*Please be succinct. Responses for Section I should not exceed five pages*

### **1. Person or organization requesting the change (Required)**

Name of primary contact person: Alastair Bland.

Address: [REDACTED]

Telephone number: [REDACTED]

Email address: [REDACTED]

### **2. Rulemaking Authority (Required) - Reference to the statutory or constitutional authority of the Commission to take the action requested: Sections 110, 200, 205, 265 and 275, Fish and Game Code. Reference: Sections 110, 200, 205, 265, 270 and 275, Fish and Game Code..**

### **3. Overview (Required) - Summarize the proposed changes to regulations: I would like to see the recreational daily bag limit for California halibut reduced from 3 to 1 in state waters between Point Reyes and Bodega Head. This would reduce fishing pressure on the Tomales Bay halibut population, which in my opinion, and that of others with whom I've spoken personally, has been depleted by recreational and commercial fishing pressure, mostly inside the bay. I am asking that you consider investigating this and/or modifying the current fishing regulations...**

**Rationale (Required) - Describe the problem and the reason for the proposed change:** There is no doubt in my mind that the halibut of the Tomales Bay population are smaller and fewer than in the past -- even compared to just five years ago. I have fished and dived the waters of Tomales Bay since 2009. I have spent many hours on the seafloor of the bay. My personal observations of fewer and fewer halibut each season suggest a rapid decline in the halibut population of Tomales Bay, most markedly since 2018. The apparent decline corresponds to a huge surge in fishing activity inside Tomales Bay, driven (I believe) by social media combined with easy access.

Diving Tomales Bay involves drifting with the tide and repeatedly diving to the bottom, where one scans a roughly 2-meter-wide ribbon of seafloor. In this fashion, it is possible for a breath-hold diver, in one outing, to make a visual survey of a one-mile-long, 2-meter-wide transect of the seafloor. Under such methods and



parameters, I could as recently as 2015 expect to see between, approximately, 3 and 7 halibut per free-diving outing. The fish were abundant. Sightings, however, have plunged. In 2018 and 2019, I spotted an average of 2 halibut per outing. In 2020, I saw 0.4 halibut per outing (18 outings total). This season, I have spotted 8 halibut in 10 outings. The fish are now, in my view, rare. (I occasionally spear a halibut for home utilization, but I am ready to retire from this fishery.)

I believe such a rapid decline as I am describing is very feasible considering the size and orientation of Tomales Bay, and the explosion in fishing activity observed in the past several years. This body of water is small, and there is no corner of the bay inaccessible to anglers. Tomales Bay is also calm and navigable almost every day of the year. All summer (and to a lesser extent spring and fall), the halibut which have entered the bay to spawn are heavily fished. The favored fishing area around Hog Island is barely half a mile from the Miller Park boat launching site, making access very easy, both for kayakers and motorboaters.

I have observed that recreational fishing regulations for groundfish are modified and tweaked almost annually. I feel the time is long overdue to review the regulations on California halibut. I would be very sorry to see fishing closed reactively as a response to extreme depletion of the population. More favorable would be a proactive action of merely reducing the allowable take and, perhaps, requiring that anglers use barbless hooks. This would protect undersized "shakers" which are easily torn apart in the release process when caught on barbed hooks. |

## **SECTION II: Optional Information**

**4. Date of Petition:** [September 9, 2021.]

**5. Category of Proposed Change**  
X Sport Fishing

**6. The proposal is to:**  
Amend Title 14 CCR 28.15. Halibut, California.

**7.**

CURRENT TEXT: (a) Limit: Five in waters south of a line extending due west magnetic from Point Sur, Monterey County, and three in waters north of a line extending due west magnetic from Point Sur, Monterey County.

AMENDED TEXT: (a) Limit: Five in waters south of a line extending due west magnetic from Point Sur, Monterey County and three in waters north of a line extending due west magnetic from Point Sur, Monterey County, with the exception of waters north of a line extending due west magnetic from Point Reyes and south of a line extending due west magnetic from Bodega Head, in which the daily bag limit for CA halibut is one.

**8. If the proposal is related to a previously submitted petition that was rejected, specify the tracking number of the previously submitted petition** [Click here to enter text.]  
Or X Not applicable.



9. **Effective date:** If applicable, identify the desired effective date of the regulation. If the proposed change requires immediate implementation, explain the nature of the emergency: April 1, 2022.
10. **Supporting documentation:** Identify and attach to the petition any information supporting the proposal including data, reports, and other documents: Unavailable.
11. **Economic or Fiscal Impacts:** Identify any known impacts of the proposed regulation change on revenues to the California Department of Fish and Wildlife, individuals, businesses, jobs, other state agencies, local agencies, schools, or housing: I have not assessed this..
12. **Forms:** If applicable, list any forms to be created, amended or repealed:  
[Click here to enter text.](#)

### SECTION 3: FGC Staff Only

Date received: Sept 9, 2021.

FGC staff action:

- ☐ Accept - complete  
☐ Reject - incomplete  
☐ Reject - outside scope of FGC authority

Tracking Number

Date petitioner was notified of receipt of petition and pending action: \_\_\_\_\_

Meeting date for FGC consideration: Receive Oct 14, 2021. Consider Dec 15-16, 2021

FGC action:

- ☐ Denied by FGC  
☐ Denied - same as petition \_\_\_\_\_

Tracking Number

- ☐ Granted for consideration of regulation change

**CALIFORNIA FISH AND GAME COMMISSION**  
**RECEIPT LIST FOR NON-REGULATORY REQUESTS RECEIVED BY 5:00 PM ON**  
**SEPTEMBER 30, 2021 PUBLIC COMMENT DEADLINE FOR THIS MEETING**

<b>Name/Organization of Requestor</b>	<b>Subject of Request</b>	<b>Short Description</b>	<b>FGC Receipt Scheduled</b>	<b>FGC Action Scheduled</b>
Jeanne Panek	Suspend hunting season this year	Requests that hunting season be suspended this year in order to decrease fire risks.	10/14/21	12/15-16/21
James Ahrens	Kern River fisheries management	Asks to place on the next FGC meeting agenda a discussion of Kern River management issues, including diversions to the Kern River Hatchery, reintroduction of rainbow trout, enforcement, relicensing of the diversion dam known as Fairview Dam, and a fisheries management plan.	10/14/21	12/15-16/21

**From:** Jeanne Panek <[REDACTED]>  
**Sent:** Thursday, August 19, 2021 9:01 AM  
**To:** Cornman, Ari@FGC; FGC; Wildlife R2 Information  
**Subject:** I urge you to suspend hunting season this year

Dear Ari Cornman, Fish and Game Commission, and California Dept. Fish and Wildlife,

I urge you to suspend hunting season this year.

As a past UC Berkeley forest ecologist and Calaveras county homeowner, I'm writing to express my deep concern about fire danger during hunting season. Last year hunting remained open on public forest land, despite extreme wildfire activity and wildfire vulnerability on our national forests.

PG&E cut power to homeowners like my family and neighbors last hunting season for days to weeks during PSPS events due to fire danger and high winds. Meanwhile I observed numerous hunters disregarding fire safety at remote undeveloped sites in the Stanislaus Forest. I saw open-pit fires, also unattended fires, and fires on high-wind days. Most hunters camp responsibly, however it takes just one out-of-control fire to devastate many lives, as we're experiencing now in 2021.

California is entering one of the worst wildfire seasons in its history. Evacuations are ongoing throughout the state as people lose their lives, homes and livelihoods to fires. Please consider the devastation and loss experienced by these people. Please suspend the hunting season to protect people, homes, and our forests.

Sincerely,

Jeanne Panek, PhD

--

*Writer, ecologist, mountain search-and-rescue*  
[www.JeannePanek.com](http://www.JeannePanek.com)  
[@Hobbitbook\\_](#)

**From:** Jim Ahrens <[REDACTED]>  
**Sent:** Monday, September 27, 2021 10:44 AM  
**To:** FGC  
**Subject:** FW: Follow up on Kern River Issues

California Fish & Game Commission

Please place Kern River issues on your next meeting agenda. These issues are detailed in my email to Valerie Cook which are outlined in the attached email.

Thank you Jim Ahrens  
Board Member  
Kern River Fly Fishers

James F Ahrens  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

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**From:** Cook, Valerie@Wildlife <Valerie.Cook@wildlife.ca.gov>  
**Sent:** Friday, September 17, 2021 3:48 PM  
**To:** Jim Ahrens <[REDACTED]>  
**Subject:** RE: Follow up on Kern River Issues

Good afternoon, Mr. Ahrens.

Message received. Thank you for reaching out and for providing the documentation and written concerns. This is not an issue that I am readily familiar with so I will connect with Roger and our regional folks to come up to speed and then get back to you.

Thank you again for your engagement during yesterday's WRC meeting, and have a nice weekend,

Valerie

Valerie Cook, Acting Chief  
Fisheries Branch  
California Department of Fish and Wildlife  
[Valerie.Cook@wildlife.ca.gov](mailto:Valerie.Cook@wildlife.ca.gov)

---

**From:** Jim Ahrens <[REDACTED]>  
**Sent:** Friday, September 17, 2021 3:14 PM  
**To:** Cook, Valerie@Wildlife <[Valerie.Cook@wildlife.ca.gov](mailto:Valerie.Cook@wildlife.ca.gov)>  
**Subject:** FW: Follow up on Kern River Issues

2<sup>nd</sup> try

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**From:** Jim Ahrens  
**Sent:** Friday, September 17, 2021 2:48 PM  
**To:** [Valerie.Cook-Fletcher@wildlife.ca.gov](mailto:Valerie.Cook-Fletcher@wildlife.ca.gov)  
**Subject:** Follow up on Kern River Issues

Valerie Cook

I am following up on my remarks made at the Wildlife Resources Committee of September 16, 2021. You will recall that I raised several concerns about how the Kern River was being managed by CDFW.

The major issues that I raised was the Department's refusal to end the 35 cfs diversion of water to the defunct Kern River Hatchery. I have included three documents in this email which will bring you up to speed. The first document is a copy of the email that Mr. Brett Duxbury sent to the Department requesting an end to this diversion. The second document is a response from Jennifer Hill, a staff analyst from the Department. The third Document is from Mr. Larry Elman, who outlines the Kern River Fly Fishers (KRFF) concerns and disappointment with the CDFW response. You will receive hard copies of these documents.

It is my hope, by raising these issues, that we can begin a dialogue with the Department and the Commission on the management of the Kern River Fishery. There are a number of issues that need to be addressed in addition to adequate river flows. These include the reintroduction of the Kern River Rainbow, lack of regulation enforcement on the Kern, adequate Game Warden availability, relicensing of KR-3 which is the Fairview Dam, the Department's position on relicensing and a revised CDFW management plan for the Kern River Fishery. For fifteen years the Department has promised that it would produce a new Upper Kern River Fisheries Management plan and has failed to do so. Speak to

your staff and ask them where the plan is? The Kern River Management Plan is important for the development of a viable fishery and is a necessary document needed in the relicensing process.

I and other members of KRFF would be willing to travel to Sacramento and meet with you and any staff members or Commission members that you feel should be at the meeting.

We look forward to working with you.

Jim Ahrens  
KRFF Board Member

James F Ahrens

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

RECEIVED BY THE  
CALIFORNIA FISH AND GAME  
COMMISSION  
9/22/21

September 17, 2021  
Jennifer Hill  
Staff Services Analyst  
California Department of Fish and Wildlife  
1234 E Shaw Ave  
Fresno CA 93710

Dear Ms. Hill:


I am dismayed at your July 08, 2021, response to Brett Duxbury of Kern River Boaters about inadequate minimum flows on the Kern River. Your email appears to side first and foremost with So Cal Edison, and not the mandate of your office, which is to serve and protect the fishery and river-dependent wildlife on the North Fork Kern River. We fully understand that rules and regulations govern the flows on the Kern, and that So Cal Edison has the right for now to operate the Fairview Dam and generate electricity. However, Mr. Duxbury's letter correctly points out that CDFW has the legal right to increase flows on the NF Kern at this moment — flows which are 60% below the minimum instream flow regime (40 cfs vs. 100 cfs) — yet CDFW has not done so.

The Kern River Fly Fishers Council is forming to support a healthy fishery on the Kern. A healthy, sustainable fish population in the Kern depends on adequate flows. It is worrisome that your department seems more concerned with an energy corporation's operations than with the health of the river. Yes, So Cal Edison has the right to divert some water. They do not have the right to divert more water than regulations set out by FERC.

You mention in your email that the Hatchery is getting agreed upon water for raising trout. You mention that the Hatchery will be up and running again ASAP. In fact, the Hatchery is shut down and raising no fish at this time. In fact, you have no specific schedule to repair and re-open the Hatchery at this time. You do not even cite a funding source or funding amounts.

The CDFW is quoted on the Kern River Wikipedia page about the closure of the hatchery: "On December 1st 2020, after 3 years of extensive renovations, the hatchery was closed down by [California Department of Fish and Wildlife](#), after just 20 months after being reopened. According to CDFW, the hatchery is closed for repairs with the primary focus on 'replacement of a pipeline that is more than 50 years old and no longer adequately provides a reliable water supply for fish production.'<sup>[4]</sup> There is currently no date set for reopening the hatchery. Despite the closure of the hatchery, the hatchery still diverts 35 cfs year-round<sup>[5]</sup> from the North Fork Kern River at the expense of North Fork Kern fishery and its biome."

While the Hatchery is down, while it is not operating, it is imperative that no water is diverted there. Any water designated for the Hatchery at this moment in time should be flowing uninterrupted down the 16 mile stretch between Fairview Dam and the Hatchery. The Kern River Fly Fishers Council requests the CDFW uphold the integrity of its mission and protect the wild and scenic North Fork Kern River.

Sincerely,  
  
Larry Elman  
President  
Kern River Fly Fishers Council

Copies to the following:

Julie Vance  
Region 4  
CDFW  
1234 Shaw Ave  
Fresno CA93710

Valerie Cook  
CDFW  
Acting Branch Chief  
1010 Riverside Parkway  
West Sacramento CA 95605

Frank Blackett Regional Engineer  
Office of Energy Projects  
Division of Dam Safety Projects  
San Francisco Regional Office  
100 First St  
Suite 2300  
San Francisco CA 94105S

Kimberly D. Bose  
Secretary  
FERC  
888 First Street NE Room 1-A  
Washington DC 29426

Melissa Miller Hanson  
Executive Director  
CA Fish & Game Commission  
P.O Box 944209  
Sacramento Ca 94244-2090

Charlton Bonham  
Executive Director  
CDFW  
1416 9<sup>th</sup> St 12th Floor  
Sacramento, Ca 95814

Sharon Tapia  
Chief  
CA Dept of Water Resources  
Division of Safety of Dams  
P.O. Box 942836  
Sacrament Ca 94236

**From:** George Burkhardt <[REDACTED]>  
**Sent:** Tuesday, August 17, 2021 4:58 PM  
**To:** FGC  
**Subject:** Re: Why are Stripped Bass Protected with size/take limits?

Thank you very much for providing me with your Fisheries Policies, which actually supports my opinion/concern. Firstly - I simply copied/pasted the exact wording from 8 different sections of the Policies that clearly support my view that predatory non-native Striped Bass should not continue to be protected at the detriment of other native listed species. (Although the copied sections are listed in chronological order; please ignore the incorrect computer generated numbering.

## 1. Anadromous Rainbow Trout

It is the policy of the Fish and Game Commission that:

1. Anadromous rainbow trout, commonly called steelhead, shall be managed to protect and maintain the populations and genetic integrity of all identifiable stocks. Naturally spawned anadromous rainbow trout shall provide the foundation of the Department's management program.

2.

1. Recognizing that listed species have highest priority, the Department shall manage Delta fisheries to protect and enhance each species' abundance, distribution, and genetic integrity to support their resiliency and (where applicable) recovery.
2. Domesticated or non-native fish species will not be planted, or fisheries based on them will not be developed or maintained, in drainages of anadromous rainbow trout waters, where, in the opinion of the Department, they may adversely affect native anadromous rainbow trout populations by competing with, preying upon, or hybridizing with them

3. The Department shall manage Delta fisheries in a manner that provides for maximizing sustainable recreational angling opportunities while avoiding or minimizing adverse effects to native and listed species, species of greatest conservation need, and recovery activities.

4. Salmon

It is the policy of the Fish and Game Commission that:

1. Salmon shall be managed to protect, restore, and maintain the populations and genetic integrity of all identifiable stocks. Naturally spawned salmon shall provide the foundation for the Department's management program.
2. Domesticated or non-native fish species will not be planted, or fisheries based on them will not be developed or maintained, in drainages of salmon waters, where, in the opinion of the Department, they may adversely affect native salmon populations by competing with, preying upon, or hybridizing with them.
3. The Department shall ensure that actions to increase striped bass abundance are consistent with the Department's long-term mission and public trust responsibilities including those related to threatened and endangered species and other species of greatest conservation need.

4. Trout

It is the policy of the Fish and Game Commission that:

1. Natural reproduction and rearing of trout will be encouraged to the greatest extent possible by protecting and improving habitat and by affording protection from disease, predators and competing fish species.

Secondly - I copied/pasted the following from your website showing your agency has successfully in the past acted appropriately to not just

minimize, but to completely eliminate another non-native predator of these listed species:

Northern pike are not currently found in California. Northern pike were found in Frenchman Reservoir in Plumas County, California in 1988, and were eradicated from the reservoir in 1991 and tributary streams in the Sierra Valley in 1992. Northern pike were discovered in Lake Davis, Plumas County in 1994. An unsuccessful eradication effort occurred in 1997 and northern pike were found again in Lake Davis in 1999.

Northern pike were successfully eradicated from California in 2007.

Northern pike are native to Eurasia and North America, including most of Canada, Alaska and the interior northern United States from northwestern Vermont and northern West Virginia in the east, across the Great Lakes Region to northeastern Montana and northeastern Kansas in the west. Northern pike are currently found in many areas outside of their native range in the United States and Europe, and have also been introduced to Africa.

Northern pike are one of the most popular game fish in the world due to their aggressive behavior during pursuit of prey.

Northern pike are on California's list of restricted animals and cannot be imported, transported, or possessed without a permit.

Northern pike are aggressive predators at the top of the food chain. Their diet consists mainly of fish, but they will also eat frogs, snakes, small mammals, and birds if given the opportunity. In areas where northern pike have been introduced, they have altered fish community composition and reduced fish species diversity (including eliminating native species) through predation and competition. If northern pike were to become established in California, they would pose a serious threat to many native fish species populations, including salmon and trout.

## Actions Taken if Found

Per California Code of Regulations (Title 14), any northern pike found in California **shall be killed immediately** by removing the head. CDFW shall be contacted as soon as possible and within 24 hours by calling (888) 334-2258.


In conclusion:

A. The above descriptions of Northern Pike are synonymous with Striped Bass.

B. I have fished Lake Davis where only after Northern Pike were finally/fully eradicated; it once again became the Trophy Trout Lake it was originally.

C. I fail to understand, per your own policies, why Striped Bass are not treated the same way Northern Pike were/are.

D. I wonder how many millions of dollars could be saved and/or redeployed (instead of now spent to maintain our listed species devoured by Striped Bass), if Striped Bass were instead eliminated (as were Northern Pike).

Regards, George 

On Tue, Aug 17, 2021 at 3:49 PM FGC <[FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov)> wrote:

Dear George Burkhardt,

Thank you for contacting the California Fish and Game Commission (Commission). We appreciate your inquiry.

Though they are not a native species, striped bass have been established in California for a very long time and have become a popular and robust sport fishery in the state. As such, the Commission is in the business of balancing their conservation and management goals alongside those of other species in California.

If you are interested, included here is a link to the Commission's [Fisheries Policies](#). The policies for striped bass and the Delta can both be found on that page.

Thank you again for contacting the CA Fish and Game Commission. Have a great day!

Sincerely,

David H  
Commission Staff

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**From:** George Burkhardt <[REDACTED]>  
**Sent:** Thursday, August 5, 2021 12:20 PM  
**To:** FGC <[FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov)>; Macintyre, Kirsten@Wildlife <[Kirsten.Macintyre@wildlife.ca.gov](mailto:Kirsten.Macintyre@wildlife.ca.gov)>  
**Subject:** Why are Stripped Bass Protected with size/take limits?

I ask because they are non-native, & are the scientifically proven Apex predators of the following threatened species (which require never ending extensive/expensive conservation efforts):

Smelt  
Salmon  
Trout

Regards,  
George Burkhardt

[REDACTED]  
[REDACTED]  
[REDACTED]

**From:** afa@mcn.org  
**Sent:** Sunday, August 22, 2021 12:15 PM  
**To:** Wildlife DIRECTOR; Office of the Secretary CNRA; FGC  
**Subject:** YELLOW-LEGGED FROGS -live food markets

EAST BAY TIMES, Letter to Editor, Sunday August 22, 2021. Also appears in SAN JOSE MERCURY-NEWS.

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NON-NATIVE FROG A THREAT TO REPOPULATION PLAN I was pleased to read about the Oakland Zoo's threatened yellow-legged frog project (8/12). Kudos to all. These native frogs haven't much of a chance until the state's non-native American bullfrog problem is addressed. California annually imports TWO MILLION American bullfrogs for human consumption. These frogs are routinely released into local waters, where they prey upon and displace the native species. The majority of the market bullfrogs test positive for a chytrid fungus (Bd), which has caused the extinctions of some 200 amphibian species worldwide in recent years. The bullfrogs' continued presence in California is a major threat to the yellow-legged frogs, et al. Despite major public pressure since the mid-1990's, the California Dept. of Fish and Wildlife (DFW) continues to issue import permits for these non-native frogs, imperiling our native species and the public health. Permit issuance should cease immediately. Non-native turtles, too.

WRITE: DFW director Chuck Bonham, email – [director@wildlife.ca.gov](mailto:director@wildlife.ca.gov)

Sincerely,

Eric Mills, coordinator

ACTION FOR ANIMALS

Oakland

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**From:** afa@mcn.org  
**Sent:** Saturday, September 4, 2021 6:30 PM  
**To:** Wildlife DIRECTOR; Office of the Secretary CNRA; FGC  
**Cc:** Mitchell, Karen@Wildlife  
**Subject:** FLORIDA FRESHWATER TURTLES - another fatal virus

Yet another reason to stop the non-native frog/turtle imports. As if Bd weren't enough.

Anyone have any idea of the numbers of Florida turtles imported into California annually for the live food markets?

A response would appreciated.

x  
Eric Mills, coordinator  
ACTION FOR ANIMALS  
Oakland

----- Original Message -----  
Subject: FLORIDA FRESHWATER TURTLES - another fatal virus  
From: afa@mcn.org  
Date: Sat, September 4, 2021 6:22 pm  
To: afa@mcn.org  
-----

<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.palmbeachpost.com%2Fstory%2Fweather%2F2021%2F09%2F03%2Fflorida-freshwater-turtles-dying-new-virus-and-fwc-asking-help%2F5710579001%2F&data=04%7C01%7Cf%40fgc.ca.gov%7C84ccb70eecd45b35c6908d9700cb682%7C4b633c25efbf40069f1507442ba7aa0b%7C0%7C1%7C637664022206098872%7CUnknown%7CTWFpbGZsb3d8eyJWljoIMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IklhaWwiLCJXVCi6Mn0%3D%7C2000&sdata=pk8JguqT3tzWlgcrZDKKItHvy%2FQKkWpz7Z59MkL0Kxs%3D&reserved=0>

**From:** afa@mcn.org  
**Sent:** Saturday, September 4, 2021 3:49 PM  
**To:** Wildlife DIRECTOR; Office of the Secretary CNRA; FGC  
**Subject:** [Fwd: WORLDWIDE SPECIES EXTINCTIONS....]

----- Original Message -----

Subject: WORLDWIDE SPECIES EXTINCTIONS....

From: afa@mcn.org

Date: Sat, September 4, 2021 3:43 pm

To: afa@mcn.org

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<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.cnn.com%2F2021%2F09%2F04%2Fworld%2Fextinction-faced-by-28-percent-of-assessed-species%2Findex.html&data=04%7C01%7Cfgc%40fgc.ca.gov%7C7197143f2df34b04168608d96ff6266f%7C4b633c25efbf40069f1507442ba7aa0b%7C0%7C0%7C637663925287079709%7CUnknown%7CTWFPbGZsb3d8eyJWljoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikh1haWwiLCJXVCi6Mn0%3D%7C1000&reserved=0>

FYI -

And almost entirely HUMAN-caused.....Putting an end to the non-native frog/turtle imports might be a good place to start.

x

Eric Mills, coordinator  
ACTION FOR ANIMALS  
Oakland

**From:** Lance Evans <[REDACTED]>  
**Sent:** Wednesday, September 8, 2021 10:47 PM  
**To:** FGC  
**Subject:** Petition 2021-007

I am writing in support of this petition, we here in California should be leading the way with innovation and new ideas. We are behind the times when it comes to air gun hunting. Here are some states and the largest animals they allow to be taken with an airgun.

Idaho- moose, elk 45cal or larger

Utah- bison, elk arrow shooting airguns only

Arizona- bison elk 40cal or larger

Texas- mule deer 30cal or larger

North Dakota- elk 45cal or larger

Florida- white tail deer 35cal or larger

As you probably know there are many other states that have for years allowed airgun hunting for big game.

With the airguns that are being produced these days they have more than enough power to take down any animal in California.

This could also open hunting to those that are afraid of the kick or sound of an actual firearm. My daughter will not shoot a firearm but she enjoys bow hunting, crossbow hunting. She would hunt with a powerful air gun.

Thanks,  
Lance

**From:** Mitchell Pearce <[REDACTED]>  
**Sent:** Sunday, September 12, 2021 7:08 PM  
**To:** FGC  
**Subject:** Against proposed hunting bans

Dear Commissioners:

It has come to my attention that people have requested consideration of banning hunting in all California state lands on the excuse that the increase in fires has somehow created a need to ban hunting, and some of you and/or your staff might want to support such a proposal without considering data on the subject. As of yet, there have been no studies on whether the increased fire activity has resulted in game overpopulation of lands adjacent to recent fires. If so, then increasing hunting in those areas would result in less starvation of survivors and less population stress on survivors. I've hunted lands many miles away from active fires. All the footprints of all game I tracked on those hunts were going away from the many mile away fires. Before acting on no data at all. Perhaps you all should first study the issue. Perhaps you'll find hunting provides the best method for stabilizing the migrant population and maintaining habitat that gets stressed due to population shifts caused by game movements away from fires. Moreover, hunting these lands to where game has migrated may keep your budgets in the black due to maintaining revenue. If there is no hunting, there should be no need for a commission that regulates hunting as one of its main functions. If you vote to ban hunting, the proper thing to do would also vote to slash your budget, your staff, your salaries, etc. to reflect the decreased workload and lessened need for your existence.

Mitchell Pearce, D.C., L Ac., D.A.C.B.N.  
[REDACTED]  
[REDACTED]

**From:** Melinda Lawler <[REDACTED]>  
**Sent:** Friday, September 17, 2021 4:10 PM  
**To:** FGC  
**Subject:** Recreational crab season

Really disappointed that the commission ignored the scientific evidence; recreational crab season does not impact whale mortality; commercial shipping is much more culpable. I voted for Gavin Newsom but won't do it again knowing he appointed you clowns.

Mike Wiens

Sent from my iPhone

**From:** Andrew Guiliano <[REDACTED]>  
**Sent:** Sunday, September 19, 2021 2:12 PM  
**To:** Fonbuena, Sherrie@FGC  
**Cc:** [REDACTED]  
**Subject:** Dungeness Crab Economic Impact

Sherrie,

I recently read your Economic Impact report regarding pending changes to the recreational Dungeness crab season. Unfortunately it's a distortion of the facts and drastically misrepresents the financial impact a Dungeness crab fishery delay will have on the CPFV community. The pending regulation modifications which increase fee's and create potential season opening delays to the recreational Dungeness season have the potential to **devastate** a CPFV fleet already struggling from Salmon season closures, pending CARB equipment requirements and Covid-19 impacts. In 2019 our CPFV fleet in Emeryville generated 26% of its annual business revenue from "Dungeness Crab Combo" trips. These are the industry's most popular trips, with advance reservations made several years in advance. A "Crab Combo" trip incorporates Dungeness crab trap fishing and rod and reel Rockfishing. CPFV's typically fish for Rockfish in the morning and retrieve crab traps in the afternoon. Anglers have the potential, particularly early in the season, to return with a limit of 10 Rockfish and 10 Crab. Due to the season structure of Rockfish (closes Dec 31), we are only able to offer these trips in November and December. The Bay Area CPFV fleet specifically only offer combo trips in these two months. Our season structure is fixed and lost days cannot be recovered. Should Director Bonham delay the start to our season, each day we loose we cannot recapture. This is not true with the Commercial crab fishery as the season typically runs into June or July. In 2020 our season lasted 53 days. If the pending regulations were in effect in 2020, our season would have been reduced to 3 days! 3 days! Your analysis stating the fleet has other options and suggesting a 98% effort shift is grossly inaccurate and a distortion of the facts as there are now, not in 2015/16.

Economic impact errors:

1. The comparison of the 2015/16 and 2016/17 season is fundamentally flawed. 2015 Dungeness crab was delayed due to Domoic acid, so NO CPFV crab trips were offered in 2015. Additionally, the overall fleet make up has changed. 2016 we Fish Emeryville managed 3 CPFV's carrying 60-70 passenger per day. In 2020 we managed 7, carrying 140 to 160 passengers per day

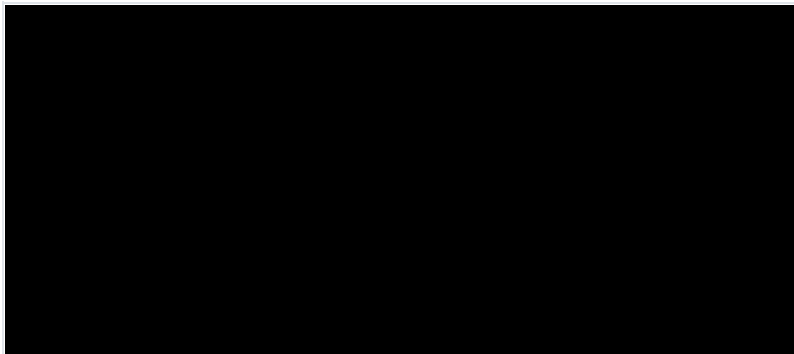
2 CPFV crab limits were increased in 2017 from 6 to 10 crab per angler, enhancing the value and interest in Combo trips. Rockfish regulations were also modified (increased depth limits from 30 to 50 fathoms) opening areas unfished since 2001, increasing the appeal of Combo trips with better quality Rockfishing.

3 For our CPFV fleet, as documented from our daily logbook submissions, Crab Combo trips accounted for 26% of our gross revenue in 2019, and 31% in 2020.

Sherrie, the Department continues in misunderstand the impact the pending Commission changes will have. We have expressed our concern regularly at Commission meetings, and both via telephone and emails with Ryan Bartling and Dr. Craig Shuman specifically. The scoping sessions and outreach the Department conducted during 2020 failed to capture the impact on the CPFV fleet. I am happy to discuss issues and share any insights I can to assist the department on Crab related fisheries.

Sincerely,

Andy Guiliano  
Golden Gate Fisherman's Association  
[Fish Emeryville](#)  
[Pacific Pearl Charters](#)



**Pacific Pearl Charters**

The premier fishing, tours and excursions charter company in the San Francisco Bay. With two fully equipped comm...

Pacific

**From:** afa@mcn.org  
**Sent:** Tuesday, September 21, 2021 6:44 PM  
**To:** Wildlife DIRECTOR; Office of the Secretary CNRA; FGC; Cornman, Ari@FGC  
**Cc:** Mitchell, Karen@Wildlife  
**Subject:** SINGAPORE BANS SALE OF FROGS/TURTLES IN LIVE MARKETS

<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.straitstimes.com%2Fsingapore%2Fsale-and-slaughter-of-live-turtles-frogs-banned-at-wet-markets-in-spore-due-to-health&data=04%7C01%7Cf9c%40fgc.ca.gov%7Caaeb4635af46476bf7c808d97d6a6d2a%7C4b633c25efbf40069f1507442ba7aa0b%7C0%7C1%7C637678718345751698%7CUnknown%7CTWFPbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IklhaWwiLCJXVCi6Mn0%3D%7C1000&sdata=mc%2BiEgP6HbDIfg2pyOqS54GuE3u4NfM3WbgzWdcaBuo%3D&reserved=0>

Can the U.S. be far behind? Sadly, yes.

x  
Eric Mills, coordinator  
ACTION FOR ANIMALS  
Oakland

**From:** Applebee, Daniel@Wildlife  
**Sent:** Friday, September 24, 2021 10:12 AM  
**To:** FGC; Thesell, Harold(David)@FGC  
**Subject:** FW: desert tortoise  
**Attachments:** 2021 Berry et al IUCN Red List.pdf

Forwarding a new publication related to desert tortoise for the Commission's record at Mr. Aardahl's request.

-Dan



Daniel Applebee  
California Department of Fish and Wildlife  
Conservation and Recovery Unit Supervisor  
West Sacramento, CA  
(916) 516-3178

**Remember California's Endangered Species  
on line 403 of your State Income Tax Form**

---

**From:** Jeff Aardahl <jaardahl@defenders.org>  
**Sent:** Friday, September 24, 2021 9:04 AM  
**To:** Applebee, Daniel@Wildlife <Daniel.Applebee@wildlife.ca.gov>  
**Subject:** desert tortoise

Hi Dan – I just received the attached report and wanted to make sure you have it, too.

The IUCN placed the desert tortoise on its Red List as a Critically Endangered species. Perhaps you could send this to the F&G Commission so they are aware.



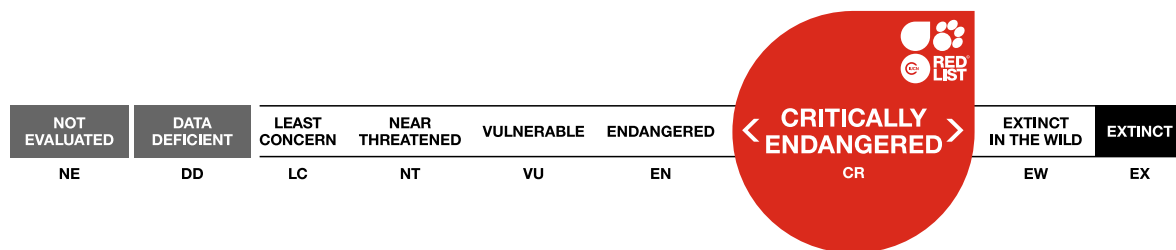
**Jeff Aardahl**  
California Representative

---

Defenders of Wildlife  
46600 Old State Hwy, Unit 13; Gualala, CA 95445  
**Tel:** 707-884-1169 |  
[JAardahl@defenders.org](mailto:JAardahl@defenders.org) | [www.defenders.org](http://www.defenders.org)

## *Gopherus agassizii*, Mojave Desert Tortoise

Assessment by: Berry, K.H., Allison, L.J., McLuckie, A.M., Vaughn, M. & Murphy, R.W.



View on [www.iucnredlist.org](http://www.iucnredlist.org)

**Citation:** Berry, K.H., Allison, L.J., McLuckie, A.M., Vaughn, M. & Murphy, R.W. 2021. *Gopherus agassizii*. The IUCN Red List of Threatened Species 2021: e.T97246272A3150871.

<https://dx.doi.org/10.2305/IUCN.UK.2021-2.RLTS.T97246272A3150871.en>

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## Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Reptilia	Testudines	Testudinidae

**Scientific Name:** *Gopherus agassizii* (Cooper, 1861)

### Synonym(s):

- *Xerobates agassizii* Cooper, 1861
- *Xerobates lepidocephalus* Ottley & Velázquez-Solis, 1989

### Common Name(s):

- English: Mojave Desert Tortoise, Agassiz's Desert Tortoise
- French: Gophère d'Agassiz, Tortue d'Agassiz
- Spanish; Castilian: Tortuga del Desierto

### Taxonomic Source(s):

TTWG (Turtle Taxonomy Working Group: Rhodin, A.G.J., Iverson, J.B., Bour, R. Fritz, U., Georges, A., Shaffer, H.B. and van Dijk, P.P.). 2017. Turtles of the World: Annotated Checklist and Atlas of Taxonomy, Synonymy, Distribution, and Conservation Status (8th Ed.). In: Rhodin, A.G.J., Iverson, J.B., van Dijk, P.P., Saumure, R.A., Buhlmann, K.A., Pritchard, P.C.H., and Mittermeier, R.A. (eds), *Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group*, pp. 1-292. Chelonian Research Monographs.

### Taxonomic Notes:

The Desert Tortoise was previously considered to be a single wide-ranging species, *Gopherus agassizii* (*sensu lato*), inhabiting the Mojave and Sonoran Desert regions of the southwestern USA and northwestern Mexico (Iverson 1992). The species was eventually found to be polytypic, and Murphy *et al.* (2011) split out the morphologically and genetically distinct Sonoran Desert subpopulations as *Gopherus morafkai*, the Sonoran Desert Tortoise. Further analysis demonstrated that *G. morafkai* was also polytypic and therefore split further to separate and describe the Sinaloan Thornscrub Tortoise further to the south as *G. evgoodei* (Edwards *et al.* 2016). This taxonomy of three species of desert tortoises has been accepted by TTWG (2017) and Berry and Murphy (2019).

## Assessment Information

**Red List Category & Criteria:** Critically Endangered A2abce+4abce [ver 3.1](#)

**Year Published:** 2021

**Date Assessed:** October 1, 2020

### Justification:

A provisional Red List Assessment of the widespread Desert Tortoise, *Gopherus agassizii* (*sensu lato*), was performed at a Desert Tortoise Council workshop in 2010 and updated by the IUCN Tortoise and Freshwater Turtle Specialist Group (TFTSG) in 2011, at which time the Mojave Desert subpopulation, now considered *G. agassizii* (*sensu stricto*) following taxonomic analysis and splitting into three separate

species (*G. agassizii*, *G. morafkai*, and *G. evgoodei*), was assessed as Critically Endangered A2bce+A4bce based on population reduction (decreasing density), habit loss of over 80% over three generations (90 years), including past reductions and predicted future declines, as well as the effects of disease (upper respiratory tract disease / mycoplasmosis). *Gopherus agassizii* (*sensu stricto*) comprises tortoises in the most well-studied 30% of the larger range; this portion of the original range has seen the most human impacts and is where the largest past population losses had been documented. A recent rigorous range-wide population reassessment of *G. agassizii* (*sensu stricto*) has demonstrated continued adult population and density declines of about 90% over three generations (two in the past and one ongoing) in four of the five *G. agassizii* recovery units and inadequate recruitment with decreasing percentages of juveniles in all five recovery units. As such, we reaffirm the prior assessment of the taxonomically restricted Mojave Desert Tortoise, *G. agassizii*, as Critically Endangered, and add criterion “a” for direct population observations: CR A2abce+A4abce. The previously defined widespread species *G. agassizii* (*sensu lato*) was last assessed as Vulnerable on the IUCN Red List in 1996; a separate assessment currently in progress by the TFTSG for the Sonoran Desert Tortoise, *G. morafkai* (previously considered part of *G. agassizii*) has provisionally assessed that species as Vulnerable.

## Geographic Range

### Range Description:

The Desert Tortoise was previously considered to be a single wide-ranging species, *Gopherus agassizii*, inhabiting the Mojave and Sonoran Desert regions of the southwestern United States and northwestern Mexico from southern California and Arizona through Sonora and into northern Sinaloa (Stebbins 1966, 2003; Iverson 1992). The species was found to be polytypic by Murphy *et al.* (2011), who split the morphologically and genetically distinct Sonoran Desert populations as *Gopherus morafkai*, the Sonoran Desert Tortoise. Further analysis demonstrated that *G. morafkai* was also polytypic and split further to separate and describe the Sinaloan Thornscrub Tortoise further to the south as *Gopherus evgoodei* (Edwards *et al.* 2016).

Geographically restricted *G. agassizii*, the Mojave or Agassiz’s Desert Tortoise, is endemic to the United States, inhabiting southeastern California, southern Nevada, southwestern Utah, and extreme northwestern Arizona west and north of the Colorado River (TTWG 2017, Berry and Murphy 2019). The Sonoran Desert Tortoise, *G. morafkai*, occurs in both the United States and Mexico, inhabiting Arizona south and east of the Colorado River, Sonora (including Isla Tiburón), and extreme northern Sinaloa (Murphy *et al.* 2011, TTWG 2017). The Sinaloan Thornscrub Tortoise, *G. evgoodei*, is endemic to Mexico and occurs in southern Sonora, northern Sinaloa, and extreme southwestern Chihuahua (Edwards *et al.* 2016, TTWG 2017).

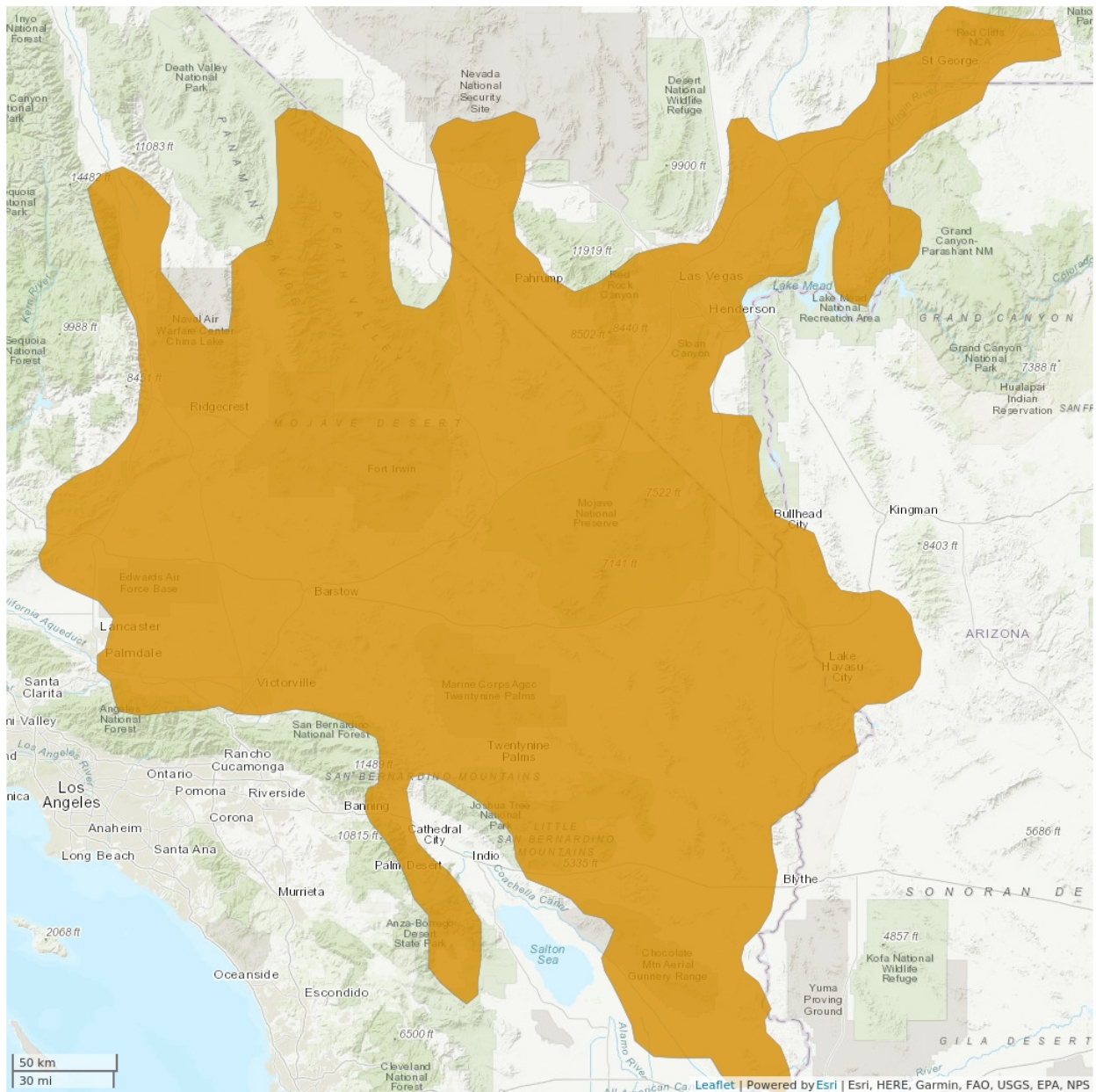
Within its geographic range, *G. agassizii* occurs in the Mojave Desert, the western Sonoran or Colorado Desert, the ecotone of the Mojave with the Great Basin Desert, and ecotones with vegetation types typical of higher elevations on the lower slopes of the Sierra Nevada, Transverse, Peninsular and desert mountain ranges (USFWS 1994). McLuckie *et al.* (1999) identified a subpopulation of *G. agassizii* east of the Colorado River in the Black Mountains of northwestern Arizona in which morphometric and mtDNA characteristics of the majority of the subpopulation were typically Mojavean; however, elements typical of tortoises in the Sonoran Desert were also evident. Edwards *et al.* (2015), using new genetic techniques, examined this and other nearby tortoise subpopulations, and identified hybrids (F2) in three mountain ranges near the Colorado River in Arizona. The two *Gopherus* species come in contact in

limited places where Mojave Desert habitats meet Sonoran Desert habitats. The two species likely maintain largely independent taxonomic identities due to ecological niche partitioning (Inman *et al.* 2019). The species has been recorded at elevations of up to 1,570 m asl (Rautenstrauch and O'Farrell 1998); however, tortoises may be found in unusual places, often transported by humans or other animals (e.g., the type specimen of *Xerobates leptocephalus* [Ottley and Velázquez-Solis 1989] from southern Baja California, Mexico, is actually an introduced *Gopherus agassizii* [Murphy *et al.* 2011]).

**Country Occurrence:**

**Native, Extant (resident):** United States (Arizona, California, Nevada, Utah)

# Distribution Map



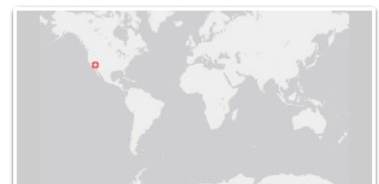
## Legend

EXTANT (RESIDENT)

Compiled by:

Chelonian Research Foundation 2021

NOT EVALUATED	DATA DEFICIENT	LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
NE	DD	LC	NT	VU	EN	CR	EW	EX



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.

## Population

Population estimates and trends have previously been difficult to obtain with certainty for large segments of *Gopherus agassizii* populations due to their patchy distribution, difficulty of detection, and associated statistical weaknesses of population estimates. Population data have been variously documented or reviewed by Woodbury and Hardy (1948), Hardy (1976), Berry (1984, 1986, 1989), Bury and Corn (1995), Freilich *et al.* (2000), Ernst and Lovich (2009), and Berry and Murphy (2019). A recent rigorous range-wide population reassessment of *G. agassizii* by Allison and McLuckie (2018) has demonstrated continued adult population declines in four of the five *G. agassizii* recovery units and inadequate recruitment with decreasing percentages of juveniles in all five recovery units and low densities in nearly all subpopulations near the minimum required to remain viable (3.9 adult tortoises/km<sup>2</sup>).

Between the 1930s and early 2000s, estimates of density and trends in populations were based on demographic data, habitat condition, and anthropogenic threats from both long- and short-term study plots of varying sizes, as well as reports by government agency personnel and expert observers (e.g., Woodbury and Hardy 1948; Hardy 1976; Berry 1984, 1989). The study plots were limited in number and did not represent the entirety of subpopulations across the geographic range (e.g., Berry 1984). The subpopulation on the Beaver Dam Slope, Utah, was federally listed as threatened in 1980 (USFWS 1980). A petition submitted by the Desert Tortoise Council in 1984 to list all wild populations in the United States was denied; the USFWS determined that listing of U.S. populations was warranted but precluded because of other higher priorities (USFWS 1985). In 1989 and 1990, the State of California and USFWS listed the tortoise as threatened (USFWS 1989, 1990; California Department of Fish and Wildlife 2016). The appearance of upper respiratory tract disease and rapidly declining populations in the western Mojave and a major decline in tortoises in parts of the western Sonoran (Colorado Desert, California) associated with appearance of shell disease were additional threats to the many causes of declines (USFWS 1990, 1994, and references therein). Reflecting its concern over these declines, USFWS (1994:3) stated that: “The most serious problem facing the remaining desert tortoise population is the cumulative load of human and disease-related mortality accompanied by habitat destruction, degradation, and fragmentation. Virtually every extant desert tortoise subpopulation has been affected by one or more of these factors.” As a result, the U.S. Department of the Interior (USFWS 1994) also designated federal critical habitat units for desert tortoises at that time. In October 2020, the California Fish and Wildlife Commission accepted a petition from Defenders of Wildlife to up-list wild desert tortoises from threatened to endangered status; California has the largest subpopulation and geographic range of the species. The petition is currently under consideration by the agency with a response estimated in 2021.

To better measure trends in densities of adult populations in the threatened subpopulations, the Recovery Team proposed development of a landscape scale program (USFWS 1994). At the same time, the Recovery Team also noted the importance of study plot data, because more population attributes were provided than density of adults. After experimenting with different techniques, the USFWS decided to use distance sampling and initiated a formal, range-wide program for estimating densities of adult populations in critical habitat units (USFWS 2015, and references therein).

In the first Recovery Plan (USFWS 1994), population size, viability, and sizes of protected areas were discussed. Assuming the minimum density of adults in a population was “approximately 10 adults per

square mile” (equivalent to 3.9 adults/km<sup>2</sup>), the target size for protected areas (then called Desert Wildlife Management Areas) was approximately 1,000 mi<sup>2</sup> (ca. 2,590 km<sup>2</sup>). This would ensure that even at such low densities and assuming half of such large areas might support no or few tortoises, each protected area would support enough adults for a genetically minimum viable population. The Recovery Team recommended six Recovery units with 12 different populations. The updated Recovery Plan (USFWS 2011) is based on the same number of populations but configured into five revised Recovery units with 17 different monitored subpopulations.

Most demographic data from study plots collected from the 1930s on the Beaver Dam Slope and between 1979–1980 in California and Nevada during the spring season indicated counts of 5–64 adult tortoises/km<sup>2</sup> (Berry and Murphy 2019). In describing trends between 1978 and 1990 in California, the USFWS summarized data from 10 study plots in the Mojave and Colorado deserts and reported a highly significant downward trend (USFWS 1994). Additional data for the period showed some populations with low but potentially stable densities in Nevada (Berry and Medica 1995). A review of population status (Tracy *et al.* 2004) considered updated information from the permanent study plots in California and found that population declines in the western part of the range in California continued and declines were perhaps beginning in the eastern part of the California range.

The current population trends are based on landscape-level assessment using distance sampling for the 11-year period between 2004 and 2014 (USFWS 2015, Allison and McLuckie 2018). The sampling represented all five recovery units with 16 subpopulations in critical habitat units of from 115 to 3,763 km<sup>2</sup> described in the original Recovery Plan (USFWS 1994). Joshua Tree National Park is treated as a protected area and monitored as a 17th subpopulation although not designated as critical habitat. Consistent downward trends have continued in four of the five recovery units, with 11 of the 17 subpopulations registering declines in adult tortoises ranging from 26.6 to 64.7% during the 11 years. Most of the increasing subpopulations were in Nevada. Population densities for adults ranged from 1.5 to 7.2/km<sup>2</sup> in declining populations as of 2014; the exceptions were adult densities in the Red Cliffs Desert Reserve (15.3/km<sup>2</sup>) and the Desert Tortoise Research Natural Area (10.2/km<sup>2</sup>) (Berry *et al.* 2014, 2020). Unfortunately, in July 2020, a significant part of the Red Cliffs Desert Reserve burned and tortoises were found injured and dead. The Red Cliffs subpopulation declined from 2005 wildfires and with the recent 2020 fires, there will likely be further depression in densities. The six subpopulations with increasing densities had 2.7 to 6.4 adults/km<sup>2</sup> in 2014. However, most of the 17 populations were near or below the 3.9 /km<sup>2</sup> density of adults considered as a minimum for viable populations (USFWS 1994, 2015).

**Current Population Trend:** Decreasing

## **Habitat and Ecology (see Appendix for additional information)**

The life history of *Gopherus agassizii* is typical of long-lived chelonians and has been reviewed by Berry and Murphy (2019). Tortoises require 17–20 years to reach sexual maturity at a straight-line carapace length (CL) of 18 cm or more (Woodbury and Hardy 1948, Turner *et al.* 1987, Medica *et al.* 2012). Variation in years is dependent on desert region, frequency of droughts, and quality of available forage. In the northern part of the geographic range, females smaller than 20.9 cm were not reproducing (Mueller *et al.* 1998). Maximum lifespan was estimated by Turner *et al.* (1987) at 75 years, but few live beyond 50 yrs in the wild (Germano 1992). Generation time was estimated to be 20–32 years (Turner *et al.* 1987, USFWS 1994). Based on data from three desert regions, mean sizes of females ranges from

21.4 to 23.1 cm, whereas the mean sizes of males ranged from 24.3 to 24.9 cm; the largest desert tortoises on record, a male, reached 38.1 cm carapace length (Stebbins 2003), whereas a female was 37.4 cm, but these animals were exceptions (Berry and Murphy 2019).

Mature females may lay clutches of one to 10 eggs in up to three clutches per year in spring and early summer; in some years, some females do not lay eggs (Rostal *et al.* 1994, Henen 1997, Mueller *et al.* 1998, Wallis *et al.* 1999, McLuckie and Fridell 2002, Ennen *et al.* 2012, Lovich *et al.* 2015). Annual fecundity ranges from 0 to 16 eggs (Mueller *et al.* 1998, Lovich *et al.* 2015). Several factors may affect egg production: site, year, size of female, size and number of eggs, and available water and protein from precipitation and forage in the year preceding egg laying, as well as the year eggs are laid (Henen 1997).

Incubation times for eggs range from 67 to 104 days (Burge 1977, McLuckie and Fridell 2002, Ennen *et al.* 2012). Hatching success varies and appears to depend on year, location of the nest, and whether it is the first or second clutch. Eggs may be infertile or broken during laying (e.g., 12%; Turner *et al.* 1987). Many nests are destroyed by predators before hatching and the loss of eggs (and nests) varies by year (Turner *et al.* 1987); they estimated an average loss of 37.1% of nests in a multi-year study. Hatching success in intact nests, undisturbed by predators, has been shown to vary from 73 to 100% (McLuckie and Fridell 2002, Rostal *et al.* 2002, Bjurlin and Bissonette 2004, Ennen *et al.* 2012).

Desert tortoises inhabit desert scrub habitats, including saltbush, creosote bush, Joshua Trees and Mojave yuccas, and microphyll woodlands with ironwood, palo verde, desert willow, and smoke trees (Berry and Murphy 2019). In the northeastern part of their geographic range, they occur in an ecotone between the Mojave and Great Basin deserts with sand sagebrush and junipers. Actual occurrences tend to be in valleys, alluvial fans, bajadas, and ephemeral stream channels, although tortoises can be found in low sand dunes and on steep slopes of mesas and cliffs (Berry and Murphy 2019).

Desert tortoises are herbivorous and selective in their choice of plant species (Jennings 1993, Oftedal 2002, Oftedal *et al.* 2002, Jennings and Berry 2015). They primarily eat forbs when available. In years of abundant precipitation, they are selective feeders and prefer specific species of annuals and herbaceous perennials in the legume, mallow, borage, aster, four o'clock, and cactus families (as well as other families). Although they eat grasses, a diet solely of grasses is deficient in nutrients and is likely to inhibit growth and survival, especially in neonate, juveniles, and immature tortoises (Hazard *et al.* 2009, 2010; Drake *et al.* 2016). The quality and quantity of preferred plant foods has diminished because of continuing invasion of non-native annual grasses and forbs and increased fire associated with the highly combustible non-native grasses (D'Antonio and Vitousek 1992, Brooks and Berry 2006, Brooks and Matchett 2006, Berry *et al.* 2014b).

Annual survival and mortality of adults is dependent on sex, size of the tortoise, frequency and severity of droughts, numbers and types of anthropogenic uses, location, and decade of study. In a multi-year study in the eastern Mojave Desert, annual survivorship of juveniles increased with size, ranging from 0.767 when <6.0 cm to 0.861 when 6.0 to 17.9 cm (Turner *et al.* 1987). When tortoises reach breeding age at an estimated 18.0 cm, survival rates were 0.87 to 0.944. Freilich *et al.* (2000) reported an annual survival of 0.883 for adults at Joshua Tree National Park. In a study in the Colorado Desert, Agha *et al.* (2015) estimated adult survival at a wind-turbine energy site (0.96) and an adjacent area (0.92). At two sites in the eastern Mojave Desert, Longshore *et al.* (2003) reported annual survival of adults of 0.985 and 0.829, with the lower survival rate at a site affected by drought.

Woodbury and Hardy (1948) estimated that 1% of adults died per year in a population mostly comprised of adults. In the northeastern Mojave Desert, Turner *et al.* (1984) reported mortality rates of 18.4% in a year of drought and 4.4% in a normal year. In the western Mojave Desert, death rates were lowest at a protected Research Natural Area (2.8%/yr) and highest in critical habitat (20.4%/yr). At Joshua Tree National Park, the mortality rate was 11.7% (Freilich *et al.* 2000), and in Red Rock State Park, 67% (Berry *et al.* 2008). In a demographic study of tortoises at 21 sites in the central Mojave Desert, mortality rates of adults ranged from 1.9 to 95.2% (Berry *et al.* 2006).

Turner *et al.* (1987) predicted an annual rate of population increase of *ca.* 2% in a model based on a tortoise subpopulation in the eastern Mojave Desert between 1977 and 1985. By 2000, this subpopulation had declined precipitously, apparently due to disease (see Christopher *et al.* 2003). Freilich *et al.* (2002) estimated the recruitment rate of young tortoises into the adult subpopulation at 0.092 in a plot in Joshua Tree National Park. This number of tortoises on this plot was thought to be stable between 1991 and 1995, but later declined (Lovich *et al.* 2014).

**Systems:** Terrestrial

## Use and Trade (see Appendix for additional information)

Commercial take or use of *Gopherus agassizii* is prohibited by law, and few animals have been documented in (illegal) trade in recent decades. The evaluation of conservation status, conservation and monitoring actions for the species have generated significant financial investments in the species, supporting a range of local and visiting livelihoods. The approximate cost to develop and implement the 25-year recovery program for the Mojave Desert Tortoise was USD 100 million (USGAO 2002, Ernst and Lovich 2009, USFWS 2011, Averill-Murray *et al.* 2012). Thirty years have passed since the federal listing of *G. agassizii* as threatened in 1989–1990, declines of breeding adults continue, and many tasks to reduce deaths, described first in 1994 (USFWS 1994), remain to be implemented (see also USFWS 2011, Reports from the Recovery Implementation Teams). If fully implemented, the recommended actions could exceed 159 million USD plus additional costs that could not be estimated in the 2011 Recovery Plan (USFWS 2011). As one of the keystone species of the Mojave Desert, *G. agassizii* plays an unquantified but substantial role in generating tourism income to regional protected areas (see Joshua Tree National Park, Mojave National Preserve, and Lake Mead National Recreation Area (<https://irma.nps.gov/STAT/>)).

## Threats (see Appendix for additional information)

*Gopherus agassizii* faces multiple threats to individuals, populations, and habitat (for annotated bibliographies of reports and published papers, see Hohman *et al.* 1980; Berry 1984; USFWS 1990, 1994, 2010, 2011; Grover and DeFalco 1995; Bury and Luckenbach 2002; von Senckendorff Hoff and Marlow 2002; Lovich *et al.* 2011; Lovich and Ennen 2013a; Berry *et al.* 2015; Berry and Murphy 2019). Recent articles document further examples of threats (Tuma *et al.* 2016; Berry *et al.* 2020a,b,c). Much of the information with numerous references are contained in Berry and Murphy (2019). Substantial tortoise habitat was already lost to cities, towns, settlements, agriculture, energy developments, and military bases in the 20th century, and continuing habitat loss and degradation, combined with high mortality rates in dwindling low-density populations due to disease (upper respiratory tract disease / mycoplasmosis), road and off-road vehicle-induced mortality, subsidized predators (e.g., ravens),

poaching for pets, and mortality from increasing droughts associated with climate change, are threatening most remaining populations of Desert Tortoises (summarized in Berry and Murphy 2019). The majority of desert tortoise populations are currently considered non-viable because of the low density of adults and their existence in isolated and fragmented pieces of habitat (Berry 1984, USFWS 2010, Allison and McLuckie 2018, Berry *et al.* 2020a,b).

Many threats are cumulative in nature and interact synergistically with others. By rating them separately in the Standard Threats Classification Scheme below, the severity of threats and their negative impacts are not described in full measure. One of the limitations of the classification scheme for threats are the ratings for severity. Severity is associated with declines (or not) by percent over 10 years or three generations, whichever is longer. For species such as desert tortoises with long generation times (*ca.* 20–30 years), this may be 60 to 90 or more years. Here we provide a detailed and expanded Threats Classification Scheme for *G. agassizii*.

## Detailed Threats Classification Scheme

### Classification Level

- a. Examples
- b. Timing and Scope

#### 1.1 Housing & urban areas, towns, settlements, ranches

- a. Desert cities, towns, settlements, scattered homes in rural areas, desert land entry, e.g., Inyokern, Ridgecrest, Red Mountain, Trona, Boron, Lancaster, Palmdale, Victorville, Lucerne Valley, Ft. Irwin, Barstow, Daggett, Mountain Pass, Joshua Tree, Twentynine Palms, Vidal Junction, Ludlow, Amboy, Needles, Las Vegas, St. George, Palm Springs, Borrego Springs, Parker, Blythe, El Centro, Stateline, Las Vegas, Mesquite, St. George.
- b. Ongoing. Severe impacts, disappearance of tortoises and habitat; 20% of geographic range. Loss of habitat from widespread and rapidly growing and expanding cities, towns, and settlements associated with high levels of human population growth in the Mojave and western Sonoran deserts and loss and degradation of adjacent habitat (Hughson 2009, U.S. Census Bureau 2010). In the northwest and southwest portions of the geographic range, tortoise populations are locally extinct, absent from valleys and fans and in low densities on military bases.

#### 1.2 Commercial & Industrial

- a. Airports and landing strips, military bases, solar and wind farms.
- b. Ongoing. Severe impacts, loss of tortoises and habitat; 8% of geographic range. Development and use of multiple airports, landing strips, several large military bases with ground disturbing activities (military manoeuvres), and solar and wind farms (with associated transmission lines and roads) result in degradation and loss of substantial habitat in both the Mojave and western Sonoran deserts.

#### 1.3 Residential & commercial; golf courses, tourism, recreation

- a. Golf courses are associated with cities and towns that currently exist or are expanding within or near Desert Tortoise habitat (e.g., Las Vegas, Henderson). Vehicle-oriented recreation and visitation are very high in many parts of both deserts including what is now critical habitat, several State Parks and National Parks, Lake Mead National Recreation Area, Red Cliffs National Conservation Area, museums,

and other points of interest.

b. Ongoing. Loss and degradation of habitat, illegal collecting of tortoises: 30%. The high levels of visitor use pose severe threats to *G. agassizii* throughout remaining habitat as well as in critical habitat. For example, at Lake Mead National Recreation, annual records of visitors from 1946 was >1 million visitors per year; by 2018 more than 7.5 million visits occurred (<https://irma.nps.gov/Stats/Reports/Park/>). In parts of critical habitat in the western Mojave Desert, visitor use is very high, e.g., visits and visitor days recorded annually from 2008–2018 ranged from 55,874 to 94,474 visits and 26,218 to 90,445 visitor days per year (USBLM 2019). Visitor use, particularly vehicle-oriented use, is very difficult to control; a substantial portion occurs off-highway and designated trails. Off-road vehicle recreational uses are associated with higher rates of deaths from gunshots in tortoises occurring in areas with high visitor use days (Berry 1986, 2020a).

#### 2.1.3 Agriculture: Agro-industry farming

a. Farms for cotton, alfalfa, pistachio, goat-nut, and other crops and dry farming in parts of the geographic range (e.g., Fremont, Antelope, Indian Wells, Victor, Apple, Lucerne, Mojave River, Chuckwalla and Virgin River valleys, bordering the Colorado River).

b. Severe, cleared land, local areas, often expansive, throughout the geographic range. Historic and ongoing. Habitat and tortoises lost, 10%. Farming began very early (late 1800s) and continues to the present. Farming has negatively affected the water table locally, causing subsidence and fissures to develop in at least one area (Berry 1984), as well as altering vegetation in the vicinity. Habitat cleared for farming generally is used for industrial purposes, e.g., solar or off-road vehicle recreation after abandonment. Both agricultural and industrial uses are associated with influx and proliferation of non-native plants onto adjacent, high quality desert tortoise habitat and protected areas.

#### 2.3.2 and 2.3.3 Agriculture: livestock farming & ranching

a. Cattle ranching, sheep grazing and driveways, allotments, licenses, and leases (often on federal lands); growing herds of feral burros and expansion into critical habitat.

b. Moderate to severe, historic (from 1850s), ongoing; 80% of the geographic range affected. Grazing of livestock and use of driveways was widespread and often intensive throughout the geographic range until the Taylor Grazing Act in 1932. Livestock grazing was widespread after that time but managed as an important desert use (e.g., Berry 1984, USBLM 1980). In 1990, after the tortoise was listed as threatened, sheep grazing continued but was excluded from critical habitat. Cattle grazing continued throughout much of critical habitat and still occurs in an estimated 17% of critical habitat (USFWS 2010). Feral burros also graze in tortoise habitats and are encroaching into one critical habitat (USFWS 2010; Berry et al. 2020c). Livestock cause degradation and loss of habitat through development of piospheres, trampling, altering cover, composition of shrubs and forage plants available for tortoises to eat (Webb and Stielstra 1979, Fleischner 1994, Brooks et al. 2006, Abella 2008, Tuma et al. 2016). The disturbances created by grazing contributes to growth and proliferation of non-native, fire-prone, invasive grasses (D'Antonio and Vitousek 1992).

#### 3.1 Energy production & mining: oil and gas

a. Oil and gas, drilling and exploration.

b. Medium severity, local areas, <1% of geographic range. Exploratory drilling has occurred in tortoise habitat and has left degraded and cleared areas of < 1-2 ha, with spoil piles, drilling waste, and trash from the drilling operations spread over the area. These sites became focal points for camping and vehicle-oriented recreation, enlarging over time (K.H. Berry pers. obs.).

### 3.2 Energy production & mining: mining and quarrying

- a. Small and large mines, exploratory pits, bulldozed areas, shafts, and major mines; quarries.
- b. Ongoing, severe degradation on a local or regional scale; 5%. Mining on small and large scales began in the late 1800s, killing tortoises and destroying habitat. Roads were constructed to access potential mining areas and districts (Mojave, Rand, Atolia, Goldstone, Calico, Mountain Pass). Tortoises fall into pits and shafts and were killed. Some mines cover 7.8 km<sup>2</sup> or more and their influence can expand beyond that. Gold mines are associated with spread of mercury and arsenic in soils and plants far beyond the source (e.g., >12 km), transported by wind and water (Chaffee and Berry 2006; Kim *et al.* 2012, 2014). Tortoises are negatively affected by these elemental toxicants with poor health; these toxicants were reported in livers, integument, lungs, etc. (Jacobson *et al.* 1991, Selzer and Berry 2005, Foster *et al.* 2009).

### 3.3 Energy production & mining: renewable energy

- a. Windfarms, photovoltaic, solar fields; new utility and transmission lines, power poles and towers with adjacent roads accompany these developments.
- b. Ongoing, future. Severe degradation and loss locally over large areas, 5% over the geographic range. Windfarms occur in tortoise habitat, generally on slopes or on hills and small mountains. Solar panels have been constructed on abandoned agricultural fields or in low density or marginal habitat. However, some projects were built in prime habitat, causing loss of habitat and displacement of tortoises. Solar and wind energy is a growing industry with losses of >106 km<sup>2</sup> as of 2019 (Mark Massar, U.S. Bureau of Land Management, pers. comm.).

### 4.1 Transportation and service corridors: roads & railroads

- a. Freeways, 2-lane highways, county gravel or dirt roads, and roads to points of interest; railroads (two major) and several spurs with associated dirt roads and tower lay-down areas for power towers and poles.
- b. Ongoing, severe loss and degradation of habitat. 5% throughout the geographic range. Roads were developed in the late 1800s and have proliferated and widened into freeways since that time. Several major freeways and state highways cross the geographic range. Importantly many more dirt roads exist to points of interest (e.g., mines, mining areas, water troughs and water sources, outlying rural areas, recreation areas). Tortoise populations are depleted on either side of highways and well-used roads for distances of >4,000 m (von Seckendorff Hoff and Marlow 2002). A very small portion of these roads and highways have tortoise-proof fencing.

### 4.2 Transportation & service corridors: utility & service lines

- a. Telephone and electric poles and lines; major transmission lines and corridors.
- b. Ongoing, moderate to severe. Telephone poles and electric poles and lines usually parallel major or minor paved and dirt roads and extend from towns and cities into remote areas to provide service to agricultural developments, mines, wind and solar farms and individual residences or small settlements. Electric transmission lines cross many parts of the geographic range, including critical habitat (critical habitat alone: 1,634 km of lines in corridors, total area of corridors, 1,743.5 km<sup>2</sup>) (USFWS 2010). These corridors are accompanied by dirt roads and spurs to the towers. Often corridors contain several sets of towers and electrical lines. Utility lines also include ground disturbance from fibre optic cables, aqueducts, and gas lines, all of which disturb tortoise habitat. Utility poles and transmission lines have allowed for spread of predators (Common Raven, Red-tailed Hawk) into remote parts of the desert,

because they make use of the towers and poles for perching and nesting, leading to increased predation on tortoises (Knight and Kawashima 1993, Anderson and Berry 2019).

4.4 Transportation and service corridors: flight paths or military use a. Commercial, non-commercial, and Department of Defence flight paths.

b. Numerous, ongoing. Flight paths are minor or no impact if not associated with release of ordnance (bombing ranges). The noise may have effects on wildlife, including tortoises (e.g., Bowles *et al.* 1999).

5.1.1 Biological resource use: hunting & trapping terrestrial animals: intentional use (species is the target)

a. Illegal collecting of *Gopherus agassizii* for commercial sale, food, cultural purposes, and for international trade, etc.

b. Ongoing, severe. Tortoises have been and continue to be collected for pets, food, tourism, commercial sale, and cultural purposes, although such collection has been unlawful since 1939 (Berry 1984, Berry *et al.* 1996, Berry and Murphy 2019, Berry *et al.* 2020b).

6.1 Human intrusions & disturbance: recreational activities

a. Visits to State and National Parks and Preserves, National Recreation Areas, federal and state lands, private lands, and Open Recreation Use Areas (unrestricted vehicle play areas) by vehicle-oriented recreationists.

b. Ongoing, severe impacts regionally and locally, especially in the western, central, and southern Mojave Desert and growing in the western Sonoran Desert; associated with proximity to cities, towns, and settlements. Formerly populated with Desert Tortoises, several intensively used areas are now severely degraded and have few if any tortoises (e.g., Bury and Luckenbach 2002, Berry *et al.* 2014a, USFWS 2015, Berry and Murphy 2019). Vehicle-oriented visitation is exceptionally high, ranging from >50,000 to 86,550 between 2008 and 2018 annually in some regions of the Mojave Desert (USBLM 2019). Other parts of the desert and critical habitat are also experiencing growing numbers of visitors. Deaths of desert tortoises from road kills and shooting is higher in areas with high levels of vehicle-oriented visitation (Berry 1986, Berry *et al.* 2020b).

6.2 Human intrusions & disturbance: war, civil unrest & military exercises

a. World War II and subsequent. Military manoeuvres across substantial areas of habitat in the western Sonoran and eastern Mojave deserts to train troops using tanks and other vehicles for the war in North Africa. Since the 1960s, military manoeuvres with armoured vehicles in extensive areas in the western, southern, and central Mojave deserts; aerial bombing training in limited areas in the western Sonoran Desert.

b. Ongoing, severe. Military manoeuvres in 1942 resulted in severely degraded habitat (compacted soils, damaged desert pavements, altered vegetation, including forage available for desert tortoises. Lands disturbed in 1942 have not recovered after 60 years (Prose 1985, 1986; Prose and Wilshire 2000). Similar disturbances have occurred and continue to occur in tortoise populations and habitat at military installations in the southern and central Mojave Desert. In the early 2000s, expansion of the Fort Irwin military installation in the central Mojave Desert caused loss and degradation of 760 km<sup>2</sup> of tortoise habitat and *ca.* 304 km<sup>2</sup> of the lost habitat was part of critical habitat (USFWS 2010, Berry and Murphy 2019). An estimated *ca.* 300 km<sup>2</sup> will be lost with additional, ongoing expansion of the same base. The western expansion of the Marine Corps base at 29 Palms caused hundreds of tortoises to be translocated and habitat lost in the southern Mojave Desert (USDD 2017).

### 6.3 Work and other activities: law enforcement, illegal immigrants, species research, vandalism

a. Border patrol agents and illegal immigrants travel cross-country by foot and vehicle in tortoise habitat in the southern border range. Vandalism, specifically wanton shooting or killing of tortoises has affected some populations more than others, probably associated with higher visitor use and vehicle-oriented recreation.

b. Ongoing, moderate severity. Border patrol agents travel north from the border into tortoise habitat, including critical habitat, to apprehend illegal immigrants. Vehicle travel can occur off dirt roads, widen existing roads, and create new disturbances. Shooting tortoises, running over them deliberately with vehicles, or otherwise killing them has been documented in both the Mojave and western Sonoran deserts (Berry 1986, Berry *et al.* 2006, Berry *et al.* 2020a,b).

#### 7.1.1 Fires & fire suppression

a. Caused by lightning, car fires on highways or roads, arson.

b. Ongoing, severe, with the severity dependent on the critical habitat unit or protected area. Mojave and Colorado Desert habitats did not evolve with fire (D'Antonio and Vitousek 1992). Fires increased in numbers, frequency, and amounts burned with the invasion and proliferation of non-native grasses which are highly combustible (Berry and Murphy 2019). Fires have occurred throughout the geographic range and have burned significant amounts of critical and other protected habitats in the southern, central, eastern and northeastern Mojave Desert regions. Once habitat burns, it is likely to burn again with higher frequencies and with potentially increased biomass of non-native annual grasses. Tortoises die in these fires or are injured, but some survive (Berry and Murphy 2019). Loss of cover of shrubs and food supply for the tortoises is severe in most burned areas. When fires are very hot, the seed bed may be damaged or destroyed. The most severely burned protected habitat is in the Red Cliffs Desert Reserve with >30% burned as of summer 2020 (McLuckie *et al.* 2021); the Mojave National Preserve also experienced a major fire and loss or degradation of 7% of the critical habitat unit in summer 2020 (Darby *et al.* 2021).

#### 7.2.8 Abstraction of ground water

a. For agriculture, primarily, followed by urban and cities.

b. Ongoing, long-term degradation of habitat adjacent to cities, towns, industrial and agricultural developments. Depletion of the ground water table causing subsidence and formation of fissures has occurred in at least one part of the western Mojave Desert and in the northeastern Mojave Desert in the Las Vegas Valley in what was once desert tortoise habitat (Berry 1984, Burbey 2002). In the western Mojave Desert, the water table was depleted by agricultural uses (cotton, alfalfa) and now with solar energy development; and by cities in the Las Vegas Valley by depleted associated aquifers. Other regions have and continue to experience depletion of the water table in areas with agriculture and desert cities, e.g., adjacent to the Mojave, Colorado, and Virgin rivers (Stamos *et al.* 2001). Water is sought from sources and regions outside desert tortoise habitat (e.g., the Colorado River) to support cities and towns, as well as agriculture, because existing water tables are insufficient to support them.

### 8.1.2 Invasive and other problematic species, genes & diseases: Named species

a. *Bromus madritensis* ssp. *rubens*, *B. tectorum*, *Schismus* spp., *Erodium cicutarium*, *Hirschfeldia incana*, *Brassica tournefortii*.

b. Ongoing, severe degradation of the Mojave and western Sonoran ecosystems. Landscape conservation forecasting (Provencher *et al.* 2011) quantified the pervasive abundance of annual brome

grasses that foster destructive wildfires of a size and intensity far greater than the fire regime with which Mojave Desert habitats developed over the past millennia. In addition to supporting fires, the non-native grasses compete with native forage species of forbs required by tortoises to grow, reproduce, and remain healthy. Non-native grasses and forbs dominate the ecosystem in biomass in both wet and dry years in many tortoise habitats (Brooks and Berry 2006, Berry 2014b). Non-native grasses are not nutritious plants for tortoises to eat and cause weight loss and can cause death in juveniles (Hazard *et al.* 2009, 2010; Drake *et al.* 2016). The awns of *Bromus* also can injure tortoise mouths. The non-native *Hirschfeldia incana* and especially *Brassica tournefortii*, introduced through agricultural development, also compete with native forage species, changing the composition of the native flora (Berry *et al.* 2014b). They are not eaten by tortoises and can be high in oxalates, potentially a source of oxalosis in tortoises (Jacobson *et al.* 2009).

#### 8.1.2 Diseases. Named species

a. Infectious diseases: *Mycoplasma agassizii*, *M. testudineum*, Testudinid herpesvirus 2 (TeHV2); Non-infectious diseases: oxalosis, gout, starvation, dehydration.

b. Infectious diseases: ongoing, severe in some areas. The two species of *Mycoplasma* are infectious pathogens. The first (*M. agassizii*) was discovered in wild populations in 1989 and the second (*M. testudineum*) a few years later (Jacobson *et al.* 1991, 2014). These pathogens are spread by contact between tortoises cause disease and death in some populations, and inhibit olfaction necessary for foraging (Jacobson and Berry 2012, Jacobson *et al.* 2014). *Mycoplasma agassizii* is common in captive desert tortoises, more so than in wild populations. Epidemiological studies indicate that the distribution of the two species differs, and that tortoises with antibody-positive tests for the diseases occur closer to human habitations rather than more distant (Berry *et al.* 2015). Mycoplasmosis has been implicated as a major contributor to a catastrophic die-off of tortoises at the Desert Tortoise Research Natural Area (Berry *et al.* 2020b). It is also associated with declines in other parts of the geographic range (Christopher *et al.* 2003). Non-infectious diseases of known etiology include oxalosis, gout, and starvation and dehydration (Homer *et al.* 1998, Berry *et al.* 2002, Jacobson *et al.* 2009). Some individuals and populations have been negatively affected by these diseases.

#### 8.2.2 Problematic Native Species

a. The Common Raven (*Corvus corax*), an uncommon to rare resident between the 1920s and 1940s in the Mojave and western Sonoran deserts, is now an abundant predator in ecosystems where the Desert Tortoise lives. Red-tailed Hawks (*Buteo jamaicensis*) is another similar predator, and Coyotes (*Canis latrans*) can also be a hyper-predator.

b. Ongoing, severe and negative effects on population structure; loss of juveniles and immature tortoises. Populations of the Common Raven have grown enormously, supported by subsidies of food, water, perch and nest sites available from humans (Boarman 1993, Boarman and Berry 1995). They have been able to access formerly remote parts of the desert by relying on settlements, road kills and trash along highways and roads, and utility poles and transmission lines for perching and nesting (Knight and Kawashima 1993). Common Ravens are very effective predators on hatchling, juvenile and immature tortoises, with dozens to hundreds of shells recorded beneath perch and nest sites. They are responsible for preventing recovery in many parts of the desert by depleting young tortoise cohorts in populations that can lead to local extinctions (Kristan and Boarman 2003). Red-tailed Hawks have expanded their use areas into remote parts of the desert ecosystems, using utility poles and towers as nest sites and juvenile tortoises for food (Anderson and Berry 2019). Similarly, Coyotes are subsidized predators found in increased numbers near cities, towns, and some military installations and at times have high

predation rates on tortoises (Esque *et al.* 2010).

#### 8.4.2 Problematic Species/ Diseases: Named Species

- a. Several non-native species of tortoises and turtles carrying disease or potentially carrying disease have been released illegally into Desert Tortoise habitats, e.g., African Spurred Tortoise (*Centrochelys sulcata*; Nelson 2010; Anonymous 2018) and Central Asian Steppe Tortoise (*Testudo horsfieldii*; Jacobson *et al.* 2013, Winters *et al.* in prep.).
- b. Ongoing, potentially severe. Releases of tortoises, whether native or non-native are illegal in large parts of the geographic range. Nevertheless, introduced, non-native turtles and tortoises such as the African Spurred Tortoise and Central Asian Steppe Tortoise have been found to carry new diseases that would negatively affect already declining *G. agassizii* populations (Nelson 2010; Anonymous 2018). The African Spurred Tortoise can do damage to habitat and to the native tortoise, *G. agassizii*, because of the large size and aggressive nature. One Central Asian Steppe Tortoise was captured in the Central Mojave Desert with a new herpesvirus not previously described in *G. agassizii* (Winters *et al.* in prep.). The concern is that this non-native tortoise may have transmitted the new herpesvirus to desert tortoises. New, non-native herpesviruses from other species and countries and continents are a threat to health in already declining *G. agassizii* populations.

#### 8.5 Viral/Prion-induced Diseases

- a. Herpesviruses are implicated in illness and mortality in tortoises.
- b. Ongoing, potentially severe if coupled with other stressors. Herpesviruses are a threat to health and survival of desert tortoises, especially those herpesviruses introduced from other, non-native species to the desert. Tortoises with clinical signs of the disease were among populations that severely declined between the 1990s and 2000s; herpesvirus may have contributed in some areas (Christopher *et al.* 2003). Testudinid herpesvirus 2 was first identified in captive tortoises, then confirmed in wild *G. agassizii* (Jacobson *et al.* 2012). The estimated prevalence of this herpesvirus for captive and wild tortoises from the Mojave and western Sonoran deserts ranged from 15 to 56% (Jacobson *et al.* 2012).

#### 8.6 Diseases of Unknown Cause

- a. Shell diseases, i.e., cutaneous dyskeratosis, necrosis.
- b. Ongoing, severe. A novel shell disease, cutaneous dyskeratosis and shell necrosis, was implicated in illness and deaths of Desert Tortoises (Jacobson *et al.* 1994; Homer *et al.* 1998, 2001) and a decline of ca. 80% in a once-robust population. Other populations in critical habitats appear to be affected similarly. This is a metabolic disease with lesions of the shell and integument as outward manifestations. The causes are suspected to be toxicants (e.g., elemental toxicants and/or nutritional deficiencies). The disease is implicated in elevated death rates in adult tortoises in the western Sonoran Desert and eastern Mojave Desert (Berry and Medica 1995, Christopher *et al.* 2003).

#### 9.2.2 Industrial & military effluents

- a. Seepage from mining.
- b. Ongoing, unremediated regionally. There are links between some diseases in tortoises and toxicants from mining and other similar developments. Tortoises dying of upper respiratory tract disease caused by *Mycoplasma* spp. in the western Mojave Desert in close proximity to a mining district had high levels of mercury in livers compared to tortoises without the disease (Jacobson *et al.* 1991). Ill tortoises with high levels of arsenic occurred in an area mining district with high levels of mercury and arsenic (Selzer and Berry 2005). Waste from the mines was transported by wind and water to distances of 15 km

(Chaffee and Berry 2006; Kim et al. 2012, 2014). Mines in other tortoise habitat in different desert regions have yet to be examined.

#### 9.4 Garbage & Solid Waste

- a. Trash is a threat to tortoises because they can consume it or become entangled.
- b. Ongoing, low to moderate. Consumption of trash can lead to illness and death (Donoghue 2006, Walde *et al.* 2007). Balloons and other trash are common throughout the desert and most abundant near human habitations, along roads, and recreation use areas (Berry *et al.* 2006, 2008, 2014a; Keith *et al.* 2008). Trash attracts predators—Common Ravens, Coyotes, and other canids—thus creating an additional risk to tortoises.

#### 9.5 Air-borne Pollutants

- a. Pollutants such as atmospheric nitrogen and increases in CO<sub>2</sub> enhance the growth of invasive grasses and thus fire.
- b. Atmospheric nitrogen from urban or other areas is transported to deserts and tortoise habitat, and deposited on soils, thus enhancing growth of non-native grasses and plants prone to fire (Brooks 2003, Rao and Allen 2010).

#### 11.1 Habitat Shifting & Alteration

- a. Desertification; degradation of vegetation, soils, and topography
- b. Ongoing, severe. Throughout the geographic range, most, if not all, tortoise habitats have received (and continue to receive) one or more anthropogenic uses and activities resulting in compacted or eroded soils and alteration of the natural structure and composition of annual and perennial vegetation (e.g., Lei 2009). Long-lived shrubs and native annual wildflowers and grasses have been replaced in part with short-lived colonizers (shrubs, non-native, fire-prone grasses) typical of disturbed areas. These changes have brought fewer places to dig burrows and a reduced supply of nutritious plants to eat (Brooks and Berry 2006, Webb and Wilshire 1983). In some areas, the rich diversity of shrubs and annual plants have been replaced by a few shrub species and the annuals replaced with primarily non-native annual species (Brooks and Berry 2006).

#### 11.2 Droughts

- a. Desert Tortoises require water from precipitation and a diverse diet of native annuals to grow, reproduce and survive.
- b. Ongoing, increasingly severe with reduced survival throughout the geographic range, often associated with hyper-predation by coyotes. Although the Mojave and western Sonoran deserts are typified by droughts often lasting more than a year, tortoises have adaptations to cope. However, tortoises die of starvation and dehydration during prolonged droughts (Berry *et al.* 2002, Christopher *et al.* 2003, Longshore *et al.* 2003, Lovich *et al.* 2014). Juveniles are especially vulnerable. With climate change and warming, droughts, including megadroughts lasting 10 years or more, are predicted to occur in coming years (U.S. Global Change Research Program 2017, Steiger *et al.* 2019).

#### 11.3 Temperature Extremes

- a. Tortoises are able to withstand the extremes of temperature experienced in the desert; however, increases in warm temperatures coupled with drying and changes in precipitation patterns present high risks to the species.
- b. Ongoing and a growing issue, with climate change having negative impacts throughout the

geographic range. Tortoises cope with the extremes of summer and winter temperatures (and lack of water, see 11.2) by using deep burrows and restricting above-ground activities and reproduction during drought. As temperatures rise with the rise in CO<sub>2</sub> and other greenhouse gases, tortoises will need to find habitats where deeper burrows can be excavated. At the higher temperatures, the spring season for foraging on ephemeral annuals and egg laying is likely to be shortened, reducing the time for eating, growing, and egg production. Sex of tortoises is determined by temperature of incubation in nests, with females produced at the higher temperatures and males at the lower temperatures. Eggs laid in nest that will experience the high temperatures of summer may be predominantly female, and if temperatures are excessive, may not be viable. Although the species could survive at higher (and cooler) elevations, the habitat in mountain ranges will be more limited, steep, rocky, with exposed bedrock in places with inadequate forage.

## 12.1 Other Threats

### a. Climate Change.

b. Ongoing, see 11.2 and 11.3. Change in timing and amounts of precipitation coupled with increasing temperatures are likely to have profound negative effects on the species, further reducing available habitat (e.g., Barrows 2011). Profound changes are predicted to cause deterioration in composition, structure, diversity and biomass of trees and shrubs (Munson et al. 2016) that provide shade and cover to the tortoises. Barrows (2011) predicted that tortoises may survive if they move from the western Colorado Desert to higher elevations. However, the long-lived tortoises have strong fidelity to existing home ranges.

## Conservation Actions (see Appendix for additional information)

### Conservation Measures taken:

The first legal conservation measures for *Gopherus agassizii* came from the State of California in 1939 (California Department of Fish and Game Code 1939–1981). Additional protective regulations followed until *G. agassizii* was listed as threatened under the California Endangered Species Act in 1989 (California Dept. of Fish and Wildlife 2016). Federal legislation to protect *G. agassizii* first occurred in 1980 and was restricted to the Beaver Dam Slope population in Utah (USFWS 1980). In 1989–1990, *G. agassizii* was federally listed as threatened (USDI 1990 and references therein). The only population of *G. agassizii* that is not protected by the Endangered Species Act of 1973, as amended, is in the northwest corner of Arizona (Edwards *et al.* 2015). Recovery efforts have been underway since 1990. The U.S. Fish and Wildlife Service (USFWS 1994) published the first Recovery Plan in 1994, coupled with designations of critical habitat units by the U.S. Department of the Interior (USFWS 1994); this was followed by a revised Recovery Plan in 2011 (USFWS 2011), and regional Recovery Implementation Teams established in 2012. These teams are chaired by an employee of the USFWS Desert Tortoise Recovery Office, and are composed of federal, state, and county employees from the range of the desert tortoise, including representatives from local and national conservation and other stakeholder organizations.

The species is included in CITES Appendix II as part of Testudinidae spp., requiring that any commercial international trade be documented not to be detrimental to the survival of wild populations. CITES Trade records generally show very low levels of international exports of live animals; the vast majority of live traded Desert Tortoises are personal pets moving in-country with their owners, and many of the records in fact concern seizures of illegally transported specimens (CITES UNEP-WCMC trade database).

Conservation and recovery efforts began in the early 1970s, long before efforts of the federal actions by the USFWS in 1989–90. The Desert Tortoise Council formed in 1974–75 out of an interim recovery effort involving the four Southwestern states. This non-profit corporation was and continues to be dedicated to preserving representative populations of desert tortoises; educating the public; holding annual introductory workshops; and annual symposia to bring together representatives from government agencies, academia, and the public to learn and discuss important topics aimed at recovery of tortoise populations. The Desert Tortoise Council was instrumental in providing critical materials for federal and state listings of the species. The Desert Tortoise Preserve Committee, Inc., was formed in 1974 to establish protected areas for *G. agassizii*. This non-profit organization is a land trust and mitigation bank, a source of education, and research. They were instrumental in establishing the Desert Tortoise Research Natural Area and increasing its size.

Two preserves or protected areas exist with moderately high degrees of protection. One is the 100 km<sup>2</sup> (and increasing) Desert Tortoise Research Natural Area, which was formally designated by the U.S. Congress in 1980. It is fenced, with no vehicle access, livestock grazing, mining, or surface disturbances other than a few limited natural trails and a kiosk. The Natural Area is for wild tortoises only and populations are allowed to fluctuate naturally with no augmentation. Population density of adults throughout the Natural Area in 2011–12 was 10.2/km<sup>2</sup> (Berry et al. 2014a). The second preserve is Red Cliffs Desert Reserve in Utah (251 km<sup>2</sup>). The Red Cliffs National Conservation Area provides additional protection for federal lands within the Reserve. Several paved roads, fenced and unfenced, run through the Reserve and recreation occurs throughout (e.g., hiking, horseback riding, mountain biking). The next and lower level of protection could be described as occurring within National Parks, State Parks, and National Recreation Areas such as Joshua Tree and Death Valley National Parks, Mojave National Preserve, Red Rock Canyon, Anza-Borrego, and Red Rocks State Parks, Lake Mead National Recreation Area, and the Beaver Dam Wash National Conservation Area. These parks and recreation areas have very high visitor use, unfenced paved roads, and some illegal collecting and release of captive tortoises of one or more species.

Twelve critical habitat units, the basis for Tortoise Conservation Areas (term defined in USFWS 2011), were designated by the USFWS (1994), and have far less protection than either the Desert Tortoise Research Natural Area or the Red Cliffs Desert Reserve and are subject to multiple land uses that fragment and degrade habitat and create vulnerabilities and risks to the tortoises (e.g., invasive non-native grasses and other non-native species; highways; roads; utility poles, towers, and electrical transmission lines; gas lines and fibreoptic cables; recreational vehicle use; shooting; domestic and feral dogs; cattle grazing and feral burros; mining; military installations; fire that causes degradation of habitat).

Seventeen monitored subpopulations in the 12 critical habitat units are contained within five recovery units which cover a total of 25,678 km<sup>2</sup>. The following information for each recovery unit and the 17 Tortoise Conservation Areas reports area (km<sup>2</sup>), and density of breeding adults per km<sup>2</sup> in 2014. Western Mojave Recovery Unit: Fremont-Kramer (2,347 km<sup>2</sup>, 2.6/km<sup>2</sup>), Ord-Rodman (852 km<sup>2</sup>, 3.6/km<sup>2</sup>), Superior-Cronese (3,094 km<sup>2</sup>, 2.4/km<sup>2</sup>); Colorado Desert Recovery Unit: Chocolate Mountains Aerial Gunnery Range (713 km<sup>2</sup>, 7.2/km<sup>2</sup>), Chuckwalla (2,818 km<sup>2</sup>, 3.3/km<sup>2</sup>), Chemehuevi (3,763 km<sup>2</sup>, 2.8/km<sup>2</sup>), Fenner (1,782 km<sup>2</sup>, 4.8/km<sup>2</sup>), Joshua Tree (1,152 km<sup>2</sup>, 3.7/km<sup>2</sup>), Pinto Mountain (508 km<sup>2</sup>, 3.4/km<sup>2</sup>), Piute Valley (927 km<sup>2</sup>, 5.3/km<sup>2</sup>); Eastern Mojave Recovery Unit: El Dorado Valley (999 km<sup>2</sup>, 1.5/km<sup>2</sup>), Ivanpah Valley (2,447 km<sup>2</sup>, 2.3/km<sup>2</sup>); Northeastern Mojave Recovery Unit: Beaver Dam Slope (750 km<sup>2</sup>,

6.2/km<sup>2</sup>), Coyote Spring (960 km<sup>2</sup>, 4.0/km<sup>2</sup>), Gold Butte (1,607 km<sup>2</sup>, 2.7/km<sup>2</sup>), Mormon Mesa (844 km<sup>2</sup>, 6.4/km<sup>2</sup>); Upper Virgin River Recovery Unit: Red Cliffs Desert Reserve (115 km<sup>2</sup>, 15.3/km<sup>2</sup>) (USFWS 2015; Allison and McLuckie 2018). The overall decline in tortoise populations in critical habitats (Tortoise Conservation Areas) between 2004 and 2014 was 32.2% (USFWS 2015). Four of the five recovery units are in a state of decline, with 11 of the 17 subpopulations registering declines in adult tortoises ranging from 26.6 to 64.7% during the 10 years (USFWS 2015). Most of the increasing subpopulations were in Nevada. Population densities for adults ranged from 1.5 to 7.2/km<sup>2</sup> in declining populations as of 2014 (USFWS 2015).

Extensive research has been published in peer-reviewed journals on many aspects of natural history, general ecology, physiological ecology, reproduction, health and diseases, population attributes, causes of death, movements and home range, predators, head-starting, translocation, and many other topics, making *G. agassizii* likely the most well-researched non-marine turtle species (Lovich and Ennen 2013b). Over 400 journal articles were published as of 2018, most between 1990 and 2018, as well as hundreds of reports (see three annotated bibliographies covering almost 160 years: Hohman *et al.* 1980, Grover and DeFalco 1995, Berry *et al.* 2016). Some information has been integrated into recovery programs, but many of the recovery measures recommended in the first Recovery Plan (USFWS 1994) have not been implemented as of 2020.

Economic relevance: The approximate cost of USD 100 million to develop and implement the first and second Recovery Plans is significant within the regulatory, scientific and local economic sectors involved and much remains to be implemented (USFWS 1994, 2011; Averill-Murray *et al.* 2012).

#### **Conservation Measures needed:**

The USFWS (1994) published recommended regulations for the areas that were designated as critical habitat. They described activities to be prohibited (e.g., all vehicle activity off designated roads; all competitive and organized recreational vehicle events on designated roads; habitat destructive military manoeuvres, clearing for agriculture, landfills and other surface disturbances; domestic livestock grazing, grazing by feral burros and horses; vegetation harvest; collection of biological specimens or vegetation harvest except by permit; dumping and littering; and deposition of captive or displace desert tortoises except under authorized translocation research projects; uncontrolled dogs out of vehicles; discharge of firearms except for hunting of game between September and February. There were many other recommended management actions but few of these recommendations were adopted when critical habitat units were officially described (USFWS 1994), and others have only been partially implemented by 2020. There were also recommendations for monitoring and research. In the second recovery plan, the USFWS (2011) identified and ranked (Darst *et al.* 2013) priority actions for recovering the Desert Tortoise and established regional Recovery Implementation Teams to implement these recovery actions. These Recovery Implementation Teams identify local, regional, and range-wide actions by submitting proposals to team members for discussion and prioritization. Ultimately the proposals are submitted to range-wide Management Oversight Groups composed of state, federal, and county government agencies for review, discussion, and potential sources of funding. Some projects are successfully funded and implemented, while many recommended in 1994 remain unfulfilled.

**In association with the following standardized categories of Conservation Actions Needed, we provide**

### the following notes:

#### 1.1. Land/water protection -> Site/area protection

a. Better protection of Critical habitats could ensure that populations of tortoises become stable and/or increase. Examples of protective measures included in recovery measures for the tortoise are exclusion fencing and culverts along highways and roads; reduction in populations of hyper-predators such as the Common Ravens; control and removal of newly introduced and previously existing non-native plants; and control of recreational vehicle use.

#### 2.1. Land/water management -> Site/area management

a. The first recovery plan identified site-specific or critical habitat-specific measures to ensure protection of habitat and reduction of deaths of tortoises from anthropogenic sources (USFWS 1994). Most of these recommendations are still relevant. The Recovery Implementation Teams have provided recommendations similar to those in the first recovery plan. Many of these measures remain to be implemented. For example, in the State of California where most desert tortoise habitat and populations occur, acquisition of private land would be beneficial, because a substantial portion of habitat is in multiple private ownership. Both the USFWS and State of California recommend that developers of tortoise habitat acquire replacement habitat for habitat lost to development, and such actions have been occurring for ~20 years. Another topic and critical area that would benefit from protection is the population and hybrid zone with *G. morafkai* east of the Colorado River in Arizona (Edwards *et al.* 2015). This small population is not protected under the federal Endangered Species Act (Edwards *et al.* 2015).

#### 2.2. Land/water management -> Invasive/problematic species control

a. Non-native grasses (e.g., *Schismus arabicus*, *S. barbatus*, *Bromus tectorum*, *B. madritensis rubens*) and forbs (e.g., *Brassica tournefortii*, *Hirschfeldia incana*) present serious and severe problems to tortoises because tortoises are selective in the choice of forage (Jennings and Berry 2015). The non-native annuals contribute to changes in forage availability, habitat structure, and increases in fire (D'Antonio and Vitousek 1992). These non-native species thrive under disturbance and spread via roads, livestock, military maneuvers, and disturbances created by recreational vehicle use off-road (e.g., D'Antonio and Vitousek 1992, Brooks and Berry 2006, Brooks *et al.* 2006, Brooks and Matchett 2006). The grasses are highly combustible and fire-prone in wildlands that did not evolve with short-term fire cycles (D'Antonio and Vitousek 1992). The grasses also compete with native annuals used as forage by the tortoises, and the species of grasses contain little nutrition, require water to metabolize, cause weight loss in the tortoises, and can become embedded in the jaws (Medica and Eckert 2007; Hazard *et al.* 2009, 2010; Drake *et al.* 2016). Similarly, *Brassica tournefortii* competes with native species used for forage and often occurs in dense stands, inhibiting movements of tortoises (Berry *et al.* 2014b).

#### 3.2. Species management -> Species recovery

a. Species management and recovery are guided by the Recovery Plan and the U.S. Fish and Wildlife Service. On-the-ground management is by the administering agency, e.g., U.S. Bureau of Land Management, National Park Service, Department of Defense, States (for state land), and private owners. That being said, much can be done by implementing actions recommended in the first Recovery Plan (USFWS 1994) and by restoring degraded habitat (e.g., Abella and Berry 2016); controlling recreation vehicle use off-road and reducing fragmentation of habitat; limiting spread of invasive, non-native grasses and forbs; controlling hyper-predation in common ravens (USFWS 2008) and coyotes; preventing dogs and dog packs from running loose in the desert; and acquiring habitat.

#### 4.3. Education & awareness -> Awareness & communications

a. See Conservation Actions in Place. Expansion of on-going programs to prevent take or shooting in the wild and release of captive tortoises of several species.

**In association with the following standardized categories of Research Needed, we provide the following notes:** While research on some topics is desirable, more is known about *G. agassizii* than most other reptiles (Lovich and Ennen 2013b, Berry *et al.* 2016 and references therein). Instead, implementation of previously identified actions to protect populations and habitat is more critical, specifically actions that will reduce deaths and loss or degradation of habitat.

##### 1.1. Research -> Taxonomy

a. Genetic relationships between and within populations: human-mediated translocations of tortoises have occurred for decades, some authorized, some not (see Murphy *et al.* 2007). One recent question is the source of tortoises in Anza Borrego Desert State Park in the Colorado Desert of California. One might expect that the source would be tortoises occurring in the Colorado Desert, but instead tortoises have genotypes typical of the southwestern Mojave Desert population (Manning and Edwards 2019). More information on nearby tortoises (e.g. Lovich *et al.* 2020) occurring on the east-facing slopes of the Peninsular Range north of the Park may shed light on whether this is a naturally occurring population or a source that came from human-mediated translocations.

b. Translocation of thousands of tortoises has occurred in the last >20 years. Yet the only information available as to whether these translocated tortoises have been assimilated into the recipient or existing resident populations is research by Mulder *et al.* (2017) on assimilation of translocated males into the population of resident tortoises. Much more needs to be done on following males and females over a 10- to 20-year period to determine if and when adult males are assimilated into resident populations.

##### 1.2. Research -> Population size, distribution & trends

a. More information on current population attributes such as size-age class structure, recruitment of juveniles into adult populations, sex ratios of adult tortoises, and causes and contributors to death is highly desirable. Landscape sampling undertaken and managed by the U.S. Fish and Wildlife Service's Desert Tortoise Recovery Office has provided valuable region-wide information on adult densities but not on other essential population attributes (i.e., Allison and McLuckie 2018). Resurvey of long-term, mark-recapture tortoise plots has been spotty for the past 20 years while support has increased for line-distance sampling representatively and on a landscape scale (see USFWS 2015, Allison and McLuckie 2018). Nonetheless, it is clear (USFWS 2011) that species recovery cannot be assumed based on patterns of adult counts alone, and active work to describe vital rates across the range will be an important part of assuring tortoise populations reflect healthy population dynamics or determining regional and size-specific recovery needs.

##### 1.3. Research -> Life history & ecology

a. More information is needed on survival of neonate, juvenile, and immature size classes (first 12 to 15 years of life) and causes of mortality in the wild. Frequent input of new data on causes of and contributors to mortality for all size classes is essential for improving management of the species and for achieving upward trends.

### 1.5. Research -> Threats

a. The USFWS developed a model to identify major threats to the species (Darst *et al.* 2013); the information in this model is based on published research only, and not on the hundreds of reports and manuscripts available in Annual Reports to the USFWS on research permits. The model is outdated and needs major revisions to more accurately reflect available information and more recent priorities. In addition, support could be provided to speed up publication of important research projects that will lead to more protective management actions.

### 3.1. Monitoring -> Population trends

a. Monitoring is especially needed on population attributes in critical habitat, near highways, and in critical habitat near urban areas.

### 3.4. Monitoring -> Habitat trends

a. Monitoring is especially needed on wildfires, non-native plants, seed beds, and recovery of preferred forage plants.

## Credits

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## External Resources

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# Appendix

## Habitats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Habitat	Season	Suitability	Major Importance?
3. Shrubland -> 3.4. Shrubland - Temperate	-	Suitable	Yes

## Threats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Threat	Timing	Scope	Severity	Impact Score
1. Residential & commercial development -> 1.1. Housing & urban areas	Ongoing	Minority (50%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
1. Residential & commercial development -> 1.2. Commercial & industrial areas	Ongoing	Minority (50%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
1. Residential & commercial development -> 1.3. Tourism & recreation areas	Ongoing	Minority (50%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.3. Agro-industry farming	Ongoing	Minority (50%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.3. Agro-industry grazing, ranching or farming	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		

3. Energy production & mining -> 3.1. Oil & gas drilling	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
3. Energy production & mining -> 3.2. Mining & quarrying	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
3. Energy production & mining -> 3.3. Renewable energy	Ongoing	Minority (50%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
4. Transportation & service corridors -> 4.1. Roads & railroads	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality		
4. Transportation & service corridors -> 4.2. Utility & service lines	Ongoing	Whole (>90%)	Slow, significant declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.1. Intentional use (species is the target)	Ongoing	Minority (50%)	Rapid declines	Medium impact: 6
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
6. Human intrusions & disturbance -> 6.1. Recreational activities	Ongoing	Majority (50-90%)	Rapid declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
6. Human intrusions & disturbance -> 6.2. War, civil unrest & military exercises	Ongoing	Minority (50%)	Causing/could cause fluctuations	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
6. Human intrusions & disturbance -> 6.3. Work & other activities	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		
7. Natural system modifications -> 7.1. Fire & fire suppression -> 7.1.1. Increase in fire frequency/intensity	Ongoing	Majority (50-90%)	Rapid declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality		
7. Natural system modifications -> 7.2. Dams & water management/use -> 7.2.8. Abstraction of ground water (unknown use)	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		

8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.1. Unspecified species	Ongoing	Majority (50-90%)	Rapid declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
8. Invasive and other problematic species, genes & diseases -> 8.3. Introduced genetic material	Ongoing	Minority (50%)	Negligible declines	Low impact: 4
	Stresses:	2. Species Stresses -> 2.3. Indirect species effects		
8. Invasive and other problematic species, genes & diseases -> 8.5. Viral/prion-induced diseases -> 8.5.1. Unspecified species	Ongoing	Majority (50-90%)	Rapid declines	Medium impact: 7
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
9. Pollution -> 9.2. Industrial & military effluents -> 9.2.2. Seepage from mining	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
11. Climate change & severe weather -> 11.1. Habitat shifting & alteration	Ongoing	Majority (50-90%)	Rapid declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
11. Climate change & severe weather -> 11.2. Droughts	Ongoing	Majority (50-90%)	Rapid declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		

## Conservation Actions in Place

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

<b>Conservation Action in Place</b>
In-place research and monitoring
Action Recovery Plan: Yes
Systematic monitoring scheme: Yes
In-place land/water protection
Conservation sites identified: Yes, over entire range
Area based regional management plan: Yes
Occurs in at least one protected area: Yes
Invasive species control or prevention: Yes
In-place species management
Harvest management plan: No
Successfully reintroduced or introduced benignly: Yes
Subject to ex-situ conservation: Unknown
In-place education
Subject to recent education and awareness programmes: Yes

Conservation Action in Place
Included in international legislation: Yes
Subject to any international management / trade controls: Yes

## Conservation Actions Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Action Needed
1. Land/water protection -> 1.1. Site/area protection
2. Land/water management -> 2.1. Site/area management
2. Land/water management -> 2.2. Invasive/problematic species control
3. Species management -> 3.2. Species recovery
4. Education & awareness -> 4.3. Awareness & communications

## Research Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Research Needed
1. Research -> 1.1. Taxonomy
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
1. Research -> 1.5. Threats
1. Research -> 1.6. Actions
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.4. Habitat trends

## Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km <sup>2</sup> ): 116993
Continuing decline in area of occupancy (AOO): Yes
Estimated extent of occurrence (EOO) (km <sup>2</sup> ): 166000
Continuing decline in extent of occurrence (EOO): Yes
Upper elevation limit (m): 1,570

<b>Population</b>
Population severely fragmented: Yes
<b>Habitats and Ecology</b>
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 20-32,30

## The IUCN Red List Partnership



The IUCN Red List of Threatened Species™ is produced and managed by the [IUCN Global Species Programme](#), the [IUCN Species Survival Commission \(SSC\)](#) and [The IUCN Red List Partnership](#).

The IUCN Red List Partners are: [ABQ BioPark](#); [Arizona State University](#); [BirdLife International](#); [Botanic Gardens Conservation International](#); [Conservation International](#); [Missouri Botanical Garden](#); [NatureServe](#); [Re:wild](#); [Royal Botanic Gardens, Kew](#); [Sapienza University of Rome](#); [Texas A&M University](#); and [Zoological Society of London](#).

# Memorandum

**Date:** August 2, 2021

**To:** Melissa Miller-Henson  
Executive Director  
Fish and Game Commission

**From:** Charlton H. Bonham  
Director

**Subject:** Request for 6-Month Extension, Agassiz's Desert Tortoise Status Review

Per Section 2074.6 of the Fish and Game Code, the California Department of Fish and Wildlife (Department) requests an extension of time, by six months, to further analyze and evaluate available science, to undergo the peer review process, and to complete the status review for the proposed endangered Agassiz's Desert Tortoise (*Gopherus agassizii*). Such an extension would change the due date of the Department's report to April 30, 2022, which is 18 months from the date the candidacy findings were published in the California Regulatory Notice Register (October 30, 2020).

If you have any questions or need additional information, please contact Scott Gardner ([Scott.Gardner@wildlife.ca.gov](mailto:Scott.Gardner@wildlife.ca.gov)).

ec: Garry Kelley, Acting Deputy Director  
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[Garry.Kelley@Wildlife.ca.gov](mailto:Garry.Kelley@Wildlife.ca.gov)

Scott Gardner, Chief  
Wildlife Branch  
[Scott.Gardner@Wildlife.ca.gov](mailto:Scott.Gardner@Wildlife.ca.gov)

**STAFF SUMMARY FOR FEBRUARY 10, 2021****For Background Purposes Only****20. RECREATIONAL CLAM, SAND CRAB, AND SHRIMP GEAR EMERGENCY****Today's Item**Information ☐Action ☒

Discuss and consider adopting emergency regulations to prohibit use of hydraulic pump gear for recreational take of clams, including clarifying amendments to apply the same gear restriction for sand crab and shrimp.

**Summary of Previous/Future Actions**

- |   |   |
|---|---|
| • FGC received petition #2019-012                           | Jun 12-13, 2019; Redding                    |
| • FGC granted petition #2019-012                            | Feb 21, 2020; Sacramento                    |
| • FGC approved scheduling emergency regulation for Feb 2021 | Dec 9-10, 2020; Webinar/Teleconference      |
| • <b>Today's adoption hearing</b>                           | <b>Feb 10, 2021; Webinar/Teleconference</b> |

**Background**

The recreational fishery for gaper clam (also known as horseneck clam) and other clams occurs in interior bays in northern California year-round. Clams are subject to bag and possession limits that vary by location, and fishing hours that are limited from a half hour before sunrise to a half hour after sunset. Existing regulations limit gear to hand-operated appliances except as prescribed.

**Public Petition**

In Jun 2019, FGC received regulation change petition #2019-012 to ban the use of hand-operated hydraulic pump gear for taking gaper and other clams; the petitioner raised concerns that hydraulic pumps, a new and highly efficient hand-operated method of harvest increasing in popularity, put clams at risk of over-fishing (Exhibit 3). FGC referred the petition to DFW for review and recommendation and, in Feb 2020, DFW recommended that FGC grant the petition (Exhibit 4).

In its review, DFW found that the use of hydraulic pumps enables take in areas still submerged in water in the lowest tides, which were not previously accessible, creates efficiencies in harvest rate that may jeopardize the sustainable harvest of the resources, and may introduce new and expanded impacts to eelgrass habitat. DFW requested that the rulemaking be added to the list of future rulemakings on a timeline to be determined based on the availability of staff that were focused on other high-priority rulemakings at the time. In Feb 2020, just prior to the start of the pandemic in California, FGC granted petition #2019-012 and added the rulemaking to its timetable on an unspecified timeline.

**Increased Effort/Emergency**

At the Dec 2020 FGC meeting, DFW reported that dramatic increases in recreational clamming effort and harvest rates using hydraulic hand pumps were occurring, necessitating immediate action to protect the stock. In response, FGC approved scheduling for the Feb 2021 meeting consideration of an emergency regulation.

**STAFF SUMMARY FOR FEBRUARY 10, 2021****For Background Purposes Only**

DFW has continued to gather additional substantiating information, including field data. In one example, law enforcement personnel observed 180 clambers at Tomales Bay during low tide on Jan 9, 2021, many of whom were working in teams with hydraulic pumps; DFW wardens contacted six of these groups, all of whom were cited for over-limits. As detailed in the draft emergency statement (Exhibit 2), DFW has found that increased harvest efficiency, greater access to clam beds, and widespread use of hydraulic pumps, coupled with increasing participation in the fishery due to the COVID-19 pandemic, are likely causing a significant increase in take; it is unknown whether the stock can support this degree of increase in a short period of time. Suspected illegal commercialization and unknown levels of impact to eelgrass habitat also justify timely action. Emergency action is recommended to protect the fishery and resource while DFW more thoroughly evaluates the gear type and other possible management measures.

***Updates***

During the development of the draft emergency statement, DFW reported that its Law Enforcement Division had identified a potential regulatory loophole related to targeting other crustacean species; sand crab and shrimp can co-occur and be harvested when fishing for clams and are authorized for take with the same hand-held gear types as described in clam regulations. As a result, DFW recommends that the proposed hydraulic pump gear restriction also be applied to the take of sand crabs and shrimp (Section 29.80), to ensure effective enforcement of the emergency regulation.

Finally, the rapid increase in clamming participation in general, as highlighted in the aforementioned example in Tomales Bay, is adding significantly to DFW enforcement's burden to ensure bag and possession limits are being followed. Clamming parties commonly commingle their clams during harvest and transport, which presents significant challenges to determining if individual limits are followed. The proposed emergency action would require each participant to use a separate container while fishing and transporting to shore. During today's meeting, DFW will highlight these additions to the proposed emergency actions.

**Significant Public Comments**

- FGC received eight comments in support of the proposed ban on hydraulic pump gear, citing its ability to significantly increase take. Most of the commenters expressed support for banning two-person hydraulic pumps, provided that the ban would not inadvertently prevent the continued use of non-hydraulic, one-person pumps for clams and ghost shrimp that are used above low tide (see exhibits 9 and 10 for examples). The original petitioner also expressed support for additional protection measures (Exhibit 6).
- Two fishermen that harvest clams in Tomales Bay with hydraulic pumps oppose the gear ban, stating that the pumps cause less damage to the surrounding, clustered organisms than shovel and PVC tube methods. The fishermen are concerned that the gear restriction would limit the available fishing grounds to what is exposed above low tide, which requires payment of access fees to private landowners, and suggest exploring alternative methods to reduce impacts to the resources, such as adjustments to bag limits or time restrictions (exhibits 7 and 8).

**STAFF SUMMARY FOR FEBRUARY 10, 2021****For Background Purposes Only****Recommendation**

**FGC staff:** Adopt the proposed emergency action to prohibit the use of hydraulic pumps to take clams and other specified species as recommended by DFW, and request that DFW provide an update on its review of management options at a future meeting.

**DFW:** Prohibit the use of hydraulic pumps for the take of affected species through emergency action for the reasons set forth in Exhibit 2.

**Exhibits**

1. DFW memo transmitting proposed emergency statement, received Jan 27, 2021
2. Draft emergency statement
3. FGC Petition #2019-012
4. DFW memo recommending to grant petition #2019-012, received Jan 24, 2020
5. Draft Form 399 – statement of economic impact
6. Email from Carl Vogler, received Jan 27, 2021
7. Email from Matthew Bond, received Jan 20, 2021
8. Email from Jerry Hong, received Jan 18, 2021
9. Email from Nate Dorris, received Jan 25, 2021
10. Email from Richard James, received Jan 29, 2021
11. DFW presentation

**Motion/Direction**

The Commission determines, pursuant to Section 399 of the California Fish and Game Code, that adopting this regulation is necessary for the immediate conservation, preservation, or protection of birds, mammals, fish, amphibians, or reptiles, including but not limited to their nests or eggs.

The Commission further determines, pursuant to Section 11346.1 of the Government Code, that an emergency situation exists and finds this proposed regulation is necessary to address the emergency.

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission adopts the emergency regulation to amend sections 29.20 and 29.80 related to authorized gear for recreational take of clams, sand crabs, and shrimp.

## Memorandum

Date: September 22, 2021

To: Melissa Miller-Henson  
Executive Director  
Fish and Game Commission

From: Charlton H. Bonham  
Director

Subject: **Agenda Item for the October 2021 Fish and Game Commission Meeting.**  
**Re: Re-adoption of Sections 29.20, Clams General, and 29.80, Gear Restrictions,**  
**Title 14, California Code of Regulations**

On February 10, 2021, the Fish and Game Commission (Commission) adopted emergency action to prohibit the use of hydraulic pumps for the harvest of clams via emergency action. The proposal amended Sections 29.20 and 29.80, Title 14, California Code of Regulations (CCR) effective March 8, 2021. The proposal was necessary to protect clam stocks from the unknown effects of this novel gear type, especially in the popular clamming areas of Humboldt Bay, Bodega Bay, Tomales Bay, Drakes Estero, and Elkhorn Slough. The proposal was also necessary to control increasing illegal-market activities that pose additional threats to resource sustainability.

Transmittal of the attached updated Findings of Emergency and Statement of Proposed Emergency Regulatory Action to the Fish and Game Commission (Commission) will allow the Commission to consider re-adopting the emergency rulemaking at its October meeting. The re-adoption would be the first of two 90-day extensions. A certificate of compliance (standard) rulemaking with updated harvest data is proposed to come before the Commission at the December 2021 meeting. Wildlife officers report the emergency rule has been effective at reducing the use of hydraulic pumps, and the requirement to keep individual bag limits separate has improved enforcement and discouraged illegal commercialization.

The Department requests that the Commission take action at its October 2021 meeting, and again at the February 2022 meeting, to re-adopt the emergency regulation to prohibit the use of hydraulic pumps for the harvest of clams until the permanent regulation is in place.

If you have any questions or need additional information, please contact Dr. Craig Shuman, Marine Regional Manager at (916) 217-2370. The Department point of contact for this emergency rulemaking should identify Environmental Scientist Ian Kelmartin. His contact information is [Ian.Kelmartin@wildlife.ca.gov](mailto:Ian.Kelmartin@wildlife.ca.gov).

Attachment

ec: Garry Kelley, Acting Deputy Director  
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Melissa Miller-Henson, Executive Director  
Fish and Game Commission  
September 22, 2021  
Page 2 of 2

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**DRAFT CALIFORNIA FISH AND GAME COMMISSION  
FINDING OF EMERGENCY AND  
STATEMENT OF PROPOSED EMERGENCY REGULATORY ACTION**

Re-adoption of Emergency Action to  
Amend Sections 29.20 and 29.80,  
Title 14, California Code of Regulations  
Re: 2021 Recreational Clam, Sand Crab, and Shrimp Gear Emergency Rule

Date of Statement: September 14, 2021

**I. Emergency Regulations in Effect to Date**

The California Fish and Game Commission (Commission) approved an emergency rulemaking amending sections 29.20 and 29.80, Title 14, CCR that became effective March 8, 2021. The emergency prohibits the use of hydraulic hand pumps to harvest clams, sand crabs, and shrimp, clarifies permissible methods for the take of those species, and requires each individual partaking in clamming to store their catch separately from those of others for ease of enforcement of individual bag and possession limits.

The rule was adopted in response to observational and scientific data indicating the potential for hydraulic hand pumps to facilitate overharvesting of clams and cause damage to the estuarine environment where recreational clamming occurs.

**II. Request for Approval of Readoption of Emergency Regulations**

The current emergency rule, sections 29.20 and 29.80, Title 14, CCR will expire on January 8, 2022 unless it is readopted for an additional 90 days.

California Department of Fish and Wildlife (Department) staff are developing a regular rulemaking that will prohibit the use of hydraulic hand pumps in pursuit of clams, sand crabs, and shrimp, clarify permissible methods of take, and require individuals to store their clamming catch separately from those of others. In order to develop the necessary information to inform that rulemaking and protect resources while it is promulgated, the current emergency rule will need to be extended.

**III. Statement of Facts Constituting the Need for Readoption of the Emergency Regulation.**

***Prior Commission Actions***

On August 8, 2019, the Commission referred petition 2019-012 requesting the amendment of Section 29.20, Title 14, CCR to ban the use of hydraulic pumps in clamming to the Department for review and recommendation.

On February 10, 2021, the Commission adopted the emergency regulation to amend sections 29.20 and 29.80, Title 14, CCR related to authorized gear for recreational take of clams, sand crabs, and shrimp.

***Existence of an Emergency and Need for Immediate Action***

The Commission considered the following factors in determining whether an emergency exists: The magnitude of potential harm; the existence of a crisis situation; the immediacy of the need; and whether the anticipation of harm has a basis firmer than simple speculation.

Clams are an important ecological, cultural, and recreational resource in the State of California. The use of hydraulic pumps to harvest clams has greatly increased the efficiency of clam harvesting and allow greater access to clam beds. These factors, combined with increasing participation in the fishery due to the COVID-19 pandemic, are likely causing a significant increase in take, and it is unknown whether the stock can support this increase. Further, illegal commercial sale of gaper clams facilitated by the use of hydraulic pumps poses a public health risk, as these catches are not subject to normal shellfish safety inspections. Consumers may believe they are purchasing geoduck clam from legitimate fisheries or be unaware of the risks posed by consuming wild-caught shellfish. Finally, the increased disturbance of sensitive and ecologically important eelgrass habitat is causing unknown disruption to estuarine environments in the state.

These conditions still exist, constituting the need for a re-adoption of the emergency regulations. Allowing the emergency to lapse while a regular rulemaking is developed would cause confusion for clammers and wildlife officers, as well as leave the emergency conditions unaddressed until the regular rulemaking becomes effective. Wildlife officers report the emergency rule has been effective at reducing the use of hydraulic pumps, and the requirement to keep individual bag limits separate has improved enforcement and discouraged illegal commercialization. COVID-19 remains a concern, and the relative safety of outdoor activities is likely to continue to increase interest and participation in the fishery. During creel surveys conducted by Department staff in June and July 2021, 45% of groups surveyed reported they had gone clamming for the first time in 2020 or 2021, or that they clammed more in 2020/21 than in previous years. The emergency regulation was supported by 55% of clammers surveyed, compared to 19% who did not support the regulation. The balance did not have an opinion on the issue. Seventy five percent (75%) of participants reported they were satisfied with current bag limits, and many commented that pumps are not necessary to harvest a limit of gaper clams. During surveys, Department staff observed approximately 130-200 clammers on summer weekends with a tide of -0.5 feet or lower, at both Lawson's Landing and Bodega Bay. Despite the high participation in the fishery, preliminary analysis shows no significant change in the mean length of gaper clams harvested at Lawson's Landing compared to 2015, though this analysis is ongoing and a full comparison of the size structure of the population will provide greater insight into the sustainability of the fishery.

A re-adoption of the emergency action is necessary to continue to protect the clam resource and estuarine environment while permanent regulations to prohibit the use of hydraulic pumps are considered and potentially implemented. The increased interest in the fishery due to COVID-19 is likely to persist through the duration of this emergency action, and protecting the resource and consumers from the actions of groups harvesting clams for illegal sale remains a top priority.

***Proposed Action by the Commission***

The Commission proposes the readoption of amendments to sections 29.20 and 29.80, Title 14, CCR that is the same as previously effective. A single addition has been made to the authority and reference for both sections 29.20 and 29.80 to include Fish and Game Code Section 399 as an authority, as the adoption of this emergency regulation and re-adoption is necessary for the immediate conservation, preservation, and protection of gaper clam stocks, and eelgrass habitat adjoining clam beds.

**IV. Impact of Regulatory Action**

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following determinations relative to the required statutory categories have been made:

- (a) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State: None.
- (b) Nondiscretionary Costs/Savings to Local Agencies: None.
- (c) Programs Mandated on Local Agencies or School Districts: None.
- (d) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code: None.
- (e) Effect on Housing Costs: None.

**V. Readoption Criteria**

**1) Same as or Substantially Equivalent**

Pursuant to Government Code section 11346.1(h), the text of a readopted “emergency regulation that is the same as or substantially equivalent to an emergency regulation previously adopted by that agency.” The language proposed for this rulemaking is the same as the language of the original emergency regulation.

**2) Substantial Progress**

Government Code section 11346.1(h) specifies “Readoption shall be permitted only if the agency has made substantial progress and proceeded with diligence to comply with subdivision (e)” [sections 11346.2 through 11347.3, inclusive].

A rulemaking in compliance with these sections (certificate of compliance) is currently underway and is scheduled to be presented to the Commission for public notice in December of 2021.

**VI. Authority and Reference**

Authority cited: Sections 200, 205 and 399, Fish and Game Code.

Reference: Sections 200, 205 and 399, Fish and Game Code.

**VII. Section 399 Finding**

Delay in the prohibition of hydraulic pumps for recreational take of clams (i.e., six to nine months for a standard rulemaking) required to address this puts clam and marine resources at risk. Action to re-adopt these regulations is necessary now to protect the resource and estuarine environment in a timely manner, as increased recreational take participation coincides with better weather conditions in the coming spring months.

Pursuant to Fish and Game Code Section 399, the Commission finds that re-adopting this regulation is necessary for the immediate conservation, preservation, or protection of gaper clam stocks, and eelgrass habitat adjoining clam beds.

## Informative Digest (Policy Statement Overview)

The California Fish and Game Commission (Commission) approved an emergency rulemaking, amending sections 29.20 and 29.80, Title 14, CCR that became effective March 8, 2021. The emergency prohibits the use of hydraulic hand pumps to harvest clams, sand crabs, and shrimp, clarifies permissible methods for the take of those species, and requires each individual partaking in clamming to store their catch separately from those of others for ease of enforcement of individual bag and possession limits.

The concerns addressed by this emergency action are:

- Use of hydraulic pumps in clamming which:
  - speed extraction of clams;
  - provide access to previously inaccessible clam beds in deeper water;
  - increases time before and after low tide clams are accessible.
- Disturbance of previously undisturbed eel grass habitat during clamming.
- Increased fishing pressure since the closure of the recreational abalone fishery, and during the Covid-19 pandemic.
- Increased illegal commercialization of gaper clams facilitated by hydraulic pumps.
- Concern for the sustainability of the resource in state waters, particularly Humboldt Bay, Bodega Bay, Tomales Bay, Drakes Estero, and Elkhorn Slough.

Clams are an important ecological, cultural, and recreational resource in the State of California. The use of hydraulic pumps to harvest clams has greatly increased the efficiency of clam harvesting and allows greater access to clam beds. These factors, combined with increasing participation in the fishery due to the COVID-19 pandemic, are likely causing a significant increase in take, and it is unknown whether the stock can support this increase. Further, the use of hydraulic pumps has corresponded with an observed increase in illegal commercial sales of gaper clams. Finally, the increased disturbance of sensitive and ecologically important eelgrass habitat is causing unknown disruption to estuarine environments in the state.

### Proposed Regulatory Action:

The proposed re-adoption would extend the emergency regulation in Section 29.20, Title 14, CCR to specify the gear permitted to be used to harvest clams as hand operated spades, shovels, hoes, forks, and rakes, and specifically prohibit the use of hydraulic hand pumps. It would also require each person to keep clams they had harvested in a separate container from clams harvested by others while digging clams and returning them to shore. The proposed re-adoption would also extend sections 29.20 and 29.90, Title 14, CCR to specify the gear permitted to be used to harvest sand crabs and shrimp as hand operated spades, shovels, hoes, forks, rakes, and slurp guns and specifically prohibit the use of hydraulic hand pumps.

### Benefits of the Regulation to the State's Environment:

The Commission anticipates benefits to the State's environment by sustainably managing California's ocean resources. The environmental risk arising from the proposed rule are not

regarded as significant, as the rule manages the resource more conservatively than existing regulation.

The Department conducted an evaluation of existing regulations and this regulation is neither inconsistent nor incompatible with existing state regulations.

**Consistency and Compatibility with Existing State Regulations:**

The Legislature has delegated authority to the Commission to promulgate sport fishing regulations (Fish and Game Code sections 200 and 205) as well as authority to promulgate corresponding emergency regulations as necessary (Fish and Game Code Section 399). No other state agency has the authority to promulgate such regulations. The Commission has conducted a search of Title 14, CCR, and determined that the proposed regulation is neither inconsistent nor incompatible with existing State regulations, and that the proposed regulation is consistent with other sport fishing regulations and marine protected area regulations in Title 14, CCR.

## Emergency Regulatory Language

Section 29.20, Title 14, CCR, is amended as follows:

**§ 29.20. Clams General**

(a) Except as provided in this article, there are no closed seasons, bag limits or size limits on saltwater clams.

(b) Fishing hours: one-half hour before sunrise to one-half hour after sunset.

(c) ~~Special gear provisions: Spades, shovels, hoes, rakes or other appliances operated by hand, except spears or gaff hooks, may be used to take clams.~~ Gear restrictions. It shall be unlawful to use anything other than the following hand-operated devices to take clams: spades, shovels, hoes, forks, rakes, devices that use suction to remove clams commonly known as slurp guns or clam guns, or rigid pipes used to prevent the collapse of holes when digging for clams. It shall be unlawful to use any other device to take clams, including any hydraulic devices. It shall be unlawful to possess a hydraulic pump, or other device, capable of liquifying sand to aid in the harvest of clams anywhere clams may be taken. It shall be unlawful to possess any such unauthorized device, except in their permanent residence, concurrently with any clam. No instrument capable of being used to dig clams may be possessed between one-half hour after sunset and one-half hour before sunrise, on any beach of this state, except tools and implements used in the work of cleaning, repairing or maintaining such beach when possessed by a person authorized by appropriate authority to perform such work.

(d) Clams ashore: Clams which have a size limit when being taken must be brought ashore above the high water mark in such a condition that the size can be determined. Such clams not in the shell may not be transported or possessed, except when being prepared for immediate consumption. Clams which have a size limit and are not retained shall be immediately reburied in the area from which dug. When digging and transporting to shore, each person is required to keep a separate container for their clams and not commingle with clams taken by another person.

Note: Authority cited: Sections 200, 202, 205, 219, 265, ~~and 275,~~ and 399, Fish and Game Code. Reference: Sections 200, 205, 255, 265, 270, ~~and 275~~ Fish and Game Code.

**Emergency Regulatory Language**

Section 29.80, Title 14, CCR, is amended as follows:

**§ 29.80. Gear Restrictions**

. . . [No changes to subsections (a) through (g)]

(h) Gear restrictions. ~~Hand-operated appliances: Spades, shovels, hoes, rakes or other appliances operated by hand may be used to take sand crabs and shrimp.~~ It shall be unlawful to use anything other than the following hand-operated devices to take sand crabs or shrimp: spades, shovels, hoes, forks, rakes, devices that use suction commonly known as slurp guns or clam guns, or rigid pipes used to prevent the collapse of holes when digging for sand crabs or shrimp. It shall be unlawful to use any other devices to take crabs or shrimp, including any hydraulic devices.

. . . [No changes to subsections (i) through (j)]

Note: Authority cited: Sections 200, 205, 265, 270, 275, 399, 7075 and 7078, Fish and Game Code. Reference: Sections 110, 200, 205, 265, 270, 275, 7050, 7055 and 7056, Fish and Game Code.

**ECONOMIC IMPACT STATEMENT**

DEPARTMENT NAME <b>Fish and Game Commission</b>	CONTACT PERSON <b>Margaret.Duncan</b>	EMAIL ADDRESS <b>@wildlife.ca.gov</b>	TELEPHONE NUMBER <b>916-653-4899</b>
DESCRIPTIVE TITLE FROM NOTICE REGISTER OR FORM 400 <b>Amend Sec 29.20 &amp; 29.80, Title 14, CCR Re: 2021 Recreational Clam, Sand Crab, Shrimp Gear Emergency Rule</b>			NOTICE FILE NUMBER <b>Z</b>

**A. ESTIMATED PRIVATE SECTOR COST IMPACTS** *Include calculations and assumptions in the rulemaking record.*

1. Check the appropriate box(es) below to indicate whether this regulation:

- ☐ a. Impacts business and/or employees
- ☐ b. Impacts small businesses
- ☐ c. Impacts jobs or occupations
- ☐ d. Impacts California competitiveness
- ☐ e. Imposes reporting requirements
- ☐ f. Imposes prescriptive instead of performance
- ☐ g. Impacts individuals
- ☒ h. None of the above (Explain below):

**Only fiscal impact assessment required for an Emergency Action**

*If any box in Items 1 a through g is checked, complete this Economic Impact Statement.  
If box in Item 1.h. is checked, complete the Fiscal Impact Statement as appropriate.*

2. The \_\_\_\_\_ estimates that the economic impact of this regulation (which includes the fiscal impact) is:  
(Agency/Department)

☐ Below \$10 million

☐ Between \$10 and \$25 million

☐ Between \$25 and \$50 million

☐ Over \$50 million *[If the economic impact is over \$50 million, agencies are required to submit a [Standardized Regulatory Impact Assessment](#) as specified in Government Code Section 11346.3(c)]*

3. Enter the total number of businesses impacted: \_\_\_\_\_

Describe the types of businesses (Include nonprofits): \_\_\_\_\_

Enter the number or percentage of total businesses impacted that are small businesses: \_\_\_\_\_

4. Enter the number of businesses that will be created: \_\_\_\_\_ eliminated: \_\_\_\_\_

Explain: \_\_\_\_\_

5. Indicate the geographic extent of impacts: ☐ Statewide

☐ Local or regional (List areas): \_\_\_\_\_

6. Enter the number of jobs created: \_\_\_\_\_ and eliminated: \_\_\_\_\_

Describe the types of jobs or occupations impacted: \_\_\_\_\_

\_\_\_\_\_

7. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here? ☐ YES ☐ NO

If YES, explain briefly: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**ECONOMIC IMPACT STATEMENT (CONTINUED)**

**B. ESTIMATED COSTS** *Include calculations and assumptions in the rulemaking record.*

1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime? \$ \_\_\_\_\_
  - a. Initial costs for a small business: \$ \_\_\_\_\_ Annual ongoing costs: \$ \_\_\_\_\_ Years: \_\_\_\_\_
  - b. Initial costs for a typical business: \$ \_\_\_\_\_ Annual ongoing costs: \$ \_\_\_\_\_ Years: \_\_\_\_\_
  - c. Initial costs for an individual: \$ \_\_\_\_\_ Annual ongoing costs: \$ \_\_\_\_\_ Years: \_\_\_\_\_
  - d. Describe other economic costs that may occur: \_\_\_\_\_  
\_\_\_\_\_
2. If multiple industries are impacted, enter the share of total costs for each industry: \_\_\_\_\_  
\_\_\_\_\_
3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements.  
*Include the dollar costs to do programming, record keeping, reporting, and other paperwork, whether or not the paperwork must be submitted.* \$ \_\_\_\_\_
4. Will this regulation directly impact housing costs? ☐ YES ☐ NO  
If YES, enter the annual dollar cost per housing unit: \$ \_\_\_\_\_  
Number of units: \_\_\_\_\_
5. Are there comparable Federal regulations? ☐ YES ☐ NO  
Explain the need for State regulation given the existence or absence of Federal regulations: \_\_\_\_\_  
\_\_\_\_\_  
Enter any additional costs to businesses and/or individuals that may be due to State - Federal differences: \$ \_\_\_\_\_

**C. ESTIMATED BENEFITS** *Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. Briefly summarize the benefits of the regulation, which may include among others, the health and welfare of California residents, worker safety and the State's environment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. Are the benefits the result of: ☐ specific statutory requirements, or ☐ goals developed by the agency based on broad statutory authority?  
Explain: \_\_\_\_\_
3. What are the total statewide benefits from this regulation over its lifetime? \$ \_\_\_\_\_
4. Briefly describe any expansion of businesses currently doing business within the State of California that would result from this regulation: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**D. ALTERNATIVES TO THE REGULATION** *Include calculations and assumptions in the rulemaking record. Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT****(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**ECONOMIC IMPACT STATEMENT (CONTINUED)**

2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:

Regulation: Benefit: \$ \_\_\_\_\_ Cost: \$ \_\_\_\_\_

Alternative 1: Benefit: \$ \_\_\_\_\_ Cost: \$ \_\_\_\_\_

Alternative 2: Benefit: \$ \_\_\_\_\_ Cost: \$ \_\_\_\_\_

3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives: \_\_\_\_\_

4. Rulemaking law requires agencies to consider performance standards as an alternative, if a regulation mandates the use of specific technologies or equipment, or prescribes specific actions or procedures. Were performance standards considered to lower compliance costs? ☐ YES ☐ NO

Explain: \_\_\_\_\_

**E. MAJOR REGULATIONS** *Include calculations and assumptions in the rulemaking record.****California Environmental Protection Agency (Cal/EPA) boards, offices and departments are required to submit the following (per Health and Safety Code section 57005). Otherwise, skip to E4.***1. Will the estimated costs of this regulation to California business enterprises **exceed \$10 million**? ☐ YES ☐ NO***If YES, complete E2. and E3******If NO, skip to E4***

2. Briefly describe each alternative, or combination of alternatives, for which a cost-effectiveness analysis was performed:

Alternative 1: \_\_\_\_\_

Alternative 2: \_\_\_\_\_

*(Attach additional pages for other alternatives)*

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

Regulation: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

Alternative 1: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

Alternative 2: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

4. Will the regulation subject to OAL review have an estimated economic impact to business enterprises and individuals located in or doing business in California exceeding \$50 million in any 12-month period between the date the major regulation is estimated to be filed with the Secretary of State through 12 months after the major regulation is estimated to be fully implemented?

☐ YES ☐ NO*If YES, agencies are required to submit a [Standardized Regulatory Impact Assessment \(SRIA\)](#) as specified in Government Code Section 11346.3(c) and to include the SRIA in the Initial Statement of Reasons.*

5. Briefly describe the following:

The increase or decrease of investment in the State: \_\_\_\_\_

The incentive for innovation in products, materials or processes: \_\_\_\_\_

The benefits of the regulations, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the state's environment and quality of life, among any other benefits identified by the agency: \_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT****(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**FISCAL IMPACT STATEMENT****A. FISCAL EFFECT ON LOCAL GOVERNMENT** *Indicate appropriate boxes 1 through 6 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

- ☐ 1. Additional expenditures in the current State Fiscal Year which are reimbursable by the State. (Approximate)  
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ \_\_\_\_\_

- ☐ a. Funding provided in \_\_\_\_\_

Budget Act of \_\_\_\_\_ or Chapter \_\_\_\_\_, Statutes of \_\_\_\_\_

- ☐ b. Funding will be requested in the Governor's Budget Act of \_\_\_\_\_

Fiscal Year: \_\_\_\_\_

- ☐ 2. Additional expenditures in the current State Fiscal Year which are NOT reimbursable by the State. (Approximate)  
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ \_\_\_\_\_

*Check reason(s) this regulation is not reimbursable and provide the appropriate information:*

- ☐ a. Implements the Federal mandate contained in \_\_\_\_\_

- ☐ b. Implements the court mandate set forth by the \_\_\_\_\_ Court.

Case of: \_\_\_\_\_ vs. \_\_\_\_\_

- ☐ c. Implements a mandate of the people of this State expressed in their approval of Proposition No. \_\_\_\_\_

Date of Election: \_\_\_\_\_

- ☐ d. Issued only in response to a specific request from affected local entity(s).

Local entity(s) affected: \_\_\_\_\_  
\_\_\_\_\_

- ☐ e. Will be fully financed from the fees, revenue, etc. from: \_\_\_\_\_

Authorized by Section: \_\_\_\_\_ of the \_\_\_\_\_ Code;

- ☐ f. Provides for savings to each affected unit of local government which will, at a minimum, offset any additional costs to each;

- ☐ g. Creates, eliminates, or changes the penalty for a new crime or infraction contained in \_\_\_\_\_

- ☐ 3. Annual Savings. (approximate)

\$ \_\_\_\_\_

- ☐ 4. No additional costs or savings. This regulation makes only technical, non-substantive or clarifying changes to current law regulations.

- ☒ 5. No fiscal impact exists. This regulation does not affect any local entity or program.

- ☐ 6. Other. Explain \_\_\_\_\_  
\_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT****(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**FISCAL IMPACT STATEMENT (CONTINUED)**

**B. FISCAL EFFECT ON STATE GOVERNMENT** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

☐ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

*It is anticipated that State agencies will:*

☐ a. Absorb these additional costs within their existing budgets and resources.

☐ b. Increase the currently authorized budget level for the \_\_\_\_\_ Fiscal Year

☐ 2. Savings in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

☒ 3. No fiscal impact exists. This regulation does not affect any State agency or program.

☐ 4. Other. Explain \_\_\_\_\_  
\_\_\_\_\_

**C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

☐ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

☐ 2. Savings in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

☒ 3. No fiscal impact exists. This regulation does not affect any federally funded State agency or program.

☐ 4. Other. Explain \_\_\_\_\_  
\_\_\_\_\_

FISCAL OFFICER SIGNATURE

DocuSigned by:



DJ Farrell

EBB0B535880C4F6

DATE

9/21/2021

*The signature attests that the agency has completed the STD. 399 according to the instructions in SAM sections 6601-6616, and understands the impacts of the proposed rulemaking. State boards, offices, or departments not under an Agency Secretary must have the form signed by the highest ranking official in the organization.*

AGENCY SECRETARY

DATE



*Finance approval and signature is required when SAM sections 6601-6616 require completion of Fiscal Impact Statement in the STD. 399.*

DEPARTMENT OF FINANCE PROGRAM BUDGET MANAGER

DATE



CALIFORNIA FISH AND GAME COMMISSION  
**RESOLUTION RECOGNIZING**

**OCTOBER 2021 AS  
NATIONAL DISABILITY EMPLOYMENT AWARENESS MONTH**

**W**HEREAS, at least 60 million Americans live with disabilities of various types, including veterans who became disabled while serving our country; and

**W**HEREAS, welcoming the talents of all people, including people with disabilities, is a critical part of our effort to build an inclusive community, strong economy, and healthy environment; and

**W**HEREAS, the State of California is celebrated for its vast array of outdoor recreational activities and diverse wildlife; and

**W**HEREAS, the most effective methods for improving the lives of people with disabilities are public awareness, understanding and inclusion in the community and workplace; and

**W**HEREAS, the California Fish and Game Commission is committed to empowering and supporting people with disabilities to achieve self-determined lifestyles through community-based activities and relationships; and

**W**HEREAS, the California Fish and Game Commission encourages every person with a disability to experience recreation in California's wild places; and

**W**HEREAS, the California Fish and Game Commission is proud to support access to fishing, hunting, and other outdoor recreational opportunities;

**NOW THEREFORE, BE IT RESOLVED**, that the California Fish and Game Commission, recognizes October 2021 as NATIONAL DISABILITY EMPLOYMENT AWARENESS MONTH to raise awareness about disability employment issues, celebrate the many and varied contributions of people with disabilities, promote enjoyment of California's fish and wildlife resources by people with disabilities, and urge everyone to dedicate themselves to empowering and fully including disabled individuals in all aspects of community life all year long.

**DATED: OCTOBER 14, 2021**

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Peter S. Silva, President

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Samantha Murray, Vice President

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Jacqueline Hostler-Carmesin, Member

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Eric Sklar, Member

---

Erika Zavaleta, Member

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Melissa Miller-Henson, Executive Director



## July Notables Awareness Month:

- ◆ **Fragile X Awareness Month**
- ◆ **National Cleft & Craniofacial Awareness & Prevention Month**

**July 12:** Heterochromia Awareness Day

**July 23:** World Sjogren's Day

**July 24:** National Seasonal Affective Disorder Day

**July 26:** Americans with Disabilities Act 31st Anniversary

## August Notables Awareness Month:

- ◆ **Digestive Tract Paralysis Month**
- ◆ **Spinal Muscular Atrophy Awareness Month**

**August 21:** National Senior Citizens Day

### Resources:

[CDFW DAC Intranet Page](#)

[CDFW EEO Intranet Page](#)

[CDFW Reasonable Accommodations](#)

[Department of Rehabilitation](#)

July—August 2021

## Meet the newest DAC Member!

**Region 4:** I am Virginia Guhin and I am the Education Coordinator/Interpreter II at the Elkhorn Slough Ecological Reserve. I have been with the Reserve since 2010 and with the Department since 2015. I develop and manage Visitor Services programs (Visitor Center and public tours), K-college programs (curriculum, resources, field trips), Teacher workshops, and Community Outreach and Events (on-site and off-site). I have led the Reserve public access strategic planning and implementation for the past 4 years. These efforts have focused on safe, equitable access for all visitors.

If you have any questions or are interested in participating on the DAC, please contact your DAC representative.

The Committee can also be reached at:  
[DAC@wildlife.ca.gov](mailto:DAC@wildlife.ca.gov).



### DAC Members:

Chairperson: Brad Burkholder, WFD

Vice Chairperson: Andrew Klein, R7

Secretary: Robert Hawkins, R1

DTD: Sandra Hill

ECD: Bryan DeMucha

EEO: Rena Cordova

HRB: Monique Jones

LRB: Jonathan Anaya

WCB: Heather Conn

Region 2: Malena Harvey

Region 3: Mitsuko Grube

Region 4: Virginia Guhin

Region 5: Jennifer Ludovissy

Region 6: Aaron Johnson



# Did you know.....



The [Americans with Disabilities Act \(ADA\)](#) was signed on July 26, 1990. This year we celebrate the 31st anniversary of this important civil rights law that works to ensure all people with disabilities have the same rights and opportunities as everyone else. The law was modeled on the earlier Civil Rights Act as an “equal opportunity” law for those living with disabilities. Although it has been over 30 years since signing, it has been updated by the Department of Justice on a few occasions as needed, most recently in 2016.

For those of us less familiar with the law, mention of the ADA often brings to mind the [ADA Standards for Accessible Design](#), as updated in 2010, that ensures that newly designed and constructed State and local government facilities, public accommodations, and commercial facilities are readily accessible to and usable by individuals with disabilities. In truth, although the “Standards” constitute a very important part of ADA, the law covers quite a bit more. The ADA is divided into five sections, or “titles” covering: (i) equal employment opportunities, (ii) public services provided by state and local government, (iii) public accommodations and services in privately-owned facilities, (iv) telecommunication, and (v) additional miscellaneous provisions. It goes without saying that the ADA covers a lot more than meets the eye and we encourage everyone to take some time to [review this important law](#) and the ways in which it might benefit either yourself, or someone you know.

As your [CDFW Disability Advisory Committee \(DAC\)](#), it is our purpose to raise disability awareness in the workplace, enhance employment and promotional opportunities for individuals with disabilities, and to provide input regarding effective implementation of the ADA. Please reach out by email to [DAC@wildlife.ca.gov](mailto:DAC@wildlife.ca.gov) if you have any questions or ideas that you would like to share.





It is estimated that up to 4% of the world population relies on some sort of Assistive Technology to access electronic documents and Web pages. Assistive Technology includes: Screen Reading software, Refreshable Braille displays, and Screen Magnifiers.

Accessibility to documents is a right that is protected by both Federal and State law. The Department is continuing to work towards full compliance with [CA AB 434](#), [Section 508 of the Rehabilitation Act](#) and the [Web Content Accessibility Guidelines \(WCAG\) 2.0](#).

Creating accessible documents is required to ensure information access for persons with disabilities.

### **Seven Steps to Creating an Accessible Word Document**

1. Use appropriate font style and sizes.
2. Use color appropriately.
3. Add alternative texts and captions to images.
4. Specify column header rows in Tables.
5. Use meaningful Hyperlink Text.
6. Use built-in formatting styles.
7. Check Accessibility.

For more instructions please visit the DAC Intranet page to access the following documents: [Creating an Accessible Word Document](#) and [Creating Accessible Forms in Word and PDFs](#).

Additional information can also be found on the Department of Rehabilitation website at the following link: [Document Accessibility](#).

# Fishing and Hunting

**The Free Fishing Days for 2021 are Saturday, July 3 and Saturday, September 4.**

## **FISHING:**

CDFW offers a variety of Reduced-fee Sport Fishing, as well as Free Sport Fishing licenses. Here is a list of the various Free and Reduced-Fee Sport Fishing Licenses. These are only available from the CDFW's License and Revenue Branch.

To qualify for a Free or Reduced-Fee Sport Fishing License, anglers must meet the criteria listed on the application. Click on the following link for information: [Licensing and Fees](#).

- Reduced-Fee Sport Fishing for Disabled Veteran
- Reduced-Fee Sport Fishing License for Recovering Service Member
- Reduced-Fee Sport Fishing License for Low Income Senior
- FREE Sport Fishing License for Low Income Native American
- FREE Sport Fishing License for Mobility Impaired, Blind or Developmentally Disabled

Also, check out the CDFW updated friendly interactive [Fishing Guide](#) map application to help you plan your fishing activities. This application provides regulation information and available amenities such as boat ramp and wheelchair accessibility, restrooms, boat launches, and much more.

## **HUNTING:**

To qualify for a Reduced-Fee Hunting License and Disabled Entitlements, hunters must meet the criteria listed on the application. Click on the following link for information: [Licensing and Fees](#).

- Reduced-Fee Disabled Hunting License
- Reduced-Fee Recovering Member Hunting License

### **DISABLED ENTITLEMENTS**

- Mobility Impaired Disabled Persons Motor Vehicle Hunting License – NO FEE
- Visually Disabled Muzzleloader Scope Permit –NO FEE
- Disabled Archer Permit – NO FEE

### **Waterfowl Hunting Opportunities for Mobility Impaired Hunters.**

A number of State Wildlife Areas and National Wildlife Refuges have hunting blinds designated for use by mobility impaired hunters. Disabled hunters must provide the registration certificate for DMV issued disabled license plates. Eligibility will be verified when you check in at the wildlife area.

Click on the link below for information, how to apply, and for a list of blind sites for mobility impaired hunters: [Wildlife Areas with Blinds for Mobility Impaired](#).

**California Fish and Game Commission**  
**Staff Time Allocation and Activities**  
*October 5, 2021*

This report identifies for the months of August and September 2021 where California Fish and Game Commission staff time was allocated in general activity categories, trends in staff time allocation, and examples of the specific activities in which staff engaged.

**General Time Allocation**

<b>Task Category</b>	<b>August Staff Time</b>	<b>September Staff Time</b>
Regulatory Program	6%	12%
Non-Regulatory Programs	4%	4%
Commission/Committee Meetings	33%	18%
Legal Matters	5%	4%
External Affairs	11%	12%
Special Projects	22%	15%
Administration	22%	22%
Leave Time	3%	21%
Unfilled Positions	0%	0%
Total Staff Time <sup>1</sup>	106%	103%

<sup>1</sup> Total staff time is greater than 100% due to overtime

**Trends**

Allocated time across most task categories were relatively consistent and expected; special projects, leave time, and unfilled positions are noteworthy.

Staff preparations for the move to the new building became increasingly time consuming as we approached the move date. For most staff, a good portion of time in August was dedicated to planning, packing and other move arrangements, including preparing and boxing paper files for conversion to digital format. Thankfully, staff received wonderful assistance from the California Department of Fish and Wildlife's facilities move team; even after 30 years of being in the Commission suite and over 40 years in the Ninth Street building, the move was relatively painless. Staff swiftly unpacked in the new P Street building in early September. While staff will continue to advance work on the paper to digital conversion project, we expect the special projects category to diminish to pre-move levels.

After many months of deferred vacation plans, September saw some staff taking leave. And, while the personal leave program terminated as of July 1, 2021, multiple staff have accumulated dozens of hours of earned leave credits that will need to be used in the coming months.

Finally, staff is grateful to have consistency in staffing; several consecutive months with no unfilled positions is unusual, but encouraging and uplifting.

## **Sample Activities for August 2021**

- Organized and facilitated four Coastal Fishing Communities Project regional roundtable meetings to begin the process of exploring a potential Commission policy on coastal fishing communities
- Coordinated with California Ocean Science Trust staff regarding each agency's coastal fishing community projects
- Began the 2022 Sea Grant State fellow recruitment process, including participating in host presentations for the 2022 finalists
- Made final preparations for and completed the physical move to the new P Street building
- Participated in justice, equity, diversity and inclusion (JEDI) coordination meetings with the California Department of Fish and Wildlife (Department) to help advance the Commission's JEDI planning efforts, and initiated discussions in support of developing an agreement for a JEDI contractor
- Advanced progress on pending aquaculture lease requests through bi-weekly coordination meetings with the Department
- Participated in the Governor's tribal advisor's monthly tribal consultation regarding drought and the state tribal liaisons quarterly meeting
- Participated in the California Natural Resources Agency (CNRA) agency-wide leaders, monthly external affairs, and monthly tribal liaisons meetings
- Participated in the California Hunting and Conservation Coalition's quarterly meeting
- Researched and reported to CNRA estimated greenhouse gas emission reductions for commissioners and staff during the pandemic
- Observed an ongoing tribal consultation by the Department with the ten member tribes of the InterTribal Sinkyone Wilderness Council
- Participated in planning for California Native American Day 2021
- Participated in the Department's monthly operations committee meeting
- Continued work sessions to refine the framework for committee workload prioritization, and initiated an analysis of MRC projects using the prioritization tool
- Began planning a guest speaker event with Dr. Jill Lindsey Harrison
- Continued onboarding of new regulatory analyst
- Prepared for and conducted two publicly noticed meetings (Tribal Committee and Commission), and began preparations for one publicly noticed meeting (Wildlife Resources Committee)

## **Sample Activities for September 2021**

- Unpacked and began settling into the new office at 715 P Street
- Organized and facilitated two Coastal Fishing Communities Project regional roundtable meetings to continue the process of exploring a potential Commission policy on coastal fishing communities
- Participated in Department and Commission JEDI coordination meetings, and continued discussions to develop an agreement for a JEDI contractor

- Completed planning for and conducted a guest speaker event with Dr. Jill Lindsey Harrison
- Continued work sessions to refine the framework for committee workload prioritization
- Joined Department colleagues on the Russian River to conduct salmon and steelhead monitoring
- Participated in Governor's tribal advisor monthly tribal consultation regarding drought
- Participated in the California Natural Resources Agency's agency-wide leaders, monthly external affairs, and monthly tribal liaisons meetings
- Advanced progress on pending aquaculture lease requests through bi-weekly coordination meetings with DFW
- Participated in California Department of Human Resources' mandatory training regarding the future hybrid workforce as we move beyond the pandemic
- Participated in aquaculture coordination through the federal Southern California Offshore Aquaculture Working Group to advance collaboration on proposed aquaculture projects in federal waters
- Participated in the CNRA Aquaculture Leadership Team meeting to help advance aquaculture in California and a state aquaculture action plan
- Participated in multiple days of the Association of Fish and Wildlife Agencies' annual meeting with colleagues from across the United States and Canada to discuss the many issues and opportunities facing fish and wildlife agencies
- Engaged with colleagues at CNRA, the California Ocean Science Trust, and the Department to collaboratively plan for the 2022 decadal management review of California's network of marine protected areas
- Participated in the Department's Joint Leadership Team meeting
- Participated in a tribal liaison training and work session hosted by CNRA
- Prepared for and conducted one publicly noticed meeting (Wildlife Resources Committee) and began preparations for one publicly noticed meeting (Commission)

## **Sample Tasks for the General Allocation Categories**

### ***Regulatory Program***

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Coordination meetings with DFW to develop timetables and notices</li> <li>• Prepare and file notices, re-notices, and initial/final statements of reasons</li> <li>• Prepare administrative records</li> <li>• Track and respond to public comments</li> </ul> | <ul style="list-style-type: none"> <li>• Consult, research and respond to inquiries from the Office of Administrative Law</li> <li>• Facilitate CEQA document review, certification of findings, and filing with state clearinghouse.</li> </ul> |
|---|--|

### ***Non-Regulatory Program***

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• DFW partnership, including jointly developing management plans and concepts</li> <li>• Process and analyze non-regulatory requests</li> </ul> | <ul style="list-style-type: none"> <li>• Develop, review and amend Commission policies</li> <li>• Research and review adaptive management practices</li> <li>• Review and process CESA petitions</li> </ul> |
|--|---|

### ***Commission/Committee Meetings and Support***

- Research and compile subject-specific information
- Review and develop policies
- Develop and distribute meeting agendas and materials
- Agenda and debrief meetings
- Prepare meeting summaries, audio files and voting records
- Develop and distribute after-meeting memos/letters
- Conduct onsite meeting management
- Process submitted meeting materials
- Provide commissioner support (expense claims, office hours, etc.)
- Process and analyze regulation change petitions

### ***Legal Matters***

- Public Records Act requests
- California Law Review Commission
- Process appeals and accusations
- Process requests for permit transfers
- Process kelp and state water bottom leases
- Litigation
- Prepare administrative records

### ***External Affairs***

- Engage and educate legislators, monitor legislation
- Maintain state, federal and tribal government relations
- Correspondence
- Respond to public inquiries
- Website maintenance
- Coyote workshops

### ***Special Projects***

- Coastal Fishing Communities
- Paper to digital conversion
- Bullfrogs and non-native turtles stakeholder engagement
- Streamline routine regulatory actions
- Aquaculture best management practices
- Committee workload prioritization
- Transition to GovQA software for Public Records Act requests
- California Law Revision Commission recommendation for new Fish and Wildlife Code
- Move to 715 P Street, new Natural Resources Building

### ***Administration***

- Staff training and development
- Purchases and payments
- Contract management
- Personnel management
- Budget development and tracking
- Health and safety oversight and COVID-19 responses
- Internal processes and procedures
- Document archival

### ***Leave Time***

- Holidays
- Sick
- Vacation or annual leave
- Jury duty
- Bereavement
- Personal Leave Program 2020

# Celebrate The Outdoors On National Hunting And Fishing Day

September 25, 2021



San Francisco Bay Area-based party boats are still chasing Chinook salmon just beyond the Golden Gate Bridge. *CDFW photo.*

California hunters and anglers have reason to celebrate Saturday, September 25. Not only is it National Hunting and Fishing Day – a nationwide thank you to the contributions hunters and anglers make to fish and wildlife conservation – but California’s outdoor opportunities are opening up once again in time for peak fall hunting and fishing seasons.

Just in time for the start of many deer, upland game bird and small game seasons, the USDA Forest Service has [reopened almost all of the national forests in California](#) after wildfires and fire conditions forced their closure. The California Department of Fish and Wildlife (CDFW) subsequently reopened dozens of its properties found within or immediately adjacent to USDA Forest Service boundaries.

California hunters and anglers annually pour hundreds of millions of dollars into scientific research, habitat acquisition, wildlife protection and conservation through the licenses, tags, report cards, stamps and validations they purchase, along with the excise taxes they pay on their equipment. In California, they are

rewarded with some of the most varied and diverse hunting and fishing opportunities found anywhere in the nation.

Among the many hunting opportunities available today are mountain quail, all quail species in the early coastal quail zone, ruffed grouse, sooty grouse, tree squirrel and rabbit. All of California's deer seasons are opening – or have opened – on schedule. Among the popular deer hunting zones opening to rifle hunters today are D3-5, D8-10 and X8. Wild pigs are open to hunt year-round.

California anglers have many options as well. Fishing has been excellent in the Klamath River for both Chinook salmon and steelhead. Ocean fishing remains strong up and down the coast for tuna, rock cod and lingcod. Several San Francisco Bay Area-based party boats are still chasing Chinook salmon just beyond the Golden Gate Bridge. As temperatures cool, trout and bass anglers are spending more time on the water. CDFW's Southern California trout hatcheries are once again raising and stocking trout after a bacterial outbreak halted operations at three hatcheries in 2020.

## CDFW News Room

# Southern California Fisheries Closure Implemented Due to Oil Spill

October 4, 2021

Take of all fish and shellfish is immediately prohibited from Huntington Beach to Dana Point, including the shorelines and offshore areas and all bays due to an oil spill in Southern California. The Office of Environmental Health Hazard Assessment (OEHHA) has determined that a threat to public health is likely by fishing in the affected area or consuming fish or shellfish that may have been affected by the spill. OEHHA recommended this fishery closure to the California Department of Fish and Wildlife (CDFW). The CDFW's Office of Spill Prevention and Response (OSPR) Administrator, Thomas Cullen, signed the closure on behalf of CDFW Director Charlton H. Bonham.

The closure is in effect until lifted. This [closure document](#) includes a detailed map of the initially closed areas. The extent of the closure will change as conditions and factors in the area change.

### **Media Contacts:**

[osprfisheriesclosure@wildlife.ca.gov](mailto:osprfisheriesclosure@wildlife.ca.gov)

Jordan Traverso, CDFW Communications, (916) 212-7352

## Southern California Spill Response



## Fisheries Closure

Current Fisheries Closure (as of 10/5/21):



[CDFW Fisheries Closure Declaration Amendment 10-05-21 \(1MB PDF\)](#)

## Previous Fisheries Closures:



[Declaration of Fisheries Closure 10.2.2021 \(1.7MB PDF\)](#)

**From:** CDFW Marine Region <marinenews@wildlife.ca.gov>

**Sent:** Tuesday, October 5, 2021 3:10 PM



California Department of Fish and Wildlife  
Marine Region News Service

## Informational Notice

*October 5, 2021*

### **Oil Spill Fishing Closure Area Expanded off Orange County in Southern California**



The area closed to fishing due to the oil spill off Orange County in Southern California has been revised based on new oil trajectories and projections.

#### **UPDATED CLOSURE DECLARATION AND MAP**

The Office of Environmental Health Hazard Assessment is advising that people avoid fishing in areas where there is visible sheen on the water.

In consultation with the Office of Environmental Health Hazard, the California Department of Fish and Wildlife has revised the geographic boundaries of the closure as stated below.

This closure is effective immediately. This closure prohibits the take of finfish and shellfish either from shorelines or from vessels on the water.

- For the coastal area – from Warner Ave, Huntington Beach (33° 42.595' N, 118° 33.869' W) to two miles north of San Clemente Municipal Pier (33° 26.427' N, 117° 38.653' W), San Clemente, including the shorelines and offshore areas and all bays and harbors between these points.
- For the offshore area – an extension of the coastal points to eight miles (seven nautical

**CDFW**  
**Marine Region**  
**News Service**

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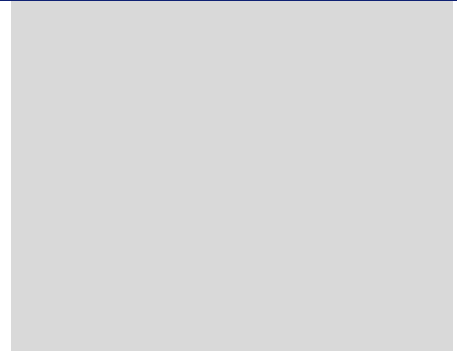


miles) offshore (33° 37.933' N, 118° 10.093' W to 33° 20.749' N, 117°44.373' W).

###

*USCG photo*

*The original CDFW press release announcing the area closure is posted [here](#).*



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**CDFW Marine Region News Service**

*Ocean-related news and information*

Learn more about CDFW's Marine Region online at [wildlife.ca.gov/regions/marine](https://wildlife.ca.gov/regions/marine)

Read the CDFW Marine Management News blog at [cdfwmarine.wordpress.com](https://cdfwmarine.wordpress.com)

*California Department of Fish and Wildlife*

*Marine Region*

*20 Lower Ragsdale Dr. Suite 100*

*Monterey CA 93940*

*Note: This e-mail account is used to distribute information to the public. Do not reply to this e-mail; instead, direct questions or comments regarding this e-mail to the CDPH points of contact provided above.*

*Thank you.*

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**STAFF SUMMARY FOR DECEMBER 9-10, 2020**  
**For Background Purposes Only**

## 27. CONDITIONAL TAKE OF WESTERN JOSHUA TREE DURING CANDIDACY PERIOD

### Today's Item

Information ☐

Action ☒

Consider regulatory action to allow take of western Joshua tree under certain circumstances by either authorizing a notice of intent to adopt a regulation at a future meeting or adopting an emergency regulation at this meeting, and consider taking final action under the California Environmental Quality Act (CEQA).

### Summary of Previous/Future Actions

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• FGC determined listing western Joshua tree may be warranted</li> <li>• <b>Today consider authorizing take of western Joshua tree</b></li> </ul> | <p>Sep 22, 2020; WRC, Webinar/Teleconference</p> <p><b>Dec 9-10, 2020; Webinar/Teleconference</b></p> |
|--|---|

### Background

At its Sep 22, 2020 meeting, FGC determined that listing western Joshua tree as a threatened or endangered species under the California Endangered Species Act (CESA) may be warranted pursuant to California Fish and Game Code Section 2074.2. Upon publication of notice in the California Notice Register, western Joshua tree became a candidate species. Candidate species are protected under CESA pursuant to Fish and Game Code Section 2085 during the CESA listing process. Pursuant to Section 2074.6, DFW will undertake a one-year status review before FGC can make a final decision on listing; if DFW requests the allowed six-month extension for completing the status review, final consideration by FGC of whether listing is warranted would be in June 2022.

Fish and Game Code Section 2084 permits the Commission to authorize, subject to terms and conditions it prescribes, and based on the best available scientific information, the take of any candidate species, "provided that...the take is consistent with" CESA.

Development is a significant threat to western Joshua tree (as identified both in the petition and the wider administrative record). Projects that intensify a potentially significant, identified threat to the species should undergo increased scrutiny as to whether a 2084 rule is the appropriate vehicle to authorize take. Additionally, the legislature's extension of take protections to candidate species through CESA in Section 2085 imposes a precautionary duty to protect the species until a full assessment of the species' status can be made, which occurs toward the end of the listing process.

Today, DFW proposes two regulations under the authority of Section 2084 to authorize the take of western Joshua trees in certain situations: Section 749.11 related to hazard trees and Section 749.12 authorizing specified local governments to allow take related to hazard trees, public works projects, and single family residences and accessory structures. DFW recommends adopting both regulations as emergencies.

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FGC is authorized to adopt regulations on an emergency basis. Fish and Game Code Section 399 authorizes FGC to adopt, amend or repeal a regulation, after at least one hearing, pursuant to Government Code Section 11346.1 if it makes either of two findings:

- (a) That the adoption, amendment, or repeal is necessary for the immediate conservation, preservation, or protection of birds, mammals, fish, amphibians, or reptiles, including, but not limited to, their nests or eggs.
- (b) That the adoption, amendment, or repeal is necessary for the immediate preservation of the public peace, health and safety, or general welfare.

Government Code Section 11346.1 requires that "...Any finding of an emergency shall include "...a description of the specific facts demonstrating the existence of an emergency and the need for immediate action, and demonstrating, by substantial evidence, the need for the proposed regulation...to address only the demonstrated emergency. The finding of emergency shall also identify each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies."

Further, Government Code subsection 11346.1(b)(2) states that "[a] finding of emergency based only upon expediency, convenience, best interest, general public need, or speculation, shall not be adequate to demonstrate the existence of an emergency."

Another mechanism for allowing limited take of listed or candidate species under CESA is an incidental take permit issued by DFW pursuant to Fish and Game Code Section 2081. Incidental take permits allow a permittee to take a CESA-listed species if such taking is incidental to, and not the purpose of, carrying out an otherwise lawful activity and certain conditions are met. The permits are most commonly issued for construction, utility, transportation, and other large infrastructure-related projects. Permittees must implement species-specific minimization and avoidance measures, and fully mitigate the impacts of the project; depending on the extent of the project, the process for developing measures and determining appropriate mitigation can take several months. In addition, application fees for the permits range in the thousands to tens of thousands of dollars, making them mostly inaccessible to the average property owner or small business.

At today's meeting, if FGC authorizes publication of a notice of proposed rulemaking, the regulation would be considered for discussion and adoption at a future meeting. If FGC adopts an emergency regulation at this meeting, FGC staff would submit the regulation to the Office of Administrative Law for filing. A regulation adopted pursuant to FGC's authority under Section 2084 would only authorize take during the time that western Joshua tree is a candidate species under CESA.

### ***Overview of Proposed Regulations***

#### ***Proposed Section 749.11***

DFW proposes that FGC adopt a regulation allowing DFW to authorize the removal of dead western Joshua trees or the trimming of western Joshua trees (Exhibit 3). The regulation would create a permit process for DFW to authorize applicants to remove trees that have fallen over,

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are leaning against existing structures, or otherwise create an imminent threat to public health or safety. DFW requests FGC take emergency action because dead trees and branches can pose a significant risk to public safety and there is sufficient risk to warrant taking emergency action; a regular, non-emergency rulemaking would not allow these risks to be addressed quickly. Supporting material is provided in exhibits 1 and 2.

*Proposed Section 749.12*

DFW has engaged in collaborative discussions with San Bernardino County, the town of Yucca Valley, and the city of Palmdale, about conditional take pursuant to FGC's authority under Section 2084 for certain construction projects as well as certain local government-authorized projects (Exhibit 4). As a result of those discussions, DFW proposes a regulation that would allow the three jurisdictions to authorize during the western Joshua tree candidacy period the take of a limited number of trees that may result from three types of activities: the trimming or removal of damaged or dead trees, public works projects, or construction of single-family residences and accessory structures (Exhibit 6). DFW requests that FGC take emergency action. Supporting material is provided in exhibits 4 and 5.

**Staff Analysis**

*Proposed Section 749.11*

Trimming or removing trees that pose a risk to public safety clearly falls within the strictures of an emergency. The proposed regulation is narrowly defined enough to anticipate and monitor its impacts, is consistent with the purposes of CESA (it would not be expected to exacerbate threats to Joshua tree populations significantly or cause declines on anything more than a localized level), and serves a legitimately important purpose of take that cannot effectively be addressed by the incidental take permit process outlined in Fish and Game Code Section 2081 and authorized for DFW. The proposed regulation would prevent excessive permitting delays and significant costs that could be detrimental to public safety and result in property damage.

*Proposed Section 749.12*

For the purposes of this analysis, proposed section 749.12 is considered in three parts: Hazard trees, public works projects, and single-family residences and accessory structures.

*Hazard trees:* The portion of proposed Section 749.12 related to trimming or removing dead trees or those that pose a threat to public safety clearly constitutes an emergency for the reasons described in the analysis of proposed Section 749.11. Proposed subdivision (e) describes the authority that the proposal would give local governments related to hazard trees. The three local governments specifically asked for the authority and, given the anticipated small scale of permit applications, are better suited to handle administration and monitoring within their jurisdictions. The local governments are familiar with the areas within their respective jurisdictions where permitting would occur and have experience in issuing permits for western Joshua tree under the California Desert Native Plant Act.

*Public works projects:* Public works projects may be considered in two categories, emergency and non-emergency. Emergency projects, those projects for which a delay could create or

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exacerbate immediate threats to public safety, public health, or the environment, meet the criteria for an emergency 2084 rulemaking. Currently, FGC staff is aware of only one project meeting the emergency definition: the Hi-Desert Water District wastewater treatment project in the town of Yucca Valley and portions of the unincorporated areas of San Bernardino County. The emergency nature of the project is documented in Exhibit 5 and on the Hi-Desert Water District's website at <https://www.hdwd.com/331/About-Your-Wastewater-Treatment-Facility>.

Public works projects that do not meet the definition of emergency are likely better addressed through either a 2084 rulemaking that follows the regular Administrative Procedure Act process or through DFW's incidental take permit process pursuant to Section 2081.

*Single-family residences and accessory structures:* Constructing single-family residences and accessory structures can run a very broad gamut from small and simple to large and complex; the full geographic scope and number of construction sites is uncertain. Given the uncertainty of the full scope and effect of development on Joshua tree populations, development-related projects, including housing, are more carefully addressed on a case-by-case basis, potentially through a local government permit or with DFW through an incidental take permit; these processes could address site-specific impacts of local projects and impose appropriate, site-specific avoidance, minimization, and mitigation measures.

Should FGC wish to entertain the idea of a regulation under Section 2084 along the lines of the Section 749.12 proposal, a regular rulemaking process is most appropriate. In general, single family residence and accessory structure projects do not meet the standard of an emergency regulation; however, activities necessary for individuals to make use of emergency public works projects (such as the Hi-Desert Water District wastewater treatment project) and emergency repair and maintenance activities could qualify as an emergency.

### ***California Environmental Quality Act (CEQA)***

The proposed regulations related to the limited trimming or removal of trees in each of the proposed regulations fall within the statutory exemption under Public Resources Code Section 21080(b)(4) and California Code of Regulations, Title 14, Section 15269(c) (CEQA Guidelines). The exemption applies to actions necessary to prevent or mitigate an emergency. An emergency is defined under CEQA as a "sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services." DFW has articulated risk to the public caused by certain trees vulnerable to severe winter conditions or dead trees. The portions of these proposed regulations addressing removal and trimming are directed specifically to instances where a threat is imminent.

The proposed amendments related to the activities necessary to ensure the rapid transition from individual septic tanks to connections with the Hi-Desert Water District wastewater treatment facility also fall within the statutory exemption under Public Resources Code Section 21080(b)(4) and Title 14, subsection 15269(c) of the CEQA Guidelines. As articulated in the staff analysis, the wastewater treatment project is demonstrated to be an essential public service that could be significantly disrupted by delay; limited take of western Joshua tree is necessary to mitigate this impact.

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## **Significant Public Comments (N/A)**

## **Recommendation**

**FGC staff:** (1) Adopt the proposed regulations for Section 749.11 (related to take authorized by DFW) as recommended by DFW. (2) Adopt the proposed regulations for Section 749.12 (related to take to be authorized by three local governments) as recommended by DFW, with modifications after considering the justification for and the emergency status of each of four components individually: hazard trees, the Hi-Desert Water District wastewater treatment project, all other public works projects, and single-family residences and accessory structures.

**DFW:** Adopt the regulations as proposed in the draft statements of proposed emergency action.

## **Exhibits**

1. DFW memo for proposed Section 749.11, received Dec 3, 2020
2. Draft statement of proposed emergency regulatory action for 749.11
3. Proposed regulation text for 749.11, dated Dec 3, 2020
4. DFW memo for proposed Section 749.12, received Dec 3, 2020
5. Draft statement of proposed emergency regulatory action for 749.12
6. Proposed regulation text for 749.12, dated Dec 3, 2020

## **Motion/Direction**

### ***Motion 1 (Hazard Trees, Emergency Public Works, and Emergency Projects for Single Family Residences and Accessory Structures)***

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission finds, pursuant to Section 399 of the California Fish and Game Code, in reference to the proposed Section 749.11 and only the portions of the proposed Section 749.12 that (1) authorize local jurisdictions to permit the removal and/or trimming of hazardous trees, and (2) authorize take related to public works projects, single family residences, and accessory structures only when a delay in implementing those projects would create or exacerbate immediate threats to public safety, public health, or the environment, that adopting the proposed emergency regulations is necessary for the immediate preservation of the public peace, health and safety, or general welfare.

The Commission further determines, based on the record, that this approval is exempt from the California Environmental Quality Act as an action necessary to prevent or mitigate an emergency as specified in Public Resources Code 21080(b)(4) and 15269(c) of the CEQA Guidelines.

The Commission further determines, pursuant to Section 11346.1 of the Government Code, that an emergency situation exists and finds the proposed regulations are necessary to address the emergency.

Therefore, the Commission adopts the emergency regulations to add Section 749.11 and portions of Section 749.12 to Title 14, California Code of Regulations, as discussed today.

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**AND**

***Motion 2 (Public Works Projects)***

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission authorizes publication of a notice of its intent to adopt a regulation related to authorizing take of western Joshua tree for public works projects, as discussed today.

**AND**

***Motion 3 (Single-family Residences and Accessory Structures)***

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission authorizes publication of a notice of its intent to adopt a regulation related to authorizing take of western Joshua tree for single-family residences and accessory structures, as discussed today.

**OR**

***Motion 1 (Section 749.11)***

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission finds, pursuant to Section 399 of the Fish and Game Code, that adopting the proposed Section 749.11 emergency regulation is necessary for the immediate preservation of the public peace, health and safety, or general welfare.

The Commission further determines, based on the record, that this approval is exempt from the California Environmental Quality Act as an action necessary to prevent or mitigate an emergency as specified in Public Resources Code 21080(b)(4) and 15269(c) of the CEQA Guidelines.

The Commission further determines, pursuant to Section 11346.1 of the Government Code, that an emergency situation exists and finds the proposed regulation is necessary to address the emergency.

Therefore, the Commission adopts the emergency regulation to add Section 749.11 to Title 14, California Code of Regulations, as discussed today.

**AND**

***Motion 2 (Section 749.12)***

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission finds, pursuant to Section 399 of the Fish and Game Code, that adopting the proposed Section 749.12 emergency regulation is necessary for the immediate preservation of the public peace, health and safety, or general welfare.

The Commission further determines, based on the record, that this approval is exempt from the California Environmental Quality Act as an action necessary to prevent or mitigate an emergency as specified in Public Resources Code 21080(b)(4) and 15269(c) of the CEQA Guidelines.

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The Commission further determines, pursuant to Section 11346.1 of the Government Code, that an emergency situation exists and finds the proposed regulation is necessary to address the emergency.

Therefore, the Commission adopts the emergency regulation to add Section 749.12 to Title 14, California Code of Regulations, as discussed today.

## Memorandum

Date: September 27, 2021

To: Melissa Miller-Henson  
Executive Director  
Fish and Game Commission

From: Charlton H. Bonham  
Director

Subject: **Readoption of Section 749.11, Title 14, California Code of Regulations (CCR):  
Incidental Take of Western Joshua Tree**

On December 10, 2020, the Fish and Game Commission (Commission) adopted emergency action to authorize the incidental take of western Joshua tree (WJT) during the candidacy period that may result from activities related to removal of dead WJT or trimming of damaged or dead WJT limbs.

The emergency rulemaking added Section 749.11 to Title 14, California Code of Regulations (CCR) which became effective January 7, 2021 and will expire on November 9, 2021 unless it is extended. The rulemaking was necessary to reduce public safety hazards. Winter weather conditions in the high desert, including high winds and snow, can result in fallen trees in public rights-of-way and weakened tree limbs, which can create a health and safety hazard. Dead trees and branches also pose a fire risk. These situations are particularly dangerous when dead or damaged trees are in close proximity to homes or other structures.

Transmittal of the attached updated Findings of Emergency and Statement of Proposed Emergency Regulatory Action to the Commission will allow the Commission to consider re-adopting the emergency rulemaking at its October 2021 meeting. The re-adoption would be the first of two 90-day extensions. The Department of Fish and Wildlife requests that the Commission take action at its October 2021 meeting, and again at the February 2022 meeting, to re-adopt the emergency regulation to authorize the incidental take of western Joshua tree during the candidacy period that may result from activities related to removal of dead WJT or trimming of damaged or dead WJT limbs.

If you have any questions or need additional information, please contact Steven Ingram, Office of General Counsel, by email at [Steven.Ingram@wildlife.ca.gov](mailto:Steven.Ingram@wildlife.ca.gov).

Attachment

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Melissa Miller-Henson, Executive Director  
Fish and Game Commission  
September 27, 2021  
Page 2

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DRAFT CALIFORNIA FISH AND GAME COMMISSION  
FINDING OF EMERGENCY AND  
STATEMENT OF PROPOSED EMERGENCY REGULATORY ACTION FOR  
READOPTON OF EMERGENCY REGULATIONS

Re-adoption of Section 749.11  
Title 14, California Code of Regulations  
Re: Incidental Take of Western Joshua Tree

Date of Statement: September 24, 2021

**I. Emergency Regulation in Effect to Date**

The California Game Commission (Commission) approved an emergency rulemaking to add Section 749.11, Title 14, CCR that became effective on January 7, 2021. The emergency addresses potential human safety issues related to western Joshua trees (*Yucca brevifolia*, WJT), the winter weather that much of the state was beginning to experience, and the constraints imposed by the WJT candidacy protections. The rule allows for incidental take of WJT tree during the candidacy period that may result from activities related to the removal of a dead WJT or trimming of a WJT under certain conditions. The Commission granted WJT endangered status protection under the California Endangered Species Act on September 22, 2020, by determining that WJT is a candidate species.

Subsection 749.11(b) describes the conditions under which the California Department of Fish and Wildlife (Department) may issue a permit to authorize either the removal of a dead WJT or the trimming of a WJT, without payment of mitigation or other fees or mitigation. A permit may be issued provided that the dead tree or any limb to be removed:

- Has fallen over and is within 30 feet of a structure; or
- Is leaning against an existing structure; or
- Creates an imminent threat to public health or safety.

These criteria are necessary to ensure that removal or trimming of a WJT only occurs when the tree creates a hazard to the public or structures, and not for other reasons such as convenience.

**II. Request for Approval of Readoption of Emergency Regulations**

The current emergency rule, Section 749.11, will expire on November 9, 2021 unless it is readopted for an additional 90 days.

As of September 7, 2021, and since its adoption in January, Department staff has issued 44 permits under Section 749.11. The most common requests are for trimming limbs or removing fallen trees that threaten public safety/homes and the removal of detached limbs and trees within 30 feet of a structure. The Department anticipates issuing several dozen more permits with the re-adoption of this emergency regulation.

### **III. Statement of Facts Constituting the Need for Readoption of the Emergency Regulatory Action**

On October 21, 2019, the Commission received a petition from the Center for Biological Diversity to list WJT as threatened under the California Endangered Species Act (CESA). On September 22, 2020, the Commission determined that listing may be warranted pursuant to Fish and Game Code (FGC) Section 2074.2. On October 9, 2020, WJT became a candidate species under CESA, effective upon publication of the notice of findings (Office of Administrative Law notice number Z2020- 0924-01). Pursuant to FGC Section 2074.6, the Department has undertaken a one-year status review. During the status review process, candidate species are protected from take under CESA pursuant to FGC Section 2085.

Winter weather conditions in the high desert, including high winds and snow, can result in fallen trees in public rights-of-way and weakened tree limbs, which can create a public health and safety hazard. Dead trees and branches also pose a fire risk. These situations are particularly dangerous when dead or damaged trees are in close proximity to homes or other structures. The California Department of Forestry and Fire Protection (CalFire) advises property owners regarding the need to maintain a multiple zone defensible space for fire management, which includes removing any dead trees from a zone that extends a minimum of 30 feet from buildings, structures, decks, etc. and trimming tree branches based on proximity to structures or proximity to other trees. The CalFire advice is outlined on the CalFire website here: <https://www.readyforwildfire.org/prepare-for-wildfire/get-ready/defensible-space/>.

The emergency continues to exist as a consequence of the application of candidacy protections on WJT and the impact of those protections on the ability to mitigate threats to human safety and property resulting from particular WJTs that create a hazard.

#### **Prior Commission Actions**

On September 22, 2020, the Commission determined that listing WJT under the California Endangered Species Act (CESA) may be warranted pursuant to FGC Section 2074.2. A species is a “candidate” until the Commission decides whether listing the species as threatened or endangered “is warranted” or “is not warranted” (FGC Section 2075.5). The emergency regulation adopted by the Commission under FGC Section 2084 authorizes incidental take of WJT during candidacy, subject to certain terms and conditions prescribed by the Commission (i.e., a “Section 2084” regulation). On December 10, 2020, the Commission adopted Section 749.11 emergency regulation to protect public health pursuant to FGC Section 2084. On June 16, 2021, the Commission approved the Department’s request for a 6-month extension to deliver the one-year status review.

#### **Existence of an Emergency and Need for Immediate Action**

The Commission considered the following factors in determining whether an emergency exists: public health, safety and general welfare, as well as the

magnitude of potential harm; the immediacy of the need; and whether the anticipation of harm has a basis firmer than simple speculation, and has determined that an emergency regulation authorized under FGC Section 2084 is needed. In this case, an emergency exists because of the public health and safety hazard presented by dead or weakened WJT in public rights-of-way or near structures.

### **Proposed Action by the Commission**

The Commission proposes the readoption of Section 749.11 that is the same as previously adopted, with minor exceptions considered substantially equivalent:

Subsection 749.11(a)(1)(B):

- Clarifying language for the meaning of an “accredited college” has been added to make explicit the general term for recognition by the U.S. Department of Education for a college or university. This necessary change makes it clear that a desert plant specialist must hold a degree from such an institution.
- Additional language for the meaning of “professional experience” has been added to clarify that the desert plant specialist refers to a person who has been formally employed to conduct relocation or restoration of WJT.

Subsection 749.11(c)(2):

- Two extra uses of the word “email” required slight reorganization in wording to clarify that within 30 days of receipt of a request for a permit, the department would either issue it, or deny the request.

## **IV. Impact of Regulatory Action**

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following determinations relative to the required statutory categories have been made:

- (a) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

The Commission anticipates that there will be costs to the State, specifically the Department. Estimated program costs of \$64,987.35 over the proposed emergency regulation period of 90 days will be absorbed within existing budgets.

- (b) Nondiscretionary Costs/Savings to Local Agencies:

This emergency regulation will not introduce nondiscretionary costs or savings to local agencies. Should an agency choose to consider the review and issuance of a permit, the process would likely entail the review of project plans, census information, and relocation plans.

- (c) Programs Mandated on Local Agencies or School Districts:

None.

- (d) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code:  
None.

## **V. Readoption Criteria**

### **1) Same as or Substantially Equivalent**

Pursuant to Government Code subdivision 11346.1(h), the text of a readopted “same or substantially equivalent” to the text of the original emergency regulation must be the “same as or substantially equivalent” to the text of an emergency regulation previously adopted by that agency.” The language proposed for this rulemaking is nearly the same as the language of the original emergency regulation, with the three exceptions noted above in Section III.

### **2) Substantial Progress**

Government Code subdivision 11346.1(h) specifies “readoption shall be permitted only if the agency has made substantial progress and proceeded with diligence to comply with subdivision (e)” [Sections 11346.2 through 11347.3, inclusive].

Pursuant to FGC sections 2080 and 2085, take of a candidate species is prohibited, unless: (1) the take is authorized in a regulation adopted by the Commission pursuant to FGC Section 2084 or (2) the Department authorizes the take through Incidental Take Permits (ITP) issued on a project-by-project basis pursuant to FGC section 2081. A 12-month review of the species’ status by the Department will be presented to the Commission in April 2022 for a final decision on listing status as threatened or endangered. A certificate of compliance (permanent) rulemaking is not being sought in this particular circumstance, because after the Commission makes the determination that listing the species is or is not warranted, a 2084 regulation would no longer be appropriate because the species is no longer a candidate for listing. At that point, the species is either protected under CESA as a listed species, or is no longer protected under CESA because it is not listed and is no longer a candidate for listing.

If the Commission determines that listing the WJT “is warranted,” the former candidate species will become a listed species and the persons conducting activities currently covered by the 2084 regulation that take WJT will be required to obtain an ITP pursuant to FGC section 2081(b) with tailored measures to mitigate the impacts of the take.

If the Commission decides that listing the WJT “is not warranted,” take of the former candidate species will no longer be prohibited under CESA. Absent protected status, no mechanism would be needed to authorize take of WJT. In that circumstance, permanent adoption of this 2084 regulation as permanent is unnecessary.

## **VI. Authority and Reference**

The Commission adopts this emergency action pursuant to the authority vested by sections 399 and 2084 of the Fish and Game Code and to implement, interpret, or make specific sections 399 and 2084 of the Fish and Game Code.

**VII. Section 399 Finding**

Fallen WJT in public rights-of-way and weakened tree limbs from winter conditions can create a public health and safety hazard. Dead trees and branches also pose a fire risk during fire-prone conditions. These situations are particularly dangerous when dead or damaged trees have fallen over, are leaning against an existing structure, or are otherwise creating an imminent threat to public health or safety.

Pursuant to Section 399, subdivision (b), of the Fish and Game Code, the Commission finds, based on the information above, that adopting this regulation is necessary for the immediate preservation of the public peace, health and safety, and general welfare.

## Informative Digest (Plain English Overview)

### **Proposed Regulatory Action**

On October 21, 2019, the California Fish and Game Commission (Commission) received a petition from the Center for Biological Diversity to list the western Joshua tree (*Yucca brevifolia*; WJT) as threatened under the California Endangered Species Act (CESA). California Fish and Game Code (FGC) Section 2073.5 requires that the California Department of Fish and Wildlife (Department) evaluate the petition and submit a written evaluation with a recommendation to the Commission, which was received at the Commission's April 2020 meeting. Based upon the information contained in the petition and other relevant information, the Department determined and informed the Commission that there is sufficient scientific information available to indicate that the petitioned action may be warranted.

On September 22, 2020, the Commission determined that listing may be warranted pursuant to FGC Section 2074.2, and therefore western Joshua tree is a candidate species and the Department will deliver a one-year status review to the Commission. Due to the large geographic range of the species and the depth of scientific information available, the Department requested and received a 6-month extension to deliver the one-year status review. As such, the Department is on track to deliver the one-year status review to the Commission in accordance with that extension by April 2022. At that time, the Commission will make a final decision on listing.

Candidate species are protected from take under CESA pursuant to FGC Section 2085 during the remainder of the CESA listing. Under FGC Section 2084, CESA provides that the Commission may adopt regulations to authorize take of candidate species, based on the best available scientific information, when the take is otherwise consistent with CESA. As with all regulations, the Commission may adopt a regulation under Section 2084 on an emergency basis when it determines that a situation exists which threatens public health and safety or general welfare.

The Commission considered the following factors in determining whether an emergency exists: public health, safety and general welfare, as well as the magnitude of potential harm; the immediacy of the need; and whether the anticipation of harm has a basis firmer than simple speculation, and determined that an emergency regulation authorized under FGC Section 2084 is needed. In this case, an emergency exists because of the public health and safety hazard presented by dead or weakened WJT in public rights-of-way, or near structures. The readoption of Section 749.11, Title 14, California Code of Regulations allows the continued incidental take of WJT during CESA candidacy for tree and limb removal actions.

The emergency continues to exist as a consequence of the application of candidacy protections on WJT and the impact of those protections on the ability to mitigate threats to human safety and property resulting from particular WJTs that create a hazard.

The current emergency rule, Section 749.11, will expire on November 9, 2021 unless it is readopted for an additional 90 days. The Commission proposes the readoption of Section 749.11 that is the same as previously adopted, with minor exceptions:

Subsection 749.11(a)(1)(B):

- Clarifying language for the meaning of an “accredited college” has been

added to make explicit the general term for recognition by the U.S. Department of Education for a college or university. This necessary change makes it clear that a desert plant specialist must hold a degree from such an institution.

- Additional language for the meaning of “professional experience” has been added to clarify that the desert plant specialist refers to a person who has been formally employed to conduct relocation or restoration of WJT.

Subsection 749.11(c)(2):

- Two extra uses of the word “email” required slight reorganization in wording to clarify that within 30 days of receipt of a request for a permit, the department would either issue it, or deny the request.

## **Benefits**

The primary benefit of the proposed emergency action is removal of hazardous western Joshua trees for public safety. Winter weather conditions in the high desert, including high winds and snow, can result in fallen trees in public rights-of-way and weakened tree limbs, which can create a public health and safety hazard. Dead trees and branches also pose a fire risk. These situations are particularly dangerous when dead or damaged trees are in close proximity to homes or other structures. The California Department of Forestry and Fire Protection (CalFire) advises property owners regarding the need to maintain a multiple zone defensible space for fire management, which includes removing any dead trees from a zone that extends a minimum of 30 feet from buildings, structures, decks, etc. and trimming tree branches based on proximity to structures or proximity to other trees. The CalFire advice is outlined on the CalFire website here: <https://www.readyforwildfire.org/prepare-for-wildfire/get-ready/defensible-space/>

## **Consistency and Compatibility with Existing State Regulations**

Commission staff has searched the California Code of Regulations and has found no other state regulation relating to the Commission’s ability to allow for incidental take of a candidate species under CESA, and therefore concludes that the proposed regulations are neither inconsistent nor incompatible with existing state regulation.

## Regulatory Language

Section 749.11 Title 14, CCR, is added to read:

### **§749.11 Special Order Relating to Take of Western Joshua Tree (*Yucca brevifolia*) During Candidacy Period.**

The commission authorizes the take of western Joshua tree during the candidacy period for each of the activities described in this section, subject to the terms and conditions specified for each activity.

(a) Definitions.

(1) Desert native plant specialist means:

(A) An arborist certified by the International Society of Arborists; or

(B) An individual with a four-year college degree ~~from an accredited college~~ in ecology or fish and wildlife related biological science ~~from an accredited college~~ accredited by the U.S. Department of Education, and at least two years of professional experience (i.e., formal employment) with relocation or restoration of native California desert vegetation; or

(C) An individual with at least five years of professional experience with relocation or restoration of native California desert vegetation.

(2) Western Joshua tree means an individual western Joshua tree (*Yucca brevifolia*) that has emerged from the ground, regardless of age or size, including all stems that have emerged from the ground within a one-meter radius measured from a single point at the base of the largest stem.

(b) The department may issue a permit to authorize either the removal of a dead western Joshua tree or the trimming of a western Joshua tree. The project proponent or its agent may remove a detached dead western Joshua tree or detached limb of a western Joshua tree. All other removals and all trimming of western Joshua trees authorized by permits issued pursuant to this subsection shall be completed by a desert native plant specialist. The department may issue permits pursuant to this subsection, without payment of mitigation fees or other mitigation, provided that the dead western Joshua tree or any limb(s) to be removed:

(1) Has fallen over and is within 30 feet of a structure; or

(2) Is leaning against an existing structure; or

(3) Creates an imminent threat to public health or safety.

(c) Permit Process.

(1) A property owner seeking a permit pursuant to subsection (b) shall submit a permit request to the Department by emailing to [WJT@wildlife.ca.gov](mailto:WJT@wildlife.ca.gov), or mailing to California

Department of Fish and Wildlife, Habitat Conservation Planning Branch, Attention: Western Joshua Tree Permitting, P.O. Box 944209, Sacramento, CA 94244-2090 the following information:

(A) The name, telephone number, mailing address, and email address of the property owner seeking the permit.

(B) The street address of the property on which the western Joshua tree to be removed or trimmed is located. If no street address is available, the property owner may include the assessor's parcel number.

(C) Photographs of the western Joshua tree that visually depict either:

1. That the tree is dead and meets one or more of the three requirements of subsection (b); or

2. The specific limb or limbs to be trimmed and that the limb or limbs to be trimmed meet one or more of the three requirements of subsection (b).

(2) Within thirty days of receipt of a request for a permit pursuant to subsection (c)(1), the department shall either issue a permit allowing for the removal or trimming or deny the request if the request does not demonstrate a permit can be issued pursuant to this section.

(A) If the department issues the permit, it shall do so by email, or by U.S. mail if the permit request was received by mail, and it will provide the property owner sixty days in which to complete the removal or trimming.

(B) If the department denies the permit request, the property owner may resubmit the request with additional information and photographs. Resubmissions pursuant to this subsection shall be processed as new permit requests.

(3) Within thirty days of completing the removal of a dead western Joshua tree or trimming one or more limbs from a western Joshua tree in accordance with a permit issued pursuant to this section, to demonstrate compliance with this section the property owner shall by mail or email photographs of the site at which the dead western Joshua tree was removed or the western Joshua tree that was trimmed pursuant to the permit.

(d) Limitations.

(1) Nothing in this section is intended to be or shall be construed to be a general project approval. It shall be the responsibility of each project proponent receiving take authorization pursuant to this section to obtain all necessary permits and approvals and to comply with all applicable federal, state, and local laws.

(2) Nothing in this section is intended to or shall be construed to limit the terms and conditions, including those relating to compensatory mitigation, the department includes in incidental take permits for western Joshua tree issued pursuant to Fish and Game Code section 2081, subdivision (b).

Note: Authority cited: Sections 399 and 2084, Fish and Game Code. Reference:  
Sections 399 and 2084, Fish and Game Code.

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**ECONOMIC IMPACT STATEMENT**

DEPARTMENT NAME Fish and Game Commission	CONTACT PERSON margaret.duncan	EMAIL ADDRESS @wildlife.ca.gov	TELEPHONE NUMBER 916-653-4899
DESCRIPTIVE TITLE FROM NOTICE REGISTER OR FORM 400 Emergency Regulation: Amend Section 749.11, Title 14, CCR, Re: Take of Western Joshua Tree			NOTICE FILE NUMBER Z

**A. ESTIMATED PRIVATE SECTOR COST IMPACTS** *Include calculations and assumptions in the rulemaking record.*

1. Check the appropriate box(es) below to indicate whether this regulation:

- |  |   |
|--|---|
| <input type="checkbox"/> a. Impacts business and/or employees  | <input type="checkbox"/> e. Imposes reporting requirements  |
| <input type="checkbox"/> b. Impacts small businesses           | <input type="checkbox"/> f. Imposes prescriptive instead of performance                           |
| <input type="checkbox"/> c. Impacts jobs or occupations        | <input type="checkbox"/> g. Impacts individuals   |
| <input type="checkbox"/> d. Impacts California competitiveness | <input checked="" type="checkbox"/> h. None of the above (Explain below):<br>Emergency Regulation |

***If any box in Items 1 a through g is checked, complete this Economic Impact Statement.  
If box in Item 1.h. is checked, complete the Fiscal Impact Statement as appropriate.***

2. The \_\_\_\_\_ estimates that the economic impact of this regulation (which includes the fiscal impact) is:  
(Agency/Department)

- ☐ Below \$10 million
- ☐ Between \$10 and \$25 million
- ☐ Between \$25 and \$50 million
- ☐ Over \$50 million *[If the economic impact is over \$50 million, agencies are required to submit a Standardized Regulatory Impact Assessment as specified in Government Code Section 11346.3(c)]*

3. Enter the total number of businesses impacted: \_\_\_\_\_

Describe the types of businesses (Include nonprofits): \_\_\_\_\_

Enter the number or percentage of total  
businesses impacted that are small businesses: \_\_\_\_\_

4. Enter the number of businesses that will be created: \_\_\_\_\_ eliminated: \_\_\_\_\_

Explain: \_\_\_\_\_

5. Indicate the geographic extent of impacts: ☐ Statewide  
☐ Local or regional (List areas): \_\_\_\_\_

6. Enter the number of jobs created: \_\_\_\_\_ and eliminated: \_\_\_\_\_

Describe the types of jobs or occupations impacted: \_\_\_\_\_

7. Will the regulation affect the ability of California businesses to compete with  
other states by making it more costly to produce goods or services here? ☐ YES ☐ NO

If YES, explain briefly: \_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**ECONOMIC IMPACT STATEMENT (CONTINUED)****B. ESTIMATED COSTS** *Include calculations and assumptions in the rulemaking record.*

1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime? \$ \_\_\_\_\_

a. Initial costs for a small business: \$ \_\_\_\_\_ Annual ongoing costs: \$ \_\_\_\_\_ Years: \_\_\_\_\_

b. Initial costs for a typical business: \$ \_\_\_\_\_ Annual ongoing costs: \$ \_\_\_\_\_ Years: \_\_\_\_\_

c. Initial costs for an individual: \$ \_\_\_\_\_ Annual ongoing costs: \$ \_\_\_\_\_ Years: \_\_\_\_\_

d. Describe other economic costs that may occur: \_\_\_\_\_

2. If multiple industries are impacted, enter the share of total costs for each industry: \_\_\_\_\_

3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements.  
*Include the dollar costs to do programming, record keeping, reporting, and other paperwork, whether or not the paperwork must be submitted.* \$ \_\_\_\_\_4. Will this regulation directly impact housing costs? ☐ YES ☐ NO

If YES, enter the annual dollar cost per housing unit: \$ \_\_\_\_\_

Number of units: \_\_\_\_\_

5. Are there comparable Federal regulations? ☐ YES ☐ NO

Explain the need for State regulation given the existence or absence of Federal regulations: \_\_\_\_\_

Enter any additional costs to businesses and/or individuals that may be due to State - Federal differences: \$ \_\_\_\_\_

**C. ESTIMATED BENEFITS** *Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. Briefly summarize the benefits of the regulation, which may include among others, the health and welfare of California residents, worker safety and the State's environment: \_\_\_\_\_

2. Are the benefits the result of: ☐ specific statutory requirements, or ☐ goals developed by the agency based on broad statutory authority?

Explain: \_\_\_\_\_

3. What are the total statewide benefits from this regulation over its lifetime? \$ \_\_\_\_\_

4. Briefly describe any expansion of businesses currently doing business within the State of California that would result from this regulation: \_\_\_\_\_

**D. ALTERNATIVES TO THE REGULATION** *Include calculations and assumptions in the rulemaking record. Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not: \_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**ECONOMIC IMPACT STATEMENT (CONTINUED)**

2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:

Regulation: Benefit: \$ \_\_\_\_\_ Cost: \$ \_\_\_\_\_

Alternative 1: Benefit: \$ \_\_\_\_\_ Cost: \$ \_\_\_\_\_

Alternative 2: Benefit: \$ \_\_\_\_\_ Cost: \$ \_\_\_\_\_

3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives: \_\_\_\_\_

4. Rulemaking law requires agencies to consider performance standards as an alternative, if a regulation mandates the use of specific technologies or equipment, or prescribes specific actions or procedures. Were performance standards considered to lower compliance costs? ☐ YES ☐ NO

Explain: \_\_\_\_\_

**E. MAJOR REGULATIONS** *Include calculations and assumptions in the rulemaking record.****California Environmental Protection Agency (Cal/EPA) boards, offices and departments are required to submit the following (per Health and Safety Code section 57005). Otherwise, skip to E4.***1. Will the estimated costs of this regulation to California business enterprises **exceed \$10 million**? ☐ YES ☐ NO***If YES, complete E2. and E3******If NO, skip to E4***

2. Briefly describe each alternative, or combination of alternatives, for which a cost-effectiveness analysis was performed:

Alternative 1: \_\_\_\_\_

Alternative 2: \_\_\_\_\_

*(Attach additional pages for other alternatives)*

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

Regulation: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

Alternative 1: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

Alternative 2: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

4. Will the regulation subject to OAL review have an estimated economic impact to business enterprises and individuals located in or doing business in California exceeding \$50 million in any 12-month period between the date the major regulation is estimated to be filed with the Secretary of State through 12 months after the major regulation is estimated to be fully implemented?

☐ YES ☐ NO*If YES, agencies are required to submit a Standardized Regulatory Impact Assessment (SRIA) as specified in Government Code Section 11346.3(c) and to include the SRIA in the Initial Statement of Reasons.*

5. Briefly describe the following:

The increase or decrease of investment in the State: \_\_\_\_\_

The incentive for innovation in products, materials or processes: \_\_\_\_\_

The benefits of the regulations, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the state's environment and quality of life, among any other benefits identified by the agency: \_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**FISCAL IMPACT STATEMENT****A. FISCAL EFFECT ON LOCAL GOVERNMENT** *Indicate appropriate boxes 1 through 6 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

- ☐ 1. Additional expenditures in the current State Fiscal Year which are reimbursable by the State. (Approximate)  
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ \_\_\_\_\_

- ☐ a. Funding provided in \_\_\_\_\_

Budget Act of \_\_\_\_\_ or Chapter \_\_\_\_\_, Statutes of \_\_\_\_\_

- ☐ b. Funding will be requested in the Governor's Budget Act of \_\_\_\_\_

Fiscal Year: \_\_\_\_\_

- ☐ 2. Additional expenditures in the current State Fiscal Year which are NOT reimbursable by the State. (Approximate)  
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ \_\_\_\_\_

*Check reason(s) this regulation is not reimbursable and provide the appropriate information:*

- ☐ a. Implements the Federal mandate contained in \_\_\_\_\_

- ☐ b. Implements the court mandate set forth by the \_\_\_\_\_ Court.

Case of: \_\_\_\_\_ vs. \_\_\_\_\_

- ☐ c. Implements a mandate of the people of this State expressed in their approval of Proposition No. \_\_\_\_\_

Date of Election: \_\_\_\_\_

- ☐ d. Issued only in response to a specific request from affected local entity(s).

Local entity(s) affected: \_\_\_\_\_  
\_\_\_\_\_

- ☐ e. Will be fully financed from the fees, revenue, etc. from: \_\_\_\_\_

Authorized by Section: \_\_\_\_\_ of the \_\_\_\_\_ Code;

- ☐ f. Provides for savings to each affected unit of local government which will, at a minimum, offset any additional costs to each;

- ☐ g. Creates, eliminates, or changes the penalty for a new crime or infraction contained in \_\_\_\_\_

- ☐ 3. Annual Savings. (approximate)

\$ \_\_\_\_\_

- ☐ 4. No additional costs or savings. This regulation makes only technical, non-substantive or clarifying changes to current law regulations.

- ☒ 5. No fiscal impact exists. This regulation does not affect any local entity or program.

- ☐ 6. Other. Explain \_\_\_\_\_  
\_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**FISCAL IMPACT STATEMENT (CONTINUED)****B. FISCAL EFFECT ON STATE GOVERNMENT** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*☒ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ 64,987.35

*It is anticipated that State agencies will:*☒ a. Absorb these additional costs within their existing budgets and resources.☐ b. Increase the currently authorized budget level for the \_\_\_\_\_ Fiscal Year☐ 2. Savings in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

☐ 3. No fiscal impact exists. This regulation does not affect any State agency or program.☐ 4. Other. Explain \_\_\_\_\_**C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*☐ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

☐ 2. Savings in the current State Fiscal Year. (Approximate)

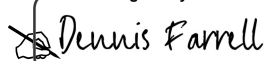
\$ \_\_\_\_\_

☒ 3. No fiscal impact exists. This regulation does not affect any federally funded State agency or program.☐ 4. Other. Explain \_\_\_\_\_

FISCAL OFFICER SIGNATURE

DATE

DocuSigned by:

 Dennis Farrell

9/30/2021

*The signature attests that the agency has completed the STD. 399 according to the instructions in SAM sections 6601-6616, and understands the impacts of the proposed rulemaking. State boards, offices, or departments not under an Agency Secretary must have the form signed by the highest ranking official in the organization.*

AGENCY SECRETARY

DATE



*Finance approval and signature is required when SAM sections 6601-6616 require completion of Fiscal Impact Statement in the STD. 399.*

DEPARTMENT OF FINANCE PROGRAM BUDGET MANAGER

DATE



## STD399 CALCULATIONS WORKSHEET ADDENDUM

Emergency Action to Amend Section 749.11,  
Title 14, California Code of Regulations  
Re: Take of Western Joshua Tree

### Economic Impact Statement

Emergency regulations do not require an economic impact statement; only fiscal impacts must be evaluated (California Government Code Section 11346.1).

### Fiscal Impact Statement

The proposed amendment of Section 749.11, Title 14, CCR, is not anticipated to have a fiscal impact on local government or the federal funding of state programs.

The Commission anticipates that there will be costs to the State, specifically the California Department of Fish and Wildlife (Department). Estimated program costs of \$64,987.35 (Table 1) over the proposed emergency re-adoption period of 90 days will be absorbed within existing budgets.

**Table 1.** Estimated Department Implementation Costs for Take of Western Joshua Tree

Classification	Activity/Task	# Permit Requests	Hours per Task	Hourly Rate <sup>1</sup>	Projected Cost (2021\$)
Senior Environmental Scientist (Specialist)	Review permit requests and correspondence with applicant about request, permit tracking	125	3	\$70.93	\$26,598.75
Environmental Program Manager I (Supervisory)	Approve permit request and CEQA compliance	100	1	\$111.49	\$11,149.00
Senior Environmental Scientist (Specialist)	Deny permit request and correspondence with applicant	25	3	\$70.93	\$5,319.75
Senior Environmental Scientist (Specialist)	Review final report photographs	100	1	\$70.93	\$7,093.00
Office Technician (Typing)	Administrative Support	125	0.5	\$33.82	\$2,113.75
Subtotal					\$52,274.25
Overhead <sup>2</sup>		24.32%			\$12,713.10
<b>Total Costs</b>					<b>\$64,987.35</b>

<sup>1</sup> Hourly Rate includes wages per CalHR payscale 2021-22 and Department benefit rates.

<sup>2</sup> Non-Federal Project Overhead rate for FY 2021-2022 is 24.32% per Department Budget Branch.

## Memorandum

**Date:** September 27, 2021

**To:** Melissa Miller-Henson  
Executive Director  
Fish and Game Commission

**From:** Charlton H. Bonham  
Director

**Subject:** **Readoption of Section 749.12, Title 14, California Code of Regulations (CCR):  
Incidental Take of Western Joshua Tree**

On December 10, 2020, the Fish and Game Commission (Commission) adopted emergency action to authorize the incidental take of western Joshua tree (WJT) during the candidacy period that may result from activities related to approvals or permits issued by local agencies for construction of single-family residences and accessory structures, public works projects, or the trimming or removal of damaged or dead trees.

The emergency regulation Section 749.12 to Title 14, California Code of Regulations (CCR) became effective January 7, 2021 and will expire on November 9, 2021 unless it is extended. The regulation was necessary to reduce public safety hazards. The County of San Bernardino, City of Palmdale, and the Town of Yucca Valley (participating agencies) submitted information to the Department indicating that certain projects scheduled to move forward in the next 6-12 months within their jurisdictions meet those criteria and addressing the associated health and safety concerns may cause take of WJT.

Transmittal of the attached updated Findings of Emergency and Statement of Proposed Emergency Regulatory Action to the Commission will allow the Commission to consider re-adopting the emergency rulemaking at its October 2021 meeting. The re-adoption would be the first of two 90-day extensions. The Department of Fish and Wildlife requests that the Commission take action at its October 2021 meeting, and again at the February 2022 meeting, to re-adopt the emergency regulation to allow the Commission to grant the City of Palmdale and Town of Yucca Valley the authority to authorize the incidental take of a limited number of WJTs during the candidacy period that may result from activities related to approvals or permits issued by the participating agencies for construction of single-family residences and accessory structures, public works projects, or the trimming or removal of damaged or dead trees. The County of San Bernardino will not be participating. By adopting this regulation, the Commission will authorize the incidental take of western Joshua tree during the candidacy period that may result from those permitted activities.

If you have any questions or need additional information, please contact Steven Ingram, Office of General Counsel, by email at [Steven.Ingram@wildlife.ca.gov](mailto:Steven.Ingram@wildlife.ca.gov).

Melissa Miller-Henson, Executive Director  
Fish and Game Commission  
September 27, 2021  
Page 2

Attachment

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DRAFT CALIFORNIA FISH AND GAME COMMISSION  
FINDING OF EMERGENCY AND  
STATEMENT OF PROPOSED EMERGENCY REGULATORY ACTION FOR  
READOPTON OF EMERGENCY REGULATIONS

Readoption of Section 749.12  
Title 14, California Code of Regulations (CCR)  
Re: Incidental Take of Western Joshua Tree

Date of Statement: September 24, 2021

**I. Emergency Regulation in Effect to Date**

The California Game Commission (Commission) approved an emergency rulemaking to add Section 749.12, Title 14, CCR that became effective on January 7, 2021. The emergency regulation permits the City of Palmdale, County of San Bernardino and the Town of Yucca Valley (participating agencies) to continue work on certain projects scheduled within their jurisdictions that are addressing health and safety concerns that may cause take of western Joshua trees (*Yucca brevifolia*, WJT).

Section 749.12 grants participating agencies the authority to authorize the incidental take of a limited number of WJTs during the candidacy period that may result from activities related to approvals or permits issued by the participating agencies for construction of single-family residences and accessory structures, public works projects, or the trimming or removal of damaged or dead trees. These activities will take place within the jurisdictions of the participating agencies, in habitats that are currently supporting the presence of WJT.

**II. Request for Approval of Readoption of Emergency Regulations**

The current emergency rule, Section 749.12, will expire on November 9, 2021, unless it is readopted for an additional 90 days.

Post adoption of the emergency rule, the Town of Yucca Valley and the City of Palmdale adopted the required ordinances to implement Section 749.12 and provided their initial \$10,000 deposits to the Western Joshua Tree Mitigation Fund (mitigation fund). The County of San Bernardino opted to not participate in the implementation of Section 749.12, therefore, references to the applicability to and participation of the County of San Bernardino are deleted from the regulation text.

Since the adoption of the ordinances, the City of Palmdale has reported zero (0) take of WJT, and therefore has not paid any additional funds to the mitigation fund. In the same time frame, the Town of Yucca Valley has reported 64 total WJT take applications, where 36 permits were issued in support of connecting homes to the High Desert Water District (HDWD) wastewater treatment system and has paid an additional \$80,000 to the mitigation fund. The Department anticipates reviewing the bi-monthly reports from two entities, for a total of four more reports, during the next 90-day re-adoption period.

### III. **Statement of Facts Constituting the Need for Readoption of the Emergency Regulatory Action**

On October 21, 2019, the Commission received a petition from the Center for Biological Diversity to list WJT as threatened under the California Endangered Species Act (CESA). On September 22, 2020, the Commission determined that listing may be warranted pursuant to California Fish and Game Code (FGC) Section 2074.2. On October 9, 2020, WJT became a candidate species under CESA, effective upon publication of the notice of findings (Office of Administrative Law notice number Z2020- 0924-01). Pursuant to FGC Section 2074.6, the California Department of Wildlife (Department) has undertaken a one-year status review. During the status review process, candidate species are protected from take under CESA pursuant to FGC Section 2085.

The Commission adopted a regulation under Section 2084 on an emergency basis because it determined that a situation exists which threatens public health and safety or general welfare.

Scheduled projects within the jurisdictions of the City of Palmdale and the Town of Yucca Valley continue to move forward and require the removal, relocation and/or trimming of WJT to address the associated health and safety concerns. These were:

- Groundwater protection: Expediency is still needed for HDWD and the Town of Yucca Valley to be able to complete connection phases between the new water treatment and reclamation plant and residences already underway, in order to replace reliance on leaking septic systems and protect groundwater. Thirty-six permits have been issued thus far during the candidacy period in support of connecting homes to the new plant.
- Residences and accessory structures: Work associated with modifications to single-family residences and accessory structures within the candidacy period continues for the City of Palmdale and Town of Yucca Valley.
- Public works projects: Various public works and other projects are ongoing for the Town of Yucca Valley and the City of Palmdale during the candidacy period, including road improvements or road structures and new single family residences.
- Trimming or removing dead or damaged trees or limbs: Winter weather conditions in the high desert, including high winds and snow, can result in fallen trees in public rights-of-way and weakened tree limbs, which can create a public health and safety hazard. Dead trees and branches also pose a fire risk. These conditions remain a concern for public safety coming into winter months.

The emergency continues to exist as a consequence of the application of candidacy protections on WJT and the impact of those protections on the ability to address the associated health and safety concerns, or threats to property.

Another means to allow take of CESA candidate species is by Incidental Take

Permit (ITP) issued by the Department pursuant to FGC Section 2081, subdivision (b). An ITP allows a permittee to take CESA listed or candidate species if such taking is incidental to, and for the purpose of, carrying out an otherwise lawful activity. However, issuance of ITPs involve a more lengthy and costly permit approval process which is infeasible for the projects covered by the emergency regulation.

### **Prior Commission Actions**

On September 22, 2020, the Commission determined that listing WJT under the California Endangered Species Act (CESA) may be warranted pursuant to FGC Section 2074.2. A species is a “candidate” until the Commission decides whether listing the species as threatened or endangered “is warranted” or “is not warranted” (FGC Section 2075.5). The emergency regulation adopted by the Commission under FGC Section 2084 authorizes incidental take of WJT during candidacy, subject to certain terms and conditions prescribed by the Commission (i.e., a “Section 2084” regulation). On December 10, 2020, the Commission found that the adoption of the Section 749.12 emergency regulation pursuant to FGC Section 2084 was necessary for the immediate preservation of the public peace, health and safety or general welfare. On June 16, 2021, the Commission approved the Department’s request for a 6-month extension to deliver the one-year status review.

### **Existence of an Emergency and Need for Immediate Action**

The Commission considered the following factors in determining whether an emergency exists: public health, safety and general welfare, as well as the magnitude of potential harm; the immediacy of the need; and whether the anticipation of harm has a basis firmer than simple speculation, and has determined that an emergency regulation authorized under FGC Section 2084 is needed.

### **Proposed Action by the Commission**

The Commission proposes the readoption of Section 749.12 that is the same as previously adopted, with the following exceptions:

Subsection 749.12(a) and (f)(2):

- The County of San Bernardino opted to not participate in the implementation of Section 749.12, therefore, references to the applicability to and participation of the County of San Bernardino are deleted from the regulation text.

Subsection 749.12(b)(2)(B):

- Clarifying language for the meaning of an “accredited college” has been added to make explicit the general term for recognition by the U.S. Department of Education for a college or university. This necessary change makes it clear that a desert plant specialist must hold a degree from such an institution.
- Additional language for the meaning of “professional experience” has been added to clarify that the desert plant specialist refers to a person who has been formally employed to conduct relocation or restoration of WJT.

## Subsection 749.12(b)(4):

- Removal of the word “counties” since County of San Bernardino opted not to participate in implementation of Section 749.12, leaving “cities and towns.”

## Subsection 749.12(b)(12):

- Correcting reference to 749.10(a)(5) from “Section” to “subsection,” and adding in the word “former” before 749.10(a)(5). This change is necessary because although Section 749.10 is repealed from Title 14, the WJT Mitigation Fund continues to exist, and maintaining the reference clarifies this specific mitigation fund for WJT.

## Subsection 749.12(c):

- Changing the language, “within sixty days of the effective date of this section” to “No later than March 8, 2021” is necessary to prevent confusion with 60 days of the effective date of the re-adoption, when the 60 days was intended for the original enactment of the emergency. The March date ensures that affected individuals are clear on the (now past) due date for deposition of money in the Mitigation Fund.

## Subsection 749.12(c)(5)(B):

- Remove the words “property owner may include” from before the words “the assessor’s parcel number” and add the words “may be included” since either the property owner or a participating agency could reasonably include the parcel number with the report on survival rates, if there is no street address.

## Subsection 749.12(d)(4)(C)2.:

- Remove a hyphen between the words “foundations structures; striking out the words before and after it since a reader can’t see the hyphen when it is struck out.

## Subsection 749.12(d)(7):

- Adds a subsection that clarifies that no refunds will be provided from the Western Joshua Tree Mitigation Fund. Additional changes are included to clarify the regulation. This added subsection is necessary to clarify that in the event that a city or town did not end up removing the tree, that the fees paid into the fund are non-refundable. The rationale for this is that the fees are calculated for mitigation for impacts, but even if a participating agency didn’t participate in take of WJT, the administrative aspect of reviewing and issuing the permit would still occur, and thus no refund is allowable.

#### IV. Impact of Regulatory Action

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following determinations relative to the required statutory categories have been made:

- (a) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

The Commission anticipates that there will be costs to the State, specifically the Department. Estimated program costs of \$32,373.82 over the proposed

emergency regulation period of 90 days will be absorbed within existing budgets.

(b) **Nondiscretionary Costs/Savings to Local Agencies:**

This emergency regulation will not introduce nondiscretionary costs or savings to local agencies. Should an agency choose to consider the review and issuance of a permit, the process would likely entail the review of project plans, census information, and relocation plans.

(c) **Programs Mandated on Local Agencies or School Districts:**

None.

(d) **Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code:**

None.

## **V. Readoption Criteria**

### **1) Same as or Substantially Equivalent**

Pursuant to Government Code Section 11346.1(h), the text of a readopted “same or substantially equivalent” to the text of the original emergency regulation that must be the “same as or substantially equivalent” to the text of an emergency regulation previously adopted by that agency.” The language proposed for this rulemaking is substantially equivalent to the emergency regulation previously adopted by the Commission, with the exceptions noted above in Section III.

### **2) Substantial Progress**

Government Code subdivision 11346.1(h) specifies “readoption shall be permitted only if the agency has made substantial progress and proceeded with diligence to comply with subdivision (e)” [Sections 11346.2 through 11347.3, inclusive].

Pursuant to FGC sections 2080 and 2085, take of a candidate species is prohibited, unless: (1) the take is authorized in a regulation adopted by the Commission pursuant to FGC Section 2084 or (2) the Department authorizes the take through Incidental Take Permits (ITP) issued on a project-by-project basis pursuant to FGC section 2081. A 12-month review of the species’ status by the Department will be presented to the Commission in April 2022 for a final decision on listing status as threatened or endangered. A certificate of compliance (permanent) rulemaking is not being sought in this particular circumstance, because after the Commission makes the determination that listing the species is or is not warranted, a 2084 regulation would no longer be appropriate because the species is no longer a candidate for listing. At that point, the species is either protected under CESA as a listed species, or is no longer protected under CESA because it is not listed and is no longer a candidate for listing.

If the Commission determines that listing the WJT “is warranted,” the former candidate species will become a listed species and the persons conducting activities currently covered by the 2084 regulation that take WJT will be required to obtain an ITP pursuant to FGC section 2081(b) with tailored measures to mitigate the impacts of the take.

If the Commission decides that listing the WJT “is not warranted,” take of the former candidate species will no longer be prohibited under CESA. Absent protected status, no mechanism would be needed to authorize take of WJT. In that circumstance, permanent adoption of this 2084 regulation as permanent is unnecessary.

## **VI. Authority and Reference**

The Commission adopts this emergency action pursuant to the authority vested by sections 399 and 2084 of the Fish and Game Code and to implement, interpret, or make specific sections 399 and 2084 of the Fish and Game Code.

## **VII. Section 399 Finding**

Delay in the ability for residences in the Town of Yucca Valley to connect to the new sewer and water treatment system for groundwater recharge as a result of western Joshua tree take protections will risk CRWQCB noncompliance and may mean those connections aren’t realized and that septic waste would continue to leach to the groundwater basin. The necessary sewer connections are critical to implementing the transition away from septic and the reduction of nitrate concentrations in the groundwater basin, which is a clear public safety and public health concern.

Work associated with modifications to single-family residences and accessory structures will provide critical cash-flow to small businesses and local permitting agencies in economically hard-hit areas, benefiting the general welfare of the residents of those communities.

Fallen WJT in public rights-of-way and weakened tree limbs from winter conditions can create a public health and safety hazard. Dead trees and branches also pose a fire risk during fire-prone conditions. These situations are particularly dangerous when dead or damaged trees have fallen over, are leaning against an existing structure, or are otherwise creating an imminent threat to public health or safety.

Pursuant to Section 399, subdivision (b), of the Fish and Game Code, the Commission finds, based on the information above, that adopting this regulation is necessary for the immediate preservation of the public health and safety, and general welfare.

## Informative Digest (Plain English Overview)

### Proposed Regulatory Action

On October 21, 2019, the California Fish and Game Commission (Commission) received a petition from the Center for Biological Diversity to list the western Joshua tree (*Yucca brevifolia*, WJT) as threatened under the California Endangered Species Act (CESA). California Fish and Game Code (FGC) Section 2073.5 requires that the California Department of Fish and Wildlife (Department) evaluate the petition and submit a written evaluation with a recommendation to the Commission, which was received at the Commission's April 2020 meeting. Based upon the information contained in the petition and other relevant information, the Department recommended that the Commission determine the petition has sufficient scientific information available to indicate that the petitioned action may be warranted, and informed the Commission of that recommendation.

On September 22, 2020, the Commission determined that listing may be warranted pursuant to FGC Section 2074.2, and therefore WJT became a candidate species. The Department is in the process of conducting a one-year status review and will provide it to the Commission along with a listing recommendation. Due to the large geographic range of the species and the depth of scientific information available, the Department requested and received a 6-month extension to deliver the one-year status review. As such, the Department is on track to deliver the one-year status review to the Commission in accordance with that extension by April 2022. At that time, the Commission will make a final decision on listing.

Candidate species are protected from take under CESA pursuant to FGC Section 2085 during the remainder of the CESA listing. Under FGC Section 2084, CESA provides that the Commission may adopt regulations to authorize take of candidate species, based on the best available scientific information, when the take is otherwise consistent with CESA. As with all regulations, the Commission may adopt a regulation under Section 2084 on an emergency basis when it determines that a situation exists which threatens public health and safety or general welfare.

The Commission considered the following factors in determining whether an emergency exists: public health, safety and general welfare, as well as the magnitude of potential harm; the immediacy of the need; and whether the anticipation of harm has a basis firmer than simple speculation and determined that an emergency regulation authorized under FGC Section 2084 is needed.

The readoption of the emergency action of Section 749.12 to Title 14, California Code of Regulations would allow the Commission to grant the City of Palmdale and Town of Yucca Valley (participating agencies) the authority to authorize the incidental take of a limited number of WJTs during the candidacy period that may result from activities related to approvals or permits issued by the participating agencies for construction of single-family residences and accessory structures, public works projects, or the trimming or removal of damaged or dead trees. These activities will take place within the jurisdictions of the participating agencies, in habitats that are currently supporting the presence of WJT, ranging from poor to higher quality habitat. Lands on which project activities are expected to take place are expected to be pre-subdivided parcels of one to five acres in size. Parcels that have not been developed or disturbed are more likely to provide high quality WJT habitat, and parcels that have already been

developed or disturbed are likely to provide of lower quality WJT habitat.

Mitigation fees will be collected for authorized take of WJTs by the participating agencies. Project activities that result in take of WJT in habitats that are expected to provide lower quality habitat for WJT (developed parcels) are subject to lower mitigation fees than project activities that result in take of WJT in habitats that are expected to provide higher quality habitat (undeveloped parcels). Furthermore, removal and relocation of WJT from project activities will be subject to lower mitigation fees than removal of WJT without relocation, because relocated WJT may survive, and provide benefits. These fees will be deposited into a WJT Mitigation Fund and may be expended for the purpose of addressing threats to WJT, which may include but are not limited to acquiring and conserving WJT mitigation lands.

The participating agencies may authorize take of WJT associated with developing single-family residences, accessory structures, and public works projects concurrent with approval of the project, subject to the following terms and conditions:

- Adoption of a required WJT ordinance by each participating agency;
- Deposit of required moneys to the WJT Mitigation Fund no later than March 8, 2021, and bi-monthly thereafter;
- Submittal of bi-monthly reports and an annual report by each participating agency;
- No more than ten WJTs may be removed per project site;
- Completion of a required WJT census for each project by the project proponent, and submittal of a corresponding report to the participating agency;
- Avoidance of take to the maximum extent practicable;
- Minimization of take via limits on ground disturbance and a requirement to relocate WJTs to the maximum extent feasible;
- Meeting circumstances warranting relocation of individual WJT, and subsequent measures to be taken for relocation efforts;
- The option of removal of individual WJT where relocation of such individuals is not feasible;
- Payment of required mitigation fees defined by size class, take action (relocation vs. removal), and land status (undeveloped or developed) to the participating agencies by the project proponents; and
- The option of issuing permits for removing detached WJT or tree limbs when posing a threat to structures or public health or safety.
- Cumulative limits on the amount of WJT take for single family residences, accessory structures, and public works projects that may be permitted by the participating agencies.

The current emergency rule, Section 749.12, will expire on November 9, 2021, unless it is readopted for an additional 90 days. The Commission proposes the readoption of Section 749.12 that is the same as previously adopted, with the following exceptions considered substantially equivalent:

## Subsection 749.12(a) and (f)(2):

- The County of San Bernardino opted to not participate in the implementation of Section 749.12, therefore, references to the applicability to and participation of the County of San Bernardino are deleted from the regulation text.

## Subsection 749.12(b)(2)(B):

- Clarifying language for the meaning of an “accredited college” has been added to make explicit the general term for recognition by the U.S. Department of Education for a college or university. This necessary change makes it clear that a desert plant specialist must hold a degree from such an institution.
- Additional language for the meaning of “professional experience” has been added to clarify that the desert plant specialist refers to a person who has been formally employed to conduct relocation or restoration of WJT.

## Subsection 749.12(b)(4):

- Removal of the word “counties” since County of San Bernardino opted not to participate in implementation of Section 749.12, leaving “cities and towns.”

## Subsection 749.12(b)(12):

- Correcting reference to 749.10(a)(5) from “Section” to “subsection,” and adding in the word “former” before 749.10(a)(5). This change is necessary because although Section 749.10 is repealed from Title 14, the WJT Mitigation Fund continues to exist, and maintaining the reference clarifies this specific mitigation fund for WJT.

## Subsection 749.12(c):

- Changing the language, “within sixty days of the effective date of this section” to “No later than March 8, 2021” is necessary to prevent confusion with 60 days of the effective date of the re-adoption, when the 60 days was intended for the original enactment of the emergency. The March date ensures that affected individuals are clear on the (now past) due date for deposition of money in the Mitigation Fund.

## Subsection 749.12(c)(5)(B):

- Remove the words “property owner may include” from before the words “the assessor’s parcel number” and add the words “may be included” since either the property owner or a participating agency could reasonably include the parcel number with the report on survival rates, if there is no street address.

## Subsection 749.12(d)(4)(C)2.:

- Remove a hyphen between the words “foundations structures; striking out the words before and after it since a reader can’t see the hyphen when it is struck out.

## Subsection 749.12(d)(7):

- Adds a subsection that clarifies that no refunds will be provided from the Western Joshua Tree Mitigation Fund. Additional changes are included to

clarify the regulation. This added subsection is necessary to clarify that in the event that a city or town did not end up removing the tree, that the fees paid into the fund are non-refundable. The rationale for this is that the fees are calculated for mitigation for impacts, but even if a participating agency didn't participate in take of WJT, the administrative aspect of reviewing and issuing the permit would still occur, and thus no refund is allowable.

**Benefits**

The benefits of readopting the emergency regulation include fulfilling the transition away from septic tank storage for the Town of Yucca Valley and reducing nitrate leaching into the groundwater basin and ensuring timely connection to the new sewer and water treatment system, protecting the groundwater basin water quality (drinking water supply) and public health. Take authorization to participating agencies of WJT would augment the general welfare of city and county residents by allowing residential improvements by local contractors, and may provide critical cash-flow to small businesses and local permitting agencies in economically hard-hit areas. Allowing the removal of weakened WJT with broken or downed limbs would reduce threats to public safety and structures during the WJT candidacy period.

**Consistency and Compatibility with Existing State Regulations**

Commission staff has searched the CCR and has found no other state regulation relating to the incidental take by the specific projects identified under this regulation of WJT during its candidacy under CESA, and therefore concludes that the proposed regulations are neither inconsistent nor incompatible with existing state regulation.

## Regulatory Language

Section 749.12 Title 14, CCR, is added to read:

### **§749.12 Special Order Relating to Take of Western Joshua Tree (*Yucca brevifolia*) During Candidacy Period.**

The commission authorizes the take and possession of western Joshua tree during the candidacy period for each of the activities described in this section, subject to the terms and conditions specified for each activity.

(a) The take authorization conferred by this section shall apply only to take authorized, pursuant to subsections (d) and (e), by ~~the following counties, cities, and towns:~~

(1) City of Palmdale.

(2) ~~County of San Bernardino~~

~~(3) Town of Yucca Valley.~~

(b) Definitions.

(1) Accessory structure means a subordinate structure, the use of which is incidental to an existing or contemporaneously constructed single-family residence, and includes: an accessory dwelling unit, addition to an existing single-family residence, garage, carport, swimming pool, patio, greenhouse, storage shed, gazebo, septic tank, sewer connection, solar panels, or gravel or paved driveway.

(2) Desert native plant specialist means:

(A) An arborist certified by the International Society of Arborists; or

(B) An individual with a four-year college degree in ecology or fish and wildlife related biological science from an college accredited by the U.S. Department of Education, ~~college~~ and at least two years of professional experience (i.e., formal employment) with relocation or restoration of native California desert vegetation; or

(C) An individual with at least five years of professional experience with relocation or restoration of native California desert vegetation.

(3) Developed parcel means a parcel with an existing single-family residence.

(4) Participating agency means each of the ~~counties, cities, and towns~~ listed in subsection (a).

(5) Project proponent means the owner of a project site for a single-family residence or accessory structure or the owner's agent or the public agency undertaking a public works project.

(6) Project site means the parcel or parcels on which a project proponent proposes to construct a single-family residence or accessory structure or on which a public agency proposes to undertake a public works project.

(7) Public works project means a project for the erection, construction, alteration, maintenance, or repair of any public structure, building, or road.

(8) Single-family residence means a single detached building that has been or will be constructed and used as living facilities, including provisions for sleeping, eating, cooking, and sanitation as required by the California Building Code for not more than one household. Nothing in this section shall be construed to authorize take of western Joshua tree for a subdivision or other development that includes more than one single-family residence.

(9) Size class means the classification of western Joshua trees by the following three sizes:

(A) Less than one meter in height;

(B) One meter or greater but less than four meters in height; and

(C) Four meters or greater in height.

(10) Undeveloped parcel means a parcel without an existing single-family residence.

(11) Western Joshua tree means an individual western Joshua tree (*Yucca brevifolia*) that has emerged from the ground, regardless of age or size, including all stems that have emerged from the ground within a one-meter radius measured from a single point at the base of the largest stem.

(12) Western Joshua Tree Mitigation Fund means the fund established pursuant to former Section subsection 749.10(a)(5).

(c) Each participating agency shall:

(1) No later than March 8, 2021 ~~Within sixty days of the effective date of this section,~~ adopt an ordinance that:

(A) Requires as a condition of any approval or permit for a single-family residence, accessory structure, or public works project that has one or more western Joshua trees on the project site satisfaction of each of the requirements set forth in subsection (d).

(B) Provides for the permitting of take of dead trees and trimming of limbs pursuant to subsection (e).

(2) No later than March 8, 2021 ~~Within sixty days of the effective date of this section,~~ deposit moneys in the Western Joshua Tree Mitigation Fund as follows:

(A) The City of Palmdale shall deposit the sum of \$10,000.

(B) ~~The County of San Bernardino shall deposit the sum of \$10,000~~

~~(C) The Town of Yucca Valley shall deposit the sum of \$10,000.~~

(3) Make bi-monthly deposits to the Western Joshua Tree Mitigation Fund, by the fifteenth day of March, May, July, September, November, and January of all mitigation fees collected pursuant to subsection (d)(6) during the preceding two calendar months.

(4) Submit to the department at WJT@wildlife.ca.gov by the fifteenth day of March, May, July, September, November, and January a bi-monthly report that includes the following information for the preceding two calendar months:

(A) The number of projects approved pursuant to subsection (d) that resulted in the removal or relocation of western Joshua trees.

(B) The number and size class of western Joshua trees that were relocated pursuant to subsection (d).

(C) The number and size class of western Joshua trees removed and not relocated pursuant to subsection (d).

(D) The number of dead western Joshua trees removed and live trees trimmed pursuant to subsection (e).

(E) The total amount of mitigation fees collected for each of the mitigation categories set forth in subsection (d)(6).

(F) Documentation that the total amount of mitigation fees listed pursuant to subsection (c)(4)(E) was paid into the Western Joshua Tree Mitigation Fund.

(5) Submit to the department at WJT@wildlife.ca.gov an annual report on the survival rates of trees relocated pursuant to subsection (d) by January 15 of each year beginning in 2022 and continuing for a total of three years. The annual report shall include, at a minimum, the following:

(A) The total number of western Joshua trees relocated pursuant to subsection (d).

(B) For each western Joshua tree relocated:

1. The street address for the parcel on which the western Joshua tree was relocated. If no street address is available, the ~~property owner may include~~ the assessor's parcel number may be included.

2. The date of the relocation.

3. Whether the western Joshua tree is alive or dead as of the date of the annual report.

4. A photograph of the relocated western Joshua tree in its current condition.

(d) Upon compliance with subsections (c)(1) and (2), each participating agency may authorize take of western Joshua tree associated with developing single-family

residences, accessory structures, and public works projects concurrent with its approval of the project and subject to the following conditions:

(1) No project shall be eligible to receive take authorization pursuant to this section if it will result in the take of more than ten western Joshua trees from the project site.

(2) Census.

(A) The project proponent proposing to relocate or remove a western Joshua tree shall cause a census of western Joshua trees to be conducted on the project site by a desert native plant specialist. The census shall tag and count all western Joshua trees on the project site and classify them by size class.

(B) Prior to receiving take authorization from the participating agency, the project proponent shall submit to the participating agency a census report that shall include the following:

1. The name of the desert native plant specialist who conducted the census and the employer of the desert native plant specialist.

2. If applicable, the name of the desert native plant specialist who will relocate western Joshua trees pursuant to subsection (d)(4)(D) and the employer of the desert native plant specialist.

3. The date of the census.

4. The date or dates of the proposed relocation of western Joshua trees, if applicable.

5. A map of the project site that depicts: the location of the proposed single-family residence, accessory structure, or public works project; the number and location of all western Joshua trees on the project site; and, if applicable, the proposed western Joshua trees for removal, or the proposed placement of each relocated western Joshua tree.

6. Photographs of each western Joshua tree on the project site, including a visual representation of the scale of the height of each tree.

(3) Avoidance. To the maximum extent practicable, the project proponent shall avoid take of western Joshua trees on the project site.

(4) Minimization.

(A) Notwithstanding subsection (d)(3), the project proponent shall avoid all ground-disturbing activities within 10 feet of any western Joshua tree, unless those activities will be temporary, will not physically impact the western Joshua tree or its root system, and will not disturb the soil to a depth of greater than twelve inches.

(B) To the maximum extent feasible, the project proponent shall relocate all western Joshua trees that cannot be avoided to another location on the project site.

(C) For purposes of this subsection, relocation of a western Joshua tree shall be determined to be infeasible if any of the following applies:

1. Relocation of the western Joshua tree on the project site would pose a threat to public health or safety.
2. Relocation of the western Joshua tree on the project site would interfere with existing roadways, sidewalks, curbs, gutters, utility lines, sewer lines, drainage improvements, ~~foundations, structures,~~ foundations, structures, or setbacks to any of those structures or improvements.
3. There is no location on the project site that satisfies the requirements of subsection (d)(4)(D)2.

(D) The project proponent shall ensure that relocation of western Joshua trees pursuant to this section satisfies the following requirements:

1. All relocations of western Joshua trees one meter or greater in height shall be completed by a desert native plant specialist. All relocations of western Joshua trees less than one meter in height shall be relocated according to the terms of the applicable participating agency's ordinance adopted pursuant to subsection (c)(1).
2. All western Joshua trees to be relocated shall be placed at least twenty-five feet from any existing or proposed structure or improvement and at least ten feet from any other western Joshua tree.
3. Within thirty days of completing the relocation, the project proponent shall provide the participating agency with a map of the project site indicating where each western Joshua tree was relocated.

(5) Removal. Subject to the limitations of subsection (d)(1), a project proponent may remove western Joshua trees that cannot feasibly be avoided pursuant to subsection (d)(3) or relocated pursuant to subsection (d)(5).

(6) Mitigation. Prior to receiving take authorization from the participating agency, the project proponent shall pay mitigation fees to the participating agency for deposit into the Western Joshua Tree Mitigation Fund as follows:

(A) For single-family residence projects and sewer connection projects undertaken on undeveloped parcels and public works projects to erect or construct a new public structure, building, road, or improvement, the project proponent shall pay mitigation fees as follows:

1. \$2425 for each western Joshua tree four meters or greater in height that is relocated.
2. \$625 for each western Joshua tree under four meters in height that is relocated.
3. \$4175 for each western Joshua tree four meters or greater in height that is removed and not relocated.

4. \$1050 for each western Joshua tree under four meters in height that is removed and not relocated.

(B) For accessory structure projects undertaken on developed parcels and for public works projects to alter, maintain, or repair an existing public structure, building, road, or improvement, the project proponent shall pay mitigation fees as follows:

1. \$700 for each western Joshua tree four meters or greater in height that is relocated.
2. \$175 for each western Joshua tree under four meters in height that is relocated.
3. \$2100 for each western Joshua tree four meters or greater in height that is removed and not relocated.
4. \$525 for each western Joshua tree under four meters in height that is removed and not relocated.

(7) Refunds. Once mitigation fees have been paid and deposited into the Western Joshua Tree Mitigation Fund, no refunds will be provided, even if the project proponent does not take any western Joshua trees.

(e) Each participating agency may issue a permit to authorize either the removal of a dead western Joshua tree or the trimming of a western Joshua tree. The project proponent or its agent may remove a detached dead western Joshua tree or detached limb of a western Joshua tree. All other removals and all trimming of western Joshua trees authorized by permits issued pursuant to this subsection shall be completed by a desert native plant specialist. Each participating agency may issue permits pursuant to this subsection, without payment of mitigation fees, provided that the dead western Joshua tree or the limb(s) to be removed:

- (1) Has fallen over and is within 30 feet of a structure; or
- (2) Is leaning against an existing structure; or
- (3) Creates an imminent threat to public health or safety.

(f) During the candidacy period, no participating agency shall authorize take pursuant to subsection (d), collectively, in excess of the following limits:

(1) The City of Palmdale shall not authorize take, in the form of relocation or removal, of more than 190 western Joshua trees pursuant to subsection (d).

~~(2) The County of San Bernardino shall not authorize take, in the form of relocation or removal, of more than 450 western Joshua trees pursuant to subsection (d).~~

~~(3) The Town of Yucca Valley shall not authorize take, in the form of relocation or removal, of more than 450 western Joshua trees pursuant to subsection (d), of which no more than 100 western Joshua trees shall be relocated or removed in relation to sewer connection projects.~~

(g) Enforcement.

(1) The department shall suspend a participating agency's authority to issue take authorization pursuant to subsections (d) and (e) if the participating agency does any of the following:

(A) Fails to make bi-monthly deposits of mitigation fees into the Western Joshua Tree Mitigation Fund, as required by subsection (c)(3).

(B) Fails to provide bi-monthly reports to the department, as required by subsection (c)(4).

(C) Authorizes take for a project not eligible to receive take authorization under this section.

(D) Authorizes take in excess of the limits set forth in subsection (f).

(2) The department shall provide the participating agency with written notice of a suspension within ten days of the department's discovery of facts supporting the suspension. A notice of suspension shall provide the participating agency with thirty days to remedy the failure identified in the notice. If the participating agency provides the department with written documentation that it has remedied the failure within thirty days of receipt of the notice, the department shall lift the suspension.

(3) The department shall revoke a participating agency's authority to issue take authorization pursuant to subsections (d) and (e) if the participating agency fails to remedy a failure identified in a notice of suspension within thirty days of receipt of the notice. All revocations shall be permanent.

(h) Limitations.

(1) Nothing in this section is intended to be or shall be construed to be a general project approval. It shall be the responsibility of each project proponent receiving take authorization pursuant to this section to obtain all necessary permits and approvals and to comply with all applicable federal, state, and local laws.

(2) Nothing in this section is intended to or shall be construed to limit the terms and conditions, including those relating to compensatory mitigation, the department includes in incidental take permits for western Joshua tree issued pursuant to Fish and Game Code section 2081, subdivision (b).

Note: Authority cited: Sections 399 and 2084, Fish and Game Code. Reference: Sections 399 and 2084, Fish and Game Code.

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**DRAFT DOCUMENT****ECONOMIC IMPACT STATEMENT**

DEPARTMENT NAME Fish and Game Commission	CONTACT PERSON margaret.duncan	EMAIL ADDRESS @wildlife.ca.gov	TELEPHONE NUMBER 916-653-4899
DESCRIPTIVE TITLE FROM NOTICE REGISTER OR FORM 400 Emergency Regulation: Amend Section 749.12, Title 14, CCR, Re: Take of Western Joshua Tree			NOTICE FILE NUMBER Z

**A. ESTIMATED PRIVATE SECTOR COST IMPACTS** *Include calculations and assumptions in the rulemaking record.*

1. Check the appropriate box(es) below to indicate whether this regulation:

- |  |   |
|--|---|
| <input type="checkbox"/> a. Impacts business and/or employees  | <input type="checkbox"/> e. Imposes reporting requirements  |
| <input type="checkbox"/> b. Impacts small businesses           | <input type="checkbox"/> f. Imposes prescriptive instead of performance                           |
| <input type="checkbox"/> c. Impacts jobs or occupations        | <input type="checkbox"/> g. Impacts individuals   |
| <input type="checkbox"/> d. Impacts California competitiveness | <input checked="" type="checkbox"/> h. None of the above (Explain below):<br>Emergency Regulation |

***If any box in Items 1 a through g is checked, complete this Economic Impact Statement.******If box in Item 1.h. is checked, complete the Fiscal Impact Statement as appropriate.***2. The \_\_\_\_\_ estimates that the economic impact of this regulation (which includes the fiscal impact) is:  
(Agency/Department)

- ☐ Below \$10 million
- ☐ Between \$10 and \$25 million
- ☐ Between \$25 and \$50 million
- ☐ Over \$50 million *[If the economic impact is over \$50 million, agencies are required to submit a Standardized Regulatory Impact Assessment as specified in Government Code Section 11346.3(c)]*

3. Enter the total number of businesses impacted: \_\_\_\_\_

Describe the types of businesses (Include nonprofits): \_\_\_\_\_

Enter the number or percentage of total  
businesses impacted that are small businesses: \_\_\_\_\_

4. Enter the number of businesses that will be created: \_\_\_\_\_ eliminated: \_\_\_\_\_

Explain: \_\_\_\_\_

5. Indicate the geographic extent of impacts: ☐ Statewide  
☐ Local or regional (List areas): \_\_\_\_\_

6. Enter the number of jobs created: \_\_\_\_\_ and eliminated: \_\_\_\_\_

Describe the types of jobs or occupations impacted: \_\_\_\_\_

7. Will the regulation affect the ability of California businesses to compete with  
other states by making it more costly to produce goods or services here? ☐ YES ☐ NO

If YES, explain briefly: \_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**ECONOMIC IMPACT STATEMENT (CONTINUED)****B. ESTIMATED COSTS** *Include calculations and assumptions in the rulemaking record.*

1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime? \$ \_\_\_\_\_

a. Initial costs for a small business: \$ \_\_\_\_\_ Annual ongoing costs: \$ \_\_\_\_\_ Years: \_\_\_\_\_

b. Initial costs for a typical business: \$ \_\_\_\_\_ Annual ongoing costs: \$ \_\_\_\_\_ Years: \_\_\_\_\_

c. Initial costs for an individual: \$ \_\_\_\_\_ Annual ongoing costs: \$ \_\_\_\_\_ Years: \_\_\_\_\_

d. Describe other economic costs that may occur: \_\_\_\_\_

2. If multiple industries are impacted, enter the share of total costs for each industry: \_\_\_\_\_

3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements.  
*Include the dollar costs to do programming, record keeping, reporting, and other paperwork, whether or not the paperwork must be submitted.* \$ \_\_\_\_\_4. Will this regulation directly impact housing costs? ☐ YES ☐ NO

If YES, enter the annual dollar cost per housing unit: \$ \_\_\_\_\_

Number of units: \_\_\_\_\_

5. Are there comparable Federal regulations? ☐ YES ☐ NO

Explain the need for State regulation given the existence or absence of Federal regulations: \_\_\_\_\_

Enter any additional costs to businesses and/or individuals that may be due to State - Federal differences: \$ \_\_\_\_\_

**C. ESTIMATED BENEFITS** *Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. Briefly summarize the benefits of the regulation, which may include among others, the health and welfare of California residents, worker safety and the State's environment: \_\_\_\_\_

2. Are the benefits the result of: ☐ specific statutory requirements, or ☐ goals developed by the agency based on broad statutory authority?

Explain: \_\_\_\_\_

3. What are the total statewide benefits from this regulation over its lifetime? \$ \_\_\_\_\_

4. Briefly describe any expansion of businesses currently doing business within the State of California that would result from this regulation: \_\_\_\_\_

**D. ALTERNATIVES TO THE REGULATION** *Include calculations and assumptions in the rulemaking record. Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not: \_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**ECONOMIC IMPACT STATEMENT (CONTINUED)**

2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:

Regulation: Benefit: \$ \_\_\_\_\_ Cost: \$ \_\_\_\_\_

Alternative 1: Benefit: \$ \_\_\_\_\_ Cost: \$ \_\_\_\_\_

Alternative 2: Benefit: \$ \_\_\_\_\_ Cost: \$ \_\_\_\_\_

3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives: \_\_\_\_\_

4. Rulemaking law requires agencies to consider performance standards as an alternative, if a regulation mandates the use of specific technologies or equipment, or prescribes specific actions or procedures. Were performance standards considered to lower compliance costs? ☐ YES ☐ NO

Explain: \_\_\_\_\_

**E. MAJOR REGULATIONS** *Include calculations and assumptions in the rulemaking record.****California Environmental Protection Agency (Cal/EPA) boards, offices and departments are required to submit the following (per Health and Safety Code section 57005). Otherwise, skip to E4.***1. Will the estimated costs of this regulation to California business enterprises **exceed \$10 million**? ☐ YES ☐ NO***If YES, complete E2. and E3******If NO, skip to E4***

2. Briefly describe each alternative, or combination of alternatives, for which a cost-effectiveness analysis was performed:

Alternative 1: \_\_\_\_\_

Alternative 2: \_\_\_\_\_

*(Attach additional pages for other alternatives)*

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

Regulation: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

Alternative 1: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

Alternative 2: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

4. Will the regulation subject to OAL review have an estimated economic impact to business enterprises and individuals located in or doing business in California exceeding \$50 million in any 12-month period between the date the major regulation is estimated to be filed with the Secretary of State through 12 months after the major regulation is estimated to be fully implemented?

☐ YES ☐ NO*If YES, agencies are required to submit a Standardized Regulatory Impact Assessment (SRIA) as specified in Government Code Section 11346.3(c) and to include the SRIA in the Initial Statement of Reasons.*

5. Briefly describe the following:

The increase or decrease of investment in the State: \_\_\_\_\_

The incentive for innovation in products, materials or processes: \_\_\_\_\_

The benefits of the regulations, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the state's environment and quality of life, among any other benefits identified by the agency: \_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**FISCAL IMPACT STATEMENT****A. FISCAL EFFECT ON LOCAL GOVERNMENT** *Indicate appropriate boxes 1 through 6 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

- ☐ 1. Additional expenditures in the current State Fiscal Year which are reimbursable by the State. (Approximate)  
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ \_\_\_\_\_

- ☐ a. Funding provided in \_\_\_\_\_

Budget Act of \_\_\_\_\_ or Chapter \_\_\_\_\_, Statutes of \_\_\_\_\_

- ☐ b. Funding will be requested in the Governor's Budget Act of \_\_\_\_\_

Fiscal Year: \_\_\_\_\_

- ☐ 2. Additional expenditures in the current State Fiscal Year which are NOT reimbursable by the State. (Approximate)  
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ \_\_\_\_\_

*Check reason(s) this regulation is not reimbursable and provide the appropriate information:*

- ☐ a. Implements the Federal mandate contained in \_\_\_\_\_

- ☐ b. Implements the court mandate set forth by the \_\_\_\_\_ Court.

Case of: \_\_\_\_\_ vs. \_\_\_\_\_

- ☐ c. Implements a mandate of the people of this State expressed in their approval of Proposition No. \_\_\_\_\_

Date of Election: \_\_\_\_\_

- ☐ d. Issued only in response to a specific request from affected local entity(s).

Local entity(s) affected: \_\_\_\_\_

- ☐ e. Will be fully financed from the fees, revenue, etc. from: \_\_\_\_\_

Authorized by Section: \_\_\_\_\_ of the \_\_\_\_\_ Code;

- ☐ f. Provides for savings to each affected unit of local government which will, at a minimum, offset any additional costs to each;

- ☐ g. Creates, eliminates, or changes the penalty for a new crime or infraction contained in \_\_\_\_\_

- ☐ 3. Annual Savings. (approximate)

\$ \_\_\_\_\_

- ☐ 4. No additional costs or savings. This regulation makes only technical, non-substantive or clarifying changes to current law regulations.

- ☒ 5. No fiscal impact exists. This regulation does not affect any local entity or program.

- ☐ 6. Other. Explain \_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**FISCAL IMPACT STATEMENT (CONTINUED)****B. FISCAL EFFECT ON STATE GOVERNMENT** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*☒ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ 32,373.82

*It is anticipated that State agencies will:*☒ a. Absorb these additional costs within their existing budgets and resources.☐ b. Increase the currently authorized budget level for the \_\_\_\_\_ Fiscal Year☐ 2. Savings in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

☐ 3. No fiscal impact exists. This regulation does not affect any State agency or program.☐ 4. Other. Explain DFW estimates program implementation costs of the anticipated 4 bi-monthly reports over 90 days of the re-adopted regulation to be = \$32,373.82 that will be absorbed within existing budgets. See Addendum.**C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*☐ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

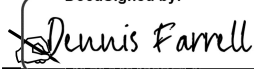
☐ 2. Savings in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

☒ 3. No fiscal impact exists. This regulation does not affect any federally funded State agency or program.☐ 4. Other. Explain \_\_\_\_\_

FISCAL OFFICER SIGNATURE

DocuSigned by:



DATE

9/30/2021

*The signature attests that the agency has completed the STD. 399 according to the instructions in SAM sections 6601-6616, and understands the impacts of the proposed rulemaking. State boards, offices, or departments not under an Agency Secretary must have the form signed by the highest ranking official in the organization.*

AGENCY SECRETARY

DATE



*Finance approval and signature is required when SAM sections 6601-6616 require completion of Fiscal Impact Statement in the STD. 399.*

DEPARTMENT OF FINANCE PROGRAM BUDGET MANAGER

DATE



## STD399 CALCULATIONS WORKSHEET ADDENDUM

Emergency Action to Amend Section 749.12  
Title 14, California Code of Regulations (CCR)  
Re: Take of Western Joshua Tree

### Economic Impact Statement

Emergency regulations do not require an economic impact statement; only fiscal impacts must be evaluated (California Government Code Section 11346.1).

### Fiscal Impact Statement

The proposed addition of Section 749.12 to Title 14, California Code of Regulations (CCR) does not have the potential for a nondiscretionary fiscal impact on local agencies or on the federal funding of state programs.

The Commission anticipates that there will be costs to the State, specifically the California Department of Fish and Wildlife (Department) for program implementation as shown in Table 1. The Department anticipates submittal of approximately two projects, with approximately four bi-monthly reports, resulting in total program costs of \$32,373.82 over the 90 days of the proposed re-adoption. The identified program costs will be absorbed within existing budgets.

**Table 1.** Estimated Department Program Costs for Take of Western Joshua Tree (2021\$)

DFW Classification	Activity/Task	Bi-monthly Reports	Hours per Task	Hourly Rate <sup>1</sup>	Project Costs
Senior Environmental Scientist (Supervisory)	Correspondence and screening for eligibility	4	40	\$96.42	\$15,427.20
Senior Environmental Scientist (Specialist)	Review bi-monthly reports	4	8	\$70.93	\$2,269.76
Environmental Scientist	Tracks #s WJT taken	4	6	\$61.62	\$1,478.88
Associate Budget Analyst	Ensure receipt of payments	4	1	\$55.42	\$221.68
Attorney IV	Issue Notice of Suspension	1	60	\$110.72	\$6,643.20
Subtotal					\$26,040.72
Overhead <sup>2</sup>					\$6,333.10
<b>Total Costs</b>					<b>\$32,373.82</b>

<sup>1</sup> Hourly Rate includes wages per CalHR payscale 2020-21 and Department benefit rates.

<sup>2</sup> Non-Federal Project Overhead rate for FY 2020-2021 is 24.32% per Department Budget Branch.

**From:** FGC  
**Sent:** Thursday, August 19, 2021 11:33 AM  
**To:** Susan Simmons  
**Subject:** Re: Western Joshua Tree restrictions

Dear Susan Simmons,

The mitigation fees for removal or relocation of Western Joshua trees should not be applicable actions that took place prior to the effective date of the regulation (January 7, 2021). If your lateral (the pipe running from your home, across your property, to the main sewer) was already in place, mitigation fees specified in Section 749.12, Title 14, California Code of Regulations (CCR) would not apply.

However, during the the period of October 9, 2020 (when Western Joshua Tree became a candidate species under the California Endangered Species Act) and January 6, 2021, take of Western Joshua Tree, except as authorized under Section 749.10, Title 14, CCR, was prohibited by the California Endangered Species Act. (Section 749.10 authorizes take of Western Joshua Tree incidental to solar energy projects listed in the regulation and for ongoing research and monitoring projects.) If your lateral was installed during this period, it would have been a violation of the California Endangered Species Act - which is subject to fines and penalties, not mitigation fees. The California Fish and Game Commission (Commission) has no authority to override or adjust such fines and penalties.

The Commission is scheduled to readopt its emergency regulation, Section 749.12, Title 14, CCR, which allows take of Western Joshua Trees for certain projects, including Yucca Valley's sewer project, and mitigation fees for such take, at its October 13-14, 2021 meeting. We will provide your message to the Commission in its materials for the October meeting. In addition, you may provide comments orally at the meeting. At this time, the meeting is anticipated to be held in Sacramento and to provide for the public to participate in person or virtually via Zoom; however, with the uncertainties regarding COVID-19, the meeting format may change. The agenda will be available at least 10 days prior to the meeting at <https://fgc.ca.gov/Meetings/2021#oct> and will specify the meeting format and participation instructions.

If a fine has been levied against you, we encourage you to contact the agency which levied that fine.

Sherrie F.  
Commission staff

---

**From:** Susan Simmons <[REDACTED]>  
**Sent:** Wednesday, August 18, 2021 03:54 PM  
**To:** FGC <FGC@fgc.ca.gov>  
**Subject:** Western Joshua Tree restrictions

I live in Yucca Valley, a town that has been mandated by the State of California to install a sewer and abandon septic tanks.

In Phase I of the sewer project, laterals had already been installed prior to the protection of the Western Joshua Tree. I am for protecting the WJT, but people who are being forced by the State to hook up to the sewer are being forced to pay thousands of dollars in order to comply with the State's protection of the WJT. They should be grandfathered because the laterals had been laid before the WJT was protected. The State of California is punishing people for complying and that is not right! People affected by fines, etc. in order to comply with the sewer should get that money back. Most of Phase I consists of families just getting by.

Sincerely,  
Susan Simmons

[REDACTED]  
[REDACTED]  
[REDACTED]

# Hatchery Coho Salmon Temporarily Relocated Amid Heat Stress And Drought Conditions In Sonoma County

August 20, 2021



Coho salmon in water

Due to drought and poor water conditions at Lake Sonoma, thousands of juvenile coho salmon have been relocated from the Warm Springs Fish Hatchery in Geyserville. The fish were trucked to a conservation facility at a high school in Petaluma where they will be reared until conditions improve.

Beginning in late spring, rising water temperatures at Warm Springs Hatchery increased the risk of heat stress and pathogen outbreaks. Scientists developed the relocation plan as a precaution to keep the hatchery coho safe.

“We all have a vested interest in seeing coho salmon remain healthy. In addition to being endangered, coho are an indicator species and a sign of the health of the

watershed. When they're in danger action needs to be taken," said CDFW Acting Regional Manager Stacy Sherman.

The relocation was made possible by a successful public private partnership led by the National Marine Fisheries Service, the U.S. Army Corps of Engineers (USACE), and the California Department of Fish and Wildlife (CDFW). USACE owns the Warm Springs Hatchery and co-operates the facility with CDFW. The project was also made possible by generous donations from Jackson Family Wines and Sonoma Water. United Anglers of Casa Grande, Inc. maintains the student-operated conservation facility at Casa Grande High School. Also supporting the relocation effort was the Monterey Bay Salmon and Trout Project.

Coho kept as hatchery broodstock are carefully managed so that their genetic diversity is comparable with wild populations of the Central California Coast Evolutionarily Significant Unit. With wild populations facing poor river conditions due to drought, captive fish act as insurance against loss of genetic diversity.

"Relocating a portion of the juvenile coho provides additional protection for the maintenance of genetic diversity, which is important for resilience of the species as a whole," said Sherman.

The relocation effort was carried out during July and August 2021. In total, about 4,000 juvenile coho were relocated from Warm Springs Hatchery to the conservation facility at Casa Grande High School.

[View photos of the salmon relocation](#)

# Waterfowl Hunting Seasons Opening Soon; Drought Conditions May Limit Opportunities

August 25, 2021



As California's 2021-22 waterfowl hunting season approaches, hunters may find that wildlife areas have limited space, particularly early in the season.

Most years, quality public hunting access can be found on more than two dozen [national wildlife refuges and wildlife areas](#) administered by the California Department of Fish and Wildlife ([CDFW](#)). With this year's drought, some areas will have significantly reduced amounts of water available, while others will have normal to near-normal water conditions. As a result, some wildlife areas and refuges may be closed, while others may open later in the season or have a reduced hunter quota.

Beginning Sept. 1, hunters can submit reservation applications for state-operated waterfowl hunting areas. CDFW will attempt to offer reservation applications only for areas that will be open for hunting. However, last-minute closures may occur

due to uncertain water availability, and refunds cannot be issued for applications submitted to areas that close due to a lack of water.

Updates about wildlife area and refuge closures will be posted on CDFW's [Closures web page](#). For detailed information about hunter quotas, please contact the [wildlife area or refuge](#) you wish to hunt.

**Commissioners**  
**Peter S. Silva**, President

Jamul

**Samantha Murray**, Vice President  
Del Mar

**Jacque Hostler-Carmesin**, Member  
McKinleyville

**Eric Sklar**, Member  
Saint Helena

**Erika Zavaleta**, Member  
Santa Cruz

STATE OF CALIFORNIA  
Gavin Newsom, Governor

## Fish and Game Commission



*Wildlife Heritage and Conservation  
Since 1870*

**Melissa Miller-Henson**  
**Executive Director**  
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[fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov)  
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### WILDLIFE RESOURCES COMMITTEE

Committee Co-Chairs: President Silva and Commissioner Zavaleta

### September 16, 2021 Meeting Summary

Following is a summary of the California Fish and Game Commission (Commission) Wildlife Resources Committee (WRC) meeting as prepared by staff. An audio recording of the meeting is available upon request.

#### Call to order

The meeting was called to order at 9:01 a.m. by Co-Chair Erika Zavaleta, who gave welcoming remarks.

Wildlife Advisor Ari Cornman outlined instructions for participating in Committee discussions and gave introductory remarks. The following commissioners, Commission staff, and California Department of Fish and Wildlife (Department) staff, participated:

#### **Committee Co-Chairs**

Peter Silva	Present
Erika Zavaleta	Present

#### **Commission Staff**

Melissa Miller-Henson	Executive Director
Ari Cornman	Wildlife Advisor
Cynthia McKeith	Staff Services Analyst

#### **Department Staff**

Garry Kelley	Acting Deputy Director, Wildlife and Fisheries Division
Scott Gardner	Branch Chief, Wildlife Branch
Valerie Cook	Acting Branch Chief, Fisheries Branch
Chris Stoots	Captain, Law Enforcement Division
Brad Burkholder	Environmental Program Manager, Wildlife Branch
David Casady	Big Game Supervisor, Wildlife Branch
Dan Skalos	Senior Environmental Scientist Supervisor, Wildlife Branch
Karen Mitchell	Senior Environmental Scientist Specialist, Fisheries Branch
Melanie Weaver	Waterfowl Program Coordinator, Wildlife Branch
Katherine Miller	Upland Game Bird Biologist, Wildlife Branch

**1. Approve agenda and order of items**

The Committee approved the agenda and order of items.

**2. Public comment for items not on the agenda**

Representatives of the Northern California Guides and Sportsman's Association (NCGASA) and the Coastal Conservation Association of California brought to WRC's attention Assembly Bill 817, which is on the governor's desk for potential signature; the bill provides for a 365-day fishing license. They asked for the Commissioners to support the governor signing the bill.

A representative of the Kern River Fly Fisher's Club raised concerns about the Kern River, including flows into a closed hatchery, the lack of a management plan, a perceived lack of enforcement, and reintroduction of rainbow trout.

A commenter noted his recently submitted petition proposing changes to a variety of hunting and fishing regulations, which is designed to create new opportunities, increase Department revenue, and reduce participant frustration.

A representative of NCGASA spoke about diminishing rivers and declining Central Valley salmon numbers; they urged the Commission to support the Department's hatchery efforts and to make recommendations to the Pacific Fisheries Management Council to increase salmon escapement numbers.

A commenter thanked the Department for working with the U.S. Forest Service on various fire, access, and management issues. A commenter expressed concern about protecting salmon to support condors, orcas, and other wildlife.

A representative of the Public Interest Coalition urged California's wildlife agencies to curtail consumptive activities until drought, wildfires, and extreme temperature conditions improve. Another commenter disagreed and stated that decisions about hunting should be made based on scientific data on wildlife populations. The co-chairs affirmed that the Commission makes decisions based on the science brought to it from the Department and other sources.

Ari Cornman noted that Commission staff usually recommends that the Commission support bills in concept rather than actual bills, since they can change significantly during the legislative process. The Commission supported 365-day fishing licenses in a previous letter to the California State Legislature; however, the support was contingent on a number of factors, such as addressing fiscal impacts to the Department.

Ari also clarified that the Commission is not contemplating closing or curtailing any wildlife seasons, and that if the Commission were to consider such an action it would be vetted at a WRC meeting first (barring an emergency action). He further explained that the Commission has no authority to close or open any federal public lands, and any decisions to close Department-managed lands due to public safety considerations are made by the Department under its day-to-day management authority. That said, the Commission stays apprised of drought and wildfires, and their effects on wildlife populations, so it can take action when and if necessary.

### 3. Department updates

#### (A) Wildlife Branch

Scott Gardner gave an overview of new, one-time funding directed to the Department Lands Program, to address drought and wildfires and make strategic improvements. The Department was appropriated funds to focus on wildfire prevention on Department lands, and has made significant progress this year in increasing resilience to wildfires.

The Department received further one-time funding to deal with drought on Department lands, to efficiently manage water and habitat to lessen the impact of water scarcity. There is also a concerted effort to monitor drought effects to wildlife populations. The Department is partnering with many other organizations to address similar issues on private lands.

New funding also is being directed to efficient management of wetlands on Department lands. Spending is devoted to key infrastructure improvement, heavy equipment acquisition, and gaining efficiencies to help reduce ongoing maintenance costs. Other funding initiatives include improving access, upgrading signage, and enhancing visitor amenities.

The Department is working to build relationships with tribes, including co-management agreements. It has hired a cultural resource specialist, the Department's first dedicated terrestrial entomologist, and five new positions to support the Department's mandates under the California Endangered Species Act (CESA). It is also investing in its human dimensions of wildlife and human-wildlife conflict programs, including a pilot wolf depredation compensation program.

The Department is undertaking a feasibility study for a new wildlife health laboratory to be located at Yolo Bypass Wildlife Area. Wildlife health staff have been working on wildlife injured by wildfires.

Commissioner Zavaleta encouraged future discussions on anticipating hotter and drier conditions, looking at the future distributions of species, and expected changes in sea level.

#### (B) Fisheries Branch

Valerie Cook stated that drought is a primary focus, as water conditions continue to deteriorate with low dissolved oxygen, increasing fish passage issues, high rates of pre-spawn mortality, prevalence of pathogens and disease, and instream egg loss. In some cases, high water temperatures at hatcheries has necessitated closures or transfer of fish between facilities. Millions of fish have been moved or held longer to avoid diseases that have resulted in 80-90 percent mortality. The Department has initiated thiamine injections to offset deficiencies.

The Department is looking for opportunities to increase fish production to offset losses. It is actively monitoring conditions and conducting fish rescues of listed or special status species, including steelhead, coho salmon, and McCloud River redband trout. The Department has requested that anglers voluntarily avoid fishing in waters during the most stressful part of the day for fish.

Fisheries Branch is also receiving some funding for CESA work, as well as some limited-term positions to help with monitoring and fish rescues, drought resiliency, and addressing hatchery infrastructure, deferred maintenance, and modernization. They are actively monitoring low-flow conditions to determine if actions need to be taken.

(C) Law Enforcement Division

Chris Stoots noted that law enforcement personnel continue to assist with wildfire-related incidents, including evacuations, perimeter security, and property protection from looters.

A new cadre of wildlife officers has graduated from the Wildlife Resources Academy, with 19 badged and sworn in as new wildlife officers. They will enter the field training program shortly. Additionally, officers now have a pink shoulder patch that may be worn during October for Breast Cancer Awareness Month. Chris also highlighted a case of a poacher cited for various hunting and fishing violations, including carrying lead ammunition.

***Discussion***

A representative of the U.S. Bureau of Land Management (BLM) commended the state on collaboration on fire issues and wildlife habitat acquisitions. Another commenter felt that the BLM had been doing a better job keeping lands open for public access.

A commenter stated that fishing restrictions should be mandatory, not voluntary. He also expressed concerns about water diversions to a hatchery on the Kern River. Valerie explained why voluntary measures are being taken for the time being and that the possibility of mandatory measures was being explored.

Chris answered some questions on enforcement of cannabis laws and partnership with water agencies.

**4. Periodic Rulemakings**

**(A) Upland Game Birds**

Dan Skalos and Katherine Miller gave a presentation on the status of upland game bird populations and offered ideas for future regulatory changes.

***Discussion***

A representative of the National Wild Turkey Federation supported a potential Department proposal to expand the definition of “apprentice hunters.” Several commenters asked about reducing wild horse and burro populations, and one asked that upland bird habitat be prioritized for post-fire remediation. Two commenters raised concerns with rising turkey populations and reduced fall hunting limits.

Three commenters urged action in protecting birds, like mourning doves, as well as other declining avian species, like sage grouse. One commenter supported reductions in hunting when supported by science.

President Silva expressed support for hunter outreach and hunter recruitment, retention, and reactivation efforts. Commissioner Zavaleta asked about feral horses

and burros, Eurasian doves, and turkeys. Scott and Dan highlighted that the zero-hunting quota for sage grouse in California is an example of good science shaping management in the face of bird declines. Sage grouse notwithstanding, oftentimes hunting is not the source of decreasing numbers, and removing hunting pressure will not measurably affect the species. He further noted that many human-turkey conflicts are seen in areas where hunting is prohibited. Horses and burros are primarily a federal issue, and it is often difficult for federal agencies to get public support for management. It is sometimes difficult for the public to understand that horses and burros can be detrimental to nature. With respect to sage grouse, fire and invasive species impacts have increased. Dan provided some clarifications on dove harvesting and some context on bird management, and Katherine Miller spoke about postfire remediation. She further explained that in bad fire years, perceptions of increased or decreased populations could be due to geographic shifts in bird densities in response to wildfires, and not necessarily population trends.

### **(B) Mammal Hunting**

The Department recommended no regulation changes for this year.

#### *Discussion*

A commenter asked the Commission to act on his petition, related to wild pig hunting. Melissa Miller-Henson explained that petition referral to the Department is for review and ultimately a recommendation from the Department, and that the Commission will take action after it receives the recommendation. She also explained the difference between the California Fish and Game Code and the California Code of Regulations.

A representative of Tolowa Dunes Stewards gave some background on the organization, voiced a concern for Roosevelt elk, and asked for information, transparency, and science on the elk. The organization is looking for a report on the elk herds that was expected in the summer and urges the development of a management plan for trepaneme-associated hoof disease (TAHD). Another commenter hoped that some of the new Department funding would be used to address TAHD in Roosevelt elk and for wildlife corridors, and that hunting quotas on Roosevelt elk be reduced. A biologist for the Yurok Tribe stated that the tribe is working to improve elk habitat and is interested in creating habitat corridors to facilitate herd connections to Yurok lands.

A commenter encouraged the Commission to allow hunters to acquire a second bear tag and to convert some deer tags to premium hunts to increase hunting opportunity and Department funding.

### **(C) Waterfowl Hunting**

Melanie Weaver presented recommendations for waterfowl hunting regulation changes, including minor seasonal adjustments and moving two days in the Balance of State Zone from early Canada goose season to late season. She also provided the latest updates on mallard harvest rates.

### ***Discussion***

A representative of the California Waterfowl Association supported the movement of the two hunting days. They also agreed with the Department's assessment that any mallard decreases were due to habitat declines and not hunting pressure. They and other meeting participants requested that the federal DD Form 214 (commonly referred to as a DD214) be permitted as a valid identification document for military and veteran hunts. They also requested that the start of the late goose season in the Balance of State Zone be moved from the third weekend in February to the second weekend in February to coincide with the veteran and active military hunt. The Grassland Water District, NCGASA, the Suisun Resource Conservation District, the Black Brant Group, the Tulare Basin Wetlands Association, and the Cal-Ore Wetlands and Waterfowl Council supported these suggestions.

#### **(D) *Central Valley Sport Fishing***

#### **(E) *Klamath River Basin Sport Fishing***

Central Valley sport fishing and Klamath River Basin sport fishing were considered together. Karen Mitchell provided an overview of Department recommendations and the anticipated timeline for both rulemakings.

### ***Discussion***

NCGASA appreciated the Commission keeping the May teleconference meeting as a standing meeting, articulated concerns about low flows and declining salmon numbers, and spoke about effort shift. Commissioner Zavaleta asked about regulation changes to assist with salmon populations, and Karen answered that the Department is waiting for information from the Pacific Fisheries Management Council before recommending any action.

#### **(F) *Inland Sport Fishing***

##### ***I. Striped Bass Slot Limits***

Valerie Cook indicated that the Department and Commission staff have met with interested parties and are in negotiations about appropriate slot limits. Meetings will continue through to the January WRC meeting.

### ***Discussion***

NCGASA representatives expect more regular meetings over the coming months to arrive at an agreement on suitable limits. They gave a short background on slot limits and emphasized the importance of striped bass for recreational angling.

##### ***II. Inland Boat Limits***

Valerie gave a short explanation and background of the boat limits issue. Proponents wanted to include both salmon and striped bass as eligible for boat limits. Because striped bass slot limits may introduce some uncertainty that would be difficult to incorporate into a boat limit framework, all proponents agreed to constrain boat limits discussions to salmon. The Department would need to be able to differentiate which of the regulations was affecting striped bass to adaptively manage the species. With that understanding, stakeholders,

the Department, and Commission staff have agreed to regular discussions that are expected to continue through to the January meeting.

#### Discussion

NCGASA encouraged the agencies to engage in further conversations. Commissioner Zavaleta stated that she is eager to learn more about the proposition and its potential impacts.

### *III. Permits for Game Fish Contests*

Valerie gave a presentation on the Department's proposal for changes to the regulations that govern permitting for game fish tournaments. Potential amendments could include:

- Changes to the different event classifications,
- allowing catch-photo-release events,
- extending black bass event maximum durations,
- clarifying applicant eligibility and permit stipulations,
- expanding the criteria for permit denial or suspension, and
- revising the permit conflict resolution process.

The regulation changes are intended to expand tournament opportunities, clarify associated permit processes by eliminating procedures that may allow skewing of the odds for successful permit drawing, and facilitating improved enforcement of the permits. The Department is reaching out to stakeholders, and is anticipating requesting that the regulatory changes be effective in July 2022.

#### Discussion

A commenter stated that a group of stakeholders had submitted a proposed permitting process to the Department. This group supported increasing restrictions that limit annual tournaments (including potentially a 30-boat or 60-angler limit), instituting a "legacy-based process" where applicants with demonstrated track records of successful tournaments would get preferential treatment, and formalizing current practices in regulation.

A commenter encouraged the Commission to ensure there would be an avenue for public participation in the course of the rulemaking. Commissioner Zavaleta stated that these issues are complex, she is eager to hear from the public regarding the proposals, and that the sometimes slow pace of progress is in the service of greater public participation.

Commissioner Zavaleta asked for more context about why the Department mediates permit conflicts. Valerie answered that the existing regulation requires that, if there are conflicts in the permitting process, the Department move to a random drawing. Over time, applicants found that the ability to consult as a group and work through conflicts prior to the drawing gave better results and more control over the outcome. A stakeholder explained that the system worked well when all applicants participated in good faith, but if some participants use fake companies or other methods to exploit the process, the system does not work. A discussion ensued about how to ensure newer

applicants are not shut out of the process. Valerie reiterated that the Department is working with stakeholders and considering options for the rulemaking's different aspects.

#### *IV. Regulation simplification clarifications and updates*

Karen Mitchell gave a short background on the simplification of statewide inland sport fishing rulemaking that was adopted at the October 2020 Commission meeting. The Department is preparing a proposal for updates and corrections. There may also be a proposal for some changes to black bass regulations. The Department is soliciting regulation change proposals from Department personnel across the state, for potential inclusion in a future sport fishing regulation change proposal.

##### *Discussion*

There was no public discussion.

##### *Recommendation*

*The Wildlife Resources Committee recommended that the Commission support proposed regulation changes for waterfowl hunting, Central Valley sport fishing, and Klamath River Basin sport fishing, as recommended by the Department.*

### **5. Preference points and tag refunds**

#### **(A) Regulation for 2021-22**

Brad Burkholder gave a presentation on a Department proposal for regulation change to address big game hunts that suffer a substantial loss of opportunity due to wildfires; this regulation would be similar to one that was adopted in the previous year. The proposal would reinstate preference points, and award one preference point for the license year, for certain deer tags, and would refund tag fees, reinstate preference points, and award one preference point for the license year for bighorn sheep, pronghorn antelope, and elk tags, when hunt zones are inaccessible for 66% or more of the season because of public land closures caused by wildfires.

The proposed regulation would be effective for the 2021 and 2022 license years only, which would give time for the Commission to adopt a permanent regulation for tag returns.

Commissioner Silva asked about timing, and Scott Gardner responded that the Department is looking to have the regulation effective by February, to give enough time to process tag returns before the next year's drawing. He noted that the core team for the regulation has been in heavy planning discussions, and that fortunately national forests were reopening for public access – with the caveat that closures could start again if wildfire activity increased.

##### *Discussion*

A representative of the California Deer Association, Rocky Mountain Elk Foundation, and the Wild Sheep Foundation thanked the Department and the Commission for proposing the regulation; they strongly support the proposal. The California Deer

Association supported the inclusion of preference point returns for premium deer tags, and asked that deer fees be considered for refunds, despite the understanding that the cost of administering the refunds exceeds the refunded amount. They suggested that a credit might be issued in lieu of a refund. They would like to work with the legislature to “backfill” some of the refunds to the Department’s Big Game Management Account.

A commenter mentioned a petition regarding land closures that was rejected under staff review; he asked that it be added to a future agenda.

Several commenters opposed the idea of refunding tag fees, stating that the money should go to conservation. Other suggestions included: The option to exchange premium hunt tags for open tags in other deer hunts, tighter timelines for tag returns, and splitting the archery and general seasons.

President Silva stated that he was supportive of the regulation as proposed, and encouraged the public to engage on the more permanent regulations for alternatives or concerns. He did express concern about the deadlines for tag returns and encouraged the Department to reassess their appropriateness.

Scott Gardner elucidated the focus of the regulation as preserving “once-in-a-lifetime” opportunities in the face of extraordinary circumstances. He stated earlier return times are better, and stressed the importance having a single deadline to avoid confusion; the core team will consult with the Department’s License and Revenue Branch (LRB) to see what works best. The Department has endeavored to simplify the proposal. Brad explained that some of the reason for later dates had to do with the timeline for the regulation to become effective, and the 2022 license year may have earlier dates. He mentioned that LRB spends a great deal of time reissuing tags (using a list of alternates) if they are returned before the season starts or if a hunter chooses not to purchase a tag after being drawn.

#### *Recommendation*

*The Wildlife Resources Committee recommended that the Commission support the proposed regulation changes to restore preference points for certain hunts and to refund certain tag fees in instances where public lands were closed due to wildfires during the 2021 and 2022 mammal hunting seasons, as recommended by the Department.*

#### **(B) Long-term regulation**

David Casady presented on a potential regulation to address big game hunts that suffer a substantial loss of opportunity due to wildfires that would not be limited to specific license years. Ari Cornman examined the major decision points for which the Commission and the Department are seeking input.

As a longer-term solution, the Department would like to explore altering the hunting season timing for some mammals to better coincide with times of the year that are less fire-prone.

### *Discussion*

A commenter suggested extending antelope and elk seasons rather than moving them, similar to bighorn sheep seasons. A hunter encouraged the Department to look at other states for similar models. Commenters expressed dismay about public land closures, supported preference point reinstatement, supported monetary refunds for elk, antelope and sheep tags, supported the idea of issuing credit in place of deer tag refunds, and encouraged a “moderated” approach.

## **6. Bullfrogs and non-native turtles**

Ari provided an update on the progress of the bullfrog and non-native turtle stakeholder engagement process. The agency group is meeting to discuss one last results chain, and the industry and environmental/animal welfare groups are reviewing the last of the results chains to finalize their plans as well. A period of cross-group dialogue, synthesis and options development will follow. At the January 2022 WRC meeting, Commission staff anticipates the beginning of a series of detailed, substantive dialogue with stakeholders and the public.

### ***Discussion***

There was no discussion.

## **7. Future agenda items**

Topics for the January 13, 2022 WRC meeting include: (1) further discussion on a longer-term solution to big game tag returns, and (2) an update and discussions on the bullfrog and non-native turtle stakeholder engagement process.

### ***Discussion***

There was no discussion.

## **Adjourn**

WRC adjourned at 3:43 p.m.

**California Fish and Game Commission**  
**Wildlife Resources Committee (WRC) Work Plan**  
**Scheduled Topics and Timeline for Items Referred to WRC**  
*Updated October 6, 2021*

		May 2021 Webinar/ Teleconference	Sep 2021 Webinar/ Teleconference	Jan 2022 Sacramento
<b>Periodic Regulations</b>				
Upland (Resident) Game Birds	Regulatory	X	X/R	
Mammal Hunting	Regulatory	X	X/R	
Waterfowl Hunting	Annual	X	X/R	
Central Valley Sport Fishing	Annual	X	X/R	
Klamath River Basin Sport Fishing	Annual	X	X/R	
Inland Sport Fishing	Regulatory	X	X/R	
<b>Regulations &amp; Legislative Mandates</b>				
Falconry	Referral for Review			
Preference Points and Refunds for Hunting Tags	Regulatory		X	X
Restricted Species	Regulatory			
<b>Special Projects</b>				
American Bullfrog and Non-native Turtle Stakeholder Engagement Project	Referral for Review	X	X	X

**KEY:**    **X**   Discussion scheduled    **X/R**   Recommendation developed and moved to FGC

## Memorandum

**Date:** October 1, 2021

**To:** Melissa Miller-Henson  
Executive Director  
Fish and Game Commission

**From:** Charlton H. Bonham  
Director

**Subject:** **Agenda Item for the October 14 Fish and Game Commission Meeting; Request for Authorization to Publish Notice of the Commission's Intent to amend Section 708.14, Title 14, California Code of Regulations, RE: Big Game Preference Points Reinstatement and Tag Refunds Due to Public Land Closures**

The California Department of Fish and Wildlife (Department) requests that the Fish and Game Commission (Commission) authorize publication of notice of its intent to amend Section 708.14, Title 14, CCR to address conditions resulting from the 2021 fire season. Amendments are needed to allow big game hunters to return their first-choice tags after the season starts for reinstatement of preference points for premium deer, bighorn sheep, pronghorn antelope, and elk and to request a refund for bighorn sheep, pronghorn antelope, and elk tags. Following the notice hearing scheduled for October 14, 2021, discussion at the December 2021 and adoption at the February 2022 Commission meetings would allow this regulation to achieve its planned effective timeframe of April 2022.

The purpose of the proposed regulation is to authorize the Department to consider reinstatement of preference points and award one preference point for the license year for certain deer tags and to refund tag fees, reinstate preference points, and award one preference point for the license year for bighorn sheep, pronghorn antelope, and elk hunts whose hunt zones are inaccessible for sixty-six percent (66%) or more of the season as a result of public land closures caused by wildfires.

This package is necessary to allow consideration of lost opportunities in the event public lands are closed and inaccessible to hunting resulting from wildfire. Options include preference point reinstatement and/or refunds of tag fees by the Department for certain deer, bighorn sheep, pronghorn antelope, and elk tags.

The proposal would affect hunters who were drawn for the following deer, bighorn sheep, pronghorn antelope, and elk hunts (as of September 16, 2021):

**DEER**

- Those deer zones defined in Title 14, Section 708.1 and described as Premium Deer Hunt Tags
  - The approximate number of premium deer hunt tags eligible for

points re-instatement (as of September 16, 2021): **15,037** across  
14 archery zones and 6 general zones

**BIGHORN SHEEP**

- Those zones defined in Title 14, Section 362
  - The approximate number of bighorn sheep hunt tags affected (as of September 16, 2021): **0**. No sheep hunts are affected by known public land closures and thus the proposed regulation.

**PRONGHORN ANTELOPE**

- Those zones defined in Title 14, section 363
  - The approximate number of pronghorn antelope hunt tags affected (as of September 16, 2021): **106**

**ELK**

- Those zones defined in Title 14, Section 364
  - The approximate number of elk hunt tags affected (as of September 16, 2021): **113** across 7 general zones, 1 archery zone, and 2 apprentice zones

If you have any questions or need additional information, please contact Brad Burkholder, Game Conservation Program Manager, at (916) 214-3645 or by email at [Brad.Burkholder@wildlife.ca.gov](mailto:Brad.Burkholder@wildlife.ca.gov). The public notice for this rulemaking should identify Brad Burkholder as the Department's point of contact for this rulemaking as well.

Attachments

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Melissa Miller-Henson  
Executive Director  
October 1, 2021  
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State of California  
Fish and Game Commission  
**DRAFT** Initial Statement of Reasons for Regulatory Action

Amend Section 708.14  
Title 14, California Code of Regulations

Re: Big Game Preference Points Reinstatement and  
Tag Refunds Due to Public Land Closures

I. Date of Initial Statement of Reasons: September 20, 2021

II. Dates and Locations of Scheduled Hearings

(a) Notice Hearing

Date: October 14, 2021

Location: Teleconference

(b) Discussion Hearing

Date: December 15-16, 2021

Location: Teleconference

(c) Adoption Hearing

Date: February 16-17, 2022

Location: Sacramento

III. Description of Regulatory Action

(a) Statement of Specific Purpose of Regulatory Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary

Unless otherwise specified, all section references in this document are to Title 14 of the California Code of Regulations (CCR).

## **BACKGROUND**

The Fish and Game Commission (Commission) periodically considers recommendations from the Department of Fish and Wildlife (Department) in establishing big game mammal hunting regulations. Specifically, the Department manages deer, bighorn sheep, pronghorn antelope and elk resources in California. Deer hunting tags, elk hunting tags, bighorn sheep hunting tags, and pronghorn antelope hunting tags are required to hunt these species in California.

## **CURRENT REGULATIONS**

Deer hunts and seasons are described in sections 360 and 361, bighorn sheep in Section 362, pronghorn antelope in Section 363, and elk in Section 364. The Department distributes hunting tags for deer, elk, bighorn sheep, and pronghorn antelope annually via a big game drawing for a specific area and season. Some deer tags for certain hunt zones include both an early archery-only season and a subsequent “general” season by firearm.

Public demand for certain deer tags and all bighorn sheep, pronghorn antelope, and elk hunting tags exceeds the available opportunities; therefore, a modified preference point

system (currently Section 708.14(a)) provides preference to hunters who have applied for, but not drawn, tags in past drawings. Before the start of the hunting license year (which runs from July 1 through June 30), a hunter may apply through the Automated License Data System (ALDS) between April 15 through June 2 for a deer, bighorn sheep, pronghorn antelope, or elk hunting tag. If the hunter is not drawn, the hunter receives a preference point which gives that hunter preference in future drawings for that game species. A portion of the tags for each species are issued randomly to allow some opportunity for new hunters or hunters that do not have enough preference points to draw through the preference point portion of the drawing.

Many big game hunts require years of accumulated preference points in order to even have the opportunity. Others require the maximum number of preference points, and are 'once in a lifetime' draws. For example, a number of hunt zones for the 2021 season were only available to applicants that had accumulated the maximum number of preference points (19 points for this license year which equates to 19 years of accumulating points) to potentially draw the tag.

For deer, hunters may make up to three hunt choices. Applicants can indicate their preferred 'first tag choice,' which is taken into account along with the number of accumulated preference points. All remaining unsuccessful applications are then sorted by second tag choice, in random number order (starting with the lowest random number to the highest random number). A second round of drawings is then conducted for any zones and hunts with tags remaining without consideration of accumulated points.

Deer tags are classified pursuant to Subsection 708.1(a)(2)(A) by three types:

- Premium, which include those tags where the tag quota filled on or before the first business day after July 1 in the immediately preceding license year;
- Restricted, which include all non-Premium tags where the tag quota filled on or before on or before the first business day after August 1 in the immediately preceding license year; and
- Unrestricted, which include those tags where the tag quota did not fill on or before the first business day after August 1 in the immediately preceding license year.

Existing regulations in Subsections 708.14(j) and 708.14(k) outline the process for returning a big game tag if a hunter was unable to hunt for first tag choice tag holders. That process requires the hunter submit to the Department a written request to retain their existing preference point total and earn one preference point for that year. Request for refunds for bighorn sheep, pronghorn, and elk tag fees also exists under subsection 708.14(k). The Department may consider the request if it is returned to the Department's License and Revenue Branch **before** the season starts for which the tag is valid. There is currently no mechanism for considering the request if the tag is returned to the License and Revenue Branch **after** the season has started.

## PROPOSED REGULATORY CHANGES

Regulations to address conditions resulting from the 2021 fire season are needed to allow hunters to return their first tag choice tags after the season starts. The catastrophic and unprecedented 2021 fire season that temporarily closed all national forests in California in

early September impacted many of the deer, bighorn sheep, pronghorn antelope, and elk hunting seasons and resulted in a loss of opportunity for many hunters who had “once in a lifetime” hunting tags. The Commission adopted a similar regulation (addition of Section 708.19) for the loss of opportunities during the 2020 wildfire season that authorized the Department to reinstate preference points and refund tag fees for certain bighorn sheep, antelope, and elk hunts if the written requests were submitted to the Department on or before May 1, 2021.

While fire has always been somewhat problematic during big game hunting season, the scale and magnitude has dramatically changed over the past several years. The potential for future public land closures and increasingly hazardous conditions such as poor air quality is likely given the increasing likelihood of large-scale wildfires, and closures could more commonly occur later into the summer and fall because environmental conditions are drier and the risk increases. This timeframe for fire susceptibility to public lands overlaps with the start of certain earlier big game seasons, such as those for archery. The resulting loss of opportunity means some hunters receive little or no chance to hunt with tags acquired using many years of accumulated preference points.

## **PUBLIC LAND CLOSURES**

In response to the Dixie Fire and extreme fire conditions, the Pacific Southwest Region of the U.S. Department of Agriculture Forest Service (USFS) (Region 5) closed the Lassen National Forest (NF) from August 12 to November 30, 2021 (Forest Order No. 06-21-08). In response to the Caldor Fire and potential extreme fire conditions, the USFS closed the Eldorado National Forest (NF) from August 17 – September 30, 2021 (Forest Order No. 03-21-14). Subsequent closures of nine other NFs became effective from August 22 – September 6, 2021 (Forest Order No. 21-04) and were later replaced by the statewide closure to all 18 NFs from August 31 – September 17, 2021 (Forest Order No. 21-07), which was terminated as of September 15, 2021. Additionally, the Department closed 33 properties surrounding those NFs due to extreme fire conditions, but re-opened those as of September 16, 2021.

The purpose of the proposed regulation is to authorize the Department to consider reinstatement of preference points and award one preference point for the license year for certain deer tags and to refund tag fees, reinstate preference points, and award one preference point for the license year for bighorn sheep, pronghorn antelope, and elk hunts whose hunt zones are inaccessible for sixty-six percent (66%) or more of the season as a result of public land closures.

This package is necessary to allow consideration of lost opportunities resulting from natural disasters such as fire preference point reinstatement and/or refunds of tag fees by the Department for certain deer, bighorn sheep, pronghorn antelope, and elk tags in the event public lands are closed and inaccessible to hunting.

**Amend Subsection 708.14(j):** Process for requesting preference point reinstatements and tag refunds for deer.

Subsection 708.14(j) is amended to include new subsection (1) and (2) for deer tags. The words in parentheses “(becoming a tag holder)” are added to clarify terminology of the

hunter's status after they have successfully drawn a tag; therefore, the term "applicant" has been changed to "tag holder" after this first mention in subsection 708.14(j). The words "[may] return their unfilled (i.e., unused) tag and" are added to make clear that returning an unfilled tag should include a written request for preference point reinstatement and/or refund. In one instance, the word "application" has been stricken after the words "resident deer tag" to clarify that the fee paid is for the tag itself. The added words "for that license year" clarify the year for which the +1 preference point would apply. A sentence added at the end of the subsection states how, and the date by which, a tag must be returned to the Department and references the newly added eligibility criteria in subsection 708.14(j)(1) and (2).

Subsection 708.14(j)(1): This new subsection outlines the circumstances under which hunters may return their deer tags and request preference point reinstatement before the season starts, which could be for reasons other than loss of opportunity attributable to public land closures. Language for returning the tag to the Department's License and Revenue Branch is moved from subsection (j) to this new subsection (j)(1) and expanded to include the post office box address for mailing the written request and clarify when that the request must be received. Including the word "earliest" clarifies that the written request would need to be submitted before the start of the first season when the tag is valid for more than one season (archery only usually occurs before the "general" season, whereby archery and firearms may be typically used) for that hunting license year. Language describing that the Department may refund the difference between the fee paid for a nonresident deer tag and resident deer tag has been moved from subsection (j) to the end of this new subsection (j)(1), with the striking of the word "application" in two instances after the words "nonresident deer tag" to clarify that the fee paid is for the tag itself.

708.14(j)(2): This new subsection outlines the circumstances under which hunters may return their deer tags and request preference point reinstatement after the season starts, given loss of opportunity due to public land closures.

(A): The Department has determined that when access to the hunt zone is restricted due to a public land closure for more than two-thirds (66 percent) or more of a hunt season, the resulting loss of opportunity would qualify a hunt for the applicable preference point reinstatement and/or tag refunds (for bighorn sheep, pronghorn antelope, or elk only) as proposed in amended subsections 708.14(j) and (k). The threshold of 66% or more was chosen to recognize a basic estimation of the majority of the season that would be unhuntable if public lands are closed, equating to 33% or less of the season available for hunting. Thus, premium deer tag holders whose hunt zones are inaccessible for sixty-six percent (66%) or more of the respective hunt season as a result of public land closures could return their tag with a written request after the season starts to be considered for preference point reinstatement and earn one preference point for the license year.

The timeframe for subsection 708.14(j)(2)(A) applies to tags issued in the 2021 hunting license year (commencing July 1, 2021). Considering that public lands access restrictions have changed during the preparation of these regulatory documents (fall 2021), this regulation aims to function retroactively. The description of returning the tag to the Department's License and Revenue Branch is paired with a required postmark date of May 1, 2022 in order to allow enough time for department staff to review and process requests

so that points will be restored for customers for the following year's license application sales. Any requests with a postmark after May 1 shall not be considered.

(B) For the hunting license year commencing July 1, 2022, the same 66% threshold for public land closure leading to hunter eligibility to pursue reinstatement applies. The Department requires the hunter submit the unfilled tag and written request for point reinstatement to the Department's License and Revenue Branch on or prior to February 28 of the current license year. This particular date was chosen as it signifies the end of the month by which the last big game season concludes, allowing for requests for reinstatement to be submitted through February.

**Amend Subsection 708.14(k):** Process for requesting preference point reinstatements and tag refunds for bighorn sheep, pronghorn antelope, and elk.

Subsection 708.14(k) is amended to include new subsections (1) and (2) for bighorn sheep, pronghorn antelope, and elk. The words in parentheses "(becoming a tag holder)" are added to clarify terminology of the hunter's status after they have successfully drawn a tag; therefore, the term "applicant" has been changed to "tag holder" after this first mention in subsection 708.14(k). The words "[may] return their unfilled (i.e., unused) tag and" are added to make clear that returning an unfilled tag should include a written request for preference point reinstatement and/or refund. The added word "license" for "that license year" clarifies the year for which the +1 preference point would apply, and the words "and seek refund of the tag free" clarifies that a refund may be requested. Existing language regarding paying the nonrefundable processing fee as specified in Section 702 remains unchanged. A sentence added at the end of the subsection states how, and the date by which, a tag must be returned to the Department and references the newly added eligibility criteria in subsection 708.14(k)(1) and (2).

Subsection 708.14(k)(1): This new subsection outlines the circumstances under which hunters may return their bighorn sheep, pronghorn antelope, or elk tags and request preference point reinstatement and refund before the season starts, which could be for reasons other than loss of opportunity attributable to public land closures. Language for returning the tag to the Department's License and Revenue Branch is moved from subsection (k) to this new subsection (k)(1) and expanded to include the post office box address for mailing the written request and clarify when that the request must be received.

Subsection 708.14(k)(2): This new subsection outlines the circumstances under which hunters may return their bighorn sheep, pronghorn antelope, or elk tags and request preference point reinstatement and tag refund after the season starts, given loss of opportunity due to public land closures.

(A): As noted above for justification of subsection 708.14(j)(2)(A), public land closure for 66% or more of a hunt season resulting loss of opportunity would qualify a bighorn sheep, pronghorn antelope, or elk hunt for the applicable preference point reinstatement and tag refunds. Thus, tag holders whose hunt zones are inaccessible for sixty-six percent (66%) or more of the respective hunt season as a result of public land closures could return their tag with a written request after the season starts to be considered for preference point reinstatement and earn one preference point for the license year, and be eligible for a refund.

As with subsection 708.14(j)(2)(A), the timeframe for subsection 708.14(k)(2)(A) applies to 2021 hunting license year bighorn sheep, pronghorn antelope, or elk tags, and will function retroactively. The same postmark date of May 1, 2022 and rationale applies as for deer.

(B) As noted above for justification of subsection 708.14(j)(2)(B), the 66% threshold aims to serve as a prescriptive criterion focusing on potential future land closures. The bighorn sheep, pronghorn antelope, or elk hunter would submit the unfilled tag and written request for point reinstatement to the Department's License and Revenue Branch postmarked on or prior to February 28 of the current license year.

## **Necessity**

This regulation is necessary for the Commission to allow consideration of reinstatement of preference points and refund of some tag fees after the start of the season for first tag choice for deer, bighorn sheep, pronghorn antelope, and elk tags that were not usable due to public land closures caused by fires. The proposal would affect hunters who were drawn for the following deer, bighorn sheep, pronghorn antelope, and elk hunts:

### **DEER**

- Those deer zones defined in Title 14, Section 708.1 and described as Premium Deer Hunt Tags
  - The approximate number of premium deer hunt tags eligible for points reinstatement (as of September 16, 2021): **15,037** across 14 archery zones and 6 general zones

### **BIGHORN SHEEP**

- Those zones defined in Title 14, Section 362
  - The approximate number of bighorn sheep hunt tags affected (as of September 16, 2021): **0**. No sheep hunts are affected by known public land closures and thus the proposed regulation.

### **PRONGHORN ANTELOPE**

- Those zones defined in Title 14, section 363
  - The approximate number of pronghorn antelope hunt tags affected (as of September 16, 2021): **106**

### **ELK**

- Those zones defined in Title 14, Section 364
  - The approximate number of elk hunt tags affected (as of September 16, 2021): **113** across 7 general zones, 1 archery zone, and 2 apprentice zones

## **IMPACT FROM PUBLIC LAND CLOSURES**

The Department conducted an analysis to determine which premium deer, bighorn sheep, pronghorn antelope, and elk hunt seasons spatially and temporally overlapped with the affected National Forests as of August 31, 2021, and again on September 16, 2021 with the re-opening of most forests on September 15, 2021 to assess closures on the numbers of issued tags by species and hunt type. The Department considered loss of opportunity

based on the number of days closed of each season and tallied those hunts resulting in 66 percent or greater of days closed.

**Table 1** shows the premium deer hunt zones affected by 66% or greater of the season lost due to public land closures, which as of September 16, 2021 included 14 archery hunt zones and 6 general hunt zones, one of which is Apprentices (J-21). Approximately 70 deer hunters had returned their tags prior to the start of their respective seasons. Up to 15,037 premium deer tags could be eligible for return based on the closure criteria. The majority of archery seasons started August 21, 2021, running through September 12, 2021, encompassing the major statewide closure of National Forests. Others starting later, such as X-1 and X-4 share range with the Lassen National Forest, which remains under a closure order through November 30, 2021. For those deer in impacted zones, the following quotas were allocated based on first tag choice and subsequent tag choice for the 2021 license year hunts:

- C-Zone: C-zone tags are issued for use in any of the C-zones. Of the 8,150 quota, 7,022 tags were first choice tags, the remaining 1,130 tags went to second choice.
- D14 Zone: Of the 3,000 quota, 1,860 tags were first choice tags, the remaining 1,140 tags went to second choice.
- D16 Zone: Of the 3,000 quota, 903 tags were first choice tags, the remaining 733 tags went to second choice, 216 went to third choice, and rest went to over the counter.
- A1 Zone: Of the 1,945 quota, 703 tags were first choice, the remaining 1,242 remaining went to second choice.

**Table 1.** Affected premium deer hunts based on public land closures (as of September 16, 2021).

DEER Impacted Zones	Type	Season Start	Season Close	# days closed/ total hunt days	% Days of Hunt Impacted	1 <sup>st</sup> choice Tags Issued <sup>a</sup>	Tags returned 16-Sep-21
D-14	A	04-Sep-21	26-Sep-21	19/23	83%	1,860	0
D-16	A	04-Sep-21	26-Sep-21	19/23	83%	903	0
A-1 Zone C-3 Archery	A	21-Aug-21	12-Sep-21	23/23	100%	703*	4
A-1 Zone C-4 Archery	A	21-Aug-21	5-Sep-21	16/16	100%	-	-
A-3 (Zone X-1 Archery)	A	21-Aug-21	12-Sep-21	22/23	96%	100	1
A-4 (Zone X-2 Archery)	A	21-Aug-21	12-Sep-21	22/23	96%	10	2
A-5 (Zone X-3a Archery)	A	21-Aug-21	12-Sep-21	22/23	96%	40	0
A-6 (Zone X-3b Archery)	A	21-Aug-21	12-Sep-21	22/23	96%	71	4
A-7 (Zone X-4 Archery)	A	21-Aug-21	12-Sep-21	23/23	100%	120	8
A-11 (Zone X-6a Archery)	A	21-Aug-21	12-Sep-21	22/23	96%	50	1
A-12 (Zone X-6b Archery)	A	21-Aug-21	12-Sep-21	22/23	96%	90	0
A-13 (Zone X-7a Archery)	A	21-Aug-21	12-Sep-21	22/23	96%	45	2
A-14 (Zone X-7b Archery)	A	21-Aug-21	12-Sep-21	22/23	96%	25	3
A-15 (Zone X-8 Archery)	A	21-Aug-21	12-Sep-21	22/23	96%	40	1
C-3	G	18-Sep-21	24-Oct-21	37/37	100%	7,020*	0
C-4	G	18-Sep-21	03-Oct-21	16/16	100%	-	-
X-1	G	02-Oct-21	17-Oct-21	16/16	100%	786	0
X-4	G	02-Oct-21	17-Oct-21	16/16	100%	485	0
G-1 Late Season Buck Hunt for Zone C-4	G	23-Oct-21	31-Oct-21	9/9	100%	2,710	0
J-21 East Tehama Apprentice Either-Sex Deer Hunt	G AP	18-Sep-21	31-Oct-21	44/44	100%	50	0
<b>A = Archery</b> <b>AP = Apprentice</b> <b>G = General</b>				<b>Tags</b>	<b>impacted</b>	<b>15,108</b>	<b>71</b>
				<b>Points</b>	<b>Eligible</b>	<b>15,037</b>	

<sup>a</sup> Quota allocated based on first tag choice and subsequent tag choice for the 2021 license year hunt

\* Tags Issued: C-zone tags are issued for use across any of the C-1 through C-4 zones. Tags issued are across this group of zones, though only zones C-3 and C-4 were impacted by public land closures.

For pronghorn antelope, an estimated 106 tags are estimated to be eligible for preference point reinstatement (**Table 2**). This includes 100 general tag holders (8 hunt zones affected) and 6 apprentice tag holders (4 hunt zones affected). The non-apprentice tag holders would be eligible to pursue a refund. Junior (apprentice) hunt tags would not be issued dollar refunds because the tag fee is less than the processing costs. The estimated refund amount of \$127.98 is multiplied by 100 for an estimated total antelope tag refund amount of \$12,798.

For elk, an estimated 113 tags are estimated to be eligible for preference point reinstatement (**Table 3**). This includes 109 general tag holders (7 hunt zones affected), 4 apprentice tag holders (2 hunt zones affected), and an Archery hunt zone. The estimated refund amount of \$443.32 is multiplied by 109 for an estimated total antelope tag refund amount of \$48,322.

**Table 2.** Affected pronghorn antelope hunts based on public land closures (as of Sept.16, 2021).

<b>PRONGHORN Hunt Name</b> (Hunt Code)	<b>Hunt Type</b>	<b>2021 Tag Quota</b>	<b>Tags returned 16-Sep-21</b>	<b>Season Start</b>	<b>Season Close</b>	<b># Days Closed/ Total Hunt Days</b>	<b>% Days of Hunt Impacted</b>
Z1 Mount Dome Buck (710)	G	2	1	21-Aug-21	29-Aug-21	8/9	89%
Z2 Clear Lake Buck (720)	G	15	5	21-Aug-21	29-Aug-21	8/9	89%
Z3 Likely Tables Period 1 Buck (730)	G	25	11	21-Aug-21	29-Aug-21	8/9	89%
Z3 Likely Tables Period 2 Buck (732)	G	25	5	04-Sep-21	12-Sep-21	9/9	100%
Z4 Lassen Period 1 Buck (740)	G	35	13	21-Aug-21	29-Aug-21	8/9	89%
Z4 Lassen Period 2 Buck (742)	G	35	20	04-Sep-21	12-Sep-21	9/9	100%
Z5 Big Valley Buck (750)	G	20	8	21-Aug-21	29-Aug-21	8/9	89%
Z6 Surprise Valley Buck (760)	G	10	4	21-Aug-21	29-Aug-21	8/9	89%
Z3 Likely Tables Pd. 1 Either-Sex (734)	AP	5	2	21-Aug-21	29-Aug-21	8/9	89%
Z4 Lassen Period 1 Either-Sex (790)	AP	5	4	21-Aug-21	29-Aug-21	8/9	89%
Z5 Big Valley Either-Sex (780)	AP	1	1	21-Aug-21	29-Aug-21	8/9	89%
Z6 Surprise Valley Either-Sex (766)	AP	4	2	21-Aug-21	29-Aug-21	8/9	89%

Eligible Antelope Tags	G	167	67	<b>Refund/Tag</b> \$ 127.98	<b>Refund total</b> \$ 12,798.00
No refund: Fee paid is less than process fee	AP	15	9	\$ (10.68)	\$ (64.08)
<b>Points Re-instatement Eligible</b>	<b>Total</b>	<b>106</b>			

A = Archery

AP = Apprentice

G = General

**Table 3.** Affected elk hunts based on public land closures (as of Sept. 16, 2021).

<b>ELK Hunt Name</b> (Hunt code)	<b>Hunt Type</b>	<b>2021 Tag Quota</b>	<b>Tags returned 16-Sep-21</b>	<b>Season Start</b>	<b>Season Close</b>	<b># Days Closed/ Total Hunt Days</b>	<b>% Days of Hunt Impacted</b>
Northeastern CA either-sex (409)	AP	2	0	15-Sep-21	26-Sep-21	12/12	100%
Marble Mountains either-sex (408)	AP	4	2	08-Sep-21	19-Sep-21	10/12	67%
Northeastern CA either-sex (411)	A	10	1	01-Sep-21	12-Sep-21	12/12	100%
Marble Mountain antlerless (301)	G	8	0	08-Sep-21	19-Sep-21	8/12	67%
Marble Mountain bull (302)	G	34	2	08-Sep-21	19-Sep-21	8/12	67%
Northeastern CA antlerless (304)	G	10	2	10-Nov-21	21-Nov-21	12/12	100%
Northeastern CA bull (305)	G	15	1	15-Sep-21	26-Sep-21	12/12	100%
Siskiyou antlerless (401)	G	20	4	08-Sep-21	19-Sep-21	8/12	67%
Siskiyou bull (300)	G	20	1	08-Sep-21	19-Sep-21	8/12	67%
Lake Pillsbury Pd. 1 antlerless (331)	G	4	1	08-Sep-21	17-Sep-21	8/10	80%

Eligible Elk Tags Refunds	G	121	12	<b>Refund/Tag</b> \$443.32	<b>Refund total</b> \$48,321.88
No refund: Fee paid is less than process fee	AP	6	2	\$ (10.68)	\$ (42.72)
<b>Points Re-instatement Eligible</b>	<b>Total</b>	<b>113</b>			

A = Archery

AP = Apprentice

G = General

This Initial Statement of Reasons documents a maximum impact for effects on individual big game hunters due to public land closures. Actual impacts should be less than the estimated maximums because hunters may avoid public land altogether based on preference or ability to do so. Most zones have some percentage of private property which would allow hunters to hunt despite closures to public lands, depending on the location, and severity of fires or any local ordinances for public safety.

The number of tags affected for the 2022 license year will not be known until after any closures of public lands occur in that license year. For purposes of this document, estimates of affected hunts and tag numbers are assumed to cover the same level of impact as the 2021 license year described herein as of September 16, 2021.

(b) Goals and Benefits of the Regulation

The goal of the proposed regulation is to provide equity of opportunity by allowing certain deer, bighorn sheep, pronghorn antelope, and elk hunters who lost “premium” or “once in a lifetime” hunting opportunities due to public land closures caused by wildfires, the option to obtain tag fee refunds, reinstatement of preference points, and one preference point for the license year. Some hunters with tags for the affected deer, bighorn sheep, pronghorn antelope, and elk hunts used many years (up to 19) of earned preference points to obtain their hunting tags. This proposal would allow hunters with certain tags, who lost opportunities due to public land closures caused by wildfires, to use their accumulated preference points in the future to enter drawings for deer, bighorn sheep, pronghorn antelope, or elk tags. This proposal is consistent with the Department’s efforts to recruit, retain, and reactivate hunters.

(c) Authority and Reference Sections from Fish and Game Code for Regulation

Authority: Sections 200, 203, 219, 331, 332, 1050 and 10502, Fish and Game Code.

Reference: Sections 331, 332, 713, 1050, 10500 and 10502, Fish and Game Code.

(d) Specific Technology or Equipment Required by Regulatory Change

None.

(e) Identification of Reports or Documents Supporting Regulation Change

None

(f) Public Discussions of Proposed Regulations Prior to Notice Publication

The Commission discussed the proposed regulations at its Wildlife Resources Committee meeting held on September 16, 2021, virtual meeting. The Department is considering ideas for a future rulemaking that addresses returns of mammal hunting preference points and fee refunds in response to potential future public land closures. Aspects such as standards for eligibility based on the nature of the closures, applicable big game species and hunts, season adjustments, tag return protocols, and other considerations will be considered at that time.

#### IV. Description of Reasonable Alternatives to Regulatory Action

##### (a) Alternatives to Regulation Change

###### Preference Point Reinstatement and Tag Refunds

No other alternatives to the proposed regulation were identified. Wildfires in California have always led to closures of some public lands during big game hunting seasons which reduced certain deer, bighorn sheep, pronghorn antelope, or elk tag holder hunting opportunities but not at the scale where all access was closed for the majority of seasons. The Department evaluated the prospect of reissuing the tags for the following hunt season to the impacted hunters in the 2020 regulatory package but determined that it was not feasible without significant changes to multiple existing regulatory sections. There is currently no authority to transfer license or tags across license years. Even if it were determined that there was authority to do so, the Department currently does not have an efficient method in place to reissue tags to hunters for the following year and would have to make some operational changes to its licensing system at a minimum which would result in an unbudgeted fiscal cost to the Department. Reissuing tags to the following year would also result in a loss of revenue because fewer tags could be sold the following year.

Additionally, if tags are reissued to hunters, the license system would have to be programmed to remove those tags from those available through the drawing process for next license year, thereby reducing the number of tags available for hunters in the big game drawing and changing the odds of being drawn. A reduction in available tags through the drawing could reduce participation in hunting by the public. This would also result in reductions in Department revenue due to having fewer tags. More than four million acres burned during the unprecedented 2020 fire season. An additional one million acres have burned thus far in the 2021 fire season.

The proposed alternative to reinstate the hunter's preference points plus provide an additional point for the current license year and a refund for bighorn sheep, pronghorn antelope, and elk tags is the most feasible option and least economically impactful. These hunters will remain in the pool of hunters who have maximum points and theoretically have the same or similar odds to draw the tag the next year.

##### (b) No Change Alternative

###### Preference Points and Tag Refunds

The "no-change" alternative was considered and rejected because it would not meet project objectives of allowing for preference point reinstatement and tag fee returns for certain big game species after a hunt season has started. Given the increased scale and magnitude of closures of public lands statewide due to fires, it would be unfair not to allow certain deer, bighorn sheep, pronghorn antelope, and elk tag holders the opportunity to have their preference points restored, and earn a preference point for the license year, and tags refunded for affected sheep, antelope, and elk hunts. These tags are considered premium opportunities and a once-in-a-lifetime drawing, so allowing

hunters to restore their points, earn a preference point for the license year, and receive a refund is justified.

(c) Description of Reasonable Alternatives that Would Lessen Adverse Impact on Small Business

The regulatory change is not expected to have an adverse impact on small business.

V. Mitigation Measures Required by Regulatory Action

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures are needed.

VI. Impact of Regulatory Action

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. Considering the relatively small number of tags to be returned from the bighorn sheep, pronghorn antelope, elk and deer tags over the entire state, this proposal is economically neutral to business.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California, Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment

The Commission anticipates no impact on the creation or elimination of jobs within the state, no impact on the creation of new business, the elimination of existing businesses or the expansion of businesses in California as minor variations in hunting regulations are, by themselves, unlikely to provide a substantial enough economic stimulus to the state.

(c) Cost Impacts on a Representative Private Person or Business

The Commission is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with this proposed action. A \$31.93 nonrefundable big game tag return processing fee per refund, as established in Section 702, is deducted from the amount refunded. The choice to obtain a refund is not required and is purely discretionary for each individual.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State

Only bighorn sheep, pronghorn antelope, and elk tags following the proposed regulations would be eligible for tag refunds as a result of public land closures. The fees and quantities for refunds given the affected hunt areas (as of September 16, 2021) are outlined in **Table 4**. Hunters who request reinstatement of preference points and a refund of tag fees (sheep, pronghorn antelope, and elk only for refunds) under the proposed regulation would receive a

refund of their tag fees, reinstatement of their preference points, and earn one preference point for the license year, but they would be required to forfeit the \$31.93 nonrefundable big game tag return processing fee specified in Section 702.

Hunters would be required to forfeit the \$31.93 nonrefundable big game tag return processing fee specified in Section 702. There are 109 resident elk, and 100 pronghorn antelope tags estimated to potentially be impacted by public land closures, as of September 16, 2021. Should every hunter seek refund for every tag, and the total of 209 tags be returned, the Department would expend a total of approximately \$61,120. Junior (apprentice) hunt tags would not be issued dollar refunds because the tag fee is less than the processing costs. All tags returned through this program would be eligible for points reinstatement.

**Table 4. Projected Tag Refunds Due to Public Land Closures (as of September 16, 2021)**

<b>Tag Type</b>	<b>Tag (Base) Fee</b>	<b>Surcharge</b>	<b>Total Fee</b>	<b>Individual Refund per Tag</b>	<b>Impacted Tags</b>	<b>Total Refund by Hunt</b>
Bighorn Sheep	\$449.00	\$7.50	\$456.50	\$424.57	0	\$0
Resident Pronghorn Antelope	\$155.25	\$4.66	\$159.91	\$127.98	100	\$12,798
Resident Pronghorn Antelope (Apprentice)	\$29.25	\$0.64	\$21.89	No Refund/Points only	(6)	\$0
Resident Elk	\$467.75	\$7.50	\$475.25	\$443.32	109	\$48,321.88
Resident Elk (Apprentice)	\$21.25	\$0.64	\$21.89	No Refund/Points only	(4)	\$0
Tag Return Processing Fee	\$31.00	\$0.93	\$31.93			
			<b>Totals</b>	<b>Points &amp; Refunds</b>	<b>209</b>	<b>\$61,119.88</b>
				<b>Points only</b>	<b>219</b>	

Sources: CDFW Wildlife Branch, and License and Revenue Branch, 2021.

Big game tag fees are used to provide funding for environmental assessment and management of California's big game populations. For example, the Department's Big Game Program (Program) is composed of branch and field biologists who work together coordinating programs and implementing projects throughout the state. Biologists prepare monitoring plans, prepare population assessments, compile harvest information, conduct and direct research, enhance and restore habitat, develop hunting season and tag quota proposals, and prepare environmental documents associated with big game management and hunting. The Program is largely supported by hunters through the purchase of hunting licenses and big game tags. The management costs of the program do not change when fires cause forest closures, so some minor cost adjustments may be necessary if increased quantities of refunds are sought.

Additionally, the Department anticipates that the projected increase in the total number of refunds and point reinstatements may exceed staff time currently budgeted for those job tasks.

The per tag processing costs and typical annual aggregate costs are summarized in **Table 5** and **Table 6**. In the current hunt season, the total staff time/costs redirected to processing tag refunds and/or points reinstatements is estimated to exceed a typical year by \$291,657.

**Table 5. Per Tag Processing Time/Cost by Classification**

Classification	Hours	Rate	Total
Phone/Email Customer Service (7.5 min)	0.125	\$ 53.77	\$ 6.72
Seasonal Clerk (1.5 mins.)	0.025	\$ 21.25	\$ 0.53
Associate Govt Program Analyst (1.5 mins.)	0.025	\$ 53.77	\$ 1.34
Program Technician (3 mins.)	0.050	\$ 29.59	\$ 1.48
Mail Machine Operator I (1 min.)	0.017	\$ 30.15	\$ 0.50
Associate Govt Program Analyst (2 mins.)	0.033	\$ 53.77	\$ 1.79
Staff Services Manager I (1 min.)	0.017	\$ 63.68	\$ 1.06
Associate Govt Program Analyst (2 mins.)	0.033	\$ 53.77	\$ 1.79
Reinstatement total time in minutes	19.50	-	\$15.22
Overhead		24.32%	\$3.70
<b>Reinstatement Cost per tag</b>			<b>\$ 18.93</b>
License Revenue Branch, AGPA – (5 mins.)	0.083	\$ 53.77	\$ 4.48
Accounting Officer (Specialist) – (20 mins.)	0.333	\$ 49.09	\$ 16.36
Refund total time in minutes	25.00	-	\$20.84
Overhead		24.32%	\$5.07
<b>Refund Cost per Tag</b>			<b>\$25.91</b>
<b>Reinstatement &amp; Refund Cost per tag</b>		-	<b>\$44.84</b>

Source: California Department of Fish and Wildlife, License and Revenue Branch, 2021. Hourly Rates include benefits and are regular/non-overtime pay rates.

**Table 6. Typical, Recent and Projected LRB Tag Processing Costs**

Year	Tags	Unit Cost	Processing Cost
Tag Processing Average 2011-2019	80	\$31.93	\$ 2,554.40
2020-21 (Pandemic and Fire Closures)	1,277	\$31.93	\$ 40,774.61
2021-22 (NFS, BLM, & CDFW Public Land Closures)			
• Deer & Apprentice hunt reinstatements	15,037 (deer) +10 (junior)	\$18.93	\$284,839.71
• Elk & Pronghorn refund & reinstatements	209	\$44.84	\$9,371.56
2021-22 Projected Total Costs			\$294,211.27
Additional Costs more than Average Year			<b>\$291,656.87</b>

Source: California Department of Fish and Wildlife, License and Revenue Branch, 2021. <sup>1</sup>For 2011-2019 and 2020-2021, the processing cost is \$31.93 per Section 702, Title 14 CCR (adjusted annually pursuant to FG Code Section 713). For 2021-22, the unit reinstatement cost is \$18.93, and for reinstatement and refund the unit cost is \$44.84, as itemized in Table 2.

NFS = National Forest Service; BLM = Bureau of Land Management; CDFW = California Department of Fish and Wildlife.

(e) Nondiscretionary Costs/Savings to Local Agencies

None.

(f) Programs Mandated on Local Agencies or School Districts

None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code

None.

(h) Effect on Housing Costs

None.

## VII. Economic Impact Assessment

(a) Effects of the Regulation on the Creation or Elimination of Jobs Within the State

This regulatory action is not anticipated to create any adverse impacts to businesses or the state economy. The areas of the state that were closed to the public were closed to all access and types of recreation, not just hunting. Any negative impacts are specifically attributed to wildfires and the subsequent public land closures. This specific regulation to refund select tag fees, restore preference points, and award one preference point for the license year permits the mitigation of some of the adverse negative impacts to individuals from the public land closures.

(b) Effects of the Regulation on the Creation of New Businesses or the Elimination of Existing Businesses Within the State

The proposed regulation is not anticipated to prompt the creation of new businesses or the elimination of existing businesses within the state. This proposed regulation pertains to preference points and tag refunds that are temporary and necessary to address unprecedented conditions that significantly limited public access and opportunities during a specific time period. The proposed regulation is unlikely to cause the elimination of existing businesses.

(c) Effects of the Regulation on the Expansion of Businesses Currently Doing Business Within the State

The proposed preference point reinstatements and tag refunds are unlikely to impact expansion of businesses currently doing business in the state. The proposed regulations are short-term and are not anticipated to sustainably impact the long-term viability of various businesses that serve recreational hunters.

(d) Benefits of the Regulation to the Health and Welfare of California Residents

Although the closure of public lands to hunting due to wildfires keeps members of the public from hunting outdoors in potentially dangerous conditions, including hazardous air quality, generally hunting is an outdoor activity that provides health and welfare benefits to California residents, and the closure of public lands limits this activity. Allowing preference point and tag fee returns will ensure these hunters are not unnecessarily and unfairly penalized by unprecedented circumstances beyond their control.

(e) Benefits of the Regulation to Worker Safety

The proposed regulation will not affect worker safety.

(f) Benefits of the Regulation to the State's Environment

As set forth in Fish and Game Code section 1801, it is the policy of the state to encourage the conservation, maintenance, and utilization of fish and wildlife resources for the benefit of all the citizens of the state. The objectives of this policy include, but are not limited to, providing recreational opportunities. The hunters affected by the proposed regulation would be eligible to apply for a refund of their bighorn sheep, pronghorn antelope, and elk tag fees and/or reinstatement of deer, bighorn sheep, pronghorn antelope, and elk preference points, and earn one preference point for the license year, thus allowing these hunters to reapply for deer, elk, bighorn sheep, and pronghorn antelope tags using their accumulated preference points in the future. If the preference points are not reinstated and an additional preference point awarded for the license year for the hunters affected by the proposed regulation, these hunters would be less likely to draw the tags required for hunting deer, bighorn sheep, pronghorn antelope, and elk (thereby reducing their opportunity to hunt).

(g) Other Benefits of the Regulation

Preference point reinstatement, award of additional preference points for the license year, and tag fee refunds will help maintain support for hunting programs and conservation efforts by minimizing the impact to the public when their access was significantly impacted by unprecedented, catastrophic wildfire circumstances beyond their control.

## Informative Digest/Policy Statement Overview

The California Department of Fish and Wildlife (Department) manages deer, bighorn sheep, pronghorn antelope, and elk resources in California. Deer hunting tags, bighorn sheep hunting tags, pronghorn antelope hunting tags, and elk hunting tags are required to hunt these species in California. The Department distributes hunting tags for certain deer, bighorn sheep, pronghorn antelope, and elk annually via the big game drawing. Public demand for deer, bighorn sheep, pronghorn antelope, and elk hunting tags exceeds the available opportunities; therefore, a modified preference point system (currently Section 708.14) provides preference to hunters who have applied for, but not received, tags in past drawings. Each year a hunter applies for a deer, bighorn sheep, pronghorn antelope, or elk hunting tag and is not drawn, that hunter receives a preference point which gives that hunter preference in future drawings for that species. A portion of the tag quota for deer, bighorn sheep, pronghorn antelope, and elk tags are allocated by preference point drawing each year. A portion of tags are issued randomly to allow some opportunity for new hunters and hunters that do not have enough preference points to draw through the preference point portion of the drawing.

The 2021 season trails the catastrophic 2020 fire season, and like 2020, has caused unprecedented public land closures, including the temporary closure of all national forests in California. These closures have resulted in a loss of opportunity for hunters who had “once in a lifetime” deer, bighorn sheep, pronghorn antelope, or elk hunting tags. Hunters used many years of accumulated preference points (in many cases 19 years of preference points) to obtain the required tags for the hunts specified in the proposed regulation.

Regulations to address conditions resulting from the 2021 fire season are needed to allow hunters to return their first-choice tags after the season starts. The Department is proposing to amend Section 708.14, subsections (j) (for deer) and (k) (for bighorn sheep, pronghorn antelope, and elk) to allow hunters who lost their opportunity to hunt due to land closures caused by fires to return certain deer, bighorn sheep, pronghorn antelope, and elk tags for reinstatement of the preference points used to obtain the tag through the drawing and earn one preference point for the license year after the start of the hunting season. The eligibility for tag refund continues to apply only to the elk, bighorn sheep, and pronghorn antelope tags. Hunters who request a refund would be required to pay the \$31.93 nonrefundable big game tag return processing fee specified in Section 702.

The purpose of the proposed regulation is to authorize the Department to consider reinstatement of preference points and award one preference point for the license year for certain deer tags and to refund tag fees, reinstate preference points, and award one preference point for the license year for bighorn sheep, pronghorn antelope, and elk hunts whose hunt zones are inaccessible for sixty-six percent (66%) or more of the season as a result of public land closures. Considering that public lands access restrictions have changed during the preparation of these regulatory documents (fall 2021), this regulation aims to function retroactively, whereby written requests for point reinstatements (and refunds, if applicable) would need to be postmarked before May 1, 2022 for consideration. The regulation would act prospectively for the 2022 license year and beyond, and require postmark before February 28 of that license year.

The proposal would affect hunters who were drawn for the following deer, bighorn sheep,

pronghorn antelope, and elk hunts:

#### **DEER**

- Those deer zones defined in Title 14, Section 708.1 and described as Premium Deer Hunt Tags
  - The approximate number of premium deer hunt tags eligible for points reinstatement (as of September 16, 2021): **15,037** across 14 archery zones and 6 general zones

#### **BIGHORN SHEEP**

- Those zones defined in Title 14, Section 362
  - The approximate number of bighorn sheep hunt tags affected (as of September 16, 2021): **0**. No sheep hunts are affected by known public land closures and thus the proposed regulation.

#### **PRONGHORN ANTELOPE**

- Those zones defined in Title 14, section 363
  - The approximate number of pronghorn antelope hunt tags affected (as of September 16, 2021): **106**

#### **ELK**

- Those zones defined in Title 14, Section 364
  - The approximate number of elk hunt tags affected (as of September 16, 2021): **113** across 7 general zones, 1 archery zone, and 2 apprentice zones

#### Benefits of the regulations

The proposed regulation will authorize the Department to reinstate preference points and award one additional preference point for the license year for certain deer tags, and reinstate preference points, award one additional preference point for the license year, and issue tag fee refunds to hunters who lost elk, bighorn sheep, and pronghorn antelope hunting opportunities due public land closures.

#### Non-monetary benefits to the public

The Commission expects this proposal will provide non-monetary benefits to the public by promoting fairness in the allocation of public hunting opportunities because hunters who lost deer, elk, bighorn sheep, and pronghorn antelope hunting opportunities will have the ability to have their preference points reinstated, earn a preference point for the license year, and have another chance to obtain a deer, elk, bighorn sheep, or a pronghorn antelope tag in the future. The Commission does not anticipate non-monetary benefits to the public through the protection of public health and safety, worker safety, the prevention of discrimination, the promotion social equity and the increase in openness and transparency in business and government.

#### Consistency and compatibility with existing state regulations

The Commission, pursuant to Fish and Game Code Sections 200 and 203, has the sole authority to regulate deer, elk, bighorn sheep, and pronghorn antelope hunting in California. Commission staff has searched the California Code of Regulations and has found the proposed changes pertaining to deer, elk, bighorn sheep, and pronghorn antelope tag allocations are consistent with Title 14.

Therefore, the Commission has determined that the proposed amendments are neither inconsistent nor incompatible with existing State regulations.

## Proposed Regulatory Language

### § 708.14. Big Game License Tag Drawing System.

. . . [No changes to subsections (a) through (i)] . . .

(j) Any applicant who was drawn for the applicant's first deer tag choice in the big game drawing (becoming a tag holder) and ~~can not~~ cannot hunt for any reason may return their unfilled tag and submit a written request to retain ~~the~~ their accumulated preference point total and earn one preference point for deer for that license year. ~~Applicants shall return the tag to the department's License and Revenue Branch before the season starts for which the tag is valid for the department to consider the request. If the request is granted, the applicant tag holder shall retain the preference point total the applicant tag holder accumulated prior to the big game drawing and earn one preference point for deer for that license year. The department shall not refund the fees paid for a resident deer tag application. The department may refund the difference between the fee paid for a nonresident deer tag application and a resident deer tag application for any nonresident. To be eligible for preference point reinstatement, tag holders must meet one of the criteria below:~~

(1) Before a season starts. The tag holder must return the unfilled tag with their written request to the department's License and Revenue Branch, P.O. Box 944209, Sacramento, CA 94244-2090, postmarked prior to the earliest date the tag is valid for hunting. For tags that are valid for both an archery season, and a general season pursuant to sections 360 and 361 of these regulations, the written request must be postmarked prior to the opening date of the earliest season. The department may refund the difference between the fee paid for a nonresident deer tag and a resident deer tag for any nonresident.

(2) After a season starts.

(A) For the 2021 hunting license year, a tag holder whose hunt zone was inaccessible for sixty-six percent (66%) or more of a hunt season (pursuant to sections 360 and 361 of these regulations) due to a public land closure caused by wildfire may return their unfilled tag with their written request for preference point reinstatement. For tags that are valid for both an archery season and a general season, only the general season shall be considered for the calculation of the percentage of hunt season lost. The tag holder must return their unfilled deer tag with their written request to the department's License and Revenue Branch, P.O. Box 944209, Sacramento, CA 94244-2090, postmarked prior to May 1, 2022. Requests postmarked on or after May 1, 2022 shall not be considered.

(B) Commencing with the 2022 hunting license year beginning July 1, 2022, a tag holder whose hunt zone was inaccessible for sixty-six percent (66%) or more of a hunt season (pursuant to sections 360 and 361 of these regulations) due to a public land closure caused by wildfire may return their unfilled tag with their written request for

preference point reinstatement. For tags that are valid for both an archery season and a general season, only the general season shall be considered for the calculation of the percentage of hunt season lost. The tag holder must return their unfilled deer tag with their written request to the department's License and Revenue Branch, P.O. Box 944209, Sacramento, CA 94244-2090, postmarked on or prior to February 28 of the current license year. Requests postmarked after this date shall not be considered.

(k) Any applicant who was awarded an elk, antelope, or ~~big horn~~ bighorn sheep tag in the big game drawing (becoming a tag holder) and ~~can not~~ cannot hunt for any reason may return their unfilled tag and submit a written request to retain ~~the~~their accumulated preference point total, earn one preference point for elk, antelope or ~~big horn~~ bighorn sheep for that license year, and seek refund of the tag fee. ~~Applicants shall return the tag to the department's License and Revenue Branch before the season starts for which the tag is valid for the department to consider the request.~~ The applicant tag holder shall ~~submit~~pay the nonrefundable processing fee specified in Section 702 with the request. If the request is granted, ~~the applicant~~ tag holder shall retain the preference point total the applicant tag holder accumulated prior to the big game drawing and earn one preference point for elk, antelope or ~~big horn~~ bighorn sheep. The department may refund the tag fee. To be eligible for preference point reinstatement and/or tag refund, tag holders must meet one of the criteria below:

(1) Before a season starts. The tag holder must return the unfilled tag with their written request to the department's License and Revenue Branch, P.O. Box 944209, Sacramento, CA 94244-2090, postmarked prior to the opening date of the season for which the tag is valid.

(2) After a season starts.

(A) For the 2021 hunting license year, a tag holder whose hunt area was inaccessible for sixty-six percent (66%) or more of the hunt season (pursuant to sections 362, 363 and 364 of these regulations) due to a public land closure caused by wildfire may return their unfilled tag with their written request for preference point reinstatement and/or tag refund. The tag holder must return their unfilled deer tag with their written request to the department's License and Revenue Branch, P.O. Box 944209, Sacramento, CA 94244-2090, postmarked prior to May 1, 2022. Requests postmarked on or after May 1, 2022 shall not be considered.

(B) Commencing with the 2022 hunting license year beginning July 1, 2022, a tag holder whose hunt zone was inaccessible for sixty-six percent (66%) or more of the hunt season (pursuant to sections 362, 363, and 364 of these regulations) due to a public land closure caused by wildfire may return their unfilled tag with their written request for preference point reinstatement and/or tag refund. The tag holder must return their unfilled tag with their written request to the department's License and Revenue Branch, P.O. Box 944209, Sacramento, CA 94244-2090, postmarked on or prior to February 28

of the current license year. Requests postmarked after this date shall not be considered.

NOTE: Authority cited: Sections 200, 203, 219, 265, 270, 275, 331, 332, 1050, 1572, 4302 and 10502, Fish and Game Code.

Reference: Sections 110, 200, 201, 203, 203.1, 219, 255, 265, 270, 275, 331, 332, 713, 1050, 1570, 1571, 1572, 3950, 3951, 4302, 4330, 4331, 4332, 4333, 4336, 4340, 4341, 4902, 10500 and 10502, Fish and Game Code.

STATE OF CALIFORNIA — DEPARTMENT OF FINANCE

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**ECONOMIC IMPACT STATEMENT**

DEPARTMENT NAME <b>Fish and Game Commission</b>	CONTACT PERSON <b>Ona.Alminas</b>	EMAIL ADDRESS <b>@wildlife.ca.gov</b>	TELEPHONE NUMBER <b>916 653-7899</b>
DESCRIPTIVE TITLE FROM NOTICE REGISTER OR FORM 400 <b>Amend Sec 708.14, Title 14, CCR, Re: Big Game Preference Pt. Reinstatement &amp; Tag Refunds Due to Public La</b>			NOTICE FILE NUMBER <b>Z</b>

**A. ESTIMATED PRIVATE SECTOR COST IMPACTS** *Include calculations and assumptions in the rulemaking record.*

1. Check the appropriate box(es) below to indicate whether this regulation:

- |  |   |
|--|---|
| <input type="checkbox"/> a. Impacts business and/or employees  | <input type="checkbox"/> e. Imposes reporting requirements              |
| <input type="checkbox"/> b. Impacts small businesses           | <input type="checkbox"/> f. Imposes prescriptive instead of performance |
| <input type="checkbox"/> c. Impacts jobs or occupations        | <input checked="" type="checkbox"/> g. Impacts individuals              |
| <input type="checkbox"/> d. Impacts California competitiveness | <input type="checkbox"/> h. None of the above (Explain below):          |

*If any box in Items 1 a through g is checked, complete this Economic Impact Statement.  
If box in Item 1.h. is checked, complete the Fiscal Impact Statement as appropriate.*

2. The **Fish and Game Commission** estimates that the economic impact of this regulation (which includes the fiscal impact) is:  
(Agency/Department)

- ☒ Below \$10 million  
☐ Between \$10 and \$25 million  
☐ Between \$25 and \$50 million  
☐ Over \$50 million *[If the economic impact is over \$50 million, agencies are required to submit a [Standardized Regulatory Impact Assessment](#) as specified in Government Code Section 11346.3(c)]*

3. Enter the total number of businesses impacted: **0**Describe the types of businesses (Include nonprofits): **N/A**Enter the number or percentage of total businesses impacted that are small businesses: **N/A**4. Enter the number of businesses that will be created: **0** eliminated: **0**Explain: **N/A**5. Indicate the geographic extent of impacts: ☐ Statewide  
☒ Local or regional (List areas): **Areas in the proximity of closed Public Lands**6. Enter the number of jobs created: **0** and eliminated: **0**Describe the types of jobs or occupations impacted: **N/A**7. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here? ☐ YES ☒ NOIf YES, explain briefly: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

STATE OF CALIFORNIA — DEPARTMENT OF FINANCE

**ECONOMIC AND FISCAL IMPACT STATEMENT****(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**ECONOMIC IMPACT STATEMENT (CONTINUED)****B. ESTIMATED COSTS** *Include calculations and assumptions in the rulemaking record.*

1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime? \$ 0
- a. Initial costs for a small business: \$ 0 Annual ongoing costs: \$ 0 Years: 1
- b. Initial costs for a typical business: \$ 0 Annual ongoing costs: \$ 0 Years: 1
- c. Initial costs for an individual: \$ 0 Annual ongoing costs: \$ 0 Years: 1
- d. Describe other economic costs that may occur: No new costs for eligible tag holders who choose to return tags for refund / points reinstatement. A previously established in FGC 702 nonrefundable processing fee of \$31.93 per tag is forfeited. See Addendum

2. If multiple industries are impacted, enter the share of total costs for each industry: N/A

3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements. Include the dollar costs to do programming, record keeping, reporting, and other paperwork, whether or not the paperwork must be submitted. \$ \_\_\_\_\_

4. Will this regulation directly impact housing costs? ☐ YES ☒ NO

If YES, enter the annual dollar cost per housing unit: \$ \_\_\_\_\_

Number of units: \_\_\_\_\_

5. Are there comparable Federal regulations? ☐ YES ☒ NO

Explain the need for State regulation given the existence or absence of Federal regulations: This regulatory action applies to hunting tags for hunts within the State of California.

Enter any additional costs to businesses and/or individuals that may be due to State - Federal differences: \$ N/A

**C. ESTIMATED BENEFITS** *Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. Briefly summarize the benefits of the regulation, which may include among others, the health and welfare of California residents, worker safety and the State's environment: Individual tag holders will benefit by a refund of tag costs an points reinstatements. Worker safety, the health and welfare of state residents, and the State's environment are not directly impacted by this action. See Addendum
2. Are the benefits the result of: ☐ specific statutory requirements, or ☒ goals developed by the agency based on broad statutory authority?
- Explain: The Fish and Game Commission issues regulations regarding hunts in the State.
3. What are the total statewide benefits from this regulation over its lifetime? \$ 61,120 See Addendum
4. Briefly describe any expansion of businesses currently doing business within the State of California that would result from this regulation: N/A

**D. ALTERNATIVES TO THE REGULATION** *Include calculations and assumptions in the rulemaking record. Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not: The proposed regulation is considered the most effective way to compensate hunters for reduced hunting opportunities due to public land closures.
- ALT 1: No Change would not provide any relief to tag holders. See Addendum

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**ECONOMIC IMPACT STATEMENT (CONTINUED)**

2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:

Regulation: Benefit: \$ 61,120 Cost: \$ 291,657Alternative 1: Benefit: \$ 0 Cost: \$ 61,120

Alternative 2: Benefit: \$ \_\_\_\_\_ Cost: \$ \_\_\_\_\_

3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives:

\$61,120 = benefit or value of the refunded tags to hunters. Cost =\$291,657 or additional staff time to process increase in tag refunds/reinstatements. Alt 1 costs = total tag fees lost, for impacted hunts. See Addendum Tables 3 & 4

4. Rulemaking law requires agencies to consider performance standards as an alternative, if a regulation mandates the use of specific technologies or equipment, or prescribes specific actions or procedures. Were performance standards considered to lower compliance costs?

☐ YES☒ NOExplain: N/A**E. MAJOR REGULATIONS** *Include calculations and assumptions in the rulemaking record.****California Environmental Protection Agency (Cal/EPA) boards, offices and departments are required to submit the following (per Health and Safety Code section 57005). Otherwise, skip to E4.***1. Will the estimated costs of this regulation to California business enterprises **exceed \$10 million?** ☐ YES ☐ NO***If YES, complete E2. and E3******If NO, skip to E4***

2. Briefly describe each alternative, or combination of alternatives, for which a cost-effectiveness analysis was performed:

Alternative 1: \_\_\_\_\_

Alternative 2: \_\_\_\_\_

*(Attach additional pages for other alternatives)*

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

Regulation: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

Alternative 1: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

Alternative 2: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

4. Will the regulation subject to OAL review have an estimated economic impact to business enterprises and individuals located in or doing business in California exceeding \$50 million in any 12-month period between the date the major regulation is estimated to be filed with the Secretary of State through 12 months after the major regulation is estimated to be fully implemented?

☐ YES☒ NO*If YES, agencies are required to submit a [Standardized Regulatory Impact Assessment \(SRIA\)](#) as specified in Government Code Section 11346.3(c) and to include the SRIA in the Initial Statement of Reasons.*

5. Briefly describe the following:

The increase or decrease of investment in the State: \_\_\_\_\_

The incentive for innovation in products, materials or processes: \_\_\_\_\_

The benefits of the regulations, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the state's environment and quality of life, among any other benefits identified by the agency: \_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**FISCAL IMPACT STATEMENT****A. FISCAL EFFECT ON LOCAL GOVERNMENT** *Indicate appropriate boxes 1 through 6 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

- ☐ 1. Additional expenditures in the current State Fiscal Year which are reimbursable by the State. (Approximate)  
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ \_\_\_\_\_

- ☐ a. Funding provided in \_\_\_\_\_

Budget Act of \_\_\_\_\_ or Chapter \_\_\_\_\_, Statutes of \_\_\_\_\_

- ☐ b. Funding will be requested in the Governor's Budget Act of \_\_\_\_\_

Fiscal Year: \_\_\_\_\_

- ☐ 2. Additional expenditures in the current State Fiscal Year which are NOT reimbursable by the State. (Approximate)  
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ \_\_\_\_\_

*Check reason(s) this regulation is not reimbursable and provide the appropriate information:*

- ☐ a. Implements the Federal mandate contained in \_\_\_\_\_

- ☐ b. Implements the court mandate set forth by the \_\_\_\_\_ Court.

Case of: \_\_\_\_\_ vs. \_\_\_\_\_

- ☐ c. Implements a mandate of the people of this State expressed in their approval of Proposition No. \_\_\_\_\_

Date of Election: \_\_\_\_\_

- ☐ d. Issued only in response to a specific request from affected local entity(s).

Local entity(s) affected: \_\_\_\_\_  
\_\_\_\_\_

- ☐ e. Will be fully financed from the fees, revenue, etc. from: \_\_\_\_\_

Authorized by Section: \_\_\_\_\_ of the \_\_\_\_\_ Code;

- ☐ f. Provides for savings to each affected unit of local government which will, at a minimum, offset any additional costs to each;

- ☐ g. Creates, eliminates, or changes the penalty for a new crime or infraction contained in \_\_\_\_\_

- ☐ 3. Annual Savings. (approximate)

\$ \_\_\_\_\_

- ☐ 4. No additional costs or savings. This regulation makes only technical, non-substantive or clarifying changes to current law regulations.

- ☒ 5. No fiscal impact exists. This regulation does not affect any local entity or program.

- ☐ 6. Other. Explain \_\_\_\_\_  
\_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**FISCAL IMPACT STATEMENT (CONTINUED)****B. FISCAL EFFECT ON STATE GOVERNMENT** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*☒ 1. Additional expenditures in the current State Fiscal Year. (Approximate)\$ 61,120*It is anticipated that State agencies will:*☒ a. Absorb these additional costs within their existing budgets and resources.☐ b. Increase the currently authorized budget level for the \_\_\_\_\_ Fiscal Year☐ 2. Savings in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

☐ 3. No fiscal impact exists. This regulation does not affect any State agency or program.☒ 4. Other. Explain Increase in staff time allocated to tag refunds and point reinstatements is expected to exceed  
a normal year by: \$291,657. See Addendum**C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*☐ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

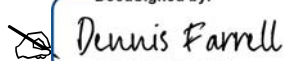
☐ 2. Savings in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

☒ 3. No fiscal impact exists. This regulation does not affect any federally funded State agency or program.☐ 4. Other. Explain \_\_\_\_\_

FISCAL OFFICER SIGNATURE

DocuSigned by:

 Dennis Farrell

F8B0B53580C4E6

DATE

9/30/2021

*The signature attests that the agency has completed the STD. 399 according to the instructions in SAM sections 6601-6616, and understands the impacts of the proposed rulemaking. State boards, offices, or departments not under an Agency Secretary must have the form signed by the highest ranking official in the organization.*

AGENCY SECRETARY

DATE

*Finance approval and signature is required when SAM sections 6601-6616 require completion of Fiscal Impact Statement in the STD. 399.*

DEPARTMENT OF FINANCE PROGRAM BUDGET MANAGER

DATE



## STD. 399 Addendum

## Amend Section 708.14

Title 14, California Code of Regulations  
Re: Big Game Preference Points Reinstatement and  
Tag Refunds Due to Public Land Closures

**ECONOMIC IMPACT STATEMENT****PREFERENCE POINT REINSTATEMENTS AND TAG REFUNDS**

The purpose of the proposed regulation is to authorize the Department of Fish and Wildlife (Department) to consider reinstatement of preference points and award one preference point for the license year for certain deer tags and to refund tag fees, reinstate preference points, and award one preference point for the license year for bighorn sheep, pronghorn antelope, and elk hunts in the event of public land closures. The proposed regulation would apply to big game hunts after a season has started whose hunt areas are inaccessible for sixty-six percent (66%) or more of the season as a result of public land closures.

**SECTION A. ESTIMATED PRIVATE SECTOR COST IMPACTS****Question 1.** Answer g. Impacts Individuals.

The hunters affected by the proposed regulation would be eligible to apply for a refund of bighorn sheep, elk and pronghorn antelope tag fees and reinstatement of their preference points, thus allowing these hunters to reapply for bighorn sheep, pronghorn antelope, elk tags using their preference points in the future. Affected premium deer tag holders would be eligible to return unused tags for points reinstatement with no dollar refund. If the preference points are not reinstated for the hunters affected by the proposed regulation, these hunters would be less likely to draw the tags required for hunting bighorn sheep, elk, pronghorn antelope, and deer.

Individuals may receive refunds for previously paid tag fees that could vary from \$456.60 for a resident bighorn sheep tag (includes base fee and surcharge), to \$159.91 for a resident pronghorn antelope tag, to \$475.20 for a resident elk tag. A \$31.93 nonrefundable big game tag return processing fee, as specified in Section 702, Title 14, CCR is deducted from the amount refunded. The choice to obtain a refund is not required and is purely discretionary for each individual hunter.

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. Considering the relatively small number of tags eligible for refund for bighorn sheep for the 2021 license year (zero), pronghorn antelope (100), and elk (109) over the entire state, this proposal is economically neutral to business. Given the recent timing of wildfires and potentials for public land closures, the impacts for the 2022 license year are anticipated to be similar.

**Section A**

**Question 6. Number of jobs created and eliminated. 0**

The Commission does not anticipate that the proposed regulation would induce any impact on the creation or elimination of jobs.

**SECTION B. ESTIMATED COSTS****Question 1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime?**

**\$0** = estimated statewide cost to comply with regulation. Eligible tag holders who choose to return tags for refund incur no new costs. Upon tag purchase, a previously established \$31.93 non-refundable processing fee would be complied with.

**SECTION C. ESTIMATED BENEFITS****Question 1. Briefly summarize the benefits of the regulation.**

A maximum of \$61,120 (calculated in Table 4 below) may be dispersed by the Department to hunters for refunded bighorn sheep, pronghorn antelope, and elk tags for the 2021-2022 license year. Additionally, preference points will be reinstated for these species, and for premium deer affected by public land closures, which means hunters would still gain one preference point for that year. Worker safety, the health and welfare of state residents, and the State's environment are not directly impacted by this action. Although the closure of public lands to hunting in 2021 due to wildfires may temporarily limit the health benefits of hunting outdoors, these actions also protect the health and welfare of California residents from potentially dangerous wildfire conditions, including hazardous air quality. Allowing preference point reinstatement and tag fee returns will ensure these hunters are not unnecessarily burdened by circumstances beyond their control.

**Section C****Question 3. What are the total statewide benefits from this regulation over its lifetime?**

A maximum of \$61,120 estimated total economic benefit. Hunters would be required to forfeit the \$31.93 nonrefundable big game tag return processing fee specified in Section 702. There are 109 resident elk, and 100 pronghorn antelope tags estimated to potentially be impacted by public land closures, as of September 16, 2021. Should every hunter seek refund for every tag, and the total of 209 tags be returned, the Department would expend a total of approximately \$61,120. Junior (apprentice) hunt tags would not be issued dollar refunds because the tag fee is less than the processing costs. All tags returned through this program would be eligible for points reinstatement. Potential public land closures for the 2022-2023 license year are expected to be of similar extent to those affecting the 2021-2022 license year, with similar consequence for reinstatement and refunds.

**Section C****Question 4. Briefly describe any expansion of businesses currently doing business within the State of California that would result from this regulation.**

The Commission does not anticipate that the proposed regulation would induce any impacts on the expansion of businesses currently doing business within the state.

## **SECTION D. ALTERNATIVES TO THE REGULATION**

### **Question 1.**

No other alternatives to the proposed regulation were identified. The proposed regulation provides benefits in the form of refunded tag fees, estimated to be up to \$61,120. The Statewide costs are comprised of the Department's processing costs, estimated at \$291,657, for tag refunds and points reinstatements that exceed a typical year's volume.

This economic and fiscal analysis documents a maximum impact for effects on individual big game hunters due to public land closures. Actual impacts would be less than the estimated maximums due to the fact that hunters may avoid public land altogether, based on preference or ability to do so. Most zones have some percentage of private property which would allow hunters to hunt despite closures to public lands, depending on the location, and severity of fires or any local ordinances for public safety.

#### **Alternative 1: No Change Alternative**

The "no-change" alternative was considered and rejected because it would not meet project objectives of allowing for preference point reinstatement and tag fee returns for certain big game species after a hunt season has started. Given the unprecedented closure of public lands statewide due to a catastrophic and historic fire season, it would be unfair not to allow elk, bighorn sheep, pronghorn antelope and for premium deer tag holders the opportunity to have their preference points restored and, for all except deer, tags refunded. These tags are considered premium opportunities and once in a lifetime drawing, so allowing hunters to restore their points and receive a refund is justified.

### **Question 2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:**

**Table 1. Regulation and Alternatives Total Statewide Benefits and Costs (\$2021)**

<b>Regulation or Alternative</b>	<b>Benefit</b>	<b>Cost</b>
Regulation:	\$ 61,120	\$291,657
Alternative 1: No Change	\$0	\$ 61,120
Alternative 2: N/A	---	--

Source: License and Revenue Branch and Automated Data License System data, 2021.

See Table 4 for the calculation of Benefit; See Table 3 for the calculation of Cost

## **FISCAL IMPACT STATEMENT**

### **SECTION A. FISCAL EFFECT ON LOCAL GOVERNMENT**

**Answer 5.** No Fiscal impact exists. This regulation does not affect any local entity or

program.

## **SECTION B. FISCAL IMPACT ON STATE GOVERNMENT**

**Question 1.** Additional expenditures in the current State Fiscal Year. (Approximate): up to (\$61,120)

It is anticipated that State agencies will: a. Absorb these additional costs within their existing budgets and resources.

**Question 4.** Other. Explain: Increase in staff time/cost allocated to tag refunds and point reinstatements is expected to exceed an average year by \$291,657. See Table 3, below.

### **Processing Costs Increase**

Additionally, the Department anticipates that the projected increase in the total number of refunds and point reinstatements may exceed staff time currently budgeted for those job tasks. The per tag processing costs and typical annual aggregate costs are summarized in Table 2 and Table 3. Table 3 compares average to recent years' number of tag refunds/points reinstatements. In the current hunt season, the total staff time/costs redirected to processing tag refunds and/or points reinstatements is estimated to exceed a typical year by \$291,657.

**Table 2. Per Tag Processing Time/Cost by Classification**

<b>Classification</b>	<b>Hours</b>	<b>Rate</b>	<b>Total</b>
Phone/Email Customer Service (7.5 min)	0.125	\$ 53.77	\$ 6.72
Seasonal Clerk (1.5 mins.)	0.025	\$ 21.25	\$ 0.53
Associate Govt Program Analyst (1.5 mins.)	0.025	\$ 53.77	\$ 1.34
Program Technician (3 mins.)	0.050	\$ 29.59	\$ 1.48
Mail Machine Operator I (1 min.)	0.017	\$ 30.15	\$ 0.50
Associate Govt Program Analyst (2 mins.)	0.033	\$ 53.77	\$ 1.79
Staff Services Manager I (1 min.)	0.017	\$ 63.68	\$ 1.06
Associate Govt Program Analyst (2 mins.)	0.033	\$ 53.77	\$ 1.79
Reinstatement only total time in minutes	<b>19.50</b>	-	<b>\$15.22</b>
Overhead		24.32%	\$3.70
<b>Reinstatement Cost per tag</b>			<b>\$18.93</b>
License Revenue Branch, AGPA – (5 mins.)	0.083	\$ 53.77	\$4.48
Accounting Officer (Specialist) (20 mins.)	0.333	\$ 49.09	\$16.36
Refund only total time in minutes	<b>25.00</b>	-	<b>\$20.84</b>
Overhead		24.32%	\$5.07
<b>Refund Cost per tag</b>			<b>\$25.91</b>
<b>Reinstatement &amp; Refund Cost per tag</b>		-	<b>\$44.84</b>

Source: California Department of Fish and Wildlife, License and Revenue Branch, 2021. Hourly Rates include benefits and are regular/non-overtime pay rates.

**Table 3. Typical, Recent and Projected LRB Tag Processing Costs**

<b>Year</b>	<b>Tags</b>	<b>Unit Cost<sup>1</sup></b>	<b>Processing Cost</b>
Tag Processing Average 2011-2019	80	\$31.93	\$ 2,554.40
2020-21 (Pandemic and Fire Closures)	1,277	\$31.93	\$ 40,774.61
2021-22 (NFS, BLM, & CDFW Public Land Closures)			
• Deer & Apprentice hunt reinstatements	15,037 (deer) +10 (apprentice)	\$18.93	\$284,839.71
• Elk & Pronghorn refund & reinstatements	209	\$44.84	\$9,371.56
2021-22 Projected Total Costs			\$294,211.27
Additional Costs more than Average Year			<b>\$291,656.87</b>

Source: California Department of Fish and Wildlife, License and Revenue Branch, 2021. <sup>1</sup>For 2011-2019 and 2020-2021, the processing cost is \$31.93 per Section 702, Title 14 CCR (adjusted annually pursuant to FG Code Section 713). For 2021-22, the unit reinstatement cost is \$18.93, and for reinstatement and refund the unit cost is \$44.84, as itemized in Table 2.

NFS = National Forest Service; BLM = Bureau of Land Management; CDFW = California Department of Fish and Wildlife.

### **Tag Refund Expenditures**

The Department estimates additional expenditures to be refunded to hunters to total to \$61,120 in the current state fiscal year. Hunters who request preference point reinstatement and a refund of their tag fees under the proposed regulation would receive a refund of their fees and their preference points would be reinstated. A \$31.93 nonrefundable big game tag return processing fee is required, as specified in Section 702.

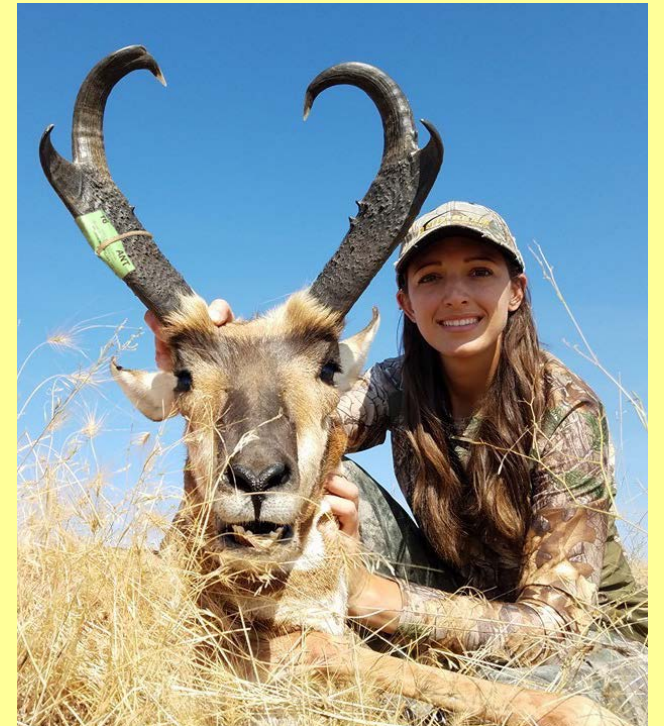
**Table 4. Tag Refunds Due to Public Land Closures: (\$2021)**

<b>Tag Type</b>	<b>Tag (Base) Fee</b>	<b>Surcharge</b>	<b>Total Fee</b>	<b>Individual Refund per Tag</b>	<b>Impacted Tags</b>	<b>Total Refund by Hunt</b>
Bighorn Sheep	\$449.00	\$7.50	\$456.50	\$424.57	0	\$0
Resident Pronghorn Antelope	\$155.25	\$4.66	\$159.91	\$127.98	100	\$12,798
Resident Pronghorn Antelope (Apprentice)	\$29.25	\$0.64	\$21.89	No Refund/ Points only	(6)	\$0
Resident Elk	\$467.75	\$7.50	\$475.25	\$443.32	109	\$48,321.88
Resident Elk (Apprentice)	\$21.25	\$0.64	\$21.89	No Refund/ Points only	(4)	\$0
Tag Return Processing Fee	\$31.00	\$0.93	\$31.93			
			<b>Totals</b>	<b>Points+ Refunds</b>	<b>209</b>	<b>\$61,119.88</b>
				<b>Points only</b>	<b>219</b>	

Source: California Department of Fish and Wildlife, License and Revenue Branch, 2021.

### **SECTION C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS**

**Answer 3.** No fiscal impact exists. This regulation does not affect any federally funded State agency or program



# Wildlife Resources Committee

## September 16, 2021

Big Game Tag  
Return Regulations

# Changes Under Consideration to § 708.14 Title 14, California Code of Regulations – Big Game Tags

- Amend 708.14 to allow tag returns after season starts



# Changes Under Consideration to § 708.14 Title 14, California Code of Regulations – Big Game Tags

- Recap of 2020 efforts  
and plan for 2021

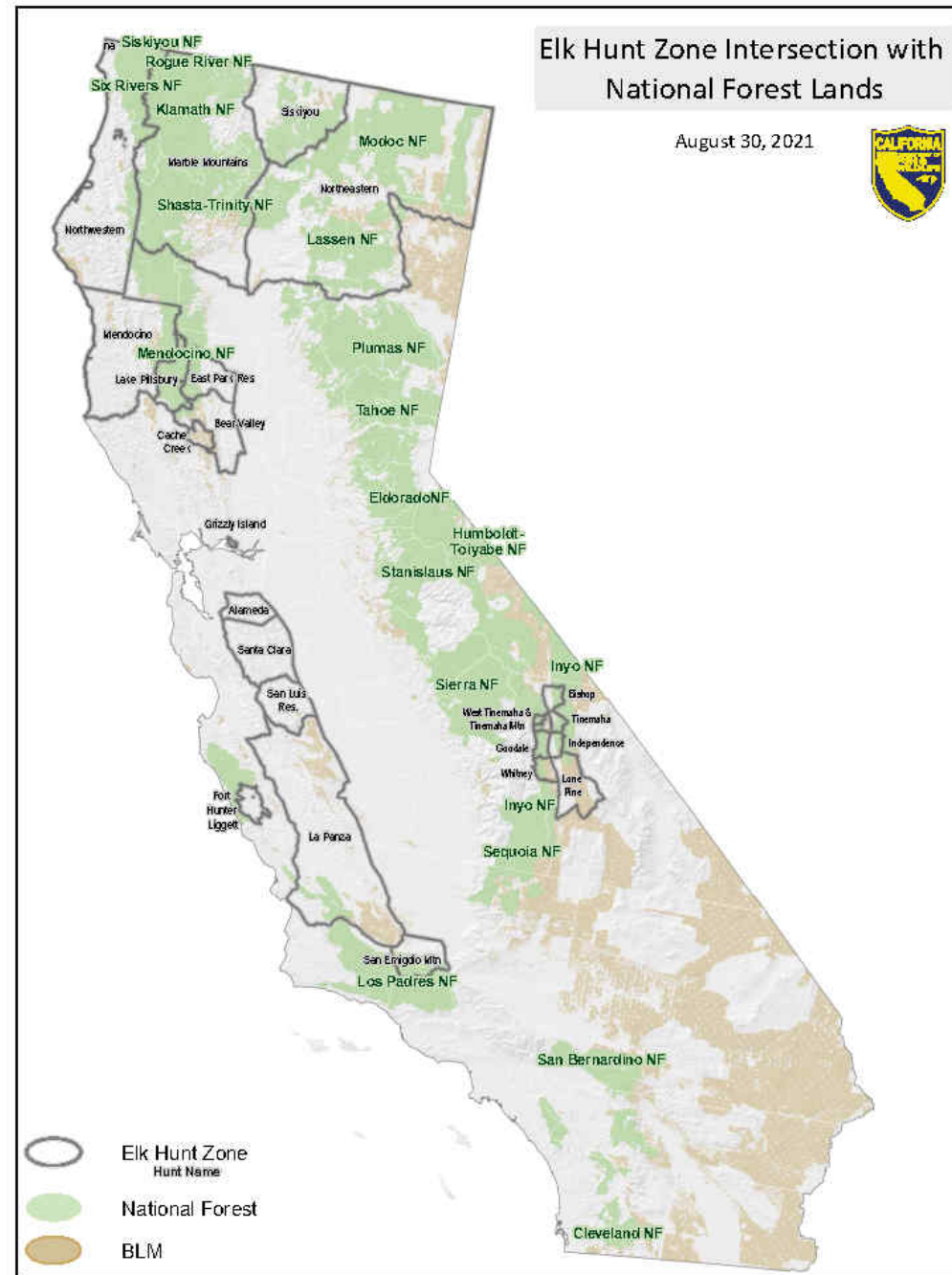


# Changes Under Consideration to § 708.14 Title 14, California Code of Regulations – Big Game Tags

- Current understanding



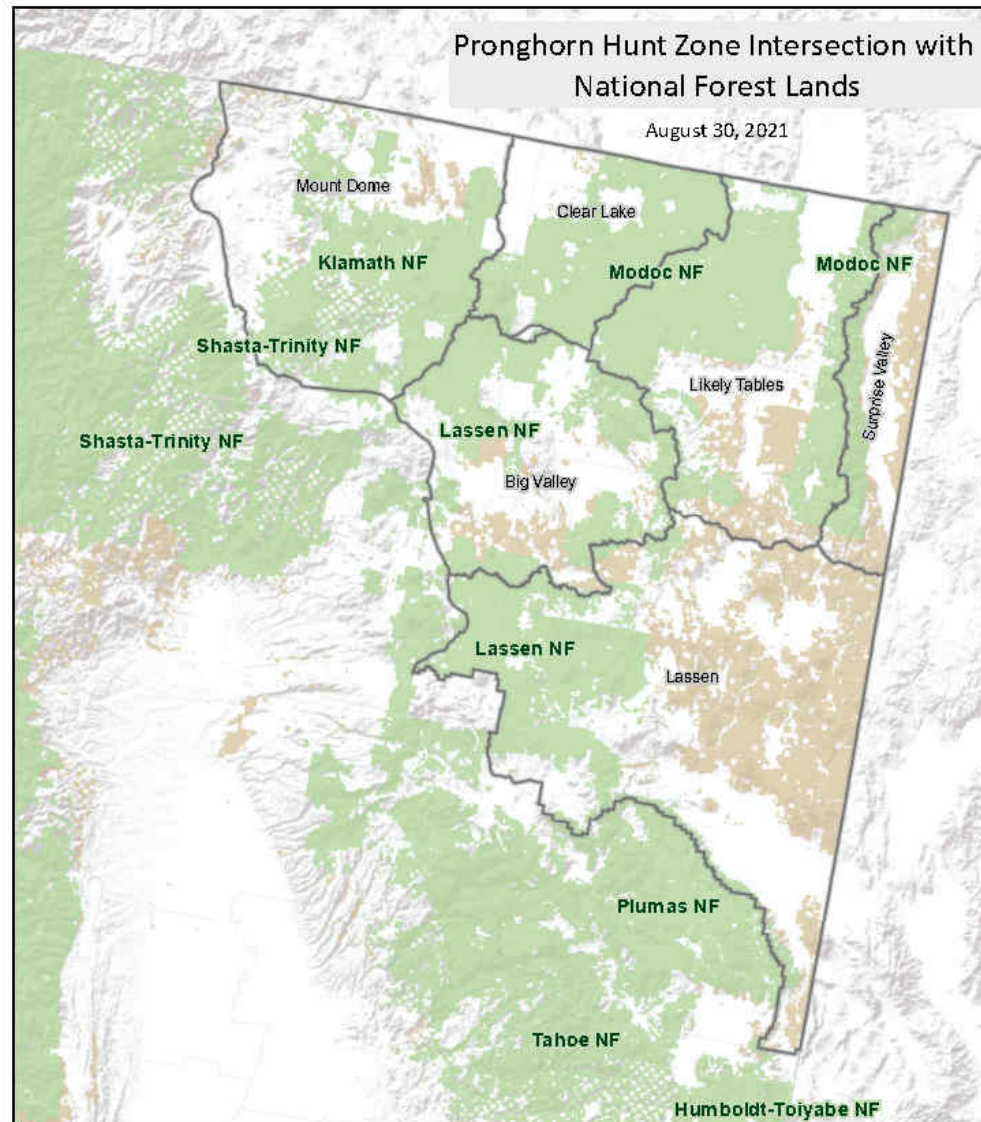
# Elk



Season Dates:	
9* USFS Early Closure Dates	8/22/2021 9/6/2021
All CA USFS Closure Dates	8/31/2021 9/17/2021
Display Week:	8

[illegible]

# Pronghorn



Pronghorn Hunt Zone  
Hunt Name



National Forest



BLM



## 2021 Pronghorn Hunt Seasons Impacted by USFS Closures

Season Dates:

9* USF5 Early Closure Dates	8/22/2021	9/6/2021
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All CAUSFS Closure Dates	8/31/2021	9/17/2021
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Display Week: 2

[illegible]

# Bighorn Sheep



## 2021 Bighorn Sheep Hunt Seasons Impacted by USFS Closures

Season Dates:		
All CA USFS Closure Dates	8/31/2021	9/17/2021
Display Week:	1	

Hunt Zone	Hunt Zone Name	Season Start	Season End	Total Hunt Days	# Days in Closure	% Days of Hunt Closed	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
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# Changes Under Consideration to § 708.14 Title 14, California Code of Regulations – Big Game Tags

- Potential criteria



# Changes Under Consideration to § 708.14 Title 14, California Code of Regulations – Big Game Tags

- Preference Points
- Refunds



# Tag Returns and Refunds

	Total Cost	Base Fee	Surcharge	Refund Amount
Elk Tag (Res)	\$475.25	\$467.75	\$7.50	\$443.32
Elk Tag (Nonres)	\$1,454.25	\$1,446.75	\$7.50	\$1,422.32
Elk Tag (Junior)	\$21.89	\$21.25	\$0.64	N/A
Pronghorn Tag (Res)	\$159.91	\$155.25	\$4.66	\$127.98
Pronghorn Tag (Nonres)	\$489.50	\$482.00	\$7.50	\$457.57
Pronghorn Tag (Junior)	\$21.89	\$21.25	\$0.64	N/A
Bighorn Sheep Tag (Resident)	\$456.50	\$449.00	\$7.50	\$424.57
Bighorn Sheep Tag Nonres)	\$1,690.75	\$1,683.25	\$7.50	\$1,690.75

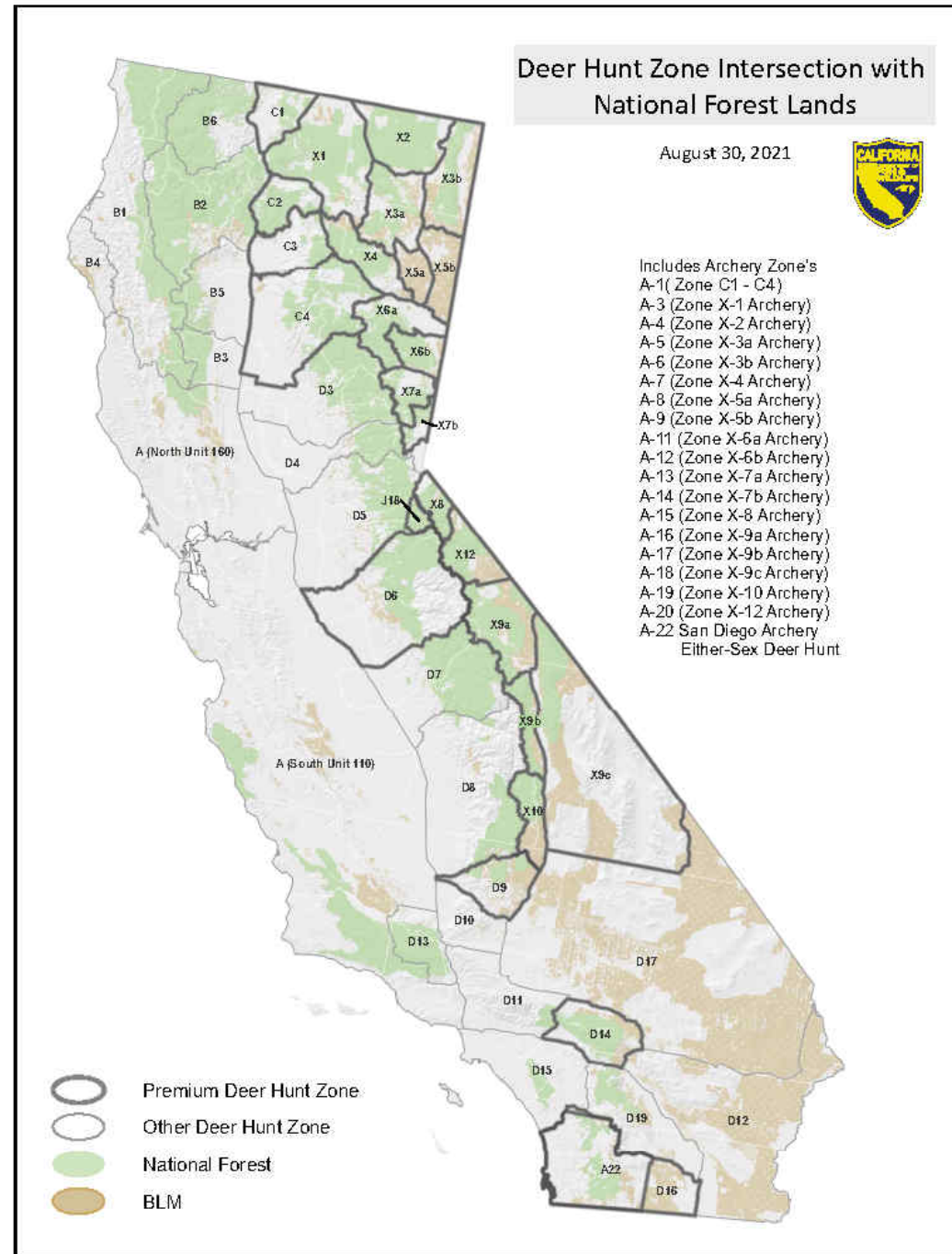


# Changes Under Consideration to § 708.14 Title 14, California Code of Regulations – Big Game Tags

- Additional consideration for 2021



# Deer



## 2021 Deer Hunt Seasons Impacted by USFS Closures

		Season Dates:	
Eldorado NF Closure Dates	8/17/2021	9/30/2021	
9* USFS Early Closure Dates	8/22/2021	9/6/2021	
All CA USFS Closure Dates	8/31/2021	9/17/2021	
Display Week:	7		

Hunt Zone #	HuntZone Name:	HuntType	SeasonStart	Season End	Total Hunt Days	#Days In Closure	%Days Of Hunt Closed
D-6	D-6 Zone General Season	Premium	9/18/2021	10/31/2021	44	0	0%
D-6	D-6 Zone Archery Season	Premium	8/21/2021	9/12/2021	23	13	57%
A-1	Zone C-1 Archery	Premium	8/21/2021	9/5/2021	16	15	94%
A-1	Zone C-2 Archery	Premium	8/21/2021	9/12/2021	23	22	96%



# Deer Tag Fees

	Total Cost	Base Fee	Surcharge	Application Fee	Refund Amount
Resident First Deer Tag	<b>\$32.96</b>	\$27.50	<b>\$0.96</b>	<b>\$4.50</b>	N/A
Resident Second Deer Tag	<b>\$41.20</b>	\$35.50	<b>\$1.20</b>	<b>\$4.50</b>	N/A
Nonresident First Deer Tag	<b>\$294.50</b>	\$282.50	<b>\$7.50</b>	<b>\$4.50</b>	\$255.00
Nonresident Second Deer Tag	<b>\$294.50</b>	\$282.50	<b>\$7.50</b>	<b>\$4.50</b>	\$247.00



# Changes Under Consideration to § 708.14 Title 14, California Code of Regulations – Big Game Tags

## Summary of Recommendations

- Allow the return of premium deer, elk, pronghorn, and sheep tags after the season starts, in the event of public land closures resulting in a loss of 66% of the season, for point reinstatement and one additional point for the license year
- Allow refunds for elk, pronghorn, and sheep tags after the season starts.
- For the current license year (2021), tags must be returned by May 1, 2022.
- Beginning with the 2022 license year, tags must be returned by February 28.



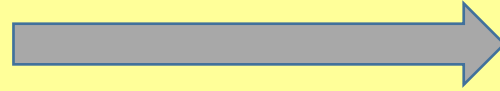
# Changes Under Consideration to § 708.14 Title 14, California Code of Regulations – Big Game Tags

Next Steps and Other  
Considerations



# Potential Long-Term Solution

Current Seasons Impacted  
(Aug – Sep)



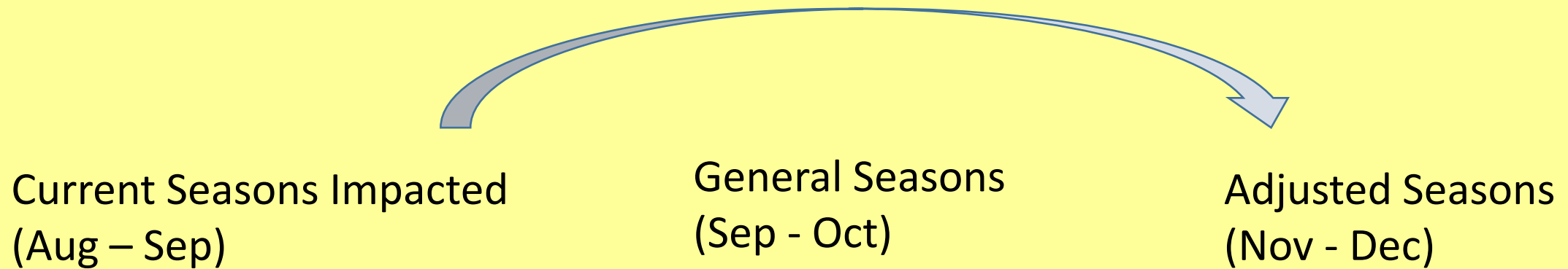
Adjusted Seasons  
(Oct – Nov)

- Elk (~ 30 hunts)
- Pronghorn ( ~ 17 hunts)
- Bighorn Sheep (~ 1 hunt)



## Potential Long-Term Solution (one option)

- Premium Mule Deer (~ 27 hunts)



# Potential Long-Term Solutions

## Considerations

- Biological Assessment and ramifications of moving the seasons
- CEQA Document
- Regulation Changes



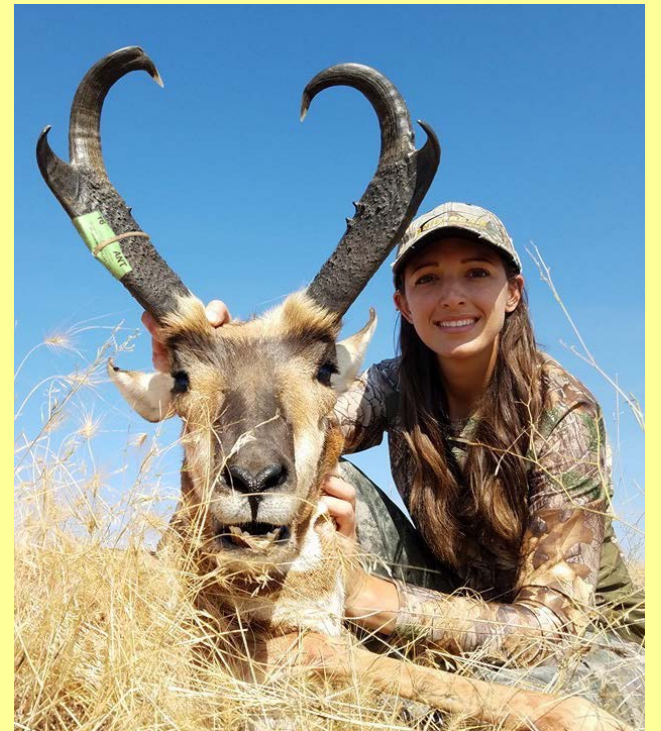
# Potential Long-Term Solutions

## Next Steps

- Further discussions with stakeholders and interested parties and developing some potential alternatives for long-term solutions.



# Questions?





# Deer Tag Return Trends

License Year	Number Returned
2011	64
2012	99
2013	64
2014	47
2015	64
2016	78
2017	83
2018	117
2019	136
2020	1,277



# Changes Under Consideration to § 708.14 Title 14, California Code of Regulations – Big Game Tags

## Summary of Recommendations (continued)

- For the current (2021) license year, allow the return of premium deer tags whose zones have been inaccessible for 66% or more of the season as result of public land closures after the season starts for point reinstatement and one additional point for the license year.
- Beginning with the 2022 license year, allow tag returns in the event that a premium deer zone was inaccessible within the first 33% of the season as result of public land closures. Tags must be returned within 5 business days of the notice of closure.



## Elk , Antelope, & Premium Deer Tags

Stephen Russell <[REDACTED]>

Tue 09/07/2021 01:57 PM

To: FGC <FGC@fgc.ca.gov>

**WARNING:** This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Hi

I am writing to express my thoughts on this year's A 3, premium deer tag . I have been trying to draw this zone for 4 years. I drew this year, planned my hunt, took time off , loaded the trailer, and on Thursday before opening day headed out. While hunting on opening day I was informed by forest service woods will be closing Sunday.

I know this is not Fish and Wildlife's fault, but it is in your power to correct this. As stated before, I waited 4 years to draw this tag. and I'm sure there are many others out there who had more than my 4 pts..

I thought of returning my tag before the deadline but then I thought might be worse next year. So as of Thursday, when I left, the woods were open.

I guess my whole point is I would like to see you approve a reinstatement of points , plus one, to all the premium tags out there that were affected by the forest closure.

Thank you

Stephen Russell  
[REDACTED]

# California Fish and Game Commission Tribal Committee (TC)

## Work Plan: Topics and Timeline for Items Referred to TC by the California Fish and Game Commission

Updated August 18, 2021

Topic / Goal	Type / Lead	Aug 2021	Dec 2021	Apr 2022
<b>Special Projects</b>				
FGC justice, equity, diversity and inclusion plan	FGC Project	X	X	X
Co-management definition implementation	TC Project	X	X	X
Coastal Fishing Communities Project: Updates	MRC Project	X	X	X
<b>Regulatory / Legislative</b>				
Kelp and algae harvest management regulations: Updates and then recommendation and guidance	DFW Project and Regulation Change		X	X
<b>Developing Management Issues</b>				
FGC Climate Policy: During development of policy, make recommendations and provide guidance	FGC Policy			
<b>Management Plans</b>				
Sheep, deer, antelope, trout, abalone, kelp/seaweed: Updates and guidance (timing as appropriate for each)	DFW	X	X	X
<b>Informational Topics</b>				
Definition of “tribal subsistence”, and related management mechanisms	FGC		X	X
Marine Protected Areas Statewide Leadership Team (MSLT): Update on tribal participation in MSLT and implementation of the MSLT work plan	OPC Project		X	X
Wildfire impacts and state response: Update as requested	DFW			
Statewide kelp recovery efforts: Update as requested	DFW			
Kelp recovery efforts at Casper Cove and Tankers Reef				
Annual tribal planning meeting: Review topics discussed at annual meeting	FGC	X	X	X
Cross-pollination with MRC and WRC: Identify tribal concerns and common themes with WRC and MRC	FGC Committees	X	X	X
FGC regulatory calendar: Update	FGC staff	X	X	X
Status of abalone recovery: Update as requested	DFW			
Proposition 64 (cannabis): Update as requested	DFW			
West Coast Ocean Alliance Tribal Caucus: Presentation and discussion regarding its work to enhance coordination and management for the ocean along the West Coast (Aug 2020)	FGC staff			

**Key:** X = Discussion scheduled      X/R = Recommendation developed and moved to FGC

FGC = California Fish and Game Commission

MRC = FGC's Marine Resources Committee

DFW = California Department of Fish and Wildlife

WRC = FGC's Wildlife Resources Committee

**Commissioners**  
**Peter S. Silva**, President

Jamul

**Samantha Murray**, Vice President  
Del Mar

**Jacque Hostler-Carmesin**, Member  
McKinleyville

**Eric Sklar**, Member  
Saint Helena

**Erika Zavaleta**, Member  
Santa Cruz

STATE OF CALIFORNIA  
Gavin Newsom, Governor

## Fish and Game Commission



*Wildlife Heritage and Conservation  
Since 1870*

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### TRIBAL COMMITTEE

Committee Chair: Commissioner Hostler-Carmesin

### August 17, 2021 Meeting Summary

Following is a summary of the California Fish and Game Commission (Commission) Tribal Committee (TC) meeting as prepared by staff. An audio recording of the meeting is available upon request. *Note that in this document the California Department of Fish and Wildlife is referred to as the Department.*

#### Call to order

The meeting was called to order at 1:01 p.m. The following Committee members and Commission and Department staff attended.

#### Committee Chair

Jacque Hostler-Carmesin      Present

#### Visiting Commissioner

Erika Zavaleta      Present

#### Commission Staff

Melissa Miller-Henson	Executive Director
Rachel Ballanti	Deputy Executive Director
Susan Ashcraft	Marine Advisor
Ari Cornman	Wildlife Advisor
Chuck Striplen	Tribal Advisor and Liaison
Cynthia McKeith	Staff Services Analyst
Corinna Hong	Sea Grant State Fellow

#### Department Staff

Chris Stoots	Captain, Law Enforcement Division and Acting Tribal Liaison
Scott Gardner	Chief, Wildlife Branch
Valerie Cook	Acting Chief, Fisheries Branch
Craig Shuman	Regional Manager, Marine Region
Becky Ota	Marine Habitat Conservation Program Manager, Marine Region

## **Other Invited Speakers**

Geneva E.B. Thompson	Assistant Secretary for Tribal Affairs, California Natural Resources Agency
Mike Esgro	Marine Ecosystems Program Manager & Tribal Liaison, California Ocean Protection Council
Lynne Barre	Seattle Branch Chief, National Oceanic and Atmospheric Administration (NOAA) Fisheries West Coast Regional Office, Protected Resources Division
Penny Ruvelas	Long Beach Branch Chief, NOAA Fisheries West Coast Regional Office, Protected Resources Division

### **1. Approve agenda and order of items**

TC approved the agenda in the order listed.

### **2. Commission justice, equity, diversity and inclusion plan**

Melissa Miller-Henson provided an update on the approved work plan for developing the Commission's justice, equity, diversity and inclusion (JEDI) plan.

Consistent with Commission direction, staff has continued to work on multiple tasks that begin implementing the JEDI work plan. Two of the key tasks are: (1) a purpose or vision statement and key definitions, and (2) a policy statement. Meeting participants were encouraged to engage in the Commission's JEDI planning effort.

### **3. Annual tribal planning meeting**

Chuck Striplen reviewed outcomes from the July 28, 2021 tribal planning meeting, held annually pursuant to the Commission's Tribal Consultation Policy.

This year's meeting was well attended, by both tribes and agency representatives. Tribal liaisons from six other state agencies, including new Assistant Secretary Geneva Thompson, provided updates on programs and initiatives of interest to tribes.

## ***Discussion***

Representatives from the Native American Fish and Wildlife Society, a national tribal organization established nearly 40 years ago, provided an overview of their programs and services related to tribal fish and wildlife management issues. To date, the society has not been very active with California tribes but, as its capacity has expanded in recent years, some of its programs and collaborations may be of interest to the Commission, the Department, and a number of tribes in California.

Commissioner Hostler-Carmesin moderated a lengthy discussion with tribal representatives about a wide range of topics. In this second year of COVID, tribes continue to experience disproportionate impacts to their communities – especially in being able to maintain program staffing to implement natural resource programs.

A major theme of the discussion centered on tribal access to resources, including tribal co-management agreements; legal and financial barriers to accessing traditional resources on state lands; and active cultural management of those resources. While access challenges

experienced by tribes fall within the jurisdictions of a number of state and federal agencies, the rulemaking authority of the Commission was noted as potentially having a role.

Tribes still view the lack of a legal definition (and management pathway) for “tribal subsistence” in California code as an obstacle to meaningful tribal co-management. A number of tribes have agreed to enter into agreements under existing code sections – some of which were discussed. Other tribes believe that management around “commercial” or “recreational” fishing is insufficient to meet tribal needs. A majority of attending tribes echoed the sentiments verbally and support the Commission formally exploring these issues in more detail, with some offering to actively participate in related discussions.

### ***TC Recommendation***

Add to the TC work plan a project to explore the definition of “tribal subsistence” in state code.

## **4. Co-management implementation**

Chuck Striplen provided a verbal review of the Commission’s co-management definition and vision statement and provided some detail on two existing tribal memoranda of understanding (MOA) with the Department. A resolution from the National Congress of American Indians supporting tribal co-management of federal lands (PDX-20-003), provided to the Commission by the Karuk Tribe, was described and distributed with meeting materials.

### ***Discussion***

A representative from the Big Pine Paiute Tribe inquired about the best way to engage with the State on potential new agreements. Scott Gardner provided his contact information and expressed willingness to engage with the tribe. Christ Stoot was also recognized as the acting tribal liaison for the Department and as another good point of contact.

Commissioner Zavaleta inquired whether existing MOAs all focus on individual species, or if some also pertain to area-based management. Chris Stoots described one of the challenges with implementing area-based agreements: existing agreements were developed under authorities related to scientific collection, tying them to specific species. There are efforts to consider and explore agreements related to land access.

## **5. Coastal Fishing Communities Project**

Susan Ashcraft reviewed staff recommendations from the 2019 staff synthesis report on coastal fishing community meetings held 2016-2018. To date, staff has provided draft analyses for five of the ten recommendations from the report. The analyses are currently available in various MRC meeting binders, but will be posted to the newly revised FGC Coastal Fishing Communities Project webpage (<https://fgc.ca.gov/Committees/Marine/Coastal-Fishing-Communities-Project>) in the coming days.

### ***Discussion***

Commissioner Hostler-Carmesin inquired as to whether tribes are able to participate in the policy roundtable discussions. Susan Ashcraft responded that these are very informal

discussions, there is room to explore tribal engagement in the overall process, and Commission staff is working on tribal engagement internally.

## **6. Marine Protected Areas Statewide Leadership Team**

This item was moved to the California Ocean Protection Council's agency update.

## **7. Pinnipeds and California's fisheries**

Lynne Barre provided a presentation on recent guidance and methods being developed by NOAA related to conflicts between pinnipeds and coastal fishing communities and tribes. With her California counterpart, Penny Ruvelas, she fielded questions from the commissioners and attending tribes.

### ***Discussion***

A representative from the Tolowa Dee-ni' Nation inquired about pinniped population control measures allowable under federal regulations. NOAA staff offered to follow up outside the meeting with additional resources to address tribal inquiries.

### ***TC Recommendation***

Modify the TC work plan by removing this topic. TC believes it has fully explored this matter and provided the interested tribes with substantive information and contacts for them to follow up with relevant federal partners.

## **8. Staff and agency updates requested by the Committee**

### ***(A) California Ocean Protection Council (OPC)***

Mike Esgro provided an update on the tribal marine stewards network and the marine protected areas decadal management review.

#### ***Discussion***

Sam Cohen, Government Affairs and Legal Officer to Santa Ynez Band of Chumash Indians, noted that the decadal management review update was very high level and did not include co-management. The tribe sent comments to OPC regarding the review and is open to sharing comments with other tribes.

Commissioner Hostler-Carmesin requested that Mr. Cohen share the comment letter with the Commission.

### ***(B) Department***

#### ***I. Law Enforcement Division***

Chris Stoots provided a brief verbal update on the Department's recent enforcement activities.

#### ***II. Wildlife and Inland Fisheries Division***

Valerie Cook, Scott Gardner, and Chris Stoots provided verbal updates on Department personnel changes, including hiring new Tribal Cultural Resource Specialist Sarah Fonseca; Valerie Cook's capacity as acting

fisheries branch chief; and Michelle Selmon's promotion to lands program manager.

#### *Discussion*

Chris Stoots and Scott Gardner provided additional perspectives on the existing tribal co-management agreements and the recent 2021 Traditional Ecological Knowledge Summit hosted by the Bi-State Tribal Natural Resources Committee. Danielle Gutierrez, Tribal Historic Preservation Officer for Big Pine Paiute Tribe, noted that she is part of the summit planning committee with Bi-State Sage Grouse, and invited everyone to participate in next year's summit. Danielle also announced a Bi-State Tribal Natural Resources Committee meeting on Sept 16, 2021.

Commissioner Zavaleta asked the Department to elaborate on responsibilities tribal members now have through the existing MOAs with respect to the fisheries in questions (e.g., what roles tribes have taken on through an MOA).

Chris Stoots described authorities related to tribal implementation and enforcement management of certain species, specifically as it pertains to take by tribal members, acting under a tribal member fishing license in traditional ancestral lands.

### *III. Marine Region*

#### *a. MPA Decadal Management Review*

Becky Ota provided a verbal update on the MPA decadal review, and the Department's collaborative efforts with OPC to engage with tribes on the decadal review.

#### *Discussion*

Commissioner Hostler-Carmesin asked if the Department was open to expanding the Tribal Steering Committee. Becky Ota confirmed the steering committee is open to anyone and indicated that she or Tova Handelman at OPC are the appropriate contacts for related inquiries.

#### *b. Potential rulemaking for commercial harvest of wild kelp and algae*

Craig Shuman provided a brief verbal update on a potential rulemaking for commercial harvest of wild kelp and algae, and the Department's ongoing consultation with the Intertribal Sinkyone Wilderness Council and its member tribes.

### **(C) Commission staff**

Ari Cornman and Susan Ashcraft provided brief verbal updates on work plan progress for the Wildlife and Marine Resources committees, WRC and MRC respectively. Melissa Miller-Henson briefly reviewed the Commission's most current rulemaking timetable.

#### *Discussion*

Danielle Gutierrez inquired about the geographic scope of WRC, and how best to engage in its work. Ari Cornman replied that the work of WRC can potentially include all

counties in the state, it's lands, lakes, rivers, streams – essentially anything that isn't the ocean environment. Ari also suggested that for tribes, the FGC tribal advisor can be their primary point of contact, who can then direct individuals/issues to the appropriate Committee.

## **9. Future agenda items**

### **(A) Review TC work plan topics, priorities, and timeline.**

Chuck Striplen provided an overview of the TC work plan topics, priorities, and timeline.

#### *Discussion*

Commissioner Zavaleta inquired about the climate policy work plan item. Melissa Miller-Henson indicated a potential policy had been on the work plan for several years and was sidelined by numerous commissioner and staff changes; she suggested it could be addressed during the future review of all Commission policies. Commissioners Hostler-Carmesin and Zavaleta agreed to keep a climate policy update on the work plan for now.

Commissioner Hostler-Carmesin proposed removing *Pinnipeds and California Fisheries* from the TC work plan.

#### *TC Recommendation*

Remove from the TC work plan the *Pinnipeds and California Fisheries* topic.

### **(B) Potential new agenda topics for Commission consideration**

#### *Discussion*

Government Affairs Coordinator Shirley Laos from Trinidad Rancheria noted that it was an appropriate time to add a tribal subsistence project to the TC work plan.

#### *TC Recommendation*

Add to the TC work plan a project on tribal subsistence.

## **10. General public comment for items not on agenda**

Geneva Thompson briefly reviewed efforts by the California Natural Resources Agency to consult with tribal nation partners on developing initiatives such as the State's commitment to conserve 30 percent of California's lands and coastal waters by 2030 (30x30) and enlist California's vast network of natural and working lands in the fight against climate change. Geneva also noted that the California Ocean Protection Council is seeking tribal input for best practices when engaging with tribal partners.

## **Adjourn**

Commissioner Hostler-Carmesin thanked Commissioner Zavaleta for joining as a visiting commissioner and to all the participants for the robust conversations.

TC adjourned at 3:56 p.m.



# Department of Fish & Wildlife Legislative Report

October 2021 Final Report

(as of October 11, 2021)

## CHAPTERED

### [AB 26](#)

**(Holden D) Peace officers: use of force.**

**Introduced:** 12/7/2020

**Last Amend:** 7/7/2021

**Status:** 9/30/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 403, Statutes of 2021.

**Location:** 9/30/2021-A. CHAPTERED

**Summary:** Current law requires each law enforcement agency, on or before January 1, 2021, to maintain a policy that provides a minimum standard on the use of force. Current law requires that policy, among other things, to require that officers report potential excessive force to a superior officer when present and observing another officer using force that the officer believes to be unnecessary, and to require that officers intercede when present and observing another officer using force that is clearly beyond that which is necessary, as specified. This bill would require those law enforcement policies to require those officers to immediately report potential excessive force, as defined.

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### **AB 63**

**(Petrie-Norris D) Marine resources: Marine Managed Areas Improvement Act: restoration and monitoring activities.**

**Introduced:** 12/7/2020

**Last Amend:** 8/30/2021

**Status:** 9/28/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 368, Statutes of 2021.

**Location:** 9/28/2021-A. CHAPTERED

**Summary:** Under the MMAIA, in a state marine conservation area, it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for commercial or recreational purposes, or a combination of commercial and recreational purposes, that the designating entity or managing agency determines would compromise protection of the species of interest, natural community, habitat, or geological features. The MMAIA authorizes the designating entity or managing agency to permit, among other things, research, education, and recreational activities. This bill would authorize the designating entity or managing agency to also permit restoration and monitoring activities.

### **AB 89**

**(Jones-Sawyer D) Peace officers: minimum qualifications.**

**Introduced:** 12/7/2020

**Last Amend:** 9/3/2021

**Status:** 9/30/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 405, Statutes of 2021.

**Location:** 9/30/2021-A. CHAPTERED

**Summary:** Current law requires the Commission on Peace Officer Standards and Training (POST) to establish a certification program for specified peace officers, including officers of the Department of the California Highway Patrol. Current law requires the commission to establish basic, intermediate, advanced, supervisory, management, and executive certificates for the purpose of fostering the education and experience necessary to perform general police service duties. Current law requires certificates to be awarded on the basis of a combination of training, education, experience, and other prerequisites, as determined by the commission. This bill would require the office of the Chancellor of the California Community Colleges to develop a modern policing degree program, with the commission and other stakeholders to serve as advisors, as specified, and to submit a report on recommendations to the Legislature outlining a plan to implement the program on or before June 1, 2023.

### **AB 141**

**(Committee on Budget) Budget Act of 2021: Department of Cannabis Control: licensure: safety and quality assurance.**

**Introduced:** 1/8/2021

**Last Amend:** 6/27/2021

**Status:** 7/12/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 70, Statutes of 2021.

**Location:** 7/5/2021-A. CHAPTERED

**Summary:** Would establish the Department of Cannabis Control within the Business, Consumer Services, and Housing Agency, would transfer to this department the powers, duties, purposes, functions, responsibilities, and jurisdiction of the bureau, the

Department of Food and Agriculture, and the State Department of Public Health under MAUCRSA, except as specified, and would make conforming changes. The bill would require the department to be under the supervision and control of a director.

### **AB 223**

**(Ward D) Wildlife: dudleya: taking and possession.**

**Introduced:** 1/11/2021

**Last Amend:** 7/15/2021

**Status:** 9/28/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 370, Statutes of 2021.

**Location:** 9/28/2021-A. CHAPTERED

**Summary:** Would make it unlawful to uproot, remove, harvest, or cut dudleya, as defined, from land owned by the state or a local government or from property not their own without written permission from the landowner in their immediate possession, except as provided, and would make it unlawful to sell, offer for sale, possess with intent to sell, transport for sale, export for sale, or purchase dudleya uprooted, removed, harvested, or cut in violation of that provision. The bill would require a violation of those provisions, or any rule, regulation, or order adopted pursuant to those provisions, to be a misdemeanor punishable by a specified fine, imprisonment in a county jail for not more than 6 months, or both the fine and imprisonment.

### **AB 315**

**(Stone D) Voluntary stream restoration property owner liability: indemnification.**

**Introduced:** 1/25/2021

**Last Amend:** 9/3/2021

**Status:** 10/6/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 580, Statutes of 2021.

**Location:** 10/6/2021-A. CHAPTERED

**Summary:** Would require a qualifying state agency, as defined, that funds a project to restore fish and wildlife habitats to indemnify and hold harmless a real property owner who voluntarily allows their real property to be used for such a project from civil liability for property damage or personal injury resulting from the project if the project qualifies for a specified exemption and meets specified requirements, including that the liability arises from, and the real property owner or any person or entity retained by the real property owner does not perform, the construction, design specifications, surveying, planning, supervision, testing, or observation of construction related to the project. The bill would authorize a qualifying state agency to indemnify and hold harmless a real property owner who voluntarily allows their real property to be used for that project from civil liability for property damage or personal injury resulting from the project in the case the project does not meet the specified exemption.

### **AB 379**

**(Gallagher R) Wildlife conservation.**

**Introduced:** 2/1/2021

**Last Amend:** 8/26/2021

**Status:** 10/8/2021-Signed by the Governor

**Location:** 10/8/2021-A. CHAPTERED

**Summary:** Current law authorizes the Department of Fish and Wildlife, with the approval of the Wildlife Conservation Board , to enter into agreements with any other

department or agency of this state, any local agency, or nonprofit organization, to provide for the construction, management, or maintenance of the facilities authorized by the board, and authorizes such other department or agency of this state, local agency, or nonprofit organization, and each of them to construct, manage, or maintain those facilities pursuant to the agreement. Current law authorizes the board to make grants or loans to nonprofit organizations, local governmental agencies, federal agencies, and state agencies for various purposes in connection with fish and wildlife habitats. This bill would authorize the department to also enter into that type of agreement with a California Native American tribe.

#### **AB 525**

##### **(Chiu D) Energy: offshore wind generation.**

**Introduced:** 2/10/2021

**Last Amend:** 9/3/2021

**Status:** 9/23/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 231, Statutes of 2021.

**Location:** 9/23/2021-A. CHAPTERED

**Summary:** Current law requires the Public Utilities Commission and the Energy Commission to undertake various actions in furtherance of meeting the state's clean energy and pollution reduction objectives. This bill would require the Energy Commission, on or before June 1, 2022, to evaluate and quantify the maximum feasible capacity of offshore wind to achieve reliability, ratepayer, employment, and decarbonization benefits and to establish offshore wind planning goals for 2030 and 2045, as specified.

#### **AB 614**

##### **(Aguiar-Curry D) Wildlife habitat: birds.**

**Introduced:** 2/12/2021

**Last Amend:** 7/1/2021

**Status:** 10/5/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 521, Statutes of 2021.

**Location:** 10/5/2021-A. CHAPTERED

**Summary:** Would raise by \$10 the upland game bird hunting validation and the state duck hunting validation fees, as specified, with that \$10 to be deposited, and available upon appropriation to the Department of Fish and Wildlife for the Nesting Bird Habitat Incentive Program, in the Nesting Bird Habitat Incentive Program Account, which the bill would create in the Fish and Game Preservation Fund.

#### **AB 804**

##### **(Dahle, Megan R) Free hunting days.**

**Introduced:** 2/16/2021

**Last Amend:** 8/16/2021

**Status:** 9/30/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 413, Statutes of 2021.

**Location:** 9/30/2021-A. CHAPTERED

**Summary:** Current law authorizes the Director of Fish and Wildlife to establish 2 free hunting days per year: one in the fall, and one in the winter. Current law authorizes a California unlicensed resident to hunt during a free hunting day if accompanied by a licensed hunter, subject to certain conditions. Existing law prohibits these provisions

from being implemented until the Department of Fish and Wildlife's Automated License Data System is fully operational for at least one year. This bill would require, rather than authorize, the director to establish 2 free hunting days per year no later than July 1, 2023. The bill would require the department to issue a registration for free hunting days to any California resident who provides the department with all of the information required to issue an annual California hunting license and evidence of completing a course in hunter education, as specified.

#### **AB 817**

**(Wood D) Sport fishing licenses: electronic display: 12-consecutive-month licenses.**

**Introduced:** 2/16/2021

**Last Amend:** 7/15/2021

**Status:** 10/7/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 607, Statutes of 2021.

**Location:** 10/7/2021-A. CHAPTERED

**Summary:** Would authorize the Department of Fish and Wildlife, on or before January 1, 2023, to provide an option to display a sport fishing license, validation, report card, or other sport fishing entitlement issued pursuant to the Fish and Game Code or regulations adopted pursuant to this code electronically on a mobile device, except as provided. The bill would provide that a person who displays a sport fishing entitlement electronically on a mobile device in accordance with this provision shall be deemed to be in compliance with any requirement to possess or affix the entitlement.

#### **AB 819**

**(Levine D) California Environmental Quality Act: notices and documents: electronic filing and posting.**

**Introduced:** 2/16/2021

**Last Amend:** 5/28/2021

**Status:** 7/16/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 97, Statutes of 2021.

**Location:** 7/16/2021-A. CHAPTERED

**Summary:** CEQA requires, if an environmental impact report is required, the lead agency to mail a notice of determination to each responsible agency, the Office of Planning and Research, and public agencies with jurisdiction over natural resources affected by the project. CEQA requires the lead agency to provide notice to the public and to organizations and individuals who have requested notices that the lead agency is preparing an environmental impact report, negative declaration, or specified determination. CEQA requires notices for an environmental impact report to be posted in the office of the county clerk of each county in which the project is located. This bill would instead require the lead agency to mail or email those notices, and to post them on the lead agency's internet website. The bill would also require notices of an environmental impact report to be posted on the internet website of the county clerk of each county in which the project is located.

#### **AB 1138**

**(Rubio, Blanca D) Unlawful cannabis activity: civil enforcement.**

**Introduced:** 2/18/2021

**Last Amend:** 9/3/2021

**Status:** 10/5/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 530, Statutes of 2021.

**Location:** 10/5/2021-A. CHAPTERED

**Summary:** Would impose a civil penalty on persons aiding and abetting unlicensed commercial cannabis activity of up to 3 times the amount of the license fee for each violation, but in no case more than \$30,000 for each violation. The bill would prohibit filing an action for civil penalties brought against a person pursuant to MAUCRSA 3 years after the first date of discovery of the violation.

### **AB 1183**

**(Ramos D) California Desert Conservation Program.**

**Introduced:** 2/18/2021

**Last Amend:** 7/12/2021

**Status:** 9/28/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 380, Statutes of 2021.

**Location:** 9/28/2021-A. CHAPTERED

**Summary:** Would establish the California Desert Conservation Program under the administration of the Conservation Board to: (1) protect, preserve, and restore the natural, cultural, and physical resources of the portions of the Mojave and Colorado Deserts region in California through the acquisition, restoration, and management of lands, (2) promote the protection and restoration of the biological diversity of the region, as specified, (3) provide for resilience in the region to climate change, as provided, (4) protect and improve air quality and water resources within the region, and (5) undertake efforts to enhance public use and enjoyment of lands owned by the public, as provided.

### **AB 1219**

**(Berman D) Income taxes: Natural Heritage Preservation Tax Credit Act of 2000.**

**Introduced:** 2/19/2021

**Status:** 9/30/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 419, Statutes of 2021.

**Location:** 9/30/2021-A. CHAPTERED

**Summary:** The Personal Income Tax Law and the Corporation Tax Law allow a credit against the taxes imposed by those laws in the amount equal to 55% of the fair market value of any qualified contribution, defined as a contribution of property that has been approved for acceptance by the Wildlife Conservation Board, that is made on or after January 1, 2010, and no later than June 30, 2020, during the taxable year pursuant to the Natural Heritage Preservation Tax Credit Act of 2000, as provided. Those laws allow the credit to be carried over for 15 years if necessary. This bill would renew this tax credit for qualified contributions on or after January 1, 2021, and no later than June 30, 2026.

### **AB 1298**

**(Bloom D) Pesticides: use of 2nd generation anticoagulant rodenticides.**

**Introduced:** 2/19/2021

**Last Amend:** 3/25/2021

**Status:** 10/4/2021-Approved by the Governor. Chaptered by Secretary of State - Chapter 479, Statutes of 2021.

**Location:** 10/4/2021-A. CHAPTERED

**Summary:** Current law prohibits the use of 2nd generation anticoagulant rodenticides in

wildlife habitat areas. Current law additionally prohibits the use of 2nd generation anticoagulant rodenticides in the state until the director certifies to the Secretary of State that certain conditions have occurred including that the Department of Fish and Wildlife determines that control or eradication of invasive rodent populations is necessary for the protection of threatened or endangered species or their habitats and requires the use of a 2nd generation anticoagulant rodenticide. Current law exempts the use of 2nd generation anticoagulant rodenticides from these prohibitions under certain circumstances. This bill would delete the requirement that the Director of Pesticide Regulation certify that the Department of Fish and Wildlife has made that specified determination.

## **SB 2**

**(Bradford D) Peace officers: certification: civil rights.**

**Introduced:** 12/7/2020

**Last Amend:** 9/1/2021

**Status:** 9/30/2021-Approved by the Governor. Chaptered by Secretary of State. Chapter 409, Statutes of 2021.

**Location:** 9/30/2021-S. CHAPTERED

**Summary:** Under current law, the Tom Bane Civil Rights Act, if a person or persons, whether or not acting under color of law, interferes or attempts to interfere, by threats, intimidation, or coercion, with the exercise or enjoyment by any individual or individuals of rights secured by the Constitution or laws of the United States, or of the rights secured by the Constitution or laws of this state, the Attorney General, or any district attorney or city attorney, is authorized to bring a civil action for injunctive and other appropriate equitable relief in the name of the people of the State of California, in order to protect the exercise or enjoyment of the right or rights secured. Current law also authorizes an action brought by the Attorney General, or any district attorney or city attorney, to seek a civil penalty of \$25,000. Current law also allows an individual whose exercise or enjoyment of rights has been interfered with to prosecute a civil action for damages on their own behalf. This bill would eliminate certain immunity provisions for peace officers and custodial officers, or public entities employing peace officers or custodial officers sued under the act.

## **SB 16**

**(Skinner D) Peace officers: release of records.**

**Introduced:** 12/7/2020

**Last Amend:** 8/30/2021

**Status:** 9/30/2021-Approved by the Governor. Chaptered by Secretary of State. Chapter 402, Statutes of 2021.

**Location:** 9/30/2021-S. CHAPTERED

**Summary:** Current law makes peace officer and custodial officer personnel records and specified records maintained by any state or local agency, or information obtained from these records, confidential and prohibits these records from being disclosed in any criminal or civil proceeding except by discovery. Current law sets forth exceptions to this policy, including, among others, records relating to specified incidents involving the discharge of a firearm, sexual assault, perjury, or misconduct by a peace officer or custodial officer. Existing law makes a record related to an incident involving the use of force against a person resulting in death or great bodily injury subject to disclosure. Current law requires a state or local agency to make these excepted records available for inspection pursuant to the California Public Records Act, subject to redaction as

specified. This bill would make a sustained finding involving force that is unreasonable or excessive, and any sustained finding that an officer failed to intervene against another officer using unreasonable or excessive force, subject to disclosure.

### **SB 80**

**(McGuire D) Commercial fishing: inspection: crab traps.**

**Introduced:** 12/15/2020

**Last Amend:** 9/3/2021

**Status:** 10/9/2021-Signed by the Governor

**Location:** 10/9/2021-S. CHAPTERED

**Summary:** Would require a person who holds a commercial fishing license or a commercial fish business license, upon request of an authorized agent or employee of the Department of Fish and Wildlife, to immediately relinquish, at no charge, fish or parts of fish caught or landed in California to the department for the purpose of collecting a biological sample. Because a violation of this provision would be a crime, this bill would impose a state-mandated local program.

### **SB 160**

**(Committee on Budget and Fiscal Review) Department of Cannabis Control: licensure: appellations of origin: trade samples.**

**Introduced:** 1/8/2021

**Last Amend:** 7/11/2021

**Status:** 7/16/2021-Approved by the Governor. Chaptered by Secretary of State. Chapter 87, Statutes of 2021.

**Location:** 7/16/2021-S. CHAPTERED

**Summary:** AB 141 of the 2021–22 Regular Session (AB 141) would, among other things, establish the Department of Cannabis Control within the Business, Consumer Services, and Housing Agency, would transfer to this department the powers, duties, purposes, functions, responsibilities, and jurisdiction of the bureau, the Department of Food and Agriculture, and the State Department of Public Health under MAUCRSA, except as specified, and would make conforming changes. This bill would revise, as described below, certain provisions of MAUCRSA that would be amended or added by AB 141, and would become operative only if AB 141 is enacted before this bill.

MAUCRSA defines “manufacture” for purposes of the act to mean to compound, blend, extract, infuse, or otherwise make or prepare a cannabis product. This bill would revise the definition of “manufacture” to include to package or label a cannabis product. MAUCRSA authorizes licensing authorities to create, issue, deny, renew, discipline, suspend, or revoke licenses, and provides that this is a matter of statewide concern. AB 141 would give the department this authority and would remove the statement that this is a matter of statewide concern.

### **SB 369**

**(Pan D) Flood control: Yolo Bypass Cache Slough Partnership Multibenefit Program.**

**Introduced:** 2/10/2021

**Last Amend:** 6/14/2021

**Status:** 9/23/2021-Approved by the Governor. Chaptered by Secretary of State. Chapter 275, Statutes of 2021.

**Location:** 9/23/2021-S. CHAPTERED

**Summary:** Would establish the Yolo Bypass Cache Slough Partnership Multibenefit Program to support the development and implementation of projects within the Yolo Bypass and Cache Slough region. The bill would define “Yolo Bypass Cache Slough Partnership” to mean the multiagency partnership established pursuant to a memorandum of understanding signed in May 2016 by a total of 15 participating federal, state, and local agencies. The bill would require the participating state agencies, including the Natural Resources Agency, the Department of Water Resources, the Department of Fish and Wildlife, the Central Valley Flood Protection Board, the State Water Resources Control Board, and the Central Valley Regional Water Quality Control Board, to work in collaboration with the participating federal and local agencies and the City of West Sacramento, if it chooses to participate, to advance specified objectives in the Yolo Bypass and Cache Slough region.

### **SB 716**

**(McGuire D) Land use: habitat restoration and enhancement: mitigation lands.**

**Introduced:** 2/19/2021

**Last Amend:** 9/3/2021

**Status:** 10/8/2021-Approved by the Governor. Chaptered by Secretary of State. Chapter 735, Statutes of 2021.

**Location:** 10/8/2021-S. CHAPTERED

**Summary:** The Habitat Restoration and Enhancement Act authorizes a project proponent to submit a habitat restoration or enhancement project to the Director of Fish and Wildlife for approval. This bill would extend the operation of the act until January 1, 2027, and would require the Department of Fish and Wildlife to submit a report on the implementation of the act to the Legislature no later than December 31, 2025.

### **SB 790**

**(Stern D) Wildlife connectivity actions: compensatory mitigation credits.**

**Introduced:** 2/19/2021

**Last Amend:** 8/30/2021

**Status:** 10/8/2021-Approved by the Governor. Chaptered by Secretary of State. Chapter 738, Statutes of 2021.

**Location:** 10/8/2021-S. CHAPTERED

**Summary:** Would authorize the Department of Fish and Wildlife to approve compensatory mitigation credits for wildlife connectivity actions taken under the conservation and mitigation banking program or the regional conservation investment strategy program. In order to receive compensatory mitigation credits from the department under this authority, the bill would require the wildlife connectivity action to meet specified requirements. The bill would authorize a compensatory mitigation credit created under this authority to be used to fulfill, in whole or in part, compensatory mitigation requirements established under any state or federal environmental law, as determined by the applicable local, state, or federal regulatory agency.

### **SB 822**

**(Committee on Natural Resources and Water) Marine resources.**

**Introduced:** 3/9/2021

**Last Amend:** 6/21/2021

**Status:** 10/9/2021-Signed by the Governor

**Location:** 10/9/2021-S. CHAPTERED

**Summary:** Current law establishes the Department of Fish and Wildlife. Current law provides that it is the department's mission to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment of the public. Current law establishes various provisions prohibiting the taking of fish under specified circumstances, including the taking of any fish for the sole purpose of removing its eggs except for the purpose of developing a brood stock for aquaculture purposes. This bill would authorize the department to issue a letter of authorization to allow the taking of marine living resources or to authorize the take and possession of marine resources and possession of gear or equipment that would otherwise be prohibited in marine waters to support data collection, environmental cleanup, hazard removal, or public health and safety.

## **VETOED**

None.

For more information call:

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Julie Oltmann, CDFW Legislative Representative at (916) 653-9772

Kristin Goree, CDFW Legislative Coordinator at (916) 653-4183

You can also find legislative information on the web at <http://leginfo.legislature.ca.gov/> and follow the prompts from the 'bill information' link.

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**Samantha Murray**, Vice President  
Del Mar

**Jacque Hostler-Carmesin**, Member  
McKinleyville

**Eric Sklar**, Member  
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STATE OF CALIFORNIA  
Gavin Newsom, Governor

## Fish and Game Commission



*Wildlife Heritage and Conservation  
Since 1870*

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September 7, 2021

Honorable Members, California State Senate  
Honorable Members, California State Assembly  
State Capitol Building  
Sacramento, CA 95814

### **Re: Support for plastic pollution reduction policies and actions**

Dear policy-makers,

The California Fish and Game Commission has a vision of “a healthy, biodiverse and natural California in which native fish and wildlife thrive within dynamic ecosystems and inspire human interaction and enjoyment.” In support of the Commission’s vision, I write you today to convey strong support for legislative action to reduce plastic pollution and waste in California.

As you are likely aware, deadly levels of plastic pollution have been found in the digestive systems of seabirds, sea turtles and marine mammals, including whales and dolphins. Both large and small plastic fragments are increasingly found in streams, rivers and coastal ecosystems, contaminating fish, plants, and other organisms, and degrading habitat for wildlife. In addition to concerns for California’s wildlife, plastic particles have been found in drinking water, bottled water, table salt, and fish and shellfish from local California fish markets, posing risks to human health and the quality of life for all Californians.

Thirty-three billion pounds of plastic enter the world’s marine environments every year, devastating our shared ocean and coastal ecosystems.<sup>1</sup> Without action, the amount of plastic entering the global ocean each year will double by 2025.<sup>2</sup> Environmental degradation is driven by annual global plastic production, which continues to rise. Nearly all plastics are produced from fossil fuels and, therefore, are a significant source of greenhouse gas emissions that contribute to climate change.<sup>3</sup>

<sup>1</sup> van Sebille, E., Wilcox, C., Lebreton, L., et al. (2015) *A global inventory of small floating plastic debris*. Environmental Research Letters. <https://iopscience.iop.org/article/10.1088/1748-9326/10/12/124006>

<sup>2</sup> Matthew MacLeod, Hans Peter H. Arp, Mine B. Tekman, Annika Jahnke. *The global threat from plastic pollution*. Science, 2021; 373 (6550): 61 DOI: 10.1126/science.abg5433 <https://www.sciencedaily.com/releases/2021/07/210701140931.htm>

<sup>3</sup> Center for International Environmental Law. *Plastic & Climate: The Hidden Costs of a Plastic Planet*. May 2019. <https://www.ciel.org/wp-content/uploads/2019/05/Plastic-and-Climate-FINAL-2019.pdf>

At current rates, plastic production is projected to more than triple by 2050 and could consume 20 percent of all fossil fuel production, slowing the transition to a low carbon economy and further exacerbating climate change. However, as demand falls for fossil fuels for primary use in energy production, plastics production is a way for fossil fuels industries to offset the demand reduction, which poses an increasing threat to California's wildlife and climate.

While recycling can play an important role in reducing our reliance on new, virgin plastic production, current rates are insufficient. In 2018, the national recycling rate for plastics was 8.7 percent, as reported by the U.S. Environmental Protection Agency.<sup>4</sup> Even in California where the populace is environmentally-minded, less than 15 percent of single-use plastic is recycled. Plastic waste places enormous financial burdens on California communities for cleanup and disposal costs; local jurisdictions spend \$420 million annually to clean up and prevent plastic and other litter from entering the state's oceans and waterways.<sup>5</sup> In 2018, nearly 27 million tons of plastic were sent to landfills in the U.S. – representing 18.5% of all municipal solid waste. At present, the California Department of Fish and Wildlife, which is responsible for ensuring the sustainable management of California's wildlife and their habitats, is deeply underfunded and unable to undertake activities associated with mitigating the impact of plastic pollution entering the state's environment and, ultimately, impacting fish and wildlife.

Given the well-documented adverse impacts of plastic pollution and waste on wildlife and their habitats, the Commission urges the California State Legislature to prioritize enactment of meaningful policies and other measures that:

- Reduce our reliance on plastic products developed with fossil fuels and move toward a foundation of renewable materials and a circular economy;
- develop long-term incentives and funding mechanisms to increase infrastructure for recycling, composting, reuse and remanufacturing, in support of greater circularity;
- promote the design and require the deployment of reusable and refillable product delivery systems as an alternative to single-use plastic food ware and packaging;
- reduce the types of plastic products that disproportionately litter and impact the state's coasts, marine and freshwater environments, wildlife and human communities, especially single-use plastic packaging, food ware and other items consumed in the state; and
- restore and protect rivers, beaches, and marine and other natural environments impacted by litter and pollution associated with plastics;

We also support the following measures identified by our sister organization, the California Ocean Protection Council:<sup>6</sup>

- Improve management of waste, recycling and compost receptacles in high use areas;

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<sup>4</sup> US EPA. *Plastics: Material-Specific Data*. <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/plastics-material-specific-data>; accessed September 1, 2021.

<sup>5</sup> Kier Associates. *Waste in Our Water: The Annual Cost to California Communities of Reducing Litter That Pollutes Our Waterways*. Natural Resources Defense Council. August 2013. 56 pp. [https://www.nrdc.org/sites/default/files/oce\\_13082701a.pdf](https://www.nrdc.org/sites/default/files/oce_13082701a.pdf)

<sup>6</sup> California Ocean Protection Council. *2018 California Ocean Litter Prevention Strategy: Addressing Marine Debris from Source to Sea*. June 2018. [https://opc.ca.gov/webmaster/media\\_library/2018/06/2018\\_CA\\_OceanLitterStrategy.pdf](https://opc.ca.gov/webmaster/media_library/2018/06/2018_CA_OceanLitterStrategy.pdf)

- prohibit or discourage common ocean litter items in public institutions, and retail and food service establishments through government policies or mandates; and
- drive individual behavior change in purchasing decisions by educating consumers about the sources, impacts and alternatives to products that commonly become ocean litter.

Please don't hesitate to engage the California Fish and Game Commission in support of legislative efforts that align with these objectives.

Sincerely,

 for  
Peter S. Silva  
President

ec: Angie Wei, Legislative Affairs Secretary, Office of Governor Gavin Newsom  
Stuart Thompson, Chief Deputy Legislative Secretary, Office of Governor Gavin Newsom  
Hazel Miranda, Deputy Legislative Secretary, Office of Governor Gavin Newsom  
Miranda Flores, Deputy Secretary for Legislation, California Natural Resources Agency  
Charlton Bonham, Director, California Department of Fish and Wildlife  
Clark Blanchard, Deputy Director for Legislative Affairs, California Department of Fish  
and Wildlife

State of California  
AIR RESOURCES BOARD

# **Public Hearing to Consider the Proposed Amendments to the Commercial Harbor Craft Regulation**

## **Staff Report: Initial Statement of Reasons**

**Date of Release: September 21, 2021**  
**Scheduled for Consideration: November 19, 2021**

**Location:**  
California Air Resources Board  
4001 Iowa Avenue  
Riverside, California 92507

This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the California Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

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## List of Abbreviations and Acronyms

°C	Degrees Celsius
µg/m <sup>3</sup>	Microgram per Cubic Meter
AB	Assembly Bill
ACE	Alternative Control of Emissions
ADPF	Active Diesel Particulate Filter
AQMP	Air Quality Management Plan
ASD	Azimuth Stern Drive
ASTM	American Society for Testing and Materials
ATB	Articulated Tug Barge
ATCM	Airborne Toxic Control Measure
BACT	Best Available Control Technology
BC	Black Carbon
bhp	Brake Horsepower
Board	California Air Resources Board
C Plans	Oil Spill Contingency Plans
CAA	Clean Air Act
CAAP	Clean Air Action Plan
CAECS	CARB Approved Emission Control Strategy
CalEPA	California Environmental Protection Agency
CAPP	Community Air Protection Program
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CERP	Community Emissions Reduction Plan
CFR	Code of Federal Regulations
CH <sub>4</sub>	Methane
CHC	Commercial Harbor Craft
CHE	Cargo Handling Equipment
CNG	Compressed Natural Gas
CMA	California Maritime Academy
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
CPCN	Certificate of Public Convenience and Necessity
CPFV	Commercial Passenger Fishing Vessel
CPUC	California Public Utilities Commission
CSC	Community Steering Committee
DAC	Disadvantaged Community
DECS	Diesel Emission Control Strategy
DEF	Diesel Exhaust Fluid
DMV	Department of Motor Vehicles
DOF	Department of Finance
DPF	Diesel Particulate Filter

DPM	Diesel Particulate Matter
EA	Environmental Analysis
ECA	Emission Control Area
ECM	Emission Control Module
EEZ	Exclusive Economic Zone
EF	Emission Factor
EGR	Exhaust Gas Recirculation
EIAPP	Engine International Air Pollution Prevention
EO	Executive Officer
EU	European Union
FCC	Federal Communications Commission
FCF	Fuel Correction Factor
g/bhp-hr	Gram Per Brake Horsepower-Hour
g/kW-hr	Gram Per Kilowatt-Hour
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GSP	Gross State Product
GT	Gross Tonnage
GT ITC	Gross Tonnage in Conventional International Measurement System
GWP	Global Warming Potential
H <sub>2</sub> O	Water
HC	Hydrocarbons
HDVIP	Heavy-Duty Vehicle Inspection Program
HFC	Hydrofluorocarbon
HIN	Hull Identification Number
Hp	Horsepower
HRA	Health Risk Assessment
HSC	Health and Safety Code
I/M	Inspection and Maintenance
IAPP	International Air Pollution Prevention
IMO	International Maritime Organization
IPT	Incidence Per Ton
ISO	International Organization for Standardization
ISOR	Initial Statement of Reasons
ITU	International Telecommunication Union
IWA	Inland Waterway Auxiliary
IWP	Inland Waterway Propulsion
kW	Kilowatt
L/cylinder	Liter Per Cylinder
LCFS	Low Carbon Fuel Standard
LF	Load Factor
LNG	Liquefied Natural Gas
LOA	Length Overall
MCAS	Maritime Clean Air Strategy
Mg	Milligram

MMSI	Maritime Mobile Service Industry
MT	Metric Ton
MTPY	Metric Tons Per Year
MY	Model Year
N <sub>2</sub>	Nitrogen Gas
N <sub>2</sub> O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NJDEP	New Jersey Department of Environmental Protection
NLS	Noxious Liquid Substance
Nm	Nautical Mile
NO	Nitric Oxide
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Oxides of Nitrogen
NTIA	National Telecommunications and Information Administration
OEHHA	Office of Environmental Health Hazard Assessment
OEM	Original Equipment Manufacturer
OGV	Ocean-Going Vessel
OSPR	Office of Spill Prevention and Response
PEMS	Portable Emissions Measurement System
PERP	Portable Equipment Registration Program
PM	Particulate Matter
PM <sub>2.5</sub>	Fine Particulate Matter ( $\leq 2.5$ micrometer in diameter)
POLA	Port of Los Angeles
POLB	Port of Long Beach
ppb	Parts Per Billion
ppm	Parts Per Million
ppmdv	Parts Per Million - Dry Volume
PSIP	Periodic Smoke Inspection Program
PUC	Public Utilities Code
PUCTRA	Public Utilities Commission Transportation Reimbursement Account
PVA	Preliminary Verification Application
R100/R99	100 or 99 Percent Renewable Diesel
RCW	Regulated California Waters
Reefer	Refrigerated Cargo Vessel
REMI	Regional Economic Models, Inc.
ROG	Reactive Organic Gases
Ro-Ro	Roll On-Roll Off Vessels
RRP	Risk Reduction Plan
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SC-CO <sub>2</sub>	Social Cost of Carbon
SCR	Selective Catalytic Reduction
SIMW	Spark-Ignition Marine Watercraft
SIP	State Implementation Plan
SLCP	Short-Lived Climate Pollutant

SO <sub>2</sub>	Sulfur Dioxide
Soot	Black Carbon
SO <sub>x</sub>	Oxides of Sulfur
SRIA	Standardized Regulatory Impact Assessment
TAC	Toxic Air Contaminant
TEU	Twenty-Foot Equivalent Unit
TPY	Tons Per Year
U.S. EPA	United States Environmental Protection Agency
ULSD	Ultra-Low Sulfur Diesel
USCG	United States Coast Guard
UVI	Unique Vessel Identifier
VCC	Vessel Common Carrier
VDECS	Verified Diesel Emission Control Strategy
VEE	Visual Emissions Evaluation
VMAP	Vessel Mutual Assistance Plan
VOC	Volatile Organic Compound
WETA	Water Emergency Transportation Authority
WHO	World Health Organization
WOEIP	West Oakland Environmental Indicators Project
ZEAT	Zero-Emission and Advanced Technology

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## Executive Summary

### A. Purpose of the Rulemaking

California Air Resources Board (CARB) staff is proposing to amend the Commercial Harbor Craft (CHC) Regulation. Since the original adoption of the CHC regulation in 2008, and its amendment in 2010, CHC vessel owners have replaced older engines with newer and cleaner engines, which reduced the emissions of air pollutants including diesel particulate matter (DPM), fine particulate matter (PM<sub>2.5</sub>), oxides of nitrogen (NO<sub>x</sub>), oxides of sulfur (SO<sub>x</sub>), reactive organic gases (ROG), and greenhouse gases (GHG). After the Current Regulation is fully implemented by the end of 2022, there will be additional needs to reduce emissions from CHC.

In response to Assembly Bill (AB) 617 (Garcia, Chapter 136, Statutes of 2017), CARB created the Community Air Protection Program (CAPP) to address the environmental and health inequities from air pollution experienced by certain disadvantaged communities (DAC) in the State. The CAPP Blueprint contains a list of statewide actions that should be undertaken to achieve reductions in these disproportionately burdened communities.<sup>1</sup> Many CHC operate in or adjacent to DACs, and emission reductions from these vessels will directly benefit these communities experiencing cumulative exposure burden.

Additionally, Governor Newsom's Executive Order N-79-20 directed CARB and other State agencies to transition off-road vehicles and equipment to 100 percent zero-emission by 2035 where feasible. To address this, staff proposes provisions to accelerate deployment of Zero-Emission and Advanced Technologies (ZEAT), which includes requiring all short-run ferries to switch to zero-emissions propulsion and auxiliary power systems, and for new excursion vessels to be equipped with zero-emission capable hybrid systems. There are other use cases of CHC operations that can be transitioned to zero-emission over the coming decade. Therefore, in response to Executive Order N-79-20, CARB staff has proposed amendments that creates compliance flexibility for introducing zero-emission technology into the marine market.

The Proposed Amendments will assist California to achieve its National Ambient Air Quality Standards (NAAQS) set by the U.S. Environmental Protection Agency (U.S. EPA). Most of the emission reductions expected from the adoption of the Proposed Amendments will occur in areas with significant challenges with air quality, and reductions will assist the State to attain the NAAQS.

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<sup>1</sup> CARB, Community Air Protection Blueprint, October 2018, last accessed July 6, 2021, [https://ww2.arb.ca.gov/sites/default/files/2020-03/final\\_community\\_air\\_protection\\_blueprint\\_october\\_2018\\_acc.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-03/final_community_air_protection_blueprint_october_2018_acc.pdf).

While achieving emission reductions through cleaner combustion and zero-emission technologies, the Proposed Amendments are expected to provide significant health benefits, avoid premature death and mortality, and protect workers and on-vessel passengers from exposure to diesel and other combustion-generated air pollutants.

## **B. Summary of Proposal**

The Proposed Amendments would apply more stringent requirements to in-use and new vessels, expand the regulatory requirements to vessel categories that were previously exempt from in-use vessel requirements, and apply reporting, infrastructure, and other requirements onto facilities, such as seaports, terminals, marinas, and harbors that conduct business with CHC. Amending the Current Regulation would further reduce emissions from harbor craft by establishing expanded and more stringent requirements for CHC engines and mandates for accelerated deployment of ZEAT. The following is a summary of the key provisions introduced in the Proposed Amendments.

### **1. In-Use and New-Build Vessel Emissions Performance Standards**

Staff proposes more stringent engine emissions performance standards for NO<sub>x</sub> and particulate matter (PM). To meet the required emissions performance standards, vessel owners and operators could choose to repower and retrofit engines on in-use vessels or obtain a new-build vessel. For engines rated less than or equal to 600 kilowatts (kW), the Proposed Amendments would require a performance standard equivalent to Tier 3 engine plus a diesel particulate filter (DPF), or Tier 4 plus a DPF if there is an available engine model certified to Tier 4 by the compliance date of the engine. Engines rated greater than 600 kW would need to meet a performance standard equivalent to a Tier 4 engine plus a DPF. Staff is proposing a performance standard that is more stringent than the U.S. EPA standards for marine Tier 3 and marine Tier 4 engines. It is important to note that in the Proposed Amendments to the CHC Regulation, CARB is not proposing new emission standards for marine engine manufacturers selling engines in California.

### **2. Expanded Vessel Categories**

Subjecting additional CHC vessel categories to in-use requirements would achieve additional emission reductions that are needed in the areas where CHC operate. Staff is proposing to add the following vessel categories to the in-use requirements of the Proposed Amendments: commercial passenger fishing vessels (CPFV), commercial fishing vessels, all tank barges, pilot vessels, and workboats. Including these categories will regulate 2,095 more vessels out of the approximately 3,159 CHC that are estimated to operate in Regulated California Waters (RCW) in 2023. RCW is defined as waters within 24 nautical miles (nm) of the California mainland coastline (not 24 nm beyond islands).

### **3. Mandates for Zero-Emission and Advanced Technologies**

The Proposed Amendments include ZEAT mandates where technology is more feasible: new excursion vessels would need to be zero-emission capable by 2025, and new and in-use short-run ferries to be zero-emission by 2026. In addition, CARB staff propose a regulatory incentive framework that would encourage adoption as ZEAT technology advancements are made in the marine sector. If a vessel owner or operator adopts ZEAT early or where not otherwise required, additional compliance time could be granted to other engines or vessels within the fleet.

### **4. Renewable Diesel**

The Proposed Amendments would require vessels to use renewable diesel when operating in California beginning on January 1, 2023. Renewable diesel is a drop-in fuel that is already being used widely in diesel engines across the State, including those in the marine sector. The use of renewable diesel will achieve immediate NO<sub>x</sub> and PM emission reductions, resulting in health benefits for workers and residents. Additionally, substituting fossil diesel with renewable diesel will reduce the State's GHG emissions and help California achieve its climate targets.

### **5. Low-Use Compliance Pathway**

The Current Regulation provides a low-use compliance pathway that exempts engines from in-use requirements if engine hours do not exceed an annual threshold of 80 hours for dredges and barges, and 300 hours for all other regulated in-use vessel categories. The Proposed Amendments would change this pathway to reflect the distinctions between engine tiers, in order to provide flexibility to stakeholders who have already upgraded to cleaner engines, while continuing to remove engines with the lowest emissions performance standards. Pre-Tier 1, Tier 1, Tier 2 and Tier 3 or 4 engines will be exempted from in-use requirements if they operate below a threshold of 80, 300, 400, and 700 hours, respectively. If vessels operate in Disadvantaged Communities, the annual threshold is halved (to 40, 150, 200, and 350 hours, respectively) to ensure that emission reductions are prioritized in these areas.

### **6. Proposed Compliance Extensions**

Staff is proposing several compliance extensions in the Proposed Amendments to allow for more time for compliance in cases of scheduling, feasibility, or infrastructure challenges. Most of these extensions will expire by the end of 2034. Passenger carrying vessels, including ferries, CPFVs, and excursion vessels, if subject to vessel replacement to meet emissions performance standards, would be eligible to receive an additional two-year feasibility extension due to potential impacts from the global situation that began in 2020.

## **7. Alternative Control of Emissions**

Staff is also proposing to modify the Alternative Control of Emissions (ACE) by which vessel owners and operators could comply with the Proposed Amendments. The ACE currently allows and would continue to allow vessel owners and operators to comply with the Proposed Amendments through an alternative means other than directly complying with the calendar year schedule for engine or vessel compliance. Under an ACE, an applicant would be able to comply by receiving approval from the Executive Officer (EO) to pursue an alternative that includes, but is not limited to, any combination of engine modifications, exhaust treatment control, engine repowers, use of alternative fuels or additives, fleet averaging, or any other measures that, when implemented, will sufficiently reduce emissions equivalent to the emissions performance standards identified in the Proposed Amendments.

## **8. Facility Owner and Operator Responsibilities**

Staff also proposes adding new requirements on facility owners and operators that conduct business with CHC. Facilities would be required to report information about vessels that use those facilities, which will improve data quality and compliance, and clarify facility owner and operator responsibilities to support shore power and infrastructure to support ZEAT vessels.

## **C. Potential Impacts of the Proposal**

### **1. Potential Environmental Impacts**

The Proposed Amendments are expected to reduce emissions of PM<sub>2.5</sub>, DPM, NO<sub>x</sub>, ROG, and GHGs beyond levels achieved under the Baseline (Table ES-1). Emission reductions would begin in 2023 when the Proposed Amendments impose new emission reduction requirements. Staff estimated that from 2023 through 2038, the Proposed Amendments would further reduce cumulative statewide emissions by approximately 1,610 tons of PM<sub>2.5</sub>, 1,680 tons of DPM, 34,340 tons of NO<sub>x</sub>, 2,460 tons of ROG, and 415,060 metric tons (MT) of GHG, relative to the Baseline.

**Table ES-1. Projected Annual and Total PM2.5, DPM, NOx, ROG, and GHG Emission Reductions Resulting from the Proposed Amendments from 2023 through 2038**

<b>Year</b>	<b>PM2.5 (Tons)</b>	<b>DPM (Tons)</b>	<b>NOx (Tons)</b>	<b>ROG (Tons)</b>	<b>GHG (MT)</b>
2023	42	44	584	21	339
2024	53	56	941	53	4,781
2025	62	64	1,239	75	9,139
2026	71	74	1,568	96	15,963
2027	77	80	1,767	110	18,876
2028	83	87	1,906	120	20,204
2029	90	94	2,046	131	21,313
2030	103	108	2,328	164	22,539
2031	117	122	2,585	201	25,342
2032	125	131	2,767	217	29,784
2033	133	139	2,845	222	39,598
2034	136	142	2,853	222	40,709
2035	134	140	2,805	216	41,063
2036	131	138	2,756	210	41,429
2037	129	135	2,703	203	41,804
2038	126	132	2,648	196	42,180
<b>Total</b>	<b>1,610</b>	<b>1,680</b>	<b>34,340</b>	<b>2,460</b>	<b>415,060</b>

These emission reductions benefit individuals by reducing incidence of premature death, hospital admissions, and emergency room visits, as well as reducing criteria pollutants and GHGs. Overall staff estimated the Statewide valuation of health benefits from avoided adverse health outcomes due to the Proposed Amendments at \$5.25 billion between 2023 and 2038, far exceeding the direct economic costs of \$1.79 billion for the same time period during implementation of the Proposed Amendments.

At a local level, these emission reductions will reduce air pollution-related health issues in communities in high-risk areas near seaports, marinas, harbors, and other waters are exposed to higher PM2.5 concentrations from harbor craft than other California residents. In addition, ZEAT requirements would require the use of quieter zero-emission and other advanced technologies on ferry and excursion vessels that would decrease the noise levels that passengers and crew are exposed to on traditional diesel-fueled harbor craft.

Note, in this Staff Report, which has been prepared pursuant to the California Administrative Procedure Act, the term “baseline” refers to the Current Regulation scenario. Note that the term “baseline” carries a different meaning under the California Environmental Quality Act (CEQA), which is addressed in the Draft Environmental Analysis (EA) included as an Appendix D to this Staff Report. As explained in that document, for purposes of the Draft EA, the term “baseline” refers to the existing environmental conditions at the time the environmental review process commenced, in this case representing 2020 existing environmental conditions.

## **2. Potential Economic Impacts**

The CHC Proposed Amendments will have a range of impacts on the California economy. Regulated vessel fleets and facility owners and operators will experience direct costs to comply with the regulation. On the other hand, demand to many sectors such as shipyard services, construction industry, and engine equipment manufacturing will increase in response to the Proposed Amendments, which may lead to increases in economic output and/or employment in these sectors.

The macroeconomic impacts of the regulation are relatively small in relation to the California economy. Staff's analysis indicates that the Proposed Amendments are unlikely to have a significant impact on the overall California economy. Overall, California's Gross State Product (GSP), jobs, and output will continue to grow under the Proposed Amendments, and the changes in the growth of jobs, GSP, and output are projected to not exceed 0.01 percent of the baseline.

## **I. Introduction and Background**

Commercial Harbor Craft ("CHC" or "harbor craft") are a vital part of California's economy, and are essential for moving cargo and providing services to Ocean-Going Vessels (OGV) and various seaports, harbors, and marinas throughout California. While these vessels are reliable and operationally efficient, many of them are powered by and utilize diesel engines that emit significant amounts of air pollutants, including diesel particulate matter (DPM), fine particulate matter (PM<sub>2.5</sub>), oxides of nitrogen (NO<sub>x</sub>), oxides of sulfur (SO<sub>x</sub>), reactive organic gases (ROG), and greenhouse gases (GHG). Coastal areas throughout the State continue to be impacted by emissions generated from 3,159 CHC operating near California seaports and marine terminals. More emission reductions are necessary from CHC to further protect Californian's public health and welfare, and to achieve the National Ambient Air Quality Standards (NAAQS).

The Airborne Toxic Control Measure for Diesel Engines on Commercial Harbor Craft ("Original Regulation") was adopted in 2008 to reduce emissions of DPM, NO<sub>x</sub>, and ROG from diesel engines used on CHC operated in RCW. The Original Regulation was then amended in 2010 (becoming the "Current Regulation") to include additional vessel categories, including crew and supply, barge, and dredge vessels. The Current Regulation (Title 17, California Code of Regulations (CCR) § 93118.5) will be fully implemented by the end of 2022. This Initial Statement of Reasons ("ISOR" or "Staff Report") provides the basis for the California Air Resources Board (CARB) staff's proposal to amend the Current Regulation to further reduce emissions from harbor craft in impacted communities.

Amending the Current Regulation would further reduce emissions from harbor craft by establishing expanded and more stringent requirements for CHC engines and mandates for accelerated deployment of Zero-Emission and Advanced Technologies (ZEAT). The Proposed Amendments to the Commercial Harbor Craft Regulation ("Proposed Amendments") would apply more stringent requirements to in-use and new vessels, expand the regulatory requirements to vessel categories that were previously exempt from in-use vessel requirements, and apply reporting, infrastructure, and other requirements onto facilities, such as seaports, terminals, marinas, and harbors that conduct business with CHC.

### **A. CARB's Authority to Regulate and Reduce Air Pollution from CHC**

CARB has been granted broad and extensive authority under the Health and Safety Code (HSC) to adopt the Proposed Amendments. CARB is authorized to adopt standards, rules and regulations needed to properly execute the powers and duties granted to and imposed on CARB by law (HSC § 39600 and 39601). HSC § 43013 and 43018 broadly authorize and require CARB to achieve the maximum feasible and cost-effective emission reductions from new and in-use non-vehicular and mobile sources, including, to the extent permitted by federal law, the adoption of regulations for marine vessels, (HSC § 43013(b)). HSC § 43013(h) directs CARB to expeditiously

reduce NOx emissions from diesel marine vessels and other vehicular and mobile sources “which significantly contribute to air pollution problems.” HSC § 43108(a) directs CARB to achieve “the maximum degree of emission reduction possible” from both vehicular and other mobile sources.

Section 209(e)(1) of the federal Clean Air Act (CAA) preempts all states from adopting or enforcing standards or other requirements relating to controlling emissions from new nonroad engines less than 175 horsepower (hp) used in farm and construction equipment and vehicles, new engines used in locomotives, or new locomotive engines. Neither the Original CHC Regulation, the Current Regulation, nor the Proposed Amendments affect the engines listed in CAA § 209(e)(1).

CAA § 209(e)(2) allows California to adopt and enforce separate state nonroad emission standards or emission related requirements for all other new and in-use nonroad engines. CARB obtained an authorization from the United States Environmental Protection Agency (U.S. EPA) to enforce the Original CHC Regulation, including new and in-use engine emission limits on December 13, 2011.<sup>2, 3</sup> In addition, U.S. EPA granted authorization for CARB to implement the Current Regulation on January 19, 2017.<sup>4</sup>

CARB is further mandated to reduce emissions of toxic air contaminants (TAC) under California’s air toxics laws. HSC § 39666 directs CARB to adopt Airborne Toxic Control Measures (ATCM) to “reduce emissions of toxic air contaminants from nonvehicular sources,” such as the DPM emitted from CHC.

CARB is also charged by HSC § 38500 et seq. to monitor and regulate sources of GHG emissions and is directed by HSC § 38560 to adopt regulations to “achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions from sources or categories of sources, subject to the criteria and schedules set forth in this part.”

HSC § 39730 directs CARB to develop a comprehensive strategy to reduce emissions of short-lived climate pollutants (SLCP), such as black carbon (BC) emitted by CHC in

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<sup>2</sup> U.S. EPA, Federal Register, Vol. 76, No. 239, California State Nonroad Engine Pollution Control Standards; Commercial Harbor Craft Regulations; Notice of Decision, December 13, 2011, last accessed June 28, 2021, <https://www.govinfo.gov/content/pkg/FR-2011-12-13/pdf/2011-31916.pdf>.

<sup>3</sup> CARB, Regulatory Advisory, Advisory Number: 310, Implementation of the Commercial Harbor Craft Regulation, last accessed June 28, 2021, <https://ww2.arb.ca.gov/sites/default/files/classic/enf/advs/advs310.pdf>.

<sup>4</sup> U.S. EPA, Federal Register, Vol. 82, No. 12, California State Nonroad Engine Pollution Control Standards; Commercial Harbor Craft Regulation; Notice of Decision, January 19, 2017, last accessed June 28, 2021, <https://www.govinfo.gov/content/pkg/FR-2017-01-19/pdf/2017-01261.pdf>.

the state, and HSC § 39730.5 directs CARB to begin implementing that strategy no later than January 1, 2018.

## **B. Background on Affected Watercraft, OGVs, and CHC**

CARB has enacted several regulations to reduce emissions from watercraft and marine vessels, which are described below in more detail. Although recreational watercraft and OGVs are not subject to the requirements in the Current Regulation or the Proposed Amendments, it is important to delineate between these categories to provide further clarity on the regulatory differences.

### **1. Recreational Watercraft**

CARB regulates exhaust emissions from new spark-ignition engines that are designed to propel marine vessels in Title 13 CCR § 2440 through 2448. These vessels consist of inboards, sterndrives, outboards, personal watercraft, jet drives, and hovercraft, and are typically used for recreational purposes, such as water skiing and motoring.

The first exhaust emission standards for spark-ignition marine engines in California began in 2001 and required outboard engines and personal watercraft engines to comply with progressively more stringent hydrocarbon (HC) and NO<sub>x</sub> standards in 2001, 2004, and 2008. A rating system was adopted for these engines, and the vessels in which they were used, to indicate relative emissions levels. Vessels with engines certified to the 2001 standard were required to display a "1 STAR" label indicating that the engine was 75 percent cleaner than previously uncertified engines. Vessels with engines certified to the 2004 standard were required to display a "2 STAR" label indicating that the engine was 20 percent cleaner than a "1 STAR" engine. Lastly, vessels with engines certified to the 2008 standard were required to display a "3 STAR" label indicating that the engine was 65 percent cleaner than a "1 STAR" engine. Certification and warranty provisions were also adopted at that time.

Inboard and sterndrive engines were first regulated in 2003 with a combined HC and NO<sub>x</sub> standard of 16 gram per kilowatt-hour (g/kW-hr) and a "3 STAR" label being required. In 2008, the HC and NO<sub>x</sub> standard for inboard and sterndrive engines was reduced to 5 g/kW-hr, which necessitated the adoption of a "4 STAR" label indicating that the engine was 90 percent cleaner than a "1 STAR" engine. The "4 STAR" standards generally required the incorporation of a three-way catalytic converter. Hovercraft and jet drive vessels generally fall into this category of standards. A voluntary "5 STAR" label also exists for engines that are certified to HC and NO<sub>x</sub> levels 50 percent lower than the "4 STAR" standard.

At the time of their adoption, the outboard regulations estimated a reduction of ozone-forming HC and NO<sub>x</sub> emissions by 161 tons per day on average in 2020.<sup>5</sup> Similarly, the inboard and sterndrive regulations estimated a summer weekend reduction of HC and NO<sub>x</sub> emissions by 56 tons per day on average in 2020.<sup>6</sup> In addition to reducing air pollution, the exhaust emission regulations have also helped minimize water contamination for various lakes. Older two-stroke marine engines would dump significant quantities of unburned fuel into the surrounding water, often damaging fish estuaries and the purity of the local drinking water supply. It is common today for many California lake authorities to ban the use of vessels with less than a “1 STAR” or “2 STAR” emissions rating.

In 2015, the Board set standards for Spark-Ignition Marine Watercraft (SIMW). For all new boats, model year (MY) 2018 and later, CARB certified components such as low-permeation fuel houses and tanks, along with carbon canisters and pressure relief valves, must be installed to reduce evaporative emissions. Due to CARB’s regulations in place for recreational watercraft, there have been significant reductions in air and water pollution over the years.

## **2. Ocean-Going Vessels**

OGVs are large commercial vessels that are designed to transport cargo or passengers between seaports. OGVs are generally greater than 400 feet long, weigh more than 10,000 gross tons (GT), have per-cylinder engine displacement of greater than 30 liters, and can be a U.S. or foreign-owned vessel. Most OGVs are owned by foreign companies due to the international nature of shipping but are still subject to California’s OGV regulations.

OGVs docked at berth must run auxiliary engines to produce electricity for cargo operations. As a result, these vessels constantly emit TACs, criteria pollutants, and GHGs at berth. CARB’s At-Berth Regulation<sup>7</sup> requires vessels to reduce emissions at berth by plugging into shore power or using capture and control technologies. Shore power allows vessels to plug into grid-based power and release zero emissions at the stack.

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<sup>5</sup> CARB, Staff Report: Public Hearing to Consider Adoption of Emission Standards and Test Procedures for New 2001 and Later Model Year Spark-Ignition Marine Engines, October 23, 1998, last accessed June 28, 2021, <https://ww3.arb.ca.gov/regact/marine/isor.pdf>.

<sup>6</sup> CARB, Staff Report: Public Hearing to Consider Adoption of Emission Standards and Test Procedures for New 2003 and Later Spark-Ignition Inboard and Sterndrive Marine Engines, June 8, 2001, last accessed June 28, 2021, <https://www.arb.ca.gov/regact/marine01/isor.pdf>.

<sup>7</sup> CARB, Final Regulation Order: Control Measure for Ocean-Going Vessels At Berth, 2020, last accessed June 28, 2021, <https://ww3.arb.ca.gov/regact/2019/ogvatberth2019/fro.pdf>.

Since 2014, emissions from container, refrigerated cargo (“reefer”), and cruise vessels have been controlled at berth through CARB’s 2007 At-Berth Regulation.<sup>8</sup> This Regulation was predicted to achieve an 80 percent reduction of emissions from those vessel types (around 4,000 visits) by 2020<sup>9</sup>. While the 2007 At-Berth Regulation has achieved reductions in DPM and NOx, there are no additional measures to continue reducing the remaining health burdens associated with OGVs at berth. For this reason, CARB adopted a new At Berth Regulation in 2020 that built upon the significant emission reductions that were achieved with the 2007 Regulation by adding roll-on/roll-off (“ro-ro”) and tanker vessels, and requiring all OGVs that visit a terminal receiving 20 or more vessel visits per calendar year to reduce emissions at berth.

In addition to the At Berth Regulation, OGVs must also comply with the Vessel Fuel Regulation which has been in place since 2008. This regulation requires all OGVs to use cleaner distillate marine fuels to reduce DPM, PM, NOx, and SOx from OGV main propulsion diesel engines, auxiliary diesel engines, diesel-electric engines, and auxiliary boilers. Vessels must switch to CARB compliant distillate marine fuels anytime the vessel is within RCW, or within 24 nautical miles (nm) of the California coast (including islands).<sup>10</sup> The At Berth and Fuel Regulations have significantly decreased emissions from OGVs, which has led to reductions in the number of premature deaths, hospital admissions, and emergency room visits for residents in California, especially for those that live in portside communities.

### **3. Commercial Harbor Craft**

CHC consist of any private, commercial, government, or military marine vessel including, but not limited to, passenger ferries, excursion vessels, tugboats, ocean-going tugboats, towboats, push-boats, crew and supply vessels, workboats, pilot vessels, supply boats, fishing vessels, research vessels, U.S. Coast Guard (USCG) vessels, emergency response harbor craft, and barge vessels that do not otherwise meet the definition of OGVs or recreational vessels.

Although CHC are used throughout California harbors, bays, and other coastal waters, they are heavily concentrated at the commercial seaports, harbors, and marinas, such

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<sup>8</sup> CARB, Final Regulation Order: Airborne Toxic Control Measure for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At-Berth in a California Port, 2007, last accessed June 28, 2021, [https://ww2.arb.ca.gov/sites/default/files/2020-04/finalregulation\\_ADA.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-04/finalregulation_ADA.pdf).

<sup>9</sup> CARB, Staff Report: Initial Statement of Reasons, Public Hearing to Consider the Proposed Control Measure for Ocean-Going Vessels At Berth, October 15, 2019, last accessed June 28, 2021, <https://ww3.arb.ca.gov/regact/2019/ogvatberth2019/isor.pdf>.

<sup>10</sup> 17 CCR, §93118.2, Airborne Toxic Control Measure for Fuel Sulfur and Other Operational Requirements for Ocean-Going Vessels Within California Waters and 24 Nautical Miles of the California Baseline, Amended October 27, 2011, last accessed June 28, 2021, <https://ww3.arb.ca.gov/ports/marinevess/documents/fuelogv17.pdf>.

as the Port of Long Beach (POLB), Port of Los Angeles (POLA), Port of Oakland, etc. In 2023, there will be an estimated 3,159 harbor craft operating in California that fall into the vessel categories subject to the Proposed Amendments.

The Current Regulation includes requirements for both new and in-use diesel engines used on CHC operating in RCW. Specifically, all harbor craft must:

- Install a non-resettable meter to measure operating hours on each engine, if not already installed.
- Use CARB diesel or an approved alternative fuel.
- Submit an initial report to CARB providing vessel and engine information.
- Maintain and update these records and keep copies on the vessel or at its homebase office.
- Meet “new engine emission standards” when replacing engines on existing vessels or installing engines on newly built vessels.

### **C. Basics on CHC Operations**

This section introduces harbor craft operations and the various types of CHC that visit California seaports, marinas, and harbors.

#### **1. Barges**

Barges are cargo transporting vessels that are generally towed or tugged along with other vessels. Since barges are typically not self-propelled, they require tugboats or towboats to be moved. Barges often have a flat-bottomed rectangular hull with sloping ends that can be built with or without a propulsion engine. Barges come in a wide variety of configurations and some barge configurations and vocations may have significant emissions if they are supporting fuel-bunkering operations. Depending on the type of barge, there may be a number of auxiliary engines aboard for pumping fuel or petrochemicals off the barge, powering hydraulic actuators for mechanical barge dumping, or generating electricity for running lights.

##### **a. Articulated Tug Barges**

An Articulated Tug Barge (ATB) is a petrochemical tank barge that is mechanically linked with a paired tugboat that functions as a tug-barge combination. Unlike an OGV oil tanker, the ATB tug and barge can separate into two distinct harbor craft, even if they do not commonly operate independently. ATBs conduct similar operations as tugs pulling tank barges with cables, are similar in design and equipment to CHCs, and are classified as such in the Proposed Amendments. The fact that ATBs are considered two distinct harbor craft, circumvents some of the applicable USCG subchapter rules governing the operation of OGV tankers allowing operation with a crew of 8 rather than 20 or 23 compared to a similar size/capacity OGV tanker. The barge is considered a separate unmanned vessel even when pinned to the pusher tug

and is subject to requirements of both 46 Code of Federal Regulations (CFR) Subchapters D<sup>11</sup> (Tank Vessels) and O<sup>12</sup> (Certain Hazardous Bulk Flammable/Combustible Petrochemical Cargoes listed in table 46 CFR § 30.25-1) as they existed as of May 24, 2021.

Loaded ATBs typically transit up and down the California coastline in offshore shipping lanes. ATB operators are typically in contract with the refineries and their vessel activities are scheduled by other entities. While slower and less efficient than an OGV tanker, ATBs are still more efficient than towing double-hull petrochemical barges on a wire with older tow boat equipment.

When the ATB is docked at a terminal, the main propulsion engines are typically shut down and the barge engines are operated to run deck equipment and transfer product out of the barge. It can take a full day or more to pump out one product while being loaded with another. Most ATBs, and several other petrochemical tank barges, are longer than 400 feet, which exempts them from the Current Regulation. Some operators may already use CARB Ultra-Low Sulfur Diesel (CARB ULSD) and operate engines certified to newer U.S. EPA certification standards than what is required; however, CARB does not have any existing requirements on ATB barges or tank barges. Since tank barges and the barge portion of an ATB are currently unregulated, this presents an opportunity to further reduce emissions from harbor craft.

CARB staff recognizes that there are operational similarities between ATBs, tugs pulling barges with a towline, and some types of OGV tanker operations. Given that OGV tankers have requirements to control emissions at berth in CARB's At-Berth Regulation, the Proposed Amendments provide an ACE option applicable to all CHC, including ATBs, to comply with the Proposed Amendments in lieu of meeting emissions performance standards. The ACE allows an owner or operator to control auxiliary engine emissions (including from tank barges), similar to the controls used for ships at berth if equivalent or additional reductions are achieved relative to meeting emissions performance standards. The At-Berth regulation requires all OGVs to utilize a CARB Approved Emission Control Strategy (CAECS) or shore power to control emissions while at berth. For example, it may be possible, if ATB owners and operators opt to control their auxiliary emissions on tugs and barges using a CAECS or shore power, to demonstrate that emissions are equal or lower than directly complying with the regulation by following the MY schedule for each engine, and if CARB approves the ACE, then ATBs would only have to reduce emissions from the main engines on the tugs while in transit under the Proposed Amendments. Figure I-1

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<sup>11</sup> 46 CFR Subchapter D – Tank Vessels, last accessed June 28, 2021, <https://www.gpo.gov/fdsys/pkg/CFR-2008-title46-vol1/pdf/CFR-2008-title46-vol1-chapl-subchapD.pdf>.

<sup>12</sup> 46 CFR Subchapter O – Certain Bulk Dangerous Cargoes, last accessed June 28, 2021, <https://www.gpo.gov/fdsys/pkg/CFR-2011-title46-vol5/pdf/CFR-2011-title46-vol5-chapl-subchapO.pdf>.

shows a Kirby Corporation ATB tug interfaced into the back of its ATB barge departing the Bay Area.

**Figure I-1. Kirby Corp. ATB Departing the San Francisco Bay Area**



### **b. Double-Hull Petrochemical Tank Barges**

Double-hull petrochemical tank barges may contain large quantities of fuel or petrochemicals. Similar to ATB barges, these barges utilize a number of power generators, auxiliary engines to pump products, and power hydraulic pumps for deck equipment such as anchor winches or hose handling booms. Pictured in Figure I-2 is the double-hulled fuel barge *Alesea Bay*, which has a length of 349 feet. This particular tank barge is already subject to the Current Regulation since it is less than 400 feet long, and therefore meets the definition of a barge.

**Figure I-2. Sause Bros. Ocean Double Hull Fuel Barge, *Alesea Bay***



### **c. Double-Hull Fuel-Bunker Barges**

The double-hull fuel-bunkering barges are used for fueling OGVs either at berth or at anchor and are considerably smaller than the ATB or petrochemical tank barges. The fuel capacity of a typical bunker barge in California is 20,000-50,000 barrels, or roughly

1/3 to 1/5 the capacity of a relatively small 550 Class ATB. Additionally, bunker barges are not equipped with ballast water tanks.

The engines aboard bunker barges are used for pumping fuel, powering deck equipment, and generating electricity. Most bunker barges would have at least two product pumping engines aboard, with most operations occurring within RCW. However, CARB staff does not have data regarding the portion of fuel bunkering that occurs at berth versus at anchor. Figure I-3 shows the *Bernie Briere* double-hull fuel-bunker barge at the Port of San Francisco.

**Figure I-3. Bernie Briere Double Hull Fuel Bunker Barge at Port of San Francisco**



#### **d. Other Barges**

The Other Barge vessel category includes deck barges, derrick or crane barges, and construction barges. Construction barges make up the majority of the “Other Barge” category in California and are used to transport oversized materials including machinery, grain, coal, fuel, and many other commodities. Construction barges may utilize a permanently affixed generator for running lights, which would be subject to the CHC regulations, but most emissions from the operation of these barges occur from the tugboat moving the barge, or other equipment temporarily located on the barge that would be controlled by other CARB regulations. Figure I-4 is an image of a flat top construction barge.

**Figure I-4. Flat Top Construction Barge with Characteristic Tapered Ends**



## **2. Commercial Fishing Vessels**

Commercial fishing vessels are used to catch fish in the sea, lake, or river and may operate their engines at the dock while loading supplies. Commercial fishing vessels transit to various offshore locations to collect fish, sometimes with trips lasting a few days. Most of the smaller commercial fishing vessels are powered by one main engine and have an auxiliary generator engine for powering vessel refrigeration, lighting, deck equipment, and icemakers for preserving fish. Vessel propulsion is accomplished by single or twin-screw fixed-pitch propellers, but some larger commercial fishing vessels may have more main engines and twin-screw propulsion. Figures I-5a and I-5b are images of commercial fishing vessels that are recovering trawl nets.

**Figure I-5a and Figure I-5b. Commercial Fishing Vessels Recovering Trawl Nets**



## **3. Commercial Passenger Fishing Vessels**

Commercial passenger fishing vessels (CPFV) consist of any coastal or offshore vessel used for sport fishing, charter fishing, or any other type of fishing activity where individuals, other than the owners, operators, or employees of the vessel, are onboard the vessel to perform fishing activities. This is including but is not limited to operations that provide both day and overnight trips, such as those that may voyage periodically in and out of RCW to target migratory species.

CPFVs are certificated by the USCG to carry dozens of passengers out onto the ocean for fishing day-trips. These vessels may idle at their docks while preparing for departure and loading passengers and equipment. CPFVs then transit at high speeds out to fishing grounds in the open ocean where they troll at low speeds or maintain a constant position. Figure I-6 is an image of the vessel *Freelance*, which is located in Newport Beach, California.

The Current Regulation has not required CPFVs to meet Tier 2 or 3 engine standards and does not have any reporting or fuel use requirements for uninspected CPFVs that carry six passengers or less. However, CARB staff recognizes that both inspected and uninspected CPFVs compete for the same business, may operate in similar locations, and use similar types of vessels and diesel engines. Chapter III of this Staff Report outlines CARB staff's proposed changes to the Current Regulation, which would subject the uninspected diesel-powered vessels to the Proposed Amendments.

**Figure I-6. CPFV *Freelance*, operating out of Newport Beach, CA**



#### **4. Crew and Supply Vessels**

Crew and supply vessels are self-propelled vessels that are used for carrying personnel and/or supplies to and from offshore and in-harbor locations, including but not limited to offshore work platforms, construction sites, islands, and other vessels. Ocean-going crew and supply vessels are regularly used to service offshore drilling platforms and assist in towing and repositioning drilling platforms. Often available for charter, these vessels perform any number of specialized offshore maritime work required of them, including ocean towing, engineering project support, and research project support.

Offshore crew and supply vessels are large harbor craft often over 150 feet in length and have up to four powerful main propulsion engines. The vessels characteristically have a flat and extended main deck, often with a large hydraulic crane for cargo or machinery handling. Figures I-7a and I-7b are images of the *Maersk Transporter* and the *NRC Quest* crew and supply vessels, respectively.

Figure I-7a and Figure I-7b. *Maersk Transporter* and *NRC Quest* Offshore Crew and Supply Vessels



Figures I-8a and I-8b show a high-speed crew and supply vessel, *Mr. Steven*, which is under contract with Space X to recover rocket fairing equipment.

Figure I-8a and Figure I-8b. Fast crew and Supply Vessel, *Mr. Steven*



## 5. Dredges

Dredges are vessels designed to remove earth from the bottom of waterways, by means of a scoop, a series of buckets, or a suction pipe. Dredging vessels excavate underwater debris from shipping channels by utilizing mechanical, hydraulic, or a combination of both methods. Dredging operations are accomplished either by barge-mounted heavy equipment or custom-built harbor craft.

### a. Mechanical Dredges

Mechanical dredges come in a number of different arrangements, including barge-mounted hydraulic excavators with back-hoe or clamshell-type buckets, bucket wheel excavators, and cutter-suction dredges. Figures I-9a, I-9b, and I-10 are images of hydraulic excavator and back-hoe type dredges.

**Figure I-9a and Figure I-9b. Hydraulic Excavator with Clamshell Bucket and a Cutter Suction Dredge for Dredging Harder Materials like Rock and Corral**



**Figure I-10. Barge Mounted Back-Hoe Type Dredge**



### **b. Hydraulic Dredges**

Hydraulic dredging vessels utilize large, high-volume, debris-resistant water pumps to pump a combination of water and debris either to the side of the excavation area, into a pipeline to pump a short distance away, or into a self-contained hopper or “scow” (dumping hopper barge) to transport long distances. Hydraulic suction dredges are better suited for removing softer debris such as sand and mud. These vessels often run their main engines at full power through a gearbox power take-off to pump massive quantities of water and debris. Figures I-11a and I-11b are images of suction hopper-type dredge vessels.

Figure I-11a and Figure I-11b. Suction Hopper Type Dredge Vessels



## 6. Excursion Vessels

Excursion vessels are self-propelled vessels that transport passengers for excursions such as dinner cruises, sight-seeing tours, scuba diving expeditions, parasailing, or whale-watching tours. Most excursion trips are 60 or 90 minutes and are associated with lower vessel transiting speeds (~10 knots). CARB staff is aware of some design similarities between excursion vessels and low-speed ferries and that some ferries also perform excursion activities as a secondary use. Figure I-12 is an image of the Bay Area excursion vessel, *Old Blue*, operated by Blue and Gold Fleet.

Figure I-12. Blue and Gold Fleet Excursion Vessel *Old Blue*



Due to the cyclical nature of excursion trips, trip frequencies, and the low-power requirements and transit speeds, excursion vessels are one sector of CHC activity in California where the application of zero-emission propulsion technologies is a viable option for certain vessels. For example, *Enhydra*, Red and White Fleet's new plug-in hybrid 600-passenger battery/diesel-electric excursion vessel, is capable of running 100 percent zero-emission excursion trips in the San Francisco Bay. Figure I-13 is an image of the Red and White Fleet's *Enhydra* vessel.

**Figure I-13. Red and White Fleet's Battery Plug in/Diesel Electric Bay Area Excursion Vessel, Enhydra**



## **7. Ferries**

Ferries can transport deck passengers or vehicles, operating between two points over the most direct water route. Ferries also include vessels operated by public or private companies to transport passengers commercially, on both regularly scheduled and on-demand bases.

### **a. Short-Run Ferries**

CARB staff has identified a subset of ferries that operate on shorter runs, referred to as "short-run ferries". Short-run ferries include vessels that provide regularly scheduled ferry service between two points that are less than three nm apart. Vessels that provide ferry round-trip service between two points that are less than 3 nm apart but provide less than 20 percent of the service trips from one fleet between those two points during a given calendar year, are not considered short-run ferries. This definition also excludes short-hop or interlining vessels but includes circular routes that may include one-way trips slightly longer than 3 nm. Vessels that make multiple stops in a single round-trip, where half or more of the single-trip lengths are less than 3 nm, and the longest single-trip length is less than 6 nm, are considered short-run ferries. The Proposed Amendments would require zero-emission operations for all short-run ferries.

### **b. High-Speed Ferries**

High-speed ferries are designed to be light and fast, utilizing engines at high engine loads for extended time intervals. Operating the engines at a high loads continuously while transiting requires larger and/or higher power-density engines. Figure I-14 is an image of the Water Emergency Transportation Authority (WETA) high-speed ferry, *Hydrus*.

Figure I-14. WETA High Speed Ferry, *Hydrus*.



### c. Low-Speed Monohull Ferries

Similar to excursion vessel designs, low-speed ferries are older vessels with single-hull designs. The typical transit speed of a low-speed ferry is 10-14 knots. Some low-speed ferry operators run their vessels for excursions seasonally. See Figure I-15 of the Bay Area's Blue and Gold Fleet, *Bay Monarch* vessel, which can hold up to 788 passengers.

Figure I-15. Blue and Gold Fleet Low Speed Ferry, *Bay Monarch*



## 8. Pilot Vessels

Pilot vessels are designed for transferring and transporting maritime pilots to and from OGVs while they are underway, anchored, or docked. Pilot vessels are generally designed to transit at high speeds (20+ knots) and are highly maneuverable and stable for handling rough seas and dangerous pilot transfer maneuvers next to large OGVs transiting on the ocean. In some cases, pilot vessels are designed to serve as "station boats" where they operate at lower loads for extended periods of time while a crew of pilots remains on standby until OGVs are in need of pilots for navigational assistance. Because local vessel pilots need to navigate ships into the San Francisco Bay and larger harbors in the South Coast, these vessels must quickly transport the pilots to the

OGVs that these seaports serve. Figure I-16 is an image of the San Francisco Bar Pilot's run boat, the *P/V Golden Gate*.

**Figure I-16. San Francisco Bar Pilots 67' Run Boat, *P/V Golden Gate***



## **9. Research Vessels**

Research Vessels are any vessel subject to the requirements of 46 CFR Subchapter U (Oceanographic Research Vessels) as it existed as of May 24, 2021.<sup>13</sup> Research vessels include, but are not limited to, vessels with highly advanced mobile research stations, and vessels that provide stable platforms from which explorers can deploy equipment, divers, or submersibles. Research vessels are typically used in the instruction of oceanography or limnology including those for purposes of seismic, gravity meter, magnetic exploration, and other research. Figure I-17 is an image of the Scripps Institute of Oceanography's *Robert Gordon Sproul* which is a regional general-purpose research vessel that serves research and education missions off-shore California and the U.S. West Coast.

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<sup>13</sup> 46 CFR Subchapter U—Oceanographic Research Vessels, last accessed June 28, 2021, <https://www.govinfo.gov/content/pkg/CFR-2012-title46-vol7/pdf/CFR-2012-title46-vol7-chapI-subchapU.pdf>.

**Figure I-17. Scripps Research Vessel *Robert Gordon Sproul***



## **10. Tugboats**

CARB defines tugboats as any self-propelled vessel in the service of pulling, pushing, maneuvering, berthing, or hauling barges or other vessels in harbors, over the open seas, or through rivers and canals. They are also used to tow barges or other floating structures. Tugboats generally can be divided into three groups: ship assist/escort tugboats, push/tow tugboats, and ATBs. The term "tugboat" is interchangeable with "towboat" and "push boat" when the vessel is used in conjunction with barges.

### **a. Ship Assist Tugboats**

A ship assist tugboat is a highly maneuverable tug that primarily assists ATBs and OGVs while docking and undocking. Escort tugs (described in section 10.b. below) typically work with ship assist harbor tugs to dock or undock their escorted ATBs or OGVs.

Ship assist and escort tugs have a highly variable duty cycle. They have powerful main propulsion engines but only operate at maximum load for very brief periods. Commonly, ship assist tugs remain on standby waiting for ships or transit between jobs at lower loads. Ship assist tugs are typically smaller 70 to 80-foot tractor tugs that are used to safely maneuver large container ships and/or tankers. For container ships, car carriers, and bulk cargo vessels, the ship assist tug would intercept, attach a line, and then assist the ships in transiting, making turns, and docking. The larger size of modern container ships may require additional ship assist tugs to maneuver it inside dredged shipping channels and when docking. The number of tugs required to safely assist a ship is different for each harbor due to tides, length of shipping channel turns, the number of turns, and weather conditions. Up to five tugs might be necessary to assist a larger ship. Figure I-18 is an image of ship assist tugboats maneuvering a ship to shore.

**Figure I-18. Ship Assist Tugboats Maneuvering a Ship to Shore**



### **b. Escort Tugboats**

Escort tugboats intercept and escort ATBs and OGVs entering the vicinity of a seaport region, with the purpose of providing maneuvering or stopping assistance in case of loss of propulsion or steering power while en route to or from docks and terminals. In the San Francisco Bay Area, escorting typically consists of intercepting the ship outside the Golden Gate Bridge where the tug attaches a line to the ship.

After escorting the ship to a terminal (in the case of a tanker or ATB), the escort tug then can perform ship assist duties to dock the ship and stays on standby at the terminal with the tanker or ATB that is loading or offloading product. If there is a fire or emergency, the escort tugs are available to assist in moving the ship to safety, and if equipped with water pumps, may work to extinguish the fire. When the OGV is ready to depart, the escort tug returns to assist the harbor tugs by maneuvering the vessel off the dock and out of the seaport or harbor. Figures I-19a and I-19b are images of the Bay Area escort tug, *Caden Foss*.

**Figure I-19a and Figure I-19b. Bay Area Escort Tug, Caden Foss**



### c. Push and Tow Tugboats

Push and tow tugboats are often repurposed older ship assist tugboats. These vessels have winches and fendering, but have less bollard pull and maneuverability compared to modern tractor tugs. Unlike escort and ship assist tugs, push and tow tugboats operate their engines at higher loads for extended time intervals. The average load factors for these pushing and towing tugs are estimated to be 40 to 50 percent (similar to a larger ATB push tug). Figures I-20a and I-20b are images of near-shore pushing tugboats.

Figure I-20a and Figure I-20b. Near Shore Pushing Vessels



Ocean-going towing tugboats are similar to the older near-shore pushing and towing tugboats in that they are often older repowered vessels, but these coastal or ocean-going tugs are typically much larger, in the range of 100 to 130 feet in length and have 70,000 to 120,000-gallon diesel fuel tanks for extended-range towing. Similar to ATB tugs and nearshore push boats, ocean-going towing vessels operate their main engines at high loads for extended time intervals and have a higher continuous load. Figure I-21 is an image of the *Pacific Falcon* ocean towing tug.

Figure I-21. Pacific Falcon Ocean Towing Tug



## 11. Workboat/Emergency Response Vessel

Workboats are self-propelled vessels that are used to perform any duty not specifically listed by another category, including but not limited to duties such as firefighting/rescue, law enforcement, hydrographic surveys, research, training, spill response, debris removal, cable laying, construction support (including construction drilling or diving support), and emergency response. Workboats can include vessels owned by public, private, and non-profit organizations. The workboat sector encompasses a wide variety of CHC tasked with supporting various maritime construction or infrastructure development projects.

Multi-purpose workboats consist of vessels capable of doing light towing or pushing to move construction barges, waiting on standby to assist during construction projects, and transporting equipment and small numbers of passengers out to equipment working on barges. Lacking specialized vessel designs to accommodate deck equipment other than a material-handling boom, these vessels are capable of switching between general use workboat vocations quickly and easily. Figure I-22 is an image of a general use workboat, equipped with full protective fendering for light pushing and safety railings, and lacking specialized deck equipment.

**Figure I-22. General Use Workboat**



### **D. Air Pollution from CHC**

Emissions from CHC include criteria pollutants (such as PM<sub>2.5</sub> and NO<sub>x</sub>), TACs such as DPM, and GHGs. A summary of the different forms of air pollution emitted from CHC engines is discussed below.

#### **1. Near-Source Toxics**

Diesel engines on CHC emit a complex mixture of air pollutants that pose serious health concerns to nearby communities. Diesel exhaust includes gaseous TACs, a mixture of toxics in the particulate phase, such as DPM, and other pollutants that have health impacts due to near-source exposure, such as carbon monoxide (CO). DPM is particulate matter (PM) emitted from diesel-fueled engines and is composed of carbon

particles, such as BC (“soot”), and over 40 known cancer-causing organic substances (TACs), such as arsenic polycyclic aromatic HCs, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene.

Long-term exposure to DPM can increase the risk of lung cancer and many of the same noncancer health effects resulting from exposure to PM<sub>2.5</sub>,<sup>14</sup> such as premature death, asthma, increased respiratory symptoms, decreased lung function in children, and hospitalizations and emergency room visits for exacerbated chronic heart and lung disease. Those most vulnerable to noncancer health effects are children whose lungs are still developing and the elderly, who often have chronic health problems. In addition to its health effects, DPM significantly contributes to smog and haze, reducing visibility.

In 1998, CARB identified DPM as a TAC that can cause cancer, birth defects, other serious illnesses, and leads to an increase in mortality. In 2002, U.S. EPA conducted its first comprehensive review of the potential effects from exposure to diesel engine exhaust.<sup>15</sup> This hazard assessment determined that diesel engine exhaust emissions are a likely human carcinogen, and the World Health Organization (WHO) has classified diesel emissions as carcinogenic to humans.<sup>16</sup>

## 2. Criteria Pollutants

PM, including DPM, is emitted from a vessel’s exhaust stack as a complex mixture of suspended particles and aerosols varying in size, shape, and chemical composition. These particles can either be directly emitted into the atmosphere (primary particles) or formed by chemical reactions of gases (secondary particles) from natural or man-made sources such as sulfur dioxide (SO<sub>2</sub>), NO<sub>x</sub>, and certain organic compounds. PM can be inhaled into the upper airways and lungs, creating respiratory ailments leading to public health concerns. Exposure can increase premature mortality, hospital admissions for cardiopulmonary causes, acute and chronic bronchitis, asthma attacks, and respiratory symptoms, and the health effects are of particular concern for sensitive groups such as infants, children, the elderly, and those with preexisting heart or lung disease.<sup>17</sup>

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<sup>14</sup> CARB, Overview: Diesel Exhaust & Health, last accessed June 28, 2021, <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>.

<sup>15</sup> U.S. EPA, Health Assessment Document for Diesel Engine Exhaust, May 2002, last accessed June 28, 2021, [https://ofmpub.epa.gov/eims/eimscomm.getfile?p\\_download\\_id=36319](https://ofmpub.epa.gov/eims/eimscomm.getfile?p_download_id=36319).

<sup>16</sup> IARC, WHO, Diesel and Gasoline Engine Exhausts and Some Nitroarenes, Volume 105, 2012, last accessed June 28, 2021, [https://www.who.int/ipcs/assessment/public\\_health/IARC\\_mono105.pdf](https://www.who.int/ipcs/assessment/public_health/IARC_mono105.pdf).

<sup>17</sup> CARB, Inhalable Particulate Matter and Health (PM<sub>2.5</sub> and PM<sub>10</sub>), last accessed June 28, 2021, <https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health>.

NO<sub>x</sub> consists of highly reactive gases, including nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>). NO<sub>x</sub> emissions from diesel engines can undergo chemical reactions in the atmosphere leading to the formation of PM<sub>2.5</sub> and ozone, which have harmful effects on the respiratory system.<sup>18</sup> The majority of NO<sub>x</sub> emissions from diesel engines are in the form of NO, even in the presence of catalyzed Diesel Particulate Filter (DPF) aftertreatment where NO/NO<sub>x</sub> ratios have shown to range between 0.67 to 0.82.<sup>19</sup> Both NO and NO<sub>2</sub> are formed by combining gaseous nitrogen and oxygen in the atmosphere under the high temperature and pressure conditions in the cylinder. Short-term exposure to elevated concentrations of NO<sub>x</sub> is known to irritate the respiratory system and aggravate respiratory diseases, particularly asthma, leading to hospital admissions, visits to emergency rooms, and respiratory symptoms such as coughing, wheezing, or difficulty breathing.

NO<sub>x</sub> is a precursor to ozone which is formed in combination with volatile organic compounds (VOC) in the presence of heat and sunlight. Ozone can damage the tissues of the respiratory tract, causing inflammation and irritation, and result in symptoms such as coughing, chest tightness and worsening of asthma symptoms. Exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath. CHC currently operate in several air basins, including but not limited to, the South Coast, the San Francisco Bay Area, and the San Joaquin Valley (primarily at the Port of Stockton) Air Basins. Each of these areas has varying levels of ozone pollution, and none of these areas are in the attainment of the 2008 or 2015 8-hour ozone health-protective standards. Because the South Coast and San Joaquin Valley Air Basins are designated as extreme nonattainment areas for the 2008 and 2015 8-hour ozone standards, NO<sub>x</sub> emissions must be further reduced from CHC.

### **3. Greenhouse Gases and Short-Lived Climate Pollutants**

CHC also emit GHGs and SLCPs (such as BC). GHGs contribute to the greenhouse effect by absorbing reflected solar energy and warming the Earth's atmosphere which contributes to global climate change.<sup>20</sup> Presently, the maritime industry as a whole accounts for around 2 percent of global GHG emissions, but its emissions of GHGs is projected to increase by up to 250 percent by 2050 due to industry growth associated

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<sup>18</sup> U.S. EPA, Nitrogen Dioxide (NO<sub>2</sub>) Pollution, 2016, last accessed June 28, 2021, <https://www.epa.gov/no2-pollution/basic-information-about-no2#>.

<sup>19</sup> Quiros, et al., Real-World Emissions from Modern Heavy-Duty Diesel, Natural Gas, and Hybrid Diesel Trucks Operating Along Major California Freight Corridors, July 19, 2016, last accessed June 28, 2021, <https://link.springer.com/content/pdf/10.1007/s40825-016-0044-0.pdf>.

<sup>20</sup> IMO, Greenhouse Gas Emissions, last accessed June 28, 2021, <https://www.imo.org/en/OurWork/Environment/Pages/GHG-Emissions.aspx>.

with increasing global trade demands.<sup>21</sup> California has set a GHG emission reduction goal of 40 percent below the 1990 levels by 2030,<sup>22</sup> and this target is expected to enable California to reach the ultimate goal of reducing GHG emissions by 80 percent from the 1990 levels by 2050.

Reducing CHC emissions would help to achieve California's goals in reducing both GHG emissions and SLCPs. SLCPs are powerful climate forcers that can have an immediate and powerful impact on climate change, compared to longer-lived GHGs such as carbon dioxide (CO<sub>2</sub>). Methane (CH<sub>4</sub>) is a SLCP that is emitted from CHC engines. CH<sub>4</sub> has an average lifetime of 12.4 years and a global warming potential (GWP) that equals 25 times higher than CO<sub>2</sub> emissions over a 100-year time horizon.<sup>23</sup> CARB is proposing a CHC performance standard for CH<sub>4</sub> to ensure liquefied natural gas (LNG) and compressed natural gas (CNG) engines are not used without adequate controls to limit methane slip. Nitrous oxide (N<sub>2</sub>O) is also a potent GHG with a longer lifetime (121 years) and a GWP of 298 over a 100-year time horizon.<sup>24</sup> Each GHG pollutant has a different GWP potential value, with CO<sub>2</sub> having a GWP of 1. N<sub>2</sub>O is not only a heat-trapping pollutant, but also the largest known remaining anthropogenic threat to the stratospheric ozone layer. Although the Selective Catalytic Reduction (SCR) systems used on Tier 4 engines reduces NO<sub>x</sub> emissions, this system has been shown to increase N<sub>2</sub>O emissions; however, this increase is minor relative to the CO<sub>2</sub> emissions itself, and has been considered in the overall GHG emissions impacts as discussed in Appendix H.

The overall goal of the Proposed Amendments is to lower community health risk, attain regional air quality standards, and reduce GHG emissions. For more information on the impact that CHC emissions have on air quality in California, refer to Chapter VI of this Staff Report.

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<sup>21</sup> Stefanini, Sara, Countries Inch Towards 'Bare Minimum' Climate Target For Shipping, April 10, 2018, last accessed June 28, 2021, <https://www.climatechangenews.com/2018/04/10/countries-inch-towards-bare-minimum-climate-target-shipping/>.

<sup>22</sup> HSC § 38566, Division 25.5, Senate Bill No. 32, September 8, 2016, last accessed June 28, 2021, [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201520160SB32](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32).

<sup>23</sup> Quiros, et al., Greenhouse Gas Emissions from Heavy-Duty Natural Gas, Hybrid, and Conventional Diesel On-Road Trucks During Freight Transport, *Atmospheric Environment*, Volume 168, November 2017, <https://www.sciencedirect.com/science/article/pii/S1352231017305794>.

<sup>24</sup> Myhre, G. et al., Anthropogenic and Natural Radiative Forcing, 2013, last accessed June 28, 2021, [https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5\\_Chapter08\\_FINAL.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter08_FINAL.pdf).

## **E. Current Regulations and Programs**

This section discusses the various regulations in place within the U.S. and California to reduce emissions from harbor craft.

### **1. Requirements of the Original and Current Regulation**

On November 15, 2007, CARB approved the Original Regulation for CHC that established in-use and new engine emission limits for both auxiliary and propulsion diesel engines on ferries, excursion vessels, tugboats, and towboats. The Original Regulation became effective on January 1, 2009, and was amended in 2010 (becoming the Current Regulation) to include in-use engine emission requirements for engines on crew and supply vessels, barges, and dredges. The Current Regulation has reduced NO<sub>x</sub> and DPM emissions from diesel engines by requiring certain CHC to meet specific engine standards established by U.S. EPA (e.g., Tier 2 or Tier 3 standards) for main and auxiliary engines.

The Current Regulation requires that in-use Tier 1 and earlier propulsion and auxiliary diesel engines on a CHC vessel operating as a ferry, excursion vessel, tugboat, towboat, crew and supply vessel, barge, or dredge meet emission limits equal to or cleaner than U.S. EPA standards (Tier 2 or Tier 3) in effect at the time the engine is brought into compliance. The compliance dates span through December 31, 2022, depending on the engine MY and annual operating hours. There are four compliance schedules in the Current Regulation: one for vessels with their home seaports outside of the South Coast Air Quality Management District (SCAQMD), an accelerated schedule for vessels with their home seaports in the SCAQMD, a statewide schedule for crew and supply vessels, and another for barges and dredges. Each of these compliance schedules is based on the MY and hours of operation of the engine, and are designed to replace the oldest, highest-use engines first.

For vessel categories subject to in-use requirements, the Current Regulation contains low-use provisions, which allows owners and operators to comply with the regulation by demonstrating that the engine has not, and would not, operate more than 80 or 300 hours per year, depending on the vessel category.

The Current Regulation also subjects owners and operators of all CHC operating in RCW (within 24 nm of the California coast) to reporting, recordkeeping, hour meter, and fuel use requirements. All CHC owners and operators are required to keep records for each vessel, install a non-resettable meter to measure annual hours of operation on each engine, and use ULSD (15 parts per million (ppm) sulfur) to fuel their engines. CHC owners and operators need to submit a report to CARB if they acquire a CHC vessel or engine or if there is a change in the engine hours of operation.

New ferries carrying 75 passengers or more must meet Tier 4 engine requirements or use Tier 2 or 3 engines in conjunction with the Best Available Control Technology

(BACT). The Current Regulation does not impose in-use requirements on workboats, pilot vessels, water taxis, commercial passenger fishing, the “other” category, and all barges (towed or pushed) over 400 feet in length or otherwise meeting the definition of an OGV. Since many, but not all, double-hull fuel/petrochemical barges exceed 400 feet in length, they are not subject to the Current Regulation.

## **2. Regulations on Vessel Common Carriers by the California Public Utilities Commission**

Vessel Common Carriers (VCC) are defined by the California Public Utilities Commission (CPUC) as carriers that transport persons or property between points within the State. Examples are commute ferry services in the San Francisco Bay and services between California mainland points and Catalina.<sup>25</sup> This does not include sightseeing vessels, governmental agencies, tank vessels, specialty barges, or military transportation. More information on common carrier classifications can be found in Public Utilities Code (PUC) § 211 & 212.

CARB’s definition of “ferry” includes, but is not limited to, vessels subject to the VCC requirements set forth by the CPUC.

### **a. Certificate of Public Convenience and Necessity**

Pursuant to PUC § 1007-1008, VCCs may not operate without first obtaining a certificate from the CPUC declaring that public convenience and necessity require the operation unless CPUC has declared an operator exempt from VCC requirements.

To obtain a Certificate of Public Convenience and Necessity (CPCN), the applicant must provide information about their intended operation including routes, fixed termini, points to be served, fares to be charged, proposed discounted fares, frequency of service, financial ability to render the service, and facts showing that the proposed operation is required by public convenience and necessity.<sup>26</sup>

### **b. Fees**

Vessel operators applying to obtain, sell, mortgage, lease, assign, transfer or encumber a CPCN are subject to a one-time fee of \$75.

In addition to any fees related to CPCN applications, fees imposed upon each common carrier are deposited into the Public Utilities Commission Transportation Reimbursement Account (PUCTRA), pursuant to PUC § 421. This PUCTRA fee for

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<sup>25</sup> CPUC, Passenger Stage Corporation & Vessel Common Carrier, last accessed June 28, 2021, <https://www.cpuc.ca.gov/pscvcc/>.

<sup>26</sup> CPUC, Rules of Practice and Procedure, California Code of Regulations Title 20, Division 1, Chapter 1, April 1, 2018, last accessed June 28, 2021, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M209/K618/209618807.PDF>.

VCCs is currently 0.0033 times the gross revenue per reporting period, plus a minimum \$10 quarterly fee or \$25 annual fee, depending on the operator's annual revenue.<sup>27</sup>

Operators whose annual gross California intrastate passenger revenues are \$100,000 or more must report their revenue and pay fees on a quarterly basis. Operators whose annual gross California intrastate passenger revenues are less than \$100,000 must report their revenue and pay fees on annual basis.<sup>28</sup>

For example, a ferry operator generating \$50 million in revenue per year would be required to report revenues and pay fees on a quarterly basis. If this operator generates \$12.5 million per quarter, it would be responsible for paying \$41,250 of this reported revenue each quarter, plus a \$10 quarterly fee to the CPUC.

If a ferry operator generates \$90,000 in revenue per year, it would be required to report revenues and pay fees on an annual basis. This operator would be responsible for paying \$297 of this reported revenue each year, plus a \$25 annual fee to the CPUC.

### **c. Rates**

CPUC regulates the rates of VCC in the following ways:

- Operators may not establish a rate less than the maximum reasonable rate for the transportation of property for the purpose of meeting the competitive charges of other carriers (PUC § 452).
- Operators shall not change any rate or alter any classification, contract, practice, or rule resulting in any new rate, except upon a showing before the commission and a finding by the commission that the new rate is justified. The proposed rate change does not become effective until it has been approved by the commission (PUC § 454).
- Before engaging in the transportation of persons or property, every common carrier shall file with the commission and shall print and keep open to the public schedules showing the rates, fares, charges, and classifications for the transportation between termini within this State (PUC § 486, 493).
- Every common carrier shall afford all reasonable facilities for the prompt and efficient transfer of passengers between the lines owned, operated,

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<sup>27</sup> CPUC, Resolution M-4838, February 5, 2019, last accessed June 28, 2021, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M264/K682/264682931.PDF>.

<sup>28</sup> CPUC, Instructions for Filing the PUC Transportation Reimbursement Account (PUCTRA) Fee Statement, June 2019, last accessed June 28, 2021, [https://www.cpuc.ca.gov/uploadedFiles/CPUC\\_Public\\_Website/Content/Licensing/Regulatory\\_Information/Instructions%20for%20Filing%20PUCTRA%20\(VCC\).pdf](https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Licensing/Regulatory_Information/Instructions%20for%20Filing%20PUCTRA%20(VCC).pdf).

controlled, or leased by it and the lines of every other common carrier (PUC § 556).

- Nothing shall limit or modify the duty of a common carrier to establish joint rates, fares, and charges for the transportation of passengers and property over the lines owned, operated, controlled, or leased by it and the lines of other common carriers, or the power of the commission to require the establishment of such joint rates, fares, and charges (PUC § 559).
- The commission shall, upon a hearing, determine the kind and character of facilities operations necessary to reasonably and adequately meet public requirements, and shall fix and determine the just, reasonable, and sufficient rates for such service. Whenever two or more common carriers are furnishing service in competition with each other, the commission may, after hearing, prescribe uniform rates, classifications, rules, and practices to be charged, collected, and observed by all such common carriers (PUC § 730).
- No common carrier shall receive a different compensation for their service than the applicable rates, fares, and charges filed with the commission and specified in its schedules pursuant to PUC § 494, except when approved by the commission pursuant to PUC § 523-525, 529-531, & 533.
- No operator shall by any means knowingly report false information pursuant to PUC § 458 & 459.

In 2000<sup>29</sup> and 2004<sup>30</sup>, in response to significant increases in fuel prices in California, the CPUC approved resolutions granting VCCs temporary authority to adjust their fares and rates by up to 15 percent without specific Commission authorization.

#### **d. Other Oversight**

VCCs are also required to provide evidence of liability insurance to the CPUC. CPUC responds to and investigates complaints of unsafe, unlicensed, and uninsured passenger carriers, and responds to complaints against licensed carriers concerning carrier fitness, overcharging, discriminating in service, failing to provide service, failing to respond to customer complaints, or violating any of the oversight rules set forth by the CPUC. CPUC staff initiates enforcement action through the Commission and through the California courts. They also coordinate closely with other law enforcement

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<sup>29</sup> CPUC, Resolution TL-18989, March 6, 2002, last accessed June 28, 2021, [https://docs.cpuc.ca.gov/published/Final\\_resolution/13913.htm](https://docs.cpuc.ca.gov/published/Final_resolution/13913.htm).

<sup>30</sup> CPUC, Resolution TL-19042, June 9, 2004, last accessed June 28, 2021, [https://docs.cpuc.ca.gov/published/Agenda\\_resolution/36583.htm](https://docs.cpuc.ca.gov/published/Agenda_resolution/36583.htm).

and regulatory agencies in ensuring that only safe, legal, and properly inspected carriers transport passengers in California.<sup>31</sup>

### **3. Federal Regulations**

As discussed below in Section G.1, U.S. EPA has established marine engine standards as defined in 40 CFR Parts 94 and 40 CFR 1042. CARB has not established separate marine engine standards for engines sold in California; at this time, CARB staff is not proposing any requirements on engine manufacturers.

### **4. Other States**

#### **a. Texas**

The Texas Commission on Environmental Quality offers incentive grants for marine vessels to replace or repower their vessels to cleaner engines that must be certified to emit at least 25 percent less NO<sub>x</sub> than the engine being replaced.<sup>32</sup> Marine vessel owners utilizing these funds must commit to using the vessel at least 75 percent of the total annual hours of operation in the Texas portion of the Gulf Intercoastal Waterway or bays adjacent to an eligible county and agree to submit annual usage seaports.

#### **b. New Jersey**

On July 30, 2020, the New Jersey Department of Environmental Protection's (NJDEP) Clean Air Council held a public hearing to provide recommendations to the Commissioner to help better understand the extent of air pollution and GHG emissions around seaports and airports and their surrounding communities in the State of New Jersey. In a report outlining the recommendations for the NJDEP to address the air quality issues around the seaports and airports,<sup>33</sup> recommendations were made to adopt the current and proposed California regulations for cargo handling equipment (CHE), spark-ignition marine engines, and CHC, and to evaluate the feasibility of shore power and bonnet control systems to capture and reduce hoteling emissions at berth was also made. However, at this time, NJDEP has decided not to pursue further action to adopt the CHC regulation in the near-term. CARB staff continues to track activities of, and engage with other states on, measures that would reduce emissions from CHC.

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<sup>31</sup> CPUC, Passenger Carriers Enforcement, last accessed June 28, 2021, <https://www.cpuc.ca.gov/General.aspx?id=3009>.

<sup>32</sup> Texas Commission on Environmental Quality, Emissions Reduction Incentive Grants (ERIG) Program, Webinar Presentation, Air Grants Division, November 2020, last accessed June 28, 2021, [https://www.tceq.texas.gov/assets/public/implementation/air/terp/erig/FY21/FY20\\_ERIG\\_Workshop\\_Presentation\\_Final.pdf](https://www.tceq.texas.gov/assets/public/implementation/air/terp/erig/FY21/FY20_ERIG_Workshop_Presentation_Final.pdf).

<sup>33</sup> New Jersey Clean Air Council, Public Hearing July 30, 2020, Past, Present, and Future: Air Quality Around Our Ports and Airports, last accessed on June 28, 2021, <https://www.state.nj.us/dep/cleanair/pdfs/cac2020report.pdf>.

## **5. Seaport and Community Programs**

### **a. Assembly Bill 617**

The State of California has also recently placed additional emphasis on protecting local communities from the harmful effects of air pollution through the passage of Assembly Bill (AB) 617 (Garcia, Chapter 136, Statutes of 2017). AB 617 is a significant piece of air quality legislation that highlights the need for further emission reductions in communities with high cumulative exposure burdens, such as those near seaports and harbors. Additional information on AB 617 can be found in Chapter II and Chapter VIII of this Staff Report. AB 617 requires CARB to pursue new community-focused and community-driven actions to reduce air pollution and improve public health in communities that experience disproportionate high cumulative burdens from exposure to air pollutants. In response to AB 617, CARB created the Community Air Protection Program (CAPP). CAPP is tasked with achieving emission reductions in disproportionately burdened communities as directed by AB 617 and includes new statewide actions as a core element of the program. These statewide actions reflect a coordinated suite of strategies including new regulations, new incentive grant funding, and new exposure reduction resources and tools.

### **b. State Implementation Plans**

The federal CAA requires the U.S. EPA to establish NAAQS for pollutants considered harmful to public health, including PM<sub>2.5</sub> and ozone. States that cannot demonstrate attainment with NAAQS must develop State Implementation Plans (SIP). SIPs identify the emissions control requirements that the states and air districts will develop and implement to attain and maintain compliance with NAAQS. If U.S. EPA finds that a state has failed to submit the required SIP or that the air quality standard is not achieved by the date designated by U.S. EPA, nonattainment areas can face sanctions such as the removal of Federal highway funding and 2:1 required emissions offsets for any new or modified stationary sources or emission units that require a permit.

### **c. Community Emissions Reduction Plans**

Through CARB's implementation of AB 617, the Board annually selects communities to collaborate with in order to develop and implement community monitoring programs and/or new locally-focused Community Emissions Reduction Plans (CERP).

Emissions generated from CHC are one of the primary areas of concern in a number of coastal communities currently developing CERPs due to their substantial level of toxic and criteria air pollution emissions. Currently, the Stockton, West Oakland, Wilmington/West Long Beach/Carson, and San Diego AB 617 communities all have developed or are developing CERPs that discuss their concerns with the emissions generated from CHC and the effect it has on public health. Since CHC operations in the State are largely situated in the vicinity of at-risk communities, these communities

would directly benefit from localized reductions of DPM, NO<sub>x</sub>, and PM emissions from the Proposed Amendments.

#### **d. Seaport Programs**

Seaports throughout California, such as the Port of San Diego, San Pedro Bay, and the Port of Oakland, have developed their own programs to improve the local air quality and reduce emissions from seaport activity. For more information on these programs, see Chapter II, Sections D.3, D.4, and D.5.

### **6. Portable Engine Air Toxic Control Measure and the Portable Equipment Registration Program**

Engines permanently attached to CHC are subject to the Current Regulation, and engines that are detached but operate on vessels like barges are subject to the Portable Engine ATCM. The purpose of the Portable Engine ATCM is to reduce DPM emissions from portable diesel-fueled engines having a rated brake horsepower (bhp) of 50 and greater ( $\geq 50$  bhp). Whether engines are regulated under the Current Regulation or the Portable Engine ATCM, local air districts can still require permits for auxiliary engines.

The Portable Equipment Registration Program (PERP) is a voluntary statewide program, established in 1997 that provides an alternative path to registration for portable equipment owners who operate in multiple air districts. Without the uniform statewide program, equipment owners would have to obtain an operating permit from each air district where the engine or equipment unit operates, potentially leading to multiple permits for one piece of equipment. Portable equipment registered in PERP may operate throughout the State without obtaining multiple local air district permits.

### **7. Off-Road Diesel Regulation**

There is little overlap between the CHC Regulation and the Off-Road Diesel Regulation, except in certain situations such as a forklift or tractor operating on a barge. All self-propelled off-road diesel vehicles 25 hp or greater used in California and most two-engine vehicles (except on-road two-engine sweepers) are subject to the Regulation for In-Use Off-Road Diesel-Fueled Fleets ("Off-Road Diesel Regulation").<sup>34</sup> The overall purpose of the Off-Road Diesel Regulation is to reduce emissions of NO<sub>x</sub> and PM from off-road diesel vehicles operating within California.

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<sup>34</sup> CARB, Final Regulation Order: Regulation for In-Use Off-Road Diesel-Fueled Fleets, 2011, last accessed June 28, 2021, <https://ww2.arb.ca.gov/sites/default/files/classic/msprog/ordiesel/documents/finalregorder-dec2011.pdf>.

## **F. Progress to Date**

The Current Regulation requires vessel categories such as ferries, tugboats, crew and supply, barges, dredges, and other vessel types with older Pre-Tier 1 or Tier 1 engines to be repowered with engines meeting Tier 2 or Tier 3 standards. After full implementation, the Current Regulation was estimated to have achieved a 75 percent reduction in DPM and a 60 percent reduction in NO<sub>x</sub>, when compared to 2004 CHC emissions.<sup>35</sup> However, a comparison between CARB's self-reported harbor craft database and USCG's Merchant Vessel list indicates that about one-third of the State's harbor craft have not satisfied the reporting requirements of CARB's regulation. Unreported vessels may have non-compliant engines, and CARB is unable to locate, identify, and ensure that such vessels are compliant with the regulation or are achieving the intended emission reductions. For this reason, it is difficult for CARB to quantify the actual emission reductions achieved from the Current Regulation. The Proposed Amendments require enhanced vessel reporting and new facility reporting requirements, which will help increase compliance.

## **G. Current Emission Control Technologies for CHC**

California is home to a wide variety of CHC, with different engine and vessel configurations, and operational needs. This section briefly describes the current emission control technologies for CHC. Aftertreatment technologies to reduce NO<sub>x</sub> and PM emissions may be retrofitted to in-use engines where feasible or may be built into newly manufactured engines. For more detailed information regarding the CHC emission control technologies available, see Appendix E of this Staff Report.

### **1. U.S. EPA Marine Tier 3 and 4 Standards**

Marine engine emission standards are set in place under international treaties, and Federal regulations. International standards<sup>36</sup> apply to all international vessels; Federal standards apply to U.S. vessels; U.S. EPA certifies all new marine engines sold and offered for sale in the United States, including in California, as California does not have a separate new marine engine certification program at this time. The marine engine certification standards that are set by U.S. EPA regulate the amount of PM (including BC), HCs, CO, and NO<sub>x</sub> that can be emitted from marine engines. The stringency of standards for these pollutants increases with tier number.

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<sup>35</sup> CARB, Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments for Commercial Harbor Craft, September 2007, <https://ww3.arb.ca.gov/regact/2007/chc07/isor.pdf>.

<sup>36</sup> U.S. EPA, MARPOL Annex VI and the Act to Prevent Pollution from Ships (APPS), last accessed June 28, 2021, <https://www.epa.gov/enforcement/marpol-annex-vi-and-act-prevent-pollution-ships-apps#marpol>.

In 2008, U.S. EPA set Tier 3 and Tier 4 marine engine emission standards<sup>37</sup> to reduce pollution from newly built and remanufactured propulsion and auxiliary marine diesel engines below 30 liters per cylinder (L/cylinder) displacement (Referred to as Category 1 and 2 engines). The Tier 3 emission standards for new and rebuilt engines phased in from 2009 to 2014, and the aftertreatment-based Tier 4 standards phased in from 2014-2017. Marine Tier 4 standards apply to engines above 600 kilowatts (kW) (805 hp), which are often used in ferries, tugboats, and other high-power vessels. The specific levels and implementation dates for the Tier 3 and Tier 4 standards vary by MY, engine category, power output, and cylinder displacement of the engine. Marine Tier 3 and Tier 4 standards are codified in 40 CFR Part 1042.

On April 30, 2010, U.S. EPA finalized emission standards for the largest new marine diesel engines with per-cylinder displacement at or above 30 liters (called Category 3 marine diesel engines) installed on U.S. vessels. The NOx emission standards for U.S. EPA Tier 4 engines are equivalent to International Maritime Organization (IMO) Tier III, which achieves an 80 percent reduction in NOx. To achieve the 80 percent NOx reduction required to meet the Tier 4 standard, the majority of engine manufacturers have chosen to use SCR exhaust aftertreatment technology, but this is still being discussed for Category 3 engines. Since the majority of CHC are considered Category 1 (~95 percent) and Category 2 (~4 percent) engines, the Proposed Amendments focus on reducing emissions from these categories.

SCR is a commonly-used technology for meeting stricter NOx emissions standards in diesel applications worldwide. SCR reduces NOx to nitrogen gas (N<sub>2</sub>) and water (H<sub>2</sub>O) by injecting a urea-based solution into the exhaust gas stream through a special catalyst. SCR systems have been used in conjunction with other strategies to meet 90 percent lower NOx emission standards. When IMO Tier III engines are operated in Emission Control Areas (ECA), SCR units are active, meaning that urea is injected into the exhaust to facilitate catalytic reduction of NOx emissions. In some cases, SCR has provided moderate reductions in PM emissions, but SCR performance and efficiency are highly dependent on the exhaust temperature. During engine certification over the International Organization for Standardization (ISO) 8178 E3 and D2 cycles, U.S. EPA reviews emission factors over a wide range of engine loads from 10 to 100 percent of maximum power.

SCR is not the only way to meet the Tier 4 standards. Manufacturers may choose a combination of other in-cylinder technologies, such as fuel-water emulsification, direct water injection, intake air humidification, or exhaust gas recirculation (EGR). In addition, spark-ignited Otto cycle engines can be used to meet the Tier 4 NOx

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<sup>37</sup> U.S. EPA, Federal Register, Vol. 73, No. 126, June 30, 2008, Control of Emissions of Air Pollution from Locomotive Engines and Marine Compression-Ignition Engines Less than 30 Liters per Cylinder, last accessed June 28, 2021, <https://www.gpo.gov/fdsys/pkg/FR-2008-06-30/pdf/R8-7999.pdf>.

standard of 1.8 g/kW-hr through careful engine calibration and the use of a three-way catalyst.<sup>38</sup>

After establishing Tier 4 standards and beginning to certify engine platforms, U.S. EPA was made aware that manufacturers of vessels for certain high-speed commercial applications were facing some challenges associated with finding any available engines certified to the Tier 4 engine standards. These vessels have performance needs for achieving substantial propulsion power from a light-weight engine, but newly built vessels had no engines certified to Tier 4 standards that met these performance criteria. For these reasons, in August 2020, U.S. EPA amended 40 CFR Part 1042 to delay Tier 4 engine certification requirements for high-power density engines until 2022 or 2024.<sup>39</sup> This delay provides more time for engine manufacturers to develop and certify high-power density Tier 4 engines used in some high-speed vessels that are not commonly used in California. CARB staff does not expect these delays to impact meeting Tier 4 plus DPF emissions performance standards by the proposed compliance dates.

## **2. CARB Verified Retrofit Diesel Particulate Filters**

A Verified Diesel Emission Control Strategy (VDECS) is an emissions control strategy evaluated and verified by CARB, pursuant to the verification procedure laid out in Title 13, CCR § 2700-2711. The use of these control strategies reduces either PM, NOx, or both. A DPF is the most common type of VDECS, which uses a mechanical filter to trap soot particles and oxidizes them through a process called regeneration.

There are two main categories of DPFs: active and passive. Active devices require heat from an outside energy source, such as diesel fuel or electricity, to induce chemical reactions needed to burn off the soot accumulated during operation. Passive devices remove soot while the engine operates. Often an oxidation catalyst is used to lower the activation energy needed to initiate chemical reactions to burn off the soot. The exhaust gas must be sufficiently hot for a certain percentage of the operation time to make passive regeneration possible.<sup>40</sup>

CARB has verified Rypos, Inc.'s Active Diesel Particulate Filter (ADPF) as a Level 2 Plus VDECS for use with marine CHC, indicating it can reduce DPM emissions by more than

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<sup>38</sup> UCR, Final Report: Ultra-Low NOx Near-Zero Natural Gas Vehicle Evaluation ISX12N 400, April 2018, last accessed June 29, 2021, <https://static1.squarespace.com/static/53a09c47e4b050b5ad5bf4f5/t/5b9ff77eb8a045bc3da9ab05/1537210247037/Ultra-Low+NOx+Near-Zero+Natural+Gas+Vehicle+Evaluation.pdf>.

<sup>39</sup> U.S. EPA, Federal Register, Vol. 85, No. 192, Amendments Related to Marine Diesel Engine Emission Standards, 40 CFR Part 1042, October 2, 2020, last accessed June 29, 2021, <https://www.govinfo.gov/content/pkg/FR-2020-10-02/pdf/2020-18621.pdf>.

<sup>40</sup> CARB, Frequently Asked Questions: Regulation for In-Use Off-Road Diesel-Fueled Fleets (Off-Road Regulation), December 2015, last accessed June 29, 2021, <https://ww3.arb.ca.gov/msprog/ordiesel/faq/vdecsfaq.pdf>.

50 percent during regular operation of the system.<sup>41</sup> Although Level 2 VDECS are successful at reducing DPM emissions from CHC, they are only verified to reduce DPM by at least 50 percent. Due to the immediate need of emission reductions and the availability of Level 3 control at 85 percent or more, a Level 3 VDECS must be developed and used by CHC owners to further reduce DPM emissions.

There are over 50 approved Level 3 VDECS available for on-road and off-road uses.<sup>42</sup> Although there are no Level 3 VDECS currently available for marine engines, the Proposed Amendments should incentivize VDECS manufacturers to accelerate the transfer of technology to marine applications to achieve additional emission reductions from CHC. In order for an applicant to receive CARB's Executive Officer's (EO) approval and verification of a Level 3 VDECS, the applicant must follow the requirements in Title 13, CCR § 2700-2711 as well as submit an application to the EO including a preliminary verification application (PVA or test plan), and a final verification application (final test results).

### **3. European Stage V Standards for Inland Waterway Engines**

The European Stage V Standards<sup>43</sup> refer to European Union (EU) legislation for air pollution prevention, which specify limits on PM emissions from diesel engines. The Stage V Standards limit the overall mass of PM in exhaust gases as well as the number of particles. European Stage V requirements took effect from 2019 to 2020, depending on the engine power subcategories. Emission limits for inland waterway vessels were significantly lowered under the Stage V regulation. The Stage V limits are found in Regulation (EU) 2016/1628 of the European Parliament and of the Council of 14 September 2016 [Stage V Regulation (EU) 2016/1628].<sup>44</sup>

The EU Stage V requirements for engines over 300 kW include solid particle number standards, effectively requiring the use of a DPF, beginning January 1, 2020. These engines may meet CARB proposed Tier 4 plus DPF emissions performance standards; however, the engines need to be certified by U.S. EPA before they can be legally sold and operated in the United States. These Stage V marine emission standards apply to inland waterway propulsion (IWP) and inland waterway auxiliary (IWA) engines above 19 kW, including engines of all types of ignition. All EU Stage V engines MY 2020 and newer are anticipated to be equipped with a wall-flow DPF for power subcategories

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<sup>41</sup> CARB, Executive Order DE-09-006, April 17, 2009, last accessed June 29, 2021, [https://ww2.arb.ca.gov/sites/default/files/classic//diesel/verdev/pdf/executive\\_orders/de-09-006.pdf](https://ww2.arb.ca.gov/sites/default/files/classic//diesel/verdev/pdf/executive_orders/de-09-006.pdf).

<sup>42</sup> CARB, Verification Procedure: Currently Verified, last accessed June 29, 2021, <https://ww2.arb.ca.gov/verification-procedure-currently-verified>.

<sup>43</sup> International Council on Clean Transportation, European Stage V Non-Road Emission Standards Policy Update, November 2016, last accessed June 29, 2021, [https://theicct.org/sites/default/files/publications/EU-Stage-V\\_policy%20update\\_ICCT\\_nov2016.pdf](https://theicct.org/sites/default/files/publications/EU-Stage-V_policy%20update_ICCT_nov2016.pdf).

<sup>44</sup> Official Journal of the European Union, Regulation (EU) 2016/1628 of the European Parliament and of the Council of 14 September 2016, September 14, 2016, last accessed June 29, 2021, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1628&from=EN>.

300 kW or greater. For more information regarding the EU Stage V emission standards, see Appendix E.

#### **4. Zero-Emission and Advanced Technologies**

ZEAT refers to cleaner technologies, including zero-emission capable hybrid and zero-emission equipment. To accelerate the deployment of ZEAT in the marine sector in California, the Proposed Amendments include zero-emission mandates where technology is most feasible and establishes a regulatory incentive framework to encourage adoption everywhere else.

For purposes of the Proposed Amendments, ZEAT technologies are grouped as follows:

- Zero-Emission Capable Hybrid Vessels, which include vessels in certain CHC sectors that can demonstrate that 30 percent or more of combined main propulsion and auxiliary power in a calendar year is derived from a zero-emission tailpipe emission source. Examples include diesel-powered vessels with battery plug-in hybrid propulsion systems capable of being charged from the grid, or vessels with hydrogen fuel cells.
- Zero-Emission Vessels, which include vessels in certain categories that do not and would not use an internal combustion engine to generate propulsion or auxiliary power. Combustion engines may exist for an emergency, safety, or other incidental or unforeseen purposes, but would not be permitted for use during normal operation of the vessel.

## **II. The Problem That the Proposal is Intended to Address**

Communities located near California's seaport complexes bear a disproportionate health burden due to their proximity to the emissions generated from freight activity associated with the seaports, including truck, train, and vessel traffic in and around the seaports and harbors. Despite regulations already in place to reduce emissions at seaports, the diesel-powered freight sources that operate in and around California's seaports still heavily impact many disadvantaged communities (DAC) around California seaports and harbors. To further protect communities most heavily impacted by California's freight sector, additional emission reductions are necessary at seaports, including emissions from harbor craft vessels.

Urban growth of coastal regions is expanding significantly not only within California, but also throughout the United States. With over 68 percent of California's population density being within coastal counties, there is an ever-increasing need for reductions in maritime sectors.

### **A. Need to Reduce Exposure in Impacted Communities**

CARB staff recognizes that under the Current Regulation, CHC owners have made considerable investments to replace older engines with newer, cleaner engines. In addition, some CHC owners not subject to in-use requirements have voluntarily replaced their engines utilizing CARB's Carl Moyer Program administered through local air districts.

Despite substantial progress in reducing emissions from CHC over the last decade, CHC continue to impact nearby communities, including those in ozone and PM<sub>2.5</sub> nonattainment areas. In addition, the DPM emissions from CHC impact communities located adjacent to those operations, as well as people living and working miles away. DPM is a TAC that can substantially increase the risk of developing cancer and other health problems such as increased respiratory illnesses, risk of heart disease, and premature death. In addition, emissions from CHC engines are expected to become even more significant due to the continued operation of CHC while emissions from other mobile sources are decreasing due to more stringent regulations and cleaner technologies. The emissions from CHC impose uncompensated health and environmental costs to the nearby communities and this risk must be reduced as much as possible.

In 1998, the Board identified DPM as a TAC with no Board-specified threshold exposure level, pursuant to HSC § 39650 through 39675. A needs assessment for DPM was conducted between 1998 and 2000 pursuant to HSC § 39658, 39665, and 39666. This resulted in CARB staff developing, and the Board approving, the Risk Reduction Plan (RRP) to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and

Vehicles ("Diesel RRP")<sup>45</sup> in 2000. The Diesel RRP presented information on the available options for reducing DPM and recommended regulations to achieve these reductions. The Diesel RRP's scope was broad, addressing all categories of mobile and stationary engines. It included control measures for all off-road diesel sources, such as those covered by the Proposed Amendments. The ultimate goal of the Diesel RRP is to reduce, by 2020, California's DPM emissions and associated potential cancer risks by 85 percent from the 2000 levels.

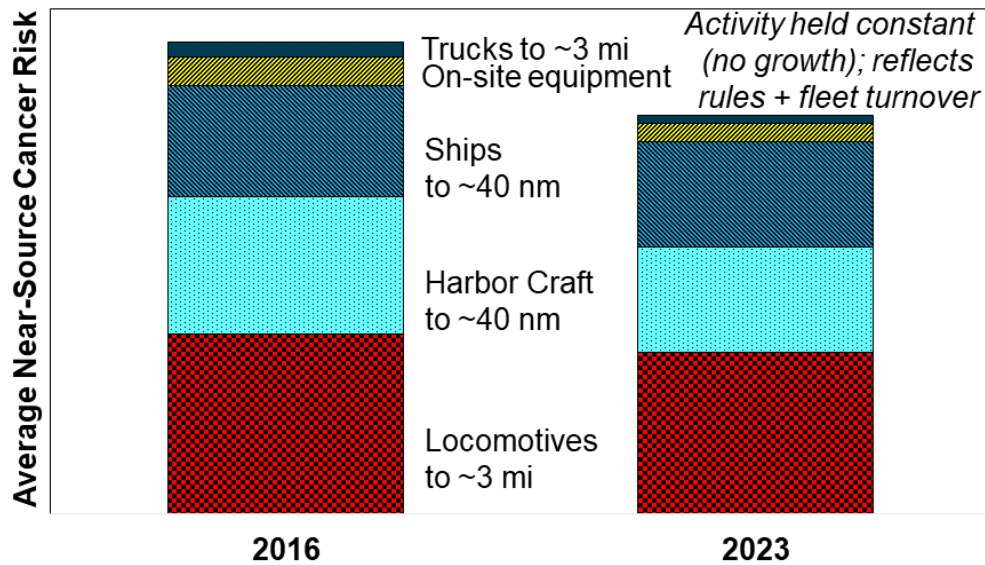
In 2018, CARB staff presented a scoping evaluation for POLA and POLB.<sup>46</sup> This scoping evaluation showed that CHC were still one of the top contributors to near-source cancer risk in 2016 and would contribute an even larger proportion in 2023 (see Figure II-1). As a result, CARB staff proposed at the March 2018 Board Hearing to develop regulations to further reduce emissions from CHC and other freight sources including OGVs, CHE, and drayage trucks. Note, data in Figure II-1 was obtained from reference 46 and updated as of August 2021 to reflect the latest projections of emissions in 2023 for OGVs and locomotives. These measures would also achieve emission reductions needed to attain NAAQS and combat climate change. The South Coast Air Basin is classified as an extreme nonattainment area for the eight-hour ozone standard, and serious nonattainment for the PM<sub>2.5</sub> standard. More reductions are necessary to attain these air quality standards. Because the Current Regulation will be fully implemented at the end of 2022, CARB staff is proposing to further reduce emissions from CHC starting in 2023. The Proposed Amendments would have final compliance deadlines in 2032 with compliance extensions expiring by December 31, 2034.

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<sup>45</sup> CARB, Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles, October 2000, last accessed July 6, 2021, <https://ww2.arb.ca.gov/sites/default/files/classic/diesel/documents/rrpfinal.pdf>.

<sup>46</sup> CARB, Implementation of State SIP Strategy and South Coast AQMP - Concepts to Minimize the Community Health Impacts from Large Freight Facilities, March 22, 2018, last accessed July 6, 2021, [https://www.arb.ca.gov/board/books/2018/032218/18-2-5pres.pdf?\\_ga=2.243242562.1596168673.1607359382-1902767897.1606875431](https://www.arb.ca.gov/board/books/2018/032218/18-2-5pres.pdf?_ga=2.243242562.1596168673.1607359382-1902767897.1606875431).

Figure II-1. Seaport Contribution to Near Source Cancer Risk



The communities and neighborhoods that reside in and around California’s seaports and harbors experience environmental and health inequities in part due to their close proximity to high levels of air pollution from seaport activities. Seaport activity includes not only CHC, but also cars, diesel trucks, CHE, OGVs, and locomotives coming and going around the seaports. Many of these communities are classified as disadvantaged by the California Environmental Protection Agency (CalEPA), using the California Communities Environmental Health Screening Tool (“CalEnviroScreen”), Version 3.0, developed by the Office of Environmental Health Hazard Assessment (OEHHA).<sup>47</sup> CalEnviroScreen uses various factors to score California communities based on environmental pollution burden and socio-economic indicators. Exposure to DPM is the main contributor to many seaport communities scoring in the top 10<sup>th</sup> percentile for high levels of air pollution statewide on CalEnviroScreen. The elevated air pollution burden in these communities can be measured. For example, while exposure to cancer-causing diesel particles has decreased substantially across all communities statewide in California, exposure to diesel particles in DACs is on average twice that experienced in non-DACs.<sup>48</sup> Emissions from harbor craft vessels are a significant contributor to air pollution and associated health impacts in many impacted seaport communities.

DPM is a TAC containing PM2.5 particles that easily penetrate the airways and lungs, where they may produce harmful health effects such as the worsening of heart and

<sup>47</sup> OEHHA, CalEnviroScreen 3.0, last accessed July 6, 2021, <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>.

<sup>48</sup> CARB, Draft Community Air Protection Blueprint For Selecting Communities, Preparing Community Emissions Reduction Programs, Identifying Statewide Strategies, and Conducting Community Air Monitoring, June 7, 2018, last accessed July 6, 2021, [https://ww2.arb.ca.gov/sites/default/files/2018-06/draft\\_community\\_air\\_protection\\_blueprint.pdf](https://ww2.arb.ca.gov/sites/default/files/2018-06/draft_community_air_protection_blueprint.pdf).

lung diseases. The risk of these health effects is greatest in the elderly and very young children. Exposure to elevated concentrations of PM is also associated with increased hospital and doctor visits and increased numbers of premature deaths. The pollution from CHC diesel engines, specifically DPM, contributes significantly to public health impacts including higher localized potential cancer risk.

Health analyses are conducted to quantify the excess cancer risk posed by the concentration of diesel-fueled engines operating in and around California's seaports. While developing the Proposed Amendments, staff performed a health risk assessment (HRA) to evaluate the localized cancer risk impacts solely attributed to CHC emissions in the South Coast and Bay Area regions. Staff selected these regions to ensure that the analyses reflected some of the higher impacted areas of the State. The HRA estimates the increase in potential cancer risk that would result under a business-as-usual scenario (see Appendix G). The results of the HRA highlight the need for further emission control from CHC diesel engines to provide public health benefits and reduce the cancer risk burden to the communities surrounding California's seaports and harbors.

Current Regulations, port, and privately owned CHC initiatives, and incentive programs have already resulted in emission reductions from CHC. However, more action is necessary to further reduce DPM and the localized cancer risk in communities surrounding seaports, marinas, and harbors, and marine terminals, lower NO<sub>x</sub> and PM<sub>2.5</sub> emissions to support regional attainment of health-based air quality standards for ozone and PM<sub>2.5</sub> and reduce the GHG emissions that contribute to global climate change.

To address these concerns, the Proposed Amendments would help act to further protect public health and reduce the air quality impacts from CHC throughout the State by:

- Reducing exposure in communities most impacted by air pollution as required under AB 617. For more information on AB 617, see Section D.2. of this chapter below and Chapter VIII.
- Minimizing near-source exposure and health risk from identified TACs, including DPM, produced by fuel combustion pursuant to the Toxic Air Contaminant Identification and Control Act, which established California's program to reduce exposure to air toxics.<sup>49</sup>
- Attaining the NAAQS for Ozone and PM in all regions of California, as required by the federal CAA.

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<sup>49</sup> CARB, AB 1807 Toxic Air Contaminant Identification and Control, last accessed July 6, 2021, <https://ww3.arb.ca.gov/toxics/background.htm>.

## B. Need to Attain Air Quality Standards

Substantial progress has been achieved in reducing NO<sub>x</sub> emissions from mobile sources statewide through the implementation of CARB's existing programs. These programs are expected to continue providing further emission reductions through 2031, helping the State to meet necessary air quality standards. However, challenges remain in meeting the NAAQS for ozone and PM<sub>2.5</sub> throughout many regions of the State. Two areas of the State in particular face the most critical air quality challenges – the South Coast Air Basin and the San Joaquin Valley Air Basin. The South Coast Air Basin has the highest ozone levels in the nation, while the San Joaquin Valley Air Basin has the greatest PM<sub>2.5</sub> challenge. To meet the 2023 and 2031 NAAQS for ozone, the South Coast Air Basin will require an approximate 70 percent NO<sub>x</sub> reduction from current levels by 2023 and an overall 80 percent NO<sub>x</sub> reduction by 2031.<sup>52</sup>

Because NO<sub>x</sub> is a precursor to both ozone and to secondary PM<sub>2.5</sub> formation, reductions in NO<sub>x</sub> emissions will also provide benefits for meeting the PM<sub>2.5</sub> standards. In addition, in October 2015, U.S. EPA adopted a more stringent 70 parts per billion (ppb) ozone standard with an attainment date of 2037. This ozone standard will likely result in additional areas being classified as nonattainment areas and requiring even further emission reductions in California's existing nonattainment areas.<sup>50</sup>

Mobile sources, such as cars, trucks, locomotives, and off-road equipment (including CHC) are the largest contributors to the formation of ozone, PM<sub>2.5</sub>, and DPM emissions in California. They are responsible for approximately 80 percent of smog-forming NO<sub>x</sub> emissions, and 90 percent of DPM emissions. Although engine standards have become more stringent over time, existing equipment tends to remain in operation for a long period of time, which slows the rate of potential emission reductions.

Overall NO<sub>x</sub> emissions from sources that are primarily regulated by the federal government, such as vessels, aircraft, and locomotives, have not kept pace with NO<sub>x</sub> reductions in other sectors, and are projected to decrease by approximately 20 percent by 2031 without additional regulations. For example, by 2023, vessel NO<sub>x</sub> emissions in the South Coast Air Basin are projected to increase to 23 tons per day.<sup>51</sup> As such, emission reductions from vessels and other federally regulated sources are essential to achieve California's ambient air quality standards.

Under the California Clean Air Act, California is required to submit air quality management plans (AQMP) for areas that exceed the health-based NAAQS illustrating

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<sup>50</sup> CARB, Staff Report: Public Hearing to Consider the Proposed Advanced Clean Trucks Regulation, October 22, 2019, last accessed July 6, 2021, <https://ww3.arb.ca.gov/regact/2019/act2019/isor.pdf>.

<sup>51</sup> CARB, Mobile Source Strategy, May 2016, last accessed July 6, 2021, <https://www.arb.ca.gov/planning/sip/2016sip/2016mobsrc.pdf>.

how the State will attain the standards by certain dates. The current standards are 80 ppb 8-hour ozone by 2023, 75 ppb 8-hour ozone by 2031, 12 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) annual PM<sub>2.5</sub> by 2021 to 2025, and lastly the new federal ozone standard of 70 ppb with attainment dates through 2037.<sup>52</sup> As part of the 2016 AQMP, CARB included a SIP Strategy approved by U.S. EPA that describes CARB's commitment to achieving the mobile source and consumer products reductions needed to meet federal air quality standards over the next 15 years.<sup>53</sup> This Strategy provides CARB's commitment to bring proposed statewide control measures to the Board for adoption and to achieve the NO<sub>x</sub> and ROG reductions needed for attainment by 2023, 2031, and 2037. While the Proposed Amendments are not included in the SIP, these reductions are additional and necessary for the State to attain its ambient air quality standards.

CHC contribute a large share of emissions to various Air Basins throughout the State. Some of these areas do not have air quality levels that meet the Federal NAAQS and are designated as nonattainment areas. U.S. EPA classifies areas of ozone nonattainment (e.g., "extreme," "severe," "serious," "moderate," or "marginal") based on how much an area exceeds the standard. For PM<sub>2.5</sub>, nonattainment areas can either be designated as Moderate or Serious, based on the level of PM<sub>2.5</sub>. This classification affects the required date that such areas need to attain the relevant standard(s). More time is allowed to demonstrate attainment for areas with higher nonattainment classifications in recognition of the greater challenge involved. However, the higher classifications are also subject to more stringent requirements.

California has five air basins or counties that are affected by CHC emissions and are nonattainment for the Federal PM<sub>2.5</sub> and ozone NAAQS. For geographical reference, Figure II-2 shows the 35 air quality districts within California.

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<sup>52</sup> CARB, Revised Proposed 2016 State Strategy for the State Implementation Plan, March 7, 2017, last accessed July 6, 2021, <https://www.arb.ca.gov/planning/sip/2016sip/rev2016statesip.pdf>.

<sup>53</sup> CARB, Implementation of State SIP Strategy and South Coast AQMP - Concepts to Minimize the Community Health Impacts from Large Freight Facilities, March 22, 2018, last accessed July 6, 2021, [https://www.arb.ca.gov/board/books/2018/032218/18-2-5pres.pdf?\\_ga=2.243242562.1596168673.1607359382-1902767897.1606875431](https://www.arb.ca.gov/board/books/2018/032218/18-2-5pres.pdf?_ga=2.243242562.1596168673.1607359382-1902767897.1606875431).

Figure II-2. California Air Districts

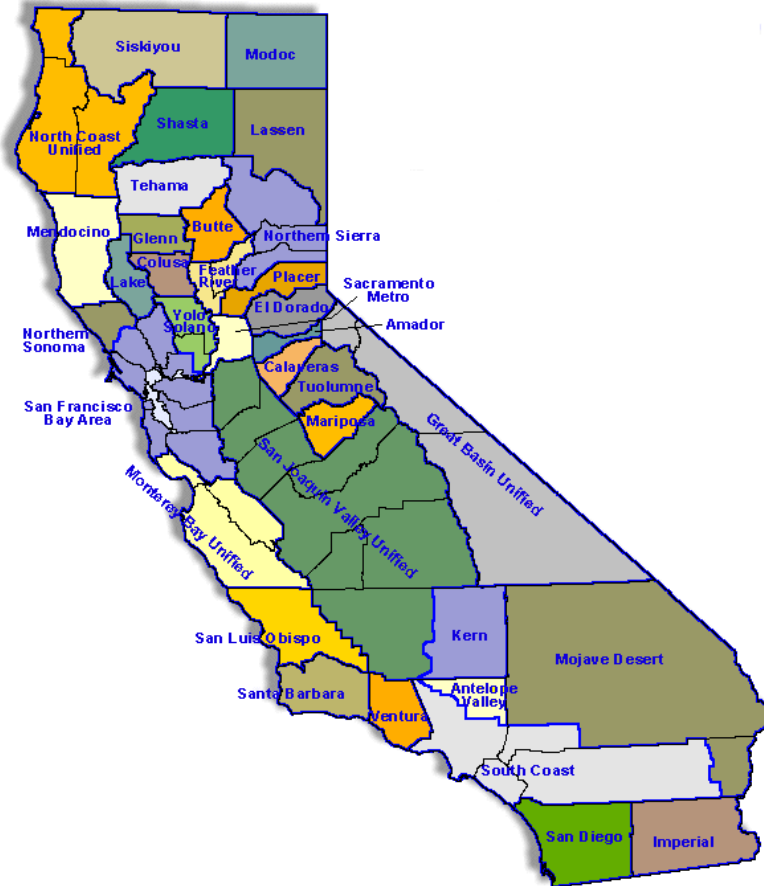


Table II-1 outlines the Air Districts/Basins in California where CHC operate which are nonattainment areas for the various ozone and PM<sub>2.5</sub> standards and their designation status. Nonattainment areas in California that are impacted by CHC emissions include the San Francisco Bay Area, the San Joaquin Valley, Ventura County, South Coast, and San Diego Air Basins.

California has two areas with the most critical air quality challenges in the nation: The South Coast Air Basin and the San Joaquin Valley Air Basin. Although the San Joaquin Valley is not located on the Coast, the Port of Stockton is located in the San Joaquin Valley and is impacted by emissions from CHC. The near-term targets for these areas include a 2023 deadline for attainment of the 80 ppb 8-hour ozone standard, a 2024 deadline for the 35 µg/m<sup>3</sup> 24-hour PM<sub>2.5</sub> standard, and a 2025 deadline for the 12 µg/m<sup>3</sup> annual PM<sub>2.5</sub> standard. There are also mid-term attainment years of 2031 and 2037 for the more recent 8-hour ozone standards of 75 ppb and 70 ppb, respectively. In 2018, U.S. EPA designated the South Coast Air Basin as an extreme nonattainment area for the 2015 8-hour ozone standard.

**Table II-1. California Non-Attainment Area Classifications for the Ozone and PM2.5 NAAQS:  
National Ambient Air Quality Standard Classifications California Non-Attainment Areas**

Nonattainment Area	2008 Ozone	2015 Ozone	2006 PM2.5	2012 PM2.5
San Francisco Bay Area	Marginal	Marginal	Moderate	*n/a
San Joaquin Valley	Extreme	Extreme	Serious	Moderate
Ventura County	Serious	Serious	n/a	n/a
South Coast	Extreme	Extreme	Serious	Moderate
San Diego	Serious	Moderate	n/a	n/a

\*n/a means that an area is unclassified or in the attainment of the relevant air quality standard.

The South Coast Air Basin has implemented many new and more stringent regulations to reduce emissions over the years, but the Basin still exceeds federal NAAQS for both ozone and PM2.5 and still experiences some of the worst air pollution in the nation. To meet the upcoming deadlines for attaining federal ozone standards, significant NOx reductions are necessary (45 percent and 55 percent beyond all Current Regulations by 2023 and 2031, respectively). OGVs combined with CHC, would be the largest source of NOx emissions in the South Coast Basin in 2023, so it is essential to maximize both early and long-term reductions from these sources. Both CARB and SCAQMD have shown that CHC would continue to contribute a significant amount of DPM to the community if regulations are not developed to further reduce emissions from CHC and other freight sources including OGVs, CHE, and drayage trucks.

The CHC rulemaking is one of several actions CARB is undertaking additional to SIP commitments, and it is intended to collectively reduce community health risk, attain regional air quality standards, and mitigate climate change while pushing forward the adoption of ZEAT.

On May 16, 2016, CARB staff released the 2016 State Strategy for the SIP, which described CARB's proposed commitment to achieve the mobile source and consumer products reductions needed to meet federal air quality standards over the next 15 years.<sup>52</sup> Federal clean air laws require areas with unhealthy levels of ozone, PM, CO2, NOx, and SOx to develop SIPs. SIPs describe how an area will attain NAAQS. While the Proposed Amendments are not included in the SIP, these reductions are additional and necessary for the State to attain its ambient air quality standards.

### **C. Need to Reduce GHG and BC Emissions**

CHC engine exhaust contains various GHG emissions that contribute to the greenhouse effect and climate change. Anthropogenic climate change is a significant and growing problem that must be addressed to avoid more serious effects in the near future. Aside from requiring cleaner tiered CHC engines to reduce criteria and toxic air pollutants, AB 32<sup>54</sup> requires California to reduce its GHG emissions to 1990

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<sup>54</sup> HSC, Assembly Bill No. 32, September 27, 2006, last accessed July 6, 2021, [http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab\\_0001-0050/ab\\_32\\_bill\\_20060927\\_chaptered.pdf](http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf).

levels by 2020. In addition, under Senate Bill (SB) 32,<sup>55</sup> California set a GHG emission reduction goal of 40 percent below 1990 levels by 2030. This target is expected to enable California to reach the ultimate goal of reducing emissions by 80 percent under 1990 levels by 2050 per Executive Order S-03-05.

BC, or soot, is emitted from burning fuels such as coal, diesel, and biomass, as well as from various forms of non-fuel biomass combustion. BC is classified as a SLCP, a category that also includes CH<sub>4</sub> and fluorinated gases (F-gases, including hydrofluorocarbons, or HFCs). SLCPs are powerful climate forcers that can have an immediate and significant impact on climate change, compared to longer-lived GHGs such as CO<sub>2</sub>. SLCPs are estimated to be responsible for about 40 percent of the current net climate forcers. SB 605 (Lara, Chapter 523, Statutes of 2014) requires CARB to develop a plan to reduce emissions of SLCPs, and SB 1383 (Lara, Chapter 395, Statutes of 2016) requires the Board to approve and begin implementing the plan by January 1, 2018. SB 1383 also sets targets for statewide reductions in SLCP emissions of 40 percent below 2013 levels by 2030 for CH<sub>4</sub> and HFCs, and 50 percent below 2013 levels by 2030 for BC.<sup>56</sup>

To reduce the mounting impacts of climate change, it is important to lower emissions of GHG and SLCPs, such as BC, from vessels. Presently, the maritime industry as a whole accounts for around 2 to 3 percent of global GHGs, but its emissions of GHGs is projected to increase by up to 250 percent by 2050, due to industry growth associated with increasing global trade demands.<sup>57</sup> California has set a GHG emission reduction goal of 40 percent below 1990 levels by 2030.<sup>55</sup> This target is expected to enable California to reach the ultimate goals of carbon neutrality by 2045 and reducing GHG emissions by 80 percent under 1990 levels by 2050. Together, these efforts align with scientifically established levels to limit global warming below 2 degrees Celsius (°C).<sup>58</sup>

Since CHC are primarily powered by and use diesel-fueled engines, they contribute to statewide BC emissions levels. Climate scientists agree that global warming and other shifts in the climate system observed over the past century are caused by human

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<sup>55</sup> HSC, Senate Bill 32, September 8, 2016, last accessed July 6, 2021, [http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb\\_0001-0050/sb\\_32\\_bill\\_20160908\\_chaptered.html](http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb_0001-0050/sb_32_bill_20160908_chaptered.html).

<sup>56</sup> CARB, Short-Lived Climate Pollutant Reduction Strategy, March 2017, last accessed July 6, 2021, [https://ww2.arb.ca.gov/sites/default/files/2018-12/final\\_slcp\\_report%20Final%202017.pdf](https://ww2.arb.ca.gov/sites/default/files/2018-12/final_slcp_report%20Final%202017.pdf).

<sup>57</sup> Stefanini, Sara, Countries Inch Towards 'Bare Minimum' Climate Target for Shipping, 2018, last accessed July 6, 2021, <https://www.climatechangenews.com/2018/04/10/countries-inch-towards-bare-minimum-climate-target-shipping/>.

<sup>58</sup> UNFCCC, The Paris Agreement, United Nations Climate Change, 2017, last accessed July 6, 2021, <https://unfccc.int/process/the-paris-agreement/what-is-the-paris-agreement>.

activities. These recorded changes are occurring at an unprecedented rate.<sup>59</sup> According to new research, unabated GHG emissions could cause sea levels to rise up to ten feet by the end of this century—an outcome that could devastate coastal communities in California and around the world.<sup>60</sup> California is already feeling the effects of climate change, and projections show that these effects will continue and worsen over the coming centuries. The impacts of climate change on California have been documented by OEHHA in Indicators of Climate Change in California,<sup>61</sup> which details the following changes that are occurring already:

- A recorded increase in annual average temperatures, as well as increases in daily minimum and maximum temperatures.
- An increase in the occurrence of extreme events, including wildfire, drought, and heatwaves.
- A reduction in spring runoff volumes, as a result of the declining snowpack.
- A decrease in winter chill hours, necessary for the production of high-value fruit and nut crops.
- An increase in ocean acidification on marine organisms, and changes in the timing and location of species sightings.

The Proposed Amendments are expected to achieve additional GHG reductions helping the State to make progress with its reduction goals and reduce the impacts of climate change by promoting an increase in the number of CHC vessels using ZEAT at California ports and harbors and by requiring that CHC use renewable diesel fuel.

Emissions must be reduced from all sources of air pollution in California to not only meet the federal standards, but to minimize negative health effects in the State's most impacted and DACs, and to lessen climate impacts. To that end, much needs to be accomplished. Figure II-3 illustrates the multitude of standards, targets, and goals for the State of California that would need to be met over the next 30 years.

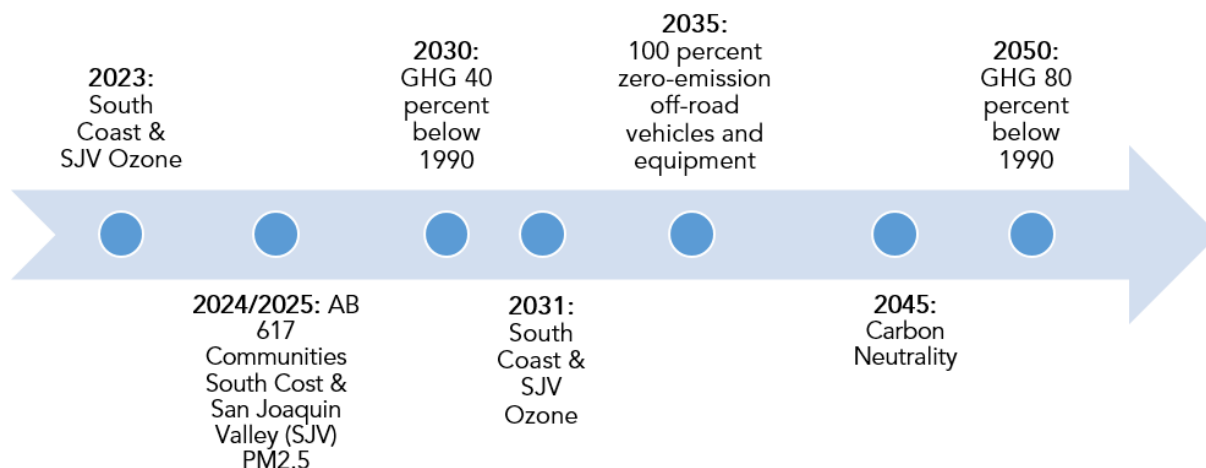
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<sup>59</sup> Cook, J., et al., Consensus on Consensus: a Synthesis of Consensus Estimates on Human-Caused Global Warming, *Environ. Res. Lett.* 11 (2016) 048002, April 13, 2016, last accessed July 6, 2021, <http://iopscience.iop.org/article/10.1088/1748-9326/11/4/048002/pdf>.

<sup>60</sup> California Ocean Protection Council Science Advisory Team Working Group, *Rising Seas in California: An Update On Sea-Level Rise Science*, April 2017, last accessed July 6, 2021, <https://www.opc.ca.gov/webmaster/ftp/pdf/docs/rising-seas-in-california-an-update-on-sea-level-rise-science.pdf>.

<sup>61</sup> OEHHA, *Indicators of Climate Change in California*, May 9 2018, last accessed July 6, 2021, <https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf>.

**Figure II-3. California's Air Quality Targets and GHG Reduction Goals**



#### **D. State Policy and Plans Direct CARB to Secure Further Reductions from Harbor Craft**

State and local agencies over recent years have made numerous plans and commitments to reduce air pollution from freight sources.

##### **1. AB 32 and SB 32**

In 2006, California enacted AB 32 to address global climate change by requiring cost-effective reductions in GHG emissions and by codifying a target of reducing California GHG emissions to 1990 levels by 2020. AB 32 directed CARB to continue its leadership role on climate change and to develop a scoping plan identifying integrated and cost-effective regional, national, and international GHG reduction programs.<sup>64</sup> In 2015, Governor Brown issued Executive Order B-32-15,<sup>62</sup> which set a goal of reducing statewide GHG emissions to 40 percent below 1990 levels by 2030. In 2016, the Legislature passed, and Governor Brown signed, SB 32, which codified the 40 percent reduction goal from 1990 levels by 2030.<sup>63</sup>

##### **2. AB 617**

Under AB 617, CARB has been directed to place additional emphasis on protecting local communities from the harmful effects of air pollution (Garcia, Chapter 136, Statutes of 2017). AB 617 requires CARB to pursue new community-focused and

<sup>62</sup> Office of Governor Edmund G. Brown, Executive Order B-32-15, April 29, 2015, last accessed July 6, 2021, <https://www.ca.gov/archive/gov39/2015/07/17/news19046/>.

<sup>63</sup> HSC, Senate Bill No. 32, September 8, 2016, last accessed July 6, 2021, [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201520160SB32](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32).

community-driven actions to reduce air pollution and improve public health in communities that experience disproportionate burdens from exposure to cumulative air pollutants. CHC typically operate in areas with a high percentage of low-income and minority populations, who are disproportionately impacted by higher levels of diesel emissions.

Several of the regions affected by the Proposed Amendments are located in and around communities that have been selected for developing community air monitoring systems, CERPs, or both in order to improve air quality in their communities.<sup>64</sup> Several seaport communities have developed CERPs including the Wilmington, Carson, West Long Beach community, and the West Oakland community. The San Diego Portside Environmental Justice Neighborhoods (Barrio Logan, West National City, Logan Heights, and Sherman Heights) is currently working to develop a CERP for their community.

#### **a. Wilmington, Carson, West Long Beach CERP**

The Wilmington, Carson, West Long Beach CERP<sup>65</sup> is a plan for achieving air pollution and exposure reductions within the Wilmington, Carson, West Long Beach community, and is tailored to address the community's air quality priorities.

This CERP was drafted by the Community Steering Committee (CSC), which is made up of people who live, work, own businesses, and/or attend school within the community, local agencies, and elected community officials, in partnership with the SCAQMD, and CARB. The CERP includes targeted actions, including developing and enforcing regulations, providing incentives to accelerate the adoption of cleaner technologies, and conducting outreach to provide useful information to support the public in making informed choices. The Wilmington, Carson, West Long Beach community identified the following air quality priorities to be addressed by this plan: refineries, seaports, neighborhood truck traffic, oil drilling and production, railyards, schools, childcare centers, and homes. Under the seaport action items, the CERP specifically calls out zero and near zero-emission technologies as a community air quality priority to reduce air pollution from seaport sources including harbor craft.

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<sup>64</sup> CARB, Community Air Protection Program- 2018 Community Recommendations Staff Report, Revised September 11, 2018, last accessed July 6, 2021, [https://ww2.arb.ca.gov/sites/default/files/2018-09/2018\\_community\\_recommendations\\_staff\\_report\\_revised\\_september\\_11.pdf](https://ww2.arb.ca.gov/sites/default/files/2018-09/2018_community_recommendations_staff_report_revised_september_11.pdf).

<sup>65</sup> SCAQMD, Community Emissions Reduction Plan- Wilmington, Carson, West Long Beach, September 2019, last accessed July 6, 2021, <http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/wilmington/cerp/final-cerp-wcwlb.pdf?sfvrsn=8>.

## **b. Owning Our Air: The West Oakland Community Action Plan**

The West Oakland CERP was developed by the Bay Area Air Quality Management District in partnership with The West Oakland Environmental Indicators Project (WOEIP) and the West Oakland CSC. This community-led plan, which is titled, *Owning Our Air: The West Oakland Community Action Plan* sets ambitious goals to protect the health of the West Oakland community. By 2025, the plan sets a goal for all neighborhoods in West Oakland to experience the entire area's average air quality, meaning no neighborhood experiences worse air quality than today's average for West Oakland. By 2030, all neighborhoods in West Oakland would have air that is as clean as today's least polluted West Oakland neighborhood.<sup>66</sup> Key strategies in the plan help to achieve these goals include moving polluting businesses and activities away from residents and moving toward a zero-emission seaport including funding cleaner tugboats and clean trucks, cleaning up the industry, reducing car trips and road dust, and stopping backyard burning.

## **3. Port of San Diego Climate Action Plan**

In 2013, the Port of San Diego developed their "Climate Action Plan"<sup>67</sup> which aims to provide actions and policies to reduce GHG emissions by 10 percent less than 2006 levels by 2020 and by 25 percent less than 2006 levels by 2035. Some of the advanced technologies mentioned in the plan include increasing the use of alternative-powered vessels, shore power for tugs and OGVs, electrification of docks and marinas, and promoting best vehicle maintenance and operational best practices for CHC, including routine engine monitoring. The plan identifies policies and measures to reduce GHG emissions. These measures include implementing programs to increase the use of alternative-powered vehicles and vessels, advanced technologies, and best practices. Many strategies apply to harbor craft: shore power for OGVs and tugs, new technologies related to the electrification of docks and marinas, promoting operational best practices for harbor craft, including routine engine monitoring, and supporting vessels to achieve the lowest emissions possible, and using a mix of alternative fueled, electric or hybrid technology.

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<sup>66</sup> Bay Area Air Quality Management District, WOEIP, *Owning Our Air: The West Oakland Community Action Plan-A Summary*, October 2019, last accessed July 6, 2021, <https://www.baaqmd.gov/~media/files/ab617-community-health/west-oakland/100219-files/owning-our-air-plan-summary-pdf.pdf?la=en>.

<sup>67</sup> Unified Port of San Diego, *Port of San Diego Climate Action Plan*, 2013, last accessed July 6, 2021, <https://pantheonstorage.blob.core.windows.net/environment/Port-of-San-Diego-Climate-Action-Plan.pdf>.

The Port of San Diego is also currently developing a Maritime Clean Air Strategy (MCAS)<sup>68</sup> to address emission sources that contribute to DPM and other pollutants in portside communities, including from CHC. The MCAS would assess the Port's current state of emission reduction technologies and strategies and evaluate the cost and operational feasibility. The MCAS would also analyze how to further reduce emissions from these tugs and ferries.

#### **4. San Pedro Bay Clean Air Action Plan**

In 2006, POLA and POLB took an unprecedented joint action to improve air quality in the South Coast Air Basin by adopting the Clean Air Action Plan (CAAP), a plan aimed at significantly reducing the health risks posed by air pollution from port-related mobile sources, specifically ships, trains, trucks, terminal equipment and harbor craft, such as tugboats. The CAAP was a landmark air quality plan that established the most comprehensive, far-reaching approach to improve air quality in the Ports region and to reduce health risks from maritime goods-movement-related activities.<sup>69</sup>

The CAAP was updated in 2017, highlighting the fact that CHC are still the third-largest source of DPM, comprising 21 percent of the Ports' DPM emissions, and reflecting strategies to continue the air quality improvement and health risk reduction as well as significantly advance the push toward zero-emissions in support of the State's GHG reduction goals. Specifically, the 2017 CAAP Update set the targets of a 40 percent reduction in GHG emissions in 2030 and an 80 percent reduction in GHG emissions in 2050, compared to 1990 levels. Strategies outlined in the CAAP apply to CHC, such as investing in technology development projects for harbor craft through the joint Technology Advancement Program, expanding infrastructure that allows harbor craft operators to plug into shore power while at berth, and providing incentives for harbor craft operators to upgrade to the cleanest available engines or low-emission hybrid systems in the short-term, and to upgrade with advanced technologies in the long-term. In addition to the specific strategies, the CAAP states that the Ports are committed to advocate for and support a new fleet turnover requirement for harbor craft.

To further reduce emissions from CHC, the CAAP mentions incentives for CHC operators to upgrade to the cleanest available engines and low-emission hybrid systems in the short term, and advanced technologies (e.g., fuel cells and alternative fuels) in the long term. The CAAP recommends reducing emissions through additional

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<sup>68</sup> Port of San Diego, Maritime Clean Air Strategy Subcommittee Presentation, September 29, 2020, last accessed July 6, 2021, [https://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/AB\\_617/Port%20of%20San%20Diego%20MCAS%20Subcommittee%20Presentation\\_09.29.20.pdf](https://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/AB_617/Port%20of%20San%20Diego%20MCAS%20Subcommittee%20Presentation_09.29.20.pdf).

<sup>69</sup> POLA and POLB, San Pedro Bay Ports Clean Air Action Plan, November 2017, last accessed July 6, 2021, <http://cleanairactionplan.org/documents/final-2017-clean-air-action-plan-update.pdf/>.

incentives such as through grants or more favorable lease terms for CHC operators that have cleaner fleets.

## **5. Port of Oakland Seaport Air Quality Plan**

In 2019, the Port of Oakland finalized the Seaport Air Quality 2020 and Beyond Plan: The Pathway to Zero Emissions, which is the Port of Oakland's master plan for achieving its vision of a zero-emission seaport.<sup>70</sup> The plan's goals and strategies are designed to complement concurrent and future plans and studies by federal, State, and regional regulatory agencies and organizations to address air quality, community health risk, and climate change. The plan's building blocks are its strategies and implementing actions. The strategies include a focus on equipment, fuel, and operational actions to reduce GHG emissions and localized exposure to criteria air pollutants and TACs, as well as addressing the infrastructure needs of transitioning to a zero-emission seaport. While the Port's influence is limited in regard to sources like CHC, the Port is committed to partner and collaborate with regulatory, resource, and public health agencies in advocating for cleaner vessels and fuels in order to achieve its vision of a zero-emission seaport.

The Plan seeks to reduce air pollutants including criteria pollutants, TACs, including DPM, and GHG. CHC contribute a large share of emissions at the Port of Oakland, being the second largest contributor of DPM in the Port's emission inventory, behind OGVs. Tugboats alone contribute 10 percent of the total Port-related DPM emissions. Potential measures to reduce emissions from CHC are briefly discussed in the Port of Oakland's Seaport plan including providing CHC engine retrofit incentives, hybrid retrofits, plug-in hybrids, fuel cells, LNG-powered tugs, and shore power for tugs.

### **E. Impacts of the Global Situation That Began in 2020 on CHC Operations in California**

Staff has received questions and comments during development of the Proposed Amendments regarding the global situation that began in 2020. During development of the Proposed Amendments, staff worked with, and provided flexibility to, stakeholders on the timeline and approach for providing input due to operational impacts of the situation on their organizations. Due to the diverse nature of CHC operations, data suggest that activity increased for some vessel categories while it decreased for others.

Generally, container throughput at California seaports initially decreased and then increased after the global situation began. As an example, the Twenty-foot Equivalent Unit (TEU) container throughput (imports and exports) at the POLA and POLB are

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<sup>70</sup> Port of Oakland, Seaport Air Quality 2020 and Beyond Plan: The Pathway to Zero Emissions, June 13, 2019, last accessed July 6, 2021, <https://www.portofoakland.com/files/PDF/2020%20and%20Beyond%20Plan%20Vol%20I.pdf>.

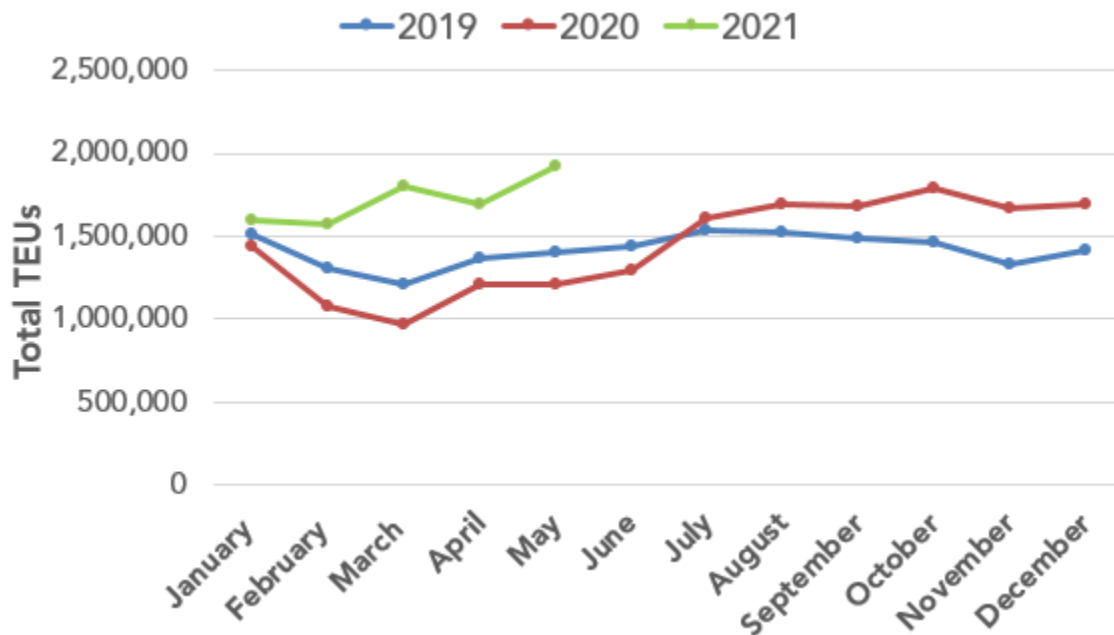
shown in Figure II-4 from January 2019 through June 2021. Between January 2020 and July 2020, TEU throughput was lower relative to the same time period during 2019; however, average throughput between August to December 2020 was 18 percent higher than the same time period during 2019. The trend of increased container throughput continued through June 2021, where both ports separately broke cargo throughput records.<sup>71, 72</sup> As of May 2021, TEU throughput was 26.9 percent higher than during May 2019. TEUs are transported on OGV container ships, which directly require ship assist tugboats for maneuvering into berths at terminals and pilot vessel services. Increased cargo throughput may also positively impact operations of other CHC categories, such as tugs, barges, dredges, workboats, and other marine construction equipment due to their indirect support of the freight system and movement.

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<sup>71</sup> Littlejohn, Donna, Port of LA Continues Breaking Cargo Records in Historic 7-Month Surge, March 16, 2021, last accessed July 6, 2021, <https://www.dailybreeze.com/2021/03/16/port-of-la-continues-breaking-cargo-records-in-historic-7-month-surge/>.

<sup>72</sup> Littlejohn, Donna, Long Beach Port Sees Largest February Cargo Flow in Its 110-Year History, March 10, 2021, last accessed July 6, 2021, <https://www.presstelegram.com/2021/03/10/long-beach-port-sees-largest-february-cargo-flow-in-its-110-year-history/>.

Figure II-4. Total TEUs (Imports and Exports) Through the Ports of Los Angeles and Long Beach Combined from January 2019 through May 2021<sup>73, 74</sup>



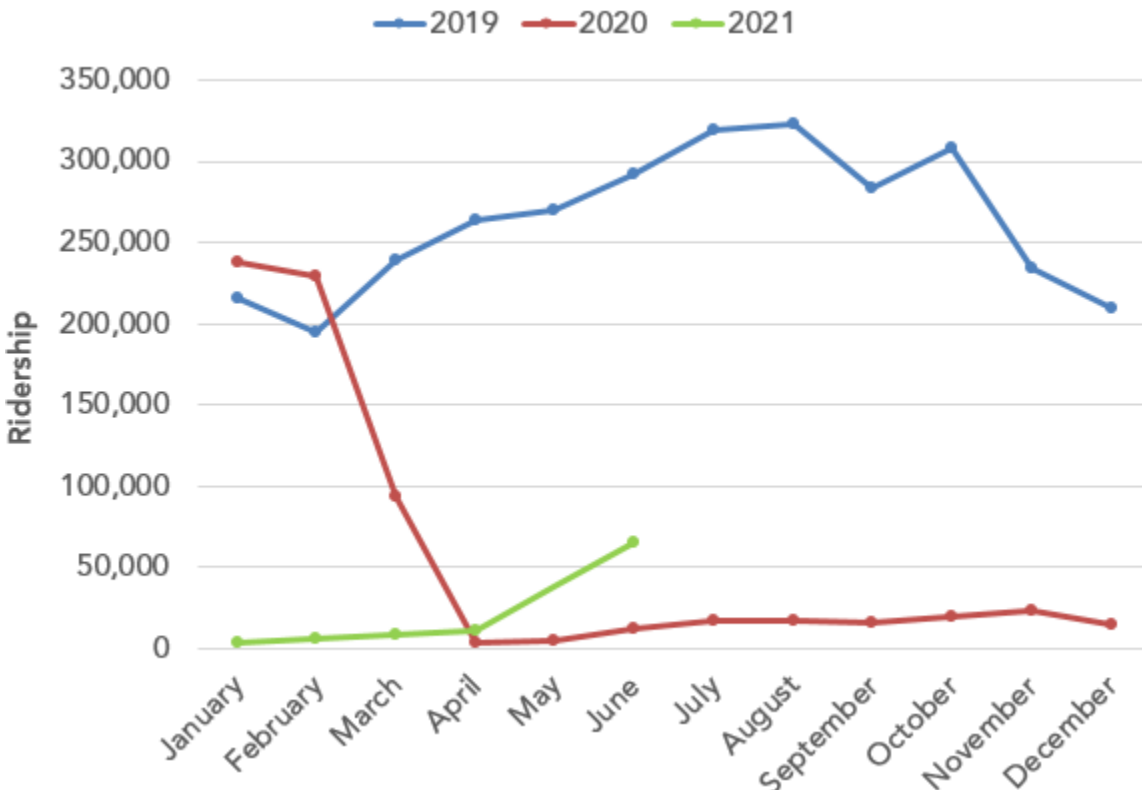
There are other CHC sectors where data suggest activity and operations decreased following the onset of the global situation that impacted California beginning in March 2020. Vessels designed to primarily carry passengers for transportation and leisure were likely more impacted than other sectors that required workers, but not paying passengers onboard. Figure II-5 below shows ridership data for the same period of January 2019 through June 2020 for WETA, a major ferry operator which provides ferry service throughout the San Francisco Bay Area. As shown in Figure II-5, data indicate a precipitous decline in ridership beginning in March 2020, where ridership remained below 10 percent of seasonal 2019 levels for the remainder of the 2020 calendar year. As of June 2021, ridership increased slightly, but remained 77 percent below ridership levels of June 2019.<sup>75</sup> Ridership may continue to trend upward later in 2021; however, it is too soon to determine to what extent the upward trend will continue or whether ridership will return to pre-2020 levels.

<sup>73</sup> POLA, Container Statistics, 2019-2021, last accessed July 7, 2021, <https://www.portoflosangeles.org/business/statistics/container-statistics>.

<sup>74</sup> POLB, Port Statistics, 2019-2021, last accessed July 7, 2021, <https://polb.com/business/port-statistics/#teus-archive-1995-to-present>.

<sup>75</sup> Emails between Tim Hanners (WETA) and David Quiros (CARB) dated June 21, June 28, and July 7, 2021.

Figure II-5. Systemwide WETA Ridership from January 2019 through June 2021<sup>76</sup>

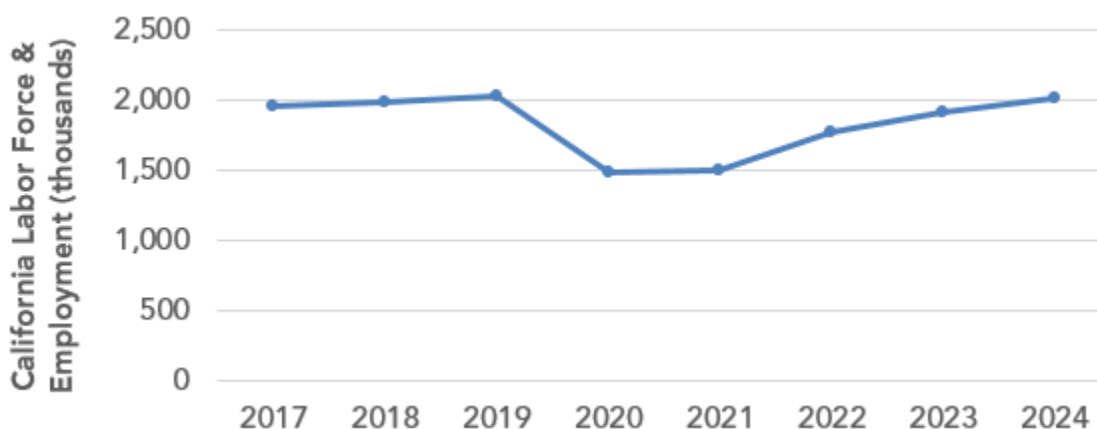


There are two other passenger-carrying vessel categories where members of the public can purchase tickets to board vessels: CPFVs and excursion vessels. CARB staff was not able to obtain a longitudinal time series of monthly passenger or activity data for the 2019, 2020, and 2021 calendar years for these sectors. However, a limited time period of CPFV ridership data was available and used for calculate the cost to individuals for the Standardized Regulatory Impact Assessment (SRIA, see Appendix C). Data suggested that CPFV ridership for months near the end of 2020 was approximately 75 percent of vessel capacity for vessels offering overnight accommodations. Whereas no data were available for angler counts prior to the global situation that began in 2020, as a comparison, ridership for ferry vessels as shown by the blue line in Figure II-5 above reflected a ridership of approximately 45 percent of vessel maximum capacity during 2019 operations. Therefore, it is possible the impacts of the global situation were not as significant for CPFVs as for ferries where data suggest ridership dropped to less than 5 percent of vessel capacity on average after the global situation began in 2020 (calculated by a 90 percent reduction from an average of a 45 percent capacity baseline in 2019).

<sup>76</sup> Email between Tim Hanners (WETA) and David Quiros (CARB) dated April 20, 2021. Some data in 2021 was imputed to approximate monthly totals where not directly provided by WETA.

CARB staff requested, but did not receive, any data for ticket sales or passenger capacities of excursion vessels. CARB received comment letters, such as this one in November 2020, indicating that impacts of the global situation were ongoing.<sup>77</sup> To predict the future impacts and recovery of the excursion vessel sector, CARB staff evaluated the Leisure and Hospitality forecast provided by the Department of Finance (DOF) Economic Forecast for California to potentially evaluate the extent of the impacts to the excursion vessel industry. Data shown in Figure II-6 suggest that after 2021, labor force and employment within this sector will increase and return to pre-2020 levels by 2023 to 2024. Although initial vessel compliance deadlines will not start until December 31, 2023, CARB staff has proposed a number of compliance extensions, including an explicit provision for vessels with compliance dates on or before December 31, 2024 to provide relief if disruptions from the global situation that began in 2020 remain longer than expected.

**Figure II-6. DOF Economic Forecast for the Leisure and Hospitality Sector<sup>78</sup>**



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<sup>77</sup> Comment letter from Hornblower to CARB sent via email on November 1, 2020 in response to CARB's public workshop on September 30, 2020.

<sup>78</sup> DOF, Economic Forecasts, U.S. and California, last accessed July 7, 2021, [https://www.dof.ca.gov/Forecasting/Economics/Eco\\_Forecasts\\_Us\\_Ca/](https://www.dof.ca.gov/Forecasting/Economics/Eco_Forecasts_Us_Ca/).

### **III. Description of the Proposed Amendments**

#### **A. Emission Reductions**

The Original Regulation was adopted in 2008 to reduce emissions of DPM, NO<sub>x</sub>, and other TACs from diesel engines used on CHC. The Original Regulation was then amended in 2010 (becoming the Current Regulation) to include additional categories of vessels including crew and supply, barge, and dredge vessels. The Current Regulation will be fully implemented, requiring that regulated in-use vessels have engines meeting Tier 2 or 3 standards, by the end of 2022.

CARB staff acknowledge that Tier 3 and Tier 4 could mean many things. To clarify, for the purposes of this ISOR, Tier 3 means Tier 3 marine or Tier 3 off-road engines. Tier 4 in this ISOR means Tier 4 marine or Tier 4 Final off-road engines.

The Proposed Amendments to the Current Regulation aim to further decrease DPM and NO<sub>x</sub> emissions from CHC by expanding vessel categories subject to in-use requirements, establishing more stringent requirements for both newly acquired and in-use vessels, and pushing for the adoption of ZEAT. CARB staff estimates that the Proposed Amendments will achieve an 89 percent reduction in DPM and 52 percent reduction in NO<sub>x</sub> by the end of 2038, three years after when the Proposed Amendments would be fully implemented.

#### **B. Affected Vessel Categories**

In-use requirements are needed for as many vessel categories as possible to maximize DPM and NO<sub>x</sub> emission reductions.

The Proposed Amendments would expand the vessel categories subject to in-use vessel requirements to include tank barges, pilot vessels, workboats, research vessels, CPFVs, and commercial fishing vessels. CARB is also proposing a change to the recreational vessel definition to no longer include passenger capacity thresholds. This would bring diesel-powered 6-passenger or “6-pack” vessels engaged in commercial service into the regulation. Table III-1 outlines each vessel category, whether they are subject to the Current Regulation, and whether they would be subject to the Proposed Amendments.

**Table III-1. Changes to Regulated In-Use Vessel Categories**

<b>Vessel Category</b>	<b>Regulated Under Current Regulation</b>	<b>Regulated Under Proposed Amendments</b>
Ferry	Yes	Yes
Tugboat	Yes	Yes
Barge	Yes	Yes
Dredge	Yes	Yes
Crew & Supply	Yes	Yes
Tugboat on ATB	Yes	Yes
Excursion	Yes	Yes
Pilot Vessel	No	Yes
Tank Barge	Under 400 feet and 10,000 GT only	Yes – all
Research Vessel	No	Yes
Workboat	No	Yes
Commercial Fishing	No	Yes - sets Tier 2 minimum
Commercial Passenger Fishing - Inspected	No	Yes
Commercial Passenger Fishing – Uninspected or “6-pack” vessel	No	Yes – diesel-powered only
Historic	No	No
USCG/ Military	No	No
Temporary Replacement	No	Yes - sets Tier 2 minimum
OGV	No	No
Dedicated Emergency Vessel	No	No

Dedicated emergency use vessels would not be subject to the in-use engine performance standard, vessel labeling, engine idling, or fee provisions in the Proposed Amendments. A vessel would be considered a dedicated emergency use vessel if it is used to perform fire suppression, police response, or emergency rescue as its primary specified vocation.

### **C. Emissions Performance Standards and Vessel Requirements**

#### **1. In-Use and New-Build Vessel Emissions Performance Standards**

CARB staff is proposing the use of the cleanest available marine certified engines combined with verified retrofit DPFs. DPFs are widely commercialized and proven

technology on light-duty and heavy-duty equipment that have been used in on-road, off-road, and seaport applications for more than a decade.<sup>79, 80, 81</sup>

The Proposed Amendments require engines rated less than or equal to 60 kW to meet a performance standard equivalent to meeting U.S. EPA:

- Tier 3 engine standards plus a DPF; or
- Tier 4 engine standards plus a DPF if there is an available engine model certified to Tier 4 standards.

Engines rated greater than 600 kW would be required to meet a performance standard equivalent to a Tier 4 engine plus a DPF.

CARB staff anticipates that the most common pathway for meeting this performance standard would be repowering or rebuilding engines and installing a CARB-verified Level 3 DPF (achieving greater than an 85 percent DPM reduction). In addition, demonstrating that engines otherwise meet the performance standard as listed in Tables III-2 through III-4 would also be a compliant pathway.

In some cases, engine and DPF retrofits may not be feasible. Vessels must then be retired and replaced for operators to comply with the Proposed Amendments. Because new-build vessels can be designed around the cleanest available equipment and present the best opportunity for cost-effectively reducing emissions from harbor craft in California, the same requirements outlined for in-use vessels would apply to new-build vessels. CARB staff expects the Proposed Amendments to result in 269 vessel replacements.

Tables III-2 through III-4 below outline the proposed performance standard for engine emissions in grams per brake horsepower-hour (g/bhp-hr) by engine category, displacement in L/cylinder, power in kW, and MY.

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<sup>79</sup> CARB, Final Statement of Reasons for Rulemaking for the Adoption of a Proposed Regulation to Reduce Emissions from In-Use On-Road Diesel Vehicles, 2008, last accessed July 6, 2021, <https://ww3.arb.ca.gov/regact/2008/truckbus08/pt2revfsor.pdf>.

<sup>80</sup> CARB, Final Statement of Reasons for Rulemaking: Public Hearing to Consider Proposed Amendments to the Regulation for Mobile Cargo Handling Equipment, 2011, last accessed July 6, 2021, <https://ww3.arb.ca.gov/regact/2011/cargo11/cargofsor.pdf>.

<sup>81</sup> CARB, Final Statement of Reasons for Rulemaking: Public Hearing to Consider the Adoption of Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements, 2010, last accessed July 6, 2021, <https://ww3.arb.ca.gov/regact/2010/offroadlsi10/lsifsor.pdf>.

**Table III-2. Emissions Performance Standards\* for Propulsion and Auxiliary Marine Engines – Tier 4 + DPF**

Category	Displacement (L/cylinder)	Maximum Engine Power (kW)	Tier 4 Engine Model Year	NOx (g/bhp-hr)	PM (g/bhp-hr)
C1 Commercial	All	kW < 1,400	2017+	1.3	0.005
C1 Commercial	All	1,400 ≤ kW < 2,000	2016+	1.3	0.005
C1 Commercial	All	2,000 ≤ kW < 3,700	2014+	1.3	0.005
C1 Commercial	< 7.0	≥ 3,700	2014-2015	1.3	0.010
C1 Commercial	< 7.0	≥ 3,700	2016+	1.3	0.010
C2 Commercial	All	600 ≤ kW < 1,400	2017+	1.3	0.005
C2 Commercial	All	1400 ≤ kW < 2,000	2016+	1.3	0.005
C2 Commercial	All	2,000 ≤ kW < 3,700	2014+	1.3	0.005
C2 Commercial	< 15.0	≥ 3,700	2014-2015	1.3	0.010
C2 Commercial	15.0 ≤ disp < 30.0	≥ 3,700	2014-2015	1.3	0.030
C2 Commercial	All	≥ 3,700	2016+	1.3	0.010

\*Emissions performance standards are emissions measured when tested on CARB diesel, not R100

**Table III-3. Emissions Performance Standards\* for Propulsion and Auxiliary Marine Engines – Tier 3 + DPF**

Category	Displacement (L/cylinder)	Maximum Engine Power (kW)	Tier 3 Engine Model Year	HC+NOx (g/bhp-hr)	PM (g/bhp-hr)
C1 Commercial < 75 kW	< 0.9	< 8	2009+	5.6	0.045
C1 Commercial < 75 kW	< 0.9	8 ≤ kW < 19	2009+	5.6	0.045
C1 Commercial < 75 kW	< 0.9	19 ≤ kW < 37	2009-2013	5.6	0.034
C1 Commercial < 75 kW	< 0.9	19 ≤ kW < 37	2014+	3.5	0.022
C1 Commercial < 75 kW	< 0.9	37 ≤ kW < 75	2009-2013	5.6	0.034
C1 Commercial < 75 kW	< 0.9	37 ≤ kW < 75	2014+	3.5	0.034
C1 Commercial Engines with ≤ 35 kW/L power density	< 0.9		2012+	4.0	0.016
C1 Commercial Engines with ≤ 35 kW/L power density	0.9 ≤ disp < 1.2	All	2013+	4.0	0.013
C1 Commercial Engines with ≤ 35 kW/L power density	1.2 ≤ disp < 2.5	< 600	2014-2017	4.2	0.010

Category	Displacement (L/cylinder)	Maximum Engine Power (kW)	Tier 3 Engine Model Year	HC+NO <sub>x</sub> (g/bhp-hr)	PM (g/bhp-hr)
C1 Commercial Engines with ≤ 35 kW/L power density	1.2 ≤ disp < 2.5	< 600	2018+	4.2	0.010
C1 Commercial Engines with ≤ 35 kW/L power density	2.5 ≤ disp < 3.5	< 600	2013- 2017	4.2	0.010
C1 Commercial Engines with ≤ 35 kW/L power density	2.5 ≤ disp < 3.5	< 600	2018+	4.2	0.010
C1 Commercial Engines with ≤ 35 kW/L power density	3.5 ≤ disp < 7.0	< 600	2012- 2017	4.3	0.010
C1 Commercial Engines with ≤ 35 kW/L power density	3.5 ≤ disp < 7.0	< 600	2018+	4.3	0.010
C1 Commercial Engines with > 35 kW/L power density	< 0.9	≥ 75	2012+	4.3	0.017
C1 Commercial Engines with > 35 kW/L power density	0.9 ≤ disp < 1.2	All	2013+	4.3	0.010
C1 Commercial Engines with > 35 kW/L power density	1.2 ≤ disp < 2.5	All	2014+	4.3	0.010
C1 Commercial Engines with > 35 kW/L power density	2.5 ≤ disp < 3.5	All	2013+	4.3	0.010
C1 Commercial Engines with > 35 kW/L power density	3.5 ≤ disp < 7.0	All	2012+	4.3	0.010
C2	7.0 ≤ disp < 15.0	< 600	2013+	4.6	0.010
C2	15.0 ≤ disp < 20.0	< 600	2014+	5.2	0.038
C2	20.0 ≤ disp < 25.0	< 600	2014+	7.3	0.030
C2	25.0 ≤ disp < 30.0	< 600	2014+	8.2	0.030
C3	> 30.0	All	2016+	2.5 (rpm < 130)	0.010
C3	> 30.0	All	2016+	6.7xN <sup>-0.20i</sup> (130 ≤ rpm < 2,000)	0.010
C3	> 30.0	All	2016+	1.5 (rpm ≥ 2,000)	0.010

\*Emissions performance standards are emissions measured when tested on CARB diesel, not R100.

**Table III-4. Emissions Performance Standards\* for Propulsion and Auxiliary Off-Road Engines – Tier 4 Final + DPF**

<b>Rated Power (kW)</b>	<b>Tier 4 Engine MY</b>	<b>NMHC (g/bhp-hr)</b>	<b>NMHC + NOx (g/bhp-hr)</b>	<b>NOx (g/bhp-hr)</b>	<b>PM (g/bhp-hr)</b>
kW < 8	2008+	-	5.6	-	0.045
8 ≤ kW < 19	2008+	-	5.6	-	0.045
19 ≤ kW < 37	2013+	-	3.5	-	0.005
37 ≤ kW < 56	2013+	-	3.5	-	0.005
56 ≤ kW < 75	2014+	0.14	-	0.30	0.005
75 ≤ kW < 130	2014+	0.14	-	0.30	0.005
130 ≤ kW < 225	2014+	0.14	-	0.30	0.005
225 ≤ kW < 450	2014+	0.14	-	0.30	0.005
450 ≤ kW < 560	2014+	0.14	-	0.30	0.005
560 ≤ kW < 900	2015+	0.14	-	2.61 / 0.50 a	0.005
kW > 900	2015+	0.14	-	2.61 / 0.50 a	0.005

\*Emissions performance standards are emissions measured when tested on CARB diesel, not R100.

a. The NOx standard for generator sets is 0.50 g/bhp-hr.

The PM performance standard of 0.005 g/bhp-hr, or 5 milligrams (mg) per bhp-hr harmonizes with the Omnibus Heavy-Duty Engine rule.<sup>82</sup> A 5 mg/bhp-hr performance standard for PM is achievable with baseline Tier 3 or Tier 4 engines when using a Level 3 DPF. Therefore, in cases where a U.S. EPA-certified engine to Tier 4 (or Tier 3 if engine power is less than or equal to 600 kW) and a CARB verified DPF retrofit is used, the vessel owner or operator would not need to provide any additional mathematical demonstration. If engines meet the performance standard without a DPF, a demonstration of engine emissions would be required. This may include reporting to U.S. EPA or CARB engine family information that documents the emissions levels are below the emissions performance standards.

In addition to the emissions performance standards outlined in Tables III-2 through III-4, CH<sub>4</sub> emissions must not exceed 1.0 g/bhp-hr when using a fuel other than diesel.

## **2. Zero-Emission and Advanced Technologies**

California remains a leader in advanced transportation, freight, and other clean-air technologies. To continue promoting the use of clean technologies in the marine sector, CARB is proposing mandates and regulatory credits for the adoption of ZEAT in the Proposed Amendments.

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<sup>82</sup> CARB, Public Hearing to Consider the Proposed Heavy-Duty Engine and Vehicle Omnibus Regulation and Associated Amendments, 2020, last accessed July 6, 2021, <https://ww3.arb.ca.gov/regact/2020/hdomnibuslownox/isor.pdf>.

### a. Mandates for ZEAT

The Proposed Amendments would require the adoption of ZEAT wherever feasible, as shown in Table III-5.

Under the Proposed Amendments, new excursion vessels would be required to be built with zero-emission capable hybrid technology starting December 31, 2024. Both new-build and in-use short-run ferries would be required to be zero-emission by December 31, 2025.

**Table III-5. Proposed Mandates for Zero-Emission and Advanced Marine Technologies**

Marine Technology Type	Vessel Category Requirement	Mandate Phase-In Date
Zero-Emission Capable Hybrid	New Excursion Vessels	December 31, 2024
Zero-Emission	New, Newly Acquired, and In-Use Short (<3 nm) run ferries	December 31, 2025

Short-run ferries include vessels that provide regularly scheduled ferry service between two points that are less than three nm apart. Vessels that provide ferry round-trip service between two points that are less than 3 nm apart but provide less than 20 percent of the service trips from one fleet between those two points during a given calendar year, are not considered short-run ferries.

In some situations, ferries provide service between three or more locations. CARB staff intend to require zero-emission vessels to be used for as much operation with one-way trips less than three nm as possible. However, operators need flexibility to provide short-run service as part of a larger multi-point routes, and also swap vessels between routes due to operational concerns. Therefore, CARB staff proposes that short-run ferries also include vessels servicing routes with three or more stops if two criteria are met: (1) half or more of the single trip lengths are less than 3 nm, and (2) the longest single trip length is less than 6 nm.

Combustion engines onboard short-run ferries must meet the Tier 3 or 4 engine emissions performance standards outlined in Chapter 3 - Section C.1 but would not be required to have a DPF. These engines would not be permitted to operate more than 20 hours per year unless performing emergency operations, which must be documented and reported to CARB. Full zero-emission vessels must not use an internal combustion engine to generate propulsion or auxiliary power for the normal operation of the vessel unless the engine meets the emission limits for distributed generation or is exclusively used during emergency operations.

The Proposed Amendments define a Zero-Emission Capable Hybrid as a vessel that derives less than 70 percent of its total onboard power (main propulsion and auxiliary) from an onboard combustion source.

Before adopting ZEAT, a vessel owner or operator must submit an application to and receive approval from CARB's EO. This application must be submitted at least

18 months prior to the compliance date or when ZEAT will be deployed. The application must include the applicant's contact information, and information specific to the harbor craft and engines on which ZEAT will be used. It must also include certification documentation, a detailed engineering analysis, design information, and other information required to demonstrate meeting the emissions performance standards required. CARB staff intend for these approval processes to apply in the absence of a separate or dedicated approval process or regulation that is established more broadly for marine or off-road equipment. Therefore, if a certification, verification, or other approval process becomes available or is adopted for ZEAT on marine vessels, the equipment would be approved under that forthcoming process.

#### **b. ZEAT Credit**

To further encourage early adoption of ZEAT in California, the Proposed Amendments would incentivize early adoption of ZEAT where not required by providing additional compliance time for an engine in the same fleet as the ZEAT vessel.

The ZEAT credit may also be allotted for the adoption of ZEAT in advance of, or in addition to, the requirements of the Proposed Amendments. The ZEAT credit can be applied to another vessel within their fleet, operating within the same air district. Three extra years would be granted for zero-emission capable hybrid vessel deployment, and seven years would be granted for full zero-emission vessel deployment, as shown in Table III-6. Allowing additional compliance time for other engines or vessels through this ZEAT credit is intended to incentivize early adoption or further development of ZEAT in the marine market.

**Table III-6. ZEAT Credit Time for Adoption When Not Required**

<b>Marine Technology Type</b>	<b>Maximum Additional Compliance Time</b>
Zero-Emission Capable Hybrid	3 Extra Years
Zero-Emission	7 Extra Years

The ZEAT credit would apply for repowers, replacements, and newly-built ZEAT vessels. The credit would be limited to vessels with Tier 2 or cleaner engines, to prevent engines with the least stringent emission standards to continue to operate in RCW. The credit must be granted to a single vessel and may not extend past December 31, 2034. The credit may not be applied to any vessel that is part of an ACE as described in Chapter 3, Section F but can be combined with feasibility compliance extensions.

To ensure that DACs would not experience a higher burden than other communities, the ZEAT credit may not be applied to a vessel with a homebase (a facility where a vessel is anchored or docked the majority of the time within a calendar year) in a DAC, unless the ZEAT vessel is also deployed in a DAC. A DAC is designated by the CalEPA

for the purpose of SB 535<sup>83</sup> (HSC 39711)<sup>84</sup> using the most current version of CalEnviroScreen by OEHHA. DACs include all wharfs, docks, berths, and slips within a seaport, marina, harbor, or other terminal facilities if any portion of the facility is located within a DAC. A vessel is considered to be operating in a DAC if its homebase or any regularly scheduled stops are within two miles of a DAC. CARB staff is proposing a distance of two miles to provide at least some additional buffer for vessel activity hotspots that are not located within, but adjacent to, DACs. CARB staff acknowledges that emissions from CHC impact a much larger geographic region, as shown by dispersion modeling results presented in Appendix G. However, the proposal would require additional control of emissions for vessels that are impacting DACs most significantly.

New and in-use short-run ferries and new excursion vessels, are eligible for this additional compliance time credit if ZEAT is adopted at least three years prior to the ZEAT compliance date.

### **3. Removing Exemptions for Engines Under 50 Horsepower**

The Current Regulation exempts engines with a power rating of less than 50 hp. CARB staff estimates 24 percent of auxiliary engines are rated below 50 hp, and emissions from engines under 50 hp contribute approximately 9 percent of total auxiliary engine DPM emissions.

Compliance costs were modeled per hp to allow a wide range of engine power to be considered. These models show a proportional cost effectiveness of reductions for larger and smaller engines alike.

To maximize emission reductions and remove any incentive to install a greater number of smaller engines under 50 hp, the Proposed Amendments would expand in-use engine standards to engines of all sizes and power displacements.

### **D. Low-Use Compliance Pathway**

The Current Regulation provides a low-use compliance pathway. Engines do not need to meet in-use requirements as long as the engine's hours do not exceed an annual threshold of 80 hours for dredges and barges, and 300 hours for all other vessel categories. These thresholds would remain in effect through December 31, 2022.

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<sup>83</sup> OEHHA, SB 535 Disadvantaged Communities, June 2017, last accessed July 6, 2021, <https://oehha.ca.gov/calenviroscreen/sb535>.

<sup>84</sup> HSC § 39711, Division 26, 2019, last accessed July 6, 2021, [https://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=HSC&division=26.&title=&part=2.&chapter=4.1.&article](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=26.&title=&part=2.&chapter=4.1.&article).

Moving forward, vessel owners and operators would still need to receive EO approval to comply with performance standards using a low use exception. The Proposed Amendments would change the annual operating hour limits of engines eligible for low-use to reflect the distinctions between engine tiers. Lower tier (i.e., older engines) would have more stringent low-use limits, and higher tier (i.e., newer engines) would have less stringent low-use limits. This approach provides flexibility to stakeholders who have already upgraded to cleaner engines, while continuing to remove engines with the least stringent emissions performance standards. Each fleet would have no more than five vessels eligible for low-use compliance; however, vessels with a homebase in California would not be counted toward this cap. The new annual hour thresholds are developed considering vessel category weighted assumptions about whether a vessel would need to be repowered versus replaced to meet emissions performance standards, and cost per weighted ton thresholds used in the Carl Moyer Memorial Air Quality Standards Attainment Program.<sup>85</sup>

To further reduce emissions in DACs, the Proposed Amendments would require more stringency for low-use compliance in areas that qualify as a DAC. The low-use compliance thresholds in DACs would be half that in other areas of the State. The low-use thresholds for each engine tier in DACs and other areas are outlined in Table III-7, and would apply to all vessels, regardless of category.

**Table III-7. Annual Low-Use Hours Limits for Engines on Regulated In-Use Vessels Based on Engine Tier**

<b>Engine Tier</b>	<b>Pre-Tier 1</b>	<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3 or 4</b>
DACs (hours/year)	40	150	200	350
All Other Areas (hours/year)	80	300	400	700

Newly acquired in-use vessels are not eligible for low-use exemptions or the compliance extensions detailed in Chapter III, Section E. Applicants must submit a renewal application every three years.

## **E. Compliance Extensions**

### **1. Temporary Replacement Vessel Exemptions**

The Current Regulation limits the approval of a temporary replacement vessel to no more than 12 months out of 24 months for a single California vessel being replaced. During implementation of the Current Regulation, CARB staff received a number of comments concerning competitiveness within a vessel category and region as a result of some operators receiving approval for temporary replacement vessels after passing compliance deadlines. With the intent of providing uniform flexibility, the Proposed Amendments retain temporary replacement vessel provisions, but with modifications.

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<sup>85</sup> CARB, The Carl Moyer Program Guidelines, 2017, last accessed July 6, 2021, [https://ww2.arb.ca.gov/sites/default/files/classic/msprog/moyer/guidelines/2017/2017\\_cmpgl.pdf](https://ww2.arb.ca.gov/sites/default/files/classic/msprog/moyer/guidelines/2017/2017_cmpgl.pdf).

Moving forward, temporary replacement vessels would still be allowed to operate for 12 months at a time in California to assist with downtime in replacing or upgrading the existing fleet. However, they would not be approved to replace vessels taken out of service after their nominal compliance deadlines for the purpose of upgrading their engines to meet the in-use emissions performance standards. In addition, temporary replacement vessels would also be limited to those with main and auxiliary engines certified to Tier 2 marine or off-road or newer standards.

A request to use a temporary replacement vessel must be submitted to CARB at least one year prior to any compliance deadlines of engines aboard the vessel. This request must demonstrate that the temporary replacement vessel would no longer be needed to maintain business operations by the compliance deadlines of engines aboard the vessel being replaced.

## **2. Sunsetting Compliance Extensions**

The Current Regulation includes a compliance extension titled “Change in Annual Hours of Operation” as listed in subsection (e)(6)(E)1 of the Proposed Amendments. This compliance extension provides a one-year extension if a vessel owner or operator determines the engine’s compliance date using its expected hours of operation and the hours of operation increase significantly thus accelerating the compliance date. The compliance deadlines under the Proposed Amendments are not dependent on annual operating hours. The Proposed Amendments would sunset this compliance extension after December 31, 2022.

The Current Regulation includes a compliance extension titled “No Suitable Engine Replacement for Harbor Craft” as listed in subsection (e)(6)(E)2 of the Proposed Amendments. This compliance extension provides a one-year renewable extension if there is no suitable Tier 2 or Tier 3 marine engine available anywhere that can be used in the owner’s vessel, and the owner cannot otherwise meet the required performance standard. Due to the wide availability of Tier 2 and Tier 3 engines, and the requirement to use Tier 3 or 4 engines and DPF control technology instead, the Proposed Amendments would sunset this compliance extension after December 31, 2022 and create feasibility extensions outlined below.

## **3. Proposed Compliance Extensions**

CARB staff is proposing three categories of compliance extensions in the Proposed Amendments for infrastructure, feasibility, and scheduling.

### **a. Infrastructure**

Infrastructure may be a challenge in some circumstances. This extension would provide flexibility if infrastructure challenges arise. This extension would be combinable with any other extension group (feasibility or scheduling).

The infrastructure compliance extension of the Proposed Amendments would:

- provide a one-year extension,
- be renewable once for a total of two years,
- be for any vessel or engine technology requiring infrastructure, and
- is due to unforeseen circumstances outside of the owner's or operator's control that prevents the installation or use of shore power or zero-emission charging infrastructure.

### **b. Feasibility**

The feasibility compliance extension of the Proposed Amendments would provide a renewable two-year extension, for the following circumstances:

- Tier 4 engines or DPFs are not available.
- Engines or DPFs will not fit and a replacement vessel cannot be afforded, limited to six years or to December 31, 2034, except:
  - workboats, which have no limit to the number of extensions; and,
  - ferry, excursion, or CPFVs, which are limited to eight years if they have an initial compliance deadline on or before December 31, 2024.
- Tier 4 engines on a vessel have no fitment for a DPF and operate below 2,600 hours/year (or 1,300 hours/year if operating in a DAC).

This extension category would provide flexibility for all operators if the technology required by the Proposed Amendments is not available in the marine sector. If a vessel has an engine meeting Tier 4 standards and there is a DPF available for another engine family meeting Tier 4 standards, but not the unique engine already installed in a vessel, CARB staff do not intend to require the CHC owner or operator to replace the existing Tier 4 engine to accommodate the DPF, and this extension may be used. However, if both an engine and DPF combination is available from any engine or DPF manufacturer, which can be used in a vessel with any extent of modifications or reconfigurations, the CHC owner or operator would be required to use the available engine and DPF technology.

CARB staff understands that vessel replacements may be necessary for some operators to comply with the Proposed Amendments. CARB staff anticipates the most common use of the feasibility extension to be for operators that must replace a vessel and cannot afford the cost of a vessel replacement without additional time to secure funding. Under this extension, CARB staff propose no limit to the number of extensions eligible for dedicated workboats, and up to eight years of extensions for excursion, ferry, and CPFVs that have compliance deadlines on or before December 31, 2024 for the reasons discussed in Chapter II.E. For all other regulated in-use vessel categories, this renewable extension may not be combined to exceed six years or extend past December 31, 2034.

The feasibility compliance extension would also prevent owners and operators from having to replace an entire vessel already equipped with Tier 4 engines if meeting Tier 4 plus DPF emissions performance standards is not technically feasible, and the

vessel has not and will not operate above 2,600 hours/year (or 1,300 hours/year if operating in a DAC). An engineering analysis of fitment would be required for a feasibility extension and would need to consider all possible modifications or vessel reconfigurations. Modifications requiring the vessel length to be extended or passenger capacity reduced by more than 25 percent are not considered feasible. For barge and barge-mounted dredge vessels to be eligible for a feasibility extension due to annual operating hours below 2,600 hours per year (or 1,300 if operating in a DAC), all auxiliary engines must meet Tier 4 standards, but main propulsion engines would not need to meet this standard. For all other vessel categories to be eligible for this extension, all main propulsion engines must meet Tier 4 standards, but auxiliary engines would not need to meet this standard.

### **c. Scheduling**

The Proposed Amendments include a one year, one time extension for one of the following:

- Equipment manufacturer or installation delays; or
- Multiple engines with same compliance dates; or
- Multiple engines on the same vessel with different compliance dates.

Each engine would only be able to receive up to one year of extensions from any of the three pathways above.

The scheduling compliance extension provides some flexibility for applicants that run into unforeseen delays. Examples include ordering new replacement equipment for compliance at least six months prior to the compliance date but being unable to use the compliant equipment in operation due to manufacturing delays or excessive difficulties encountered during installation.

CARB staff recognizes that vessels would need to be removed from service in order to be repowered or retrofitted with compliant equipment. To prevent multiple vessels being pulled from service simultaneously, this extension provides flexibility for applicants that:

- have two or more engines on a single vessel that have the same compliance date;
- have two or more engines on another vessel; or
- have one engine on three or more vessels that have the same compliance date.

These extensions are uniquely important for the Proposed Amendments because CARB staff is anticipating a compliance response to include removing some vessels from service and replacing them with new or newly acquired vessels. Allowing some flexibility to align compliance deadlines on engines that need to be replaced at the

same time would aid in the business and operational decisions of CHC owners and operators.

## **F. Alternative Control of Emissions**

CARB staff is proposing an Alternative Control of Emissions (ACE) option that would allow owners and operators to comply with the Proposed Amendments by implementing alternative emission control strategies that achieve equivalent or additional emission reductions relative to requirements of subsection (e)(6.1) of the Proposed Amendments.

The ACE would provide a compliance option if an applicant implements an alternative emission control strategy that has CARB's EO approval. Strategies may include, but are not limited to, any combination of engine modifications, exhaust treatment control, engine repowers, use of alternative fuels, fleet averaging, or any other measures that sufficiently reduce emissions. The use of grid electricity while at dock or the use of renewable diesel would not be valid strategies for an ACE, as they would already be required by the Proposed Amendments. ACE allows owners and operators flexibility in choosing their own strategies, while maintaining the same "gram for gram" requirements for emission reduction over the compliance period and supporting the development of effective technologies. The most common strategy in an ACE would likely be fleet averaging, early compliance, or deploying ZEAT to achieve equal or greater emission reductions than the MY compliance schedule.

The emissions evaluation period, where the ACE would need to show equal or greater emission reductions than the Nominal Compliance Baseline, would be from January 1, 2023, through December 31, 2034. The MY compliance schedule establishes the emission reductions that are achieved by direct compliance with no extensions applied. The Nominal Compliance Baseline, to which the ACE would be compared, would be the MY compliance schedule with a maximum of two years of feasibility-based compliance extensions applied. This is because feasibility extensions are specific to the availability of engines in the future, which would likely change as the compliance dates approach. CARB staff is proposing to limit feasibility extensions to two years to avoid approving extensions that would not have been granted if operators were directly complying with the rule. Vessel owners and operators would apply for the compliance extensions for the baseline comparison along with the ACE application. In addition, the applicant would be required to demonstrate that DACs would not experience a higher burden than other communities as a result of implementing an ACE. The application would need to be submitted to CARB by December 31, 2025.

Emission reductions funded either partially or fully through public air quality or emission reduction incentive programs may not count toward the projected reductions in an ACE application. This is to avoid a situation where air quality programs meant to incentivize upgrades through funding end up paying for partial or full compliance of an engine or vessel with the CHC regulation. An applicant receiving funding or grants

unrelated to air quality can include vessels and engines receiving that funding in an ACE application.

### **G. Implementation Timeline**

Table III-8 specifies the compliance dates for each vessel category, engine tier, and engine MY. The compliance dates range from 2023 to 2032, with lower engine tiers and older MYs having earlier compliance dates. CARB staff analyzed the emissions per vessel considering the average age, size, load, and activity of engines. Vessels with higher emissions per vessel were prioritized for earlier compliance dates. Consequently, vessel categories that previously were not subject to regulated in-use vessel requirements are the first group of vessels that have compliance dates beginning on December 31, 2023.

Any Pre-Tier 1 or Tier 1 engines on vessels other than commercial fishing vessels would have a compliance date between 2023 and 2025 to upgrade to Tier 3 or Tier 4, and another compliance date between 2024 and 2031 to upgrade to Tier 3 or Tier 4 plus a DPF.

Tier 2, Tier 3, and Tier 4 engines on ferries (except short-run) and tugboats would have compliance dates between 2024 and 2029 to meet the Tier 3 or Tier 4 plus DPF emissions performance standards.

Tier 2, Tier 3, and Tier 4 engines on pilot boats would have compliance dates between 2025 and 2029 to meet the Tier 3 or Tier 4 plus DPF emissions performance standards.

Tier 2, Tier 3, and Tier 4 engines on research vessels, CPFVs, and excursion vessels would have compliance dates between 2026 and 2030.

Tier 2, Tier 3, and Tier 4 engines on dredges, barges, crew and supply, and workboats would have compliance dates between 2028 and 2031.

Any Pre-Tier 1 or Tier 1 engines on commercial fishing vessels would have a compliance date between 2030 and 2032 to upgrade to Tier 2 or cleaner engines.

In addition to these requirements for diesel combustion engines, the Proposed Amendments would also require all new-build excursion vessels to be zero-emission capable hybrid vessels by December 31, 2024. A zero-emission capable hybrid vessel must derive 30 percent or more of its total work from main propulsion and auxiliary engines averaged over a calendar year from a zero-emission tailpipe source. In addition, all new-build and in-use short-run ferries would be required to be zero-emission by December 31, 2025.

Table III-8. Major Compliance Requirements of Existing and Proposed Amendments

Current Regulation		Proposed Amendments (Implementation Dates) – December 31 <sup>st</sup> of compliance year									
2021 & Earlier	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
IN-USE VESSEL REQUIREMENTS											
Tier 2 or 3 (Tugs, Ferries, Excursion, Crew & Supply, Barge, Dredge)	Any Pre-Tier 1 and 1 → Tier 4* (generally Workboats, Research, Pilot, Tank Barges, and CPFV)										
	≤ MY 1993	MY 1994-2001	MY 2002-2006								
				Tier 2, 3, 4 → Tier 4*+DPF** Ferries (Except Short Run), Pilot***, All Tugs							
				MY 2007-2009	MY 2010-2012	MY 2013-2015	MY 2016-2019	MY 2020-2021	MY 2022+		
				Tier 2, 3, 4 → Tier 4*+DPF** Research, CPFV, Excursion							
				MY 2007-2010	MY 2011-2012	MY 2013-2014	MY 2015-2017	MY 2018+			
				Tier 2, 3, 4 → Tier 4*+DPF** Dredges, Barges, Crew & Supply, Workboats							
				MY 2007-2009	MY 2010-2013	MY 2014-2017	MY 2018+				
									Any Pre-Tier 1 and 1 → Tier 2 or Cleaner Commercial Fishing		
									≤ MY 1987	MY 1988-1997	MY 1998+
Other VESSEL REQUIREMENTS											
Tier 2, 3, or 4 All New Vessels Tier 3 + BACT New Ferries Carrying 75+ Passengers			New Excursion: Zero-Emission Capable (e.g., Plug-in Hybrid) 30% or more of power must be derived from a zero-emission tailpipe source								
				New and In-Use Short-Run Ferries: Zero-Emission							

\*All engines ≥600 kW would be required to be certified to Tier 4. For engines <600 kW, a Tier 4 certified engine would be required if certified by U.S. EPA or CARB and available by the compliance date.

\*\*Retrofit DPF requirements would apply to all Tier 3 and Tier 4 engines.

\*\*\*Pilot vessels at Tier 2, 3, or 4 with MY 2007-2009 would not need to comply until December 31, 2025

## **H. Other Vessel Requirements**

### **1. Main Idling and Auxiliary Engine Operating Limits**

CARB staff has observed and received complaints from the public about extended main engine idling and auxiliary engine operation while harbor craft are at dock. Staff's analysis of electronic engine records indicates that for some vessels, up to 40 percent of all operational hours over the lifetime of the engines were at idle. Idling reduction by shutting off engines or plugging into shore power would reduce operator fuel expenses, GHG and criteria pollutant emissions, and near-source exposure to DPM and NO<sub>x</sub>.

On-road heavy-duty truck idling is restricted to five minutes under title 13 CCR § 2485. Diesel-powered off-road equipment idling is also restricted to five minutes under title 13 CCR § 2449. The proposed idling restriction for CHC allows for an idling period—15 to 30-minute idling limits—relative to other diesel-powered equipment idling restriction regulations due to the size and more complex procedures required for vessels with multiple engines.

Beginning January 1, 2024, vessels subject to the Proposed Amendments may not idle propulsion engines or operate auxiliary generator engines for more than 15 minutes when docked, berthed, or moored, or 30 minutes for the initial start-up of each day or new working shift. Main propulsion engines would be limited to idling restrictions when they are not generating any useful work beyond keeping the engine turning and pumps running. Auxiliary engines would be limited to operating restrictions unless connected to shore power.

These idling limits would not apply to the following: idling or operation for testing, servicing, repairing, or diagnostic purposes, idling necessary to accomplish work for the vessel's intended use (e.g., ship-assist tug vessels in position to maneuver another vessel), operation of direct-drive or other non-generator specialty auxiliary engines, idling or operation that meets the definition of emergency operations, operating of auxiliary engines if accessible locations at the facility are not equipped with shore power, and idling or operation at facilities where shore power is not required pursuant to vessel visit thresholds outlined in Section I of this chapter.

Quick engine accelerations or restarting the engine while otherwise idling in order to circumvent this requirement would still be considered continuous idling. This concept allows 30 minutes of idling after coming to dock at the end of a work period, and 30 additional minutes prior to initial operation in a subsequent work period after engines are restarted. CARB defines a new work period to begin when main engines have been shut off for 4 hours or longer.

### **2. Renewable Diesel (R99)**

The Proposed Amendments require the use of at least 99 percent Renewable Diesel (R99 or R100) as a drop-in fuel (no changes to infrastructure or fuel necessary) to

achieve reductions on top of Tier 3 or Tier 4 plus DPF requirements. Because the use of R99 is required by the Proposed Amendments, it cannot be used as a strategy for emission reductions under an ACE. Demonstrations of emissions performance standards under an ACE should be performed using standard CARB ULSD.

Renewable diesel is a fuel substitute produced from non-petroleum renewable sources, including vegetable oils and animal fats. It is different than biodiesel, which is a methyl ester compound that should not be used in high quantities with retrofit aftertreatment. Because renewable diesel conforms to the Standard Specification for Diesel Fuel Oils (American Society for Testing Materials (ASTM) D975), and meets CARB's requirements for ULSD, its use would not cause any engine performance problems as a result of switching to R99.

CHC are forecasted to use approximately 55 million gallons of fuel in 2023. Discussions with renewable diesel producers as well as recent news of large oil companies transitioning their refineries to produce solely R100<sup>86</sup> has confirmed that there will be enough renewable diesel available to accommodate the increase in demand from the requirements of the Proposed Amendments.

Staff has performed Portable Emissions Measurement System (PEMS) testing to quantify emissions impacts of R100 for an in-use excursion vessel operation. Preliminary results confirm laboratory testing data from on-road trucks. Emission benefits are on the order of 30 percent for DPM and 10 percent for NOx.<sup>87</sup> For more detail, refer to Appendix E.

### **3. Opacity Testing**

CARB staff has received complaints about harbor craft emitting visible emissions in several areas of the State. The Current Regulation does not have any mechanism that allows CARB to require a harbor craft operator to identify the cause of excess emissions and take corrective action. CARB's heavy-duty in-use inspection and maintenance (I/M) programs are currently limited to on-road trucks, namely the Heavy-Duty Vehicle Inspection Program (HDVIP) and Periodic Smoke Inspection Program (PSIP), and Cargo Handling Equipment (CHE) operating at seaports and intermodal rail yards. Both trucks and CHE are subject to periodic smoke opacity testing according to procedures defined in SAE J1667.<sup>88</sup> CARB staff is proposing that

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<sup>86</sup> Bryan, Tom, Renewable Diesel's Rising Tide, January 12, 2021, last accessed July 6, 2021, <http://www.biodieselmagazine.com/articles/2517318/renewable-diesels-rising-tide>.

<sup>87</sup> CalEPA, Staff Report: Multimedia Evaluation of Renewable Diesel, last accessed July 6, 2021, [https://ww3.arb.ca.gov/fuels/multimedia/meetings/renewabledieselstaffreport\\_nov2013.pdf](https://ww3.arb.ca.gov/fuels/multimedia/meetings/renewabledieselstaffreport_nov2013.pdf).

<sup>88</sup> California Council on Diesel Education and Technology, Applying the SAE J1667 Snap Acceleration Test Procedure to RTG Cranes, last accessed July 6, 2021, <https://ww2.arb.ca.gov/sites/default/files/classic/ports/cargo/documents/091118saej1667rtg.pdf>.

all main propulsion diesel engines operating on harbor craft be required to perform opacity testing and meet applicable opacity limits whenever the test procedure is administered.

By March 31, 2024, and every even calendar year thereafter, all main propulsion diesel engines, including swing engines and low-use engines, operating on in-use vessels subject to the Proposed Amendments must perform opacity testing biennially and submit results to CARB along with other reporting information. Engines with MY 2020 and newer would not need to perform biennial testing until the calendar year four years after the MY of the engine. For example, a MY 2021 engine is exempt until 2025, and the first opacity test of the engine must be performed and reported to CARB by March 31, 2026. CARB would retain authority to perform opacity testing in the field or audit opacity test records at any time.

Opacity would be tested after a DPF (if installed) but before the muffler or any seawater injection into the exhaust. The vessel operator would transit to a safe location in open waters, clutch-in with engines at idle, and transition controls from idle to full load within two seconds. Opacity would be measured for 15 seconds or until engines reach full power, whichever is longer, and the test would be repeated five more times. The final opacity measurement would be the average of the 0.5-second maximum of the last three accelerations. For more information on opacity testing procedures, see Appendix E.

Vessels must not exceed the smoke opacity levels provided for the engine type of the tested engine. Engines meeting the Tier 3 plus DPF or Tier 4 plus DPF performance standard must not exceed 5 percent smoke opacity. Engines without DPFs must not exceed 40 percent smoke opacity. Staff analyzed over 800 tests of engines in CHE, and 60 tests on marine engines in harbor craft to inform opacity limits.

Auxiliary engines would be subject to the same opacity limits but would not need to test biennially due to the variety of applications, and the complexity and potential costs of periodic testing. CARB staff may test auxiliary engines upon receiving a complaint of excess visible emissions. If at dock, CARB staff may either apply SAE J1667 testing procedures or use EPA Method 9 Visual Emissions Evaluation (VEE).<sup>89</sup>

If a main engine fails an opacity test, the owner or operator has 30 calendar days to repair the engine, retest, and retain records of the passed opacity test, or the engine must be taken out of service. If an auxiliary engine fails an opacity test, the owner or operator has 30 calendar days to repair the engine and notify CARB.

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<sup>89</sup> U.S. EPA, Visual Emissions Field Manual EPA Methods 9 and 22, December 1993, last accessed July 6, 2021, <https://www.epa.gov/sites/production/files/2020-08/documents/vefieldmanual.pdf>.

## 4. Vessel Reporting

Analysis of vessels reported to CARB, and data from the California Department of Motor Vehicles (DMV) and USCG indicate that more than one-third of vessels subject to the CHC regulation and operate in RCW are not reported to CARB, as required by the Current Regulation. Based on enforcement inspections through mid-2020, the compliance rate of reported vessels was approximately 92 percent based on inspections of mostly reported vessels.<sup>90</sup> To increase compliance, especially for non-reported vessels that may have lower compliance rates, CARB is proposing new vessel reporting requirements.

The Current Regulation requires vessels to report to CARB only periodically, such as after repowering engines or as compliance deadlines approach. To ensure that CARB's records are current, and the regulation can be effectively implemented, the Proposed Amendments would make changes to the information vessel owners and operators are required to report and would require annual reporting.

Vessel owners and operators would be required to report to CARB the percentage of time a vessel is used in each vessel use category, vessel homebase, primary area(s) of vessel operation in RCW, new owner contact information when a vessel is sold, engine tier, and engine MY. If an engine is equipped with an SCR system, owners and operators would also be required to report the quantity of diesel exhaust fluid (DEF), such as ammonia or urea, consumed. If a vessel is used in emergency operations, the owner or operator would be required to report the hours of operation and documentation of the emergency operation. If a zero-emission vessel with a diesel engine is operated more than 20 hours per year, or if the total amount of work done by a zero-emission capable hybrid vessel with a combustion engine is more than 70 percent annually, the owner or operator would need to report that information to CARB. For each vessel adopting ZEAT, the owner or operator must keep records of the infrastructure type, manufacturer, serial number, installation date, equipment type supported, number of equipment supported, capacity (fuel/energy storage volume), amperage, voltage, public or private use, and number of plugs for the landside ZEAT infrastructure. In addition, CARB staff is proposing reporting requirements for facilities where CHC operate, which is discussed more in Section I of this chapter.

## 5. Vessel Labeling

Although many agencies already require various forms of labeling, there is no common identifier for all vessels in California subject to the Proposed Amendments. Below are the vessel labeling requirements from other agencies.

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<sup>90</sup> CARB, Public Workshop for the Draft Proposed Amendments to the Commercial Harbor Craft Regulation, September 30, 2020, last accessed July 6, 2021, <https://ww2.arb.ca.gov/sites/default/files/2020-09/CHC%20Workshop%20September%202020.pdf>.

Vessels are currently required to register with the USCG if they are five or more net tons, 30 feet or more in length and used in fishing activities in navigable waters of the U.S., if they operate in the Exclusive Economic Zone (EEZ), or if they are used in coastwise trade. Vessels that register with the USCG are assigned an official number that is required to be permanently affixed to the vessel.<sup>91</sup>

The DMV registers all sail-powered vessels over eight feet in length and all motor-driven vessels that are not documented by the USCG but are used on California waterways. The DMV assigns a Permanent Vessel Number ("CF" Number) and a Hull Identification Number (HIN) for the owner or operator to affix to the vessel.<sup>92</sup>

The California Department of Fish and Wildlife (CDFW) issues Fish and Game License numbers that permit a person to take fish, mollusks, crustaceans, invertebrates, amphibians, or reptiles in inland or ocean waters. These license numbers are required to be displayed on the vessel.<sup>93</sup>

IMO issues a number for propelled sea-going merchant ships of 100 GT and above that must be permanently affixed to the vessel.<sup>94</sup>

The National Telecommunications and Information Administration (NTIA) for federal users issues a Maritime Mobile Service Industry (MMSI) number for vessels owned and operated by a federal entity. For nonfederal users (civilians), the MMSI number is assigned by the Federal Communications Commission (FCC). The MMSI number is also registered with the International Telecommunication Union (ITU) and is programmed into the radio equipment on-board the vessel.<sup>95</sup>

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<sup>91</sup> USCG, National Vessel Documentation Center FAQ, last accessed February 5, 2021, <https://www.dco.uscg.mil/Our-Organization/Assistant-Commandant-for-Prevention-Policy-CG-5P/Inspections-Compliance-CG-5PC-/National-Vessel-Documentation-Center/National-Vessel-Documentation-Center-FAQ/>.

<sup>92</sup> DMV, Boat/ Vessel Registration, last accessed July 6, 2021, <https://www.dmv.ca.gov/portal/vehicle-registration/new-registration/register-your-boat-vessel/>.

<sup>93</sup> FGC § 7880-7892, Division 6, 1997, last accessed July 6, 2021, [https://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=FGC&division=6.&title=&part=3.&chapter=1.&article=4](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=FGC&division=6.&title=&part=3.&chapter=1.&article=4).

<sup>94</sup> IMO, IMO Identification Number Schemes, last accessed July 6, 2021, <https://www.imo.org/en/OurWork/MSAS/Pages/IMO-identification-number-scheme.aspx>.

<sup>95</sup> U.S. Department of Homeland Security, Maritime Mobile Source Identity, last accessed July 6, 2021, <https://www.navcen.uscg.gov/?pageName=mtmmsi>.

To increase reporting compliance, CARB Unique Vessel Identifiers (UVI) would be issued under the Proposed Amendments. All CHC would need to have their identifier affixed to the vessel by January 1, 2024.

The CARB UVI would be a unique set of letters and numbers in the format of "CARB 01234." Letters and numbers must be readily legible during daylight hours. Each character of the CARB UVI must be at least 5 inches in height and 2.5 inches in width. Letters and numbers must be black on a lime green background with decimal code (R, G, B) - (0, 255, 0). The green background must measure at least 40 inches in width and 10 inches in height and have a one-inch border surrounding the black UVI letters and numbers on all sides. The UVI must be affixed to both sides of the pilothouse in a visible location while not obstructing the captain/pilot view.

Registered historic vessels would be allowed to install a cast bronze, brass, carved wooden plaque, or other UVI format that matches their vessel's theme, but would need to meet the other specifications for size and location of the UVI.

## **I. Facility Compliance, Infrastructure, and Recordkeeping Requirements**

As advanced and alternative technologies emerge for the harbor craft sector, CARB staff is taking into consideration the infrastructure needed to support them. There are some vessels operating in California that are capable of zero-emission operation, but limited infrastructure is available to maximize the use of zero-emission operation and reduce emissions. Additionally, the introduction of zero-emission power systems is expanding, from both new and established marine powertrain manufacturers. As of today, there is insufficient infrastructure available to support widespread deployment of zero-emission and other advanced technologies.

The majority of facilities have docks or slips that are equipped with shore power capabilities that enable harbor craft auxiliary engines to operate using electricity while at dock. However, there are still facilities and vessels that do not have shore power capabilities. CARB is proposing that facility owners and operators be jointly responsible for the installation and maintenance of shore power infrastructure of up to 99 kW to support the power requirements of visiting vessels by January 1, 2024.

This would apply to owners (an entity that owns the property, also called "landowner" or "property owner") and operators (entity directing daily operations, also called "tenant" or "facility tenant") of facilities that receive more than 50 vessel visits per year. A vessel visit is defined as a period of time lasting between one and 24 hours during which period a vessel idles its main engines or operates any auxiliary engines at a facility. For example, 50 different vessels operating two hours each, or one single vessel operating consecutively for 50 days, would each equal 50 visits for a given facility.

The threshold of 99 kW was selected because auxiliary generators are typically not rated above 99 kW, unless they are used for the designed purpose or function of a

vessel, such as generators installed on a petrochemical tank barge used to run product pumps. To avoid requiring facilities to pay for costs associated with high power infrastructure, CARB is proposing that vessel owners and operators be responsible for installing and maintaining any shore power infrastructure above 99 kW. This will prevent vessel owners and operators from using facility-owned shore power as a compliance strategy.

Furthermore, if shore power is provided by a source other than the grid, CARB is proposing that distributed generation emission limits must be met. Distributed generation is any electrical generation technology that produces electricity near the place of use. The Proposed Amendments would establish emission standards for electricity generated through distributed generation to ensure that the emission reductions from its use would be similar to the emission reductions of using grid electricity. If distributed generation is used to supply shore power, the electricity generated must meet the following emission standards:

- NO<sub>x</sub> emissions no greater than 0.03 g/kW-hr.
- PM emissions equivalent to the combustion of natural gas with a fuel sulfur content of no more than 1 grain per 100 standard cubic-foot.
- GHG emissions must be grid-neutral (emitting no more than if powered by the grid); and
- Ammonia emissions no greater than 5 parts per million on a dry volume basis (ppmdv) if SCR is used.

Vessel owners would also be responsible for the installation and maintenance of infrastructure to support zero-emission or zero-emission capable hybrid vessels. Facility owners and operators would be required to allow vessel owners to install infrastructure to facilitate ZEAT deployment. Facility owners and operators must work with vessel owners and operators to accommodate ZEAT infrastructure including but not limited to providing slips/berths that are best suited for the installation of fast-charging equipment, or for hydrogen trucks coming to dock. Facility owners and operators would be responsible for all applicable permitting for the installation of ZEAT infrastructure. Table III-9 outlines the various requirements, and associated responsibilities for facility and vessel owners and operators to comply with the Proposed Amendments.

**Table III-9. Proposed Infrastructure Installation and Maintenance Responsible Party**

<b>Proposed Requirement</b>	<b>Vessel Owner/ Operator Responsible</b>	<b>Facility Owner Responsible</b>	<b>Facility Operator Responsible</b>
Installation and Maintenance of Infrastructure to Support Shore Power Requirement – Less than or Equal to 99 kW		X	X
Installation and Maintenance of Infrastructure to Support Shore Power Requirement – Greater than 99 kW	X		
Installation and Maintenance of Infrastructure to Support the Use of Zero-Emission or Zero- Emission Capable Hybrid Vessels (e.g., Hydrogen Fueling or Rapid Charging Infrastructure)	X		
Permitting the installation of Infrastructure to Support the Use of ZEAT Vessels		X	X

To further increase reporting compliance, the Proposed Amendments require facilities to report to CARB quarterly, starting January 1, 2023. Facilities would be required to report the applicable facility contact information such as name and address of facility and facility owner, as well as the contact information for each vessel owner or operator, the vessel's CARB UVI, start date of facility use agreement, and the dock, berth or slip location or number. If the vessel does not have a CARB UVI, the USCG, DMV, MMSI, or another identification number must be provided.

Facilities with shore power infrastructure must report the infrastructure type, manufacturer, serial number, installation date, type of equipment supported, number of vessels supported, number of plugs, plug configuration, amperage, and voltage for each connection. Starting January 1, 2023, facilities would also be required to maintain daily records of the date, local time, and position (e.g., slip number) for each vessel tenant.

## **J. Compliance Fees**

CARB is authorized under HSC § 43019.1 to develop a fee schedule to recover costs associated with compliance of off-road or non-vehicular engines and equipment. This would include, but not be limited to, receiving and processing vessel owner or operator and facility reports, including outreach and follow-up with regulated parties, review and approval of compliance extension requests, and statewide enforcement of the regulation.

Staff developed a draft fee schedule based on costs of personnel, equipment, and administration for implementation and enforcement equaling \$2.1 million per year (includes currently budgeted and future personnel costs). Fees are assessed based on the number of main engines and number of vessels. Fees are not assessed for auxiliary engines operating on harbor craft. Using projected vessel and engine populations for 2023, the fee amounts in Table III-10 were calculated to fully recover this cost, while

providing a 25 percent lower fee for fleets operating only one vessel and assessing a 50 percent higher fee for low-use compliance engines due to additional staff time to review demonstrations and applications. Fees would be payable to CARB's EO by September 1 of each calendar year beginning in 2023. Vessels and engines for which fees are not collected by this date would be subject to the late fees, due by December 31 of each calendar year, outlined in Table III-10 in addition to the per-vessel and per-engine fees already applicable.

**Table III-10. Annual Fees for Owners or Operators of Regulated In-Use Vessels**

<b>Category</b>	<b>Fee Amount</b>
Per vessel, for single-vessel fleets	\$364
Per vessel, for all other fleets	\$486
Per engine, for single-vessel fleets	\$297
Per engine, for all other fleets	\$396
Per engine, if complying by low-use pathway	\$594
Late fee, per vessel	\$130
Late fee, per engine	\$86

For example, for a vessel in a multi-vessel fleet with two main engines, the vessel owner or operator would pay a total of  $\$486 + (\$396 \times 2) = \$1,278$  per year for that vessel. If the operator failed to pay this amount by December 31 of each calendar year, an additional  $\$130 + (\$86 \times 2) = \$302$  would be required for this vessel. For a fleet with only one vessel with three main engines total, one of which is a low-use engine, the vessel owner or operator would pay a total of  $\$364 + (\$297 \times 2) + \$594 = \$1,552$  per year for that vessel. If the operator failed to pay this amount by December 31 of each calendar year, an additional  $\$130 + (\$86 \times 3) = \$388$  would be required for this vessel.

## **IV. The Specific Purpose and Rationale of Each Adoption, Amendment, or Repeal**

CARB has adopted numerous regulations to control emissions from many different sectors, including CHC. However, the need for further emission reductions from the marine sector is still urgent. While all sources of PM and NOx emissions are important, the CHC sector remains a large contributor of emissions in California, despite the Current Regulation requiring CARB diesel fuel to be used in marine engines and establishing requirements for cleaner diesel engines.

Numerous changes and additions to the Current Regulation, which was adopted under Title 17 CCR § 93118.5 and Title 13 CCR § 2299.5, are necessary in order to increase the emission reductions from CHC operating in RCW.

CARB staff is proposing that the Board approve adoption of the Proposed Amendments to Title 13, California Code of Regulations (CCR) § 2299.5, and Title 17, CCR § 93118.5, pursuant to its authority under HSC §§ 38505, 38510, 38560, 38566, 38580, 39600, 39601, 39650, 39658, 39659, 39666, 39730, 41511, 43013, 43018, and 43019.1. The Proposed Amendments would be effective beginning January 1, 2023.

Throughout the text of the Proposed Amendments, CARB staff is proposing an effective date of January 1, 2023, to convey the date that several new requirements and provisions would go into effect. This date was chosen as it would be the day after the Current Regulation would be fully implemented. Accordingly, there are several places where CARB staff proposes that certain sections of the Current Regulation are no longer in effect. The date of December 31, 2022, was added to provisions in the regulatory text to explicitly state when older provisions would no longer be applicable so the regulated community has record of past requirements, current/new requirements, and the effective dates of the change.

The information in this chapter provides information regarding CARB staff's determination that each provision of the Proposed Amendments is: (1) reasonably necessary to carry out the purpose of the regulation; and (2) reasonably necessary to address the problem for which the regulation is proposed.

### **A. Title 13, California Code of Regulations Section 2299.5. Fuel Requirements, Emission Limits and Other Requirements for Commercial Harbor Craft**

#### **Purpose of Section 2299.5**

This section was included to notify anyone viewing section 2299.5 that the Current Regulation has been amended, including replacing the low sulfur fuel requirement with a renewable diesel fuel requirement, and other requirements for CHC to further reduce emissions. Additional authority and reference sections were incorporated.

### Rationale of Section 2299.5

This section is necessary for CARB to notify the public regarding how the Current Regulation was amended to ensure that members of the public viewing those sections are aware of those changes and understand the applicability of those subsections in the Proposed Amendments. Additional authority and reference sections are necessary because the Proposed Amendments would achieve GHG reductions through use of cleaner engines and ZEAT technology, and also rely on new fee authority to recover costs associated with compliance of off-road equipment.

### **B. Title 17 CCR, Section 93118.5. Airborne Toxic Control Measure for Commercial Harbor Craft**

#### Purpose of Section 93118.5

This section was included to notify anyone viewing section 93118.5 that the Proposed Amendments supersede the Current Regulation, as specified. The section also provides severability clauses for subsections being newly added by the Proposed Amendments.

#### Rationale of Section 93118.5

This section is necessary for CARB to notify the public regarding how, and which subsections of the Proposed Amendments would supersede the Current Regulation. To ensure that members of the public viewing those sections are aware that the Proposed Amendments supersede the Current Regulation, CARB has amended those sections to describe how those sections are affected by the Proposed Amendments. In addition, this section clarifies that if the Proposed Amendments are repealed or invalidated, that the requirements of the Current Regulation become operative again.

### **C. Subsection (a) Purpose and Intent**

#### Purpose of Subsection 93118.5(a)

This subsection describes the purpose and intent of the Proposed Amendments, which is to reduce criteria pollutants, TACs, and GHG emissions from CHC that operate in RCW to reduce health impacts on California's seaport communities, and to ensure that harbor craft are meeting visible emissions standards as specified in HSC § 41701. The specific need for additional emission reductions from CHC is detailed in Chapter II of this ISOR.

This subsection also specifically identifies which pollutants and emissions would be reduced from CHC vessels while operating in RCW and establishes that the reductions achieved by the Proposed Amendments contribute to California's health and air quality goals.

This subsection also clarifies that "this section" refers to section 93118.5 in its entirety.

#### Rationale of Subsection 93118.5(a)

- D. This subsection is necessary to set forth the purpose and intent of the requirements of the Proposed Amendments. CARB fleet rules contain purpose subsections and the inclusion of this is consistent with other CARB regulations contained in the CCR. This subsection is also necessary to clarify that the term "section" refers to the entirety of section 93118.5 as opposed to subsections within section 93118.5 to avoid confusion and distinguish between the terms section and subsection. Subsection (b) Applicability**

#### Purpose of Subsection 93118.5(b)

This subsection establishes the applicability of the Proposed Amendments by specifying who must comply with the Proposed Amendments and which vessel categories and engines are subject to the Proposed Amendments.

#### Rationale of Subsection 93118.5(b)

Each of the provisions within subsection 93118.5(b) is necessary to establish who and which vessel categories and engines are subject to the Proposed Amendments.

#### Purpose of Subsection 93118.5(b)(1)

This subsection establishes that any new or in-use harbor craft is subject to the Proposed Amendments regardless of fuel type. This subsection is being amended to clarify that all CHC, regardless of fuel type (diesel, natural gas, hydrogen, battery-electric) are subject to the Proposed Amendments beginning January 1, 2023.

#### Rationale of Subsection 93118.5(b)(1)

The scope of the regulation needs to be expanded to all fuel types to ensure that all CHC vessels comply with the Proposed Amendments. Without this provision, diesel-powered vessels could be modified to use an alternative non-diesel fuel, and be exempted from the regulation and not meet applicable requirements.

#### Purpose of Subsection 93118.5(b)(2)

The amendment to this subsection moves text clarifying that the requirements of Section 93118.5 supersede other control measures adopted by CARB.

#### Rationale of Subsection 93118.5(b)(2)

The amendments to this subsection were non-substantive and for clarification purposes only.

#### Purpose of Subsection 93118.5(b)(4)

This subsection establishes that the Proposed Amendments also apply to ATB tug-barge combinations, and petrochemical tank barges. This subsection also updates the references to sections pertaining to control requirements for OGVs that do not apply to the types of harbor craft regulated under this section.

#### Rationale of Subsection 93118.5(b)(4)

Because some ATBs and petrochemical tank barges meet the definition of an OGV as defined by weight, length, or engine size, it is necessary to clarify that petrochemical tank barges and ATBs are subject to the Proposed Amendments instead of control measures for other OGVs. It is also necessary to update the code sections that apply to OGVs but not these classes of harbor craft because the OGV requirements for fueling and operation within Regulated California Waters and At Berth have been amended since the Current CHC Regulation was last amended.

### **E. Subsection (c) Exemptions**

#### Purpose of Subsection 93118.5(c)

This subsection establishes certain situations in which CHC vessels are not subject to the requirements of the Proposed Amendments.

#### Rationale of Subsection 93118.5(c)

This subsection is necessary to define the CHC vessels that are not subject to the requirements of the Proposed Amendments.

#### Purpose of Subsection 93118.5(c)(2)

This subsection establishes that in the Proposed Amendments, both main and auxiliary engines on temporary replacement vessels must meet Tier 2 or newer marine or off-road emission standards. This section also clarifies that temporary replacement vessels can be used to replace both zero-emission and combustion vessels, but not after the compliance deadlines for vessels if the engines have not been upgraded.

#### Rationale of Subsection 93118.5(c)(2)

This subsection is new, which was not included in the Current Regulation. It is necessary to exempt the temporary replacement vessels from the performance standards in (e)(10) and (e)(12) as California requires more stringent emission standards than other states in the harbor craft sector. However, requiring engines meeting Tier 2 or newer emission standards is necessary to protect backsliding of emissions controls for temporary vessels brought into California for temporary work. It is also critical to ensure that temporary replacement vessels are not brought into RCW to replace a vessel after its compliance deadline. For example, if a vessel owner or operator needs

a temporary replacement vessel while upgrading their primary vessel, they need to take it out of service and bring in a temporary vessel prior to applicable compliance deadlines. If temporary replacement vessels are approved for vessels after their compliance deadline, the emission benefits of the Proposed Amendments would not be achieved on time.

#### Purpose of Subsection 93118.5(c)(3)

This subsection clarifies that this provision is only applicable until December 31, 2022.

#### Rationale of Subsection 93118.5(c)(3)

This subsection establishes exemption requirements for a temporary replacement vessel used to replace a vessel homeported in SCAQMD in the Current Regulation. Under the Proposed Amendments, vessels operating in SCAQMD are subject to the same requirements as in other air districts. As such, this subsection is only applicable until December 31, 2022, which is the date of full implementation of the Current Regulation.

#### Purpose of Subsection 93118.5(c)(6)

This subsection clarifies that dredges, petrochemical tank barges, and ATBs are not exempt from the Proposed Amendments.

#### Rationale of Subsection 93118.5(c)(6)

There is confusion about whether petrochemical tank barges, ATBs, or dredges above 400 feet long or equipped with engines having 30 L/cylinder displacement are subject to CHC regulation or control measures for OGVs. It is necessary to clarify that petrochemical tank barges, ATBs, and dredges are subject to the Proposed Amendments.

#### Purpose of Subsection 93118.5(c)(7)

This subsection establishes that a registered historic vessel is exempt only from subsection (e)(6) and (e)(12).

#### Rationale of Subsection 93118.5(c)(7)

The Proposed Amendments establish performance standards requirements in subsection (e)(12), which replace in-use engine requirements in subsection (e)(6) of the Current Regulation. It is necessary to establish that a registered historic vessel is exempt from subsection (e)(12) as well as (e)(6).

#### Purpose of Subsection 93118.5(c)(10)

This subsection establishes that engines rated less than 50 hp are not exempted from the Proposed Amendments.

#### Rationale of Subsection 93118.5(c)(10)

This subsection is necessary to achieve the greatest emission reductions in the harbor craft sector. CARB staff estimates 24 percent of auxiliary engines are rated below 50 hp, and emissions from engines under 50 hp contribute approximately 9 percent of total auxiliary engine PM emissions. Therefore, to maximize emission reductions, and remove any incentive to install a greater number of smaller engines under 50 hp, all engine sizes need to be included.

#### Purpose of Subsections 93118.5(c)(11)(B) through 93118.5(c)(11)(D)

These subsections establish that vessel owners and operators must notify CARB prior to removing a near-retirement vessel from service, and provides updates to sentence structure over a list of requirements.

#### Rationale of Subsections 93118.5(c)(11)(B) through 93118.5(c)(11)(D)

CARB enforcement and implementation staff recognize that many vessel owners and operators did not submit associated information after taking near-retirement vessels out of service. It is necessary to emphasize this reporting requirement to ensure CARB maintains accurate records.

#### Purpose of Subsection 93118.5(c)(12)

This subsection establishes that a dedicated emergency use vessel is exempt from performance standards requirements in subsection (e)(12), opacity testing requirements in subsection (k), and compliance fee requirements in subsection (l).

#### Rationale of Subsection 93118.5(c)(12)

A dedicated emergency use vessel is a type of vessel performing fire suppression, police response, or emergency rescue tasks. To be consistent with CARB's other regulations in which emergency use equipment or vehicles are exempted, the Proposed Amendments propose that dedicated emergency use vessels be exempt from performance standards requirements, idling requirements, opacity testing requirements and compliance fee requirements.

#### Purpose of Subsection 93118.5(c)(13)

This subsection establishes that commercial fishing vessels are exempt from performance standards requirements in subsection (e)(12) and compliance fee requirements in subsection (l).

#### Rationale of Subsection 93118.5(c)(13)

Commercial fishing vessels are exempt from the performance standards requirements and compliance fee requirements due to the small profit margins in the industry and the inability to establish new prices to recover costs of compliance, demonstrated lack of feasibility for Tier 4 repowers and retrofits, and competition with out of State and global markets.

#### Purpose of Subsection 93118.5(c)(14)

This subsection establishes that vessel owners and operators and facility owners and operators have a short-term exemption from applying during a force majeure event.

#### Rationale of Subsection 93118.5(c)(14)

This subsection and exemption is necessary to provide administrative and legal clarity to regulated entities of their compliance obligations during a force majeure event. The provision also ensures that this only applies in situations where the regulated entity has attempted to comply and mitigate the air quality impacts of their non-compliance.

### **F. Subsection (d) Definitions**

#### Purpose of Subsection 93118.5(d)

This subsection establishes that all definitions from HSC § 39010 through 39060 apply to the Proposed Amendments, except as otherwise specified in this section.

#### Rationale of Subsection 93118.5(d)

This subsection is necessary for CARB to define terms with particular meanings in the Proposed Amendments that differ or are not included in HSC § 39010 through 39060. This subsection is also necessary for establishing definitions that were not included in the Current Regulation or have been significantly modified. Inclusion of the Definitions subsection is consistent with existing CARB off-road vehicle regulations contained in the CCR, including the Current Regulation.

This subsection also establishes which definitions in the Proposed Amendments are modified or new definitions from the Current Regulation. The amendments to this subsection also remove the numbering of definitions, which are now included in alphabetic order as a stylistic change.

## **1. Air Basin**

### Purpose for Air Basin

Subsection 93118.5(d) defines “Air Basin” as a land area with generally similar meteorological and geographic conditions throughout. This is a new definition, which was not included in the Current Regulation.

### Rationale for Air Basin

“Air Basin” is applied to several requirements, including fleet definition and subsection (e)(11) of ZEAT Credit for early or surplus deployments. “Air Basin” is used to replace “Air District” in the Proposed Amendments. This is necessary to provide flexibility for fleets to develop compliance plans that consider vessels in different air districts but within the same air basin.

## **2. Alternative Diesel Fuel**

### Purpose for Alternative Diesel Fuel

This subsection keeps the same content but makes edits on punctuation.

### Rationale for Alternative Diesel Fuel

The amendments to this subsection were non-substantive and for clarification purposes only.

## **3. Annual Hours of Operation**

### Purpose for Annual Hours of Operation

Subsection 93118.5(d) defines “Annual Hours of Operation” as the total number of hours, rounded to the nearest whole hour, a vessel engine is used for all commercial purposes in Regulated California Waters in the calendar year (January 1 to December 31) immediately prior to the engine’s compliance date set forth in subsection (e)(6)(D). For example, if a vessel is used for commercial fishing and commercial non-fishing purposes, the total number of hours combined for both uses shall be the total annual hours of operation for that vessel. On and after January 1, 2023, any use of a commercial vessel for non-commercial purposes must be documented based on recordkeeping requirements in subsection (m)(4), otherwise the annual hours of operation for commercial purposes will be based on records from the non-resettable hour meter.

### Rationale for Annual Hours of Operation

This definition is updated from the Current Regulation. CARB is modifying this term to clarify that non-commercial activities must be documented and would not be counted

toward the operation hours when applying for low-use exceptions or situations where operation hours is used as a basis to determine compliance status. In addition, reporting period is revised to reflect the annual reporting requirement in the Proposed Amendments.

#### **4. Articulated Tug Barge**

##### Purpose for Articulated Tug Barge

Subsection 93118.5(d) defines “Articulated Tug Barge (ATB)” to mean a petrochemical tank barge that is mechanically linked with a paired tug that functions as a tug-barge combination.

##### Rationale for Articulated Tug Barge

The definition is a new definition, which was not included in the Current Regulation. This definition is necessary to specifically establish that ATBs will be subject to the Proposed Amendments. Because some ATBs are the same size as OGVs, it is important to clarify and clearly define what makes a large vessel of an ATB and therefore subject to the requirements of the Proposed Amendments.

#### **5. Battery Plug-in Hybrid Propulsion System**

##### Purpose for Battery Plug-in Hybrid Propulsion System

Subsection 93118.5(d) defines “Battery Plug-in Hybrid Propulsion System” to mean a harbor craft main propulsion system utilizing energy from two or more different energy sources, one of which includes a battery energy storage system that is designed to periodically be swapped or charged by an external energy source.

##### Rationale for Battery Plug-in Hybrid Propulsion System

This is a new definition, which was not included in the Current Regulation. The Proposed Amendments require ZEAT to be used for short-run ferries and new-build excursion vessels. Battery plug-in hybrid propulsion systems are anticipated to be one of technologies utilized to meet ZEAT requirements. Consequently, CARB is defining this term to establish the scope of a battery plug-in hybrid propulsion system. This definition is necessary for vessel owners and operators to understand what a battery plug-in hybrid propulsion system is in order to utilize a battery plug-in hybrid propulsion system for compliance with the Proposed Amendments.

#### **6. Barge**

##### Purpose for Barge

Subsection 93118.5(d) defines “Barge” to mean a vessel having a single or double hull that is typically flat-bottomed, but may have a rounded hull form and built with or

without a propulsion engine. Barges include but are not limited to deck barges, derrick or crane barges, dredging scow barges, autonomous drone barges, towed or pushed petrochemical tank barges, or barges operating as part of an ATB combination.

#### Rationale for Barge

This definition is updated from the Current Regulation. CARB is modifying this term to specify the types of barges included and clarify that petrochemical tank barges and barges operating as part of an ATB combination belong to barge category and are subject to the Proposed Amendments.

### **7. Based Outside of Regulated California Waters (RCW)**

#### Purpose for Based Outside of Regulated California Waters

Subsection 93118.5(d) defines “Based Outside of RCW” to mean operating more than 50 percent of the time outside of RCW in the previous calendar year.

#### Rationale for Based Outside of Regulated California Waters

This definition was not included in the Current Regulation but was added to the Proposed Amendments to provide clarity. It is essential to establish what “based outside of RCW” means for the reader to understand the requirements of the Proposed Amendments.

### **8. Berth**

#### Purpose for Berth

Subsection 93118.5(d) defines “Berth” to mean a vessel’s allocated place at a wharf, pier, or dock. For the purpose of this section, berth and slip can be used interchangeably.

#### Rationale for Berth

This definition was not included in the Current Regulation but was added to the Proposed Amendments to provide clarity. It is essential to establish what a berth is in order for the reader to understand the requirements of the Proposed Amendments.

### **9. California Department of Motor Vehicles CF Number**

#### Purpose for California Department of Motor Vehicles CF Number

Subsection 93118.5(d) defines “California Department of Motor Vehicles (DMV) CF Number” to mean a permanent registration number (CF number) assigned upon registration of undocumented vessels in California. In accordance with the national

vessel registration system, the registration number consists of the letters CF, four numbers, and a two-letter suffix (for example, CF 1234 AB).

#### Rationale for California Department of Motor Vehicles CF Number

This is a new definition, which was not included in the Current Regulation. If applicable, a California DMV CF Number is required in the reporting requirements in both the Current Regulation and Proposed Amendments. It is a unique identifier which can be used to identify certain types of vessels; as such, it is necessary to establish this term to ensure that the vessel owner or operator is able to identify and report the correct information.

### **10. California Fish and Wildlife License Number**

#### Purpose for California Fish and Wildlife License Number

Subsection 93118.5(d) defines “California Fish and Wildlife License Number” to mean an identification number assigned by the California Department of Fish and Wildlife, which is displayed on vessels on contrasting background in a format of FG 12345.

#### Rationale for California Fish and Wildlife License Number

This is a new definition, which was not included in the Current Regulation. If applicable, a California Fish and Wildlife License Number is required in the reporting requirements in both the Current Regulation and Proposed Amendments. It is a unique identifier and able to be used to identify a vessel; as such, it is necessary to establish this term to ensure that the vessel owner or operator is able to identify and report the correct information.

### **11. Call Sign Number**

#### Purpose for Call Sign Number

Subsection 93118.5(d) defines “Call Sign Number” to mean a unique identifier to a vessel containing both characters and numbers most often used in radio transmissions.

#### Rationale for Call Sign Number

This is a new definition, which was not included in the Current Regulation. If applicable, the call sign number is required in the reporting requirements in both the Current Regulation and Proposed Amendments. It is a unique identifier and is able to be used to identify a vessel; as such, it is necessary to establish this term to ensure that the vessel owner or operator is able to identify and report the correct information.

## **12. CARB Approved Emission Control System**

### Purpose for CARB Approved Emission Control System

Subsection 93118.5(d) defines “CARB Approved Emission Control System (CAECS)” to mean a method of reducing emissions to a satisfactory level for compliance with Title 17, CCR § 93130 through 93130.20, which is approved by CARB in this section as providing the same or greater reductions as applied to harbor craft.

### Rationale for CARB Approved Emission Control System

One of the emissions control strategies in subsection 93118.5(f) of the Proposed Amendments is to use a CAECS to reduce emissions from a vessel. As such, this definition is necessary to establish what constitutes a CAECS. This definition was not included in the Current Regulation as it was not a control strategy in the Current Regulation, but a CAECS is allowed if approved in an ACE compliance plan in the Proposed Amendments. As such, it is necessary to define what this term is to ensure that vessel owners and operators understand the method and apply for it appropriately.

## **13. CARB Diesel Fuel**

### Purpose for CARB Diesel Fuel

Subsection 93118.5(d) defines “CARB Diesel Fuel” to mean any diesel fuel that meets the specifications of vehicular diesel fuel, as defined in Title 13 CCR, § 2281 and 2282.

### Rationale for CARB Diesel Fuel

The Current Regulation requires vessel operators to use CARB diesel fuel. However, the Proposed Amendments require renewable diesel R100 or R99 to fuel harbor craft. To ensure vessel operators meet the fuel requirements, it is necessary to clarify what CARB diesel fuel is to differentiate CARB diesel fuel from R100 or R99.

## **14. Charter**

### Purpose for Charter

Subsection 93118.5(d) defines “Charter” to mean an agreement or contract where one person or company rents, leases, hires, or uses CHC vessels from another person or company to convey or transport goods or passengers.

### Rationale for Charter

This definition was not included in the Current Regulation but was added in the Proposed Amendments to provide clarity. The requirements of the Proposed

Amendments apply to parties who charter harbor craft vessels. As such, this definition is necessary to establish which parties are involved in chartering a vessel.

## **15. CHC Reporting System**

### Purpose for CHC Reporting System

Subsection 93118.5(d) defines “CHC Reporting System” to mean a reporting system that utilizes a web-based portal, fillable forms or other approved means of meeting reporting requirements of this section.

### Rationale for CHC Reporting System

This term was not included in the Current Regulation, as it did not exist during the implementation of the Current Regulation. This definition is necessary to specify that the CHC reporting system may include a variety of methods for reporting. Options could include a web-based portal reporting system, fillable forms, or other approved means to facilitate vessel owners and operators meeting reporting requirements of the Proposed Amendments.

## **16. Commercial Harbor Craft**

### Purpose for Commercial Harbor Craft

Subsection 93118.5(d) defines “Commercial Harbor Craft” to mean the same as “Harbor Craft.”

### Rationale for Commercial Harbor Craft

Adding this definition in the Proposed Amendments provides convenience for readers who may be searching for the definition of Commercial Harbor Craft instead of Harbor Craft.

## **17. Commercial Passenger Fishing or Charter Fishing or Sportfishing**

### Purpose for Commercial Passenger Fishing or Charter Fishing or Sportfishing

Subsection 93118.5(d) defines “Commercial Passenger Fishing” (also called “Charter Fishing” or “Sportfishing”) to mean any coastal or offshore vessel used for sport fishing, charter fishing, or any other type of fishing activity where individuals other than the owners or operators of the vessel are on board the vessel to perform fishing activities in exchange for payment to the vessel owner or operator. CPFVs include but are not limited to operations that provide both day and overnight trips, including those that may voyage periodically in and out of RCW.

## Rationale for Commercial Passenger Fishing or Charter Fishing or Sportfishing

Charter Fishing Vessel was defined as part of the Fishing Vessel category in the Current Regulation. In the Proposed Amendments, to be consistent with the maritime industry, the definition of Commercial Passenger Fishing or Sportfishing Vessel is now defined for clarification. In addition, in the Proposed Amendments, CPFVs are subject to different requirements than the Commercial Fishing vessel category. As such, it is necessary to clearly define Commercial Passenger Fishing to ensure vessel owners and operators of Commercial Passenger Fishing understand what requirements apply.

### **18. Compliance Date**

#### Purpose for Compliance Date

Subsection 93118.5(d) defines “Compliance Date” to mean the date by which time a vessel engine must meet the requirements set forth in subsection (e). The “compliance date” prior to January 1, 2023 for a vessel engine is set forth in Table 7, Table 8, Table 9, or Table 10 in subsection (e)(6)(D), whichever is applicable. The “compliance date” on and after January 1, 2023 is set forth in Table 12, Table 17, Table 18, or Table 19 in subsection (e)(12), or the extension is set forth in (e)(12)(E), whichever is applicable.

#### Rationale for Compliance Date

This is an updated definition from the Current Regulation. The Proposed Amendments provide new compliance schedules and new tables outlining compliance dates for vessel categories. The updated definition is necessary to outline where the updated compliance tables can be found.

### **19. Crew and Supply Vessel**

#### Purpose for Crew and Supply Vessel

Subsection 93118.5(d) defines “Crew and Supply Vessel” to mean a self-propelled vessel used for carrying personnel and/or supplies to and from off-shore and in-harbor locations (including, but not limited to, off-shore work platforms, construction sites, islands, and other vessels).

#### Rationale for Crew and Supply Vessel

This is an updated definition from the Current Regulation, adding “islands” as one example of locations that crew and supply vessels travel to and from. This adds clarification in the Proposed Amendments.

## **20. Dedicated Emergency Use Vessel**

### Purpose for Dedicated Emergency Use Vessel

Subsection 93118.5(d) defines “Dedicated Emergency Use Vessel” to mean a vessel that is used to perform fire suppression, police response or activities to protect public safety, or emergency rescue as its only specified vocation reported to CARB. Vessels performing training or certification for, or actual operations in oil spill response, are not dedicated emergency use vessels. Vessels operated by the California Department of Fish and Wildlife to enforce provisions of the California Fish and Game Code or California Fish and Game regulations are not dedicated emergency use vessels, even if they may be called upon to enforce other California laws.

### Rationale for Dedicated Emergency Use Vessel

This is a new definition, which was not included in the Current Regulation. Dedicated emergency use vessels are generally a subcategory of workboats that are exempt from certain requirements including performance standards requirements in subsection (e)(12), opacity testing requirements in subsection (k), and compliance fee requirements in subsection (l). As such, it is necessary to clearly define what vessels are considered dedicated emergency use vessels. In the Current Regulation, workboats do not have requirements to meet more stringent engine standards, and therefore it is necessary to clarify the scope of dedicated emergency use vessel requirements. It is necessary to clarify that there are other types of vessels that provide necessary functions for public service that do not meet the dedicated emergency use vessel definition, in order to maximize emission reductions and protect public health.

## **21. Diesel Emission Control Strategy**

### Purpose for Diesel Emission Control Strategy

Subsection 93118.5(d) defines “Diesel Emission Control Strategy (DECS)” to refer to a technology that reduces air pollution from diesel engine exhaust before it is emitted into the air.

### Rationale for Diesel Emission Control Strategy

This is a new definition, which was not included in the Current Regulation. The term is used in the Current Regulation, but not formally defined. The Proposed Amendments would require the use of Verified DECS, or VDECS, and will not allow the use of DECS for compliance. Therefore, it is necessary to establish the difference between a DECS and VDECS so that owners and operators can distinguish between the two to comply with the Proposed Amendments.

## **22. Diesel Engine System**

### Purpose for Diesel Engine System

Subsection 93118.5(d) defines “Diesel Engine System” to mean a system, including diesel engines and DPFs, used to meet CARB’s performance standards as set forth in subsection (e)(9).

### Rationale for Diesel Engine System

This is a new definition, which was not included in the Current Regulation. In the Current Regulation, DPFs are not required. The Proposed Amendments require certain regulated in-use vessels to meet performance standards which are equivalent to Tier 3 (or 4) plus DPF emission standards depending on the engine tier availability. To simplify, we define the combination of an engine plus a DPF as a diesel engine system. It is necessary in the Proposed Amendments to define a diesel engine system as including diesel engines and DPFs to meet performance standards requirements of the Proposed Amendments.

## **23. Diesel Exhaust Fluid**

### Purpose for Diesel Exhaust Fluid

Subsection 93118.5(d) defines “Diesel Exhaust Fluid (DEF)” to mean a liquid reducing agent (other than engine fuel) used in conjunction with SCR to reduce NOx emissions. DEF is generally understood to be an aqueous solution of urea conforming to the specifications of ISO 22241.

### Rationale for Diesel Exhaust Fluid

This is a new definition, which was not included in the Current Regulation. Because DEF is an aqueous chemical compound that is used to support SCR system, and its consumption is required to be reported, the Proposed Amendments define the term and specification.

## **24. Diesel Particulate Filter**

### Purpose for Diesel Particulate Filter

Subsection 93118.5(d) defines “Diesel Particulate Filter (DPF)” to mean an emission control technology that reduces diesel PM emissions in engine exhaust gases by trapping the particles in a flow filter substrate and periodically removing the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration. On and after January 1, 2023, DPF means a CARB Level 3 VDECS.

### Rationale for Diesel Particulate Filter

This term is updated from the Current Regulation to clearly specify that in the Proposed Amendments, DPF refers to CARB Level 3 VDECS. DPF is a retrofit device, which is a general term, but in this section a DPF is a Level 3 VDECS and needs to be used to comply with the performance standard requirements. Because it is used repeatedly throughout the Proposed Amendments, it is necessary to clarify what a DPF is.

## **25. Direct Control**

### Purpose for Direct Control

Subsection 93118.5(d) defines “Direct Control” to mean owning, operating, having a contract, lease, or other arrangement to operate a harbor craft. For facilities, “Direct Control” means to control the affairs of facility operations, which includes but is not limited to collecting payment from independent operators for use of dock space, using facility property to moor, dock, service, or maintain a person’s own vessels, and being responsible for the majority of commercial activity at a given location.

### Rationale for Direct Control

This definition is expanded from the Current Regulation, adding what direct control means for facilities. The Proposed Amendments established requirements for facilities. It is necessary to clarify the meaning of direct control for facilities to ensure related parties including facility owners or facility operators clearly understand their responsibilities respectively.

## **26. Disadvantaged Communities**

### Purpose for Disadvantaged Communities

Subsection 93118.5(d) defines “Disadvantaged Communities (DAC)” to mean census tracts or applicable tribal data designated by the CalEPA for the purposes of SB 535 (HSC § 39711) using the most current version of CalEnviroScreen by the Office of Environmental Health Hazard Assessment (OEHHA). DACs include all wharfs, docks, berths, and slips within a port, marina, harbor or other terminal facility if any portion of the facility is located within a DAC. Additional requirements apply for vessels with a homebase or any regularly scheduled stop within two miles of a DAC.

### Rationale for Disadvantaged Communities

This term is a new definition, which was not included in the Current Regulation. The Proposed Amendments establish lower annual operating hours thresholds in low-use exceptions and compliance extensions for vessels operating in DACs to further reduce emissions and protect public health equally throughout California, especially in areas suffering from disproportionately high pollution levels and the resulting adverse health

and environmental impacts. As such, it is necessary to clearly define what areas are considered DACs.

## **27. Distributed Generation**

### Purpose for Distributed Generation

Subsection 93118.5(d) defines “Distributed Generation” to mean electrical power generation technologies and equipment (including but not limited to on-shore combustion engines at a dock and barge-mounted combustion engines moored to a dock), or methods that produce electricity at or near the place of use. Stationary generators meeting the definition of an emergency standby generator used for emergency operations for harbor craft are not subject to distributed generation requirements. The electricity generated must meet the following emissions standards:

- NO<sub>x</sub> emissions no greater than 0.03 g/kW-hr;
- PM emissions equivalent to the combustion of natural gas with a fuel sulfur
- content of no more than 1 grain per 100 standard cubic foot;
- Distributed generation GHG emissions must be grid-neutral; and
- Ammonia emissions no greater than 5 ppm<sub>dv</sub> if SCR is used.

### Rationale for Distributed Generation

This is a new definition, which was not included in the Current Regulation. The Proposed Amendments require facilities to supply shore power to allow vessels to meet idling requirements, and require ZEAT on short-run ferries and excursion vessels. As such, it is essential to define what distributed generation is so that any parties using it to supply electrical power are aware of the emission standards they would be required to meet to comply with the Proposed Amendments.

## **28. Dock**

### Purpose for Dock

Subsection 93118.5(d) defines “Dock” to mean the state of being secured to a facility (to dock), or the permanent structure to which a vessel can be secured.

### Rationale for Dock

This is a new definition, which was not in the Current Regulation. This term is used repeatedly throughout the Proposed Amendments; as such it is necessary to establish what “dock” means to ensure readers interpret compliance requirements correctly, especially regarding engine idling and operation limits.

## **29. Dredge**

### Purpose for Dredge

Subsection 93118.5(d) defines “Dredge” to mean a vessel designed to remove earth from the bottom of waterways, by means of including, but not limited to, a scoop, a series of buckets, or a suction pipe. Dredges include, but are not limited to, hopper dredges, clamshell dredges, or pipeline dredges. On and after January 1, 2023, dredges also include, but are not limited to, suction hopper dredges, barge mounted dredges, and dredges with engines having a per cylinder displacement above 30 liters.

### Rationale for Dredge

This term was expanded from the Current Regulation, adding dredges of any type that have per-cylinder displacement over 30 L. This definition clarifies that all dredges, even if they would otherwise meet the definition of an OGV, are subject to the Proposed Amendments.

## **30. Emergency Operation**

### Purpose for Emergency Operation

Subsection 93118.5(d) defines “Emergency Operation” to mean performing emergency response duties such as responding to a stricken vessel, participating in activities as required by a Vessel Mutual Assistance Plan (VMAP), transporting displaced persons and first responders in response to a regional emergency, unannounced drills that are part of California Department of Fish and Wildlife (CDFW) Office of Spill Prevention and Response (OSPR) validation of Oil Spill Contingency Plans (C Plans) or U.S. Coast Guard requirements, providing response effort to an oil or petrochemical spill event, or use of combustion engines onboard vessels meeting ZEAT requirements in the event of an electrical utility power outage. The operating hours within RCW during emergency operation can be excluded from performance requirements for ZEAT in subsection (e)(10), and annual limits as set forth in subsection (e)(14) and (e)(12)(E)(4) if documented according to recordkeeping requirements in subsection (m)(19)(C) and reported according to subsection (o). The operating hours within RCW during emergency operation can be excluded from performance requirements for ZEAT in subsection (e)(10), and annual limits as set forth in subsection (e)(14) and (e)(12)(E)(4) if documented according to recordkeeping requirements in subsection (m) and reported according to subsection (o).

### Rationale for Emergency Operation

This term is a new definition, which was not included in the Current Regulation. Under the Proposed Amendments, operating hours are a key factor in determining the applicability of certain requirements. It is essential to clearly specify what types of operation are considered emergency operations so that they can be properly

excluded from any applicable hour-limited requirements, such as compliance by low-use.

### **31. Engine Family**

#### Purpose for Engine Family

Subsection 93118.5(d) defines “Engine Family” to mean an identifier assigned by the U.S. EPA or CARB to every engine certified to Tier 1 emission standards or higher. Engine family names generally contain 11 to 12 digits for off-road or marine certified engines.

#### Rationale for Engine Family

This term was used but not defined in the Current Regulation. Engine family is one of the parameters required in the reporting requirement to identify the engine. It is necessary to define it in the Proposed Amendments to ensure that readers understand what an engine family is and what constitutes an engine family.

### **32. Escort Tugboats**

#### Purpose for Escort Tugboats

Subsection 93118.5(d) defines “Escort Tugboats” to mean a tugboat with a primary vocation involving intercepting and escorting ATBs, or any OGV entering or departing RCW with the purpose of providing maneuvering or stopping assistance in case of loss of propulsion or steering power while in-route to or from docks and terminals. Escort tugs will typically work with ship assist harbor tugs to dock or undock their escorted ATBs or OGVs. Escort tugs may also stay with ATBs or ocean-going tanker vessels while they are offloading or loading petrochemical product for fire suppression assistance or emergency undocking.

#### Rationale for Escort Tugboats

This term is a subcategory of tugboats. To be consistent with marine industry, it is necessary in the Proposed Amendments to establish a definition for escort tugboats to clarify that it is a type of tugboat.

### **33. Excursion Vessel**

#### Purpose for Excursion Vessel

Subsection 93118.5(d) defines “Excursion Vessel” to mean a self-propelled vessel that transports passengers for purposes including, but not limited to, dinner cruises; harbor, lake, or river tours; scuba diving expeditions lessons, or training; parasailing expeditions; any type of for-hire charters for pleasure purposes; and whale watching

tours. "Excursion Vessel" does not include crew and supply vessels, ferries, and recreational vessels.

#### Rationale for Excursion Vessel

This term is expanded from the Current Regulation by adding parasailing expeditions as examples of excursion vessel activities. In addition, this updated term emphasizes that any type of for-hire charters for pleasure purposes would be considered excursion vessels. It is necessary to provide clarity for vessel owners and operators so they have a clear understanding of what constitutes commercial excursion activity versus recreational activity for pleasure, which is not regulated.

### **34. Facility**

#### Purpose for Facility

Subsection 93118.5(d) defines "Facility" to mean, but is not limited to, any port, marine terminal, oil terminal, marina, harbor, and land with docks for allowing CHC to dock, moor, or otherwise conduct commerce.

#### Rationale for Facility

This is a new definition, which was not included in the Current Regulation. The Proposed Amendments set requirements for facilities, including facility shore power, infrastructure, and reporting requirements. As such, this definition is necessary to establish what type of facility has compliance obligations under the Proposed Amendments.

### **35. Facility Operator**

#### Purpose for Facility Operator

Subsection 93118.5(d) defines "Facility Operator" to mean any person or company in direct control of daily facility operations and if applicable, responsible for the collection of CHC vessel operators' compensation to dock, moor, or otherwise conduct commerce. For purpose of this section, "Facility Operator" is interchangeable with the "Tenant" or "Facility Tenant."

#### Rationale for Facility Operator

This definition was not included in the Current Regulation, as there were no requirements for facilities. Facility operators have obligations under the Proposed Amendments; as such, this definition is necessary to establish what defines this entity. Facility operators are jointly responsible for requirements with facility owners, defined separately. Therefore, it is important to distinguish what constitutes a facility operator. This definition also clarifies that facility operators include those who collect monetary

compensation as well as those that do not collect monetary compensation but allow vessels to dock at their location.

### **36. Facility Owner**

#### Purpose for Facility Owner

Subsection 93118.5(d) defines “Facility Owner” to mean any person, company, municipality, or port authority that owns the property of the facility. “Facility Owner” is interchangeable with “Land Owner” and “Property Owner”. In some cases, including but not limited to port authorities, “facility owner” may also be the “facility operator.”

#### Rationale for Facility Owner

This definition was not included in the Current Regulation, as there were no requirements for facilities. Facility owners have obligations under the Proposed Amendments. As such, this definition is necessary to establish what defines this entity. Facility owners are jointly responsible for requirements with facility operators, defined separately. Therefore, it is important to distinguish what constitutes a facility owner.

### **37. Ferry**

#### Purpose for Ferry

Subsection 93118.5(d) defines “Ferry” to mean a harbor craft having provisions only for deck passengers or vehicles, operating on a short run, on a frequent schedule between two points over the most direct water route, and offering a public service of a type normally attributed to a bridge or tunnel. On and after January 1, 2023, “Ferry” means a harbor craft having provisions only for deck passengers or vehicles, operating between two points over the most direct water route, and offering a public service of a type normally attributed to a bridge or tunnel. “Ferry” also includes vessels operated by a public or private company to transport passengers commercially, on a regularly scheduled or on-demand basis, which is not for pleasure. Ferry vessels include, but are not limited to, water taxis and any vessel subject to VCC requirements as set forth by the CPUC.

#### Rationale for Ferry

This is an updated definition from the Current Regulation. Additional clarification for ferry was added to the definition to ensure that vessels owned/operated by private companies that provide on-demand passenger service, as opposed to posted schedules over defined routes, are also considered ferries. In addition, the new definition for ferries removes short-run ferries, which are separately defined and have a separate schedule and requirements for emissions reduction.

### **38. Fishing Vessel**

#### Purpose for Fishing Vessel

The definition of “Fishing Vessel” is revised to clarify that on and after January 1, 2023, fishing vessels do not include CPFVs, and that vessels that are used for hire by the general public and dedicated to the search for and collection of, fish for the purpose of general consumption are separate from the general term “fishing vessel” and “commercial fishing vessel.”

#### Rationale for Fishing Vessel

This is an updated term from the Current Regulation. Under the Current Regulation, fishing vessel includes both commercial fishing vessel and charter fishing vessel. The Proposed Amendments separate CPFVs (commercial passenger fishing vessels) from fishing vessels, and the term fishing vessel only represents commercial fishing vessels. This update is necessary as commercial fishing and CPFVs have separate requirements in the Proposed Amendments.

### **39. Fleet**

#### Purpose for Fleet

Subsection 93118.5(d) defines “Fleet” to mean the total number of harbor craft owned, rented, or leased by an owner or operator in an air district or distinct locale within RCW; or, the statewide population of a specific vessel type. On and after January 1, 2023, “fleet” also includes chartered harbor craft and extends to harbor craft in an air basin.

#### Rationale for Fleet

This is an updated term from the Current Regulation to clarify a fleet can consider any vessel within an air basin instead of air district. This change is necessary to provide fleet owners and operators more flexibility when complying with the regulation by deploying ZEAT or using ACE to comply with the regulation.

### **40. Force Majeure**

#### Purpose for Force Majeure

Subsection 93118.5(d) defines “force majeure” to mean a sudden and unforeseeable event involving a clear danger, demanding action to prevent or mitigate the loss of, or damage to, life, health, property, or essential public services, arising from causes beyond the control of the vessel or facility owner or operator, which delays or prevents the performance of any obligation under this section, despite best efforts to fulfill the obligation. The definition clarifies that negligence or financial inability to comply are not considered a force majeure.

### Rationale for Force Majeure

This definition was not included in the Current Regulation. This definition is necessary because the Proposed Amendments establish an exemption for force majeure events for vessel and facility owners and operators. This exemption provides more certainty and administrative clarity to the legal compliance obligations for a regulated entity under an unforeseen event, such as the global situation that began in 2020, should it occur in 2023 or after.

## **41. Grid Neutral**

### Purpose for Grid Neutral

Subsection 93118.5(d) defines “Grid Neutral” to mean emitting no more GHG emissions than if equipment were powered by the California grid as represented in the most recent eGRID Summary Table for State Output Emission Rates as the California carbon dioxide equivalent (CO<sub>2</sub>e) emissions rate.

### Rationale for Grid Neutral

This is a new definition as GHG emission reduction was not required in the Current Regulation. The Proposed Amendments require that the electric power produced by technologies other than the California grid, including distributed generation, must be grid-neutral for the year that the technology is used. As such, this definition is necessary to define what that grid-neutral standard means.

## **42. Harbor Craft**

### Purpose for Harbor Craft

Subsection 93118.5(d) defines “Harbor Craft” (also called “Commercial Harbor Craft” or “CHC”) means any private, commercial, government, or military marine vessel including, but not limited to, passenger ferries, excursion vessels, tugboats, ocean-going tugboats, towboats, push boats, crew and supply vessels, workboats, pilot vessels, supply boats, fishing vessels, research vessels, barge and dredge vessels, CPFVs, oil spill response vessels, USCG vessels, hovercraft, emergency response harbor craft, and barge vessels that do not otherwise meet the definition of OGVs or recreational vessels.

### Rationale for Harbor Craft

This is an updated definition from the Current Regulation, which includes additional specific examples of harbor craft that were omitted from the definition in the Current Regulation. Barge and dredge vessels, CPFVs, and oil spill response vessels are common examples of harbor craft and are included to provide a more comprehensive list of examples.

### **43. Homebase**

#### Purpose for Homebase

Subsection 93118.5(d) defines “Homebase” to mean the facility located in RCW where a vessel is anchored, docked, or moored the majority of the time within a calendar year.

#### Rationale for Homebase

This is a new term to replace the homeport definition in the Current Regulation. CARB staff intent is to provide a definition for homebase that considers where a vessel is located most often while in the State; however, CARB staff has received comments that homeport is often used synonymously with the USCG term “hailing port,” which defines where a vessel is registered. To minimize potential confusion with industry terms, CARB staff is proposing to use the term “homebase” when referencing where a vessel is typically docked in RCW.

### **44. Hydrocarbon**

#### Purpose for Hydrocarbon

Subsection 93118.5(d) defines “Hydrocarbon (HC)” to mean the hydrocarbon group on which the emission standards are based for each fuel type, as described in 40 CFR § 1042.101(d) and § 1042.104(a).

#### Rationale for Hydrocarbon

This is a new definition, which was not included in the Current Regulation. As HC is one of the pollutants targeted for reductions in the U.S. EPA emission standards in the Current Regulation and in the performance standards in the Proposed Amendments, it is necessary to define the pollutant.

### **45. Hydrogen Fueling Infrastructure**

#### Purpose for Hydrogen Fueling Infrastructure

Subsection 93118.5(d) defines “Hydrogen Fueling Infrastructure” to mean the necessary infrastructure required to safely transfer compressed or liquid hydrogen directly from a truck or on-site storage facility to a CHC.

#### Rationale for Hydrogen Fueling Infrastructure

This is a new definition; the Current Regulation does not have a ZEAT requirement, and therefore has no need to establish a definition for hydrogen fueling infrastructure. The Proposed Amendments require that some vessel owners or operators must adopt ZEAT, such as fuel cell technology, on short-run ferries and new-build excursion

vessels. As such, hydrogen fueling infrastructure may be needed to deploy ZEAT vessels, and because information must be reported to CARB, it is necessary to define the scope of the fueling infrastructure subject to requirements.

## **46. Idling**

### Purpose for Idling

Subsection 93118.5(d) defines “Idling” to mean operating main propulsion or auxiliary engines when the net torque generated by the engine is at the operational minimum for the configuration of an engine connected to propulsion or other auxiliary vessel systems. Idling typically occurs when the vessel is at dock.

### Rationale for Idling

The Proposed Amendments sets forth idling limits for main propulsion engines and auxiliary generator engines. It is necessary to define what idling means for a vessel owner/ or operator to determine whether their operation is idling and subject to the limit. Without specificity, the general term of idling could imply any type of engine operation while a vessel is at dock, even if the engine is performing useful work, such as to keep the vessel firmly positioned against the dock by powering a propeller or water jet. CARB staff intent is to set a limit to idling operation of engines when they are not performing a functional purpose. This is a new definition; the Current Regulation does not have an idling limit, and therefore has no need to establish an idling definition.

## **47. International Maritime Organization Number**

### Purpose for International Maritime Organization Number

Subsection 93118.5(d) defines “International Maritime Organization (IMO) Number” to mean an identification number made up of the three letters "IMO" followed by a unique seven-digit number assigned to all ships by IHS Markit (formerly known as Lloyd's Register-Fairplay) when constructed.

### Rationale for International Maritime Organization Number

This is a new definition, which was not included in the Current Regulation. If applicable, the IMO Number is required in the reporting requirements in both the Current Regulation and Proposed Amendments. It is a unique identifier and can be used to identify certain types of vessels in the absence of a CARB-issued UVI; as such, it is necessary to establish this definition to ensure that the vessel owner or operator is able report the correct information.

## **48. Line Towing**

### Purpose for Line Towing

Subsection 93118.5(d) defines “Line Towing” to mean towing another OGV, barge, or harbor craft with a trailing towline as opposed to hauling alongside.

### Rationale for Line Towing

This is a new definition, which was not included in the Current Regulation. This term is used in the definition of tugboat. As such, it is necessary to establish what line towing means to help regulated parties understand the tugboat definition.

## **49. Low-use**

### Purpose for Low-use

Subsection 93118.5(d) defines “Low-use” to mean the operation of any compression-ignition engine associated with a harbor craft vessel for less than the total annual hours of operation in RCW, based on the immediately preceding calendar year, that the EO deems the engine is subject to the in-use requirements in subsection (e). The definition was updated to reference the new limits that would apply after January 1, 2023.

### Rationale for Low-use

This definition is updated from the Current Regulation by specifying the low-use hour limits for both the Current Regulation and Proposed Amendments. The low-use exception provides flexibility for vessel owners and operators operating engines under low-use hour limits without needing to upgrade engines or install DPFs to meet performance standards. Thus, it is necessary to update the definition so that the low-use limits as applied to engines are defined with the updated thresholds as defined in subsection (e)(14) Table 22.

## **50. Military Tactical Support**

### Purpose for Military Tactical Support

Subsection 93118.5(d) amends “Military Tactical Support” to clarify that vessels operated by contractors working for the military do not meet this definition.

### Rationale for Military Tactical Support

Military tactical support vessels are exempt from the Current Regulation and Proposed Amendments. Therefore, it is necessary to clarify that the contractors working for the military still have compliance obligations under the Current Regulation and Proposed Amendments.

## **51. Moor**

### Purpose for Moor

Subsection 93118.5(d) defines “Moor” to mean any permanent structure to which a vessel may be secured, or the act of securing a vessel to a permanent structure or facility.

### Rationale for Moor

This is a new definition, which was not in the Current Regulation. This term is used repeatedly throughout the Proposed Amendments; as such it is necessary to establish what moor means to ensure readers interpret compliance requirements correctly.

## **52. Newly Acquired Harbor Craft**

### Purpose for Newly Acquired Harbor Craft

Subsection 93118.5(d) defines “Newly Acquired Harbor Craft” to mean a harbor craft that a person did not own or operate as of January 1, 2023.

### Rationale for Newly Acquired Harbor Craft

Section 93118.5 sets specific requirements on newly acquired and new build vessels. It is necessary to define what is considered a newly acquired vessel so that vessel owners and operators can comply with the applicable requirements when obtaining a newly acquired vessel. Without including newly acquired harbor craft in the requirements that apply to new harbor craft, a person could purchase a used vessel to circumvent meeting a more stringent performance standard that applies to “new harbor craft”. Therefore, this definition is necessary to clarify that a newly acquired vessel includes any vessel that was not owned or operated inside of California prior to January 1, 2023.

## **53. Ocean-Going Vessel**

### Purpose and Rationale of Subsection 93118.5(d)(83)

Subsection 93118.5(d) adds a clarification “Ocean-going Vessels (OGV)” must be self-propelled, in addition to meeting requirements for length, weight, or per-cylinder engine displacement.

### Rationale of Subsection 93118.5(d)(83)

This is an updated definition from the Current Regulation, emphasizing that OGVs are self-propelled. It is necessary to clarify that non-self-propelled vessels such as barges do not belong to OGV category even if they meet any of the other criteria of the OGV definition.

## **54. Ocean-going Tugboats and Towboats**

### Purpose for Ocean-going Tugboats and Towboats

Subsection 93118.5(d) defines “Ocean-going Tugboats and Towboats” to mean tugboats and towboats with a “registry” (foreign trade) endorsement on their USCG certificates of documentation, or tugboats and towboats that are registered under the flag of a country other than the United States.

### Rationale for Ocean-going Tugboats and Towboats

This term is included in the Current Regulation but was relocated to this subsection in the Proposed Amendments to consolidate all definitions into the same subsection, which is subsection 93118.5(d).

## **55. Oil Spill Response Vessel**

### Purpose for Oil Spill Response Vessel

Subsection 93118.5(d) defines “Oil Spill Response Vessel” to mean a type of workboat that is dedicated to providing oil or fuel spill response cleanup. For the purpose of this section, oil spill response vessels are not dedicated emergency use vessels.

### Rationale for Oil Spill Response Vessel

This definition is new, which was not included in the Current Regulation. Oil spill response vessels and dedicated emergency use vessels are subject to different requirements under the Proposed Amendments. As such, it is critical to add this definition to the Proposed Amendments to clarify.

## **56. Opacity**

### Purpose for Opacity

Subsection 93118.5(d) defines “Opacity” to mean the fraction of a beam of light, expressed in percent, which fails to penetrate a plume of smoke as measured over a five-inch path length in accordance with SAE J1667.

### Rationale for Opacity

This definition was not included in the Current Regulation, as there were no opacity testing requirements specified in the Current Regulation. The Proposed Amendments set forth opacity testing requirements; as such, it is necessary to define what opacity means for readers to understand the requirements. It is specifically important to clarify that in this section, opacity is defined over a 5-inch path length in accordance with SAE J1667, which differs from other types of opacity measurements performed visually from stationary sources.

## **57. Operate**

### Purpose for Operate

Subsection 93118.5(d) defines “Operate” to mean steering or otherwise running the vessel or its functions while the vessel is working, underway, moored, anchored, or at dock.

### Rationale for Operate

This is an updated definition from the Current Regulation, adding working as one example of an operating function. It is necessary to clarify to ensure correct interpretation of “operate” in the context of the regulation.

## **58. Operator**

### Purpose for Operator

Subsection 93118.5(d) defines “Operator” to mean a person who operates a vessel under a contract agreement.

### Rationale for Operator

Both the Current Regulation and Proposed Amendments set obligations for operators and this term is repeatedly used; as such, this definition is necessary to be added in the Proposed Amendments to establish what defines this entity.

## **59. Performance Standards**

### Purpose for Performance Standards

Subsection 93118.5(d) defines “Performance Standards” to mean PM and NO<sub>x</sub> emission standards defined by CARB, set forth in Table 7, Table 8 and Table 9 in subsection 93118.5(e)(9), that must be met to comply with the in-use requirements of the CHC regulation.

### Rationale for Performance Standards

This definition was not included in the Current Regulation. The Proposed Amendments require regulated in-use vessels to meet the performance standard requirements. As such, it is necessary to establish what the performance standards are for owners and operators to understand what emissions criteria they need to meet to comply with the requirements. CARB staff has chosen the term “performance standard” to avoid confusion with the term emission standard, which in many cases applies to engine manufacturers when selling a new engine. The “performance standards” must be met by vessel owners and operators, which can be achieved through using an engine

certified to levels below the performance standards, or through other compliance approaches.

## **60. Petrochemical Tank Barge**

### Purpose for Petrochemical Tank Barge

Subsection 93118.5(d) defines “Petrochemical Tank Barge” to mean a non self-propelled double-hull tank barge constructed to transport petrochemicals, fuels, or other combustible or noxious liquid substances and designed to either be pushed by a designated tug utilizing a proprietary retractable pin connection system forming a temporary ATB combination or towed on a wire by tugboat.

### Rationale for Petrochemical Tank Barge

This definition was not included in the Current Regulation. Petrochemical tank barges are a subcategory of the barge category and perform different functions than other types of barges. As such, it is necessary to clearly define what a petrochemical tank barge means to delineate this term from other barge vessels.

## **61. Physical Constraint**

### Purpose for Physical Constraint

Subsection 93118.5(d) defines “Physical Constraint” as an unavoidable barrier at a terminal to provide a service due to the layout of a terminal or waterway where a state or federal public agency with jurisdiction over the resources effected by this section has made a safety determination that prevents the use of shore power.

### Rationale for Physical Constraint

Vessel or facility owners and operators may be granted a maximum of two years of compliance extensions for infrastructure delays due to a physical constraint that cannot be controlled. As such, it is necessary to define “physical constraint” to enable vessel or facility owners and operators to determine eligibility for infrastructure extensions.

## **62. Pilot Vessel**

### Purpose for Pilot Vessel

Subsection 93118.5(d) defines “Pilot Vessel” to mean a vessel designed for, but not limited to, the transfer and transport of maritime pilots to and from OGVs while such vessels are underway, at anchor, or at dock.

### Rationale for Pilot Vessel

This term is updated from the Current Regulation by clarifying that pilot vessels also include vessels that are used to transport marine pilots to OGVs that are at anchor or at dock.

## **63. Portable Equipment Registration Program**

### Purpose for Portable Equipment Registration Program

Subsection 93118.5(d) defines "Portable Equipment Registration Program (PERP)" to mean the statewide program designed to promote the use of clean portable engines and equipment units in California, as provided for in Title 13, CCR § 2450 through 2465. Once registered in the program, portable engines and equipment units can operate throughout the State without being required to obtain individual permits from each air pollution control or air quality management district in which they operate.

### Rationale for Portable Equipment Registration Program

This definition is updated from the Current Regulation by clarifying that the PERP applies to portable equipment units, and that the program only applies to engines that are portable. The clarification is necessary to ensure that the PERP definition is accurate and consistent with the current requirements of the PERP program. In some instances, auxiliary engines are registered in PERP or permitted by local air districts as portable engines. In cases where they are permanently affixed to a CHC, they remain subject to the requirements of this section, regardless of whether they are issued a permit through the local air district.

## **64. Propulsion Engine**

### Purpose for Propulsion Engine

Subsection 93118.5(d) defines "Propulsion Engine" to mean an engine that provides power to move a vessel through the water or directs the movement of a vessel. For purposes of this section, "Propulsion engine" is interchangeable with "Main" engine.

### Rationale for Propulsion Engine

This definition is expanded from the Current Regulation by clarifying that propulsion engine and main engine are synonymous. Propulsion engine and main engine are used interchangeably in the Proposed Amendments; as such, it is necessary to clarify this definition in the Proposed Amendments to avoid confusion.

## **65. Rebuild**

### Purpose for Rebuild

Subsection 93118.5(d) defines “Rebuild” to mean an overhaul to an engine using both new and re-conditioned parts while following repair procedures that have been approved by the manufacturer. When engine repairs require replacement of the engine block, the engine is considered to be repowered, not rebuilt.

### Rationale for Rebuild

This is a new definition, which was not included in the Current Regulation. During implementation of the Current Regulation, CARB staff recognized there is confusion between rebuild and repower. An engine repower is subject to the performance standards in subsection (e)(8), where engines can be rebuilt to their current standard. As such, it is necessary to distinguish the terms to clarify under what circumstances engines must meet more stringent standards.

## **66. Recreational Vessel**

### Purpose for Recreational Vessel

Subsection 93118.5(d) defines “Recreational Vessel” to mean a vessel that is intended by the vessel manufacturer to be operated primarily for pleasure or leased, rented, or chartered to another for the latter’s pleasure, excluding the following vessels: (1) vessels of less than 100 GT that carry more than 6 passengers, (2) vessels of 100 GT or more that carry one or more passengers, and (3) vessels used solely for competition. On and after January 1, 2023, “Recreational Vessel” means a vessel that is used solely for personal use, which excludes diesel-powered vessels that are operated as a charter or hired to carry any number of passengers.

### Rationale for Recreational Vessel

This term is updated from the Current Regulation to clarify that in the Proposed Amendments, recreational vessels no longer include diesel-powered vessels carrying six passengers or less for commercial activity. Recreational vessels are not subject to the CHC Regulation; as such, it is necessary to clarify that all diesel-powered vessels, regardless of passenger limits, engaging in commercial service are not considered recreational vessels.

## **67. Regularly Scheduled**

### Purpose for Regularly Scheduled

Subsection 93118.5(d) defines “Regularly Scheduled” to mean any vessel activity planned to occur repeatedly on an on-going basis with constant or defined time intervals.

### Rationale for Regularly Scheduled

Regularly scheduled is used in the definitions of ferry, short-run ferry, and DACs. In addition, it is referenced in other circumstances of the Proposed Amendments. As such, it is essential to establish the meaning of regularly scheduled for readers to understand the definitions and associated requirements.

## **68. Regulated California Waters or RCW**

### Purpose for Regulated California Waters

Subsection 93118.5(d) amends “Regulated California Waters” to clarify the boundaries of the waters subject to this section.

### Rationale for Regulated California Waters

This term is updated from the Current Regulation, and update the boundary coordinates in the Proposed Amendments to ensue boundary limits of RCW are within 24 nautical miles as accurate as possible.

## **69. Regulated In-Use Vessel**

### Purpose for Regulated In-Use Vessel

Subsection 93118.5(d) defines “Regulated In-Use Vessel” to mean a vessel that operates as one of the vessel categories subject to in-use engine standards in subsection (e)(6). On and after January 1, 2023, this applies to vessels subject to performance standards requirements in subsection (e)(12).

### Rationale for Regulated In-Use Vessel

This is an updated definition from the Current Regulation. The in-use engine standards applicable to regulated in-use vessels in subsection (e)(6) in the Current Regulation was replaced with performance standards (e)(12) in the Proposed Amendments. As such, it is necessary to update what regulated in-use vessel means and to what requirements regulated in-use vessels are subject.

## **70. Renewable Diesel, or R100, or R99**

### Purpose for Renewable Diesel or R100, or R99

Subsection 93118.5(d) defines “Renewable Diesel” or “R100” or “R99” to mean a diesel fuel substitute produced from non-petroleum renewable sources, including vegetable oils and animal fats. Renewable diesel meets the federal registration requirements for fuels and fuel additives and ASTM specification D975, which are incorporated by reference herein.

## Rationale for Renewable Diesel or R100, or R99

This is a new definition, which was not included in the Current Regulation. It is necessary to define Renewable Diesel to distinguish it from ULSD, as Renewable Diesel in blends of 99 percent or greater in volume (R99) must be used beginning January 1, 2023 by all vessels operating in the State. The term "Renewable Diesel," can mean either a blend of 99 percent "R99," or 100 percent "R100" renewable diesel by volume.

### **71. Repower**

#### Purpose for Repower

Subsection 93118.5(d) defines "Repower" to mean replacing a used engine with a brand new or reconditioned engine meeting current emission standards in effect at the time of repower, including but not limited to major engine repairs on a damaged engine requiring a new engine block.

#### Rationale for Repower

This is a new definition, which was not included in the Current Regulation. During implementation of the Current Regulation, CARB staff noticed the confusion between rebuild, repower, and remanufacture. As such, it is necessary to define what repower means to clarify the confusion as repowering engines is one of options to meet performance standards of the Proposed Amendments.

### **72. Research Vessel**

#### Purpose of Research Vessel

Subsection 93118.5(d) defines "Research Vessel" to mean all vessels subject to requirements of 46 CFR Subchapter U, plus any others that have highly advanced mobile research stations, and vessels that provide dedicated platforms from which explorers can deploy equipment, divers, or submersibles.

#### Rationale for Research Vessel

This is a new definition, which was not included in the Current Regulation. The Proposed Amendments require research vessels to comply with the performance standards requirements in subsection (e)(12). It is necessary to clarify that research vessels are a type of workboat, and the extent of vessel types that CARB staff intends to include as Research Vessels.

### **73. Retrofit**

#### Purpose for Retrofit

Subsection 93118.5(d) defines “Retrofit” to mean to install new or modified parts or equipment in or onto a vessel or engine.

#### Rationale for Retrofit

This is a new definition, which was not included in the Current Regulation. There is general confusion with the terms retrofit, repower, rebuild and remanufacture. It is necessary to define what retrofit means to help readers understand what retrofitting DPFs onto engines means.

### **74. Selective Catalytic Reduction**

#### Purpose for Selective Catalytic Reduction

Subsection 93118.5(d) defines “Selective Catalytic Reduction (SCR)” to mean an emission control system that reduces NOx emissions through the catalytic reduction of NOx in diesel exhaust by injecting nitrogen-containing compounds into the exhaust stream, such as ammonia or urea.

#### Rationale for Selective Catalytic Reduction

This term is new, which was not included in the Current Regulation as engines meeting Tier 4 emission standards were not required in the Current Regulation but required in the Proposed Amendments. Under the Proposed Amendments, some engines are equipped or retrofitted with SCR systems to reduce NOx emissions from harbor craft in order to meet the performance standard requirements in subsection (e)(12). As such, it is necessary to establish a definition for SCR.

### **75. Ship-Assist Tugboat**

#### Purpose for Ship-Assist Tugboat

Subsection 93118.5(d) defines “Ship-Assist Tugboat” to mean a harbor tug having a primary vocation of assisting ATBs and OGVs while docking and undocking.

#### Rationale for Ship-Assist Tugboat

This definition was not included in the Current Regulation but is added as a subcategory of tugboat in the Proposed Amendments. As such, it is necessary to clarify that ship-assist tugboats are a type of tugboat and therefore have compliance requirements under the Proposed Amendments.

## **76. Shore Power**

### Purpose for Shore Power

Subsection 93118.5(d) defines “Shore Power” (also called “Harbor Craft Shore Power”) to refer to electrical power provided by either the electric utility or distributed generation to a vessel at dock that can be used to provide house load or any other on-board auxiliary power normally provided by onboard diesel generators.

### Rationale for Shore Power

The Proposed Amendments establish shore power as a method for meeting main engine idling and auxiliary engine operating limit requirements in subsection (h) to further reduce emissions from harbor craft while at berth, at dock, or mooring. As such, it is necessary to establish what constitutes shore power.

## **77. Short-Run Ferry**

### Purpose for Short-Run Ferry

Subsection 93118.5(d) defines “Short-Run Ferry” to mean a vessel dedicated to provide regularly scheduled round-trip ferry service between two points that are less than three nm apart. Vessels that make multiple stops in a single round-trip, where half or more of the single trip lengths are less than three nm, and the longest single trip length is less than six nm, are considered short-run ferries. Vessels that provide ferry round-trip service between two points that are less than three nm apart, but account for less than 20 percent of the service trips from one fleet or operator between those two points during a given calendar year, are not considered short-run ferries.

### Rationale for Short-Run Ferry

This is a new definition, which was not included in the Current Regulation, as short-run ferries were not considered or regulated separately from non-short-run ferries in the Current Regulation. The Proposed Amendments places specific requirements on “Short-Run Ferry” that require a transition to zero-emission by December 31, 2025. As such, the definition is necessary to determine which vessels are subject to separate and more stringent requirements.

## **78. Slip**

### Purpose for Slip

Subsection 93118.5(d) defines “Slip” to mean the same as berth.

### Rationale for Slip

This is a new definition, as there were no facility requirements in the Current Regulation. The term slip is used by industry and is used in the Proposed Amendments to establish facility infrastructure, recordkeeping, and reporting requirements. Slip can be used interchangeably with berth. As such, it is necessary to establish what slip means to help readers understand the associated facility requirements.

## **79. Supply Vessel**

### Purpose for Supply Vessel

Subsection 93118.5(d) defines “Supply Vessel” to mean a self-propelled vessel used for carrying crew and supplies to and from off-shore and in-harbor locations including, but not limited to, off-shore work platforms, construction sites, islands, and other vessels.

### Rationale for Supply Vessel

This is an updated definition from the Current Regulation that clarifies that supply vessels can carry crews and that islands could be one example of a location to which supply vessels can travel. It is necessary to update this definition to make it clear for the readers and vessel owners and operators.

## **80. Tank Barge**

### Purpose for Tank Barge

Subsection 93118.5(d) defines “Tank Barge” to mean a non-self-propelled vessel constructed or adapted primarily to carry, or that carries, oil, petrochemicals, sewage, or other noxious liquid substances. Tank barges also include both petrochemical tank barges and barges carrying gaseous or liquid fuels, such as those performing fuel bunkering services.

### Rationale for Tank Barge

This definition is expanded from the Current Regulation to include additional examples of tank barges that fall into the vessel category. It is necessary to clarify that petrochemical tank barges and barges carrying gaseous or liquid fuels are classified as tank barges, so that owners and operators of petrochemical barges and barges carrying fuels understand compliance requirements.

## **81. Temporary Emergency Rescue/Recovery Vessel**

### Purpose for Temporary Emergency Rescue/Recovery Vessel

Subsection 93118.5(d) defines “Temporary Emergency Rescue/Recovery Vessel” to mean a self-propelled vessel that performs duties including, but not limited to, policing harbor areas, firefighting, rescue operations, oil spill prevention, and on-water oil removal that is brought into California for the immediate use of emergency rescue or recovery and leaves California at the conclusion of its emergency rescue/recovery mission.

### Rationale for Temporary Emergency Rescue/Recovery Vessel

This term is updated from the Current Regulation to remove reference to the word homeport, which on and after January 1, 2023, is not referenced or used to establish compliance requirements in the Proposed Amendments.

## **82. Temporary Replacement Vessel**

### Purpose for Temporary Replacement Vessel

Subsection 93118.5(d) defines “Temporary Replacement Vessel” to mean a self-propelled vessel that is brought into service to temporarily replace a California vessel that has been temporarily taken out of service. Prior to January 1, 2023, “temporary replacement vessel” includes only the following:

- a) vessels that are used in the SCAQMD but have a homeport in California outside of the SCAQMD; and
  - vessels that are used anywhere in California, including the SCAQMD, but have a homeport outside of California.

### Rationale of Temporary Replacement Vessel

The Proposed Amendments remove the accelerated compliance for SCAQMD, thus homeport location is not applicable in the Proposed Amendments. As such, it is necessary to clarify that provisions (A) and (B) are only applicable in the Current Regulation.

## **83. Tier 4 Final Off-Road or Nonroad Emission Standards**

### Purpose for Tier 4 Final Off-Road or Nonroad Emission Standards

This subsection makes a minor change by moving the word “Final” after “Tier 4.”

#### Rationale for Tier 4 Final

This definition remains the same, with only a minor change of the name of the definition to ensure that all engine Tier level definitions remain together when sorted alphabetically, making them easier to compare for readers.

### **84. Tier 4 Interim Off-Road or Nonroad Emission Standards**

#### Purpose for Tier 4 Interim

This subsection makes a minor change by moving word “Interim” after “Tier 4.”

#### Rationale for Tier 4 Interim

This definition remains the same, with only a minor change of the name of the definition to ensure that all engine Tier level definitions remain together when sorted alphabetically, making them easier to compare for readers.

### **85. Tugboat**

#### Purpose for Tugboat

Subsection 93118.5(d) defines “Tugboat” to mean any self-propelled vessel engaged in, or intending to engage in, the service of pulling, pushing, maneuvering, berthing, or hauling alongside other vessels, or any combination of pulling, pushing, maneuvering, berthing, or hauling alongside such vessels in harbors, over the open seas, or through rivers and canals. Tugboats generally can be divided into three groups: harbor or short-haul tugboats, ocean-going or long-haul tugboats, and barge tugboats. “Tugboat” is interchangeable with “towboat” and “push boat” when the vessel is used in conjunction with barges. On and after January 1, 2023, “tugboats” also include three types of vessels: ship assist and escort tugboats; ocean-going ATB and line towing tugboats; and, near-shore pushing and towing tugboats.

#### Rationale for Tugboat

This term is updated from the Current Regulation by regrouping the tugboat subcategories to be consistent with marine industry. The basic definition is unchanged from the Current Regulation. It is necessary to reclassify the subcategories to avoid confusion and align with marine industry terminology.

### **86. U.S. Coast Guard Documentation Number (USCG Number)**

#### Purpose for U.S. Coast Guard Documentation Number (USCG Number)

Subsection 93118.5(d) defines “U.S. Coast Guard Documentation Number (USCG Number)” to mean a national form of registration. Documentation provides conclusive evidence of nationality for international purposes, provides for unhindered commerce

between the states, and admits vessels to certain restricted trades, such as coastwise trade and the fisheries.

#### Rationale for U.S. Coast Guard Documentation Number (USCG Number)

USCG Number, if applicable, is required to be reported to CARB in the recordkeeping and reporting requirements to identify a vessel; as such, it is necessary to establish a definition for USCG Number to allow for vessel owners and operators to identify the number and report the information correctly.

### **87. Vessel Tenant**

#### Purpose for Vessel Tenant

Subsection 93118.5(d) defines “Vessel Tenant” to mean a CHC vessel which docks or moors for seven or more days in a calendar month at a facility.

#### Rationale for Vessel Tenant

This is a new definition which was not included in the Current Regulation as the Current Regulation did not set requirements on facilities. The Proposed Amendments require facility owners and operators to report a list of vessels who dock or moor for a certain amount of days at a facility. As such, it is necessary to define after what length of time a vessel remaining at a facility becomes a tenant.

### **88. Water Taxi**

#### Purpose for Water Taxi

Subsection 93118.5(d) defines “Water Taxi” to mean a ferry including USCG uninspected passenger vessels carrying six or less passengers for hire or USCG inspected passenger vessels that carry seven or more passengers for hire that transits paying passengers to any destination rather than operating over a fixed route and schedule.

#### Rationale for Water Taxi

This is a new definition, which was not included in the Current Regulation. It is necessary to define this term by specifying that water taxi is a ferry and would be subject to requirements set forth by the Proposed Amendments for the ferry category.

### **89. Workboat**

#### Purpose for Workboat

Subsection 93118.5(d) defines “Workboat” to mean a self-propelled vessel that is used to perform duties such as fire/rescue, law enforcement, hydrographic surveys, spill/response, research, training, and construction (including drilling). On and after

January 1, 2023, “Workboat” means a self-propelled vessel that is used to perform any duty not specifically listed by another category of CHC, including but not limited to duties such as hydrographic surveys, spill/response, school training, marketing (such as advertising), and construction (including drilling). Workboats can include vessels owned by public, private, and not-for-profit organizations.

#### Rationale for Workboat

This is an updated definition from the Current Regulation. This definition specifically points out that any vessels used for commercial activity that are not included in other specific vessel categories would be classified as a workboat. It is necessary to make this clarification for vessel owners and operators to correctly interpret and meet compliance dates accordingly.

### **90. ZEAT**

#### Purpose for ZEAT

Subsection 93118.5(d) defines “ZEAT” to refer to Zero-Emission and Advanced Technology, which collectively includes zero-emission capable hybrid, and zero-emission vessels.

#### Rationale for ZEAT

This is a new term, which was not included in the Current Regulation because there were no requirements for adopting ZEAT. As such, it is necessary to define this term in the Proposed Amendments for vessel owners and operators to be able to meet the requirements of the Proposed Amendments and qualify for the additional compliance credits after deploying ZEAT in their fleets.

### **91. Zero-Emission**

#### Purpose for Zero-Emission

Subsection 93118.5(d) defines “Zero-Emission” to mean a propulsion system, auxiliary power system, and/or vessel utilizing a zero-emission propulsion and auxiliary power system that has no tailpipe exhaust emissions other than water vapor or diatomic nitrogen from the onboard source(s) of power.

#### Rationale for Zero-Emission

This is a new term which was not included in the Current Regulation because there were no zero-emission requirements. To meet CARB’s goal of reducing emissions, the Proposed Amendments would establish zero-emission vessel requirements where feasible. It is necessary to establish what zero-emission means for vessel owners and operators to utilize the appropriate technologies to achieve zero emissions.

## **92. Zero-Emission Capable Hybrid Vessel**

### **Purpose for Zero-Emission Capable Hybrid Vessel**

Subsection 93118.5(d) defines “Zero-Emission Capable Hybrid Vessel” to mean a CHC utilizing a hybrid power system with two or more onboard power sources, one or more of which is approved by CARB’s EO to be capable of providing a minimum of 30 percent of vessel power required for main propulsion and auxiliary power operation with zero tailpipe emissions when averaged over a calendar year.

### **Rationale for Zero-Emission Capable Hybrid Vessel**

This term is a new definition which was not included in the Current Regulation as zero-emission capable hybrid technology was not required on any type of vessel categories in the Current Regulation. The Proposed Amendments would require new and newly required excursion vessels to adopt zero-emission capable hybrid technology. CARB is defining this term to standardize and set a performance standard for zero-emission capable hybrid technology used in vessels. Specifically, this definition clarifies that a zero-emission capable hybrid vessel must derive 30 percent of its power from a zero-emission tailpipe source, which could differ from other common forms of operation where diesel engines can be temporarily turned off while deriving power from the combustion engines.

## **93. Zero-Emission Infrastructure**

### **Purpose for Zero-Emission Infrastructure**

Subsection 93118.5(d) defines “Zero-Emission Infrastructure” to mean installed dockside infrastructure necessary to support the operation of a ZEAT vessel. For example, charging equipment for propulsion system batteries, or on-dock hydrogen storage tanks, and fueling infrastructure.

### **Rationale for Zero-Emission Infrastructure**

This term is a new definition which was not included in the Current Regulation as zero-emission technology is not required in the Current Regulation. The Proposed Amendments would require short-run ferries and new excursion vessels to transition to ZEAT, which must be supported with charging or fueling infrastructure. As such, it is necessary to define zero-emission infrastructure to ensure the construction of zero-emission infrastructure meet the needs of ZEAT vessels.

## **G. Subsection (e) Fuel Use and Engine Emission Requirements**

### **Purpose of Subsection 93118.5(e)**

This subsection establishes the fuel use requirement, the requirement for installing hour meters on all harbor craft, new and newly acquired engine and vessel

requirement, requirements for ZEAT on certain vessel categories, ZEAT credit for early or surplus deployment requirements, requirements for in-use engines, engine requirements on commercial fishing vessels and requirements for low-use engines. Modifications to existing requirements in this subsection were to clarify that some no longer apply after December 31, 2022. The subsection also will no longer include a plain English narrative prior to the requirements of the subsections.

#### Rationale of Subsection 93118.5(e)

The primary purpose of the Proposed Amendments is to further reduce emissions from harbor craft. This subsection is necessary to define the performance standards that combustion engines must meet and compliance methods to comply with the fuel and engine performance standards requirements. To meet emission reductions goals, it is necessary to establish expanded and more stringent requirements on regulated in-use vessels, add mandatory requirements on certain vessel categories and voluntary provisions on other vessel categories to accelerate the deployment of ZEAT in the marine sector. It is also essential to keep the requirements for low-use engines but make some changes on low-use thresholds and administrative processes. It is necessary to add engine requirements for commercial fishing vessels to further reduce emissions. The plain English narrative was omitted to avoid confusion and redundancy with the same requirement being discussed using slightly different wording in two places. Additional emphasis has been included for clarification in the subsections discussed next.

### **1. Subsection (e)(1) All Harbor Craft – Low Sulfur Fuel Use Requirement (Applicable Until December 31, 2022)**

#### Purpose of Subsection 93118.5(e)(1)

This subsection establishes that the low sulfur fuel use requirement in the Current Regulation is no longer applicable after December 31, 2022.

#### Rationale of Subsection 93118.5(e)(1)

The Proposed Amendments set forth provisions requiring R99 renewable diesel fuel requirements in subsection (e)(7). As such, it is necessary to sunset the low sulfur fuel use requirement to ensure vessel owners and operators use renewable diesel to comply with the fuel requirements in the Proposed Amendments and clarify that the existing fuel requirements no longer apply.

### **2. Subsection (e)(2) All Harbor Craft – Installation and Use of Non-Resettable Hour Meters**

#### Purpose of Subsection 93118.5(e)(2)

This subsection establishes that all harbor craft must install a non-resettable hour meter on each engine and allows reasonable personnel access to the hour meter

without impediment. This subsection newly establishes in the Proposed Amendments for owners and operators to replace and report information if an hour meter fails.

#### Rationale of Subsection 93118.5(e)(2)

This subsection is expanded from the Current Regulation by adding provisions to address instances when an hour meter is replaced for some reason, such as the hour meter not functioning properly. The expanded provision is necessary to allow for the replacement of a non-functioning hour meter to ensure engine operation activity is recorded accurately. It is also necessary for vessel owners and operators to report the hour meter replacement, date replaced, and hour meter readings of both the original and replacement meter for CARB to effectively implement and enforce the regulation. The 30-day timeframe for reporting is consistent with the other reporting components of the Proposed Amendments.

### **3. Subsection (e)(3) All In-Use Harbor Craft – Requirements for Newly Acquired Engines (Applicable until December 31, 2022)**

#### Purpose of Subsection 93118.5(e)(3)

This subsection establishes that the requirements for newly acquired engines for all in-use harbor craft in the Current Regulation is no longer applicable to the Proposed Amendments after December 31, 2022.

#### Rationale of Subsection 93118.5(e)(3)

The Proposed Amendments set forth requirements for new and newly acquired diesel engines in subsection (e)(8), which replaces the subsection (e)(3) in the Current Regulation. As such, it is necessary to sunset the requirements for newly acquired engines to ensure vessel owners and operators are purchasing engines certified with the latest emission standards to comply with the Proposed Amendments.

### **4. Subsection (e)(4) All New Harbor Craft (Including All New Ferries) – Requirements for Newly Acquired Vessels (Applicable until December 31, 2022)**

#### Purpose of Subsection 93118.5(e)(4)

This subsection establishes that the requirements for newly acquired vessels for all new harbor craft in the Current Regulation are no longer applicable after December 31, 2022.

#### Rationale of Subsection 93118.5(e)(4)

The Proposed Amendments set forth requirements for new and newly acquired in-use harbor craft in subsection (e)(9), which replaces the subsection (e)(4) in the Current Regulation. As such, it is necessary to sunset subsection (e)(4) to ensure vessel owners

and operators comply with subsection (e)(9) of the Proposed Amendments when acquiring new harbor craft and newly acquired in-use harbor craft.

**5. Subsection (e)(5) Selected New Ferries Only – Additional Requirements for All Newly Acquired Propulsion Engines (Applicable until December 31, 2022)**

Purpose of Subsection 93118.5(e)(5)

This subsection establishes that the requirements for selected new ferries in the Current Regulation is no longer applicable after December 31, 2022.

Rationale of Subsection 93118.5(e)(5)

Similar to the Current Regulation which establishes separate and more stringent requirements for selected new ferries, the Proposed Amendments set forth requirements for ferries, including new and newly acquired ferries, and short-run ferries. As such, it is necessary to sunset subsection (e)(5) to ensure vessel owners and operators comply with new requirements for ferries in the Proposed Amendments.

**6. Subsection (e)(6) In-Use Engines and Vessels – Schedules for Meeting Tier 2 or Tier 3 Standards (Applicable until December 31, 2022)**

Purpose of Subsection 93118.5(e)(6)

This subsection establishes that the in-use engine requirements for in-use engines and vessels in the Current Regulation is no longer applicable after December 31, 2022.

Rationale of Subsection 93118.5(e)(6)

The Proposed Amendments set forth performance standards for in-use engines and vessels in subsection (e)(12), which replaces subsection (e)(6) in the Current Regulation. As such, it is necessary to sunset subsection (e)(6) to ensure vessel owners and operators operating regulated in-use vessels meet the newly defined performance standards to comply with the Proposed Amendments.

**7. Subsection (e)(7) All Harbor Craft – Renewable Diesel Fuel Requirements (Applicable on and after January 1, 2023)**

Purpose of Subsection 93118.5(e)(7)

This subsection establishes the new R99 fuel requirements that all harbor craft must use when operating in RCW beginning on January 1, 2023.

#### Rationale of Subsection 93118.5(e)(7)

This subsection is necessary to ensure vessel owners and operators fuel vessels with 99 percent or greater blends of renewable diesel fuel that is required by the Proposed Amendments with the exceptions discussed in subsection (e)(7)(B).

#### Purpose of Subsection 93118.5(e)(7)(A)

This subsection establishes that beginning January 1, 2023, vessel operators shall only fuel a diesel engine with R99 or higher fuel blend, except to demonstrate compliance with engine and fuel standards.

#### Rationale of Subsection 93118.5(e)(7)(A)

Renewable diesel fuel is chemically identical to petroleum diesel and meets the same ASTM D975 fuel quality standards. Renewable diesel fuel can be used in existing engines without modifying the engines. An analysis by CARB staff showed that a 30 percent NO<sub>x</sub> emission reduction and a 10 percent PM emission reduction will be achieved by using renewable diesel fuel compared to the use of CARB diesel fuel. To meet emission reductions goals and protect public health, it is necessary to require renewable diesel fuel. Because the use of R99 or higher blends decreases emissions from diesel engines, it is necessary to create an exemption from using renewable diesel and to allow the use of CARB diesel when operating engines or performing diesel engines in support of new certification or determining compliance with the performance standards of this Proposed Regulation.

#### Purpose of Subsection 93118.5(e)(7)(B)

This subsection establishes that CARB diesel fuel is allowed in situations where renewable diesel fuel is not available in other states where harbor craft may originate, and records must be retained and submitted to CARB upon request.

#### Rationale of Subsection 93118.5(e)(7)(B)1.

This concept is carried over from the Current Regulation, which allows for the use of low sulfur fuel on vessels if operators are not able to access CARB diesel when a harbor craft is traveling from a seaport located outside of California. The concept has been updated to align with the newly proposed renewable diesel fuel requirements. It is necessary to establish this provision as availability of renewable diesel fuel is out of the vessel owner or operator's control. It is also necessary for vessel owners and operators to retain documentation of fuel purchases to demonstrate the lack of availability of renewable diesel fuel to CARB, and present such documentation to CARB upon request.

#### Rationale of Subsection 93118.5(e)(7)(B)2.

This subsection is newly created in the Proposed Amendments to create a temporary exception from using renewable diesel if the vessel operator has an existing fueling contract that is still valid with a low sulfur fuel supplier as of January 1, 2023. It is necessary to establish this provision because there may be public or private fleets who do not have the ability to change the terms of an existing contract that was in place prior to the Proposed Amendments being adopted. CARB staff worked with public and private fleet operators to determine that fueling contracts typically do not last more than three to five years, therefore the exception will end for all vessel owners and operators by December 31, 2025. CARB staff confirmed with fuel suppliers that for most existing contracts, there should be flexibility to substitute existing CARB diesel suppliers with R99 or higher blends without modifying the terms of the contract. Therefore, to take advantage of this exception, vessel owners or operators must provide a copy of an agreement (such as a contract) demonstrating the inability to use renewable fuel diesel.

#### **8. Subsection (e)(8) All Harbor Craft (Excluding Commercial Fishing Vessels) – Requirements for New and Newly Acquired Diesel Engines (Applicable on and after January 1, 2023)**

##### Purpose of Subsection 93118.5(e)(8)

This subsection establishes the requirements for new and newly acquired diesel engines intended for use on a new or in-use harbor craft except for commercial fishing vessels.

##### Rationale of Subsection 93118.5(e)(8)

This subsection is necessary for vessel owners and operators to understand what engine tier level they are allowed to sell, purchase, offer for sale, lease, rent, import, or acquire on a new and in-use harbor craft. These requirements apply to vessel owners and operators and prior to any phase-in dates for engines to meet more stringent performance standards. Requiring new and newly acquired engines meeting the most current emissions standards is one strategy that contributes to meeting emission reduction goals from the marine sector to protect public health.

##### Purpose of Subsection 93118.5(e)(8)(A)

This subsection establishes that new or newly acquired engines must meet the most current U.S. EPA emission standards at the time of engine acquisition, which could be Tier 3 or Tier 4 marine standards, Tier 4 Final off-road standards, or performance standards set forth in Tables 11, 12 or 13 in subsection (e)(9), if available.

#### Rationale of Subsection 93118.5(e)(8)(A)

This provision is necessary to ensure the cleanest available certified engines are installed on new or in-use harbor craft, which is one strategy that contributes to meeting emission reduction goals from the marine sector to protect public health.

#### Purpose of Subsection 93118.5(e)(8)(A)1.

This subsection establishes that Tier 4 marine engines are not required for engines rated below 600 kW if Tier 4 marine engines are not available at the time of engine acquisition.

#### Rationale of Subsection 93118.5(e)(8)(A)1.

This provision is necessary to explain when Tier 3 marine engines can be purchased and used after January 1, 2023. Clarifying that Tier 4 engines are required if available below 600 kW is necessary so that vessel owners and operators understand and comply with this requirement of subsection (e).

#### Purpose of Subsection 93118.5(e)(8)(A)2.

This subsection establishes that off-road engines are allowed for use only if engines meet Tier 4 Final emission standards and have been marinized to comply with 40 CFR § 1042.605.

#### Rationale of Subsection 93118.5(e)(8)(A)2.

This provision is necessary to clarify that if off-road engines are used to comply, then vessel owners and operators must install compliant off-road engines that are designed to operate in a marine application as required by U.S. EPA certification requirements.

#### Purpose of Subsection 93118.5(e)(8)(A)3. and 93118.5(e)(8)(A)3.a, b, c, d, and e.

This subsection establishes that engines rebuilt to Tier 3 or Tier 4 marine or Tier 4 off-road standards at the time of engine acquisition can be newly acquired for use on harbor craft subject to CARB approval. Requirements a. through e. list potential approval pathways for CARB to use when evaluating requests to use engines rebuilt to Tier 3 or 4 standards. This subsection also provides the EO discretion to approve or reject technical information submitted that is not based on good engineering judgment.

#### Rationale of Subsection 93118.5(e)(8)(A)3. and 93118.5(e)(8)(A)3.a, b, c, d, and e.

Rebuilding engines to current or more stringent emission standards is a common industry practice to extend the lifespan of an engine while not replacing the entire engine. Therefore, to provide financial relief or lower-cost options to upgrading engines, it is necessary to provide potential pathways for rebuilt engines to

demonstrate compliance with current emission standards in effect. In addition, there are other strategies such as using add-on diesel emission controls such as DPFs or SCR systems that can be used to achieve emissions control equivalent to using engines certified to Tier 3 or 4 standards. Therefore, it is necessary to outline the possible technical approaches, and examples of testing, certification, and verification procedures that can be used to demonstrate equivalence. Testing approaches are, in some cases, application specific. As such, EO engineering judgement and discretion is necessary to ensure emission reduction claims from vessel owners, vessel operators, engine manufacturers, and/or emission control device manufacturers are based on sound science and would achieve the intended emission reductions.

#### Purpose of Subsection 93118.5(e)(8)(B)

This subsection establishes that a 6 month “sell-through” period is allowed after the date that Tier 3, Tier 4 marine, or Tier 4 Final off-road standards have come into effect.

#### Rationale of Subsection 93118.5(e)(8)(B)

This provision was included in the Current Regulation and is applied to the Proposed Amendments. U.S. EPA amended the marine diesel engine certification requirements by providing additional lead time for implementing Tier 4 emission standards for high-power density engines used in certain high-speed vessels, which are extended through 2022 or 2024 depending on engine power output and power density. CARB staff acknowledges that most Tier 4 engine standards have been in effect for several years, but this provision may still apply to the Tier 4 engines with extended effective dates for the high-power density engines through 2024.

#### Purpose of Subsection 93118.5(e)(8)(C)

This subsection establishes that if an engine fails, CARB can approve a replacement engine meeting non-current, less-stringent emission standards. This provision incorporates a U.S. EPA requirement on engine manufacturers specifying when they can sell engines certified to less stringent standards. This provision establishes that CARB’s EO must approve replacement engines, and documentation to demonstrate that no engines meeting current emission standards are available must be provided. This provision also clarifies that replacement engines can never be certified to a less stringent standard than the engines being replaced.

#### Rationale of Subsection 93118.5(e)(8)(C)

This subsection has been expanded from the Current Regulation to include examples of engines certified to Tier 3 and 4 emission standards. The Proposed Amendments require engines to eventually meet performance standards; however, it is necessary to provide flexibility for engines that fail and need to be replaced prior to or after diesel engine systems are installed to meet the performance standards in the Proposed Amendments. Although engine manufacturers cannot sell new engines certified to less stringent standards unless meeting the requirements in 40 CFR § 1042.615, it is

necessary to clarify that this requirement applies so that used engines cannot be purchased and installed on in-use vessels. For consistency in the processing of replacement engines, it is also necessary for CARB to review and approve all replacement engines purchased that do not meet current standards, even if they are newly purchased from an engine manufacturer or dealer that has complied separately with U.S. EPA replacement engine requirements for marine engines.

#### Purpose of Subsection 93118.5(e)(8)(D)

This subsection establishes that engines that have been approved to operate as low-use can be replaced with engines certified to a more stringent emission standard than the engine being replaced.

#### Rationale of Subsection 93118.5(e)(8)(D)

The Proposed Amendments establish low-use hour thresholds in subsection (e)(14) that are dependent upon engine tier level. This provision allows vessel owners and operators to purchase cleaner engines and be allowed a greater number of hours (up to 700 hours/year for a Tier 3 engine) before needing to meet the Tier 3 or 4 + DPF performance standards. This provision provides a pathway for vessels and engines operated under a low-use threshold outlined in Table 22 to make lower cost upgrades to engines as compared to meeting performance standards, which may in some cases result in vessel retirement and replacement. In addition, this pathway allows operators who have the availability to install a newer and/or cleaner engine meeting a more stringent, but not current emission standard, to replace their engine and reduce emissions, while still remaining compliant with the requirements of subsection (e)(8).

### **9. Subsection (e)(9) All Harbor Craft (Excluding Commercial Fishing Vessels) – Requirements for New and Newly Acquired In-Use Harbor Craft (Applicable on and after January 1, 2023)**

#### Purpose of Subsection 93118.5(e)(9)

Except for commercial fishing vessels, this subsection establishes the requirements for new and newly acquired in-use harbor craft and defines the performance standards that new and in-use harbor craft must meet.

#### Rationale of Subsection 93118.5(e)(9)

This subsection is necessary to establish the performance standards that ultimately most harbor craft will need to meet by the end of 2031, unless granted an extension. It is necessary to clarify that after January 1, 2023, new vessels must meet these performance standards to minimize any additional turnover of vessels or equipment to newer technologies later during the phase-in schedule as set forth by subsection (e)(12). It is necessary for vessel owners and operators to know requirements when entering into a contract to sell, purchase, lease, rent, import, offering for sale, or acquiring or supplying a new or an in-use harbor craft.

#### **a. Subsection (e)(9)(A) Requirements for New Harbor Craft**

##### Purpose of Subsection 93118.5(e)(9)(A)1.

This subsection establishes specific requirements for all new build harbor craft, except for commercial fishing vessels, which require the tailpipe emissions from propulsion and auxiliary engines to meet the applicable performance standards set forth in Table 11, 12 or 13, and off-road engines must be marinized according to 40 CFR 1042.605.

##### Rationale of Subsection 93118.5(e)(9)(A)1.

This subsection is necessary to ensure that new build harbor craft meet the emission levels of performance standards, which are equivalent to the cleanest available marine standards (Tier 3 or Tier 4 depending on the availability based on engine power and duty cycle rating) plus a DPF, which ensures the lowest possible emissions from new build vessels.

##### Purpose of Subsection 93118.5(e)(9)(A)2.

This subsection establishes that if applicable Tier 4 marine engines are available for engines rated less than 600 kW, tailpipe emissions from engines on new-build vessels must meet Tier 4 + DPF performance standards set forth in Table 11.

##### Rationale of Subsection 93118.5(e)(9)(A)2.

This provision is necessary to ensure that the cleanest engines are used to achieve the greatest emission reductions. Although not required by U.S. EPA, some engine manufacturers have certified engines rated below 600 kW to Tier 4 standards. This is a key provision of the Proposed Amendments that will create additional incentive for engine manufacturers to develop and certify engines to cleaner standards than currently required by 40 CFR Part 1042.

##### Purpose of Subsection 93118.5(e)(9)(A)3.

This subsection establishes that CH<sub>4</sub> emissions must not exceed 1.0 g/bhp-hr when using a gaseous or liquid fuel other than diesel.

##### Rationale of Subsection 93118.5(e)(9)(A)3.

This subsection is critical to ensure that no excess CH<sub>4</sub> is emitted if vessel owners and operators adopt vessel technologies using gaseous or liquid fuel other than diesel fuel. CH<sub>4</sub> is a SLCP and potent GHG, and therefore CARB staff intends to maximize reductions by setting a limit on tailpipe emissions. Emissions testing on dual-fuel (LNG and diesel) ferry vessels operated in Canada, with compression-ignition diesel cycle engines, has indicated that CH<sub>4</sub> emissions can significantly increase the overall CO<sub>2e</sub> of the vessel's operation. CARB staff review of MY 2020 and newer on-road

heavy-duty natural gas engine certification data has suggested that engines are certified with measured CH<sub>4</sub> levels as low as 0.2 g/bhp-hr. In the absence of marine specific engine testing, CARB staff has proposed a 1.0 g/bhp-hr tailpipe CH<sub>4</sub> emissions limit.

Purpose of Subsection 93118.5(e)(9)(A)4.

This subsection establishes that new and newly acquired excursion vessels and short-run ferries are required to meet performance standards set forth in Table 11, Table 12, or Table 13 if acquired before ZEAT requirements take into effect.

Rationale of Subsection 93118.5(e)(9)(A)4.

This subsection is necessary to clarify that new excursion vessels and new short-run ferry vessels that are acquired between January 1, 2023 and the starting date of ZEAT requirements are subject to the cleaner combustion performance standards as set forth in subsection (e)(8), in addition to meeting any future ZEAT requirements for short-run ferries by December 31, 2025.

Purpose of Subsection 93118.5(e)(9)(A)5.

This subsection establishes the procedures and requirements for situations where there are no technologies available to meet performance standards for new-build vessels.

Rationale of Subsection 93118.5(e)(9)(A)5.

This subsection is necessary to provide clarification in situations where performance standards cannot be met due to unavailability of Tier 4 engines or DPFs. It is critical to clearly specify that vessel owners and operators have obligations to meet the performance standards when technologies are available by following the requirements set forth in subsection (e)(12), which include applying for applicable extensions every two years. It is also necessary to obtain EO approval for using engines not meeting performance standards to ensure accuracy and consistency in the implementation and enforcement of the Proposed Amendments.

**b. Subsection (e)(9)(B) Requirements for Newly Acquired In-Use Vessels**

Purpose of Subsection 93118.5(e)(9)(B)

This subsection establishes the requirements for newly required in-use vessels.

Rationale of Subsection 93118.5(e)(9)(B)

It is necessary to clarify that a newly required in-use vessel must meet the same requirements as a new-build vessel. This is different than a new-build vessel, because a

newly acquired vessel includes those that are already constructed or owned/operated by another person prior to becoming part of an existing fleet.

Purpose of Subsection 93118.5(e)(9)(B)1.

This subsection establishes that propulsion and auxiliary engines of a newly acquired in-use vessel must comply with the requirements for new build vessels.

Rationale of Subsection 93118.5(e)(9)(B)1.

It is necessary for vessel owners and operators to understand the requirements that vessels must meet prior to acquisition. This subsection is necessary to ensure a newly acquired vessel meets the same stringency as new vessels. Otherwise, vessel owners and operators could acquire used vessels to circumvent meeting the ZEAT requirements that are intended to apply to all new vessels entering an existing fleet after a given deadline.

Purpose of Subsection 93118.5(e)(9)(B)2.

This subsection establishes that low-use exceptions or compliance extensions approved for the previous owner of a vessel are not transferrable to the new owner of a vessel.

Rationale of Subsection 93118.5(e)(9)(B)2.

It is necessary to ensure emission reductions are achieved by limiting transferring low-use exceptions and compliance extensions. This provision directs investments of vessel owners and operators to newer and compliant engine technologies rather than perpetuating the use and resale of in-use vessels that are not compatible with the cleanest available engine technologies.

Purpose of Subsection 93118.5(e)(9)(B)3.

This subsection establishes that new owners of a newly acquired in-use vessel cannot apply for low-use exceptions and compliance extensions with exceptions of extensions (e)(12)(E)(2) and (e)(12)(E)(4).

Rationale of Subsection 93118.5(e)(9)(B)3.

The rationale of this subsection is identical to the rationale indicated immediately above for Subsection 93118.5(e)(9)(B)2. CARB staff propose allowing limited compliance extensions for engine or DPF unavailability and for vessels using Tier 4 engines with limited hours, because these factors are generally beyond the control of a vessel owner or operator.

#### Purpose of Subsection 93118.5(e)(9)(B)4.

This subsection establishes that relocated vessels from outside of RCW can still be considered in-use (instead of new or newly acquired) vessels only if documentation is provided to CARB.

#### Rationale of Subsection 93118.5(e)(9)(B)4.

It is necessary to clarify that relocated vessels would be considered in-use vessels and not newly acquired vessels because the requirements that in-use vessels and newly acquired vessel are subject to would be slightly different. For example, in-use vessels are eligible for low-use exceptions, but newly acquired vessels are not. As such, it is necessary to clarify what type of documentation through recordkeeping and reporting is required to be considered a relocated vessel.

### **10. Subsection (e)(10) Requirements for Zero-Emission and Advanced Technologies (ZEAT) for New, Newly Acquired and In-Use Short-Run Ferries, and New and Newly Acquired Excursion Vessels (Applicable on and after January 1, 2023)**

#### Purpose of Subsection 93118.5(e)(10)

This subsection establishes the requirements for ZEAT for new, newly acquired and in-use short-run ferries, and new and newly acquired excursion vessels, and the application process that applicants must follow.

#### Rationale of Subsection 93118.5(e)(10)

There is a wide range of technologies that are rapidly developing and emerging into the mobile source and marine vessel market. This subsection is necessary to ensure that certain vessel categories that can feasibly adopt zero-emission technologies start to deploy ZEAT on vessels to further reduce emissions and protect public health. This subsection establishes the minimum requirements, upon which vessel owners and operators can choose to adopt more ZEAT within their fleets. This subsection also establishes an application process to ensure ZEAT that is adopted is performed in a manner consistent with sound science and good engineering judgement.

#### **a. Subsection (e)(10)(A)**

#### Purpose of Subsection 93118.5(e)(10)(A)

This subsection establishes that new and newly acquired excursion vessels must adopt zero-emission capable hybrid technology starting on December 31, 2024, and new and in-use short-run ferries must adopt zero-emission technology starting on December 31, 2025.

#### Rationale of Subsection 93118.5(e)(10)(A)

This subsection is necessary to establish the minimum deployment date targets for certain sectors, and requirements for full zero-emission and zero-emission capable hybrid technology. Additionally, this subsection outlines the two targets of ZEAT that CARB staff has, through their investigation to support the Proposed Amendments, proposed as feasible and necessary targets to achieve emission reductions from the marine sector.

#### Purpose of Subsection 93118.5(e)(10)(A)1.

This subsection establishes that during revenue service the zero-emission vessels are not allowed to be pushed, towed, attached, or propelled by another non-zero-emission vessel.

#### Rationale of Subsection 93118.5(e)(10)(A)1.

This subsection is necessary to prevent the operation of a non-zero-emission vessel on a short-run ferry route during normal revenue service. Non-revenue service operations, such as being towed in the case of a zero-emission powertrain failure or for being transported to shipyards for maintenance and repairs is permitted.

#### Purpose of Subsection 93118.5(e)(10)(A)2.

This subsection establishes that a temporary replacement vessel operating on a dedicated zero-emission short-run ferry route must meet the requirements set forth in subsection (c)(2), which includes reporting requirements.

#### Rationale of Subsection 93118.5(e)(10)(A)2.

This subsection is necessary to clarify that temporary replacement vessels can be used to replace zero-emission vessels, but that they are still subject to all the requirements of subsection (c)(2), which includes meeting a Tier 2 minimum, reporting requirements, along with many other regulatory requirements.

### **b. Subsection (e)(10)(B)**

#### Purpose of Subsection 93118.5(e)(10)(B)1. through 3.

This subsection establishes the requirements of internal combustion engines on ZEAT vessels. Internal combustion engines on short-run ferries must meet the most stringent engine emission standards in effect on the compliance dates. This subsection also establishes the engine's annual hour operation limit allowed and reporting requirements if engines operate above the limit during emergency operations. Engines on excursion vessels must meet the performance standards of Tier 3 plus DPF or Tier 4 plus DPF depending on applicable engine ratings and duty cycle ratings.

#### Rationale of Subsection 93118.5(e)(10)(B) 1. through 3.

This subsection is necessary to ensure engines on ZEAT vessels meet the highest emission standards available, and engines are operated under limited hours for zero-emission vessels, which would result in maximum emission reductions achieved on ZEAT vessels. CARB staff proposes more stringent (Tier 3 or 4 + DPF) requirements on combustion engines on zero-emission capable vessels (required for new and newly acquired excursion vessels) than zero-emission vessels (required for short-run ferries), because the engines are designed to operate and provide up to 70 percent of the annual work to the vessel. CARB staff proposes a 20 hours/year limit before triggering reporting requirements for emergency operations to provide a reasonable level of flexibility to operators to operate combustion engines in unplanned circumstances and for maintenance and testing purposes. Beyond 20 hours/year, additional emergency operations can be performed, but need to be documented according to recordkeeping and reporting procedures.

#### **c. Subsection (e)(10)(C)**

##### Purpose of Subsection 93118.5(e)(10)(C)

This subsection establishes that a person must submit an application and obtain approval before adopting ZEAT.

##### Rationale of Subsection 93118.5(e)(10)(C)

The submittal and approval of a ZEAT application prior to adopting ZEAT is necessary to ensure that the standards of zero-emission, and zero-emission capable hybrid vessels defined in subsection (d) are met, which is important to ensure the reliability and performance of the ZEAT adopted.

#### **i. Subsection (e)(10)(C)1 Application Process**

##### Purpose Subsection 93118.5(e)(10)(C)1.

This subsection provides an overview of the process for applying for ZEAT and defines the elements that must be included in the application. This subsection also establishes the timeframe for application submittal.

##### Rationale of Subsection 93118.5(e)(10)(C)1.

Submission of an application for adopting ZEAT is required; as such, it is necessary to establish the proper procedures for submitting an application. This subsection is necessary to ensure that the application package will provide CARB staff with the necessary information to evaluate the vessel design and technologies, as well as charging or fueling infrastructure to meet the ZEAT requirements of the Proposed Amendments. The minimum of 18 months provides applicants time to make

modifications on applications, and in their vessel designs, in the situation where an application is not approved.

Purpose of Subsection 93118.5(e)(10)(C)1.a.

This subsection requires applicants to provide contact information in a ZEAT application.

Rationale of Subsection 93118.5(e)(10)(C)1.a.

This information is necessary so that CARB staff is able to contact the applicant to ask questions and provide a response regarding the application's approval or denial.

Purpose of Subsection 93118.5(e)(10)(C)1.b.

This subsection requires applicants to identify the vessel and engines ZEAT would apply to, including the vessel name, applicable identifier(s), and engine information.

Rationale of Subsection 93118.5(e)(10)(C)1.b.

This information is necessary so that CARB staff is aware which vessel is adopting ZEAT.

Purpose of Subsection 93118.5(e)(10)(C)1.c.i and ii

This subsection specifies what must be included in the ZEAT application.

Rationale of Subsection 93118.5(e)(10)(C)1.c.i and ii

These subsections are necessary to establish that an application must contain a detailed engineering analysis, calculations, design information, certification documentation, battery or fuel cell capacities, typical trips or other information to demonstrate that the vessel meets ZEAT requirements. This information is essential for CARB staff to properly analyze the application to determine if it meets CARB ZEAT requirements. Analysis of the hybrid propulsion duty cycle is critical to ensuring the minimum 30 percent zero-emission tailpipe energy source requirement is met. It is necessary to allow zero-emission vessels to install internal combustion engines to provide power during emergencies or incidental situations. Requiring documentation of the use of internal combustion engines onboard is necessary to ensure engines are being operated in limited situations.

Purpose of Subsection 93118.5(e)(10)(C)1.d.

This subsection establishes that the ZEAT application must include information and plans for charging or fueling infrastructure.

#### Rationale of Subsection 93118.5(e)(10)(C)1.d.

Requiring this information is essential to ensuring that applicants coordinate with relevant parties (such as electrical utilities or other fueling providers) and purchase necessary equipment needed to build applicable infrastructure. Without necessary infrastructure, the proper operation of ZEAT vessels and their emission reductions will not be achieved.

#### Purpose of Subsection 93118.5(e)(10)(C)1.e.

This subsection establishes that the applicant must maintain the records used to demonstrate continued effectiveness of the ZEAT and report associated information according to reporting requirements in subsection (m)(19).

#### Rationale of Subsection 93118.5(e)(10)(C)1.e.

This provision is necessary to ensure that regulated parties maintain associated records for sufficient time for CARB staff to review compliance to effectively implement and enforce the Proposed Amendments. It is possible that an applicant would receive approval for a zero-emission capable hybrid system, but not operate the vessel consistently with their fueling or charging plan, and therefore not meet the minimum 30 percent requirement for fueling with a zero-emission tailpipe source.

### **ii. Subsection (e)(10)(C)2. EO Review and Final Decision-Making Process**

#### Purpose of Subsection 93118.5(e)(10)(C)2.a.

This subsection establishes the EO's review process and timeframe for making a final decision.

#### Rationale of Subsection 93118.5(e)(10)(C)2.a.

This provision is essential to advise the applicant that CARB staff has 30 days from the date of receipt to determine if the application is sufficient, and the applicant has 30 days to submit the supplemental documentation if the original application is incomplete for evaluation. CARB staff considers 30 days an appropriate amount of time to review the application for deficiencies and report to the EO if there are problems with the application.

#### Purpose of Subsection 93118.5(e)(10)(C)2.b.

This subsection establishes the EO's review process and timeframe for making a final decision.

#### Rationale of Subsection 93118.5(e)(10)(C)2.b.

This provision is essential to advise the applicant that CARB staff has 60 days from the time the application is deemed complete to notify an applicant in writing of the approval or disapproval of the application. CARB staff consider 60 days an appropriate amount of time to review the application and draft a letter to be signed by the EO.

### **11. Subsection (e)(11) ZEAT Credit for Early or Surplus Deployments (Applicable on and after January 1, 2023)**

#### Purpose of Subsection 93118.5(e)(11)

This subsection establishes that additional compliance time could be granted for early or surplus ZEAT deployments. In addition, this subsection establishes the applicability, the eligibility, and the requirements for receiving ZEAT credit, and outlines the process for obtaining ZEAT credit.

#### Rationale of Subsection 93118.5(e)(11)

Compliance via deployment of ZEAT in vessel categories where ZEAT is not required is one pathway for meeting the performance standards requirements of subsection (e)(12) of the Proposed Amendments. The ZEAT credit is necessary for incentivizing surplus ZEAT adoption in vessel categories where ZEAT is not required and early ZEAT adoption in excursion vessels and short-run ferries. As such, this subsection is necessary to establish the applicability, the eligibility, and the requirements for receiving the ZEAT credit, and the application process that applicants must follow to obtain the ZEAT credit. Incentivizing early or surplus ZEAT deployments would further reduce emissions beyond the performance standards and help advance the marine sector toward zero-emission development to ultimately protect public health and improve air quality.

#### **a. Subsection (e)(11)(A) Applicability**

#### Purpose of Subsection 93118.5(e)(11)(A)

This subsection establishes that if an excursion vessel or a short-run ferry deploys ZEAT three years prior to compliance dates required in Table 14 of (e)(10), or ZEAT is adopted in vessel categories where ZEAT is not required, additional compliance time in Table 15 of (e)(11)(A) will be granted to another vessel subject to subsection (e)(10) or (e)(12), provided the vessel is under the same person's direct control and operating within the same California air basin.

#### Rationale of Subsection 93118.5(e)(11)(A)

This subsection establishes a regulatory incentive framework to encourage adoption of ZEAT not only to excursion vessels and short-run ferries, but also to any other vessel categories. This is necessary to provide additional opportunities for ZEAT to enter the

marine market. The ZEAT mandates for short-run ferries and new excursion vessels in Table 14 indicate where CARB staff has demonstrated that technical feasibility exists today. CARB staff acknowledges that there are opportunities to deploy ZEAT for specific use cases in other categories of harbor craft, even if not feasible for all use cases of vessels in those categories. To maximize the adoption of zero-emission technology that is only feasible in some uses cases, CARB staff has proposed two ZEAT credits that would provide additional compliance time for other vessels in a person's fleet. Two lengths of credits are proposed depending on the classification of ZEAT; full zero-emission vessels would be eligible for a longer ZEAT credit than partial or zero-emission capable vessels.

#### **b. Subsection (e)(11)(B) Eligibility and Requirements for Receiving ZEAT Credit**

##### Purpose of Subsection 93118.5(e)(11)(B)

This subsection establishes the eligibility and requirements for a ZEAT credit application to be granted.

##### Rationale of Subsection 93118.5(e)(11)(B)

It is necessary to outline the criteria for vessel owners and operators to understand the requirements and determine whether their vessels or prospective vessels are eligible to receive or generate a ZEAT credit.

##### Purpose of Subsection 93118.5(e)(11)(B)1.

This subsection establishes that the ZEAT vessel that is generating the credit must be deployed and operational.

##### Rationale of Subsection 93118.5(e)(11)(B)1.

Requiring the vessel using ZEAT to be deployed and operational prior to generating a ZEAT credit is necessary to ensure additional compliance time is not granted prior to a vessel owner or operator making the full commitment and successfully deploying a vessel with ZEAT.

##### Purpose of Subsection 93118.5(e)(11)(B)2.

This subsection establishes that vessels included in an ACE plan are not permitted to generate a ZEAT credit.

##### Rationale of Subsection 93118.5(e)(11)(B)2.

This provision is necessary to prevent vessel owners and operators from using a single ZEAT deployment to generate more additional compliance time than the intended three or seven years per vessel. This subsection prevents vessel owners and operators

from receiving a ZEAT credit for deploying a ZEAT vessel and applying the emission reductions from the ZEAT vessel in an ACE plan. This would result in double counting the benefits of a vessel with ZEAT by receiving both a ZEAT credit and additional compliance time through the ACE plan provisions, for a single ZEAT deployment.

Purpose of Subsection 93118.5(e)(11)(B)3.

This subsection establishes that ZEAT vessels deployed using incentive funding are allowed to generate ZEAT credit if guidelines of the incentive funding do not have any restrictions preventing this.

Rationale of Subsection 93118.5(e)(11)(B)3.

Allowing ZEAT vessels receiving incentive funding to generate ZEAT credits, as long as incentive funding guidelines allow it, could encourage more ZEAT vessels to be deployed, resulting in more advanced technologies being used and more emission reductions achieved.

Purpose of Subsection 93118.5(e)(11)(B)4.

This subsection establishes that ZEAT vessels, deployed prior to or after January 1, 2023, are eligible to generate ZEAT credit.

Rationale of Subsection 93118.5(e)(11)(B)4.

It is necessary to give credit for ZEAT vessels deployed prior to January 1, 2023, the date that CARB staff expects the Proposed Amendments would take effect. This provision ensures that early and voluntary actions to deploy ZEAT is encouraged and not disregarded when implementing the requirements of the Proposed Amendments starting in 2023.

Purpose of Subsection 93118.5(e)(11)(B)5.

This subsection establishes that ZEAT credit can only be applied to vessels with engines certified to a minimum of Tier 2 emissions standards.

Rationale of Subsection 93118.5(e)(11)(B)5.

This provision is necessary to ensure the ZEAT credit does not apply to older and dirtier engines, which need to be replaced in early compliance dates to protect public health. CARB staff is not requiring an emissions analysis to demonstrate that delaying compliance three or seven years on another vessel in the fleet does not increase emissions overall. Instead of requiring such analysis, CARB staff is proposing that ZEAT credits can only be applied to engines that would have met the minimum engine requirements for regulated in-use vessels under the Current Regulation.

Purpose of Subsection 93118.5(e)(11)(B)6.

This subsection establishes that vessels receiving ZEAT credit are still eligible to apply for feasibility compliance extensions after the ZEAT credit has expired.

Rationale of Subsection 93118.5(e)(11)(B)6.

This subsection is necessary to clarify the eligibility of compliance extensions for vessels receiving the ZEAT credit. CARB staff deems it reasonable to allow for compliance extensions due to lack of engine or DPF availability and/or feasibility after the expiration of a ZEAT credit, because if these extension circumstances are applicable after the expiration of the ZEAT credit, these extensions would have been granted in the absence of a ZEAT credit.

Purpose of Subsection 93118.5(e)(11)(B)7.

This subsection establishes that any combination of multiple ZEAT credits and compliance extensions shall not extend the compliance date of any engine or vessel beyond December 31, 2034.

Rationale of Subsection 93118.5(e)(11)(B)7.

This provision is necessary to ensure emission reductions projected in the Proposed Amendments are achieved by setting a final compliance date for engines or vessels receiving ZEAT credit. This end date of December 31, 2034 is consistent with the final date allowed under an ACE plan in subsection (f) and is also the final date of expiration for most compliance extensions. The target date of 2035 for maximizing zero-emission technologies was also established by Governor Newsom's EO N-79-20.

Purpose of Subsection 93118.5(e)(11)(B)(8).

This subsection establishes that a ZEAT credit can only be applied to other vessels with a homebase or regularly scheduled stop within two miles of a DAC if the ZEAT vessel deployed to generate the ZEAT credit also has a homebase or regularly scheduled stop within two miles of any DAC.

Rationale of Subsection 93118.5(e)(11)(B)(8).

This provision is necessary to ensure that ZEAT deployed in non-DACs does not result in delayed compliance for vessels operating in DACs. The exception is where both the vessel generating and the vessel receiving the credit are both located in a DAC, even if they are not within the same community or region of the air basin.

#### Purpose of Subsection 93118.5(e)(11)(B)9.

This subsection establishes that analysis of emission reductions is not required in the ZEAT credit application unless zero-emission capable hybrid vessels are used generating the ZEAT credit.

#### Rationale of Subsection 93118.5(e)(11)(B)9.

This provision is necessary to clarify and distinguish the differences between deploying ZEAT and requesting a credit pursuant to subsection (e)(11) or applying the emission reductions quantitatively as part of an ACE plan in subsection (f).

#### Purpose of Subsection 93118.5(e)(11)(B)10.

This subsection establishes that the ZEAT credit is not renewable, is applied once a ZEAT vessel is constructed and put into service, and is not transferrable to another vessel or to a subsequent owner.

#### Rationale of Subsection 93118.5(e)(11)(B)10.

This subsection is necessary to prevent ZEAT credits from being used on more than one diesel vessel, and therefore producing surplus emissions generated from multiple non-compliant vessels in exchange for the deployment of one ZEAT vessel.

### **c. Subsection (e)(11)(C) ZEAT Credit Application Process**

#### Purpose Subsection 93118.5(e)(11)(C)1.

This subsection establishes that applicants must submit an application and obtain approval to be able to receive a ZEAT credit. It also provides an overview of the process for applying for a ZEAT credit and defines the elements that must be included in the application. This subsection also establishes the timeframe for application submittal.

#### Rationale of Subsection 93118.5(e)(11)(C)1.

CARB approval is necessary to ensure the ZEAT vessel in the application is deployed and operational and ZEAT credit is applied to an eligible vessel. As such, it is necessary to establish the proper procedures for submitting an application. This subsection is necessary to ensure that the application package will provide CARB staff with the necessary information to evaluate the eligibility of receiving ZEAT credit and whether the application meets the requirements for receiving ZEAT credit. The minimum of nine months provides applicants time to reconsider a compliance strategy for vessels involved if the ZEAT credit is not granted.

#### Purpose of Subsection 93118.5(e)(11)(C)1.a

This subsection requires applicants to provide contact information.

#### Rationale of Subsection 93118.5(e)(11)(C)1.a

This information is necessary so that CARB staff is able to contact the applicant, which enables CARB staff to follow up with the submitting party about any questions and provide a decision regarding the application.

#### Purpose of Subsection 93118.5(e)(11)(C)1.b and c

These subsections require applicants to identify the ZEAT vessel information, demonstrate the deployed ZEAT vessel meets the ZEAT requirements, and identify the vessel receiving the ZEAT credit.

#### Rationale of Subsection 93118.5(e)(11)(C)1.b and c

This information is necessary so that CARB staff can confirm the ZEAT vessel is deployed and operational, and so that staff is aware of which vessel is receiving the ZEAT credit for the extended compliance dates. This information would be critical for the successful implementation and enforcement of the Proposed Amendments.

#### Purpose of Subsection 93118.5(e)(11)(C)2.

This subsection establishes the EO's review process and timeframe for making a final decision.

#### Rationale of Subsection 93118.5(e)(11)(C)2.

This provision is essential to advise the applicant that CARB staff has 30 days from the date of receipt to determine if the application is sufficient, and the applicant has 30 days to submit the supplemental documentation if the original application is incomplete for evaluation. CARB staff considers 30 days an appropriate amount of time to review the application for deficiencies and for applicants to submit supplemental documentation if there are problems with the application.

#### Purpose of Subsection 93118.5(e)(11)(C)3.

This subsection establishes that if an approved application was found to no longer meet the criteria for a ZEAT credit, CARB's EO may modify or revoke the application.

#### Rationale of Subsection 93118.5(e)(11)(C)3.

This subsection is necessary to ensure that if changes were to be made to an approved ZEAT credit application, CARB could modify or revoke approval of the application. This provision is essential to ensuring the required emission reductions for the regulation are being achieved.

#### Purpose of Subsection 93118.5(e)(11)(C)4.

This subsection sets the timeline for retaining records and an expected delivery time of 30 days to supply CARB records when requested.

#### Rationale for Subsection 93118.5(e)(11)(C)4.

This provision is essential to ensuring that regulated parties maintain records for enough time for CARB to effectively implement and enforce the Proposed Amendments. The expected delivery of records within 30 days is consistent with other recordkeeping requirements of this section.

### **12. Subsection (e)(12) In-Use Engines and Vessels (Excluding Commercial Fishing Vessels) – Requirements for Meeting Performance Standards (Applicable on and after January 1, 2023)**

#### Purpose of Subsection 93118.5(e)(12)

This subsection establishes the requirements for in-use engines and vessels on all regulated in-use vessel categories (which excludes commercial fishing vessels). Requirements in this subsection include compliance methods, compliance dates, and compliance extensions.

#### Rationale of Subsection 93118.5(e)(12)

This subsection is essential and one of key elements to achieve the emission reduction goals of the Proposed Amendments.

#### **a. Subsection (e)(12)(A) Applicability**

#### Purpose of Subsection 93118.5(e)(12)(A)1. and 2.

This subsection establishes the applicability of subsection (e)(12) by specifying that an in-use regulated vessel operating above certain annual hours after January 1, 2023 is subject to the performance standards. This subsection also clearly specifies which vessel categories are in-use regulated vessels.

#### Rationale of Subsection 93118.5(e)(12)(A).1 and 2.

These subsections are necessary for vessel owners and operators to be aware if their vessels are subject to this subsection.

## **b. Subsection (e)(12)(B) General Requirements**

### Purpose of Subsection 93118.5(e)(12)(B)

This subsection establishes the general requirements that regulated in-use vessels must meet to comply with the performance standards requirements of the Proposed Amendments.

### Rationale of Subsection 93118.5(e)(12)(B)

This subsection is necessary for vessels owners and operators to clearly understand the general requirements that their regulated in-use vessels must meet to comply with the Proposed Amendments.

### Purpose of Subsection 93118.5(e)(12)(B)1

This subsection establishes that engines or diesel engine systems on regulated in-use vessels must meet the performance standards by compliance dates using the compliance methods set forth in subsection (e)(12)(C). This subsection also establishes that engines subject to in-use regulated vessel requirements prior to January 1, 2023, if complying by low use, must continue to meet those requirements until new compliance dates.

### Rationale of Subsection 93118.5(e)(12)(B)1.

This subsection is necessary to explain that vessel owners and operators are not allowed to own, operate, sell, purchase, offers for sale, rent, import, or otherwise acquire a regulated in-use vessel within RCW unless the engines on the vessel comply with the requirements of subsection (e)(12). It is necessary to clarify that low-use engines (pre-Tier 1 or Tier 1) must continue to operate as low use until new compliance dates, because pre-Tier 1 and Tier 1 engines would not have new compliance dates until December 31 of 2023, 2024, or 2025. Without this specification, pre-Tier 1 and Tier 1 engines would be legally allowed to operate an unlimited number of hours for up to three years because subsection (e)(6) would be amended to no longer be in effect starting on January 1, 2023.

### Purpose of Subsection 93118.5(e)(12)(B)2.

This subsection establishes that in-use engines rated below 600 kW shall not be repowered with engines meeting Tier 3 emission standards if Tier 4 engines are available, with the exception of situation where the in-use engines are repowered with Tier 3 engines on or after January 1, 2023 and Tier 4 engines are not available at the time of engine acquisition. In other words, if an engine is repowered to Tier 3 emission standards on or after January 1, 2023, then no further repower to Tier 4 emission standards is required even if Tier 4 engines become available for the horsepower and duty cycle rating at a later time.

#### Rationale of Subsection 93118.5(e)(12)(B)2.

This subsection is necessary to reduce financial burden for vessel owners and operators by not requiring vessels to repower twice (once to Tier 3, then again to Tier 4) after the Proposed Amendments take effect. CARB staff selected the threshold date of January 1, 2023 to differentiate between actions potentially taken to comply with the Current Regulation and to set a clear delineation after which repowers to Tier 3 vessels would be “permanent” under the Proposed Amendments.

#### Purpose of Subsection 93118.5(e)(12)(B)3.

This subsection establishes that Tier 3 engines rated below 600 kW that are repowered before January 1, 2023 are required to meet Tier 4 emission standards if applicable Tier 4 engines are available 12 months prior to the compliance date. If a Tier 4 engine is not available, but DPF is available by the compliance date, Tier 3 + DPF would meet compliance requirements and no further repower is needed.

#### Rationale of Subsection 93118.5(e)(12)(B)3.

This provision is necessary to clarify that Tier 3 engines rated below 600 kW repowered before January 1, 2023 can remain as Tier 3 engines if there are no Tier 4 engines available for their power and duty cycle rating and if they are retrofit with a DPF. The 12-month timeframe was selected to provide a reasonable time window between when a vessel owner or operator needs to select an engine for incorporation into a vessel and its compliance date. This provision is also critical to clarify under which circumstances installing DPF retrofits prior to compliance deadlines would be permanent, and not require replacement if the existing Tier 3 engines are still subject to a Tier 4 repower. The Verification Procedure as set forth in 13 CCR 2700 et seq. allows the manufacturers of DPFs to develop and propose their own policies regarding swapping and redesignating DPFs onto other engines after they have been installed. Therefore, because CARB staff cannot guarantee that a DPF purchased for a Tier 3 engine would be mechanically or legally compatible with any future Tier 4 engine purchases, this provision is critical to clarify and provide certainty to vessel owners and operators as they develop a compliance strategy for subsection (e)(12).

#### Purpose of Subsection 93118.5(e)(12)(B)4.

This subsection establishes that engines rated above 600 kW shall meet Tier 4 + DPF performance standards and are eligible for applicable compliance extensions.

#### Rationale of Subsection 93118.5(e)(12)(B)4.

This provision is necessary to ensure that maximum emission reductions are achieved for engines rated above 600 kW as U.S. EPA Tier 4 emission standards are applicable to engines in these power ratings. Notwithstanding any replacement engine exemptions that may exist for engine manufacturers to sell engines not meeting

current standards into in-use vessels, all engines rated above 600 kW still must meet Tier 4 + DPF performance standards by their applicable compliance deadlines.

Purpose of Subsection 93118.5(e)(12)(B)5.

This subsection establishes the compliance requirements for vessels operating in dual or multiple vocations. Vessels operating in secondary uses are subject to performance standards unless operated in other vessel categories less than low-use hour thresholds set forth in subsection (e)(14).

Rationale of Subsection 93118.5(e)(12)(B)5.

This provision is necessary to clarify the compliance requirements that dual or multiple-operation vessels are subject to; as such, vessel owners and operators would understand clearly their compliance obligations and comply accordingly. The total number of combined hours in any regulated in-use vessel category must be included and below the limits set forth in subsection (e)(14), otherwise the engines must meet the performance standards required by this subsection (e)(12).

Purpose of Subsection 93118.5(e)(12)(B)6.

This subsection establishes that non-compliant engines are not allowed to be kept on the vessel unless vessel owners and operators take actions to prevent the engines from operating.

Rationale of Subsection 93118.5(e)(12)(B)6.

This provision is necessary to provide flexibility for vessel owners and operators who are not able to remove the non-compliant engines to keep the engines on the vessel as long as they can ensure the engines are not being operated, which would ensure no extra emissions are emitted from the non-compliant engines.

Purpose of Subsection 93118.5(e)(12)(B)7.

This subsection establishes the requirements for selling a non-compliant vessel intended for operation outside of RCW.

Rationale of Subsection 93118.5(e)(12)(B)7.

This provision is necessary to allow for necessary operations when selling non-compliant vessels, including performing sea trials or transporting the vessel to its destination. Obtaining CARB's approval and requiring submitting a request including vessel/engine information, estimated operation hours, date and location, would help CARB track the activities of non-compliant vessels operated, and assist CARB to effectively implement and enforce the Proposed Amendments. Without this provision, it would not be possible to sell engines or vessels outside of California if they were kept inside California after their compliance deadlines.

### **c. Subsection (e)(12)(C) Compliance Methods**

#### Purpose of Subsection 93118.5(e)(12)(C)

This subsection establishes the compliance methods that vessel owners and operators may take to comply with subsection (e)(12).

#### Rationale of Subsection 93118.5(e)(12)(C)

This subsection is necessary for owners and operators to be aware of the available pathways for complying with the performance standards of the Proposed Amendments.

#### **i. Subsection (e)(12)(C)1. Method C1**

##### Purpose of Subsection 93118.5(e)(12)(C)1.

This subsection establishes that vessel owners and operators may replace the in-use engine with a U.S. EPA certified marine Tier 3 or Tier 4 engine or off-road Tier 4 Final engine that meets CARB performance standards in its certified condition by U.S. EPA or CARB at the time of the compliance dates to comply with subsection (e)(12) of the Proposed Amendments.

##### Rationale of Subsection 93118.5(e)(12)(C)1.

This subsection is necessary to ensure that the cleanest available engines that meet the CARB performance standards are installed to reduce emissions to meet the health and climate goals of the Proposed Amendments. This provision provides a pathway for engines certified by U.S. EPA or CARB that already meet the performance standards to take no further action to retrofit with a DPF. CARB staff expects the majority of engines following this pathway to be equipped with a DPF as part of the engine's certified condition.

#### **ii. Subsection (e)(12)(C)2. Method C2**

##### Purpose of Subsection 93118.5(e)(12)(C)2.

This subsection establishes that vessel owners and operators may replace the in-use engine with a U.S. EPA certified marine Tier 3 or Tier 4 engine or off-road Tier 4 final engine at the time of the compliance date that does not meet CARB performance standards and retrofit with a CARB verified Level 3 DPF to comply with subsection (e)(12) of the Proposed Amendments.

##### Rationale of Subsection 93118.5(e)(12)(C)2.

This subsection is necessary to provide a compliance option in situations where there are no U.S. EPA certified engines meeting the performance standards in their certified

condition. Requiring the cleanest certified engines that do not meet performance standards to retrofit with a CARB-verified Level 3 DPF will ensure the performance standards are met and emission reductions are achieved.

### **iii. Subsection (e)(12)(C)3. Method C3**

#### Purpose of Subsection 93118.5(e)(12)(C)3.

This subsection establishes that ACE plans in subsection (f) can be used to comply with subsection (e)(12) of the Proposed Amendments by using ACE pathways in subsection (f).

#### Rationale of Subsection 93118.5(e)(12)(C)3.

This subsection provides flexibility for compliance by allowing ACE pathways and encourages the adoption of ZEAT in the marine sector while achieving the same or a greater level of emission reductions.

### **iv. Subsection (e)(12)(C)4. Method C4**

#### Purpose of Subsections 93118.5(e)(12)(C)4.a. and 4.b.

These subsections establish that previously unregulated in-use vessels may choose to comply using a two-step phase-in method by repowering with the cleanest certified engines first according to compliance dates in Table 16, then retrofitting with DPFs by compliance dates in Table 17, Table 18 or Table 19 of (e)(12) based on the vessel category.

#### Rationale of Subsection 93118.5(e)(12)(C)4.a. and 4.b.

This subsection provides flexible compliance schedules for previously unregulated in-use vessels. Allowing pre-Tier 1 or Tier 1 engines on previously unregulated in-use vessels to comply by using a two-step phase-in method relieves the compliance burden on those vessels, and ensures the oldest engines removed in the early implementation years of 2023 through 2025. It is important to distinguish that this option is only available for pre-Tier 1 and Tier 1 engines because the repower of an engine would reset the compliance deadline of the newly repowered Tier 3 or Tier 4 engine according to subsection (e)(12)(D). CARB staff only intend for engines that previously did not repower to Tier 2 or 3 under the Current Regulation to have this flexibility. All other engines would need to repower to Tier 3 or 4 standards and install a retrofit DPF by the same compliance deadline.

#### **d. Subsection (e)(12)(D) Compliance Dates**

##### Purpose of Subsection 93118.5(e)(12)(D)

This subsection establishes the dates by which specific vessel types must comply with subsection (e)(12) and the methods for determining the actual or effective engine MY.

##### Rationale of Subsection 93118.5(e)(12)(D)

This subsection is necessary to identify the dates when compliance obligations begin. It is also necessary to establish methods to determine the engine MY under circumstances when the engine has been rebuilt or repowered. Compliance dates are set up based on the engine MY, which can be determined using one of many pathways.

The Proposed Amendments require new vessel categories to be subject to the performance standards in subsection (e)(12) that are not covered in the Current Regulation. Consequently, engines on vessel categories with no existing regulatory requirements (e.g., workboats, CPFVs, pilot vessels, research vessels, etc.) would need to repower to Tier 3 and Tier 4 earlier and be retrofit later during the implementation period.

CARB estimates that over 4,500 engines would need to apply a compliance option that would result in retrofitting or repowering engines. This includes engines subject to in-use requirements under the Current Regulation as well as engines that would be subject to performance standards requirements for the first time under the Proposed Amendments. The compliance schedule considers the population inventory of engines based on age to achieve approximately a constant number of engines repowered in a given calendar year over the nine-year period. Vessel categories with highest per-vessel emissions were targeted earlier in the compliance tables.

#### **i. Subsection (e)(12)(D)1. Method D1**

##### Purpose of Subsection 93118.5(e)(12)(D)1.a.

This subsection establishes that an engine's actual MY is considered to be the engine MY and can be used to determine the compliance dates in Table 16, Table 17, Table 18, or Table 19 of (e)(12).

##### Rationale of Subsection 93118.5(e)(12)(D)1.a.

This subsection is necessary to specify that if an original engine has never been upgraded to higher emission standards, then the engine's actual MY is the engine MY used to determine the compliance date.

#### Purpose of Subsection 93118.5(e)(12)(D)1.b.

This subsection establishes that with the exception of engines complying by subsection (e)(12)(C)(4)b, an engine's actual MY of the in-use engine that was installed in the in-use vessel as of December 31, 2022 is considered to be the engine MY and can be used to determine the compliance dates in Table 16, Table 17, Table 18, or Table 19 of (e)(12).

#### Rationale of Subsection 93118.5(e)(12)(D)1.b.

Certain compliance extensions require the cleanest available engines to be installed on the vessel in situations where performance standards are not able to be met at the time of compliance dates of the original engines. This provision clarifies that in those situations the MY of the new engines installed cannot be used to determine the compliance date. Instead, the actual MY of the original engine replaced is the correct MY to determine the compliance date. In other words, the compliance dates based on the original engine's MY remain, which is based upon the engine model year on the vessel as of December 31, 2022.

### **ii. Subsection (e)(12)(D)2. Method D2**

#### Purpose of Subsection 93118.5(e)(12)(D)2.a.

This subsection establishes that if an engine was rebuilt to Tier 2, Tier 3, or Tier 4 emission standards, the rebuilt year is determined to be the effective MY and used to determine the compliance dates in Table 16, Table 17, Table 18, or Table 19 of (e)(12).

#### Rationale of Subsection 93118.5(e)(12)(D)2.a.

This subsection is necessary to identify that the effective MY is based on the year in which the Tier 3, or Tier 4 rebuild occurred. Establishing rebuild year as the effective MY for determining the compliance dates allows vessel owners and operators to continue using rebuilt engines for the same amount of time that would have been granted under a repower. CARB staff provides this flexibility because an engine rebuild is intended to restore an engine to its "like new" condition.

#### Purpose of Subsection 93118.5(e)(12)(D)2.b.

This subsection establishes the information that needs to be submitted to CARB to demonstrate that the rebuilt engine meets Tier 3 or Tier 4 emission standards.

#### Rationale of Subsection 93118.5(e)(12)(D)2.b.

This information ensures that CARB staff has necessary information to be able to validate the emissions level from rebuilt engines.

#### Purpose of Subsections 93118.5(e)(12)(D)2.c. and 2.d.

These subsections establish CARB's review process and timeline needed to make an engine MY determination based on engine rebuilds.

#### Rationale of Subsections 93118.5(e)(12)(D)2.c. and 2.d.

These provisions are necessary to advise the applicant that CARB staff has 30 days from the date of receipt to determine if the documentation provided is sufficient. CARB staff considers the 30-day timeframe an adequate amount of time to review an application for determination. It is necessary for CARB to notify and confirm that the effective MY of the rebuilt engines is the MY used to determine the compliance date if the application meets the criteria required.

#### Purpose of Subsection 93118.5(e)(12)(D)2.e.

This subsection establishes that with the exception of engines complying by subsection (e)(12)(C)(4)b, an engine's actual MY of the in-use engine that was installed in the in-use vessel as of December 31, 2022 is considered to be the engine MY and can be used to determine the compliance dates in Table 16, Table 17, Table 18, or Table 19 of (e)(12).

#### Rationale of Subsection 93118.5(e)(12)(D)2.e.

Certain compliance extensions require the cleanest engines installed on the vessel in situations where performance standards are not able to be met at the time of compliance dates. This provision clarifies that in those situations the MY of the new engines installed cannot be used to determine the compliance date. Instead, the actual MY of the original engine replaced is the correct MY to determine the compliance date. In other words, the compliance dates are based on the original engine's MY as of December 31, 2022.

### **e. Subsection (e)(12)(E) Compliance Extensions**

#### Purpose of Subsection 93118.5(e)(12)(E)

This subsection establishes the compliance extensions that regulated entities may request in certain circumstances, and the application procedures and requirements for applying for each compliance extension.

#### Rationale of Subsection 93118.5(e)(12)(E)

This subsection is critical to provide regulated parties with compliance extensions in certain situations where complying by the compliance dates is not possible. This subsection clarifies how extensions can be combined but not extended beyond December 31, 2034. The end date, except for extensions subject to unlimited renewals, is critical to achieving emission reductions during the implementation

period. This subsection also specifies that renewals to extensions must include the same level of technical analysis as the original application and the same EO review process for analyzing information submitted for deciding to grant or deny the extension. The specific rationale of each compliance extension is discussed further in the following text.

**i. Subsection (e)(12)(E)1. Extension E1: Shore Power and ZEAT Infrastructure Delays**

Purpose of Subsection 93118.5(e)(12)(E)1.

This subsection establishes that the EO may grant a vessel or facility owner or operator required to install infrastructure to support shore power or ZEAT requirements a compliance extension for unforeseen circumstances that are out of the applicant's control. This subsection also establishes the eligibility and application process that applicants must follow to obtain the EO's approval.

Rationale of Subsection 93118.5(e)(12)(E)1.

CARB staff recognizes that with new infrastructure projects, there is a potential for delays from a variety of sources outside the control of the vessel or facility owner or operator. For example, there could be delays related to permitting and construction. As such, this subsection is essential to allowing the regulated parties to apply for compliance extensions due to infrastructure installation delays.

**ii. Subsection (e)(12)(E)1.a. Length of Extension**

Purpose of Subsection 93118.5(e)(12)(E)1.a.

This subsection establishes the length of extension that may be granted if approved by the EO.

Rationale of Subsection 93118.5(e)(12)(E)1.a.

This subsection is necessary to advise the applicants when the compliance extension is expired so that applicants can meet the compliance date without violating the regulation. CARB staff has proposed a one-year extension, renewable once, to ensure that infrastructure is installed as expeditiously as possible while providing reasonable flexibility for factors that are outside of a vessel or facility owner or operator's control.

### **iii. Subsection (e)(12)(E)1.b.i through iv. Eligibility and Application Package**

#### Purpose of Subsection 93118.5(e)(12)(E)1.b.i. through iv.

This subsection establishes the timeline for applicants to submit the extension application package, and the information that must be included in the application for CARB staff to review and make a decision on the request.

#### Rationale of Subsection 93118.5(e)(12)(E)1.b.i through iv.

This subsection is necessary to ensure that applicants are submitting appropriate information to CARB staff to determine whether the application is eligible for the compliance extension requested. CARB staff is requesting a description of the circumstances and what efforts would be undertaken in the future to minimize the need for future extension requests. The requirement to specify the exact timeframe of the needed extension should limit the extension periods to only the time needed to resolve infrastructure delays and deploy zero-emission vessel operations as soon as possible.

### **iv. Subsection (e)(12)(E)1.c. Renewal**

#### Purpose of Subsection 93118.5(e)(12)(E)1.c.

This subsection establishes the timeframe for requesting, and length of renewing an infrastructure compliance extension.

#### Rationale of Subsection 93118.5(e)(12)(E)1.c.

This subsection is necessary to ensure that applicants can renew infrastructure delay extensions if applicants can demonstrate that the infrastructure delays have not been improved, and the challenge of not having infrastructure installed by the expiration of the first compliance extension still exists. The timeline for the submission of a renewal application is consistent with the timeline established for the original extension application.

### **v. Subsection (e)(12)(E)2 Feasibility Extension E2 - No Certified Engines or DPFs Available**

#### Purpose of Subsection 93118.5(e)(12)(E)2.

This subsection establishes an extension if no engines or DPFs are certified or available for any engine or vessel, regardless of fitment.

#### Rationale of Subsection 93118.5(e)(12)(E)2.

CARB staff recognizes that there is a possibility that there could be no certified engines or verified DPFs available for some engines to meet performance standards by their nominal compliance deadlines. This subsection is necessary to allow eligible vessel owners and operators to comply at a later time when engines or DPFs meeting performance standards become certified, verified, and/or available.

#### **vi. Subsection (e)(12)(E)2.a. Length of Extension**

##### Purpose of Subsection 93118.5(e)(12)(E)2.a.

This subsection establishes that technology availability extensions would be granted for two years at a time if approved by EO.

##### Rationale of Subsection 93118.5(e)(12)(E)2.a.

This subsection is necessary to advise the applicants on the duration of a compliance extension so they can meet the compliance date by repowering and/or retrofitting, or requesting an additional extension, without violating the regulation.

#### **vii. Subsection (e)(12)(E)2.b Eligibility and Application Package**

##### Purpose of Subsection 93118.5(e)(12)(E)2.b.

This subsection sets a deadline for applicants to submit an extension request; information must be submitted nine to 12 months prior to the compliance deadline for the first request, and for a renewal. This subsection also establishes the information or documentation that must be included in the application for CARB staff to review and analyze to make a determination for the application, which includes review of certified engines, verified retrofit DPFs, and an engineering analysis to show nothing available can be made to be functional for a vessel.

##### Rationale of Subsection 93118.5(e)(12)(E)2.b.

It is necessary to require applicants to evaluate all U.S. EPA certified engines or CARB verified DPFs to demonstrate that there are no available certified engines or CARB verified DPFs meeting the performance standards. The detailed engineering analysis is essential for CARB staff to properly evaluate the availability of applicable engines or DPFs for specific engines, vessels, and/or in-use vessel operations.

#### **viii. Subsection (e)(12)(E)2.c. Renewal**

##### Purpose of Subsection 93118.5(e)(12)(E)2.c.

This subsection establishes the timeframe for requesting, and renewing a compliance extension pursuant to subsection (E)2.

#### Rationale of Subsection 93118.5(e)(12)(E)2.c.

As marine engine and aftertreatment control technology is evolving because of the efforts made by manufacturers of engines and aftertreatment companies, it is necessary to request applicants to re-evaluate the availability of certified engines and DPFs and renew the extension every two years. The timeline and information needed for renewal application is the same as what is required for the initial application.

#### **ix. Subsection (e)(12)(E)2.d. Additional Provisions**

##### Purpose of Subsection 93118.5(e)(12)(E)2.d.

This subsection establishes additional provisions that applicants must meet to obtain EO approval for an extension pursuant to this subsection.

##### Rationale of Subsection 93118.5(e)(12)(E)2.d.

The additional provisions, including "cleanest engine" requirements, and the provision to address availability of a DPF for different engine manufacturers or models, are necessary to ensure that all near-term actions to reduce emissions are taken even if Tier 4 engines and DPFs are not available for a vessel.

#### **x. Subsection (e)(12)(E)2.d.i. Cleanest Engine Requirement**

##### Purpose of Subsection 93118.5(e)(12)(E)2.d.i.

This subsection establishes that in situations where engines certified to current Tier 3 marine, Tier 4 marine, or Tier 4 Final off-road are available but CARB verified Level 3 DPFs are not available, the applicant must repower the vessel with the available Tier 3 marine, Tier 4 marine, or Tier 4 Final off-road engines and submit an engineering analysis to evaluate the availability of CARB verified Level 3 DPFs every two years.

##### Rationale of Subsection 93118.5(e)(12)(E)2.d.i.

This provision ensures that the cleanest available engines are installed on the vessel during the granted extension period. This subsection also sets a timeframe of six months for applicants to retrofit the engine after a DPF becomes available. CARB staff consider six months as sufficient for vessel owners and operators to order the DPF and have it installed on the vessel.

#### **xi. Subsection (e)(12)(E)2.d.ii Unavailability of a DPF for a Specific Engine Manufacturer or Model**

##### Purpose of Subsection 93118.5(e)(12)(E)2.d.ii.

This subsection establishes that if a verified Level 3 DPF is not verified for one manufacturer of marine or off-road engine but is verified for another manufacturer or

model of engine with the same power rating and engine tier, CARB does not require applicants to replace the existing engine with another engine with DPF retrofit available. However, if applicants repower an engine with a higher tier engine with the same power rating, applicants must install a higher tier engine with DPF retrofit available regardless of engine brand.

Rationale of Subsection 93118.5(e)(12)(E)2.d.ii.

This provision is necessary to ensure that PM emission reductions are achieved by requiring the use of any manufacturer, model, or brand of engine if a retrofit DPF is verified. This provision is also necessary to reduce the cost and financial burden by allowing the original engine to be retained if repowering the engine to a higher emission standard is not required, even if a retrofit DPF is available for another engine manufacturer, model, or brand.

**xii. Subsection (e)(12)(E)3 Feasibility Extension E3 - Engines or DPF not Feasible and Cannot Afford Vessel Replacement**

Purpose of Subsection 93118.5(e)(12)(E)3

This subsection establishes that an applicant may be granted a two-year extension, that can be renewed twice, for a total of up to six years of compliance extension in a situation where engines or CARB verified Level 3 DPFs are available, but vessels cannot be reconfigured or modified to meet performance standards without replacing the vessel, and the applicant cannot pay for a replacement vessel by the compliance date. This subsection also establishes the information and documentation that must be included in the application package, and EO review process and requirements for renewing an extension application.

Rationale of Subsection 93118.5(e)(12)(E)3

CARB staff understands that more stringent performance standards would present technical and financial challenges for many vessels. To better understand the extent of vessel modifications that may be required to accommodate Tier 4 engines or retrofit DPF and SCR aftertreatment, CARB contracted with the California Maritime Academy (CMA) to perform a feasibility and cost analysis for different vessel categories. Findings of this study indicated that some vessel categories would likely require substantial reconfiguration to accommodate newer engines or aftertreatment, and fitment of new equipment is dependent on the unique vessel configuration. Therefore, CARB staff establishes this compliance extension to accommodate the situation where vessel replacement is required to meet performance standards.

### **xiii. Subsection (e)(12)(E)3.a Length of Extension**

#### Purpose of Subsection 93118.5(e)(12)(E)3.a.

This subsection establishes that the feasibility compliance extension would last two years if approved by EO.

#### Rationale of Subsection 93118.5(e)(12)(E)3.a.

This subsection is necessary to inform applicants when the compliance extension would expire so they can meet the compliance dates without violating the regulation. In addition, the length of the extension provides vessel owners and operators certainty in their planning for the frequency of renewing or taking action to repower, retrofit, or replace their vessel to meet performance standards.

### **xiv. Subsection (e)(12)(E)3.b. Eligibility and Application Package**

#### Purpose of Subsection 93118.5(e)(12)(E)3.b.

This subsection sets a timeline of 18 months prior to compliance dates for applicants to submit their application. This subsection also establishes the criteria to be eligible for this compliance extension, and information or documentation that must be included in the application for CARB staff to review and analyze to make a decision on the request for an extension.

#### Rationale of Subsection 93118.5(e)(12)(E)3.b.

This provision is necessary to set a reasonable timeframe of a minimum of 18 months for application submittal. This provides the applicant time to take appropriate actions if the extension is denied. If the applicant expects more time is needed to take action to comply, such as building a new vessel, if the request is denied, the applicant may submit the application to the EO earlier. Because this evaluation is based less on availability of technology than Extension (e)(12)(E)(2), CARB can evaluate the application a greater period of time prior to the compliance deadlines.

#### Purpose of Subsection 93118.5(e)(12)(E)3.b.i.

This subsection establishes that an application must include a technical feasibility analysis demonstrating that no certified engine can be used to repower engines meeting performance standards on the vessel(s) for extensions to repower engines.

#### Rationale of Subsection 93118.5(e)(12)(E)3.b.i.

This provision is necessary to provide CARB staff sufficient information to evaluate the availability and suitability of certified engines for repower to determine whether or not to grant a compliance extension.

#### Purpose of Subsection 93118.5(e)(12)(E)3.b.ii.

This subsection establishes that an application must include a technical feasibility analysis demonstrating that no DPF can be used to retrofit Tier 3 or Tier 4 engines on the vessels for extensions for installing DPFs.

#### Rationale of Subsection 93118.5(e)(12)(E)3.b.ii.

This provision is necessary to provide CARB staff sufficient information to evaluate the availability and suitability of CARB verified DPFs for retrofitting Tier 3 or Tier 4 engines to determine whether or not to grant a compliance extension.

#### Purpose of Subsection 93118.5(e)(12)(E)3.b.iii.

This subsection establishes that an application must include a technical feasibility analysis provided by a third-party naval architect demonstrating that no modifications are feasible to repower and retrofit the vessel for extensions for repowering engines or installing DPFs.

#### Rationale of Subsection 93118.5(e)(12)(E)3.b.iii.

This provision is necessary to provide CARB staff sufficient information to evaluate whether no suitable engines or control technologies physically fit within the existing vessel structure, and no amount of modifications can be made to the vessel structure without compromising its structural integrity. Requiring a third-party naval architect performing a technical feasibility analysis ensures that the analysis is relatively fair, accurate and comprehensive which helps CARB staff with evaluating the application.

#### Purpose of Subsection 93118.5(e)(12)(E)3.b.iv.

This subsection establishes that extensions for repowering engines or installing DPFs, even if feasible, would be considered not feasible if the applicant can demonstrate that passenger capacity would be reduced by 25 percent or more and there is an increase of emissions in their operation as a result.

#### Rationale of Subsection 93118.5(e)(12)(E)3.b.iv.

This provision is necessary to ensure that CARB does not withhold granting a compliance extension if the only feasible modification to a vessel would result in a significant decrease in passengers, which would then increase emissions. For instance, a ferry operator may need to offer more scheduled runs after modifying an in-use vessel, which could increase fuel consumption and emissions from their operation relative to the baseline. Therefore, CARB staff is proposing that passenger reductions of 25 percent or more, combined with demonstration that this level of reduction would result in an increase of operational emissions, would be grounds for receiving a compliance extension for building a new vessel. A new build vessel could then be

designed to accommodate engines meeting performance standards and carry a sufficient number of passengers.

Purpose of Subsection 93118.5(e)(12)(E)3.b.v.

This subsection establishes that an application must include financial information where applicable, which includes at least three years of federal and State income tax documents, and Profit and Loss statements.

Rationale of Subsection 93118.5(e)(12)(E)3.b.v.

This subsection is necessary to provide necessary information for CARB staff to evaluate financial feasibility for vessel replacement. CARB staff considers a minimum three years of financial records is enough to make a sound financial analysis.

Purpose of Subsection 93118.5(e)(12)(E)3.b.vi.

This subsection establishes that an application must include a list of actions that the applicant has taken to comply or in anticipation to comply with the regulation at the earliest compliance date and supporting documentation to demonstrate that these actions have been taken.

Rationale of Subsection 93118.5(e)(12)(E)3.b.vi.

This subsection is necessary to demonstrate to CARB that vessel owners and operators have tried to comply with the Proposed Amendments. A key action is whether vessel owners and operators developed a new business structure after Board approval of the Proposed Amendments in 2022 to pass costs onto consumers or entities receiving their services in order to generate sufficient capital to comply. Other actions may include engine upgrades, and other technical, financial, or environmental assessments to assist CARB staff with evaluating the extension request.

Purpose of Subsection 93118.5(e)(12)(E)3.b.vii.

This subsection establishes that an application must include a list of engines for which the extension is requested, and a demonstration that all other engines within the fleet subject to the applicant's direct control meet the requirements of this section.

Rationale of Subsection 93118.5(e)(12)(E)3.b.vii.

This subsection is necessary to ensure CARB staff does not issue compliance extensions to non-compliant engines or fleets that are operating non-compliant engines.

#### **xv. Subsection (e)(12)(E)3.c Renewal**

##### Purpose of Subsection 93118.5(e)(12)(E)3.c.i. through 3.c.ii.

This subsection establishes that an additional two-year extension may be granted if applicants can demonstrate that Tier 4 Engines or DPFs continue to be not feasible, and applicants can continue to demonstrate they cannot afford a vessel replacement. This subsection also establishes that this compliance extension cannot be extended beyond December 31, 2034 or a maximum of six years with two exceptions: workboats that have no limits, and selected ferry, excursion, or CPFV vessels that are eligible for a total of eight years.

##### Rationale of Subsection 93118.5(e)(12)(E)3.c. i. through 3.c.ii.

It is necessary to specify the total length of time that this extension can be renewed, and the end date for when all compliance extensions would expire. Workboats are not limited in the number of extensions they can be granted if vessel replacement is required because the cost per weighted tons of emissions reduced for this category was significantly higher than every other vessel category on average. Passenger-carrying vessels, including ferries, excursions, and CPFVs may have been more significantly impacted by the global situation that began in 2020 than other vessel categories that do not carry passengers. For vessels in these categories with compliance deadlines on or before December 31, 2024, who can also demonstrate continued lack of financial ability to pay for replacement, would be eligible for an additional two years, for a total of eight years extension under this subsection. Requiring a minimum Tier 3 engines on workboats for unlimited extensions would ensure the cleanest feasible engines are equipped on workboats during extensions period, which would ensure that the greatest emission reductions possible are achieved. The requirement to upgrade to Tier 3 would not apply until December 31, 2034 to allow for the opportunity for a feasible Tier 4 engine to become available.

#### **f. Subsection (e)(12)(E)4. Feasibility Extension E4 – Tier 4 Engines with Limited Operating Hours and DPFs not Feasible**

##### Purpose of Subsection 93118.5(e)(12)(E)4.

This subsection establishes the requirements of a compliance extension for vessels with Tier 4 engines operating limited hours if DPFs are not feasible without vessel replacement. Engines operating under 2,600 hours/year or 1,300 hours per year if within a DAC are eligible to receive this extension.

##### Rationale of Subsection 93118.5(e)(12)(E)4.

This extension is necessary to provide vessel owners and operators flexibility to minimize the number of vessels replaced that are already operating with Tier 4 engines. The threshold of 2,600 hours/year was selected based on using existing cost

effectiveness thresholds of the Carl Moyer program, and this threshold is cut in half for vessels operating within 2 miles of a DAC.

#### **i. Subsection (e)(12)(E)4.a Length of Extension**

##### Purpose of Subsection 93118.5(e)(12)(E)4.a.

This subsection establishes that compliance extensions would be granted in two-year increments if approved by EO.

##### Rationale of Subsection 93118.5(e)(12)(E)4.a.

This subsection is necessary to advise the applicants on the duration of a compliance extension once received so they can prepare to apply for a renewal without violating the regulation.

#### **ii. Subsection (e)(12)(E)4.b. Eligibility and Application Package**

##### Purpose of Subsection 93118.5(e)(12)(E)4.b.

This subsection establishes that the application package must demonstrate that available DPFs do not fit the regulated in-use vessel based on feasibility analysis, and Tier 4 engines have not, and will not operate above the annual hour thresholds. This subsection also requires the application to be received within nine months of the engine's nominal compliance deadline.

##### Rationale of Subsection 93118.5(e)(12)(E)4.b.

This subsection is necessary to ensure that the application includes appropriate and sufficient information for CARB staff to properly evaluate the application. It is important that vessel owners and operators demonstrate and provide technical feasibility analysis supporting their request to ensure extensions are not granted when there are vessel design solutions that can be adopted to accommodate DPFs.

This subsection also establishes that applicants must submit extension requests nine months prior to, and no more than 12 months before, compliance dates or expiration of a previous extension. CARB staff considers the window of nine to 12 months an appropriate balance between giving the vessel owner or operator sufficient time to develop a new compliance strategy if the request for an extension is denied while keeping the window close enough to the compliance date to ensure the analysis reflects the most recent market of available DPFs.

### **iii. Subsection (e)(12)(E)4.c Renewal**

#### Purpose of Subsection 93118.5(e)(12)(E)4.c.

This subsection establishes that renewal requests must be submitted between nine and 12 months prior to an extension expiring. This subsection also specifies the information that must be included in the application for CARB staff to review in order to obtain CARB's approval.

#### Rationale of Subsection 93118.5(e)(12)(E)4.c.

This subsection is necessary to ensure that applicants can request and receive approval for a renewal to their two-year extension as long as they can demonstrate the situations for receiving approval of the original extension have not changed. The timeline for submission of a renewal application is consistent with the timeline established in the original extension application.

### **iv. Subsection (e)(12)(E)4.d Additional Provisions**

#### Purpose of Subsection 93118.5(e)(12)(E)4.d.

This subsection establishes additional provisions that applicants must meet to obtain EO approval for an extension pursuant to this subsection. This subsection also clarifies when the extension may be terminated if the vessel operates over the 1,300 or 2,600 hours/year limits.

#### Rationale of Subsection 93118.5(e)(12)(E)4.d.

This subsection is necessary to clarify which engines onboard a vessel, if not all, are certified to Tier 4 standards, and when the extension may be terminated. CARB staff has proposed that the dominant engines all need to be certified to Tier 4 standards to be eligible for this extension, which are the main propulsion engines on all vessel categories except for barges and dredges, where all auxiliary engines must be certified to Tier 4 engine standards.

### **v. Subsection (e)(12)(E)4.d.i Engine Type Determining Eligibility**

#### Purpose of Subsection 93118.5(e)(12)(E)4.d.i.

This subsection establishes that to be eligible for this extension, only auxiliary engines are required to meet the Tier 4 emission standards and operate below the operating hours threshold for barges and barge-mounted dredges, and only propulsion engines for all other regulated in-use vessel categories except for barges and barge mounted dredges.

#### Rationale of Subsection 93118.5(e)(12)(E)4.d.i.

Barges are not equipped with propulsion engines. As such, it is necessary to require only auxiliary engines on barges to meet Tier 4 marine or Tier 4 Final off-road emission standards. This provision is necessary to provide consistency on Tier 4 standard requirements across different vessel categories.

#### **vi. Subsection (e)(12)(E)4.d.ii Extension Termination**

##### Purpose of Subsection 93118.5(e)(12)(E)4.d.ii.

This subsection establishes the actions that applicants must take if Tier 4 engines operate above hour limits of 1,300 hours/year in a DAC or 2,600 hours/year elsewhere after receiving approval for a compliance extension. This subsection also clarifies that engines operated above the limits are no longer eligible for any future compliance extensions under (E)(4).

##### Rationale of Subsection 93118.5(e)(12)(E)4.d.ii.

It is necessary to clarify that if engines are operated over limits allowed by the extension, the compliance extensions are terminated, and the vessel owner or operator must stop operating vessels, notify CARB within 30 days, and perform another compliance option for the vessel. It is important to clarify that vessels are no longer eligible for this extension if they operate over the limits. CARB staff considers 30 days an appropriate amount of time for applicants to report to CARB, and it is consistent with other reporting requirements in the Proposed Amendments. These provisions ensure that no excess emissions are emitted beyond the approved extension allowed.

#### **vii. Subsection (e)(12)(E)5. Scheduling Extension E5**

##### Purpose of Subsection 93118.5(e)(12)(E)5.

This subsection establishes the requirements for the scheduling extension, which includes the extension period granted, eligibility, and information required to be included in the application package.

##### Rationale of Subsection 93118.5(e)(12)(E)5.

CARB staff recognizes some challenges that vessel owners and operators may come across when trying to comply with the Proposed Amendments as a fleet. This subsection is necessary to address compliance challenges associated with delays on ordering engines, scheduling work needing to be done at shipyards, and scheduling work on multiple vessels within a fleet. Together, this extension provides flexibility for vessel owners and operators.

### **viii. Subsection (e)(12)(E)5.a Length of Extension**

#### Purpose of Subsection 93118.5(e)(12)(E)5.a.

This subsection establishes the length of the extension of one year that may be granted if approved by EO.

#### Rationale of Subsection 93118.5(e)(12)(E)5.a.

This subsection is necessary to advise vessel owners and operators of the length of this compliance extension so they can meet the compliance date without violating the regulation.

### **ix. Subsection (e)(12)(E)5.b Eligibility and Application Package**

#### Purpose of Subsection 93118.5(e)(12)(E)5.b.

This subsection establishes the eligibility for this scheduling extension, including equipment manufacturer delays or installation difficulties, new build vessel delays due to shipyard capacities, multiple engines on multiple vessels with same compliance dates, or multiple engines on a single vessel with different compliance dates. In addition, this subsection establishes that requests must be submitted to the EO in advance of compliance dates.

#### Rationale of Subsection 93118.5(e)(12)(E)5.b.

This subsection is necessary to convey the possible ways that a vessel owner or operator can receive a one-year scheduling extension for engines on vessels in their fleet.

### **x. Subsection (e)(12)(E)5.b.i For Equipment Manufacturer Delays or Installation Difficulties**

#### Purpose of Subsection 93118.5(e)(12)(E)5.b.i.

This subsection establishes the requirements that a vessel owner or operator must meet to be granted an extension for equipment manufacturer delays or installation difficulties; engines must be ordered at least six months prior to compliance dates and the engines or equipment must not have been received.

#### Rationale of Subsection 93118.5(e)(12)(E)5.b.i.

This is not a new provision; it was included in the Current Regulation. CARB staff understands and recognizes that there is a potential for a delay in receiving equipment from an engine or DPF manufacturer, and additionally that there may be installation difficulties. It is necessary to a compliance extension if the applicant ordered new equipment six months before the compliance date, the new equipment has not been

received or installed due to manufacturing delays or excess difficulties, and the applicant has submitted all related documentation for CARB staff to review.

**xi. Subsection (e)(12)(E)5.b.ii for Equipment Manufacturer Delays or Installation Difficulties**

Purpose of Subsection 93118.5(e)(12)(E)5.b.ii.

This subsection establishes the requirement to enter into an agreement with a shipyard one year in advance of compliance dates to be eligible for a one-time, one-year extension due to shipyard delays. Additional documentation must be provided to CARB.

Rationale of Subsection 93118.5(e)(12)(E)5.b.ii.

As discussed in Appendix E, CARB staff acknowledges that shipyards need to have excess capacity for new builds to accommodate natural vessel turnover, any potential growth not accounted for or quantified in inventory projections, and new builds deployed in response to accelerated turnover to meet the performance standards. As such, there is a potential for delay from shipyard that is out of an applicant's control. To address such a possibility, it is necessary to allow for a compliance extension for new-build vessel delays due to delays at shipyards.

**xii. Subsection (e)(12)(E)5.b.iii for Multiple Engines Multiple Vessels with Same Compliance Dates**

Purpose of Subsection 93118.5(e)(12)(E)5.b.iii.

This subsection establishes that vessel owners and operators can qualify for a scheduling extension by having two or more regulated in-use vessels with two or more engines that have the same compliance date. This subsection also establishes the requirements for applying for the extension.

Rationale of Subsection 93118.5(e)(12)(E) 5.b.iii.

This is not a new provision, as this type of extension was included in the Current Regulation. This provision is necessary to relieve repower/retrofit burden for fleets that have multiple engines required to comply by the same compliance date. It is necessary for applicants to identify the engines and vessels with the same compliance dates in the application for CARB staff to determine whether they are eligible for this extension.

**xiii. Subsection (e)(12)(E)5.b.iv for Multiple Engines on Single Vessel  
with Different Compliance Dates**

Purpose of Subsection 93118.5(e)(12)(E)5.b.iv.

This subsection establishes that CARB staff may grant an applicant a one-time, maximum one year extension for fleets with multiple engines on a single vessel with different compliance dates. This subsection also establishes the requirements for applying for the extension.

Rationale of Subsection 93118.5(e)(12)(E)5.b.iv.

This is a new compliance extension that was not included in the Current Regulation. This provision would allow vessel owners and operators to plan repower/retrofit projects by considering drydock schedules or other operation or maintenance needs. Because the Proposed Amendments are expected to result in some vessel replacements, if the engine model year and therefore compliance dates of engines differ from each other, vessel owners and operators may need to plan to retire the vessel and all of its engines on a single date, rather than separately. It is necessary for applicants to identify the engines and vessels with the same compliance dates in the application for CARB staff to determine whether they are eligible for this extension.

**g. Subsection (e)(12)(F) Special Provisions Applicable to the  
Use of a Verified Diesel Emission Control Strategies  
(VDECS)**

Purpose of Subsection 93118.5(e)(12)(F)

This subsection establishes the requirements that vessel owners and operators must meet after installing and operating a retrofit DPF, or VDECS.

Rationale of Subsection 93118.5(e)(12)(F)

This subsection is not new; it was included in the Current Regulation. It is necessary for vessel owners and operators to be aware of the requirements that they must follow after installing DPFs and other VDECS on their vessels. The specific requirements are outlined in the following text.

Purpose of Subsection 93118.5(e)(12)(F)1.

This subsection establishes that the vessel owner or operator must follow the VDECS manufacturer's guidelines to operate and maintain the VDECS after it is installed on the vessel.

#### Rationale of Subsection 93118.5(e)(12)(F)1.

This subsection is necessary to ensure that VDECS are maintained in good working order and operated in accordance with the manufacturer's guidelines to achieve the original level of emission reductions intended by the VDECS manufacturer.

#### Purpose of Subsection 93118.5(e)(12)(F)2.

This subsection establishes the steps that the vessel owners and operators must take within 30 days of the failure of a VDECS.

#### Rationale of Subsection 93118.5(e)(12)(F)2.

It is necessary to require that within 30 days of a failure that vessel owners and operators repair the failed VDECS to good working condition, replace with another working VDECS, or employ another method that would achieve the original level of emission reductions. Detection of failures may coincide with a failure to meet opacity tests, which must be performed biennially or upon CARB audits as set forth in subsection (k). The 30-day timeframe to perform corrective action is consistent with the requirements of subsection (k)(1)(F) and (k)(3)(D).

#### Purpose of Subsection 93118.5(e)(12)(F)3.

This subsection establishes that only the VDECS manufacturer or an authorized dealer or installer can make a determination of whether a VDECS cannot be repaired.

#### Rationale of Subsection 93118.5(e)(12)(F)3.

This provision is necessary to ensure the determination of the reparability of a VDECS is made by authorized installers or the VDECS manufacturer themselves in order to ensure the proper determination is made.

#### Purpose of Subsection 93118.5(e)(12)(F)4.

This subsection establishes that if a VDECS is replaced within 30 days of failure, the original failed VDECS may only remain on the vessel if it is not connected to the exhaust manifold of the engine for which it was originally installed.

#### Rationale of Subsection 93118.5(e)(12)(F)4.

This provision provides flexibility and convenience for vessel owners and operators who need to have the failed VDECS remain on the vessel. CARB staff does not anticipate many failed VDECS to remain on vessels because the new replacement VDECS would likely be installed in the same physical location as the original VDECS. To address situations where failed VDECS do remain onboard the vessel, it is necessary to clarify that the failed VDECS cannot be connected to the exhaust manifold to ensure it is not operated, and to avoid excess emissions.

### **13. Subsection (e)(13) Engine Requirements on Commercial Fishing Vessels**

#### Purpose of Subsection 93118.5(e)(13)

This subsection establishes requirements for new and in-use commercial fishing vessels, which is that engines meet at minimum Tier 2 standards according to a phase-in schedule between 2030 and 2032.

#### Rationale of Subsection 93118.5(e)(13)

It is necessary to establish the requirements that engines on new and in-use commercial fishing vessels must meet to comply with the Proposed Amendments to ensure that the greatest emission reductions possible are achieved in the CHC sector. The requirements for commercial fishing vessels were established separately from regulated in-use vessel categories due to unique economic considerations, such as not being able to pass costs onto consumers. Specific requirements of this subsection are discussed in the following text.

#### **a. Subsection (e)(13)(A) In-Use Engines on In-Use Commercial Fishing Vessels – Requirements for Meeting Tier 2 and Higher Emission Standards**

##### Purpose of subsection 93118.5(e)(13)(A)

This subsection establishes that the engines on in-use commercial fishing vessels must meet U.S. EPA certified Tier 2 or higher emission standards according to the compliance dates set forth in Table 21 of (e)(13).

##### Rationale of Subsection 93118.5(e)(13)(A)

This subsection is necessary to ensure the greatest emission reductions possible are achieved from the CHC sector to meet the health and climate change goals. Without establishing requirements for commercial fishing vessels, the overall goals of the regulation would not be met. The requirement for pre-Tier 1 and Tier 1 engines to meet at a minimum Tier 3 or newer emission standards effectively requires that all engines will be meeting Tier 2 or newer standards by the end of 2032, unless they are eligible for and successfully receive approval for a low-use compliance exception.

#### **b. Subsection (e)(13)(B) Engines on New and Newly Acquired Commercial Fishing Vessels**

##### Purpose of subsection 93118.5(e)(13)(B)

This subsection establishes the engine requirements that new build and newly acquired commercial fishing vessels must meet to comply with the Proposed Amendments.

#### Rationale of Subsection 93118.5(e)(13)(B)

This subsection is necessary to require engines on new-build or newly acquired commercial fishing vessels meet the most stringent emission standards, which is Tier 3 or Tier 4 marine standards or Tier 4 Final off-road standards, to ensure the greatest level of emission reductions are achieved. New vessels are subject to more stringent requirements, including using Tier 4 engines, because they can be designed around the physical dimensions and characteristics of engines.

### **14. Subsection (e)(14) Low-Use Exceptions**

#### Purpose of Subsection 93118.5(e)(14)

This subsection establishes the requirements and application process for vessel owners and operators of regulated in-use vessels and commercial fishing vessels to request and receive approval for low-use exceptions.

#### Rationale of Subsection 93118.5(e)(14)

This low-use concept is not new; it is included in the Current Regulation. This subsection provides an option for vessel owners and operators to receive an exception from complying with performance standards for regulated in-use vessels in subsection (e)(12), cleaner engine requirements for commercial fishing vessels in (e)(13), or ZEAT requirements in subsection (e)(10). This provision is necessary to allow vessels to operate a limited number of hours without repowering/retrofitting engines/vessels to meet the proposed performance standards. The low-use compliance exception is also a pathway for vessel owners and operators to bring vessels into the State for a limited period of time for short-term projects that do not require a significant number of operating hours in RCW. It is necessary to establish an application process so that vessel owners and operators do not abuse the low-use compliance exception and only operate engines not meeting performance standards if they can demonstrate that they have, and will continue to operate engines on vessels in a limited capacity.

#### **a. Subsection (e)(14)(A) EO Approval**

#### Purpose of Subsection 93118.5(e)(14)(A)

This subsection establishes that EO approval must be obtained prior to an engine's compliance date set forth in subsection (e)(12)(D), or (e)(13), or (e)(10), or compliance dates extended from compliance extensions, or entering RCW if vessels come from outside of RCW.

#### Rationale of Subsection 93118.5(e)(14)(A)

This subsection is necessary to ensure that only engines meeting required emissions levels are allowed to operate above the low-use thresholds. Obtaining EO approval prior to operating an engine not meeting required emissions levels is critical to ensure

emission reductions are achieved and that operations of higher-emitting engines are carefully monitored. Newly proposed stringency for vessels operated in or surrounding DACs must also be carefully reviewed by CARB prior to granting approval to the vessel operator. The EO approval letter serves as guidance for the vessel owners and operators regarding reporting, recordkeeping, and other requirements they have to follow to remain in compliance while operating engines with a low-use compliance exception.

#### **b. Subsection (e)(14)(B) Requirements**

##### Purpose of Subsection 93118.5(e)(14)(B)

This subsection establishes the requirements that vessel owners and operators must meet to apply for low-use exceptions.

##### Rationale of Subsection 93118.5(e)(14)(B)

This subsection is necessary to inform applicants of the requirements to be able to be eligible for low-use exceptions, in order for applicants to determine whether their engines/vessels can apply for low-use exceptions.

##### Purpose of Subsection 93118.5(e)(14)(B)1.

This subsection establishes that to be approved as low-use engines, the applicable engine has not, and will not be operated more than the applicable low-use operation limits of 80, 300, 400, or 700 hours for pre-Tier 1, Tier 1, Tier 2, and Tier 3 or 4 engines, respectively. These limits are half of their values for vessels operated within two miles of a DAC.

##### Rationale of Subsection 93118.5(e)(14)(B)1.

It is necessary for the applicant to demonstrate that the applicable engine was able to be arranged to operate less than the low-use hour limit in the past; as such, CARB staff has more confidence to approve the low-use exception for the applicable engine because of the demonstration of past operation. It is also important to require past demonstration of low-use operation to avoid vessel owners and operators from lowering the operational hours on multiple vessels in a fleet rather than repowering to meet required emissions levels. It is necessary to require applicants to demonstrate that the in-use engine has the capability to remain low-use in subsequent years through an activity plan and/or making a commitment to prevent operations from exceeding limits and generating excess emissions. It is necessary to clarify what is defined as operating in DAC areas, because low-use limits are reduced to 50 percent in DAC areas compared to in non-DAC areas.

#### Purpose of Subsection 93118.5(e)(14)(B)2.

This subsection establishes that to obtain a low-use exception, the vessel owner or operator must be in full compliance with all requirements of the Proposed Amendments.

#### Rationale of Subsection 93118.5(e)(14)(B)2.

This provision is necessary to ensure CARB staff does not issue low-use exceptions to non-compliant engines or fleets that are operating non-compliant engines.

#### Purpose of Subsection 93118.5(e)(14)(B)3.

This subsection establishes that no more than five vessels within the applicant's direct control based outside of California shall be eligible for this exception per calendar year. This subsection clarifies that the limit of five vessels does not apply to a California based fleet.

#### Rationale of Subsection 93118.5(e)(14)(B)3.

This provision is necessary to prevent vessels based outside of California from rotating non-compliant vessels to work within RCW. Without five vessels cap, a large fleet based outside of California may keep operating different low-use vessels in California, which would result in excess emissions.

#### Purpose of Subsection 93118.5(e)(14)(B)4.

This subsection establishes that newly acquired in-use engines are not allowed to apply for low-use exceptions.

#### Rationale of Subsection 93118.5(e)(14)(B)4.

This provision is necessary to direct financial investments in newly acquired in-use vessels to those that have the ZEAT or diesel engine systems meeting applicable requirements. This requirement ensures older, higher-emitting engines are not operated in RCW after a person newly acquires a vessel.

### **c. Subsection (e)(14)(C) Initial Low-Use Application for EO's Review**

#### Purpose of Subsection 93118.5(e)(14)(C)

This subsection establishes the documentation and information that must be included in the initial low-use application, and the timeframe to submit the application to the EO.

#### Rationale of Subsection 93118.5(e)(14)(C)

This subsection is necessary to inform applicants of the low-use application process and information required in the application so that applicants are aware of what must be submitted for CARB staff to process, approve or deny an application.

#### Purpose of Subsection 93118.5(e)(14)(C)1.

This subsection establishes that vessel owners and operators must submit an application package at least 60 days prior to an engine's compliance date or before vessels are scheduled to first enter RCW.

#### Rationale of Subsection 93118.5(e)(14)(C)1.

CARB staff considers 60 days adequate for CARB staff to review the application, verify the information submitted, request additional information if needed, and draft a final determination letter.

#### Purpose of Subsection 93118.5(e)(14)(C)2.

This subsection outlines the information and documentation that must be contained in the initial application.

#### Rationale of Subsection 93118.5(e)(14)(C)2.

Approval of a low-use application is required; as such, this subsection is necessary to establish the proper procedures for submitting the application. This subsection is essential to ensuring that the application will provide CARB staff with the necessary information to evaluate whether the application meets the requirements of low-use exceptions. The specific purpose and rationale of these criteria are included in the following text.

#### Purpose of Subsection 93118.5(e)(14)(C)2.a.

This subsection establishes that a request letter must include a table identifying applicable vessels and engines, including vessel name and UVI, engine type, engine make, engine MY, engine serial number and engine family name if applicable.

#### Rationale of Subsection 93118.5(e)(14)(C)2.a.

It is necessary to inform CARB staff of which engines and vessels are included in a request for a low-use exception. Using this information, CARB staff can verify whether the applicable engines are eligible for low-use exceptions.

#### Purpose of Subsection 93118.5(e)(14)(C)2.b.

This subsection establishes that the request letter must include current hour meter readings and evidence showing engines are equipped with a functioning

non-resettable hour meter. The low-use exceptions require the low-use engines to operate below the specified hours limit.

Rationale of Subsection 93118.5(e)(14)(C)2.b.

This provision is necessary to ensure non-resettable hour meters are functioning and accurate to monitor the operation hours after being approved for a low-use exception.

Purpose of Subsection 93118.5(e)(14)(C)2.c.

This subsection establishes that a request letter must include supporting documents to demonstrate that the engine has not operated more than the specified limits in the previous calendar year and is not expected to operate more than the specified limits in the calendar year for the demonstration.

Rationale of Subsection 93118.5(e)(14)(C)2.c.

This subsection is necessary for CARB staff to have sufficient information to verify whether applicable engines operate less than the limits for receiving a low-use exception.

Purpose of Subsection 93118.5(e)(14)(C)2.d.

This subsection establishes that the low-use request letter must include a future activity plan and/or commitment demonstrating that engines will not operate more than the limits in the subsequent years following the demonstration.

Rationale of Subsection 93118.5(e)(14)(C)2.d.

It is necessary to require the applicant to provide plans on how they will keep the in-use engine operating below low-use limits in the future. It is necessary to help CARB staff verify whether their plan sounds reasonable and realistic to make a final determination.

Purpose of Subsection 93118.5(e)(14)(C)2.e.

This subsection establishes if engines are used in capacities not for regulated work, these hours do not count toward the low-use hours limits, but only if they are clearly documented in logbooks for past operation and future activity plans demonstrate how future operation in regulated work will remain below applicable limits.

Rationale of Subsection 93118.5(e)(14)(C)2.e.

The purpose of the Proposed Amendments is to regulate commercial vessel use only. CARB staff recognizes that there are possibilities where vessels may be used for personal pleasure, it is necessary to not count these hours when assessing the annual low-use hours.

#### Purpose of Subsection 93118.5(e)(14)(C)2.f.

This subsection requires that vessel owners and operators who are applying for a low-use exception to provide a list of all vessels with an approved low-use exception that are operating in RCW.

#### Rationale of Subsection 93118.5(e)(14)(C)2.f.

Because vessel owners and operators are limited to five low-use exceptions for vessels that are based outside of California, it is necessary to provide CARB the latest information about which vessels remain operative in RCW.

#### Purpose of Subsection 93118.5(e)(14)(C)3.

This subsection establishes that the EO will rely on the information submitted by the applicant and utilize their engineering judgment to evaluate whether the information meets the criteria when making a decision on a low-use exception request.

#### Rationale of Subsection 93118.5(e)(14)(C)3.

This provision is necessary to advise applicants that approval of low-use exception requests is discretionary, but that the EO will review requests fairly using sound science, good engineering judgment, and without bias.

### **H. Subsection (f) Alternative Control of Emissions**

#### Purpose of Subsection 93118.5(f)

This subsection establishes the provision for an alternative plan referred to as an ACE. Language in this immediate subsection was relocated from subsection (f)(1) of the Current Regulation to clarify that ACE plans can be used to achieve equal or greater emission reductions than required by directly complying with subsection (e)(10), (e)(12), or (e)(13).

#### Rationale of Subsection 93118.5(f)

The ACE is not a new provision and was originally included in the Current Regulation. This subsection is necessary to clarify that ACE plans can be used instead of directly complying with the newly proposed requirements for regulated in-use vessels as defined in subsection (e)(10), (e)(12), or (e)(13).

### **1. Subsection (f)(1) Requirements for ACE**

#### Purpose of Subsection 93118.5(f)(1)

This subsection establishes the requirements that an ACE application must meet to obtain EO approval of the alternative strategies to comply with the Proposed Amendments.

#### Rationale of Subsection 93118.5(f)(1)

This subsection is necessary for vessel owners and operators who are seeking alternative strategies for compliance to understand the criteria to be eligible for an ACE and what should be contained in the ACE application.

#### Purpose of Subsection 93118.5(f)(1)(A)

This subsection establishes that to receive EO approval, an ACE application must achieve equal or greater emission reductions than the Nominal Compliance Baseline. This provision also sets a time period between January 1, 2023 through December 31, 2034 to evaluate the emission reductions for the ACE. Strategies employed prior to this date, if surplus to the requirements of the Current Regulation, can be quantified for emission reduction after January 1, 2023. The provision clarifies that up to two years of a feasibility extension, if demonstrated, can be considered in an applicant's Nominal Compliance Baseline, to which the ACE will be compared. The Proposed Amendments would remove requirements for strategies to not increase other air pollutants by more than 10 percent.

#### Rationale of Subsection 93118.5(f)(1)(A)

This provision is necessary to ensure that by using chosen alternative emission control strategies, vessel owners and operators can propose ACE plans that would achieve the same or greater emission reductions, relative to the emission reductions required in certain subsections. The emission reduction requirement is critical to achieving the goals of the Proposed Amendments while providing compliance flexibility. The time period for the evaluation of emissions must be specified to ensure ACE plan emission reductions occur within the implementation period of the Proposed Amendments. It is important to allow strategies employed prior to the implementation of the Proposed Amendments to evaluate a vessel owner's or operator's overall efforts to reduce emissions from their operation. It is necessary to clarify whether compliance extensions are allowed when considering the fleet averaging plan. Obtaining CARB's approval on the fleet averaging plan would ensure that the emission reduction requirements are able to be met while providing flexibility to the vessel owner or operator.

#### Purpose of Subsection 93118.5(f)(1)(E)

This subsection lists examples of alternative emission control strategies that applicants could apply for, and outlines details for applying for CAECS. The Proposed Amendments would no longer allow the use of alternative fuels to be a strategy, and clarifies that ZEAT deployment can be used as a strategy to reduce emissions. The Proposed Amendments clarify that emission reductions from an ACE must come from other harbor craft within a person's fleet, and cannot be achieved from other source categories, whether mobile or stationary.

#### Rationale of Subsection 93118.5(f)(1)(E)

This subsection is expanded and modified from the Current Regulation to make the options consistent with other requirements of the Proposed Amendments. For example, it was brought to CARB staff attention that ATB owners and operators may elect to use CAECS instead of repowering and retrofitting engines. CAECS, which would be initially approved for use by OGV vessel operators to comply with the At Berth Regulation, would be required to be evaluated and tested to demonstrate effectiveness at controlling emissions from CHC. Alternative fuels would no longer be allowed to be used as an ACE strategy, because the Proposed Amendments would require the use of R99 on all diesel-powered vessels beginning on January 1, 2023. CARB staff is not aware of any additional emission benefits that would be achievable through fuel-based strategies. Allowing ZEAT to be an alternative compliance strategy could advance ZEAT development and deployment in the marine sector and further reduce emissions and protect public health. It is necessary to specify that the quantified emission reductions in the ACE plan must occur in the harbor craft sector only, which ensures the emission reductions are achieved from CHC themselves.

#### Purpose of Subsection 93118.5(f)(1)(F) through (H) and (J)

These subsections are updated from the Current Regulation with minor changes to clarify that a current ACE can apply after January 1, 2023, by replacing the term homeport with homebase, and clarifying that the ACE applies to the newly proposed requirements in subsections (e)(10), (e)(12), and (e)(13). All other requirements of the ACE from the Current Regulation would remain unchanged and become part of the Proposed Amendments.

#### Rationale of Subsection 93118.5(f)(1)(F) through (H) and (J)

It is necessary to update provisions of the ACE plan for the Proposed Amendments after January 1, 2023. The rationale for changing the term homeport to homebase can be found in section IV.F.44 of this report.

#### Purpose of Subsection 93118.5(f)(1)(I)

This subsection is expanded from the Current Regulation by clarifying that the ACE applications must not use equipment acquired by funds or grants that cannot be used to comply with State regulations, laws, or mandates.

#### Rationale of Subsection 93118.5(f)(1)(I)

This clarification is necessary to ensure that vessel owners and operators understand that emission reductions achieved through air quality incentive programs cannot be used in ACE plan. CARB staff intend to clarify that the requirements of the Proposed Amendments are not intended to undermine or reduce the impact of additional and surplus emission reductions achieved and paid through air quality incentive programs.

#### Purpose of Subsection 93118.5(f)(1)(K)

This subsection establishes that a vessel owner's or operator's ACE plan would not be permitted to result in a higher burden to DACs relative to other communities impacted by the emissions from their vessel operations.

#### Rationale of Subsection 93118.5(f)(1)(K)

This provision ensures that while an ACE plan may achieve overall emission reductions, that emissions are not concentrated into regions that are within two miles of a DAC. It is important that vessel owners and operators evaluate the geographic impact of their operations in the context of the impact to DACs. This is a key provision that CARB staff is proposing to include to promote environmental justice and ensure that cost effective alternatives do not result in unintentional impacts for communities already experiencing cumulative exposure burden.

### **2. Subsection (f)(2) Application Process for ACE**

#### Purpose of Subsection 93118.5(f)(2)

This provision establishes the application process that applicants and CARB would need to follow to submit, review and make a decision on an ACE application.

#### Rationale of Subsection 93118.5(f)(2)

This subsection is updated from the Current Regulation with minor changes for clarification. Specific changes are discussed in the following text.

#### **a. Subsection (f)(2)(A)**

#### Purpose of Subsection 93118.5(f)(2)(A)

Under the Current Regulation, an ACE application may be submitted by February 28 of the first year that compliance is required, which may span between 2009 and 2022. In the Proposed Amendments, CARB staff is proposing to consolidate all ACE plans within the first three years of implementation after January 1, 2023 and require applications to be submitted at least six months prior to the first compliance deadline.

#### Rationale of Subsection 93118.5(f)(2)(A)

It is necessary to require applications at least six months prior to the first date that compliance is required to ensure that applicants have sufficient time to reconsider a compliance plan if the request is not approved. CARB staff is proposing a shorter time window of January 1, 2023 through December 31, 2025 to review and make a decision on ACE plan request to consolidate alternative planning earlier during the implementation period.

## **b. Subsection (f)(2)(C) Completeness Determination**

### Purpose of Subsection 93118.5(f)(2)(C)

This subsection is updated from the Current Regulation by updating the CARB review time from 15 to 30 days, and clarifying that applicants have 30 days to submit the additional documents if an ACE application is incomplete.

### Rationale of Subsection 93118.5(f)(2)(C)

These updates are essential to advise applicants that CARB staff has 30 days to review the application package to determine if the application is sufficient and the applicant has 30 days from the date of receipt of notification to submit supplemental documentation to make the application package complete. CARB staff consider 30 days an appropriate amount of time to review the application, and for applicants to provide supplemental information.

## **c. Subsection (f)(2)(D) Notice of Completeness and 30-Day First Public Comment Period**

### Purpose of Subsection 93118.5(f)(2)(D)

This subsection is updated from the Current Regulation by establishing a timeframe of 30 days for CARB providing a 30-day public comment period to receive comments on ACE applications.

### Rationale of Subsection 93118.5(f)(2)(D)

This update is essential to provide more certainty to applicants regarding the expediency that CARB will take to perform the public review of ACE plans.

## **d. Subsection (f)(2)(F) Final Action**

### Purpose of Subsection 93118.5(f)(2)(F)

This subsection is updated from the Current Regulation by updating the CARB review time from 15 to 30 days, and clarifying that CARB has 30 days to take final action to either approve or deny an ACE application and shall notify the applicant accordingly.

### Rationale of Subsection 93118.5(f)(2)(F)

CARB staff considers 30 days an appropriate amount of time to make a final determination, draft a letter review, and notify applicants. The timeframe of 30 days is consistent with the review time that CARB needs for other applications and requests in the Proposed Amendments.

## **I. Subsection (g) Unique Vessel Identifier Requirement**

### Purpose of Subsection 93118.5(g)

This subsection establishes the unique vessel identifier (UVI) requirements for all harbor craft operating in RCW, including vessels coming from outside of California.

### Rationale of Subsection 93118.5(g)

This subsection is necessary because UVIs can assist facilities in implementing vessel reporting requirements, assist with identifying and reporting non-compliance by non-facility stakeholders or members of the public, and improve accountability and tracking of emission benefits.

This requirement is new; it was not included in the Current Regulation. There is currently no single identifier that can be used across all vessel types subject to the Current Regulation. California DMV and the CDFW require labeling outside of vessels, but most vessels are not registered with DMV or CDFW, and instead are registered with USCG only. USCG does not require visible identifiers on the outside of the hull of the vessel. The nautilus of a vessel is commonly on the outside of the hull but is not unique.

### **1. Subsection (g)(1)**

#### Purpose of Subsection 93118.5(g)(1)(A)

This subsection establishes that all harbor craft operating in RCW are required to have a CARB UVI painted on the vessel including vessels coming from outside of California, and it defines the format of the UVI.

#### Rationale of Subsection 93118.5(g)(1)(A)

Standardizing the UVI in a format starting with "CARB" would help identify the UVI that is issued by CARB. Having a standardized format will make it simple for members of the public, vessel owners and operators, and other stakeholders to quickly identify whether an identifier is a CARB UVI required for compliance with the Proposed Amendments.

### **2. Subsection (g)(2) Requirements**

#### Purpose of Subsection 93118.5(g)(2)(A)

This subsection establishes that all applicable harbor craft will need to have their CARB UVI permanently affixed to their vessel by January 1, 2024.

#### Rationale of Subsection 93118.5(g)(2)(A)

CARB staff considers one year adequate for CARB to issue the UVI to all applicable harbor craft and for vessel owners and operators to affix UVIs on their vessels.

#### Purpose of Subsection 93118.5(g)(2)(B)

This subsection establishes that beginning March 1, 2023, or within 30 calendar days of fulfilling the vessel registration and reporting requirements, whichever occurs later, the EO shall issue CARB UVI numbers via electronic mail or hard copy mailed to the business address provided on the application.

#### Rationale of Subsection 93118.5(g)(2)(B)

This provision is necessary to provide a timeframe for CARB to issue UVI numbers and explain how vessel owners and operators would receive UVI numbers. CARB staff considers 30 days a sufficient amount of time to generate and issue UVI numbers to vessel owners and operators after receiving reports.

#### Purpose of Subsection 93118.5(g)(2)(C)1. through 5.

This subsection defines the specifications that UVIs must follow and identify the locations that UVIs need to be affixed or painted. The specifications include requirements for the size, font, and color of the readily legible letters and numbers, and the background surface of UVIs.

#### Rationale of Subsection 93118.5(g)(2)(C)1. through 5.

This subsection is necessary to ensure that the identification number is readily legible by specifying the format, color, size, and location. It is necessary to require the UVI remain legible for the entire life of the vessel. Specifying the specifications of UVIs on all harbor craft ensures UVIs are uniform, easily found, and recognizable for the public and CARB enforcement staff. CARB staff considers 5 inches in height and 2.5 inches in width for letters and numbers, 10 inches in height and 40 inches in width for background surface to be readily legible. Requiring black letters and numbers and lime green background surface ensures letters and numbers are easily seen.

#### Purpose of Subsection 93118.5(g)(2)(D)

This subsection establishes that registered historic vessels would be allowed to install cast bronze, brass, or carved wooden plaques, or other formats to match their vessel's theme, but shall still be required to affix UVIs to their vessels.

#### Rationale of Subsection 93118.5(g)(2)(D)

This subsection is necessary to allow registered historic vessels to maintain the aesthetic appearance of their vessels, while still requiring that they have the entire CARB UVI on both sides of the pilot house in a visible location.

### **3. Subsection (h) Main Engine Idling and Auxiliary Engine Operating and Idling Limits**

#### Purpose of Subsection 93118.5(h)

This subsection establishes the main engine idling and auxiliary engine idling or operating limits that all harbor craft must meet while at dock.

#### Rationale of Subsection 93118.5(h)

This subsection is necessary to reduce emissions and protect public health by limiting both main engine idling time and auxiliary engine idling and operating time when docked, berthed, or moored at any facility. CARB staff has observed, and has received complaints from the public, about extended main engine idling and auxiliary engine operating while harbor craft are at dock. CARB staff's preliminary analysis of electronic engine records provided by some vessel owners and operators indicate that up to 40 percent of all operational hours over the lifetime of the engines were at idle. Idling reduction through shutting off engines or plugging into shore power while at dock would reduce near-source exposure to diesel exhaust, NO<sub>x</sub>, operator fuel expenses, and GHG emissions.

### **4. Subsection (h)(1)**

#### Purpose of Subsection 93118.5(h)(1)

This subsection establishes that beginning on January 1, 2024, no vessel subject to this subsection shall idle propulsion engines or operate or idle auxiliary engines with a power rating of 99 kW or less for more than 15 consecutive minutes when docked, berthed, or moored at any facility.

#### Rationale of Subsection 93118.5(h)(1)

This subsection is necessary to communicate the effective date and time limit for operating auxiliary engines or idling main and auxiliary engines while at dock. This subsection takes effect on January 1, 2024, which would allow facilities sufficient time to install any infrastructure needed to use shore power instead of using on-board electric generators to provide on-board power to the vessel. According to the feedback from the marine industry, CARB staff is proposing a 15-minute idling limit, which is longer than the five-minute limits that are set by other regulations, due to vessels having multiple engines, and the actual operator or captain needing to traverse distances across the vessel to access the engine room and pilot house. 99 kW

was chosen as the upper limit for shore power because this is the maximum power for auxiliary generators that are typically used on a vessel for house load. In cases where generators are larger, they would be used for a functional purpose, such as generators to power pumps on petrochemical tank barges at a refinery terminal.

#### Purpose of Subsection 93118.5(h)(1)(A)

This subsection establishes that the idling and operational limits do not apply to idling or operation at designated facilities for testing, servicing, repairing or diagnosing engine issues.

#### Rationale of Subsection 93118.5(h)(1)(A)

It is necessary to allow sufficient idling time to perform any diagnostic or maintenance related work. The intent of this subsection is to limit excess and unnecessary idling, not idling that is required to be performed for servicing engines. CARB staff proposes this exception would only apply at designated facilities where maintenance activities would occur to minimize confusion or claims that unnecessary or inadvertent idling was for engine or vessel service purposes.

#### Purpose of Subsection 93118.5(h)(1)(B)

This subsection establishes that operational limits do not apply to operation of direct-drive or other non-generator specialty auxiliary engines while at a dockside location.

#### Rationale of Subsection 93118.5(h)(1)(B)

If auxiliary engines are not electric generators, they would not be able to be alternatively powered by shore power while at dock. CARB staff's intent is to use shore power instead of diesel engine power where possible, and not to require that all auxiliary engines are converted to electric generators.

#### Purpose of Subsection 93118.5(h)(1)(C)

This subsection establishes that the idling and operational limits do not apply to engines performing emergency operations.

#### Rationale of Subsection 93118.5(h)(1)(C)

It is necessary to not restrict a vessel owner's or operator's ability to use a diesel engine while at dock if performing emergency operations as defined in subsection (d) of the Proposed Amendments.

#### Purpose of Subsection 93118.5(h)(1)(D)

This subsection establishes that the idling and operational limits do not apply to idling or operation at facilities where shore power is not available or not required pursuant to vessel visit thresholds as defined in subsection (i).

#### Rationale of Subsection 93118.5(h)(1)(D)

It is necessary to allow necessary idling or operational time for engines at facilities where no shore power is available as this is out of the vessel owner's or operator's control.

#### Purpose of Subsection 93118.5(h)(1)(E)

This subsection establishes that the idling and operational limits are 30 minutes instead of 15 minutes for initial startup and crew changes for new working shifts.

#### Rationale of Subsection 93118.5(h)(1)(E)

It is necessary to allow for a longer idling or auxiliary engine operation period for the initial startup each day and between crew changes. CARB received input from vessel stakeholders indicating the range of initial daily inspections and procedures that need to be followed that would not be feasible within a 15-minute window.

### **5. Subsection (h)(2)**

#### Purpose of Subsection 93118.5(h)(2)

This subsection establishes vessel owner and operator shore power responsibilities for complying with this subsection .

#### Rationale of Subsection 93118.5(h)(2)

It is necessary for vessel owners and operators to be aware of their responsibilities when using shore power. It is reasonable that vessel owners and operators would be responsible for the installation, maintenance, and operation of equipment needed on their own vessels to establish shore power connection.

### **6. Subsection (h)(3)**

#### Purpose of Subsection 93118.5(h)(3)

This subsection establishes that if vessel owners and operators require use of shore power, the facility owner or operator must provide available access to power and accessible connection points as outlined in facility infrastructure requirements (subsection (i)).

#### Rationale of Subsection 93118.5(h)(3)

This subsection is necessary because facility owners and operators are responsible for providing shore power to auxiliary engines while at dock to meet idling requirements; as such facility owners and operators must provide access to power if available and accessible connection points to enable a shore power connection.

### **J. Subsection (i) Facility Infrastructure Requirements**

#### Purpose of Subsection 93118.5(i)

This subsection establishes facility infrastructure requirements for infrastructure to support shore power and ZEAT.

#### Rationale of Subsection 93118.5(i)

The Proposed Amendments newly include facility owner and operator responsibilities in addition to the existing vessel owner and operator responsibilities. For vessel owners and operators to be able to comply with idling requirements and requirements for adopting ZEAT vessels in certain vessel categories, it is critical to require facilities and vessel owners and operators to install necessary infrastructure. The specific requirements and rationale is included in the following text.

#### **1. Subsection (i)(1) Facility Operator and Facility Operator Shore Power Requirements**

#### Purpose of Subsection 93118.5(i)(1)

This subsection establishes the shore power infrastructure requirements for facility owners and facility operators and establishes joint responsibility between the facility owners and operators to meet this requirement.

#### Rationale of Subsection 93118.5(i)(1)

This subsection is necessary to clarify that facility owners and operators would need to provide up to 99 kW of land-side shore power infrastructure per vessel for vessel owners and operators to meet idling or engine operating requirements as set forth in subsection (h). CARB staff proposes joint responsibility between facility owners and facility operators because lease agreements and terms between the facility owner and operator vary from location. Therefore, it would be the responsibility of the facility owners and operators to develop a mutual agreement or arrangement on the responsibilities to meet this requirement.

**a. Subsection (i)(1)(A)1. through 3.**

Purpose of Subsection 93118.5(i)(1)(A)1. through 3.

These subsections establish the deadline of January 1, 2024 for facility owners and operators to provide and be responsible for maintaining shore power infrastructure if they allow more than 50 vessels to visit per year. This subsection defines a vessel visit as a period of time lasting between one and 24 hours with engine(s) using shore power at a facility.

Rationale of Subsection 93118.5(i)(1)(A)1. through 3.

The Proposed Amendments would take effect on January 1, 2023; CARB staff considers one year an appropriate amount of time for facilities to build shore power infrastructure if a facility is not yet equipped. A vessel visit threshold of 50 visits per year is proposed to ensure facilities that do not conduct business with CHC, such as facilities that primarily have docks for recreational vessels, but occasionally allow CHC to dock, are not required to install shore power for an incremental emissions benefit. This subsection is necessary to clarify that facilities are responsible for installing and maintaining shore power infrastructure in working condition.

Purpose of Subsection 93118.5(i)(1)(A)3.a.

This subsection establishes that a facility owner or operator who is not able to install shore power infrastructure by January 1, 2024 may request a compliance extension as set forth in subsection (e)(12)(E)(1).

Rationale of Subsection 93118.5(i)(1)(A)3.a.

This subsection is necessary to allow facilities that are not able to install infrastructure by the compliance date due to reasons that are out of their control to apply for a compliance extension.

**b. Subsection (i)(1)(B)**

Purpose of Subsection 93118.5(i)(1)(B)

This subsection establishes that facility owners and operators shall install shore power up to 99 kW per vessel, and specifies that shore power needs greater than 99 kW per vessel are not the responsibility of facility owners and operators.

Rationale of Subsection 93118.5(i)(1)(B)

This subsection is necessary to clarify CARB staff intent that facilities are not expected to provide infrastructure for the compliance strategy of a vessel owner or operator for the functional purpose of their vessel. From feedback received, the maximum engine power of an onboard generator is 99 kW. As such, it is necessary to clarify that other

use of electricity other than house load power is not the responsibility of facility owners and operators.

**c. Subsection (i)(1)(C)**

Purpose of Subsection 93118.5(i)(1)(C)

This subsection establishes that if distributed generation is used to supply shore power, the electricity generated must meet the emissions standards defined in subsection (d).

Rationale of Subsection 93118.5(i)(1)(C)

This subsection is necessary to prevent situations where internal combustion engine power from stationary or portable generators is used to provide shore power, which would undermine the emission benefits of using shore power from grid electricity. The standards defined in subsection (d) are intended to achieve emissions levels equal to or more stringent than grid electricity.

**d. Subsection (i)(1)(D)**

Purpose of Subsection 93118.5(i)(1)(D)

This subsection establishes the requirements for facilities that do not provide shore power infrastructure due to not meeting 50 vessel visits threshold. Requirements include submitting an exemption request, obtaining CARB's approval, reporting annual vessel visits, and installing shore power by January 1 of the year that is between 12 and 24 months after reaching 50 vessel visits per year.

Rationale of Subsection 93118.5(i)(1)(D)

This provision is necessary for CARB to effectively implement and enforce the facility infrastructure requirements of the Proposed Amendments. Without applying for an exception, a facility could not provide shore power and claim that they did not offer more than 50 vessel visits per year. It is important to clarify that once facilities offer more than 50 vessel visits per year, that requirements to report and provide shore power are triggered.

**2. Subsection (i)(2) Facility Owner and Facility Operator ZEAT Infrastructure Requirements**

Purpose of Subsection 93118.5(i)(2)

This subsection establishes facility infrastructure requirements for any facility where ZEAT vessels dock or moor at its location.

#### Rationale of Subsection 93118.5(i)(2)

It is necessary to establish clear responsibilities on ZEAT infrastructure for facility owners and operators to understand what they must do to support operation of ZEAT vessels.

#### Purpose of Subsection 93118.5(i)(2)(A)

This subsection establishes that facilities must allow the installation of charging or fueling infrastructure needed to power ZEAT vessels.

#### Rationale of Subsection 93118.5(i)(2)(A)

ZEAT infrastructure is one of the key factors to ensure deployment and operation of ZEAT vessels is feasible. It is necessary to establish that facility owners or operators cannot impede or prevent the installation of ZEAT infrastructure needed where ZEAT vessels dock or moor.

#### Purpose of Subsection 93118.5(i)(2)(B)

This subsection establishes that facility owners and operators must cooperate with vessel owners and operators to allow for surveying, permitting, construction, installation, and maintenance of the necessary charging or fueling infrastructure required to effectively operate ZEAT vessels.

#### Rationale of Subsection 93118.5(i)(2)(B)

This subsection is necessary to establish that facility owners and operators must work with vessel owners and operators to allow the installation of charging or fueling infrastructure to support operation of ZEAT vessels. Without facilities permission and assistance, infrastructure would not be able to be installed and ZEAT vessels would not be able to operate. As such, it would be impossible to deploy the ZEAT vessels in marine sector and owners and operators of ZEAT vessels would not be able to comply.

### **3. Subsection (i)(3) Vessel Owners and Operators ZEAT Infrastructure Requirements**

#### Purpose of Subsection 93118.5(i)(3)(A)

This subsection establishes that ZEAT vessel owners and operators are responsible for purchasing, installing and maintaining ZEAT infrastructure.

#### Rationale of Subsection 93118.5(i)(3)(A)

The installation and maintenance of ZEAT infrastructure can require investments that require cost recovery over a period of time that exceeds the length of lease terms. If the tenant with a particular vessel no longer visits the facility, it may result in stranded

assets for the facility. There is a higher likelihood of stranded assets for harbor craft because technology is becoming commercialized but is not yet standardized. Unlike passenger cars where standard SAE J1772 plug connections are used on most vehicles, the physical connections and charging protocols are not established within the marine sector. Therefore, CARB staff does not propose that facilities should be responsible for installing infrastructure to support ZEAT.

## **K. Subsection (j) Facility Recordkeeping and Reporting Requirements**

### Purpose of Subsection 93118.5(j)

This subsection defines the general information that a facility owner or operator needs to report, and specifies an initial reporting requirement by July 1, 2023 and on an annual basis thereafter.

### Rationale of Subsection 93118.5(j)

This provision is necessary because CARB staff estimates that over one-third of vessels operating in the State, which are subject to the CHC Regulation, has not satisfied the reporting requirements of CARB's Current Regulation. Unreported vessels may have non-compliant engines, and without proper reporting, CARB is limited in its ability to locate, identify, and ensure that the vessels are compliant with the regulation and are achieving the intended emission reductions. To improve the reporting rate and help CARB implementation and enforcement staff identify non-reported harbor craft, it is necessary to establish recordkeeping and reporting requirements for facilities. This will ensure that the applicable facilities are aware of their reporting obligations on harbor craft visiting their facilities.

### **1. Subsection (j)(1)**

#### Purpose of Subsection 93118.5(j)(1)

This subsection establishes that facility owners and operators or marine oil terminal operators must submit an initial list of all vessel tenants no later than July 1, 2023, and report vessel information for all vessel tenants annually thereafter.

#### Rationale of Subsection 93118.5(j)(1)

It is necessary to set July 1, 2023 as the starting date, which is after the effective date and within the first year that the Proposed Amendments would take effect. It is necessary to set visit thresholds of a minimum of seven days per month for a reporting facility, or any number of visits for a marine oil terminal. The basis for reporting vessels staying for seven days or longer is to capture non-reported harbor craft, not necessarily to capture daily vessel activity. During discussions with facility owners and operators in workgroup meetings as outlined in Appendix F, vessels remaining at one location longer than seven days typically require a contract or agreement with the facility. The exception is marine oil terminals, which often have vessels staying for

shorter than seven days, but typically only allow vessels with a contract or business purpose to dock.

#### Purpose of Subsection 93118.5(j)(1)(A)

This subsection establishes the detailed information of what facilities need to report.

#### Rationale of Subsection 93118.5(j)(1)(A)

This subsection is necessary for facilities to be aware of what information they are required to report on an annual basis.

#### Purpose of Subsections 93118.5(j)(1)(A)1 through 3

These subsections establish that facility operators must report facility name, address, and geographic coordinate information.

#### Rationale of Subsections 93118.5(j)(1)(A)1 through 3

These subsections are necessary to identify the facility where vessel owners and operators may be docking or mooring. These subsections are also necessary for CARB to recognize which facility is reporting.

#### Purpose of Subsections 93118.5(j)(1)(A)4 through 7

These subsections establish that facilities must report the property owner name, facility owner or operator, address, and responsible official and applicable facility owner or operator contact information.

#### Rationale of Subsections 93118.5(j)(1)(A)4 through 7

These subsections are necessary so that CARB is able to contact the responsible party for facility reporting related issues or questions.

#### Purpose of Subsection 93118.5(j)(1)(B)

This subsection establishes that each facility must report each vessel's CARB UVI, vessel name, vessel type, and other identifier, such as a USCG or IMO number if no CARB UVI is available.

#### Rationale of Subsection 93118.5(j)(1)(B)

One of the purposes of establishing facility reporting requirements is to improve vessels reporting rate. It is necessary for facilities to report vessel information so that CARB can locate vessels that are operating in California but have not reported to CARB. It is necessary to provide a unique identifier because many vessels have the same non-unique name or Nautilus.

#### Purpose of Subsections 93118.5(j)(1)(C)1. through 5.

These subsections establish that a facility owner or operator must report vessel owner or operator contact information, including company name, mailing address, primary contract, phone number and email address.

#### Rationale of Subsections 93118.5(j)(1)(C)1. through 5.

This information is necessary to report to provide CARB sufficient information to follow up with the vessel owners and operators regarding their compliance obligations under the Proposed Amendments.

#### Purpose of Subsections 93118.5(j)(1)(D) through (F)

These subsections establish that a facility owner or operator must report the start date and end date of each vessel and facility use agreement, and which dock, berth, or slip location or number where a vessel docks at the facility.

#### Rationale of Subsections 93118.5(j)(1)(D) through (F)

This information is necessary to enable CARB staff to corroborate the vessel information as to the period of time that the vessel docks at the facility and the location the vessel is docked, which assist with accurate tracking and locating of vessels for implementation and enforcement of the Proposed Amendments.

#### Purpose of Subsection 93118.5(j)(1)(G)

This subsection establishes that a facility owner or operator must retain and report the annual vessel visits if below 50 visits per calendar year.

#### Rationale of Subsection 93118.5(j)(1)(G)

Facilities with fewer than 50 vessel visits are exempt from the shore power infrastructure requirements and would be subject to shore power infrastructure if 50 vessel visits is reached. As such, it is necessary to request vessel visit information for CARB to determine whether or not a facility has been tracking visits and is required to meet the shore power requirements.

## **2. Subsection (j)(2)**

#### Purpose of Subsection 93118.5(j)(2)

This subsection establishes that facilities with land-side infrastructure must report infrastructure information and it specifies the due date of January 1, 2024 for submitting the required information.

#### Rationale of Subsection 93118.5(j)(2)

This subsection is necessary to ensure that CARB effectively implements and enforces the main engine idling and/or auxiliary engine operating time limits. If a facility is not required to install shore power, then the vessel would be permitted to operate auxiliary engines beyond the 15 or 30 minute limits set forth in subsection (h). Requiring a report submission date of January 1, 2024 aligns with the compliance date of facility shore power requirements in subsection (i). For infrastructure installed after January 1, 2024, a timeframe of 30 days for submission is consistent with other reporting requirements of the Proposed Amendments.

#### Purpose of Subsections 93118.5(j)(2)(A) through (C)

These subsections establish the infrastructure information that facilities must report, which include infrastructure type, manufacturer, serial number, installation date, equipment type supported, number of vessels supported, number of plugs, plug configuration, amperage, and voltage for each connection.

#### Rationale of Subsection 93118.5(j)(2)(A) through (C)

Knowing infrastructure information allows CARB staff to verify the connection compatibility and investigate discrepancies between vessels and facilities, which is critical for effective implementation and enforcement of the Proposed Amendments.

### **3. Subsection (j)(3)**

#### Purpose of Subsection 93118.5(j)(3)(A)

This subsection sets the timeline of three years for retaining records including the date, local time, and position for each vessel tenant, and if applicable, the date of vacancy for each vessel tenant, and it sets an expected delivery time of 30 days to supply CARB with records when requested.

#### Rationale of Subsection 93118.5(j)(3)(A)

This provision is necessary to ensure that facility operators maintain records for a sufficient amount of time for CARB to effectively implement and enforce the regulation. Without any records, it would not be possible for CARB to audit or determine whether a facility was reporting all vessels docking or mooring at a facility. The expected delivery of records in 30 days is consistent with other recordkeeping requirements.

## **L. Subsection (k) Opacity Testing and Emission Control Repair Requirements**

### Purpose of Subsection 93118.5(k)

This subsection establishes requirements and test procedures that all main propulsion engines must follow when conducting opacity tests and defines opacity limits that both main propulsion engines and auxiliary engines must not exceed in order to comply with opacity testing requirements. This subsection also establishes recordkeeping and reporting requirements related to opacity testing for main and auxiliary engines.

### Rationale of Subsection 93118.5(k)

CARB has received complaints about visible emissions coming from harbor craft in several areas of the State. However, the Current Regulation does not have any mechanism to address this issue. This subsection allows CARB to require harbor craft operators to perform opacity testing to ensure vessel owners and operators maintain engines and aftertreatment in proper working condition, identify the cause of excess emissions, and take corrective action accordingly.

### **1. Subsection (k)(1) Test Procedure and Repair Requirements**

#### Purpose of Subsection 93118.5(k)(1)

This subsection defines test procedures for performing opacity testing and establishes repair requirements if the tested engines exceed opacity limits. This subsection specifies that the SAE J1667 recommended practice would be applied to harbor craft under the Proposed Amendments. Specific purpose and rationale of subparts is contained in the following text.

#### Rationale of Subsection 93118.5(k)(1)

This subsection is necessary because it is critical to establish specific test procedures that apply to all harbor craft to ensure all tests are performed in a consistent manner.

#### Purpose of Subsection 93118.5(k)(1)(A)

This subsection establishes that opacity should be measured downstream of all aftertreatment, but upstream of any water muffler or water injection systems into the exhaust stream.

#### Rationale of Subsection 93118.5(k)(1)(A)

It is necessary to clarify the appropriate location for opacity testing to ensure emissions are measured without contamination. The Proposed Amendments would require opacity testing downstream of any aftertreatment, such as a DPF, to ensure it is in proper working order and is repaired if damaged; conversely, opacity testing

would be required upstream of any water exhaust system, because the presence of water vapor or liquid, and/or seawater injection would interfere with the light-absorption measurement of opacity that is intended to detect the presence of soot in the exhaust stream.

#### Purpose of Subsection 93118.5(k)(1)(B)

This subsection outlines test procedures for performing opacity tests.

#### Rationale of Subsection 93118.5(k)(1)(B)

This subsection is necessary because CARB staff is proposing to modify part of the existing SAE J1667 procedure to evaluate emissions while the vessel is accelerating in open water rather than accelerating the engine speed while the engine is disengaged from the propeller or jet drive. As discussed in Appendix E, it is not possible for all harbor craft vessels to disengage the engine from the propeller. Therefore, it is necessary to have clear tangible steps established for opacity testers to follow to ensure tests are conducted consistently between various types of vessels.

#### Purpose of Subsection 93118.5(k)(1)(C)

This subsection establishes that individuals conducting opacity tests must have completed appropriate training and obtained certification on the proper administration of the specified test procedure.

#### Rationale of Subsection 93118.5(k)(1)(C)

This subsection is necessary to ensure opacity testers understand the test procedures, and the opacity testing is performed correctly by following the test procedures established.

#### Purpose of Subsection 93118.5(k)(1)(D)

This subsection establishes that an alternative compliance method may be used if approved in situations where complying with opacity testing requirements is not feasible.

#### Rationale of Subsection 93118.5(k)(1)(D)

CARB staff understands every vessel is unique, and some vessel categories may have logistical limitations to accelerate at full power in open water. This provision is necessary to allow the use of an alternative test procedure if approved by CARB to demonstrate or evaluate whether engines and aftertreatment devices are in proper working condition.

#### Purpose of Subsection 93118.5(k)(1)(E)

This subsection establishes that if a Category 2 or Category 3 engine does not meet opacity limits required, a letter or attestation provided by a certified third-party engine professional may be considered as an alternative compliance method.

#### Rationale of Subsection 93118.5(k)(1)(E)

Category 2 and Category 3 engines are large displacement engines and respond more slowly to changes. In addition, operational characteristics and response vary widely for different engine manufacturers. In some situations, Category 2 or Category 3 engines are not able to meet opacity limits even if engines are functioning properly. As such, this provision is necessary to provide an alternative compliance method if engines are certified to be in proper working condition.

#### Purpose of Subsection 93118.5(k)(1)(F)

This subsection establishes that CARB has authority to perform opacity testing in the field, audit opacity test records at any time, and request necessary actions along with supporting documentation for audit purposes. This subsection also establishes a timeframe by which a vessel owner or operator would need to complete an inspection report of their engines or emission control systems (within 30 days) and perform any corrective action (within 30 additional days).

#### Rationale of Subsection 93118.5(k)(1)(F)

This provision is necessary to enable CARB to evaluate the need for, and request corrective action be taken to repair malfunctioning emission control systems on engines or aftertreatment devices.

#### Purpose of Subsection 93118.5(k)(1)(G)

This subsection establishes that opacity testing is not required for swing engines when maintained at a dockside location but that it is required once installed on a vessel.

#### Rationale of Subsection 93118.5(k)(1)(G)

It is necessary to require swing engines, when operating on a vessel, to perform opacity testing to ensure the engines are subject to the same requirements of any other diesel engine operating on a vessel.

## **2. Subsection (k)(2) Opacity Limits for Main Propulsion and Auxiliary Engines**

### Purpose of Subsection 93118.5(k)(2)(A)

This subsection sets forth a 5 percent opacity limit that both main propulsion engines and auxiliary engines meeting the Tier 3 or 4 + DPF performance standards must not exceed.

### Rationale of Subsection 93118.5(k)(2)(A)

This subsection is necessary so that vessel owners and operators are aware of the opacity limit engines equipped with DPFs must not exceed. The 5 percent opacity limit is consistent with the latest requirements for DPF equipped engines in CARB's PSIP and HDVIP for on-road heavy-duty vehicles.

### Purpose of Subsection 93118.5(k)(2)(B)

This subsection sets forth a 40 percent opacity limit that both main propulsion engines and auxiliary engines not equipped with DPFs must not exceed, regardless of certification level or fuel type, to comply with opacity testing requirements.

### Rationale of Subsection 93118.5(k)(2)(B)

This subsection is necessary so that vessel owners and operators are aware of the opacity limit that non-DPF engines must not exceed. As discussed in Appendix E, CARB staff performed opacity tests on seven vessels, which included tugboats, ferries, workboats, and excursion vessels, representing engines ranging from uncertified pre-Tier 1 engines to engines certified Tier 4 standards. Based on the tests data collected, CARB staff set 40 percent as the opacity limit for non-DPF engines.

## **3. Subsection (k)(3) Biennial Testing Requirements for Main Propulsion Engines**

### Purpose of Subsection 93118.5(k)(3)(A)

This subsection establishes that a vessel owner or operator subject to this subsection must perform opacity testing on main propulsion engines biennially, and the results must be submitted to CARB by March 31 of each even-numbered calendar year.

### Rationale of Subsection 93118.5(k)(3)(A)

This subsection is necessary for vessel owners and operators to be aware of the time frame for conducting opacity tests and the time frame for submitting the test results. The submission date of March 31 is consistent with the submission date of the annual reporting requirements of opacity data in subsection (o)(1). A date of March 31 was selected to provide vessel owners and operators sufficient time to prepare and submit required information at a time not coinciding with the State holidays on and preceding

January 1. CARB staff considers requiring opacity testing once every two years to be a reasonable frequency to detect malfunctioning emission controls considering engines are subject to audit and inspection at any time.

#### Purpose of Subsection 93118.5(k)(3)(B)

This subsection establishes that engines with MY 2020 or newer are exempt from this subsection until the calendar year that is four years after the MY of the engine.

#### Rationale of Subsection 93118.5(k)(3)(B)

This subsection is necessary to avoid self-testing newer engines that have a higher likelihood of being in good working condition compared to engines that are older than four years old. A time frame of four years is also consistent with the opacity testing requirements set forth in CHE Regulation as set forth in 13 CCR 2479.

#### Purpose of Subsection 93118.5(k)(3)(C)

This subsection establishes that if any vessel(s) based outside of California will be in RCW for more than 30 consecutive days, opacity testing must be performed on all applicable engines within 30 days of entering RCW. This subsection also establishes newly installed engines, such as swing engines, are subject to opacity testing under the same timeline.

#### Rationale of Subsection 93118.5(k)(3)(C)

CARB staff considers operating less than 30 consecutive days as temporary operational time; as such, to reduce opacity testing burden on vessel owners and operators, operating in RCW less than 30 days would not require opacity testing, but engines would still remain subject to meeting and complying with opacity limits at all times while within RCW. The provision for newly installed engines is necessary to clarify that those engines, such as swing engines, must be opacity tested within a short time period of their installation to ensure proper function.

#### Purpose of Subsection 93118.5(k)(3)(D)

This subsection establishes the procedures that regulated parties must follow in situations where the opacity exceeds the applicable opacity limits; within 30 days the emission control system must be repaired, and the engine must be retested prior to returning the engine to normal revenue service.

#### Rationale of Subsection 93118.5(k)(3)(D)

It is necessary to require the engine that failed the opacity test be repaired or be taken out of service. It is necessary to require that the engine, DPF, or other emission control systems be repaired such that it meets the opacity requirements before being returned to service. It is necessary to require a post-repair opacity test be performed

to determine if the repairs made were sufficient to meet opacity limits. A period of 30 days was selected, rather than a shorter time period, because if repairs require ordering replacement parts, such as a new substrate for the DPF, the process of diagnosing, ordering, receiving, and installing the new parts may require up to a few months. The 90-day time period is consistent with the requirements for VDECS as specified in (e)(12)(F).

#### Purpose of Subsection 93118.5(k)(3)(E)

This subsection establishes if the post-repair opacity measure is greater than the applicable opacity limits, the engine shall remain out of service until it can be repaired so that the post-repair opacity meets opacity limits.

#### Rationale of Subsection 93118.5(k)(3)(E)

This provision is critical to ensuring the engine is in good working condition and does not return to service until it has been repaired.

### **4. Subsection (k)(4) Opacity Compliance Requirements for Auxiliary Engines**

#### Purpose of Subsection 93118.5(k)(4)(A)

This subsection establishes that auxiliary engines must meet opacity limits but are not required to be tested biennially.

#### Rationale of Subsection 93118.5(k)(4)(A)

As discussed in Appendix E, due to the variety of applications, CARB is not proposing to require biennial opacity testing for auxiliary engines. However, the Proposed Amendments would require auxiliary engines to be subject to meeting proposed opacity limits. Upon receiving complaints or observing auxiliary engines with excess visible emissions, CARB enforcement staff may evaluate compliance with opacity limits using any sound engineering method as defined by SAE J1667 over a 5-inch path length. Appendix E provides more details on methods that may be used to measure the opacity limits for auxiliary engines.

#### Purpose of Subsection 93118.5(k)(4)(B)

This subsection establishes the procedures that must be followed if auxiliary engines do not meet opacity limits.

#### Rationale of Subsection 93118.5(k)(4)(B)

This provision is aligned with the requirements required for main engines when failing to meet opacity limits. It is necessary to require necessary repairs to ensure auxiliary engines in good working condition and meet opacity limits.

## **M. Subsection (I) Compliance Fee Requirements**

### Purpose of Subsection 93118.5(I)

This subsection establishes the compliance fee requirements that would apply to all CHC except for commercial fishing vessels.

### Rationale of Subsection 93118.5(I)

CARB is authorized by HSC 43019.1 to adopt a schedule of fees to cover reasonable costs associated with compliance. This is a new subsection, which was not included in the Current Regulation. This subsection is necessary so that CARB staff is available to effectively implement and enforce the Proposed Amendments. Commercial fishing vessels are not subject to fees for the same reason they are subject to less stringent requirements than the rest of CHC. Commercial fishing vessels are price-takers and are not able to effectively pass on compliance costs to an individual or customer.

### Purpose of Subsection 93118.5(I)(1)

This subsection establishes that fees are only assessed based on the number of main engines and number of vessels; no fees are assessed for auxiliary engines operating on harbor craft.

### Rationale of Subsection 93118.5(I)(1)

It is reasonable that fee payment is based on the number of main engines and number of vessels because the more vessels and main engines a fleet owns or operates, the more time and staff are needed to implement and enforce the Proposed Amendments. Some auxiliary engines are permitted by local air districts or enrolled in PERP and are already subject to other compliance fees. It is necessary to exclude auxiliary engines from CHC compliance fees to avoid vessel owners and operators from paying two sets of fees for the same engines.

### Purpose of Subsections 93118.5(I)(2) through (4)

These subsections instruct vessel owners and operators as to the process and the first deadline of September 1, 2023 for submitting their applicable fee payment amount and establishes that fees are non-refundable except in circumstances as determined by the EO.

### Rationale of Subsections 93118.5(I)(2) through (4)

These subsections are necessary to include so that regulated entities know how to submit their fee payment in order to comply with the compliance fee requirements. It is necessary for regulated entities to understand that fees are non-refundable unless the EO determines that fees can be refunded. A fee due date of September 1 was

chosen is to provide CARB staff sufficient time to process annual reports which ensure the most up-to-date vessel and engine information was used to calculate fees.

#### Purpose of Subsection 93118.5(l)(5)

This subsection sets the annual fees, late fees, and late fee deadlines that each vessel owner or operator of regulated in-use vessels would pay to the EO.

#### Rationale of Subsection 93118.5(l)(5)

In accordance with HSC 43019.1, the fee amount is based on estimates of CARB personnel, travel, and contract costs to conduct implementation and enforcement of the Proposed Amendments. This includes, but is not limited to, receiving and processing vessel and facility reports, outreach and follow-up with regulated parties, review and approval of compliance extension requests, and statewide enforcement of the regulation. Late fees were calculated assuming that the same number of vessel owners and operators not currently reporting to CARB would not pay fees, and the cost of the dedicated staff within CARB's enforcement division for collection of late fees.

### **N. Subsection (m) Recordkeeping Requirements**

#### Purpose of Subsection 93118.5(m)

This subsection defines which information vessel owners and operators need to maintain and be made available upon request to CARB.

#### Rationale of Subsection 93118.5(m)

This subsection is necessary to ensure vessel owners and operators are maintaining all of the necessary information and make it available, if requested, to CARB. This subsection was included in the Current Regulation. The Proposed Amendments makes some clarifications and requires more information to be maintained to reflect the additional requirements in the Proposed Amendments.

#### **1. Subsection (m)(1) Owner or Operator Contact Information**

##### Purpose of Subsection 93118.5(m)(1)(C)

This subsection clarifies that address for the vessel owner or operator refers to the address where the company is located.

##### Rationale of Subsection 93118.5(m)(1)(C)

It is necessary to clarify exactly which address is needed. Vessel registration location might not be the same as the location where the company is located.

## **2. Subsection (m)(2) Vessel Information**

### Purpose of Subsection 93118.5(m)(2)(B)

This subsection clarifies vessel categories for vessel information by specifying sub vessel categories based on the vessel use.

### Rationale of Subsection 93118.5(m)(2)(B)

This clarification and update is necessary to align with industry nomenclature and regulatory requirements. In addition, these categories align with those presented in this ISOR and in the emission inventory calculations. Collecting this information will refine CARB's ability to update emission inventories over time and develop new strategies to reduce emissions from harbor craft.

### Purpose of Subsection 93118.5(m)(2)(C)

This subsection clarifies that vessel homebase is required instead of vessel homeport.

### Rationale of Subsection 93118.5(m)(2)(C)

Some stakeholders expressed confusion between homeport defined in the Current Regulation and hailing port defined by USCG. To eliminate the confusion, the Proposed Amendments would remove references to homeport and instead use homebase.

## **3. Subsection (m)(3) Engine Information (for Each Diesel Engine on the Vessel, Including Swing Engines)**

### Purpose and Rationale of Subsection 93118.5(m)(3)(F)

This subsection clarifies that after January 1, 2023, engine model year instead of year of manufacture of engine is required.

### Purpose and Rationale of Subsection 93118.5(m)(3)(F)

To eliminate confusion over engines manufactured after their designated model year, this provision is necessary to clarify that the Proposed Amendments would require engine MY.

## **4. Subsection (m)(4) Operational Information**

### Purpose of Subsection 93118.5(m)(4)(B)

This subsection clarifies that the total annual hours for commercial operation needs to be maintained and separated from other uses.

#### Rationale of Subsection 93118.5(m)(4)(B)

This information is necessary to satisfy the needs for some requirements, for example, low-use exceptions in (e)(14), in which total annual hours of operation is based on the commercial operation only.

#### Purpose of Subsection 93118.5(m)(4)(C)

This subsection clarifies that the total annual hours of all activities needs to be maintained, including commercial operation, non-commercial operation within and outside of RCW, and daily operational logbooks as needed.

#### Rationale of Subsection 93118.5(m)(4)(C)

This information is necessary to satisfy the needs for some requirements, for example, low-use exceptions in (e)(14), in which total annual hours of operation is based on the commercial operation only.

#### Purpose of Subsection 93118.5(m)(7)

This subsection clarifies that this provision is only applicable until December 31, 2022.

#### Rationale of Subsection 93118.5(m)(7)

The Proposed Amendments removed provisions for near-retirement vessels. As such, it is necessary to clarify that this provision is no longer applicable after January 1, 2023.

#### Purpose of Subsection 93118.5(m)(8)

This subsection establishes that the provision for determining the effective engine model year using the "Engine's Model Year + 5" method pursuant to subsection (e)(6)(D)2 is only applicable until December 31, 2022.

#### Rationale of Subsection 93118.5(m)(8)

Subsection (e)(6) is replaced with subsection (e)(12) in the Proposed Amendments. As such, it is necessary to clarify that this provision is no longer applicable after January 1, 2023.

#### Purpose of Subsection 93118.5(m)(9)

This subsection clarifies that this provision also applies to subsection (e)(12)(E)5 of the Proposed Amendments to comply with subsection (e)(12)(C) and (e)(12)(D).

#### Rationale of Subsection 93118.5(m)(9)

Subsection (e)(6)(E)3 is updated in subsection (e)(12)(E)5 of the Proposed Amendments, and (e)(6) in the Current Regulation is replaced with (e)(12) in the Proposed Amendments. As such, it is necessary to update the reference accordingly to reflect the proper provisions in both the Current Regulation and Proposed Amendments.

#### Purpose of Subsection 93118.5(m)(10)

This subsection clarifies that this provision is also applicable to (e)(12).

#### Rationale of Subsection 93118.5(m)(10)

Subsection (e)(6) in the Current Regulation is replaced with subsection (e)(12) in the Proposed Amendments. As such, it is necessary to clarify this provision applies to (e)(12) in the Proposed Amendments as well.

#### Purpose of Subsection 93118.5(m)(11)

This subsection establishes that records for each VDECS must be retained for the entire VDECS life.

#### Rationale of Subsection 93118.5(m)(11)

This information is necessary to help CARB effectively implement and enforce the Proposed Amendments.

#### Purpose of Subsection 93118.5(m)(13)

This subsection clarifies that this provision is only applicable until December 31, 2022.

#### Rationale of Subsection 93118.5(m)(13)

The Proposed Amendments removed the BACT requirements for new ferries. As such, it is necessary to specify that this provision is not applicable after January 1, 2023.

### **5. Subsection (m)(14) Vessel Information**

#### Purpose of Subsection 93118.5(m)(14)(A)

This subsection establishes that a vessel owner or operator needs to keep a photo of the vessel.

#### Rationale of Subsection 93118.5(m)(14)(A)

This subsection is necessary to differentiate vessels that have the same name. In addition, requiring a photo of the vessel may help CARB determine whether the

reported vessel is classified correctly and assist CARB during other implementation and enforcement activities.

Purpose of Subsection 93118.5(m)(14)(B)

This subsection establishes that a vessel owner or operator must describe vessel activity information.

Rationale of Subsection 93118.5(m)(14)(B)

This provision is necessary to assist CARB to verify whether the vessel category is classified accurately.

Purpose of Subsection 93118.5(m)(14)(C)

This subsection establishes that a vessel owner or operator must maintain records of percent time operated in each vessel category.

Rationale of Subsection 93118.5(m)(14)(C)

This information is necessary to enable CARB to effectively implement the regulation by determining the compliance date of a vessel.

Purpose of Subsection 93118.5(m)(14)(D) and (E)

These subsections establish that a vessel owner or operator must maintain records of the vessel's overnight berthing or mooring location in RCW (if applicable), specify whether the vessel transits interstate continuously, stopping only for commerce or at anchorages, and whether and where the vessel operates exclusively or periodically in RCW.

Rationale of Subsection 93118.5(m)(14)(D) and (E)

This information is necessary to help CARB identify and locate vessels for effective implementation and enforcement of the Proposed Amendments.

Purpose of Subsection 93118.5(m)(14)(F)

This subsection establishes that a vessel owner or operator must keep record of the California DMV CF number if applicable.

Rationale of Subsection 93118.5(m)(14)(F)

This is necessary to allow CARB staff to identify a vessel when DMV CF number is the only number available. Requesting the DMV CF number is not required by the Current Regulation and is a new component. California DMV CF number is a unique number which can be used to identify a certain vessel.

#### Purpose of Subsection 93118.5(m)(14)(G)

This subsection establishes that a vessel seller must maintain documentation of purchase transaction indicating the date, selling party, and purchasing party name.

#### Rationale of Subsection 93118.5(m)(14)(G)

This provision is necessary for CARB to verify whether the vessel is a relocated vessel or newly acquired in-use vessel and ensure that vessel is subject to the appropriate requirements of the Proposed Amendments.

#### Purpose of Subsection 93118.5(m)(14)(H)

This subsection establishes that a vessel seller must maintain transaction records, including the date of sale, the purchasing entity name, and contact information.

#### Rationale of Subsection 93118.5(m)(14)(H)

This provision is necessary to indicate if a vessel has been sold and that the seller has no compliance obligations for that vessel. Knowing the purchasing entity name and contact information would help CARB identify the new operator of the vessel if the buyer did not submit required reporting after purchasing and operating the vessel.

#### Purpose of Subsection 93118.5(m)(14)(I)

This subsection establishes that a vessel owner or operator must maintain records of incentive funding information if any incentive funding is received.

#### Rationale of Subsection 93118.5(m)(14)(I)

This provision is necessary to help CARB staff verify the eligibility of ZEAT credits or ACE plans that are included in the Proposed Amendments.

### **6. Subsection (m)(15) Engine Information (for Each Diesel Engine on the Vessel, Including Swing Engines)**

#### Purpose of Subsections 93118.5(m)(15)(A) and (B)

These subsections establish that a vessel owner or operator must keep record of the general location and applicable tier level of engines.

#### Rationale of Subsections 93118.5(m)(15)(A) and (B)

These subsections are necessary because requiring an engine's general location helps CARB enforcement staff identify the specific engine in the field. Knowing an engine's tier level helps CARB verify the compliance status of the engine.

## **7. Subsection (m)(16) Operational Information**

### Purpose of Subsection 93118.5(m)(16)(A)

This subsection establishes that a vessel owner or operator must record the operating time if a vessel is used to perform emergency operations.

### Rationale of Subsection 93118.5(m)(16)(A)

Emergency operations are not counted toward the operation hours limits in some requirements of the Proposed Amendments, for example annual hours of operation for low-use exceptions. As such, it is necessary to record and report those hours used in emergency operations.

## **8. Subsection (m)(17) Control Equipment (If Applicable)**

### Purpose of Subsections 93118.5(m)(17)(A) and (B)

These subsections establish that a vessel owner or operator must maintain records of DEF consumption and installer information if engines are equipped with SCR systems.

### Rationale of Subsections 93118.5(m)(17)(A) and (B)

Recording DEF consumption helps vessel owners and operators examine whether an SCR system has been functioning properly. Requiring installer information for third-party DPFs and SCRs is necessary for CARB to reach out to the installer if an operator has a tampered configuration, or a problem with the install. This information is also necessary to align and reconcile records reported under CARB's VDECS regulations to effectively implement and enforce the Proposed Amendments.

## **9. Subsection (m)(18) Records of Opacity Testing and Emission Control Repair**

### Purpose of Subsections 93118.5(m)(18)(A) and (B)

These subsections establish that a vessel owner or operator must maintain records of the brand name and model of the opacity meter, and dates of last calibration of the opacity meter and chart recorder.

### Rationale of Subsection 93118.5(m)(18)(A) and (B)

These subsections are necessary to verify whether the opacity meter used meets and is calibrated to SAE J1667 specifications.

### Purpose of Subsections 93118.5(m)(18)(C) and (D)

These subsections establish that a vessel owner or operator must maintain records of information of the smoke meter operator who conducted the test, and name and

address of the contracted smoke test facility or vessel repair facility that conducted the test, if applicable.

#### Rationale of Subsections 93118.5(m)(18)(C) and (D)

These subsections are necessary to verify whether the smoke meter operator is certified and qualified to perform the opacity test. This information is necessary to enable CARB staff to contact the smoke meter operator or the opacity test facility for verification.

#### Purpose of Subsection 93118.5(m)(18)(E)

This subsection establishes that a vessel owner or operator must maintain the record of CARB UVI (if issued) or other UVI, engine model, engine make, engine MY, engine family number if applicable, engine serial number, and test date.

#### Rationale of Subsection 93118.5(m)(18)(E)

It is necessary to identify and report to CARB the engines and vessels on which the opacity tests are performed for effective implementation and enforcement of the Proposed Amendments.

#### Purpose of Subsections 93118.5(m)(18)(F) and (G)

These subsections establish that a vessel owner or operator must maintain the records of the test date, hour meter reading at start of the test, initial smoke test opacity levels (for three successive test readings), average of the three readings, test strips upon request, and test results.

#### Rationale of Subsections 93118.5(m)(18)(F) and (G)

It is necessary to require vessel owners and operators to retain and report the test results to CARB. Without this information, CARB staff would not be able to make a determination of compliance with opacity limits.

#### Purpose of Subsections 93118.5(m)(18)(H), (I), and (J)

These subsections establish that a vessel owner or operator must maintain the records of the date the engine was taken out of service, the hour meter reading on that date if the test failed, documentation associated with repair activity, and post-repair test date and hour meter readings of post-test.

#### Rationale of Subsections 93118.5(m)(18)(H), (I), and (J)

This information is necessary to demonstrate that the necessary repairs have been made for engines that failed the opacity tests. Requiring pre-repair and post-repair test dates is necessary to verify whether the repair has been done within 30 days of

the failed test. The repair information is necessary for CARB to effectively identify whether a compliant post-repair opacity measurement would be unequivocally the result of identifying and fixing the root cause of the failure.

#### Purpose of Subsections 93118.5(m)(18)(K) and (L)

These subsections establish that a vessel owner or operator must maintain records of the post-repair test opacity levels, final test results, and test strips upon CARB's request.

#### Rationale of Subsections 93118.5(m)(18)(K) and (L)

These provisions are necessary to verify whether the repaired engines meet the opacity testing requirements and if further actions are needed.

#### Purpose of Subsection 93118.5(m)(18)(M)

This subsection establishes that a vessel owner or operator must maintain the record of the date an engine is put back in active service and a current hour meter reading.

#### Rationale of Subsection 93118.5(m)(18)(M)

This provision is necessary to keep accurate information on vessel activity and help CARB effectively implement and enforce the Proposed Amendments.

### **10. Subsection (m)(19)**

#### Purpose of Subsections 93118.5(m)(19)(A) and (B)

These subsections establish that a vessel owner or operator must maintain the information of manufacturer, model number, and MY of each component of a ZEAT system, as well as maintenance procedures for the component(s), engine(s) and related equipment for the powertrain.

#### Rationale of Subsection 93118.5(m)(19)(A) and (B)

Maintaining this information is necessary for ZEAT vessel owners and operators to follow the appropriate maintenance procedures to ensure ZEAT systems are in good working condition and reach out to component manufacturers if needed.

#### Purpose of Subsections 93118.5(m)(19)(C), (D), and (E)

These subsections establish that a vessel owner or operator must maintain hours of operation and fuel usage for any onboard combustion engines and zero-emission systems.

#### Rationale of Subsections 93118.5(m)(19)(C), (D), and (E)

It is necessary to maintain the records of operation hours and fuel usage of the combustion engines to ensure combustion engines on ZEAT vessels are not operated in excess of allowable limits and only for emergency operations. A limit of 20 hours per year is established before documentation of emergency operations is needed to avoid administrative work for small incidental operations that may be needed but do not meet the definition of emergency operations.

#### Purpose of Subsection 93118.5(m)(19)(F)

This subsection establishes that the hour meter readings of any combustion engines must be recorded whenever a zero-emission short-run ferry operates in a secondary vocation

#### Rationale of Subsection 93118.5(m)(19)(F)

This subsection is necessary to ensure that short-run ferries that operate in secondary vocations are permitted to operate their combustion engines on those routes, while not counting toward combustion hour limitations of zero-emission vessel requirements. As discussed elsewhere, combustion engines can operate up to 20 hours per year for any reason before needing to demonstrate additional hours are due to emergency operations. If no records were required, and the combustion engines were used to operate the vessel in a secondary vocation, there would be no way to effectively implement and enforce against zero-emission vessel operating requirements.

#### Purpose of Subsection 93118.5(m)(19)(G)

This subsection establishes that any non-zero-emission temporary replacement vessel activity occurring on a dedicated zero-emission short-run ferry route shall be reported separately from annual reports within 30 days of the initial operation.

#### Rationale of Subsection 93118.5(m)(19)(G)

This separate reporting data is necessary to ensure the incremental emissions can be evaluated and the performance of zero-emission vessels can be tracked for CARB staff to continue tracking the progress of ZEAT adoption in the marine industry.

#### Purpose of Subsection 93118.5(m)(19)(H)

This subsection establishes that diesel-powered or hybrid vessels interlining on short-run ferry routes must record and report all engines activity occurring on the short-run ferry route separately from annual reporting for activities not occurring on the short-run ferry route.

#### Rationale of Subsection 93118.5(m)(19)(H)

This separate reporting data is necessary for CARB staff to evaluate the efficacy of the short-run ferry vessel requirements to inform additional stringency for ZEAT within the harbor craft sector.

#### Purpose of Subsection 93118.5(m)(19)(I)

This subsection establishes that a vessel owner or operator must maintain all records specific to a particular ZEAT approved by the EO pursuant to subsection (e)(10)(C).

#### Rationale of Subsection 93118.5(m)(19)(I)

This information is necessary to ensure records are retained that CARB has reviewed and approved a ZEAT system prior to its use.

### **11. Subsection (m)(20)**

#### Purpose of Subsections 93118.5(m)(20)(A) through (D)

These subsections establish that for each vessel adopting ZEAT, a vessel owner or operator must maintain zero-emission infrastructure information, including infrastructure type, manufacturer, serial number, installation date, equipment type, number of equipment supported, capacity (fuel/energy storage volume), amp/voltage, public or private use, and number of plugs.

#### Rationale of Subsection 93118.5(m)(20)(A) through (D)

It is necessary to keep records of infrastructure information because those are required to be reported to CARB to assist with implementing and enforcing requirements for facility owners and operators to support infrastructure.

### **O. Subsection (n) Initial and Compliance Plan Reporting Requirements (Applicable until December 31, 2022).**

#### Purpose of Subsection 93118.5(n)

This subsection establishes that the initial and compliance plan reporting requirements in the Current Regulation are no longer applicable after December 31, 2022. In addition, changes to this subsection to identify the correct new subsection references are made.

#### Rationale of Subsection 93118.5(n)

The Proposed Amendments set forth reporting requirements in subsection (o), which replace the initial and compliance plan reporting requirements in subsection (n) in the Current Regulation. As such, it is necessary to sunset subsection (n) to ensure vessel owners and operators comply with subsection (o) of the Proposed Amendments.

**P. Subsection (o) Reporting Requirements (Applicable on and after January 1, 2023)**

Purpose of Subsection 93118.5(o)

This subsection defines general information regulated entities need to report annually, or need to report under certain circumstances, as well as the due date for reported information.

Rationale of Subsection 93118.5(o)

This provision is necessary to ensure regulated entities are providing all of the necessary information to CARB, and also ensures the information is received in a timely manner.

Purpose of Subsection 93118.5(o)(1)

This subsection establishes that vessel owners and operators must report contact information, vessel information, engine information, operational information, control equipment information, and some maintenance records annually by March 31 of each year, and other records including opacity testing results, and ZEAT vessel information based on reporting periods specified in the respective requirements.

Rationale of Subsection 93118.5(o)(1)

The Current Regulation requires reporting periodically, and only after actions are taken or compliance dates are approaching. CARB staff estimated that over one-third of vessels are not reported, and a greater fraction of owners and operators have not submitted updated reports and maintained records as required by the Current Regulation. Requiring annual reporting helps CARB keep the accurate and the most up-to-date information for engines, vessels and ZEAT related information. This information is needed to effectively implement and enforce the Proposed Amendments.

Purpose of Subsection 93118.5(o)(2)

This subsection establishes that reporting is required under some circumstances in addition to annual reporting requirements.

Rationale of Subsection 93118.5(o)(2)

This subsection is necessary to enable CARB staff to be informed with the most up-to-date information in a timely manner.

#### Purpose of Subsection 93118.5(o)(2)(A) through (C)

These subsections establish that regulated entities must update some information within 30 days of a change, including a significant change of annual hours of operation, vessel category or commercial use, change of hour meter, or purchase, sell, lease, rental, or change of ownership of the vessel, engine, or VDECS. In the case of engine or vessel transaction, both the party in control or possession of the engine or vessel before and after the transaction is responsible for reporting.

These subsections also establish that regulated entities must report required information within 30 days of the initial operation of a vessel brought into RCW, the transfer of a vessel from a California facility to outside of California or the establishment of a new facility within California.

#### Rationale of Subsection 93118.5(o)(2)(A) through (C)

These provisions are necessary to ensure CARB staff has accurate information to effectively implement and enforce the Proposed Amendments. It also helps CARB hold responsible the appropriate party when a violation occurs. CARB staff considers 30 days an appropriate amount of time to report changes, and is consistent with other reporting requirements of the Proposed Amendments.

### **Q. Subsection (p) Violations**

#### Purpose of Subsection 93118.5(p)

This subsection makes minor updates on references to the Health and Safety code.

#### Rationale of Subsection 93118.5(p)

This subsection is carried over from the Current Regulation, but adds one more Health and Safety code section applicable to the Proposed Amendments. It is necessary to ensure applicable Health and Safety code sections specified in this subsection is accurate.

### **R. Subsection (q), (r) and (s)**

#### Purpose of Subsections (q), (r) and (s)

These provisions are included in the Current Regulation and retained and applied to the Proposed Amendments, but subsection numbers are changed.

#### Rationale of Subsections (q), (r) and (s)

The Proposed Amendments add more subsections, making it necessary to renumber the subsection numbers.

**S. Subsection (t) Submittal of Documents (Applicable until December 31, 2022)**

Purpose of Subsection 93118.5(t)

This subsection establishes that the provision of submittal of documents in the Current Regulation is no longer applicable under the Proposed Amendments after December 31, 2022.

Rationale of Subsection 93118.5(t)

This subsection in the Current Regulation is replaced with subsection (u) in the Proposed Amendments. As such, it is necessary to sunset subsection (t) to ensure regulated entities comply with subsection (u) of the Proposed Amendments when submitting reports, applications, or documents.

**T. Subsection (u) Submittal of Documents (Applicable on and after January 1, 2023)**

Purpose of Subsections 93118.5(u)(1) through (2)

These subsections specify how to properly submit reporting information and compliance fees to CARB.

Rationale of Subsections 93118.5(u)(1) through (2)

These subsections are necessary to ensure that any person subject to this section is aware of the proper way to submit data or documents to CARB.

## **V. Benefits Anticipated from Regulatory Action**

### **A. Air Quality**

To estimate the impacts of the Proposed Amendments, staff evaluated the economic and emission impacts of the proposal relative to the baseline (Baseline) scenario for each year of the analysis period from 2023 to 2038. The years of the analysis extend three years post full implementation of the Proposed Amendments. The Baseline for the Proposed Amendments reflects compliance with the Current Regulation and incorporates updates to the CHC vessel inventory.

The Proposed Amendments are expected to reduce emissions of PM<sub>2.5</sub>, DPM, NO<sub>x</sub>, ROG, and GHGs beyond levels achieved under the Baseline (Table V-1). Emission reductions begin in 2023 when the Proposed Amendments would require additional requirements to achieve emission reductions. Staff estimated that from 2023 through 2038, the Proposed Amendments would further reduce cumulative statewide emissions by approximately 1,610 tons of PM<sub>2.5</sub>, 1,680 tons of DPM, 34,340 tons of NO<sub>x</sub>, 2,460 tons of ROG, and 415,060 metric tons (MT) of GHG, relative to the Baseline. Some provisions of the Proposed Amendments will increase GHG emissions, such as requiring use of DPFs that are generally associated with a small fuel penalty. However overall, GHG emission reductions would be achieved because cleaner tiered engines and ZEAT penetrate the CHC fleet. Additionally, the requirement to use R99 diesel fuel will create increased demand for fuel that has significantly lower lifecycle carbon intensity than standard CARB low sulfur diesel fuel. The reductions associated with the use of R99 are not included in Table V-1 because the emission reductions are already accounted within CARB's Low Carbon Fuel Standard (LCFS) program.

**Table V-1. Projected Annual Total PM2.5, DPM, NOx, ROG, and GHG Emission Reductions  
Resulting from the Proposed Amendments (2023 – 2038)**

<b>Year</b>	<b>PM2.5 (Tons)</b>	<b>DPM (Tons)</b>	<b>NOx (Tons)</b>	<b>ROG (Tons)</b>	<b>GHG (MT)</b>
2023	42	44	584	21	339
2024	53	56	941	53	4,781
2025	62	64	1,239	75	9,139
2026	71	74	1,568	96	15,963
2027	77	80	1,767	110	18,876
2028	83	87	1,906	120	20,204
2029	90	94	2,046	131	21,313
2030	103	108	2,328	164	22,539
2031	117	122	2,585	201	25,342
2032	125	131	2,767	217	29,784
2033	133	139	2,845	222	39,598
2034	136	142	2,853	222	40,709
2035	134	140	2,805	216	41,063
2036	131	138	2,756	210	41,429
2037	129	135	2,703	203	41,804
2038	126	132	2,648	196	42,180
<b>Total</b>	<b>1,610</b>	<b>1,680</b>	<b>34,340</b>	<b>2,460</b>	<b>415,060</b>

Overall, these emission reductions will improve local and regional air quality and mitigate some impacts of global climate change. More on air quality will be discussed in Chapter VI of this Staff Report, and for more information on the methodology for the emission inventory, refer to Appendix H.

## **B. Health Benefits**

### **1. Reduced Ambient PM Levels**

A substantial number of epidemiological studies have found a strong association between exposure to ambient PM and adverse health effects. CARB staff evaluated the impacts the Proposed Amendments would have on both potential cancer risks from DPM, and noncancer health impacts associated with exposure to ambient levels of primary and secondary PM (including PM2.5). Communities located near California’s seaports and marine terminals bear a disproportionate health burden due to their close proximity to emissions from CHC (at dock, and in transit) and other emission sources including trucks, locomotives, and terminal equipment serving the ports. Most California seaports, harbors, marinas, and docks are in urban areas, where people live, work, and go to school. Many of the communities surrounding seaports and harbors are DACs and experience a disproportionately high pollution burden. Emissions from CHC are a significant and growing contributor to community air pollution and associated health impacts.

### **2. Reduction in Potential Cancer Risk**

CARB’s HRA (Appendix G) provides a cancer risk metric, which CARB staff uses to determine the localized health impacts for nearby communities. Cancer risk is

expressed as the chance an individual has of developing cancer if one million people were continuously exposed to a TAC for a specified duration of exposure. For this assessment, the pollutant of concern, is DPM emitted from diesel-fueled internal combustion engines. In 1998, CARB identified DPM as a TAC based on its potential to cause cancer and other health impacts under AB 1807 Toxic Air Contaminant Identification and Control Program.<sup>96</sup> The benefits of reduced cancer risk were quantified by reductions in exposure to DPM from CHC.

#### **a. Population Impacted by Potential Cancer Risk**

The risk to the broader population (based on a 70-year exposure duration) is expressed in terms of the population numbers exposed to each cancer risk level. Staff estimated that full implementation of the Proposed Amendments would benefit millions of Californians living next to major commercial seaports, harbors, marinas, and docks located throughout the California coastline and island regions. Although CARB's HRA only evaluated exposure to residents (also referred to as receptors), it is expected that significant potential cancer risk reduction would also benefit on-site and off-site workers, including, but not limited to, deckhands, vessel operators, longshoremen, crane operators, mechanics, truck drivers, guards, construction workers, and other individuals who work nearby seaports, harbors, and marinas.

As part of CARB's HRA, staff estimated the potential cancer health benefits of reducing DPM emitted from diesel-fueled main and auxiliary engines from CHC (see Appendix G for the detailed HRA methodology).

In the HRA, staff evaluated the health impacts in the South Coast and the San Francisco Bay Area Air Basins. Staff selected these two locations based on CHC activity and overall emissions. The South Coast Air Basin represents about 28 percent of CHC emissions in California while the San Francisco Bay Area Air Basin represents about 37 percent. Staff used air dispersion modeling to estimate the DPM concentrations for the South Coast and the San Francisco Bay Area Air Basins and estimated cancer risks from the modeled results. The estimated cancer risks were calculated for the broader population in the South Coast and the San Francisco Bay Area Air Basins.

When comparing the Proposed Amendments to the Current Regulation, the implementation of the Proposed Amendments in 2023 would reduce the total DPM emissions by approximately 25 percent. In 2038, when comparing the Proposed Amendments to the Current Regulation, it would reduce the DPM emissions by

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<sup>96</sup> CARB, Report to the Air Resources Board on the Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant; Part A, Exposure Assessment, April 22, 1998, last accessed July 6, 2021, [https://www.arb.ca.gov/toxics/dieseltac/part\\_a.pdf%20](https://www.arb.ca.gov/toxics/dieseltac/part_a.pdf%20).

approximately 89 percent. Table V-2 below shows the Estimated CHC DPM emission reductions in the South Coast and the San Francisco Bay Area Air Basins.

**Table V-2. South Coast and San Francisco Bay Area Air Basins Estimated CHC DPM Emission Reductions by Implementation Year**

Implementation Year	South Coast DPM Emission Reductions	South Coast DPM Baseline Emissions	San Francisco Bay Area DPM Emission Reductions	San Francisco Bay Area DPM Baseline Emissions
2023	11.8	49.2	17.5	62.5
2038	38.8	43.3	52.0	57.2

Compared to the Current Regulation, implementation of the Proposed Amendments would reduce total DPM emissions by approximately 90 percent and 91 percent for the South Coast Air Basin and San Francisco Bay Area Air Basin, respectively in 2038. As a result, potential cancer risk is also projected to decrease based on CARB staff analysis.

In 2038 without the Proposed amendments, in the San Francisco Bay Area Air Basin, about 7 million people, including 0.5 million people who live in DACs, are estimated to be exposed to a potential cancer risk of >1 chance per million from exposure to DPM. Under the Proposed Amendments compared to a baseline of the Current Regulation in 2038:

- the population weighted-average cancer risk would be reduced from 12 chances per million to 1 chance per million;
- the population exposure to a potential cancer risk level of greater than 50 chances per million would be eliminated; and,
- the population that would be exposed to a potential cancer risk >1 chance per million would reduce to 2 million.

In 2038 without the Proposed Amendments, in the South Coast Air Basin, about 15 million people, including 6 million people who live in DACs, are estimated to be exposed to a potential cancer risk of >1 chance per million from exposure to DPM. Under the Proposed Amendments compared to a baseline of the Current Regulation in 2038:

- the population weighted-average cancer risk would be reduced from 10 chances per million to 1 chance per million;
- the population exposure to a potential cancer risk level of greater than 100 chances per million would be eliminated; and,
- the population that would be exposed to a potential cancer risk >1 chance per million would reduce to 5 million.

For a more detailed analysis and overview of cancer risk estimates, see Appendix G.

### 3. Noncancer Health Impacts and Valuations

#### a. Noncancer Health Outcomes

California experiences some of the highest concentrations of PM<sub>2.5</sub> in the nation.<sup>97</sup> Individuals who live in high-risk areas in the South Coast and the San Francisco Bay Area Air Basins are exposed to higher PM<sub>2.5</sub> concentrations from CHCs than other California residents. These individuals are at a higher risk of developing respiratory impairments as a result of the main and auxiliary CHC engine emissions, especially those individuals within sensitive groups.

The Proposed Amendments would reduce NO<sub>x</sub> and DPM emissions from CHCs, resulting in health benefits for individuals in California. NO<sub>x</sub> includes NO<sub>2</sub>, a potent lung irritant, which can aggravate lung diseases such as asthma when inhaled.<sup>98</sup> However, the most serious quantifiable impacts of NO<sub>x</sub> emissions occur through the conversion of NO<sub>x</sub> to fine particles of ammonium nitrate aerosol through chemical processes in the atmosphere. PM<sub>2.5</sub> formed in this manner is termed as secondary PM<sub>2.5</sub>. Both directly emitted PM<sub>2.5</sub> and secondary PM<sub>2.5</sub> from CHC are associated with adverse health outcomes, such as cardiopulmonary mortality, hospitalizations for cardiovascular illness and respiratory illness, as well as emergency room visits for asthma. As a result, reductions in PM<sub>2.5</sub> and NO<sub>x</sub> emissions are associated with reductions in these adverse health outcomes. Benefits from the reductions include fewer hospital and emergency room visits and avoided premature deaths.

CARB staff used two methods to estimate the noncancer health benefits of the Proposed Amendments. One method used the air dispersion results from the HRA and the other method used the incidence-per-ton (IPT) methodology (see detail on the IPT methodology in Appendix G).

- PM health benefits: For both the South Coast Air Basin and the San Francisco Bay Air Basin, PM health benefits were estimated using the air dispersion results from the HRA. For all the other air basins, staff used the IPT methodology.
- NO<sub>x</sub> health benefits: IPT methodology was used for all air basins.

CARB staff estimated the potential reductions in statewide PM mortality and illness impacts associated with exposure to PM<sub>2.5</sub> from the implementation of the Proposed

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<sup>97</sup> U.S. EPA, Fine Particle Concentrations Based on Monitored Air Quality from 2009 – 2011, July 15, 2012, last accessed July 6, 2021, [https://www.epa.gov/sites/production/files/2016-04/documents/current\\_pm\\_table.pdf](https://www.epa.gov/sites/production/files/2016-04/documents/current_pm_table.pdf).

<sup>98</sup> U.S. EPA, Integrated Science Assessment for Oxides of Nitrogen – Health Criteria, January 2016, last accessed July 6, 2021, [http://ofmpub.epa.gov/eims/eimscomm.getfile?p\\_download\\_id=526855](http://ofmpub.epa.gov/eims/eimscomm.getfile?p_download_id=526855).

Amendments (see Appendix G for the details of Noncancer Health Impacts methodology).

These health outcomes include cardiopulmonary mortality, hospital admissions, and emergency room visits. Based on the analysis, staff estimated that the total number of cases that would be reduced from the implementation of the Proposed Amendments are as follows:

- 531 avoided premature deaths (415 to 651, 95 percent confidence interval (CI)).
- 161 avoided hospital admissions (21 to 299, 95 percent CI).
- 236 avoided emergency room visits (149 to 323, 95 percent CI).

#### **b. Monetization of Health Outcomes**

CARB staff monetized the health outcomes by multiplying incidence by a standard value derived from economic studies.<sup>99</sup> This valuation per incident is provided in Table V-3. The valuation for avoided premature mortality is based on willingness to pay.<sup>100</sup> This value is a statistical construct based on the aggregated dollar amount that a large group of people would be willing to pay for a reduction in their individual risks of dying in a year. This is not an estimate of how much any single individual would be willing to pay to prevent a certain death of any particular person,<sup>101</sup> nor does it consider any specific costs associated with mortality such as hospital expenditures. Unlike premature mortality valuation, the valuation for avoided hospitalizations and emergency room visits is based on a combination of typical costs associated with hospitalization and the willingness of surveyed individuals to pay to avoid adverse outcomes that occur when hospitalized. These include hospital charges, post-hospitalization medical care, out-of-pocket expenses, and lost earnings for both individuals and family members, lost recreation value, and lost household protection

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<sup>99</sup> U.S. EPA, Appendix B: Mortality Risk Valuation Estimates, Guidelines for Preparing Economic Analyses, December 2010, last accessed July 6, 2021, <https://www.epa.gov/sites/production/files/2017-09/documents/ee-0568-22.pdf>.

<sup>100</sup> U.S. EPA, An SAB Report on EPA's White Paper Valuing the Benefits of Fatal Cancer Risk Reduction, July 2000, last accessed July 6, 2021, [https://yosemite.epa.gov/sab/5CSABPRODUCT.NSF/41334524148BCCD6852571A700516498/\\$File/eac013.pdf](https://yosemite.epa.gov/sab/5CSABPRODUCT.NSF/41334524148BCCD6852571A700516498/$File/eac013.pdf).

<sup>101</sup> U.S. EPA, Mortality Risk Valuation – What does it mean to place a value on life?, last accessed July 6, 2021, <https://www.epa.gov/environmental-economics/mortality-risk-valuation#means>.

(e.g., valuation of time-losses from inability to maintain the household or provide childcare).<sup>102</sup>

**Table V-3. Valuation per Incident for Avoided Health Outcomes (2019 \$)**

Avoided Health Outcome	Valuation Per Incident
Deaths	\$9,864,695
Hospital Admissions for cardiovascular illness	\$58,288
Hospital Admissions for respiratory illness	\$50,841
Emergency Room Visits	\$834

Statewide valuations of health benefits were calculated by multiplying the avoided health outcomes by valuation per incident. The total statewide valuation due to avoided health outcomes between 2023 and 2038 totaled \$5.25 billion. These values are summarized in Table V-4. The spatial distribution of these benefits follow the distribution of emission reductions and avoided adverse health outcomes, therefore most cost savings associated with avoided health outcomes for individuals would occur in the South Coast and the San Francisco Air Basins.

**Table V-4. Statewide Valuation from Avoided Adverse Health Outcomes between 2023 and 2038 for the Proposed Amendments**

Avoided Health Outcome	Statewide Valuation
Deaths	\$5,242,800,000
Hospital Admissions	\$8,700,000
Emergency Room Visits	\$197,000

### **C. Greenhouse Gases and Black Carbon**

Greenhouse gasses (GHG) from diesel engines, which commonly include CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub>, are the primary climate forcing agents which contribute to global warming, and other shifts in the climate system observed over the past century are caused by human activities. GHGs and SLCs such as black carbon (BC) (a subset of PM<sub>2.5</sub>) from CHC contribute to climate change. Climate scientists agree that global warming and other shifts in the climate system observed over the past century are caused by human activities. These recorded changes are occurring at an unprecedented rate. According to new research,<sup>103</sup> unabated GHG emissions could cause sea levels to rise up to 10 feet by the end of this century—an outcome that could devastate coastal communities in California and around the world.

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<sup>102</sup> CARB, The Economic Value of Respiratory and Cardiovascular Hospitalizations, May 31, 2003, last accessed July 6, 2021, <https://ww2.arb.ca.gov/sites/default/files/classic/research/apr/past/99-329.pdf>.

<sup>103</sup> California Ocean Protection Council Science Advisory Team Working Group, Rising Seas in California: An Update on Sea-Level Rise Science, April 2017, last accessed July 6, 2021, <https://opc.ca.gov/webmaster/ftp/pdf/docs/rising-seas-in-california-an-update-on-sea-level-rise-science.pdf>.

California is already feeling the effects of climate change, and projections show that these effects will continue and worsen over the coming decades. The impacts of climate change on California have been documented by OEHHA in the Indicators of Climate Change Report.<sup>104</sup>

The Proposed Amendments would achieve GHG benefits. This is mainly achieved by reducing fuel consumption through the use of shore power and the requirement for ZEAT. Additionally, the Proposed Amendments require Tier 4 engines, which are generally associated with less fuel consumption per unit work relative to older engines, such as uncertified engines or those certified to marine Tier 1, Tier 2, and Tier 3 emission standards. For a period starting with the first implementation in 2023 through 2038, GHG emissions on average are reduced by 5 percent by implementing the Proposed Amendments. Therefore, the forecasted GHG emission reductions for the Proposed Amendments are a net benefit.

## **D. Additional Benefits**

### **1. Passengers**

In addition to regional and local air quality benefits, passengers onboard vessels would have the potential for substantially less exposure to air pollutants, such as DPM and NOx. The immediate on-source exposure implications of passengers are not quantified in regional or local HRA work presented in Appendix G. While vessels are in transit and moving, passengers may not be directly exposed to the exhaust of the vessel. However, while transiting at lower speeds, maneuvering, or while embarking or disembarking from the vessel, there is likely exposure to the exhaust of the main and auxiliary engines of the vessels. The Proposed Amendments would require use of cleaner diesel engines, ZEAT, and shore power, which collectively will reduce emissions and exposure to CHC engine exhaust. Additionally, ZEAT requirements would require the use of quieter zero-emission and other advanced technologies compared to diesel technology. Passengers would have reduced exposure to high noise levels due to the Proposed Amendments.

### **2. Technology Providers**

The Proposed Amendments are expected to result in benefits to the OEM of engines, VDECS manufacturers, battery systems manufacturers, hydrogen fueling system manufacturers, diesel engine repair shops, opacity testing equipment manufacturers, and DPF installation, repair, and maintenance centers.

The Proposed Amendments would provide fleets the options to repower older engines or install exhaust retrofits as part of their overall strategy to meet

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<sup>104</sup> OEHHA, Indicators of Climate Change in California, May 2018, last accessed July 6, 2021, <https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf>.

performance requirements. It will provide market opportunities for engine OEMs and VDECS manufacturers to advance and innovate technology to develop compliance strategies.

The Proposed Amendments would require ZEAT on all short-run ferries and new excursion vessels. The Proposed Amendments would also provide fleet incentives to adopt ZEAT in the form of additional compliance time on other selected conventional (e.g., diesel-fueled) vessels within their fleets. CARB staff's proposal, therefore, includes both requirements, and additional incentives for fleet operators to adopt ZEAT. In turn, the Proposed Amendments would provide multiple pathways and different market opportunities for ZEAT manufacturers, such as battery systems, electrical charging infrastructure, and hydrogen fueling system manufacturers, the opportunity to develop new technology.

The Proposed Amendments would require vessels to perform opacity testing every other year (biennially). This would benefit the opacity testing equipment manufacturers, and the testing companies who perform pay-for-service opacity testing for operators of diesel fleets. The engines and emission control systems (e.g., DPFs) on vessels that fail to meet opacity test limits would be required to repair the engines and emission control systems. These additional repair activities would provide immediate emission benefits and would also benefit the diesel engine repair shop industry.

The Proposed Amendments would require engines aboard vessels to be retrofitted with DPF aftertreatment devices for compliance. This would provide additional business opportunities for diesel repair shops, boatyards, or other companies that will perform repowers, vessel modifications, and installations of aftertreatment devices.

### **3. Construction**

The Proposed Amendments would provide opportunities for both larger and smaller engineering, construction, and design firms to redesign and expand existing seaport, harbor, marina, or other dockside infrastructure to accommodate CHC owner and operator compliance strategies. The Proposed Amendments would provide opportunities for naval architecture firms that will perform evaluations and design for Vessel repowering and retrofiting. The Proposed Amendments would also benefit alternative fuel suppliers to construct additional pipeline networks to feed directly to the seaports, providing additional benefits for other freight equipment. The utilities and electrical infrastructure component OEMs would benefit from the opportunities to expand dock power, hydrogen fuel delivery, and charging services to the seaports. CARB staff is not anticipating large-scale deployment of new electrical substations by local utilities. However, in the event that such installation is needed, large-scale upstream infrastructure may catalyze further development of local distributed electrical generation networks.

#### **4. Technology Research and Development**

The Proposed Amendments would provide an incentive for both university research centers and OEMs to expand innovative technology into the market.

The Proposed Amendments would require vessels to use R100 or R99 to achieve additional NO<sub>x</sub> and DPM reductions beyond those achieved by engines meeting the proposed emissions performance standards. The requirement to use R100 or R99 could increase the demand for additional alternative fuels. For example, by creating market demand at seaports, marinas, and harbors along the California coastline, additional distribution and point-of-sale locations may be established in response to the Proposed Amendments. This would increase demand for renewable diesel benefiting the renewable diesel production sector and would have an additional benefit of providing demand for low-carbon fuels credited through CARB's LCFS program.

#### **5. Out-of-State and International Impacts**

Successful adoption of the Proposed Amendments may provide an example to other regions outside of California and worldwide to adopt their own programs. For example, in the federal CAA § 209(e)(2)(B), other qualifying states have the option to adopt and enforce California non-road (marine) standards that have been granted an authorization, provided, in pertinent part, that such states adopt emission standards that are identical to the authorized California standards. In September 2020, the NJDEP gave a presentation outlining potential future plans to harmonize with CARB's Current Regulation and/or Proposed Amendments to the CHC Regulation.<sup>105</sup> Establishing identical requirements in other states would provide a greater incentive for manufacturers of cleaner diesel engines, DECS (retrofit DPFs), and ZEAT for marine applications.

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<sup>105</sup> NJDEP, Ocean Going Vessels & Harbor Craft, Stakeholder Meeting - September 16, 2020, last accessed July 6, 2021, <https://www.nj.gov/dep/workgroups/docs/njpact-air-co2-20200916-ogv-pm-pres.pdf>.

## VI. Air Quality

### A. Objective

CARB programs focus on three distinct emission reduction goals: (1) reduce localized potential cancer risk from TACs, (2) control NO<sub>x</sub>, PM<sub>2.5</sub>, and criteria pollutants to meet local, regional, State, and NAAQS, and (3) limit GHGs that contribute to the global burden of climate change.

The Proposed Amendments to the CHC Regulation are intended to further protect the health of California's residents by reducing diesel engine emissions from CHC. This chapter summarizes the potential air quality impacts in California in response to the Proposed Amendments to the CHC Regulation. This chapter includes the following elements: (1) an overview of the emission inventory methods; (2) description of the baseline used to estimate emission benefits of the Proposed Amendments to the Current Regulation; (3) summary of health analyses, and (4) changes in emissions due to the Proposed Amendments to the Current Regulation. For an explanation of the specific benefits resulting from the air quality impacts, see Chapter V.

### B. Emissions Inventory Methods

CARB staff has updated the emissions inventory for CHC to reflect new information and improved methodologies. The revised emission inventory used to support the Proposed Amendments (hereafter, called the 2021 Emissions Inventory) is an updated version from the previous emissions inventories released by staff. The inventory update is used to support the emission reduction quantifications in the Proposed Amendments, which are used for local and statewide planning efforts, the health benefit valuation, and an HRA showing additional benefits of lowered emissions after implementation of the Proposed Amendments. A description of the emission inventory methodology and estimates of reductions are provided in this chapter. For full details of the 2021 Emissions Inventory for CHC, see Appendix H.

The 2021 Emissions Inventory was updated with the following input data available at the time of the update:

- Vessel and engine population and profile data obtained from POLA, POLB, Port of Oakland, CARB reporting data 2019,<sup>106</sup> and USCG data;<sup>107</sup>

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<sup>106</sup> CHC engine data reported to CARB by owners/operators under the CHC Regulation, February 2019.

<sup>107</sup> USCG, Merchant Vessels of the United States, March 2019, [https://www.dco.uscg.mil/OurOrganization/AssistantCommandantforPreventionPolicy\(CG-5P\)/InspectionsCompliance\(CG-5PC\)/OfficeofInvestigationsCasualtyAnalysis/MerchantVesselsoftheUnitedStates.aspx](https://www.dco.uscg.mil/OurOrganization/AssistantCommandantforPreventionPolicy(CG-5P)/InspectionsCompliance(CG-5PC)/OfficeofInvestigationsCasualtyAnalysis/MerchantVesselsoftheUnitedStates.aspx).

- Population and activity growth factors were estimated based on historical trends in the past decade;<sup>108, 109, 110, 111</sup>
- Survival and purchasing curves were developed from the age distribution of CHCs in CARB reporting data from 2019;
- Load factors were updated using CARB reporting data and Engine Control Module (ECM) data voluntarily supplied by industry during 2019 and 2020; and
- Emission factors (EFs) were updated using U.S. EPA marine<sup>112</sup> and off-road<sup>113</sup> engine certification data.

CARB's 2021 Emissions Inventory estimates rely on the best available data for CHC. The updated inventory methodology used CARB and ports reporting data between 2010 and 2019 to project future baseline and control emissions scenarios for each vessel type, engine type (i.e., main engine or auxiliary engine), and pollutant.

The basic equation used to calculate per engine emissions is as follows:

$$E = \sum_{i,j,k,l,m} POP_{i,j,k,l,m} * A_{j,k,n} * HP * LF_{j,k} * EF_{j,l,m} * FCF_{j,m}$$

Where:

- E is the amount of emissions of a pollutant (NO<sub>x</sub>, DPM, ROG and GHGs) emitted (grams);
- i, j, k, l, m, n: location, vessel type, engine type, rated hp bin, MY, age;
- POP: population of engines;
- A: average activity in annual operating hours (hr);
- HP: rated brake-horsepower for each equipment type (bhp);

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<sup>108</sup> POLA, Annual Inventory of Air Emissions, last accessed July 6, 2021, <https://www.portoflosangeles.org/environment/air-quality/air-emissions-inventory>.

<sup>109</sup> POLB, Emissions Inventory, last accessed May 19, 2021, <https://polb.com/environment/air/#emissions-inventory>.

<sup>110</sup> CARB reporting database from 2010 to 2018

<sup>111</sup> WETA, 2016 Strategic Plan, last accessed July 6, 2021, <https://weta.sanfranciscobayferry.com/sites/default/files/weta/strategicplan/WETAstrategicPlanFinal.pdf>.

<sup>112</sup> U.S. EPA, Annual Certification Data for Vehicles, Engines, and Equipment: Marine Compression-Ignition (CI) Engines, 2020, last accessed July 7, 2021, <https://www.epa.gov/compliance-and-fuel-economy-data/annual-certification-data-vehicles-engines-and-equipment>.

<sup>113</sup> U.S. EPA, Annual Certification Data for Vehicles, Engines, and Equipment: Nonroad Compression Ignition (NRCI) Engines, 2020, last accessed July 7, 2021, <https://www.epa.gov/compliance-and-fuel-economy-data/annual-certification-data-vehicles-engines-and-equipment>.

- LF: Load factor (unit-less);
- EF: Emission factor, adjusted for deterioration (grams/bhp-hr); and
- FCF: Fuel correction factor (unit-less).

### **C. Air Quality Impacts**

CARB staff projected NO<sub>x</sub>, DPM, GHG, and ROG emissions from main and auxiliary engines for two scenarios from all regulated and unregulated CHC categories from 2023 to 2038. The two scenarios assume:

- 1) No further requirements were imposed beyond the Current Regulation after calendar year 2022 (baseline emissions).
- 2) The implementation timeline for the Proposed Amendments to the CHC Regulation consists of compliance deadlines between 2023 and 2031, with most compliance extensions expiring by 2034. The Proposed Amendments would accomplish emission reductions goals by requiring engines to meet a more stringent performance standard for new and in-use vessels. The addition of vessel categories not covered by the Current Regulation, including CPFVs, commercial fishing, all barges, pilot, research, and workboat vessels would also accomplish additional emission reductions that are needed in areas where CHC operate.

The projected emissions for each scenario are listed below. Most emission reductions are achieved after compliance dates ending for regulated in-use vessels on December 31, 2031, which are reflected in emissions projections for the 2032 calendar year. Full compliance with the Proposed Amendments will occur by December 31, 2034, which coincides with the expiration of the most remaining compliance extensions. Emissions projections in 2035 and ongoing reflect the full projected emissions benefits of the Proposed Amendments. Comparing the scenarios with each another provides a quantitative demonstration of the changes of emissions associated with the Current Regulation (Baseline) and the Proposed Amendments.

Figure VI-1. Projected Annual NOx Emissions from All CHC Vessels Statewide

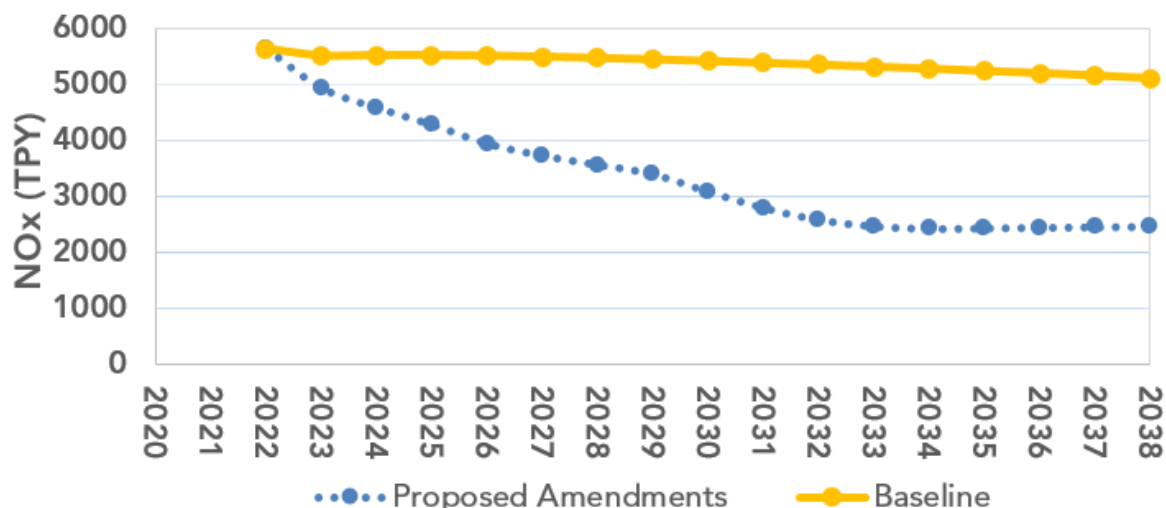


Figure VI-1 presents projected NOx emissions from 2022 to 2038 for the two scenarios. Relative to the Current Regulation, the Proposed Amendments are projected to reduce a cumulative total of 34,340 tons of NOx from 2023 to 2038. In 2038, when comparing the Proposed Amendments to the Current Regulation, NOx emissions would be reduced by about 52 percent, from 5,120 tons per year (TPY) to 2,470 TPY.

Figure VI-2. Projected Annual DPM Emissions from All CHC Vessels Statewide

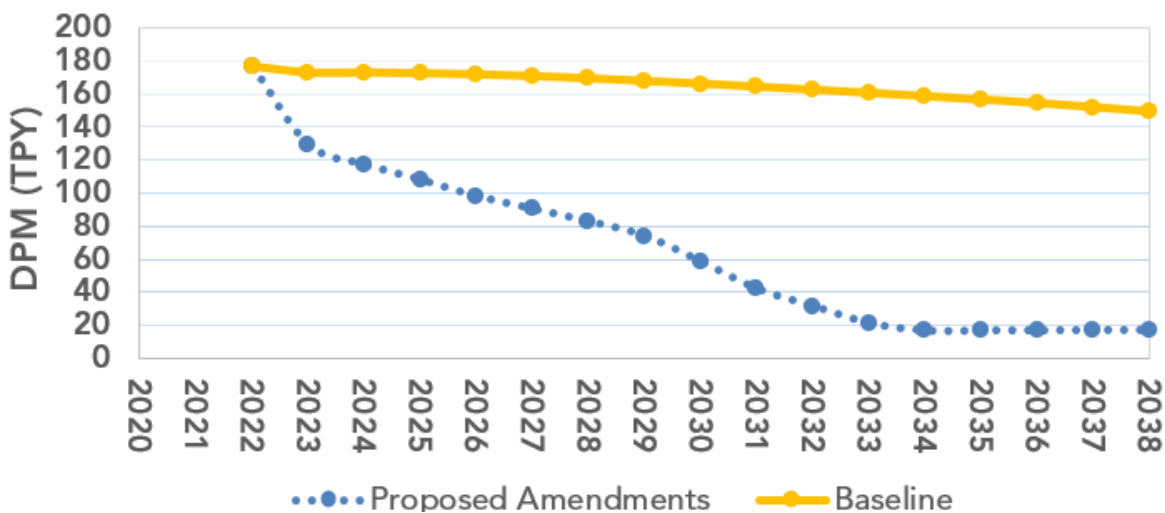


Figure VI-2 presents projected DPM emissions from 2023 to 2038 for the two scenarios. Relative to the Current Regulation, the Proposed Amendments are projected to make significant reductions in DPM emissions. From 2023 to 2038, the Proposed Amendments would reduce approximately 1,680 tons of DPM. In 2038, when comparing the Proposed Amendments to the Current Regulation, DPM emissions would be reduced about 89 percent, from 149 TPY to 17 TPY.

Figure VI-3. Projected Annual GHG Emissions from All CHC Vessels Statewide

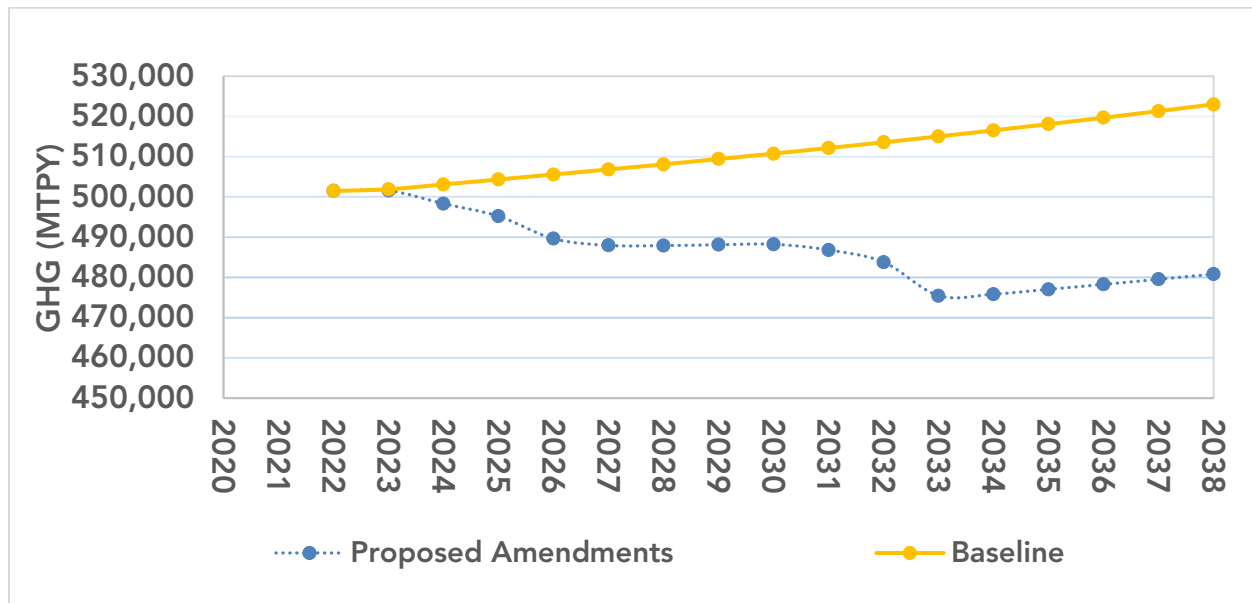


Figure VI-3 presents projected GHG (CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O) emissions from 2023 to 2038 for the two scenarios. The y-axis scale for GHG emissions starts from 450,000 metric tons per year (MTPY) rather than from zero to better show the difference in emissions between 2026 and 2038. The overall trend of annual GHG emissions for the baseline is expected to increase slightly between 2023 and 2038, which is due to increased CHC activity. The annual GHG emissions for the Proposed Amendments are expected to decrease slightly between 2023 and 2038, which is due to the ZEAT requirements and regulatory incentives which would result in the introduction vessels with zero-emission operation.

Relative to the Current Regulation, the Proposed Amendments are projected to reduce approximately 415,060 MT of GHG from 2023 to 2038. In 2038, when comparing the Proposed Amendments to the Current Regulation, GHG emissions would be reduced about 8 percent, from 523,000 MTPY to 480,800 MTPY. Overall, the GHG emission reductions achieved by the Proposed Amendments over the Current Regulation would amount to about 5 percent of the total GHG emissions, from 2023 to 2038.

CARB staff expects deployment of ZEAT, which includes full zero-emission vessels and zero-emission capable hybrid vessels that derive at least 30 percent of a vessel's annual work from a zero-emission tailpipe source. The Proposed Amendments require new excursion vessels deployed by December 31, 2024 to be zero-emission capable hybrid vessels, and all short-run ferries (new and in-use) by December 31, 2025. The Proposed Amendments additionally include a provision called ACE, which allows operators to propose any other combination of technologies or vessels to achieve equivalent emission reductions from their fleet of CHC only. Staff expects that in total, ZEAT will be deployed in 106 vessels at full implementation, which will result in the

Proposed Amendments achieving overall reduced GHG emissions relative to the baseline under the Proposed Amendments.

Figure VI-4. Projected Annual ROG Emissions from All CHC Vessels Statewide

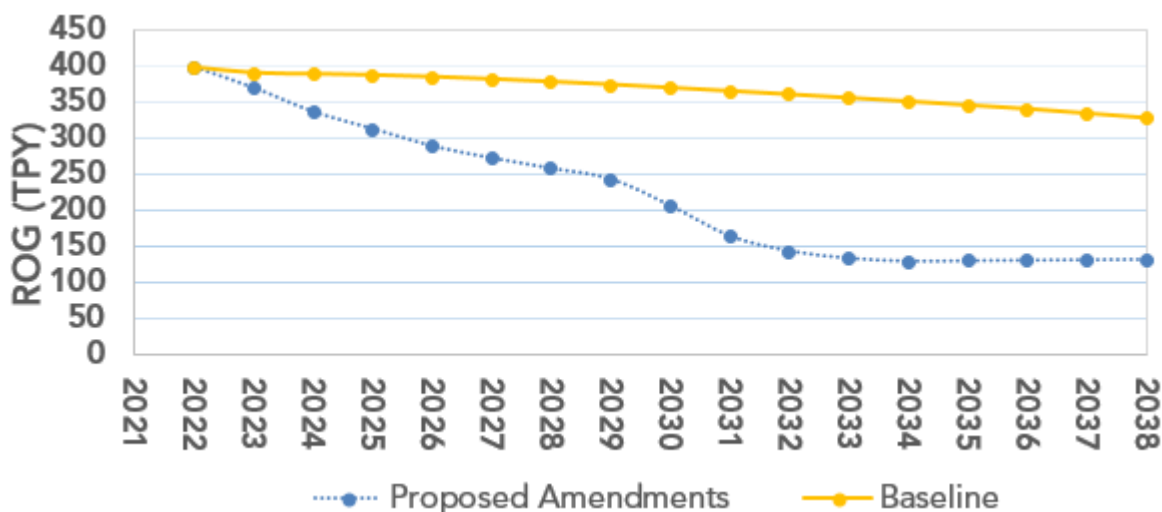


Figure VI-4 presents projected ROG emissions from 2023 to 2038 for the two scenarios. ROG emissions tend to decline in proportion with DPM emissions associated with the Proposed Amendments. Relative to the Current Regulation, the Proposed Amendments are projected to reduce approximately 2,460 tons of ROG from 2023 to 2038. In 2038, when comparing the Proposed Amendments to the CHC Regulation to the Current Regulation, ROG emissions would be reduced about 60 percent, from 328 TPY to 131 TPY.

In terms of reduction trends for the Proposed Amendments, the reduction in ROG emissions is similar to what would be achieved for NO<sub>x</sub> and DPM emissions.

The contribution to statewide CHC NO<sub>x</sub> emissions for each vessel category under baseline (Current Regulation) and Proposed Amendments in 2023 and 2038, is shown below in Figure VI-5. The Proposed Amendments to the CHC Regulation will reduce significant high emissions from main and auxiliary engines. As can be seen, in 2038, the greatest emission reductions will come from three vessel categories: workboat, tugboat-Escort/Ship Assist, ferry-catamaran, and commercial fishing. In addition, due to the large number of CHC categories, the data in Figure VI-5 illustrates that reductions from all categories of vessels are important to achieve overall emission reductions from the CHC source category.

Figure VI-5. Statewide CHC NOx Emissions by Vessel Category

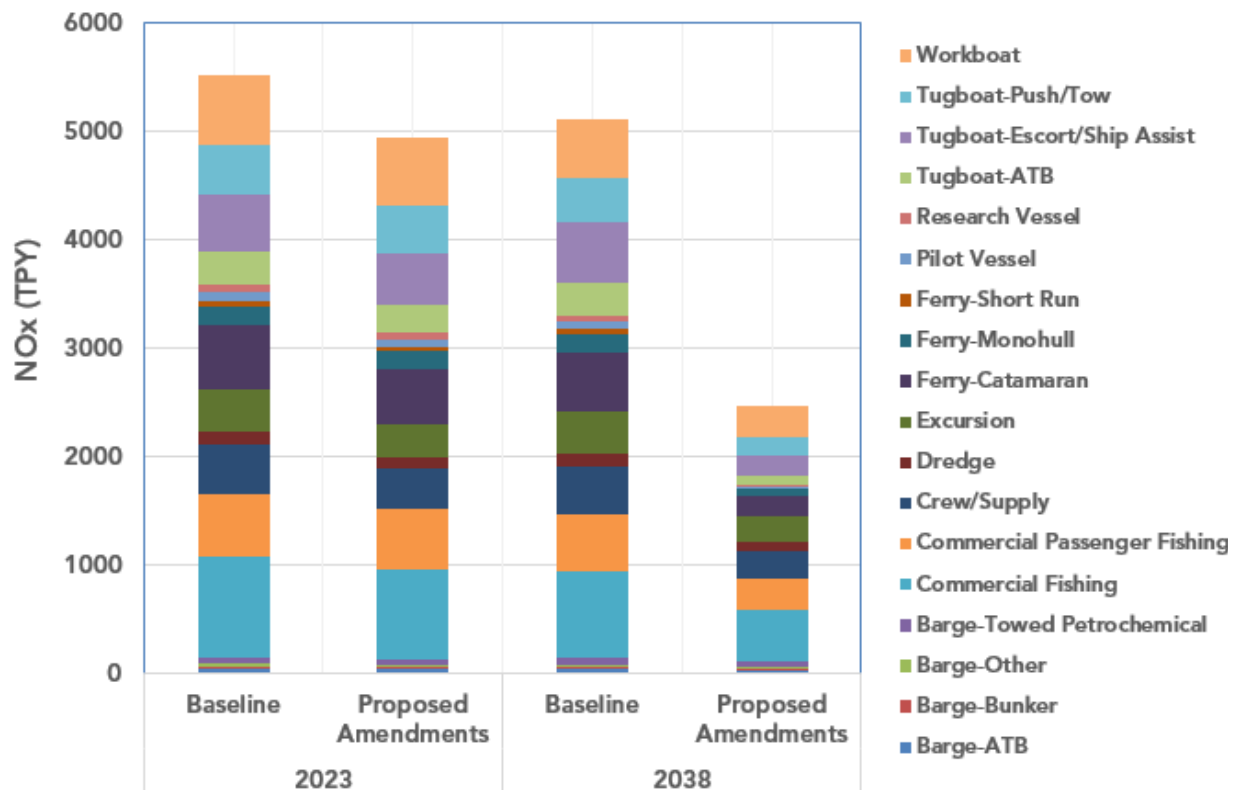
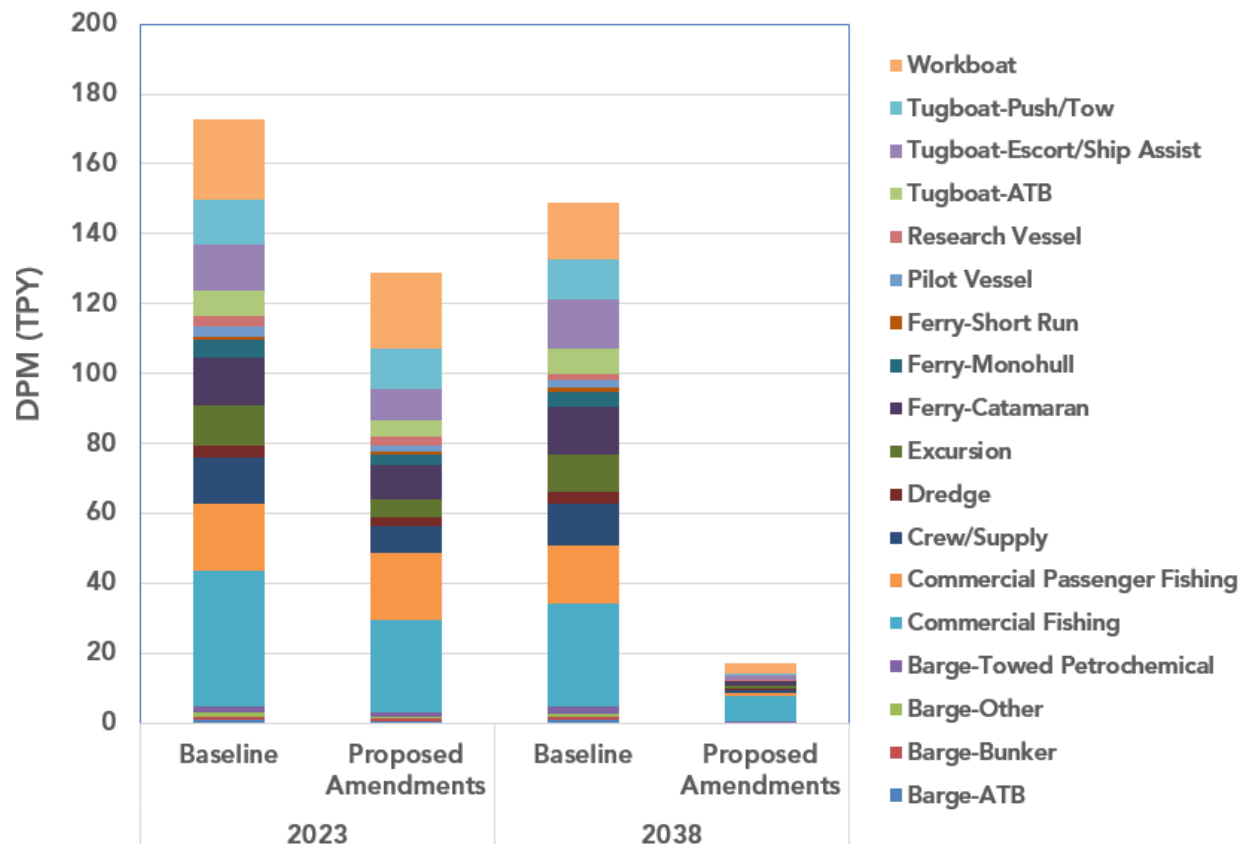


Figure VI-6 below shows the contribution to statewide CHC DPM emissions by each vessel type. In most cases, the relative contribution of NOx and DPM to the statewide inventory for each vessel category are comparable in magnitude. In 2038, the greatest emission reductions will come from three vessel categories: workboat, tugboat-Escort/Ship Assist, ferry-catamaran, and commercial fishing. In addition, due to the large number of CHC categories, the data in Figure VI-6 illustrates that reductions from all categories of vessels are important to achieve overall emission reductions from the CHC source category.

Figure VI-6. Statewide CHC DPM Emission by Vessel Type



## VII. Environmental Analysis

CARB, as the lead agency for the Proposed Amendments, has prepared an Environmental Analysis (EA) under its certified regulatory program (Title 17, CCR § 60000 through 60005) to comply with the requirements of the California Environmental Quality Act (CEQA). CARB's regulatory program, which involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans for the protection and enhancement of the State's ambient air quality has been certified by California Secretary for Natural Resources under Public Resources Code § 21080.5 of CEQA (Title 14, CCR § 15251(d)). As a lead agency, CARB prepares a substitute environmental document (referred to as an "Environmental Analysis" or "EA") as part of the Staff Report to comply with the CEQA (Title 17, CCR § 60004.2).

The Original CHC Regulation was adopted by CARB in October 2008 and it became effective in November 2008. The CHC Regulation was originally developed in accordance with several action plans and standards aimed at reducing risk for people and the environment from emissions created from goods movement. Consistent with the RRP to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles, the CHC Regulation addressed the air quality impacts of moving freight throughout California. The CHC Regulation also assists the State in meeting attainment goals under the CAA. Marine emissions standards are divided into increasingly stringent levels or tiers; the allowable emission level and effective dates vary with hp of the CHC. The Original CHC Regulation requires engines on all new CHC to meet applicable U.S. EPA marine engine emission standards at the time the vessel was acquired. The original CARB Staff Report included a chapter that was the substitute equivalent of a negative declaration, which analyzed the reasonably foreseeable environmental impacts of the methods of compliance. The analysis concluded that the adoption of the Original CHC Regulation, as written, and the reasonably foreseeable compliance with the Proposed Amendments would not result in significant adverse environmental impacts. The analysis has determined that the Proposed Amendments would lead to significant health benefits from the reduction in NO<sub>x</sub>, DPM, and GHG. When the Board approved the Original CHC Regulation in October 2008, it found that no significant impacts would result.

The first amendments to the CHC Regulation (Current Regulation) were adopted in June 2011, which stated that existing or in-use engines must meet U.S. EPA Tier 2 or Tier 3 standards based on a phased in compliance schedule. The amendments also required crew and supply vessels to meet in-use engine emission limits. The Staff Report for the Current Regulation was adopted by the Board and there were no significant adverse environmental impacts identified.

CARB has prepared this EA to assess the potential for significant adverse and beneficial environmental impacts associated with the Proposed Amendments, as required by CARB's certified regulatory program (Title 17, CCR § 60004.2). The resource areas from the CEQA Guidelines Environmental Checklist were used as a framework for assessing the potential for significant impacts.

While many impacts associated with the compliance with the Proposed Amendments could be reduced to less-than-significant levels through conditions of approval applied and mitigation measures to project-specific development, the authority to apply that mitigation lies with land use agencies or other agencies approving the development projects, not with CARB. Consequently, the EA takes a conservative approach in its significance conclusions and discloses for CEQA compliance purposes, that impacts from the development of new facilities and/or CHC associated with reasonably foreseeable compliance responses to the Proposed Amendments, could be potentially significant and unavoidable.

**Table VII-1. Summary of Potential Environmental Impacts**

<b>Section</b>	<b>Resource Area Impact</b>	<b>Significance</b>
1-1	Short-Term Construction-Related Impacts on Aesthetics	Potentially Significant and Unavoidable
1-2	Long-Term Operational-Related Impacts on Aesthetics	Potentially Significant and Unavoidable
2-1	Short-Term Construction and Long-Term Operational Impacts on Agricultural and Forest Resources	Potentially Significant and Unavoidable
3-1	Short-Term Construction-Related Impacts on Air Quality	Potentially Significant and Unavoidable
3-2	Long-Term Operational-Related Impacts on Air Quality	Less than Significant
4-1	Short-Term Construction-Related Impacts on Biological Resources	Potentially Significant and Unavoidable
4-2	Long-Term Operational-Related Impacts on Biological Resources	Potentially Significant and Unavoidable
5-1	Short-Term Construction-Related and Long-Term Operational-Related Impacts on Cultural Resources	Potentially Significant and Unavoidable
6-1	Short-Term Construction-Related Impacts on Energy Demand	Less than Significant
6-2	Long-Term Operational-Related Impacts on Energy Demand	Less than Significant
7-1	Short-Term Construction-Related and Long-Term Operational-Related Impacts on Geology and Soils	Potentially Significant and Unavoidable
8-1	Short-Term Construction-Related Impacts on Greenhouse Gases	Less than Significant
8-2	Long-Term Operational Related Impacts on Greenhouse Gases	Less than Significant
9-1	Short-Term Construction-Related Impacts to Hazards and Hazardous Materials	Potentially Significant and Unavoidable
9-2	Long-Term Operation-Related Impacts to Hazards and Hazardous Materials	Potentially Significant and Unavoidable
10-1	Short-Term Construction-Related Impacts to Hydrology and Water Quality	Potentially Significant and Unavoidable
10-2	Long-Term Operational-Related Impacts on Hydrology and Water Quality	Potentially Significant and Unavoidable

Section	Resource Area Impact	Significance
11-1	Short-Term Construction-Related and Long-Term Operational-Related Impacts to Land Use and Planning	Less than Significant
12-1	Short-Term Construction-Related and Long-Term Operational-Related Impacts to Mineral Resources	Less than Significant
13-1	Short-Term Construction-Related Impacts to Noise and Vibration	Potentially Significant and Unavoidable
13-2	Long-Term Construction-Related Impacts to Noise and Vibration	Potentially Significant and Unavoidable
14-1	Short-Term Construction Related and Long-Term Operational-Related Impacts to Population, Employment and Housing	Less than Significant
15-1	Short-Term Construction-Related and Long-Term Operational-Related Impacts to Public Services	Less than Significant
16-1	Short-Term Construction-Related and Long-Term Operational-Related Impacts to Recreation	Less than Significant
17-1	Short-Term Construction-Related Impacts to Transportation and Traffic	Potentially Significant and Unavoidable
17-2	Long-Term Operational-Related Impacts to Transportation and Traffic	Potentially Significant and Unavoidable
18-1	Short-Term Construction-Related and Long-Term Operational Impacts on Tribal Cultural Resources	Potentially Significant and Unavoidable
19-1	Short-Term Construction-Related and Long-Term Operational Impacts on Utilities and Service Systems	Potentially Significant and Unavoidable
20-1	Short-Term Construction Related and Long-Term Operational-Related Effects on Wildfire	Less than Significant

Written comments on the Draft EA will be accepted starting September 24, 2021 through November 8, 2021. The Board will consider the final EA and responses to comments received on the Draft EA before taking action to adopt the Proposed Amendments. The full Draft EA can be found in Appendix D. If comments received during the public review period raise significant environmental issues, staff will summarize and respond to the comments. The written responses to environmental comments will be approved prior to final action on the Proposed Amendments (Title 17, CCR § 60004.2(b)). If the Proposed Amendments are adopted, a Notice of Decision will be posted on CARB's website and filed with the Secretary of the Natural Resources Agency for public inspection (Title 17, CCR § 60004.2(d)).

## VIII. Environmental Justice

### A. Background

State law defines environmental justice as the fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins, with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies (Gov. Code, § 65040.12, subd. (e)(1)). Environmental justice includes, but is not limited to, all of the following: (A) The availability of a healthy environment for all people; (B) The deterrence, reduction, and elimination of pollution burdens for populations and communities experiencing the adverse effects of that pollution, so that the effects of the pollution are not disproportionately borne by those populations and communities; (C) Governmental entities engaging and providing technical assistance to populations and communities most impacted by pollution to promote their meaningful participation in all phases of the environmental and land use decision-making process; (D) At a minimum, the meaningful consideration of recommendations from populations and communities most impacted by pollution into environmental and land use decisions (Gov. Code, § 65040.12, subd. (e)(2)).

The Board approved its Environmental Justice Policies and Actions (Policies) on December 13, 2001, to establish a framework for incorporating environmental justice into CARB's programs consistent with the directives of State law.<sup>114</sup> These policies apply to all communities in California but are intended to address the disproportionate environmental exposure burden borne by low-income communities and communities of color. Environmental justice is one of CARB's core values and fundamental to achieving its mission.

In July 2017, AB 617 (Garcia, Chapter 136, Statutes of 2017) was signed into law to further environmental justice efforts in California. AB 617 requires CARB to address community-scale air pollution through new community focused and community-driven actions to reduce exposure and improve public health in communities that experience disproportionate cumulative burdens from exposure to air pollutants, such as DPM and NOx introduced by CHC activity near seaport communities.

California's CHC operations are largely situated in the vicinity of at-risk communities that directly benefit from localized reductions of NOx and DPM emissions. Although California has made dramatic progress in improving air quality, disparities in air pollution exposure, susceptibility, and health, still exist, particularly for people of color and low-income communities.

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<sup>114</sup> CARB, Policies and Actions for Environmental Justice, December 13, 2001, last accessed July 6, 2021, <https://ww3.arb.ca.gov/ch/programs/ej/ejpolicies.pdf>.

## B. Impacted Communities

Certain communities continue to experience environmental and health inequities from air pollution, particularly communities located near ports, rail yards, warehouses, and freeways. Communities near seaports, marinas, and harbors generally experience a higher concentration of air pollution associated with emissions from cars, diesel trucks, CHE, CHC, OGVs and locomotives due to activity around the ports. Many of the same communities also experience pollution impacts from large industrial facilities such as oil refineries that are often located near seaports. The impacts of this elevated, cumulative air pollution burden in these communities can be measured. For example, while exposure to cancer-causing diesel particles has decreased substantially across all communities statewide in California, exposure to diesel particles in DACs is on average twice that experienced in non-DACs.<sup>115</sup>

New Statewide actions are one of the core aspects along with several other elements included as part of CARB's CAPP to implement AB 617 (Garcia, Chapter 136, Statutes of 2017) to help achieve emission reductions in disproportionately burdened communities. These statewide actions reflect a coordinated suite of strategies including new regulations, new incentive grant funding, and new exposure reduction resources and tools. The Proposed Amendments described in this Staff Report are one of the Statewide regulatory measures that are included in the Community Air Protection Blueprint, a document describing the Statewide strategy for meeting AB 617's air protection goals, to help reduce air pollution caused by harbor craft in impacted communities.

Many of the communities identified as a priority for the deployment of community air monitoring systems and/or community emission reduction programs are located near concentrated CHC activity and would directly benefit from the Proposed Amendments. As of Spring 2021, the seaport communities that have been identified as priority communities include Richmond, West Oakland, San Diego Portside Environmental Justice Neighborhoods (Barrio Logan, West National City, Logan Heights, Sherman Heights), Wilmington, and West Long Beach.<sup>116</sup>

CARB has reached out to communities for input on the Proposed Amendments through community meetings. CARB presented to Bayview Hunters Point in November 2018, the Stockton community in September 2020, and San Diego in November 2020, and held monthly meetings with the California Cleaner Freight Coalition since 2018. Staff has also received input from Pacific Environment,

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<sup>115</sup> CARB, Community Air Protection Blueprint, October 2018, last accessed July 6, 2021, [https://ww2.arb.ca.gov/sites/default/files/2020-03/final\\_community\\_air\\_protection\\_blueprint\\_october\\_2018\\_acc.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-03/final_community_air_protection_blueprint_october_2018_acc.pdf).

<sup>116</sup> CARB, Community Air Protection Program Communities, last accessed July 6, 2021, <https://ww2.arb.ca.gov/capp-communities>.

Earthjustice, Coalition for Clean Air, Environmental Health Coalition, Environmental Defense Fund, San Pedro & Peninsula Homeowners' Coalition, East Yard Communities for Environmental Justice, WOEIP, Friends of the Earth, Little Manila Rising, Ocean Conservancy, Sierra Club California, and Union of Concerned Scientists on the Proposed Amendments, and has met with a large fraction of these organizations to discuss their comments and concerns. These meetings helped CARB recognize that community members and environmental justice groups generally do not want to have to choose between near-term emission reductions and the future deployment of ZEAT in the marine sector. These groups place absolute zero-emission operation as a high priority in emission reductions, and do not want to sacrifice near-term reductions in order to meet that goal.

### **C. Benefits of the Proposed Amendments on Communities**

The purpose and intent of the Proposed Amendments are to further reduce DPM and NO<sub>x</sub> from diesel propulsion and auxiliary engines on harbor craft that operate in RCW. The Proposed Amendments are consistent with CARB's environmental justice goal of reducing exposure to air pollutants and reducing adverse health impacts from TACs in all communities, especially those historically overburdened by air pollution sources. As discussed in Chapter III of this Staff Report, the Proposed Amendments would expand in-use requirements to additional vessel categories, implement more stringent requirements for new and in-use vessels, and require the adoption of ZEAT where feasible. This ensures that air pollutants and associated health risks are reduced above and beyond the goals of the Current Regulation. This contributes to meeting community health goals set forth in AB 617.

Additionally, NO<sub>x</sub> and PM emission reductions contribute to meeting California's SIP obligations for attainment and help achieve environmental justice goals in all communities located within affected air basins, and further exercise authority given to CARB in HSC § 39660<sup>117</sup> et seq. and 43013<sup>118</sup> et seq. The additional reductions and associated improvements to air quality are designed to help protect all communities and would be of particular benefit in environmental justice communities frequently located in areas with increased exposure to air pollution and toxics from CHC.

To further reduce emissions in DACs, the Proposed Amendments would require more stringency for low-use compliance in areas that qualify as a DAC. The low-use compliance thresholds in DACs would be half that in other areas of the State. The

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<sup>117</sup> HSC § 39660 et seq., Division 26, Identification of Toxic Air Contaminants, last accessed July 6, 2021, [https://leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?sectionNum=39660.&lawCode=HSC](https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=39660.&lawCode=HSC).

<sup>118</sup> HSC § 43013 et seq., Division 26, General Provisions, last accessed July 6, 2021, [https://leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?sectionNum=43013.&lawCode=HSC](https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=43013.&lawCode=HSC).

low-use thresholds for each engine tier in DACs and other areas are outlined in Chapter III, Table III-7, and would apply to all vessels, regardless of category.

The Proposed Amendments would also provide more stringency for the feasibility extension available to operators that operate Tier 4 engines less than 2,600 hours per year. If operating in a DAC, this threshold would be halved to 1,300 hours per year. For more details, see Chapter III, Section 3.b. To ensure that DACs would not experience a higher burden than other communities, the ZEAT credit offered through the Proposed Amendments (see Chapter III, Section 2.b.) may not be applied to a vessel with a homebase (a facility where a vessel is anchored or docked the majority of the time within a calendar year) in a DAC, unless the ZEAT vessel is also deployed in a DAC.

CARB staff is also proposing an ACE option that would allow owners and operators to comply with the Proposed Amendments by implementing alternative emission control strategies that achieve equivalent or additional emission reductions relative to requirements of subsection (e)(6.1) of the Proposed Amendments. An ACE application would be required to demonstrate that DACs would not experience a higher burden than other communities as a result of implementing an ACE.

## IX. Economic Impacts Assessment

This chapter summarizes results from analyses that estimate the cost and benefit impacts of the Proposed Amendments. While the direct compliance costs of the regulation are large, by the time the impacts of the regulation work their way through the economy, the macroeconomic modeling shows a small impact on economic indicators such as Gross State Product (GSP), employment, output, and the personal income of individuals in California, as described in detail in this chapter. Thus, this regulatory action will not have a significant adverse economic impact on businesses.

Details on the calculations and assumptions used to perform this analysis are included in the SRIA, which is attached as Appendix C-1. CARB's responses to comments from the DOF are attached as Appendix C-2.

In this chapter, staff provides a summary of the economic impacts of the Proposed Amendments to the CHC regulation. Greater details on the calculations and assumptions used to perform this analysis are included in Appendix C – SRIA to the CHC 2021 Amendments.

### A. Changes Since the Release of the SRIA

The Proposed Amendments and cost assumptions have been updated since the release of the SRIA on July 7, 2021. These changes and their potential impacts on the economic analysis are summarized as follows:

- **Low-Use Thresholds for DACs:** Since the SRIA, the Proposed Amendments were modified to specify a more stringent (lower) low-use threshold for regulated engines on in-use vessels that are homebased or regularly stop within two miles of a DAC. Vessels that operate below the low-use threshold are excepted from several provisions in the regulation and the Proposed Amendments. Table IX-1 summarizes the annual low-use hour limits in DACs and other areas by engine tier.

**Table IX-1. Annual Low-Use Hours Limits for Engines on Regulated In-Use Vessels with a Homebase or Regularly Scheduled Stops Within 2 Miles of a Disadvantage Community (DAC) and All Other Areas**

Engine Tier	Pre-Tier 1	Tier 1	Tier 2	Tier 3 or 4
Limits – DACs (hours/year)	40	150	200	350
Limits – All Other Areas (hours/year)	80	300	400	700

Table IX-2 below shows the updated percentage of vessels in each category qualifying for the low-use exception for the Proposed Amendments. Values have been weighted to account for the low-use percentages within DAC area and low-use percentages with all other areas by the vessel activity percentages within these two areas. This table

replaces “Table I-F: Low-Use Percentages of Vessel Horsepower by CHC Category” in Appendix A of SRIA for the updated cost analysis.

**Table IX-2. Vessel Low-Use Exception Percentage**

<b>Vessel Category</b>	<b>Percentage of Low-Use</b>
Ferry, Catamaran	3%
Ferry, Monohull	1%
Ferry, Short-Run	0%
Pilot Boat	2%
Push/Tow Tug	7%
Escort/Ship Assist Tug	14%
ATB Tug	36%
Research Vessel	21%
CPFV	9%
Excursion	13%
Dredge	19%
ATB Barge	23%
Bunker Barge	28%
Other Barge	39%
Towed Petrochemical Barge	1%
Crew Supply	12%
Workboat	35%
Commercial Fishing	9%

- Lower Annual Operation Threshold for Feasibility Extensions in DACs:**  
 The Proposed Amendments contain a provision that allow vessel owners of regulated in-use vessel to apply for a feasibility extension to retrofit Tier 4 engines with a DPF when 1) installation of a DPF is deemed infeasible, 2) when the number of operating hours is below a threshold for 2,600 hours. Since the SRIA, the Proposed Amendments were modified to include a lower threshold for approval of feasibility extensions in DACs. Essentially, the threshold was halved for vessels operating in DACs to prioritize emission reductions in these areas. Table IX-3 summarizes the annual operating threshold to be eligible for this feasibility extension.

**Table IX-3. Annual Operating Thresholds for Feasibility Extension for Vessels with Tier 4 Engines**

<b>Homebase or Regularly Scheduled Stop Location</b>	<b>Extension Available if Operating Below</b>
Within 2 Miles of a DAC	1,300 hours/year
All Other Areas	2,600 hours/year

Table IX-4 below shows the updated low-use percentages for Feasibility Extension (E)(4) (Tier4 +DPF) Applicability the Proposed Amendments. This table replaces “Table I-G: Percentage of Vessel Horsepower Qualifying for Limited Operating Hours Extension” in Appendix A of SRIA for the updated cost analysis.

Table IX-4. Tier 4 + DPF Low-Use Percentage (Engine >600 hp)

Vessel Category	Tier 4
Ferry, Catamaran	14%
Ferry, Monohull	8%
Ferry, Short-Run	0%
Pilot Boat	5%
Push/Tow Tug	9%
Escort/Ship Assist Tug	4%
ATB Tug	5%
Research Vessel	28%
Commercial Passenger Fishing	77%
Excursion	8%
Dredge	6%
ATB Barge	7%
Bunker Barge	0%
Other Barge	20%
Towed Petrochemical Barge	5%
Crew Supply	20%
Workboat	40%

- Majority of compliance extensions end in 2034:** To ensure that emission reductions are achieved sooner, staff modified the Proposed Amendments so the majority of compliance extensions can only be granted through December 31, 2034. Staff estimates that this change will result in fewer compliance extensions for certain vessel categories to be extended beyond 2034. Moreover, it will overall have minimal economic impact to the Proposed Amendments.
- Updates to compliance fee schedule:** Staff developed a draft schedule based on costs of personnel, equipment, and administration for implementation and enforcement equaling \$2.1 million per year, which is an updated total from the SRIA total of \$1.69 million per year. These changes were due to updated PY costs and changes to other administrative costs, such as travel and contract costs. The fee structure was also altered to ensure that CHC owners paying fees on-time are not paying for enforcement activities related to non-paying CHC owners. Enforcement resources dedicated to handling non-paying operators will be funded through late fees, that will be collected on top of the per-vessel and per-engine fees applicable to the operator.

Similar to the proposal described in Chapter C.2.n. of the SRIA, compliance fees are assessed based on the number of main engines and number of vessels and are not assessed for auxiliary engines operating on harbor craft. The previous fee amounts provided in the SRIA and the updated fee amounts are provided in Table IX-5.

**Table IX-5. Annual Fees for Owners or Operators of Regulated In-Use Vessels**

Category	Previous Fee Amount	Updated Fee Amount
	(SRIA proposal)	(ISOR proposal)
Per vessel, for single vessel fleets	\$349	\$364
Per vessel, for all other fleets	\$466	\$486
Per engine, for single vessel fleets	\$145	\$297
Per engine, for all other fleets	\$193	\$396
Per engine, if complying by low-use pathway	\$290	\$594
Late fee, per vessel	N/A	\$130
Late fee, per engine	N/A	\$86

Staff updated compliance fee amounts from the SRIA amounts to incorporate updates to vessel population, low-use percentages, and small business assumptions (informing single-vessel fleet counts) which all were updated with recently received insight into CHC businesses in California. The amended fees also incorporated updates and corrections to PY costs including overhead costs, travel costs, and indirect costs.

## **B. Direct Costs**

The direct cost inputs of the Proposed Amendments include:

- Costs for repowering and retrofitting in-use vessels including capital and labor and installation costs, fuel savings, increased electricity use and sales taxes.
- Costs for replacing vessels with new vessels or acquiring new build vessels, including capital and labor and installation costs, fuel savings, increased electricity use and sales taxes.
- Costs for installing dock power infrastructure and infrastructure to support ZEAT requirements.
- Various administrative costs described in detail below.

### **1. Cost Inputs**

#### **a. Key Assumptions in Cost Analysis**

##### **i. Amortization of Costs Based on Vessel, Engine, and Infrastructure Lifespan**

Staff assumes that capital and labor, and installation costs for engine repowers, retrofits, and vessel replacements/new-builds would be amortized over the expected equipment (i.e., engine and DPF) and vessel useful life periods. The useful life period is the point where approximately 50 percent of the engines or vessels retire in the fleet. More information about vessel survival curves can be found in Appendix H of the ISOR. Staff assumes the capital costs for land-side and vessel-side shore power and

ZEAT infrastructure would be amortized over a 20-year useful life at an interest rate of 5 percent. Staff assumes that shore power infrastructure costs would occur starting in 2023 and are amortized over a 20-year useful life at an interest rate of 5 percent.

## ii. Application of Vessel Population Growth Factors

The costs of the Proposed Amendments are directly proportional to the statewide vessel population. Staff assumed that the growth in the Statewide vessel population would be the same as the growth factor used to develop the baseline emissions estimates, which are described in further detail in Appendix H of the ISOR. The industrywide growth factors used for shore power infrastructure are provided in Table IX-6.

**Table IX-6. Industrywide Compound Vessel Growth Factors**

Year	Compound Growth Factor
2023	0.0%
2024	0.06%
2025	0.06%
2026	0.06%
2027	0.06%
2028	0.07%
2029	0.07%
2030	0.07%
2031	0.07%
2032	0.07%
2033	0.08%
2034	0.08%
2035	0.08%
2036	0.08%
2037	0.08%
2038	0.08%

## b. Repower and Retrofit Costs for In-Use Vessels

Vessel owners and operators would incur the following repower and retrofit costs:

- **Capital costs:** The costs resulting from equipment purchased to comply with the Proposed Amendments—i.e., Tier 3 or Tier 4 engines, DPFs, or zero-emission propulsion systems (short-run ferries). The capital costs for repower and retrofits range between \$141 and \$692 per hp, depending on the vessel category and engine tier. Tables II-A through II-Q in the SRIA Appendix A provides further details on the engine capital costs.
- **Labor and installation costs:** The costs resulting from labor and vessel modifications required to install the equipment, including structural and mechanical alternations, accessing the engine room, testing and commissioning, and shipyard costs. Labor and installation costs range between \$41 and \$512 per hp, depending on the vessel category and

engine tier. Tables II-A through II-Q in the SRIA Appendix A provides further details on the labor and installation costs.

- Operational and other costs: increased maintenance costs, changes due to differences in fuel consumption, and loss of use during repowering or retrofitting.
- Loss of use costs: Costs incurred due to vessel downtime during the repower and retrofit process. Loss of use costs range between \$17 and \$188 per hp, depending on the vessel category and engine tier.

For commercial fishing vessels, the Proposed Amendments would require all engines to meet a U.S. EPA certified Tier 2 or higher emissions standards, which would result in engine repower costs to vessel owners and operators.

Staff estimates the total cost of repowering and retrofitting engines for in-use vessels to equal \$1.2 billion through 2038.

### **c. Vessel Replacement/New-Build Vessel Costs**

Due to a variety of factors, including technical feasibility issues with repowering and/or retrofitting in-use engines, staff expects that some vessels would need to be replaced to meet emissions performance standards in the Proposed Amendments.

Staff expects that vessel owners and operators would incur the following costs, which apply to all vessel categories except for short-run ferries and excursion vessels, which are described in more detail further in this section.

- Capital costs: The costs resulting from purchasing a new-build vessel and DPFs, ranging from \$2,019 to \$18,883 per hp (see Table II-A to Table II-Q in the SRIA Appendix A, for details).
- Labor and installation costs: The costs resulting from designing and constructing a new vessel, and installing the DPFs, ranging from \$1,559 to \$18,088 per hp (see Table II-A to Table II-Q in the SRIA Appendix A, for details).
- Operational costs: Operational and other costs: increased maintenance costs, changes due to differences in fuel consumption, and loss of use during repowering or retrofitting.
- Vessel resale revenue: Costs savings due to revenue from reselling the old vessel.

Staff estimates the total cost of replacing and acquiring new-build vessels to equal \$472 million through 2038.

### **d. Sales Tax**

Sales tax is an additional cost levied on top of the purchase price of an engine, a DPF, and a new vessel. The sales tax varies across the state from a minimum of 7.25 percent

up to 10.5 percent in some municipalities. A value of 8.6 percent was used for staff's analysis based on a weighted average based on county level output.<sup>119</sup>

Staff applied this sales tax percentage to the capital cost values of engines and retrofit devices, and new-build vessels.

#### **e. Facility Shore Power Infrastructure Costs**

The Proposed Amendments contain an idling provision that would prohibit all propulsion engines from idling, and auxiliary engines from operating for more than 15 or 30 consecutive minutes when the vessel is docked, berthed, or moored. The 15-minute limit applies to all situations except the initial start-up of each day or for the new working crew change of a vessel. Shore power is the expected compliance strategy for vessel owners and operators if on-board power from auxiliary engines would be needed in excess of the 15 or 30-minute threshold. Facility owners and operators allowing more than 50 vessel visits per year would be required to install and maintain shore power infrastructure. Staff assumes that facility owners and operators would comply with the requirements in the Proposed Amendments by installing infrastructure to obtain electricity from the electric utility.

Both vessel owners and operators and facility owners and operators would incur costs as a result of the infrastructure required to enable a shore power connection and permit vessel owners and operators to shut down all on-board auxiliary generators. This includes infrastructure equipment cost, cost of installing chargers and increased electricity use, and cost savings from reduced use of diesel.

Staff estimates the total cost of facility shore power infrastructure to equal \$19 million through 2038.

#### **f. Zero-Emission Infrastructure**

The Proposed Amendments would require owners and operators of short-run ferries and excursion vessels to adopt zero-emission and zero-emission capable hybrid technologies. In order to meet these ZEAT requirements, staff expects that installation of charging infrastructure would be required.

Vessel owners and operators would incur costs for the installation and maintenance of all zero-emission infrastructure on both the vessel and the facility, including infrastructure for electric charging, hydrogen or other alternative refueling, or other advanced technologies.

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<sup>119</sup> California Department of Tax and Fee Administration, California City & County Sales & Use Tax Rates, last accessed July 7, 2021, <https://www.cdtfa.ca.gov/taxes-and-fees/rates.aspx>.

For the cost analysis, staff assumed that the charging infrastructure would be powered by grid electricity. Although hydrogen-powered vessels and associated infrastructure is expected to some degree under the Proposed Amendments, based on the cost data that staff received from stakeholders and the current state of the technology, staff assumed that all ZEAT would be powered by battery electric technology.

As of August, 2021, staff is aware of nine vessels operating in revenue service in the United States that operate with fuel derived from zero-emission tailpipe fuels. All of these vessels use batteries for on-board energy storage, and there is no hydrogen fuel cell vessel currently operated in normal revenue service. There are hydrogen fuel cell vessels that are constructed and still undergoing final USCG approvals and would need to undergo sea trials before being able to enter revenue service. An updated and more detailed overview of these technologies is provided as part of the staff report in Appendix E of the ISOR in support of the Proposed Amendments.

Staff assumes the Zero-Emission Infrastructure costs to include upstream utility costs, charging equipment acquisition and installation, and the cost additional use of electricity. It also includes cost savings from reduced use of diesel.

Staff estimated that 17 charging facilities would need to be installed throughout the State to meet the charging demands resulting from ZEAT requirements. Staff estimates the total cost of zero-emission shore power infrastructure to equal \$146 million through 2038.

#### **g. Administrative Costs**

Vessel owners and operators, vessel facility owners and operators, and State agencies would all incur administrative costs as a result of the Proposed Amendments. Administrative costs to State and local governments are described in section E of this Chapter. Administrative costs include:

- Opacity Testing;
- Compliance Fees;
- Vessel Labeling;
- Naval Architect and Financial Feasibility Reports (Compliance Extensions);
- Recordkeeping and Reporting;
- Facility Reporting; and
- Regulation Interpretation Costs.

Staff estimates the total cost of administrative costs for vessel owners and operators to equal \$135 million through 2038.

### i. Opacity Testing

Beginning January 1, 2023, all main propulsion diesel engines, including low-use engines, operating on in-use vessels subject to the Proposed Amendments would need to perform opacity testing biennially and submit results to CARB.

Based on stakeholder data,<sup>120</sup> staff assumes a per-vessel opacity testing cost of \$2,205 for catamaran and monohull ferries. For other vessel categories, staff assumes a per-engine opacity testing cost of \$200. Staff assumed higher costs would apply for CHC vessels compared to diesel engines in trucks to conduct opacity testing due to extra travel costs, time to test a smaller volume of engines at various in-field locations, and costs to transit the vessel out into open water. Opacity testing costs would occur biennially starting in 2023.

### ii. Compliance Fees

The Proposed Amendments include annual compliance fees that would impose a direct, on-going cost to vessel owners and operators. The compliance fees would help to offset staff costs of implementing and enforcing the Proposed Amendments.

Staff developed a preliminary proposed fee schedule based on estimated costs of personnel, equipment, and administration for implementation and enforcement equaling \$2.1 million per year. This fee structure (summarized in Table IX-7) is explained in further detail in Chapter III of this ISOR and the Draft Regulation Order.

**Table IX-7. Annual Fees for Owners or Operators of Regulated In-Use Vessels**

<b>Category</b>	<b>Fee Amount</b>
Per vessel, for single-vessel fleets	\$364
Per vessel, for all other fleets	\$486
Per engine, for single-vessel fleets	\$297
Per engine, for all other fleets	\$396
Per engine, if complying by low-use pathway	\$594
Late fee, per vessel	\$130
Late fee, per engine	\$86

### iii. Vessel Labeling

To increase reporting compliance, the Proposed Amendments would require the use of UVIs. All CHC would need to have their identifier affixed to the vessel by January 1, 2024.

Staff assume that the cost of a UVI would be \$150 per vessel, and that these costs would recur every five years beginning in 2023 due to labeling degradation. For more

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<sup>120</sup> Email between Lauren Duran Gularte (WETA) and Tracy Haynes (CARB) dated November 17, 2020.

information on UVI costs see Appendix A of the SRIA. Staff assume that vessel owners and operators would incur this cost during the year prior to the compliance deadline.

#### **iv. Naval Architect and Financial Feasibility Reports (Compliance Extensions)**

Vessel owners and operators seeking the compliance extension “Meeting Performance Standards Is Not Feasible for In-Use Harbor Craft” would need to demonstrate that Tier 4 + DPF is not feasible on their vessel, and that purchasing a replacement vessel with compliant engines would not be financially feasible. In order to do so, staff assume that vessel owners and operators would incur costs of obtaining a technical feasibility analysis from a third-party Naval Architect and providing financial data that staff would use to evaluate the ability to pay.

The total percentage of vessels in each category that incur the Financial Feasibility Report expense is based on the percentage of vessels that receive a compliance extension by their initial compliance date. Staff assumes it will take eight personnel hours to prepare each Financial Feasibility Report. At \$50 per personnel hour, this results in a total of \$400 per report.

#### **v. Recordkeeping and Reporting**

The Current Regulation requires vessels to report to CARB only periodically, such as after repowering engines or as compliance deadlines approach. To ensure that CARB’s records are current and the regulation can be effectively implemented, the Proposed Amendments would make changes to the information vessel owners and operators are required to report, and would require annual reporting.

Vessel owners and operators would be required to report to CARB the percentage of time a vessel is used in each vessel use category, new owner contact information when a vessel is sold, engine tier and MY, and the quantity of DEF consumed if the engine is equipped with an SCR.

Staff assumes that requirements to maintain vessel and engine records and submit annual reporting to CARB would cost \$200 per vessel, representing four personnel hours. These costs would occur annually beginning in 2023.

#### **vi. Facility Reporting**

To further increase reporting compliance, the Proposed Amendments require facilities to report to CARB quarterly, starting January 1, 2023. Facilities would be required to provide facility and vessel owner and operator contact information, information about the facility use agreement, and dock, berth or slip location number of vessel tenants. Facilities with shore power infrastructure would be required to provide information about the equipment, such as installation date, type of equipment supported, and number of plugs. Staff assumes that the facility reporting to CARB would cost

\$100 per vessel, representing two personnel hours. These costs would occur annually beginning in 2023.

#### **vii. Regulation Interpretation Costs**

Staff received stakeholder input regarding the amount of time required to interpret CARB Regulations.<sup>121</sup>

Staff assumes this would be a one-time cost per fleet occurring in 2023, and represents administrative time needed to understand the regulation during the first year the Proposed Amendments would be in effect. Staff assume a per-fleet cost of \$7,500 which represents 100 personnel hours with a personnel hour cost of \$75. This cost is multiplied by 1,305 fleets, which is based on data in the emission inventory.

### **2. Statewide Costs**

The total net costs of the Proposed Amendments calculated from all direct cost inputs described above are summarized in Table IX-8. The total net costs include all capital costs, as well as infrastructure costs, administrative costs for registration and reporting, and cost savings.

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<sup>121</sup> Email between Alex Brodie (Island Packers) and David Quiros (CARB) dated October 1, 2020.

**Table IX-8. Annual Direct Costs of the Proposed Amendments (2019 \$)**

<b>Year</b>	<b>Repower and Retrofit Costs</b>	<b>Vessel Replacement Costs</b>	<b>Infrastructure Costs</b>	<b>Administrative Costs</b>	<b>Fuel Cost Savings</b>	<b>Total Costs</b>
2023	\$8,715,488	\$831,139	\$10,544,369	\$21,284,688	-\$1,154,078	\$40,221,606
2024	\$29,948,428	\$3,252,010	\$10,545,134	\$11,020,606	-\$3,654,879	\$51,111,299
2025	\$45,443,479	\$5,158,105	\$10,574,061	\$11,021,273	-\$5,583,033	\$66,613,885
2026	\$57,183,571	\$7,619,589	\$11,543,289	\$11,021,957	-\$7,862,264	\$79,506,142
2027	\$66,597,219	\$12,512,740	\$11,999,355	\$11,022,660	-\$9,640,605	\$92,491,370
2028	\$73,017,786	\$15,846,841	\$12,093,761	\$11,497,406	-\$10,555,874	\$101,899,920
2029	\$77,393,497	\$20,860,983	\$12,363,039	\$7,246,120	-\$11,757,897	\$106,105,742
2030	\$85,289,519	\$28,513,289	\$12,384,103	\$7,246,861	-\$13,529,007	\$119,904,765
2031	\$88,523,359	\$32,900,296	\$12,395,466	\$7,247,622	-\$14,433,936	\$126,632,806
2032	\$91,181,642	\$37,298,134	\$12,401,094	\$7,248,404	-\$15,265,792	\$132,863,482
2033	\$93,001,369	\$44,320,296	\$12,409,412	\$7,723,243	-\$16,694,227	\$140,760,093
2034	\$95,124,398	\$52,602,526	\$12,418,743	\$7,250,035	-\$18,255,381	\$149,140,322
2035	\$95,124,398	\$52,602,526	\$12,422,441	\$3,472,765	-\$18,264,379	\$145,357,751
2036	\$95,124,398	\$52,602,526	\$12,418,589	\$3,473,620	-\$18,268,177	\$145,350,956
2037	\$95,124,398	\$52,602,526	\$12,416,764	\$3,474,500	-\$18,270,745	\$145,347,443
2038	\$95,124,398	\$52,602,526	\$12,414,551	\$3,949,451	-\$18,273,961	\$145,816,965
<b>Total</b>	<b>\$1,191,917,346</b>	<b>\$472,126,054</b>	<b>\$191,344,172</b>	<b>\$135,201,212</b>	<b>-\$201,464,237</b>	<b>\$1,789,124,546</b>

## C. Direct Costs on Businesses and Individuals

### 1. Direct Costs on Typical Businesses

The typical business that would be impacted by the Proposed Amendments is a vessel owner or operator. The total vessel owner or operator costs are made up of repower costs, retrofit costs, vessel replacement/new-build vessel costs, ZEAT infrastructure costs, shore power related costs for vessel-side infrastructure, and administrative costs as detailed above in section B.1. of this Chapter.

There is a lot of variation in businesses that own or operate vessels in the State. Thus, staff analyzed the typical direct costs per vessel and per business for each category and summarized them in Table IX-9. Costs to vessel owners and operators will vary widely depending on the number of vessels owned and the specific compliance pathways that are taken. As described earlier in the chapter, some businesses may take immediate compliance actions, while others may take advantage of multiple compliance extensions or low-use exceptions.

**Table IX-9. Direct Amortized Costs for Typical Business Vessel Owners and Operators of CHC (2019 \$)**

Vessel Category	Average Vessel# per Business	Average Direct cost per vessel	Average cost per business
Ferry (Catamaran)	5.8	\$6,333,308	\$36,944,295
Ferry (Monohull)	2.5	\$2,806,487	\$7,016,217
Ferry (Short-Run)	2.7	\$2,532,820	\$6,754,187
Pilot Boat	3.3	\$1,653,379	\$5,511,264
Push/Tow Tug	2.9	\$1,319,801	\$3,804,133
Escort/Ship Assist Tug	3.7	\$3,046,463	\$11,289,832
ATB Tug	4.8	\$4,248,532	\$20,180,525
Research Vessel	1.8	\$673,804	\$1,203,222
CPFV	1.2	\$512,980	\$618,387
Excursion	2.0	\$587,694	\$1,146,383
Dredge	2.1	\$246,863	\$527,390
ATB Barge	4.8	\$1,878,943	\$8,924,978
Bunker Barge	2.8	\$103,554	\$291,834
Other Barge	3.7	\$192,161	\$704,591
Towed Petrochemical Barge	2.2	\$279,549	\$615,008
Crew Supply	2.6	\$515,950	\$1,329,142
Workboat	2.5	\$341,201	\$863,983
Commercial Fishing	1.2	\$44,438	\$51,479

### 2. Direct Costs on Small Businesses

To illustrate the costs and cost-savings to a small business owning or operating vessels or vessel facilities, staff completed a similar analysis as presented in the typical businesses section.

For these Proposed Amendments, staff defines small businesses as businesses with 100 or less employees. Based on this, 70 percent of vessel fleets are considered small businesses. Similar to the case of typical businesses, the compliance costs for a small business will vary depending on the compliance option and the number of vessels owned/operated.

To illustrate the anticipated cost for a typical small business, CARB staff constructed two small business examples and analyzed the costs to comply with the Proposed Amendments. All cost input assumptions are the same as discussed in Section B of this Chapter. For more details, refer to the SRIA, Chapter C.

The first small business example is a CPFV business with 1 vessel with total engine power of 730 hp. Staff analyzed a scenario in which this vessel would have a compliance deadline in 2026 which would require replacement of the existing vessel with a new-build vessel. Staff estimates the total amortized costs for such a small business to comply with the Proposed Amendments be approximately \$1.2 million, or an additional cost of \$74,000 per year for the period between 2023 and 2038.

The second small business example is a commercial fishing business that owns a single vessel with total engine power of 362 hp. Staff considered an example where this vessel would repower the engine to Tier 3 in 2030, the first compliance date for the commercial fishing vessel category. Staff estimates the total amortized costs for this typical business to comply with the Proposed Amendments to be approximately \$90,000, or an additional cost of \$5,600 per year for the period between 2023 and 2038.

### 3. Direct Costs on Individuals

The Proposed Amendments would not result in any direct costs to individuals. However, staff anticipates the Proposed Amendments would result in indirect costs to individuals to the extent that compliance costs are passed through ultimately to consumers of services and cargo. These costs are discussed in Appendix C of the SRIA and are summarized in Table IX-10 below.

**Table IX-10. Calculated Cost Metrics and Cost Impacts to Individuals**

<b>Cost Metric</b>	<b>Average Annualized Cost Increase</b>
Cost Per Passenger – High-Speed Ferry, One-Way Trip	\$1.84
Cost Per Passenger – Short-Run Ferry, One-Way Trip	\$0.98
Cost Per Passenger – Excursion Vessels	\$1.23
Cost Increase Per Twenty-Foot-Equivalent Unit – Tug Vessels	\$0.44
Cost Per Pound of Fish – Commercial Fishing Vessels	\$0.04
Cost Per Passenger/day – CPFVs, One-Day Trip	\$26.37
Cost Per Passenger/day – CPFVs, Multi-Day Trip	\$24.56
Cost Per Passenger/day – CPFVs, “6-pack” Vessel*	\$83.50

\*6-pack vessels are uninspected passenger vessels that can carry up to 6 passengers (in addition to 2 crew). Due to the smaller passenger capacity and market segment, the costs to individual passengers aboard these vessels were calculated separately.

## **D. Benefits**

### **1. Benefits to Vessel Owners and Operators and Facility Owners and Operators**

There are several benefits to terminal and vessel owners and operators and facility owners and operators: fuel savings from reduced use of diesel, LCFS credits from increased use of low carbon fuels, and health benefits. Fuel cost savings depend on fuel and electricity costs.

Facility owners and operators might benefit from generating LCFS credits if they opt-in the program and provide shore power or hydrogen refueling to ZEAT vessels.

### **2. Benefits to Other California Businesses**

The Proposed Amendments may result in financial benefits to many different industries whose products will be needed to comply with the Proposed Amendments. These businesses include CHC engine OEMs, battery systems manufacturers, hydrogen fueling system manufacturers, diesel engine repair shops and boatyards, opacity testing equipment manufacturers, companies offering opacity testing services, manufacturers of emission control technologies, including but not limited to DPFs, DPF installation, repair, and maintenance centers, electrical suppliers and design, engineering, and construction firms.

### **3. Benefits to Small Businesses**

Businesses, including construction companies, engineers, electricians, parts and components manufacturers, consulting firms, and others involved in designing, installing, and maintaining equipment for engine and aftertreatment technologies may fall into the category of small businesses. The benefits discussed above would also apply to small businesses.

### **4. Benefits to Individuals**

California experiences some of the highest concentrations of PM<sub>2.5</sub> in the nation. Individuals who live in, or work in, high-risk areas near seaports, marinas, harbors, and other waters are exposed to higher PM<sub>2.5</sub> concentrations from harbor craft than other California residents. These individuals are at a higher risk of developing respiratory impairments as a result of main and auxiliary engine emissions, especially those individuals within sensitive groups such as the young and the elderly.

The Proposed Amendments would reduce NO<sub>x</sub> and PM<sub>2.5</sub> emissions from CHC vessels and result in health benefits for individuals in California. This would benefit individuals by reducing incidents of premature death, hospital admissions, and emergency room visits, as well as reduce criteria pollutants and GHGs. The Proposed Amendments would accomplish this by reducing emissions from fuel combustion on

board a vessel, including PM2.5, DPM, NOx, and ROG. GHGs would be reduced when short-run ferries and excursion vessels use ZEAT technologies.

Staff estimates that the total number of cases statewide that would be reduced (from 2023 to 2038) from the implementation of the Proposed Amendments are as follows:

- 531 premature deaths reduced (415 to 651, 95 percent confidence interval (CI)).
- 73 hospital admissions for cardiovascular illness reduced (0 to 144, 95 percent CI).
- 88 hospital admissions for respiratory illness reduced (21 to 155, 95 percent CI).
- 236 emergency room visits reduced (149 to 323, 95 percent CI).

Table IX-11 shows the estimated total reductions in health outcomes resulting from reductions in PM2.5 and NOx emissions from the Proposed Amendments from 2023 to 2038.

**Table IX-11. Proposed Amendments: Estimated Total Reductions in Health Outcomes from 2023 to 2038\***

<b>Air Basin</b>	<b>Cardiopulmonary Mortality</b>	<b>Hospitalizations for Cardiovascular Illness</b>	<b>Hospitalizations for Respiratory Illness</b>	<b>Emergency Room Visits for Asthma</b>
Lake Tahoe	0 (0 - 0)	0 (0 - 0)	0 (0 - 0)	0 (0 - 0)
North Central Coast	2 (1 - 2)	0 (0 - 1)	0 (0 - 1)	1 (1 - 2)
North Coast	3 (2 - 3)	0 (0 - 1)	0 (0 - 1)	1 (1 - 1)
Sacramento Valley	1 (1 - 1)	0 (0 - 0)	0 (0 - 0)	0 (0 - 0)
San Diego County	35 (28 - 43)	5 (0 - 9)	6 (1 - 10)	15 (9 - 20)
San Francisco Bay	167 (130 - 205)	22 (0 - 43)	26 (6 - 47)	78 (50 - 107)
San Joaquin Valley	1 (1 - 1)	0 (0 - 0)	0 (0 - 0)	0 (0 - 0)
South Central Coast	28 (22 - 34)	4 (0 - 8)	5 (1 - 8)	12 (8 - 17)
South Coast	295 (230 - 360)	42 (0 - 82)	50 (12 - 88)	128 (81 - 176)
Statewide	531 (415 - 651)	73 (0 - 144)	88 (21 - 155)	236 (149 - 323)

\*The values in parentheses represent the 95 percent confidence intervals of the central estimate. Totals may not add due to rounding. Air basins with zero impacts are not shown, and these are: Great Basin Valleys, Lake County, Mojave Desert, Mountain Counties, Northeast Plateau, and Salton Sea.

Statewide valuation of health benefits was calculated by multiplying the avoided health outcomes by valuation per incident. The total statewide valuation due to avoided health outcomes between 2023 and 2038 totaled \$5.25 billion.

## 5. Social Cost of Carbon

The Proposed Amendments would result in an estimated cumulative net reduction in GHG emissions between 2023 and 2038 totaling 415,060 MT compared with the Baseline. The Proposed Amendments would achieve GHG benefits mainly by reducing fuel consumption using shore power and the requirement for ZEAT.

The monetary value of these GHG reductions can be estimated using the social cost of carbon (SC-CO<sub>2</sub>), which provides a dollar valuation of the damages caused by one ton of carbon pollution and represents the monetary benefit today of reducing carbon emissions in the future. If all GHG emission reductions under the Proposed Amendments are assumed to be CO<sub>2</sub> reductions, the avoided SC-CO<sub>2</sub> each year is the total emission reductions (in MT CO<sub>2</sub>e multiplied by the SC-CO<sub>2</sub> (in \$/MT CO<sub>2</sub>e) for that year. Staff estimates the annual avoided SC-CO<sub>2</sub> to range between a total of \$9 to \$41 million from 2023 to 2038, depending on the discount rate.

## **E. Fiscal Impacts**

This section summarizes the fiscal impacts of the Proposed Amendments on local, State, and federal governments. For more details on this analysis, please refer to Chapter D in the SRIA.

### **1. Local Government**

#### **a. Direct Costs to Vessel Fleet and Facility Owners and Operators**

The Proposed Amendments would have a small fiscal impact on local government agencies that own/operate fleets or vessel facilities, relative to the total estimated cost of the Proposed Amendments. Local governments are estimated to incur direct costs (identified in section B of this Chapter) to comply with this regulation. The estimated direct costs to local governments equipment and facility owners are \$40.6 million in the period between 2023 - 2038.

#### **b. Utility User Tax**

Several cities and counties in California levy a Utility User Tax on electricity usage. By increasing the amount of electricity used, there would be an increase in the amount of the utility user tax revenue collected by cities and counties. Staff estimates that this will increase local governments' revenues by \$1.0 million in the period between 2023-2038.

#### **c. Diesel Fuel Tax**

When used off-road, Dyed Diesel is taxed at the combined statewide sales tax rate, plus applicable district taxes. Displacing diesel with electricity would decrease the total amount of diesel fuel dispensed in the State, resulting in a reduction in tax revenue collected by local governments. Staff estimates that this will decrease local governments' revenues by \$3.1 million in the period between 2023-2038.

#### **d. Local Sales Tax**

The Proposed Amendments would result in additional sales of vessels and vessel equipment relative to baseline conditions, which would result in a direct increase in

sales tax revenue collected by local governments. Staff estimates that this will increase local governments' revenues by \$27.0 million in the period between 2023-2038.

#### **e. Fiscal Impact on Local Governments**

In summary, the fiscal impact to local governments is estimated to be approximately \$15.6 million over the regulatory implementation period, from 2023 to 2038.

Table IX-12 summarizes these impacts by category.

**Table IX-12. Estimated Fiscal Impacts to Local Governments from 2023 through 2038 (2019\$)**

<b>Year</b>	<b>Utility User Tax Revenue</b>	<b>Local Diesel Fuel Tax</b>	<b>Local sales Tax</b>	<b>Total Change in Revenue</b>	<b>Total Direct Costs</b>	<b>Total Fiscal Impact</b>
2023	-\$14,048	\$8,299	-\$2,536,298	-\$2,542,048	\$4,240,445	\$1,698,397
2024	-\$14,055	\$104,311	-\$5,486,375	-\$5,396,119	\$6,435,195	\$1,039,077
2025	-\$15,075	\$177,114	-\$4,345,243	-\$4,183,204	\$4,440,893	\$257,689
2026	-\$49,288	\$181,003	-\$2,944,445	-\$2,812,730	\$3,012,446	\$199,717
2027	-\$65,387	\$187,624	-\$2,337,652	-\$2,215,415	\$3,157,957	\$942,542
2028	-\$68,719	\$195,174	-\$1,586,246	-\$1,459,791	\$2,393,571	\$933,779
2029	-\$78,223	\$192,254	-\$1,061,706	-\$947,676	\$2,387,769	\$1,440,093
2030	-\$78,966	\$211,154	-\$2,237,426	-\$2,105,238	\$3,844,377	\$1,739,138
2031	-\$79,367	\$215,813	-\$1,405,469	-\$1,269,023	\$2,349,023	\$1,080,001
2032	-\$79,565	\$219,334	-\$1,289,847	-\$1,150,077	\$2,215,680	\$1,065,603
2033	-\$79,858	\$226,416	-\$815,618	-\$669,059	\$2,233,673	\$1,564,614
2034	-\$80,186	\$230,206	-\$970,041	-\$820,021	\$2,712,135	\$1,892,114
2035	-\$80,316	\$229,786	\$0	\$149,470	\$282,135	\$431,605
2036	-\$80,179	\$229,608	\$0	\$149,429	\$281,355	\$430,784
2037	-\$80,114	\$229,488	\$0	\$149,374	\$280,978	\$430,352
2038	-\$80,035	\$229,338	\$0	\$149,303	\$288,884	\$438,187
<b>Total</b>	<b>-\$1,023,381</b>	<b>\$3,066,923</b>	<b>-\$27,016,366</b>	<b>-\$24,972,825</b>	<b>\$40,556,516</b>	<b>\$15,583,691</b>

## **2. State Government**

#### **a. Direct Costs to Vessel Fleet and Facility Owners and Operators**

The Proposed Amendments would have a small fiscal impact on State government agencies that own/operate fleet or vessel facilities, relative to the total estimated cost of the Proposed Amendments. State government is estimated to incur direct costs (identified in section B of this Chapter) to comply with this regulation. The estimated direct costs to State government equipment and facility owners are \$14.3 million in the period between 2023-2038.

#### **b. Diesel Fuel Tax**

When used off-road, Dyed Diesel is taxed at the combined statewide sales tax rate, plus applicable district taxes. Displacing diesel with electricity would decrease the total amount of diesel fuel dispensed in the State, resulting in a reduction in tax revenue collected by local governments. Staff estimates that this will decrease State government's revenues by \$2.6 million in the period between 2023-2038.

#### **c. Energy Resource Fee**

The Energy Resource Fee is a \$0.0003/kW-hr surcharge levied on consumers of electricity purchased from electrical utilities.<sup>122</sup> Increased use of electricity is expected to increase revenues to State government by \$33 thousand in the period between 2023-2038.

#### **d. State Sales Tax**

The Proposed Amendments would result in additional sales of vessels and vessel equipment relative to baseline conditions, which would result in a direct increase in sales tax revenue collected by State government. Staff estimates that this will increase State government's revenues by \$22.8 million in the period between 2023-2038.

#### **e. Costs to CARB**

Existing CARB staff have been working on the Current Regulation and additional staff will be necessary to augment and implement and enforce the Proposed Amendments. For more information, please refer to Chapter D in the SRIA. Staff estimates CARB's spending will increase by \$23.9 million in the period between 2023-2038.

#### **f. Collected Compliance Fees**

The Proposed Amendments will impose new compliance fees which are expected to increase State revenue by about \$2.1 million annually, or \$33 million in the period between 2023 – 2038.

#### **g. Fiscal Impacts on State Government**

Table IX-13 summarized the estimated fiscal cost to State government agencies due to the Proposed Amendments relative to baseline conditions. The fiscal impact to State government agencies is estimated to increase revenues by \$14.8 million over the regulatory implementation period.

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<sup>122</sup> California Department of Tax and Fee Administration, 2020 Electrical Energy Surcharge Rate, last accessed July 6, 2020, <https://www.cdtfa.ca.gov/formspubs/l725.pdf>.

Table IX-13. Estimated Fiscal Impacts to State Governments from 2023 through 2038 (2019 \$)

Year	Costs to CARB	State Diesel Fuel Tax	Energy Resources Fee	State Sales Tax	Total Direct Costs	Collected Compliance Fees	Total Fiscal Impact
2023	\$1,503,623	\$7,001	-\$512	-\$2,139,832	\$1,249,808	-\$2,054,290	-\$1,434,202
2024	\$1,495,623	\$88,006	-\$512	-\$4,628,762	\$2,108,411	-\$2,054,290	-\$2,991,524
2025	\$1,495,623	\$149,428	-\$535	-\$3,666,008	\$1,689,461	-\$2,054,290	-\$2,386,321
2026	\$1,495,623	\$152,709	-\$1,712	-\$2,484,178	\$1,129,929	-\$2,054,290	-\$1,761,919
2027	\$1,495,623	\$158,296	-\$2,236	-\$1,972,238	\$1,186,424	-\$2,054,290	-\$1,188,421
2028	\$1,495,623	\$164,665	-\$2,305	-\$1,338,289	\$886,769	-\$2,054,290	-\$847,827
2029	\$1,495,623	\$162,202	-\$2,579	-\$895,744	\$883,996	-\$2,054,290	-\$410,792
2030	\$1,495,623	\$178,147	-\$2,555	-\$1,887,678	\$1,453,425	-\$2,054,290	-\$817,329
2031	\$1,495,623	\$182,078	-\$2,521	-\$1,185,771	\$867,729	-\$2,054,290	-\$697,152
2032	\$1,495,623	\$185,049	-\$2,533	-\$1,088,222	\$815,612	-\$2,054,290	-\$648,761
2033	\$1,495,623	\$191,023	-\$2,546	-\$688,123	\$822,705	-\$2,054,290	-\$235,608
2034	\$1,495,623	\$194,221	-\$2,555	-\$818,407	\$1,009,910	-\$2,054,290	-\$175,498
2035	\$1,495,623	\$193,866	-\$2,577	\$0	\$59,253	-\$2,054,290	-\$308,125
2036	\$1,495,623	\$193,717	-\$2,595	\$0	\$59,205	-\$2,054,290	-\$308,340
2037	\$1,495,623	\$193,615	-\$2,604	\$0	\$59,181	-\$2,054,290	-\$308,475
2038	\$1,495,623	\$193,489	-\$2,614	\$0	\$62,423	-\$2,054,290	-\$305,369
Total	\$23,937,968	\$2,587,511	-\$33,493	-\$22,793,251	\$14,344,240	-\$32,868,640	-\$14,825,665

### **3. Federal Government**

The Proposed Amendments would have a small fiscal impact on federal government agencies that own/operate fleets or vessel facilities, relative to the total estimated cost of the Proposed Amendments. The federal government is estimated to incur direct costs (identified in Section B of this Chapter) to comply with this regulation. The estimated direct costs to federal government equipment and facility owners are estimated to be \$12.7 million.

### **F. Macroeconomic Impacts**

Regional Economic Models, Inc. (REMI) Policy Insight Plus Version 2.5.0 is used to estimate the macroeconomic impacts of the proposed amendments on the California economy. REMI is a structural economic forecasting and policy analysis model that integrates input-output, computable general equilibrium, econometric and economic geography methodologies.

#### **1. California Employment Impacts**

The statewide employment impacts of the Proposed Amendments are anticipated to be slightly positive in 2023 through 2030, corresponding with demand for cleaner technology and ZEAT engines and demand for labor and installation of new engines that would likely occur at California-based shipyards. From 2031 through 2038, the Proposed Amendments are estimated to result in slightly lower employment growth as the overall costs of the Proposed Amendments offset the positive impacts of additional in-State demand. The changes in statewide employment never represent more than a 0.01 percent change relative to baseline California employment.

#### **2. California Business Impacts**

Gross output is used as a measure for business impacts because it represents an industry's sales or receipts and tracks the quantity of freight or services produced in a given time period. Output is the sum of output for each private industry, state, and local government as it contributes to the State's Gross Domestic Product (GDP), and is affected by production cost and demand changes. As production cost increases or demand decreases, output is expected to contract, but as production costs decline or demand increases, industries would likely experience growth.

The trends in output impacts by industry are also similar to the trends in the changes in employment by industry. The industries that face direct costs to comply with the Proposed Amendments are estimated to see a decrease in output of up to 1 percent in the years with the greatest impact. Conversely, industries such as ship and boat building and engine, turbine, and power transmission equipment manufacturing are estimated to see increases in output of 13 percent and 0.5 percent in the years of greatest impact.

### **3. Impacts on Investments in California**

Gross domestic private investment consists of purchases of residential and non-residential structures and of equipment and software by private businesses and nonprofit institutions. It is used as a proxy for impacts on investments in California because it provides an indicator of the future productive capacity of the economy.

The changes in private investment for the Proposed Amendments, relative to the baseline, show increases in private investment as great as \$41 million in 2024 and a decrease as large as \$47 million in 2037. In any given year these impacts represent changes of less than 0.01 percent of baseline investment.

### **4. Gross State Product**

GSP is the market value of all freight and services produced in California and is one of the primary indicators used to gauge the health of the economy. Under the Proposed Amendments, GSP is anticipated to increase slightly from 2023 through 2027. This primarily reflects the initial increase in demand for more expensive engines and demand for installations and construction services within California. After this initial demand has been met, the ongoing increased costs to the CHC sector results in a slight decrease in GSP growth. In 2037, GSP is estimated to be \$208 million lower than baseline levels, a 0.01 percent decrease.

### **5. Creation or Elimination of Businesses**

The Proposed Amendments do not directly result in business creation or elimination. However as discussed in Chapter E of the SRIA, changes in outputs of different sectors might indicate the creation or elimination of businesses in the State.

Based on the modeling of output changes, many sectors, such as shipyards and ship and boat building industry may experience an increase in output which may result in the creation of new businesses.

Industries that operate CHC would face costs and see net decreases in output growth and employment. Some of these businesses are large and would not be anticipated to face business elimination. However, many are small businesses and may face substantial compliance costs. If these businesses are unable to pass on the costs of the Proposed Amendments to customers or if there is a significant change in demand for services, it is possible that some businesses would be eliminated.

### **6. Incentives for Innovation**

The Proposed Amendments would provide a strong signal for the development of zero-emission technologies in the off-road and maritime sectors and help in building a robust market for advanced technologies. Growth in the industries that manufacture ZEAT will also strengthen the supply chain and promote technology improvements that may not have happened otherwise. The Proposed Amendments would result in

deploying ZEAT into the marine sector in California, which responds to Governor Newsom's Executive Order N-79-20 by establishing a strategy to achieve zero-emission off-road equipment operations, where feasible and cost effective, by 2035.

## **7. Significant Statewide Adverse Economic Impact Affecting Businesses, Including Ability to Compete**

Since the Proposed Amendments would impose requirements on nearly vessels operating in RCW, regardless of whether they are based in the State or not, the Proposed Amendments are not expected to create a competitive advantage or disadvantage for in-state versus out-of-state vessels or fleets in most vessel categories that operate in RCW.

Some CHC vessels that will be impacted do however compete with vessels located in other jurisdictions. Notably, commercial fishing vessels and ATBs do compete with operations located outside California. Staff discussed the potential impacts of the Proposed Amendments on these vessel categories in Chapter E of the SRIA. Overall staff anticipates the Proposed Amendments to have a limited adverse impact on these vessel categories.

### **G. Alternatives**

Staff analyzed two alternatives to the Proposed Amendments. Under Alternative 1, there would be no low-use exceptions and no compliance extension for vessels with Tier 4 engines and limited operating hours. Under Alternative 2, the Proposed Amendments would not include any new emission control requirements on commercial fishing vessels.

Alternative 1 is more stringent than the Proposed Amendments because it requires low-use excepted vessels to control emissions or be replaced, and it requires some vessels to control emissions or be replaced at an earlier date. Alternative 1 could provide more PM<sub>2.5</sub>, DPM, and NO<sub>x</sub> reductions and health benefits but results in higher costs (about 16 percent higher or \$282 million additional cost). Alternative 1 was rejected because it has higher costs and is less cost effective to implement than the Proposed Amendments.

Alternative 2 is less stringent because it does not require commercial fishing vessels to repower engines to achieve lower emissions. This is estimated to lower costs by \$41 million and overall lower emission reductions. Alternative 2 was rejected because, while it has a lower cost, it would also result in lower emission reductions, decrease health benefits, and is less cost effective in reducing emissions.

More detail on the alternatives is discussed in the following chapter.

## **X. Evaluation of Regulatory Alternatives**

Government Code § 11346.2, subdivision (b)(4) requires CARB to consider and evaluate reasonable alternatives to the proposed regulatory action and provide reasons for rejecting those alternatives. This section discusses alternatives evaluated and provides reasons why these alternatives were not included in the proposal. As explained below, no proposed alternative was found to be less burdensome and equally effective in achieving the purposes of the Proposed Amendments in a manner that ensures full compliance with the authorizing law. The Board has not identified any reasonable alternatives that would lessen adverse impacts on small businesses while still achieving necessary emission reductions.

During the development process of the Proposed Amendments, CARB staff solicited public input regarding alternatives to achieving the Regulation's goals. CARB staff requested input on alternatives in multiple public workshops since December 2018. Staff evaluated several alternatives to the proposal, including suggestions from both public and industry stakeholders.

Staff has selected two alternatives to the Proposed Amendments for formal evaluation, which includes an analysis of cost impacts and health benefits of each alternative and a discussion on why the alternative was rejected. These alternatives are different than the alternatives discussed in Chapter VII or in the EA (Appendix D) because these EA alternatives address reducing the environmental impacts of the Proposed Amendments. The alternatives evaluated in this chapter are proposed as less burdensome and equally effective in achieving the purposes of the Proposed Amendments. It is important to note that two of the alternatives listed here are the same as those that staff considered for the SRIA (Appendix C-1).

### **A. Alternative 1: No Low-Use Exception and No Extension for Vessels with Tier 4 Engines and Limited Operating Hours**

Alternative 1 would amend the Current Regulation. For this alternative, there would be no low-use exception and no extension for vessels with Tier 4 engines and limited operating hours. All vessels would need to comply with the Proposed Amendments, even if they only operate for a limited number of hours. Although this alternative would reduce the time staff would spend on processing paperwork for low-use exemptions and compliance extensions, it would provide less flexibility for vessel owners and operators to comply with the Proposed Amendments.

Alternative 1 would require all vessels to install cleaner engines and retrofit controls, and in some cases replace entire vessels to achieve additional DPM reductions through DPF retrofits. This alternative provides less flexibility for a regulated party to select the best control option to best fit their unique operations. Vessel owners and operators would not have the option to choose how to comply. Vessels with limited operating hours and vessels operating a greater number of hours per year would both be required to install the same controls. Vessels with even a few operational hours

per year would be required to install cleaner engines and new control technology, and in some cases replace their vessels to accommodate the emission control systems. Compliance costs would be the same for vessels regardless of operating hours, but operational revenue would differ substantially. Under Alternative 1, there could be competitiveness issues introduced into the vessel market.

Alternative 1 is estimated to cost \$282 million more than the Proposed Amendments from 2023 to 2038. Under Alternative 1, more vessels would need to be repowered and retrofitted to comply with the amended regulation, even though these vessels would only operate occasionally. Under this scenario, approximately 429 more vessels operating in RCW, with a homebase at several California seaports, harbors, and marinas, would be subject to emission control requirements compared with the Proposed Amendments. Therefore, there would be higher costs for repowering and retrofitting additional vessels. A more detailed breakdown of Alternative 1 costs and savings can be found in the SRIA (Appendix C-1).

Figures X-1 through X-3 below show the emissions benefits from Alternative 1 compared to the Proposed Amendments and the Current Regulation. Alternative 1 projected greater PM2.5, DPM, and NOx emission reductions compared to the Proposed Amendments and the Current Regulation. Alternative 1 supports NOx, PM2.5, and DPM emission reduction objectives.

### **1. Reason for Rejection**

Alternative 1 would cost more, be less cost-effective to implement than the Proposed Amendments, and provides less flexibility. It would increase the overall cost of the Proposed Amendments by 16 percent while achieving 2 percent more reductions for NOx, and 2 percent more reductions for DPM and PM2.5 between 2023 to 2038, a relatively small amount of emission reductions.

CARB staff believes Alternative 1 is not appropriate for all vessels and would result in a more burdensome regulation to the vessel owners and operators, as compared to the Proposed Amendments. For CHC that visit California seaports infrequently, making expensive vessel modifications, even for a single vessel visit, would not be economical.

Overall, CARB staff believes Alternative 1 would be less cost-effective to implement than the Proposed Amendments and would result in a more burdensome regulation to the vessel owners and operators, as compared to the Proposed Amendments. Therefore, Alternative 1 was rejected.

Figure X-1. Alternative 1 - NO<sub>x</sub> Emissions Estimates

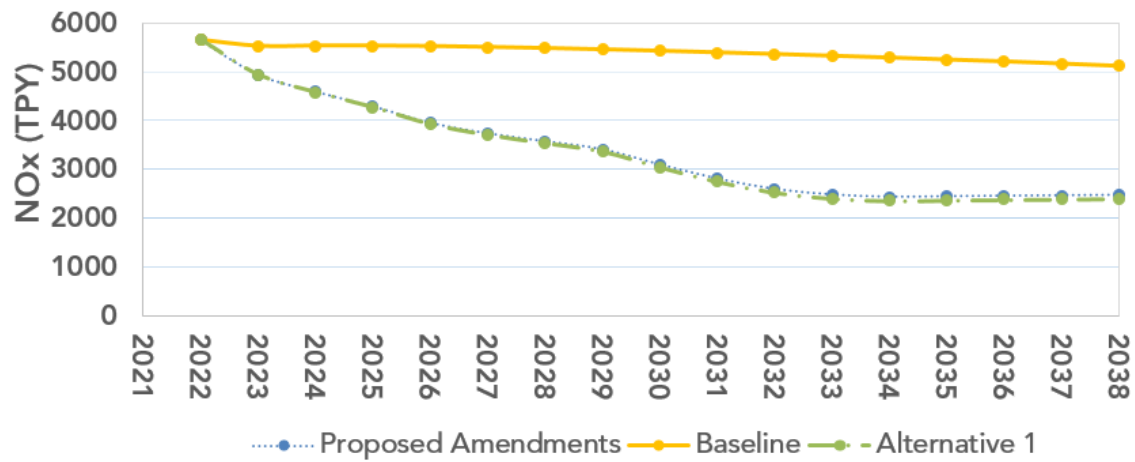


Figure X-2. Alternative 1 - DPM Emissions Estimates

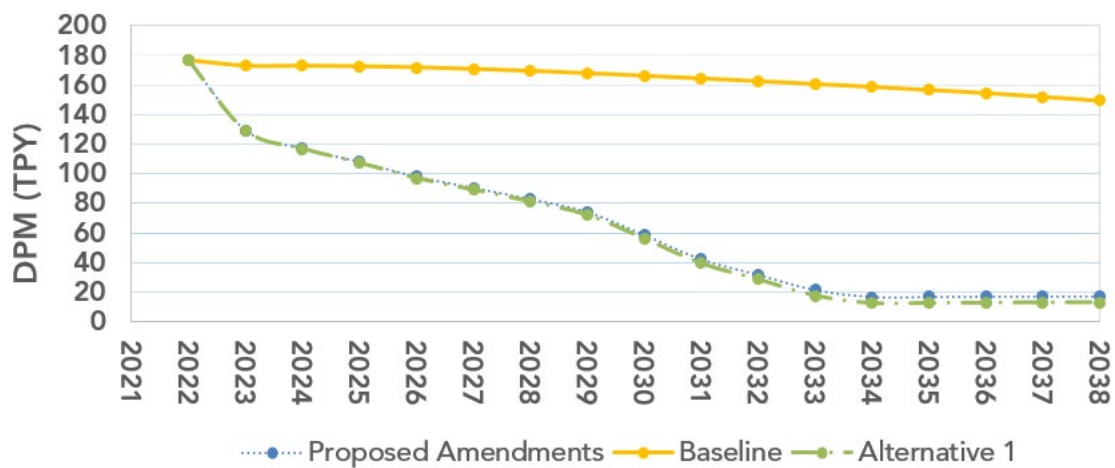
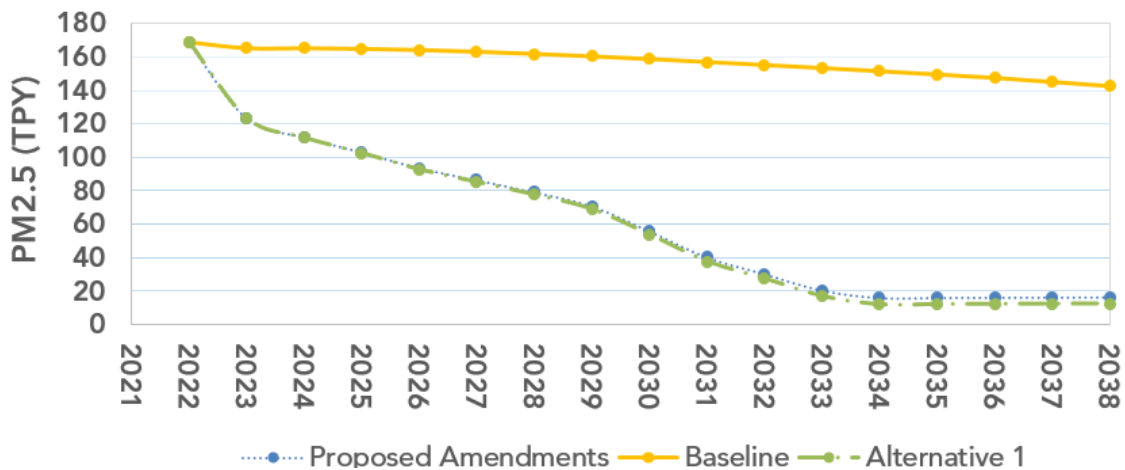


Figure X-3. Alternative 1 - PM<sub>2.5</sub> Emissions Estimates



## **B. Alternative 2: No Requirements for Commercial Fishing Vessels**

Alternative 2 differs from the Proposed Amendments because it does not include emission control requirements for commercial fishing vessels. The Proposed Amendments currently require commercial fishing vessels to begin using engines certified to Tier 2 or newer levels between 2030 and 2032.

Under Alternative 2, vessel owners and operators for other regulated in-use vessels (non-commercial fishing vessels) would have the requirements of meeting emissions performance standards equivalent to using Tier 3 or Tier 4 engines plus a DPF, which would be achieved through repowering engines, retrofitting engines, replacing vessels, or using other methods to reduce the emissions, subject to CARB approval. However, under Alternative 2, approximately 640 fewer commercial fishing vessels operating in RCW, with a homebase at several California seaports, harbors, and marinas, would be subject to emission control requirements of using Tier 2 or cleaner engines, compared with the Proposed Amendments.

Figures X-4 through X-6 below show the emissions benefits from Alternative 2 compared to the Proposed Amendments and the Current Regulation. Alternative 2 would provide less NO<sub>x</sub>, PM<sub>2.5</sub>, and DPM emission reductions compared to the Proposed Amendments. Alternative 2 would decrease the overall cost of the Proposed Amendments by 2 percent, while achieving 7 percent less reductions for NO<sub>x</sub> and 7 percent less emission reductions for DPM and PM<sub>2.5</sub>.

### **1. Reason for Rejection**

As discussed in more detail in the SRIA (Appendix C-1), excluding commercial fishing vessels would forgo feasible emission reductions and result in fewer health benefits to the local communities, compared to the Proposed Amendments. Alternative 2 would fail to provide significant additional public health and air quality benefits for California's residents, especially communities adjacent to seaports and terminals.

Overall, CARB staff believes Alternative 2 would not meet CARB's goals and objectives for the Proposed Amendments, as described in Chapter II of this Staff Report. Therefore, Alternative 2 was rejected.

Figure X-4. Alternative 2 - NO<sub>x</sub> Emissions Estimates

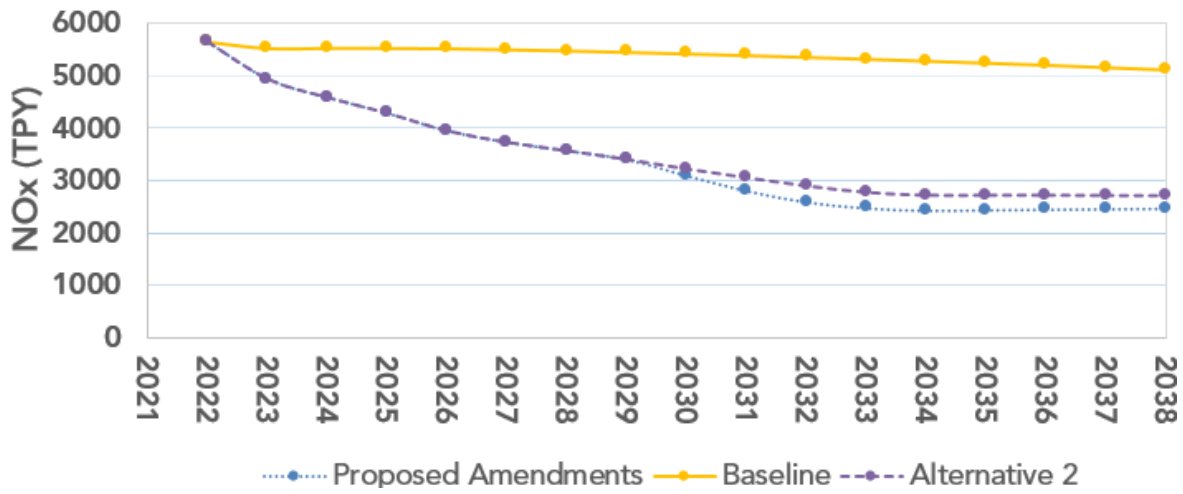


Figure X-5. Alternative 2 - DPM Emissions Estimates

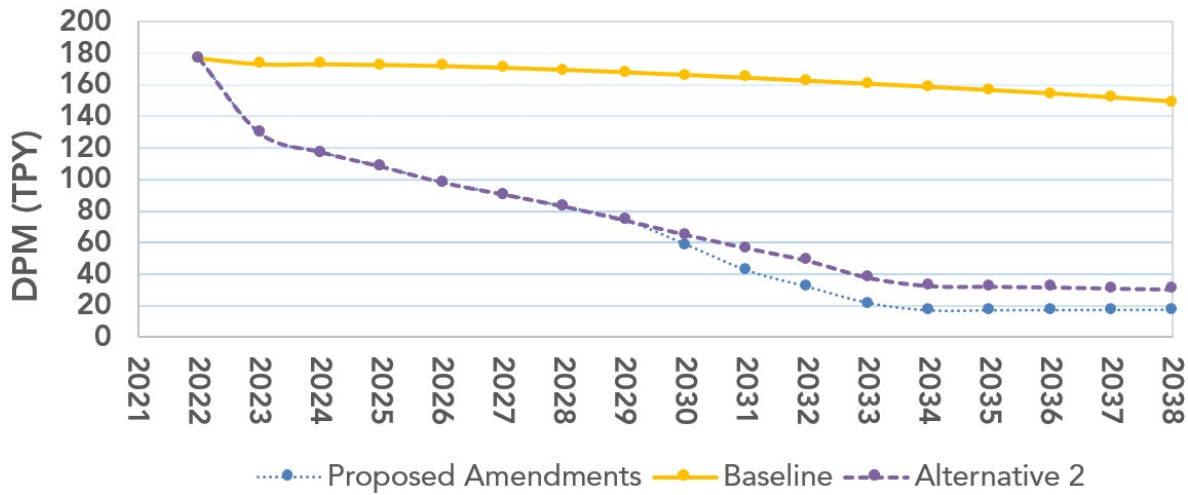
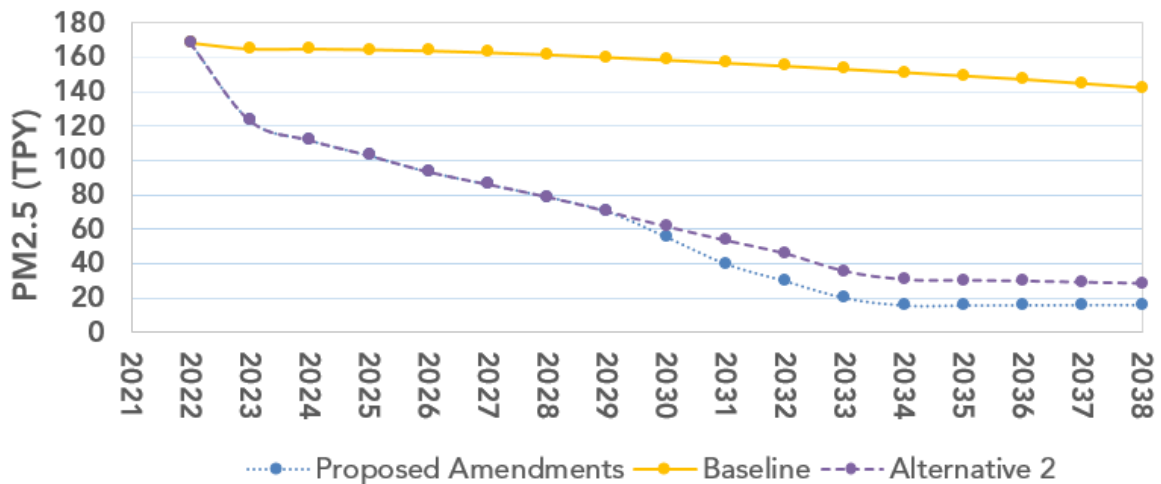


Figure X-6. Alternative 2 - PM<sub>2.5</sub> Emissions Estimates



### **C. Small Business Alternative**

The Board has not identified any reasonable alternatives that would lessen adverse impact on small businesses while still achieving necessary emission reductions.

### **D. Emissions Performance Standards in Place of Prescriptive Standards**

With respect to Government Code § 11346.2(b)(4)(A) and 11346.2(b)(1), the Proposed Amendments do not mandate the use of specific technologies or equipment or prescribe specific actions for regulated entities.

### **E. Health and Safety Code § 57005 Major Regulation Alternatives**

CARB staff estimates the Proposed Amendments would have an economic impact on the State's business enterprises of more than \$10 million in one or more years of implementation. Staff will evaluate alternatives submitted and consider whether there is a less costly alternative or combination of alternatives that would be equally as effective in achieving increments of environmental protection in full compliance with statutory mandates within the same amount of time as the proposed regulatory requirements, as required by HSC § 57005.

## **XI. Justification for Adoption of Regulations Different from Federal Regulations Contained in the Code of Federal Regulations**

Government Code section 11346.2(b)(6) requires CARB to describe its efforts to avoid unnecessary duplication or conflicts with federal regulations that address the same issues. Currently, there are no federal regulations that directly address the same issues as CARB's Proposed Amendments to the Current Regulation, so the Proposed Amendments do not conflict with nor duplicate any federal regulations.

The U.S. EPA has promulgated Tier 3 and Tier 4 standards for new marine and off-road (nonroad) engines, but has not promulgated federal standards for addressing emission reductions from in-use commercial harbor craft engines. Under federal Clean Air Act (CAA) section 213, U.S. EPA is without authority to adopt in-use standards for off-road (nonroad) engines, including off-road engines used in CHC. Consequently, the Proposed Amendments do not conflict with or duplicate any federal regulations.

California is the only governmental entity in the United States authorized by the CAA, in the first instance, to adopt emission requirements for in-use off-road engines. (See *Engine Manufacturers Association v. U.S. EPA* 88 F3d. 1075 (D.C. Cir. 1996). Section 209(e)(1) of the CAA conclusively preempts states, including California, from adopting requirements for new off-road engines less than 175 horsepower that are used in farm or construction equipment, and new engines used in new locomotives and locomotive engines. However, the proposed amendments address off-road engines used in marine vessels, rather than those used in farm or construction equipment, or locomotives.

## **XII. Public Process Description**

Consistent with Government Code sections 11346, subdivision (b), and 11346.45, subdivision (a), and with the Board's long-standing practice, CARB staff held public workshops and had other meetings with interested persons during the development of the Proposed Amendments. These informal pre-rulemaking discussions provided staff with useful information that was considered during the development of the Proposed Amendments that are now being shared for formal public comment.

### **A. Public Engagement for Rulemaking Process**

The Proposed Amendments were developed through an extensive public process to address the public health impacts of harbor craft operations.

The rulemaking process for the Proposed Amendments began in 2018. During this process, CARB staff conducted more than 400 meetings, conference calls, and site visits with members of impacted communities, environmental justice advocates, public agencies at federal, state, and local levels, and industry stakeholders (including vessel operators, seaports, marine terminals, industry associations, as well as manufacturers of emission control and ZEAT systems). The format of these conversations included agency working groups, public workshops, community meetings, and meetings with individual stakeholders. In Spring 2020, all meetings transitioned to remote formats such as webinars and web conferences.

Staff hosted meetings and participated in the meetings hosted by stakeholders to gather further input and information and discuss the Proposed Amendments. Among the industry associations represented in these conversations were American Waterways Operators, Passenger Vessel Association, Sportfishing Association of California, and the Marine Recreation Association. Discussions were held with groups such as the Engine Manufacturers Association, in addition to several individual manufacturers who produce engine and emission reduction technologies for vessels. Additionally, staff actively engaged with suppliers of ZEAT and diesel aftertreatment systems such as DPFs, including the Manufacturers of Emission Controls Association, and several of its individual members. Staff also consulted with multiple government agencies throughout the development of the Proposed Amendments, including U.S. EPA, USCG, OSPR, and local air districts in California.

Staff visited several vessel operators to learn more about their individual business operations and understand the scope of challenges facing their industries and surrounding communities. Staff also made visits to tour multiple vessels including ferry, tugboat, articulated tug-barge, pilot, and workboat vessels to learn about their unique layout and operational challenges.

A comprehensive list of these meetings, presentations, workshops, visits, and conference calls can be found in Appendix F. Throughout the rulemaking process,

access to information including notices, presentations, and contact information was made available on CARB's website for CHC.<sup>123</sup>

## **B. Public Workshops and Webinars**

CARB staff conducted five public workshop webinars to discuss the development of the Proposed Amendments, as well as one question-and-answer session for additional inquiries. All of these meetings were announced with a public workshop notice, which was issued at least two weeks prior to their occurrence. These notices were posted to the CHC program's website and were sent out to over 4,000 subscribers on CARB's "Harbor Craft (CHC Regulatory Activities)" email list. These workshops were open to all members of the public. CARB staff regularly provided documents and presentations in advance of the workshops to help stakeholders prepare for the discussions.

In these workshops, staff described the progress and elements of the current draft of the Proposed Amendments, including planned or completed analyses. Staff would then solicit questions, comments, and suggestions from participants. Because the workshops covered the extent of the Proposed Amendments, these discussions in some cases were broad, and staff regularly arranged for individual follow-up calls and meetings with stakeholders who expressed interest in receiving further detail on specific elements. Due to the number of stakeholder inquiries in the September 2020 workshop, CARB staff held an additional public question-and-answer session the following month.

## **C. Community Meetings**

CARB staff attended and presented at multiple community meetings of residents and businesses, to communicate intentions and solicit input. These meetings included community-based organizations, environmental justice advocacy organizations, as well as steering committees for communities that are implementing targeted emission reduction programs under AB 617. The CHC regulation is included in the CAPP Blueprint as an action CARB must consider to help communities heavily impacted by freight sources achieve their air quality goals. As these meetings were generally for the residents of specific areas and communities, the content of inquiries and comments staff received was typically focused on the specific types of harbor craft operating in that area.

## **D. Work Groups and Informational Meetings**

CARB staff joined many workgroups, teleconferences, and webinars of trade associations, technology providers, vessel operators, and seaport authorities, to gather information that would inform the development of the Proposed Amendments.

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<sup>123</sup> CARB, CHC Meetings and Workshops, last accessed July 6, 2021, <https://ww2.arb.ca.gov/our-work/programs/commercial-harbor-craft/chc-meetings-workshops>.

These meetings provided perspectives on the status of available and upcoming technologies with lower and zero emissions, as well as on current developments among related industry sectors and public agencies. Following these workgroup sessions, staff frequently requested meetings with individual companies. These informational meetings provided staff with many specific details of harbor craft operations and technologies, and informed the development of concepts, including the ACE compliance option. These informational meetings also included discussion of trends in various industry sectors, which assisted staff in examining the interest among technology providers potentially considering entry into the marine market.

#### **E. Site and Vessel Visits**

CARB staff made several in-person visits to the facilities, offices, and vessels of harbor craft operators to observe and discuss operations. These visits were invaluable in providing staff with further perspective on the challenges and opportunities for harbor craft operators to reduce emissions. The nature of the discussion during these visits generally centered on the costs, feasibility, and application of various emission control strategies. Vessel visits also allowed staff to evaluate proposed concepts in the field; for example, CARB staff collected opacity data (for more information, see Appendix E) on vessels as one input in developing the proposed opacity testing procedures. Site visits allowed CARB staff to meet with the employees and managers implementing the requirements of the Current Regulation and to discuss the concepts under development for the Proposed Amendments. In-person visits were conducted from April 2018 to March 2020.

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## **XIV. Appendices**

Appendix A: Proposed Regulation Order

Appendix B: Documents Incorporated by Reference

Appendix C-1: Standardized Regulatory Impact Assessment (SRIA)

Appendix C-2: DOF Comments to the CHC SRIA and CARB Responses

Appendix D-1: Draft Environmental Analysis for Commercial Harbor Craft

Appendix D-2: Attachment A, Environmental and Regulatory Setting

Appendix D-3: Attachment B, Summary of Environmental Impacts and Mitigation Measures

Appendix D-4: Attachment C, Air Quality Calculations

Appendix E: Technical Support Document and Assessment of Marine Emission Control Strategies, Zero-Emission, and Advanced Technologies

Appendix F: List of Public Workshops, Meetings, and Phone Calls

Appendix G: Health Analyses

Appendix H: 2021 Update to the Emission Inventory for Commercial Harbor Craft: Methodology and Results



September 13, 2021

Liane Randolph, Chair  
California Air Resources Board  
P.O. Box 2815  
Sacramento, CA. 95812

**RE: Taking action to ensure practicable requirements within CARB's commercial harbor craft regulations**

Dear Chairwoman Randolph,

Congrats once again on your new position. We're looking forward to working with you.

We write to express our concerns over the Air Board's pending airborne toxic control measures for commercial harbor craft ('CHC') ('the proposed rule'). As currently proposed, these pending regulations would have significant and irreparable negative impacts on the commercial charter fishing and whale watching vessel owners, ports, and coastal communities we proudly represent.

These regulations would also adversely impact public access to the natural beauty and bounty of California's magnificent coastal waters because operators would be unable to comply. They can't comply because the technology required to do so literally doesn't work.

Luckily there is time for remedial actions to ensure that your vital work to protect public health, air quality, and our climate doesn't impose impracticable or even impossible burdens on residents, and we look forward to working with you to see these actions through.

The Legislature, in partnership with Governor Newsom, has recognized the importance of maintaining coastal community health and public access to the ocean resources the State painstakingly conserves and manages. We worked collaboratively with the administration during the protracted COVID-19 emergency to restore tourism-based jobs and support small business recovery. And we have passed legislation to ensure that regulatory burdens are feasible and equitable both on implementation and for continuing to expand access opportunities for disadvantaged communities.

Commercial Passenger Fishing Vessels (CPFV), also known as charter fishing vessels, are a critical part of coastal economies and community recovery. These businesses are the primary means by which the public, including disadvantaged communities, who do not themselves own a boat, nonetheless have access to the living marine resources of our state through fishing and whale watching. CPFV operators partner in research and marine education. Federal, state, and university researchers (including students) utilize, often at no cost, access to CPFV to conduct research on the health of marine waters and fisheries. In addition, vessel owners work with schools and nonprofits (including Title 1 schools, disadvantaged youth, and veterans) to provide education and access to many that would not be able to access our marine environment any other way.

The Legislature has also prioritized, as you know, the health and wellbeing of Californians by directing your agency to take prudent action to reduce airborne toxins within our state. However, the Legislature has done so with the further direction that implementation programs be 'practicable' (HSC §39650(k)) as well as 'cost-effective, and technologically feasible' (HSC §43013(a)).

Unfortunately, rather than enhance access to the ocean and economic recovery, the proposed rule would impede coastal communities by putting many family-owned and operated CPFV out of business and reducing affordable access to marine recreation. These requirements are not practicable, they are not cost-effective, and they are not technologically feasible. So, again, the solution the agency is seeking to implement on these vessels truly doesn't work.

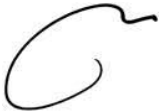
These requirements would require the installation of Tier 4 marine diesel engines and diesel particulate filters within CPFV that have been acknowledged by agency staff to be either impossible to acquire because they are not available on the open market, infeasible to install because operators cannot conform to US Coast Guard vessel safety requirements, or unsafe to operate because they run at operating temperatures that preclude their installation in wood and fiberglass hulls. While the proposed rule separates, for the first time, CPFV and commercial fishing vessels (CFV), we believe that it is inappropriate to do so. Both CPFV and CFV require operators to purchase commercial fishing licenses. Operators have used similar sizes and types of boats that operate in similar offshore areas, both spending most of their operating time far away from population centers. Unfortunately, the current structure of the proposed rule would separate these two classifications of harbor craft and, in so doing, require CPFV to conform to impracticable requirements that are neither cost-effective nor technologically feasible.

We appreciate CARB's efforts to implement policies to reduce emissions that impact climate change and reduce criteria pollutants. However, the proposed rule does not conform to the Legislature's statutory guidance for regulatory practicability. We did not intend for hundreds of businesses to be bankrupted and thousands of Californians to lose access to the ocean through

the promulgation of our important public health regulations. Therefore, we respectfully request that CARB amend the proposed rule to place CPFV back with CFV to provide an achievable, feasible, and equitable compliance pathway to reduce emissions. This is something all sides can support.

Thank you for your attention to this critical matter.

Warmest Regards,



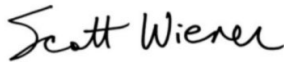
MIKE MCGUIRE  
Senator, District 2



BILL DODD  
Senator, District 3




ANDREAS BORGEAS  
Senator, District 8



SCOTT WIENER  
Senator, District 11



TOM UMBERG  
Senator, District 34



BRIAN JONES  
Senator, District 38



JIM WOOD  
Assemblymember, District 2



JAMES GALLAGHER  
Assemblymember, District 3



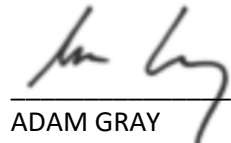
JIM COOPER  
Assemblymember, District 9



CARLOS VILLAPUDUA  
Assemblymember, District 13



DAVID CHIU  
Assemblymember, District 17



ADAM GRAY  
Assemblymember, District 21



MARK STONE  
Assemblymember, District 29



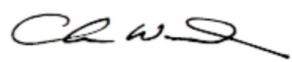
AUTUMN BURKE  
Assemblymember, District 62



JANET NGUYEN  
Assemblymember, District 72



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CHRISTOPHER WARD  
Assemblymember, District 78

October 19, 2020

**VIA E-MAIL**

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**Re: Draft Proposed Amendments to CARB's Commercial Harbor Craft Regulation**

Dear Marissa and David:

The Truck and Engine Manufacturers Association (“EMA”) offers the following comments regarding the draft proposed amendments to CARB’s Commercial Harbor Craft (“CHC”) Regulation, which proposed amendments CARB staff discussed at a public workshop held on September 30, 2020. EMA is the trade association that represents the world’s leading manufacturers of internal combustion engines, including the array of commercial marine engines used in the types of vessels that would be subject to the proposed amendments to the CHC Regulations. Accordingly, EMA and its members have a direct and significant interest in the pending rulemaking.

EMA’s preliminary comments on the draft proposed amendments to CARB’s CHC Regulations are as follows:

- CARB will need to obtain from U.S. EPA a waiver of preemption for the contemplated amendments before taking any steps to enforce them. Section 209(e) of the federal Clean Air Act, 42 U.S.C. 7543(e), expressly requires California to obtain authorization from EPA before attempting to enforce any standard or other requirement relating to the control of emissions from new or non-new nonroad engines, which include commercial marine engines. CARB should confirm its need to obtain EPA preemption-related authorization as a prerequisite to any actual implementation of the potential CHC regulatory amendments at issue.
- CARB’s proposal to require the use of diesel particulate filters (“DPFs”) on Tier 3 and Tier 4 commercial marine engines — in essence, a requirement for a new “hybrid” configuration of commercial marine engines — raises numerous concerns. First, Tier 3 engines have not been designed to accommodate DPFs, and may not have adequate backpressure margins to accommodate their integration with Tier 3 engine systems, either as new add-ons to newly manufactured Tier 3 engines, or as retrofits to in-use Tier 3 engines. Second, mandatory DPF requirements for commercial marine engines less than 600kW will create misalignment with EPA and European commercial marine engine

standards, and will, in essence, require the manufacture of unique DPF-equipped “hybrid” Tier 3 and Tier 4 engines for the relatively limited California market. That is not economically viable, especially since CARB is proposing to phase-out that already-limited Tier 3/Tier 4 market over the next 15 years through increasing mandates for the purchase and sale of zero-emissions commercial marine engines. As a result, future sales volumes of conventional commercial marine engines will not be sufficient to sustain the viability of CARB’s proposed CHC amendments, which, again, amount to a mandate for unique hybrid marine engine products in California. And third, CARB’s assumptions about the current availability of DPF-equipped commercial marine engines in Europe are not correct. EU regulations do not require DPFs for engines below 300kW, and, as a result, CARB’s proposals are not consistent with the corollary product availability that is developing under the EU Stage V regulations.

- CARB’s contemplated requirements for DPF retrofits raise a number of reliability and performance concerns, especially with regard to DPF retrofit systems developed and installed by third-party manufacturers. CARB’s verification requirements for all such DPF retrofit systems will need to be rigorous and robust but, as yet, are largely undefined and unproven in the commercial marine engine space, particularly with respect to engines in the lower power categories.
- CARB has not established that the current certification test cycles are compatible with the hybrid Tier 3 and Tier 4 engine and aftertreatments systems that would be mandated under the proposed CHC regulatory amendments. In particular, Tier 3 systems that are assessed under the current certification test cycles were never designed to operate with DPFs.
- CARB’s proposed regulatory amendments will need to account separately for and exempt high power-density engines, just as is the case under EPA’s recent regulatory amendments. Tier 4 and Tier 3 “hybrid” product availability concerns are even more acute for high power-density commercial marine engines.
- CARB has not established that the current CHC Regulations have been fully implemented with consistent compliance across the covered fleet of California vessels. Effective implementation and compliance-assurance with respect to the proposed CHC amendments will be even more problematic, since it is unlikely that there will be sufficient availability of compliant hybrid commercial marine engines (*i.e.*, Tier 3 and Tier 4 engines equipped with DPFs) in California, and since California vessel owners will not create sufficient hybrid product demand to move the market, especially if their future rates of compliance will be low, slow, or both.
- CARB should encourage EPA to certify EU V marine engines without significant additional certification requirements beyond those required under EU V, so that the commercial marine engine products offered in the EU may be offered in the U.S. in addition to Tier 4 products.

Marissa Williams  
David Quiros  
October 19, 2020  
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- Instead of establishing impractical mandates for unique hybrid commercial marine engines in California through misaligned and economically unworkable regulatory requirements for a low volume market, CARB should focus on economic incentives to accelerate the turnover of greater-than 600 kW engines in the California fleet to Tier 4 commercial engines as rapidly as possible wherever feasible.

EMA would welcome the opportunity to discuss our concerns, including as outlined above, in further detail with CARB staff.

Respectfully submitted,

TRUCK & ENGINE  
MANUFACTURERS ASSOCIATION

cc: Marine Locomotive Engine Committee

**STAFF SUMMARY FOR AUGUST 18, 2021***For background purposes only***23. COMMITTEE WORKLOAD PRIORITIZATION****Today's Item****Information** ☒**Action** ☐

Receive an update on committee prioritization project/workload prioritization tool.

**Summary of Previous/Future Actions**

- |   |   |
|---|---|
| • Provided feedback on draft prioritization tool            | Feb 10, 2021; Webinar/Teleconference        |
| • Provided additional feedback on draft prioritization tool | Apr 14, 2021; Webinar/Teleconference        |
| • Directed staff to apply prioritization tool               | Jun 16-17, 2021; Webinar/Teleconference     |
| • <b>Today's update</b>                                     | <b>Aug 18, 2021; Webinar/Teleconference</b> |
| • Review provisional prioritization for MRC projects        | Oct 13-14, 2021; Sacramento                 |

**Background**

FGC committees are often faced with competing priorities for important topics and projects. To help organize committee workload, FGC staff has developed a working tool to prioritize those topics and projects that are of highest importance over those that are more conditional or have lower urgency, by applying a series of criteria.

In Feb 2021, staff presented, and FGC provided feedback on, a draft framework to prioritize topics and projects referred to committee, directing staff to consider a wider and more nuanced scoring scale and to define each scoring level in more detail. Following that guidance, staff modified the framework by expanding the scoring scale and creating a rubric for how to assign a score for each criteria.

In Jun 2021, staff presented a revised prioritization tool, noting that through systematic testing, other salient issues had been identified which may require additional modifications to the proposed rubric and scoring; these included how best to capture cultural benefits or impacts, tribal benefits or impacts, and justice, equity diversity and inclusion benefits or impacts. FGC directed staff to incorporate the identified concepts and begin applying the revised tool to evaluate the relative priority of projects.

Since the Jun 2021 meeting, staff further modified the tool and has applied it to five current and prior Marine Resources Committee (MRC) topics, which resulted in a few additional refinements to the "working" tool (Exhibit 1) and the rubric (Exhibit 2), to ensure consistent scoring. Additionally, staff has tested various criteria score calculation methods to provide a final score for the project and selected one that appears to best reflect FGC priorities. Of note, this scoring system weighs the importance of natural resources impacts or benefits more heavily than other criteria.

**STAFF SUMMARY FOR AUGUST 18, 2021***For background purposes only*

As FGC continues to apply this working tool to a broader range of projects, it may decide that additional refinements are necessary. Importantly, staff has not had an opportunity to solicit DFW's priorities for consideration in the ranking, though one criterion (number 10, partner agencies) does take DFW's assessment of project importance into account. Further, staff intend to vet this tool with a professional in this field, who may suggest additional modifications.

For today's meeting, staff has provided project rankings for five test projects, including a summary of the key factors that contributed to each project's prioritized rank (Exhibit 3). While staff does not recommend FGC use the results of this very limited analysis to begin making decisions about committee workloads, the subset is illustrative of how the tool functions when applied to real projects. Staff plans to bring an evaluation of all projects currently on the MRC work plan to FGC at its next meeting.

**Significant Public Comments (N/A)****Recommendation**

**FGC staff:** Direct staff to continue applying the prioritization tool to committee projects and bring a complete provisional prioritization to the Oct FGC meeting.

**Exhibits**

1. *Working Framework to Prioritize Committee Work Plan Topics and Projects*, dated Aug 12, 2021
2. *Working Committee Workload Prioritization Rubric*, dated Aug 12, 2021
3. *Initial Results Using the Working Committee Workload Prioritization Tool*, dated Aug 12, 2021

**Motion (N/A)**

# California Fish and Game Commission

## Working Framework to Prioritize Committee Work Plan Topics and Projects

*Prepared by Commission staff for the October 2021 Commission meeting  
October 8, 2021*

### A. Project/Topic Characterization

**Evaluation Date:** \_\_\_\_\_

**Topic / Project** (short name): \_\_\_\_\_

**Committee** (Marine Resources, Tribal, or Wildlife Resources): \_\_\_\_\_

**Topic / Project Description** (1-2 sentences, what is the scope?): \_\_\_\_\_

**Proposed Committee Role** (Lead? Collaborate? Consult? Discuss? Track development and recommend guidance? Recommend?): \_\_\_\_\_

**Project Partners** (including other Commission committees): \_\_\_\_\_

**Key Assumptions** (What drives our understanding of the topic or project?): \_\_\_\_\_

### B. Topic / Project Evaluation

<b>Criteria for Evaluating Specific Projects</b>	<b>Category</b>	<b>None/ Neg 0</b>	<b>Low 1</b>	<b>Med 2</b>	<b>High 3</b>	<b>Very High 4</b>	<b>Final Category Score</b>	<b>Notes</b>
1. Addresses <b>risk to wildlife populations</b> and/or other <b>natural resources</b> (includes immediacy)	Natural Resources							
2. Provides <b>benefits to wildlife populations</b> and/or other <b>natural resources</b> (includes immediacy)	Natural Resources							
<b>Natural Resources Final Score</b> (Highest Score from Category, Weighted x2)	<b>Natural Resources</b>							

<b>Criteria for Evaluating Specific Projects</b>	<b>Category</b>	<b>None/ Neg 0</b>	<b>Low 1</b>	<b>Med 2</b>	<b>High 3</b>	<b>Very High 4</b>	<b>Final Category Score</b>	<b>Notes</b>
3. Not completing the project will cause <b>economic loss</b> to the state, communities, industry sectors and/or individuals	Economics							
4. Completing the project will have <b>economic benefit</b> to the state, communities, industry sectors and/or individuals	Economics							
<b>Economics Final Score</b> (Highest Score from Category)	<b>Economics</b>							
5. Completing the project will have direct <b>social and/or cultural benefits</b> (including addressing socio-cultural values or conflicts, or inter-sector, or intra-sector needs)	Social/ Cultural							
6. Not completing the project will have direct <b>negative social and/or cultural consequences</b> (including socio-cultural values or conflicts, or inter-sector, or intra-sector needs)	Social/ Cultural							
<b>Social/Cultural Final Score</b> (Highest Score from Category)	<b>Social/ Cultural</b>							
7. Not meeting the project <b>deadline</b> (regulatory, harvest season, or other timing considerations) will have negative consequences (issue must be addressed within a specific time frame)	Timing							
8. Are there <b>negative consequences of delaying action</b> or are there <b>benefits of acting immediately</b> (Commission as a catalyst, etc.) that are not covered by any other criterion?	Timing							
<b>Timing Final Score</b> (Highest Score from Category)	<b>Timing</b>							

<b>Criteria for Evaluating Specific Projects</b>	<b>Category</b>	<b>None/ Neg 0</b>	<b>Low 1</b>	<b>Med 2</b>	<b>High 3</b>	<b>Very High 4</b>	<b>Final Category Score</b>	<b>Notes</b>
9. Overall concern and attention of <b>stakeholders</b> and the <b>public</b> , including potential to build relationships	External							
10. Overall concern and attention from, and impacts to, (non-tribal) <b>partner agencies</b> (including DFW), including potential to build productive relationships	External							
11. Overall concern and attention from, and impacts to, <b>tribes and tribal organizations</b> , including potential to build productive relationships	External							
12. The project has <b>justice, equity, diversity and/or inclusion (JEDI) benefits</b>	External							
<b>External Final Score</b> (Highest Score from Category)	<b>External</b>							
13. Risk of not meeting <b>legal mandates</b> (including federal conformance)	Legal							
<b>Legal Final Score</b>	<b>Legal</b>							
14. Is the Commission the <b>only organization</b> that can perform this work?	Other							
<b>Other Final Score</b>	<b>Other</b>							

### C. Post-Evaluation Considerations

**Comments regarding Final Score and Overall Ranking:** \_\_\_\_\_

\_\_\_\_\_

**Overriding Considerations** (consequences or benefits): \_\_\_\_\_

**Additional Considerations** (Potential additional considerations the committees may wish to incorporate into topic and project evaluation?):

- Have **similar issues** been addressed and/or have projects with benefits to this demographic been **completed recently**? (If no, priority may be higher) \_\_\_\_\_
- **Who** specifically **benefits** from the action? Are the beneficiaries of the overall suite of the topic or project balanced? Are any constituencies being ignored? \_\_\_\_\_
- Are there any **benefits to delaying** the topic or project? \_\_\_\_\_
- Does the overall topic or project align with the Commission's **vision, mission and values**? \_\_\_\_\_

**Final Comments and Recommendations** (potential integration of post-evaluation considerations into overall ranking and prioritization):

\_\_\_\_\_

\_\_\_\_\_

**California Fish and Game Commission**  
**Working Committee Workload Prioritization Rubric**  
October 8, 2021

Criteria for Evaluating Specific Projects	Category	None/Negligible (0)	Low (1)	Med (2)	High (3)	Very High (4)
1. Addresses <b>risk to wildlife populations</b> and/or other <b>natural resources</b> This criterion is based on severity, but may be modified by likelihood (more probable = higher rank, less probable = lower rank)	Natural Resources	No discernable risk to wildlife populations	Minimal risk of harm to wildlife populations	Sizeable risk of harm to wildlife populations	Risk of serious, irreversible harm to populations, or adverse effects to imperiled populations	Risk of extirpation of wildlife populations or major adverse effects to imperiled populations
2. Provides <b>benefits to wildlife populations</b> and/or other <b>natural resources</b> This criterion is based on magnitude, but may be modified by likelihood (more probable = higher rank, less probable = lower rank)	Natural Resources	No discernable benefit to populations	Minimal benefit to populations	Sizeable benefit to populations	Extensive benefit to populations	Significant, definitive benefit to populations
3. Not completing the project will cause <b>economic loss</b> within a particular scope (state, communities, industry sectors and/or individuals) This criterion is based on severity, but may be modified by likelihood (more probable = higher rank, less probable = lower rank)	Economics	Within the scope, no discernable economic risks	Within the scope, risk of minimal harm	Within the scope, risk of sizeable harm	Within the scope, risk of serious harm	Risk of heavy financial harm; losses will typically be on a larger scale
4. Completing the project will have <b>economic benefit</b> within a particular scope (state, communities, industry sectors and/or individuals) This criterion is based on magnitude, but may be modified by likelihood (more probable = higher rank, less probable = lower rank)	Economics	No discernable economic benefit	Within the scope, benefits will be minimal	Within the scope, benefits will be sizeable	Within the scope, there will be very large benefits	Within the scope, there will be vast economic benefits
5. Completing the project will have direct <b>social and/or cultural benefits</b> (including addressing socio-cultural values or conflicts, or inter-sector, or intra-sector needs)	Social/Cultural	No discernable social and/or cultural benefit	Minimal social and/or cultural benefit	Moderate social and/or cultural benefit	Significant social and/or cultural benefit	Extraordinary social and/or cultural benefit
6. Not completing the project will have direct <b>negative social and/or cultural consequences</b> (including socio-cultural values or conflicts, or inter-sector, or intra-sector needs)	Social/Cultural	No discernable negative social and/or cultural consequences	Minimal negative social and/or cultural consequences	Moderate negative social and/or cultural consequences	Significant negative social and/or cultural consequences	Extraordinary negative social and/or cultural consequences
7. Not meeting the project <b>deadline</b> (regulatory, harvest season, or other timing considerations) will have <b>negative consequences</b> (issue must be addressed within a specific time frame)	Timing	No applicable deadline, or deadline exists but no consequence to missing it	Minimal consequence to missing deadline	Some consequence to missing deadline	Significant consequence to missing deadline	Exceptional consequence to missing deadline
8. Are there <b>negative consequences of delaying action</b> or are there <b>benefits of acting immediately</b> (Commission as a catalyst, etc.) that are not covered by any other criterion?	Timing	All consequences or benefits covered by other criteria	Not used for this category	Moderate consequences for delay or benefits for immediate action	Not used for this category	Serious consequences for delay or benefits for immediate action
9. Overall concern and attention of <b>stakeholders</b> and the <b>public</b> , including potential to build productive relationships	External	No known public interest	Limited public interest from organizations/ sectors and/or individuals	Moderate level of public interest from organizations/sectors and/or individuals	High level of public interest from multiple organizations/sectors OR many individuals	Highest level of public interest from multiple organizations/ sectors AND many individuals (i.e., a hot button issue in front of Commission)
10. Overall concern and attention from, and impacts to, (non-tribal) <b>partner agencies</b> (including DFW), including potential to build productive relationships	External	No known interest	Limited interest from partner agencies	Agencies have expressed support for the project, but not within their current priorities	Agencies have expressed support for the project and project falls within their current priorities	Project is mission critical for partner agencies. Not completing the project will hinder their ability to achieve their mission/mandates
11. Overall concern and attention from, and impacts to, <b>tribes and tribal organizations</b> , including potential to build productive relationships	External	No known tribal interest	No expressed tribal interest, but reasonable expectation of interest	Tribes or tribal organizations have expressed support for the project, but not within their current priorities	Tribes or tribal organizations have expressed support for the project and project falls within the current priorities of one or more tribes	Highest level of interest from one or more tribes or tribal organizations
12. The project has <b>justice/equity/diversity/inclusion (JEDI)</b> benefits	External	Any project without known JEDI Benefit	Not used for this category	Not used for this category	Reasonable expectation of some JEDI benefit	Not used for this category
13. Risk of not meeting <b>legal mandates</b> (including federal conformance)	Legal	Any project without a legal mandate	Significant consequences do not exist	Significant consequences unlikely	Significant consequences possible	Significant consequences inevitable
14. Is the Commission the <b>only organization</b> that can perform this work? (Yes = High, Some others may perform = Med or Low, Many others can perform = None)	Commission Role	Other organizations are currently performing similar work	Many other organizations could perform comparable work	Some other organizations could perform comparable work	Few other organization could perform similar work or other organizations are unwilling to perform work	Commission is the only organization that can perform the work

**California Fish and Game Commission**  
**Results of Applying the Committee Prioritization Framework to**  
**Marine Resources Committee (MRC) Work Plan Projects**  
*October 10, 2021*

Commission staff has scored MRC work plan topics (minus a few update-only topics) using the committee project prioritization framework (prioritization framework) for MRC projects, as directed by the Commission at its August 2021 meeting. The resulting ranking is based on a prioritization framework that weights the natural resources category score at twice the value of all other categories (see Exhibit 18.5, this meeting).

**Scores and Rankings for Current MRC Work Plan Topics**

Topic	Final Score	Rank
Red Abalone Fishery Management Plan (FMP) / Abalone Recovery and Management Plan (ARMP) Update	3.3	1
California Pink Shrimp FMP	2.9	2
Prohibiting Use of Hydraulic Pump Gear to Take Clam: Review of Emergency and Future Rulemakings	2.9	2
California's Coastal Fishing Communities Project	2.1	4
California Halibut FMP	2.0	5
Market Squid Fishery Management Review	2.0	5
Kelp and Algae Commercial Harvest: Bull Kelp, Edible Seaweed, Sea Palm	2.0	5
Marine Protected Area Network: 2022 Decadal Management Review	1.9	8
Aquaculture Leases: Existing and Future State Water Bottom Lease Considerations	1.7	9
Aquaculture Leases: Public Interest Determination Criteria for New State Water Bottom Lease Applications	1.6	10
Aquaculture Lease Best Management Practices (BMP) Plans	1.3	11
California Spiny Lobster FMP Implementing Regulations Review	0.9	12

**Summary of “Driving Factors” in Rankings**

***Rank 1. Red Abalone FMP / ARMP Update***

This is the highest-ranking project because it addresses a very high risk to the species, has very high interest from stakeholders and tribes, and because the Commission is the only organization that can complete this project. Additionally, the project has high social/cultural benefits and moderate economic benefits. There is an advantage to completing the project sooner due to allocated partner agency funding and to establish a new data collection methodology. The project is expected to provide justice, equity, diversity and inclusion (JEDI) benefits by providing more equitable access to abalone.

## ***Rank 2. Pink Shrimp FMP***

While this project is expected to address a moderate risk of harm to wildlife populations, the project received high or very high scores for its economic benefits, social/cultural benefits, high stakeholder interest, and because the Commission is the only organization that can complete this work. Economic benefits are particularly high because this is the final step in receiving a Marine Stewardship Council certification of sustainability for the fishery, which would make the California fishery competitive with Oregon and Washington. Staff anticipated some benefits from completing the project sooner because the industry is currently actively engaged and invested in the certification process.

## ***Rank 2. Prohibit Use of Hydraulic Pump Gear to Take Clam: Review of Emergency and Future Rulemakings***

The high rank of this project is due primarily to the very high, immediate risk of harm to clam populations. Other factors contributing to its high ranking include the need to complete the permanent rulemaking before the emergency rulemaking expires, significant concern from the California Department of Fish and Wildlife, and the fact that the Commission is the only organization that can complete this work.

## ***Rank 4. California's Coastal Fishing Communities Project***

This project ranks relatively high, despite the lack of direct natural resource benefits. There is very high stakeholder interest. Additionally, the potential for economic and social/cultural benefits is very high. Many other organizations can perform comparable work to ensure the persistence of California's coastal fishing communities into the future; some are already undertaking their own projects with the same goal. However, the Commission is the only organization able to act on its policies and regulations. Since the project has been delayed in the past, any further delays could reduce stakeholder involvement and lose opportunities to leverage partnerships with other organizations. (Note: In the scoring scenarios that weight "natural resources" more heavily than two times, this project's rank decreases relative to some other MRC projects.)

## ***Rank 5. California Halibut FMP***

This project ranks moderately high. It scores high in addressing risks to wildlife due to the potential to address potential bycatch concerns, has high interest from stakeholders and partner agencies, and the Commission is the only organization that can complete this work. The project may create some social/cultural benefits by resolving inter-sector conflicts within the fishery. It has no anticipated direct economic benefits, no deadline, and does not meet any legal mandates.

## ***Rank 5. Market Squid Fishery Management Review***

While this project has a legal mandate and high level of interest from stakeholders and partner agencies, the potential natural resources and economic benefits are low. This fishery is already managed conservatively, and completing the project is not expected to address any sizeable risks of harm to wildlife populations. However, there are moderate benefits to completing this project prior to the next population boom. Additionally, while another organization could conduct the review, the Commission is the only agency that could act on the findings and recommendations.

#### ***Rank 5. Kelp and Algae Commercial Harvest (Bull Kelp, Edible Seaweed, and Sea Palm)***

This project is anticipated to address a sizable potential risk of harm to natural resources, it will prevent moderate negative social/cultural consequences, and has a high level of external interest (including stated interest from several tribes). The overall project score was lower than other projects on this list primarily due to a comparative lack of economic loss if not completed or benefit if completed, timing concerns, or legal mandate.

#### ***Rank 8. Marine Protected Area (MPA) Network: 2022 Decadal Management Review***

Committee engagement in this stage of the process is not anticipated to provide direct wildlife or economic benefits and may provide low social/cultural benefits. However, there is very high stakeholder and partner agency interest. The decadal management review is a collaborative effort with strong investment of resources by multiple agencies and partners to develop products for the review. Efforts are following a defined timeline to support the review that is mandated in the MPA master plan adopted by the Commission. As such, Commission/committee participation is time-sensitive in order to provide input into the review process. (Note: in scoring scenarios that weight natural resources more heavily, this project ranks lower relative to other MRC projects.)

#### ***Rank 9. Aquaculture State Water Bottom Leases: Existing and Future Lease Considerations***

This project ranks relatively low because it has low or medium benefits in most categories. The project may address risk to wildlife populations at a low level and may have low economic benefits; social/cultural benefits are moderate. There is no deadline or legal mandate, but there is some benefit to acting now, as the committee vetting process helps proactively address issues before bringing requests to the Commission for approval and may contribute to expediting requests. Vetting of requests could be performed by another agency.

#### ***Rank 10. Public Interest Determination Criteria for New Aquaculture Lease Applications***

With no criteria scoring as high or very high, this project falls near the bottom of all ranked MRC projects. The project may have moderate economic or social/cultural benefits and has moderate interest from stakeholders. However, potential wildlife benefits are low, there is no legal mandate, and the Commission is not the only organization that could create public interest criteria. While there may be some benefit to completing the project sooner rather than later, there is no deadline.

#### ***Rank 11. Aquaculture Lease BMPs Plans (On hold, TBD)***

With no criteria scored as high or very high, this project ranked significantly lower than other evaluated projects. Some categories received scores of medium, such as addressing risks to natural resources and external interest (from external organizations, stakeholders, and select agencies), but all other categories were scored as low or none. This is in large part because lessees have incorporated—or are in the process of incorporating—many of the BMPs into their operations in response to early project efforts through MRC, Department, and Commission staff engagement with lessees and stakeholders.

## ***Rank 12. California Spiny Lobster FMP Implementing Regulations Review (added Feb 2019; timing TBD)***

This project is for a general review to assess whether California spiny lobster FMP implementation regulations should be amended. At the time of referral, the chief concern identified by commercial fishery participants was illegal trap activities that have since been addressed through enforcement action. With the initial concern addressed outside MRC, the project ranked the lowest out of all current MRC projects, scoring as low or none in all criteria. However, should new issues be identified that reflect natural resource concerns, the project scope will need be modified and the project re-scored and ranked. Other specific drivers did not elevate the project score

### **Further Considerations**

#### ***Key Assumptions***

Each project catalogues the *key assumptions* that were made during the scoring of the project, which includes a characterization of the scope of the project. Since projects can and do change in scope, direction, or focus over time, reevaluation of the scoring will be necessary if the assumptions under which the project was initially ranked change substantially.

#### ***Overriding Considerations***

One of the final steps in the process is evaluating if there are any *overriding considerations*, meaning considerations outside the prioritization framework that may warrant overriding the final ranking. Overriding considerations refers to important aspects that have not been considered, or other factors which the Commission determines should cause the project to be prioritized (or deprioritized) irrespective of its ranking. For example, depending on the weighting scenario the Commission selects, Commission staff may recommend that Coastal Fishing Communities be ranked relatively high based on an overriding consideration that the project is nearing completion so should not be deprioritized at this moment; different projects stemming from the umbrella projects will receive their own priorities. While Commission staff advises that this option be used sparingly, it provides an important way for the Commission to integrate its discretionary judgment into priorities, while ensuring that all projects are methodically evaluated

#### ***Concurrent Scheduling in Light of Prioritization***

Advancing higher priorities does not always mean that lower priority items are not addressed. When work on higher priority items pauses (e.g., waiting for important developments), or while waiting for partner agency(s) to complete tasks, or simply not ripe for development, the increase in staff bandwidth can permit lower priority projects to advance. Commission staff wishes to emphasize that a low priority given to a project is not meant to reflect on its overall worth or value to the Commission (and its staff), stakeholders, or the environment; rather, it is simply a reflection of a congested workload with limited resources available to meet all of the demands and mandates of the Commission in a timely manner.

#### ***Capacity and Resources***

Once priorities are determined, the Commission and its staff can evaluate how projects can be accomplished. Does the Department and/or Commission staff have the capacity and/or funding to complete the project, in the context of all the other projects? Could the scope of a project be modified, or could external resources be marshalled? While staff capacity should not be a

driver in determining if a project or topic is a priority, it is an important consideration in the feasibility of advancing and bringing a project through MRC and to completion.

***Weighting for Natural Resources Category***

The Commission indicated an interest in exploring other weighting scenarios for the natural resources category score. See Exhibit 18.5 (this meeting) for further discussion of various weightings and their impacts on rankings.

**California Fish and Game Commission**  
**Marine Resources Committee Project Scores and Ranking under**  
**Different Weighting Scenarios for the Natural Resources Category**  
*October 10, 2021*

## **Overview**

In June 2021, staff presented to the Commission a committee project prioritization scoring system that weighted the natural resources category score times two, in the recognition that abating risks and providing benefits to fish, wildlife and their habitats are fundamental to the Commission's mission.

At its Aug 2021 meeting, several public commenters and Commissioners supported exploring higher natural resource weighting scenarios; the Commission directed staff to explore options for higher natural resources weightings to the prioritized MRC projects. Following the meeting, staff calculated project scores and ranking and applied natural resources category weighting scenarios of two, three, four and six times (2x, 3x, 4x, and 6x) higher than other categories; the results are presented in tables 1 and 2. The first table illustrates the ranking orders of the different MRC projects for each weighting. The second table demonstrates the directional effect of each subsequently higher weighting on each project in turn, as well as the raw scores for each project with each weighting.

## **Analysis**

The different weighting scenarios significantly altered the placement of several MRC projects within the overall ranking.

The most notable changes were for projects scoring *nominal or none* for the natural resources category; the score of these projects did not change. However, as the scores of the projects that do provide natural resources benefits increased in the 3x, 4x and 6x scenarios, those projects rose in ranking relative to projects with nominal or no natural resources benefits.

The highest ranked project remained the top project in all scenarios due to its *very high* natural resources score. Other projects with very high natural resources scores remained highly ranked across all weighting scenarios.

In general, the ranking of projects with more consistent scores across categories did not change considerably.

## **Recommendation**

Commission staff recommends weighting the natural resources category at 3x, because it reflects an added emphasis to natural resource risks and benefits without overshadowing other important criteria. Staff's assessment is that the results from the 3x-ranked projects best reflect what appear to be the actual priorities of MRC.

**Table 1. Ranked List of MRC Projects Under Four Weighting Scenarios for the Natural Resources Category.** (Note that topics on the MRC work plan that are updates only were not scored as projects; for these, evaluation of rank is not applicable (NA).)

2x Weighting Scenario		3x Weighting Scenario		4x Weighting Scenario		6x Weighting Scenario	
Topic	Rank	Topic	Rank	Topic	Rank	Topic	Rank
Red Abalone FMP / Abalone Recovery and Management Plan Update	1	Red Abalone FMP / Abalone Recovery and Management Plan Update	1	Red Abalone FMP / Abalone Recovery and Management Plan Update	1	Red Abalone FMP / Abalone Recovery and Management Plan Update	1
California Pink Shrimp FMP	2	Rulemaking: Prohibiting Use of Hydraulic Pump Gear to Take Clam	2	Rulemaking: Prohibiting Use of Hydraulic Pump Gear to Take Clam	2	Rulemaking: Prohibiting Use of Hydraulic Pump Gear to Take Clam	2
Rulemaking: Prohibiting Use of Hydraulic Pump Gear to Take Clam	2	California Pink Shrimp FMP	3	California Pink Shrimp FMP	3	California Pink Shrimp FMP	3
California's Coastal Fishing Communities Project	4	California Halibut FMP	4	California Halibut FMP	4	California Halibut FMP	4
California Halibut FMP	5	Kelp and Algae Commercial Harvest	5	Kelp and Algae Commercial Harvest	5	Kelp and Algae Commercial Harvest	5
Market Squid Fishery Management Review	5	California's Coastal Fishing Communities Project	6	Market Squid Fishery Management Review	6	Market Squid Fishery Management Review	6
Kelp and Algae Commercial Harvest:	5	Market Squid Fishery Management Review	6	California's Coastal Fishing Communities Project	7	Aquaculture Lease Best Management Practices Plans	7
MPA Network: 2022 Decadal Management Review	8	MPA Network: 2022 Decadal Management Review	8	Aquaculture SWBL: Existing and Future Lease Considerations	8	Aquaculture State Water Bottom Leases: Existing and Future Lease Considerations	8
Aquaculture SWBL: Existing and Future Lease Considerations	9	Aquaculture SWBL: Existing and Future Lease Considerations	8	MPA Network: 2022 Decadal Management Review	9	California's Coastal Fishing Communities Project	9

2x Weighting Scenario		3x Weighting Scenario		4x Weighting Scenario		6x Weighting Scenario	
Public Interest Determination Criteria for New Aquaculture Lease Applications	10	Public Interest Determination Criteria for New Aquaculture Lease Applications	10	Public Interest Determination Criteria for New Aquaculture Lease Applications	9	Public Interest Determination Criteria for New Aquaculture Lease Applications	9
Aquaculture Lease Best Management Practices Plans	11	Aquaculture Lease Best Management Practices Plans	11	Aquaculture Lease Best Management Practices Plans	9	MPA Network: 2022 Decadal Management Review	11
California Spiny Lobster FMP Implementing Regulations Review	12	California Spiny Lobster FMP Implementing Regulations Review	12	California Spiny Lobster FMP Implementing Regulations Review	12	California Spiny Lobster FMP Implementing Regulations Review	12
MLMA Master Plan for Fisheries – Implementation Updates	NA	MLMA Master Plan for Fisheries – Implementation Updates	NA	MLMA Master Plan for Fisheries – Implementation Updates	NA	MLMA Master Plan for Fisheries – Implementation Updates	NA
Aquaculture Program Planning (Action Plan)	NA	Aquaculture Program Planning (Action Plan)	NA	Aquaculture Program Planning (Action Plan)	NA	Aquaculture Program Planning (Action Plan)	NA
Kelp Restoration and Recovery Tracking	NA	Kelp Restoration and Recovery Tracking	NA	Kelp Restoration and Recovery Tracking	NA	Kelp Restoration and Recovery Tracking	NA
Invasive Non-native Kelp and Algae Species	NA	Invasive Non-native Kelp and Algae Species	NA	Invasive Non-native Kelp and Algae Species	NA	Invasive Non-native Kelp and Algae Species	NA

FMP = fishery management plan    MPA = marine protected area    MLMA = Marine Life Management Act

Kelp and algae harvest includes bull kelp, edible seaweed, and sea palm    SWBL = state water bottom leases

**Table 2. MRC Project Evaluation Score and Ranking Under Four Weighting Scenarios for the Natural Resources Category** (Note that topics on the MRC work plan that are updates only were not scored as projects; for these, evaluation of rank is not applicable (NA).)

Topic	Rank 2x	Rank 3x	Rank 4x	Rank 6x	Final Score 2x	Final Score 3x	Final Score 4x	Final Score 6x
Red Abalone FMP / Abalone Recovery and Management Plan Update	1	1	1	1	3.3	3.9	4.4	5.6
California Pink Shrimp FMP	2	3	3	3	2.9	3.1	3.4	4.0
Rulemaking: Prohibiting Use of Hydraulic Pump Gear to Take Clam	2	2	2	2	2.9	3.4	4.0	5.1
California's Coastal Fishing Communities Project	4	6	7	9	2.1	2.1	2.1	2.1
California Halibut FMP	5	4	4	4	2.0	2.4	2.9	3.7
Market Squid Fishery Management Review	5	6	6	6	2.0	2.1	2.3	2.6
Kelp and Algae Commercial Harvest	5	5	5	5	2.0	2.3	2.6	3.1
MPA Network: 2022 Decadal Management Review	8	8	9	11	1.9	1.9	1.9	1.9
Aquaculture SWBL: Existing and Future Lease Considerations	9	8	8	8	1.7	1.9	2.0	2.3
Public Interest Determination Criteria for New Aquaculture Lease Applications	10	10	9	9	1.6	1.7	1.9	2.1
Aquaculture Lease Best Management Practices Plans	11	11	9	7	1.3	1.6	1.9	2.4
California Spiny Lobster FMP Implementing Regulations Review	12	12	12	12	0.9	1.0	1.1	1.4
MLMA Master Plan for Fisheries – Implementation Updates	NA	NA	NA	NA	NA	NA	NA	NA
Aquaculture Program Planning (Action Plan)	NA	NA	NA	NA	NA	NA	NA	NA
Kelp Restoration and Recovery Tracking	NA	NA	NA	NA	NA	NA	NA	NA
Invasive Non-native Kelp and Algae Species	NA	NA	NA	NA	NA	NA	NA	NA

FMP = fishery management plan    MPA = marine protected area    MLMA = Marine Life Management Act

Kelp and algae harvest includes bull kelp, edible seaweed, and sea palm    SWBL = state water bottom leases

# **Work Plan for Developing a California Fish and Game Commission Justice, Equity, Diversity and Inclusion Plan**

***Approved April 14, 2021***

The California Fish and Game Commission (Commission) is committed to developing a plan to promote justice, equity, diversity and inclusion (JEDI), both in its internal operations and its work with and for the people of California.

In June 2020, Commission Vice President Samantha Murray and President (then commissioner) Pete Silva made public statements against racism and white supremacy, emphasizing that policies are better informed when they include wide-ranging voices and varied perspectives. Since that time, staff has begun initial work that will support development of a Commission JEDI plan, to ensure that the Commission's commitment to these values is carried forward into action.

The Commission is one of several agencies in California responsible for holding California's fish and wildlife and their habitats in the public trust and consistently works with other federal, tribal, state, and local government agencies, non-governmental organizations and the people of California to successfully deliver on that commitment.

As an agency charged with serving the public, the Commission is committed to engaging with and receiving input from all members of the public. The mission of the Commission acknowledges that "...transparent and open dialogue where information, ideas and facts are easily available, understood and discussed..." is critical to ensuring "...that California will have abundant, healthy, and diverse fish and wildlife that thrive within dynamic ecosystems, managed with public confidence and participation, through actions that are thoughtful, bold, and visionary in an ever-changing environment." The Commission relies on the input of the public that it serves in order to make the best possible decisions; the Commission cannot know if its decisions unintentionally disadvantage certain groups if it does not hear from people representative of the entire state of California. The goal of this plan is not to diminish existing voices; it is to ensure the Commission is hearing from voices representing all Californians impacted by its work so that it can make the best-informed decisions possible.

This document provides an approach for developing the Commission's JEDI plan, and describes components included in the plan. FGC approved this work plan at its April 2021 meeting with the understanding that additional revisions may be necessary to incorporate new information as FGC develops its full plan.

## **JEDI Principles**

Justice is the administration of what is, or the quality of being, just, impartial or fair (Merriam-Webster). As a public agency, the Commission is part of a broader social structure that has historically excluded, restricted, or harmed groups of people on the basis of their background, race or identity. To act in a way that is just, impartial and fair, the Commission must, within its jurisdiction, assure all Californians have equitable access to environmental benefits, opportunities, and services, as well as the decision-making process concerning those resources. Within its power, the Commission must make every effort to guarantee equitable treatment with respect to developing, adopting, implementing and enforcing regulations and policies related to the state's fish and wildlife.

The goal of equity is to achieve equal outcomes; equity allocates resources and opportunities differently to different groups or individuals in support of equal outcomes by recognizing circumstances that might put a group or individual at a disadvantage. Where equality would ensure that all participants are given equal opportunity and resources, equity requires accounting for those who experience barriers, such as historic systems of oppression and/or exclusion, and aiming to eliminate the barriers. Through the lens of equity, the Commission can reduce barriers to participation for those who currently and have historically experienced them. For example, one means of pursuing equity is through anti-racism, a philosophy that actively opposes racism by taking conscious and deliberate action to dismantle racist systems. In the context of the Commission's work, anti-racist action would mean deliberately examining current and future natural resources decisions, regulations, programs, etc. and choosing to act in a way that opposes bias.

Diversity is the condition of having or being composed of differing elements or variety in a group or organization (Merriam-Webster), and can take many forms, whether related to race, gender, age, religion, economic background, ability, or other factors. Increasing diversity can lead to reduced misconceptions, broader perspectives and diminishing discrimination, as well as better decision-making and outcomes. The Harvard Business Review found that cognitive diversity (diversity in perspective and information processing style) solved problems more quickly<sup>1</sup>. Additionally, studies have found that non-homogeneous teams are more focused on facts, process information more carefully, and are more innovative.<sup>2</sup> By increasing diversity of the people who engage in the Commission's decision-making process, problem-solving to address fish and wildlife challenges can be enhanced.

Inclusion is the sense of belonging that people feel in an organization or community. Inclusion calls for a supportive environment where differences are represented and respected, and cultivates community empowerment, care of natural resources, personal connections, and a sense of ownership. While justice dictates that all Californians should have equitable access, inclusion is what creates a space in which all Californians are able to participate and feel empowered and comfortable using their voices. Without an inclusive environment, diversity cannot be maintained, justice cannot be served, and equity will fail to reach those that need it.

## **A Common Foundation**

One of the first steps when embarking on any project is ensuring that the project team has a shared understanding of key concepts and terms to lay a foundation for effective discussions throughout the project development process. Having shared definitions and understanding will also be an important element of discussions with participants in the JEDI plan development process and it is expected that the Commission will define key terms as part of developing its plan. Example definitions, many used by other organizations, are included as Appendix A. The examples lay a foundation for future discussion.

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<sup>1</sup> Harvard Business Review, *Teams Solve Problems Faster When They're More Cognitively Diverse*, March 17, 2017

<sup>2</sup> Harvard Business Review, *Why Diverse Teams are Smarter*, November 4, 2016

## Resources

While staff time and resources are limited, this is a high-priority project and significant staff time will be dedicated in concert with that of commission members. The core team would like to acknowledge that Rose Dodgen, the Commission's former Sea Grant state fellow, played a large part in developing the initial proposal for this work plan. The Commission core team is partnering with CDFW's Justice, Equity, Diversity and Inclusion Team to collaborate, share resources, and avoid duplication of work to the extent practicable.

In addition to partnering with CDFW, FGC will seek to partner with external organizations with experience and expertise in this type of work and, to the extent possible, staff will utilize no-cost resources and educational tools. Additionally, Commission members will help explore outside funding and resources to secure external support in developing a JEDI plan that is tailored to the Commission's unique needs and authority and will support successful outcomes. The Commission is committed to learning from expert resources and making every effort to listen to and include the voices of diverse individuals and communities that directly represent the diversity and inclusion we aim to promote through the JEDI plan.

## Development and Review Process

This draft final work plan identifies potential JEDI plan components that staff recommends be developed in three phases.

**Phase 0:** While developing a JEDI plan can be complex and nuanced, there is a need and desire to begin this work immediately. There are some tasks outlined throughout this document that can start now, even while the full plan is in development, including:

- Acknowledge current and ancestral tribal lands at the beginning of Commission and committee meetings;
- communicate internally and externally that justice, equity, diversity and inclusion are values of the Commission;
- establish multiple pathways for staff and stakeholders to provide feedback regarding opportunities for increased inclusivity;
- add fostering a welcoming workplace and creating a sense of belonging for all employees as a criterion for annual performance reviews for managers and supervisors;
- support staff learning to increase awareness of justice, equity, diversity and inclusion issues; and
- recruit more broadly and implement hiring practices that minimize implicit bias.

**Phase 1:** The initial phase will set the foundation for successful development of the JEDI plan, including early, more limited learning opportunities, stakeholder outreach and engagement, developing a Commission JEDI vision statement and/or policy, creating multiple coordination pathways with CDFW, and collecting data that will ultimately support long-term analyses.

**Phase 2:** The second phase is proposed to include developing various initiatives designed to improve JEDI in the Commission's internal and external relationships. Internal initiatives may include expanding learning opportunities, promoting fair hiring practices that ensure equal treatment of all applicants, and fostering an inclusive culture. External initiatives may include an equity analysis tool for decision-making regarding public resources, a JEDI stakeholder

engagement strategy, and an evaluation of equitable access to public resources in areas where the Commission has authority or influence.

**Phase 3:** The final phase is proposed to develop a plan to monitor and assess the Commission's progress in the ongoing implementation of each initiative.

### ***Development Steps Common to All Phases***

Under the leadership of the Commission, each plan component is proposed to be developed using similar steps; however, the steps may be modified to best fit the goals of each component. There are five proposed steps:

#### *1. Research and Development*

Staff will research best practices utilized by other organizations and recommended by experts to develop initial proposals for consideration and feedback through a variety of channels. Based upon Commission direction, this step may also include informal stakeholder coordination and initial data collection (more detailed data needs will be evaluated and pursued within each component).

#### *2. Informal Feedback from Commissioners*

President Silva and Vice President Murray have agreed to serve as lead advisors on developing a JEDI plan, and will work closely with staff to co-develop and/or provide early, informal feedback on work products. The lead commissioners will meet monthly with staff to provide additional guidance on developing and implementing the JEDI plan. Concurrently, other individual commissioners will provide informal feedback between Commission meetings.

#### *3. Targeted Stakeholder and Tribal Engagement*

One of the core purposes of this project is to engage new, diverse stakeholders who are affected by and may be interested in Commission activities but have not previously actively participated in Commission decision-making processes. While this is a long-term initiative that will require years of work, this work plan proposes engaging a group of targeted stakeholders and tribal representatives to provide early feedback on developing and implementing the JEDI plan.

#### *4. CDFW Coordination and Engagement*

CDFW is in the process of developing its own JEDI plan; as an organization with over 3,000 staff, CDFW is beginning the process primarily focused on human resources practices and staff education. As CDFW is the Commission's primary partner, the Commission will leverage that partnership, collaborate with CDFW, and integrate the knowledge and experience of CDFW staff in developing and implementing its own JEDI principles. Although there will be distinct components to each agency's plan, there is also a great deal of commonality that lends itself to knowledge-sharing. For this reason,

the Commission will coordinate closely with, and seek feedback from, CDFW during the development of its JEDI plan.

#### *5. Formal Feedback and Approval at Commission Meetings*

Materials developed as part of the JEDI plan will be presented at Commission meetings during development and for final approval. An iterative process will allow staff to incorporate feedback from Commission members and other participants through the regular public comment process as work products are developed. Additionally, the Commission will host public work sessions in conjunction with regularly-scheduled meetings. The final step is approval of each plan component at a Commission meeting.

### **Potential Plan Components**

Eleven potential JEDI plan components are proposed in support of laying a solid foundation, developing initiatives, and defining advancement indicators. While the components are described in three general phases in order to provide structure and organization to the process, the work is not strictly sequential. Some tasks found within various components (described above as “Phase 0”) will begin immediately, while others may overlap with components found in different phases.

#### ***Phase 1. Laying the Foundation***

##### *1. Purpose or Vision Statement and Key Definitions*

Draft Goal: Develop a shared understanding of what justice, equity, diversity and inclusion are for the Commission and why it is developing a JEDI plan to facilitate future discussions and plan development.

Proposed Task: Develop a working purpose/vision statement and key definitions for approval by the Commission and inclusion in the JEDI plan.

Timing Considerations: Proposed first step in developing the JEDI plan. Summer 2021.

##### *2. JEDI Policy Statement*

Draft Goal: Clearly articulate the Commission’s policy position regarding JEDI and actively opposing discrimination of any type, including through antiracism; provide guidance and consistency for developing and implementing all other plan components.

Proposed Task: Develop a draft Commission JEDI policy statement for approval by the Commission and inclusion in the JEDI plan.

Timing Considerations: Staff proposes this task begin immediately after or concurrently with the purpose/vision statement. As an overarching, guiding policy, this policy should be complete prior to developing any other JEDI plan components. Summer 2021.

##### *3. Shared Pathways with CDFW*

Draft Goal(s):

- Establish clear and consistent pathways for Commission coordination with CDFW as each organization develops its JEDI plan.

- Foster and maintain a constructive working relationship with CDFW that cultivates knowledge exchange and facilitates implementation of JEDI principles.

Proposed Tasks:

- Create a venue and communication pathways for the Commission and CDFW to develop their respective plans in close coordination.

Timing Considerations: Staff propose this task take place concurrently with steps 1 and 2. Spring/Summer 2021.

## ***Phase 2. Paving the Path***

### ***4. Learning Opportunities (Internal)***

Draft Goal: Increase Commissioners' and staff's knowledge to effectively develop and implement a JEDI plan.

Proposed Tasks:

- Review and evaluate learning opportunities developed by CDFW as part of its JEDI initiative (many aspects of CDFW's learning plan will be incorporated into the Commission's practices) and evaluate what additional learning opportunities the Commission may wish to pursue.
- Identify additional learning opportunities for commissioners, executive team members, and all staff.

Timing Considerations:

- Early steps: Early learning opportunities for members and staff would help from a strong foundation for developing the JEDI plan. Beginning Spring 2021.
- Long-term: Develop ongoing learning for commissioners and staff proposed to begin following development of components 1-3. Exact timing based on availability of opportunities and Commission priority amongst other priorities. Concurrent with other Phase 2 components. Late 2021 – 2022.

### ***5. Equitable Recruitment and Reducing Implicit Bias in Hiring***

Draft Goal: Ensure that Commission recruitment and hiring practices reach a broad and diverse audience, are inclusive, and provide equal opportunities to all potential applicants.

Proposed Task: Review and evaluate recruitment and hiring practices to diversify the applicant pool and minimize the effects of implicit bias in hiring. Expanding and diversifying the applicant pool will allow FGC to reach additional qualified candidates and, ultimately, hire the most qualified candidates, in accordance with civil service rules.

- Engage with CDFW as it reviews and develops its recruitment and hiring practices as part of its JEDI initiative.
- Review CDFW recruitment hiring practices, conduct additional research, and determine if the Commission wishes to take any additional steps, e.g., LinkedIn, additional recruitment efforts, etc.

Timing Considerations: Some of this work, such as removing sources of implicit bias from the recruitment and interview process, has already begun. Exact timing based on Commission priority amongst other priorities. This step may take place concurrently with other components in Phase 2. This would likely take place later in the development process to ensure Commission work builds on CDFW's work in this area.

#### 6. *Foster an Inclusive Culture (Internal)*

Draft Goal: Foster a culture of inclusivity where all staff can fully contribute, diversity is valued, and opportunities are afforded equally.

Proposed Tasks:

- Communicate the value of justice, diversity, equity and inclusion clearly and regularly from leadership in the recruitment process, in new hire onboarding, and with current employees.
- Build upon current Americans with Disabilities Act and Equal Employment Opportunity compliance, and clearly and proactively communicate Commission leadership support above and beyond minimum compliance.
- Establish multiple pathways for staff to provide feedback regarding opportunities for increased inclusiveness.
- Add fostering a welcoming workplace and creating a sense of belonging for all employees as a criterion for annual performance reviews for managers and supervisors.
- Support and require staff learning to increase awareness of diversity and inclusion (also see component 4).
- Engage with CDFW as it reviews and develops its retention and inclusion practices as part of its JEDI initiative.
- Review CDFW retention and inclusion practices, conduct additional research, and determine if the Commission wishes to take any additional steps.

Timing Considerations: Tasks fully contained within the Commission office will begin immediately. Some tasks would likely take place later in the development process to ensure Commission work builds on CDFW's work in this area. No end date.

#### 7. *Build on Tribal Engagement (External)*

Draft Goal: Examine and evaluate the effectiveness and inclusiveness of the Commission's engagement with tribes and determine pathways to increase participation among tribes and tribal communities.

Proposed Tasks:

- Acknowledge tribal and ancestral lands at Commission and committee meetings.
- Explore areas where the Commission's mission and goals share common ground with tribal cultures and values.
- Identify areas where tribal engagement could be more effective and work to build new connections.

- Identify and understand underlying, tribe-specific barriers to tribal participation in Commission meetings and decision-making processes (listen to and understand tribal government partners, with potential mechanisms including targeted outreach, semi-structured interviews with leaders, broader survey)
- Based on the identified barriers, research and consult on options for increasing opportunities for tribal participation:
  - How to make participation productive/worthwhile for tribal partners
  - How to engage local tribes when the Commission travels to locations throughout the state
  - How to structure or conduct Tribal Committee meetings to incorporate any of these opportunities
  - How to ensure that government-to-government consultation is effectively utilized and productive
- Identify potential actions the Commission can take to remove participation barriers and encourage participation by tribes.
- Identify areas where access to traditional resources has been compromised (e.g., CDFW public lands, fisheries, recreational opportunities under the purview of the Commission, etc.). Explore and consider opportunities to restore access.
  - Engage with tribes to identify public resources with barriers to access.
  - Work with tribes to identify potential solutions.
- Hire a Commission tribal advisor and liaison to coordinate and amplify tribal voices.

Timing Considerations: Outreach and engagement with tribes would begin after hiring the tribal advisor and liaison. First steps would be operationalizing the proposed tasks with specific steps.

## 8. *Diversify Engaged Stakeholders (External)*

Draft Goal: Examine/evaluate how the Commission's processes incentivize or disincentivize participation by historically-underrepresented groups, determine ways to create more incentives for participation, counteract or reduce disincentives, foster a culture of inclusivity in the Commission's external activities and interactions, and integrate diverse feedback into decision-making.

Proposed Tasks:

- Develop a plan to engage stakeholders that are representative of the state as a whole.
  - Understand why some communities are less engaged than others in the Commission's decision-making process
  - Identify and build connections with potential stakeholders that may experience barriers to participation or feel apathy toward public policymaking
  - Identify underlying barriers to participation in Commission decision-making for current and new potential stakeholders

- Listen to and understand the needs of current and potential stakeholders using method such as targeted outreach, semi-structured interviews with key leaders, surveys, etc.
- Research and consult on options for increasing opportunities for participation:
  - How to make information more accessible and equitable (language, access, etc.)
  - How to make meeting participation more accessible and equitable
  - How to make participation worthwhile for new or historically underrepresented participants
  - How to reach, hear feedback from, and integrate perspectives from underrepresented communities (media, social media, community organizations, etc.)
  - How to engage local communities informally when the Commission travels to locations throughout the state
- Identify potential actions the Commission can take to remove participation barriers and encourage participation.
- Identify areas where there is not equitable access to public resources (e.g., CDFW public lands, fisheries, recreational opportunities under the purview of the Commission, etc.) consider opportunities to increase equitable access.
  - Engage with stakeholders to discover and identify public resources (e.g., CDFW public lands, fisheries, etc.) with barriers to access.
  - Work with stakeholders to identify potential solutions.

#### Timing Considerations:

- Early outreach and engagement on development of a plan would begin immediately. Summer 2021.
- Develop JEDI Stakeholder Engagement Plan to guide ongoing stakeholder engagement. Exact timing based on Commission priority. This step may take place concurrently with other components in Phase 2. Throughout 2021 and 2022.

### 9. *Formalize Inclusion and Equity in Commission Decisions (External)*

Draft Goal: Develop a tool that can be applied to Commission decisions to ensure that justice, equity, diversity and inclusion are considered in the Commission's decision-making process.

#### Proposed Tasks:

- Define what inclusion and equity tools are and learn how they might apply to Commission decision-making processes.
- Research and identify potential inclusion and equity tools for use in Commission decision-making.
- Design and implement Commission inclusion and equity tool.
  - What type of tool would be used? Examples have resembled checklists, but this could take other forms.
  - Determine where and how tool could be used:

- At what point in the decision-making process would this tool be incorporated?
- Would it be used for all decisions or only certain types?

Timing Considerations: Proposed to begin following development of components 1-3. Exact timing based on Commission priority. This step may take place concurrently with other components in Phase 2. 2022.

### ***Phase 3. Sustainable Advancement***

#### *10. Monitoring Plan*

Draft Goal: Monitor implementation of the JEDI plan to ensure that progress is being made under each component.

Proposed Task: Develop monitoring plan that includes indicators or other means of assessing progress on each of the Commission's JEDI goals. Example indicators could include:

- Number of active participants in Commission and committee meetings
- Number of new active participants in Commission and committee meetings
- Number of organizations represented at Commission and committee meetings
- Number of new organizations represented at Commission and committee meetings
- Quality of participation opportunities as measured by survey or other data collection tool

Timing Considerations: Indicators or other monitoring tools should be identified as part of developing each initiative (4-8). The overall monitoring plan would be the last step in developing the JEDI plan. Late 2022 to early 2023.

## Appendix A: Example Definitions

Example definitions are provided to show the range of definitions available in the dictionary and used by other organizations, as a means to spur discussion. The definitions provided in this section are not the work of the Commission.

### 1. Justice

- The maintenance or administration of what is just especially by the impartial adjustment of conflicting claims or the assignment of merited rewards or punishments.<sup>3</sup>
- The quality of being just, impartial, or fair.<sup>4</sup>
- The principle that all people should have access to healthy, safe, livable communities and environments.<sup>5,6,7</sup>
- Justice in the context of the Commission would mean that all Californians have equitable access to environmental benefits, opportunities, and services, equitable access to the decision-making process concerning those resources, and equitable treatment with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.<sup>2,8,9</sup>

### 2. Equity

- Justice according to natural law or right, specifically freedom from bias or favoritism.<sup>1</sup>
- Fairness of achieving outcomes for all groups and no one factor, such as race, can be used to predict outcomes. Equity is defined in the context of social and racial equity.<sup>2,10</sup>
- The guarantee of fair treatment, access, opportunity, and advancement for all participants, and active identification and elimination of barriers that have prevented the full participation of some groups.<sup>11</sup>
- The process of just and fair consideration because of someone's experience or social position.<sup>12</sup>

### 3. Diversity

- The condition of having or being composed of differing elements, especially the inclusion of different types of people (such as people of different races or cultures) in a group or organization.<sup>1</sup>

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<sup>3</sup> Merriam-Webster Dictionary

<sup>4</sup> Merriam-Webster Dictionary

<sup>5</sup> California State Coastal Conservancy

<sup>6</sup> California Environmental Justice Alliance

<sup>7</sup> Communities for a Better Environment

<sup>8</sup> US Environmental Protection Agency

<sup>9</sup> California Coastal Commission

<sup>10</sup> San Francisco Bay Conservation and Development Commission

<sup>11</sup> Emory University Department of Medicine

<sup>12</sup> California Ocean Protection Council

- The range of similarities and differences in individual and organizational characteristics that shape a workplace. These include but are not limited to national origin, language, race, color, disability, ethnicity, gender, age, religion, sexual orientation, gender identity, socioeconomic status, veteran status, and family structure. The concept also encompasses other differences among people, including geographic differences and, importantly, diversity of thought and life experiences. These differences between people may also lead to different experiences in systemic advantages or encounters with systemic barriers to opportunity.<sup>2,13,14</sup>
- A variety of people, experiences, and perspectives. Often nestled under the umbrellas of identity, including race, gender identity, sexual orientation, religion, dis/ability (differently-abled), socioeconomics, political affiliation, and more.<sup>9</sup>

#### **4. Inclusion**

- The act or practice of including and accommodating people who have historically been excluded (as because of their race, gender, sexuality, or ability).<sup>1</sup>
- Creation of a welcoming environment (1) where people's differences are represented and respected; (2) that embraces multicultural and indigenous histories and presence; and (3) cultivates community empowerment, care of natural resources, personal connections, and a sense of ownership.<sup>2,15</sup>
- A culture that connects each employee to the organization; encourages collaboration, flexibility, and fairness; and leverages diversity throughout the organization so that all employees are able to participate and contribute to their full potential.<sup>8</sup>
- The sense of belonging that people feel in an organization or community. In the case of the MPA [marine protected area] network, think of how people might feel connected to, involved with, or represented within MPA network management and programming decisions.<sup>9</sup>

#### **5. Antiracism**

- Fighting against racism. Being antiracist results from a conscious decision to make frequent, consistent, equitable choices daily. These choices require ongoing self-awareness and self-reflection as we move through life. In the absence of making antiracist choices, we (un)consciously uphold aspects of white supremacy, white-dominant culture, and unequal institutions and society.<sup>16</sup>
- The work of actively opposing racism by advocating for changes in political, economic, and social life. Anti-racism tends to be an individualized approach, and set up in opposition to individual racist behaviors and impacts.<sup>17</sup>

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<sup>13</sup> The Avarna Group

<sup>14</sup> Securities Exchange Commission

<sup>15</sup> The Coro Fellows Program

<sup>16</sup> The National Museum of African American History and Culture

<sup>17</sup> Race Forward

- Conscious efforts and deliberate actions to dismantle racist systems and provide equitable opportunities on both an individual and systemic level.

## **6. Underrepresented**

- Provided with insufficient or inadequate representation.<sup>18</sup>
- Groups who have been denied access and/or suffered past institutional discrimination in the United States and, according to the Census and other federal measuring tools, includes African Americans, Asian Americans, Hispanics or Chicanos/Latinos, and Native Americans.<sup>19</sup>

## **7. Outreach**

- A way of conducting business to ensure that underserved individuals and groups are made aware of, understand, and have a working knowledge of programs and services. Outreach will ensure that these programs and services are equitable and made accessible to all.<sup>20</sup>

## **8. Engagement**

- Stakeholder engagement, in the natural resource management context, most often refers to the participation of stakeholders in planning or decision-making efforts in order to integrate their knowledge and values with a particular project's more specialized knowledge and purpose.<sup>21</sup>

## **9. Stakeholder**

- One who is involved in or affected by a course of action.<sup>1</sup>
- An individual, group, or organization involved in or can affect or be affected by a course of action or by the achievement of an organization's objectives.<sup>22,23,24</sup>

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<sup>18</sup> Oxford Languages

<sup>19</sup> Emory University Office of Diversity, Equity, and Inclusion

<sup>20</sup> US Department of Agriculture Natural Resources Conservation Service

<sup>21</sup> Talley, J. L., J. Schneider, and E. Lindquist. 2016. A simplified approach to stakeholder engagement in natural resource management: the Five-Feature Framework. *Ecology and Society* 21(4):38.

<sup>22</sup> POLICY Project, 1999

<sup>23</sup> Managing Policy Reform: Concepts and Tools for Decision-makers in Developing and Transitioning Countries, Brinkerhoff and Crosby, 2002

<sup>24</sup> Stakeholder engagement in policy development: challenges and opportunities for human genomics, Lemke and Harris-Wai, 2015

**California Fish and Game Commission**  
**Justice, Equity, Diversity and Inclusion Plan Development: Options for a**  
**Working Vision Statement**  
*October 7, 2021*

At the June 2021 meeting of the California Fish and Game Commission (Commission), staff presented several initial drafts for a potential justice, equity, diversity and inclusion vision statement for discussion. The Commission discussed the options and directed staff to refine the statements, noting that a vision statement would be approved as a “working” statement, with potential refinement as the Commission continues its work in this area.

At the Commission’s August 2021 meeting, staff presented three vision statements that had been refined based on Commission discussion and commissioners’ subsequent input. After discussing the three options, the Commission directed staff to revise them once more while narrowing them down to two options.

The two staff-revised options:

- Option 1: All people enjoy safe and equitable access to California’s thriving native wildlife and natural habitats supported by inclusive decision-making that reflects the needs and values of the state’s diverse communities.
- Option 2: All people enjoy safe and equitable access to California’s fish, wildlife and natural habitats, as well as to inclusive (and considered?) Commission decision-making processes.

**California Fish and Game Commission**  
**Justice, Equity, Diversity, and Inclusion Plan Development: Draft Policy**  
**Statement Concepts**  
*October 8, 2021*

The second step in the California Fish and Game Commission's (Commission) Justice, Equity, Diversity, and Inclusion (JEDI) Work Plan is to develop and adopt a policy statement clearly articulating the Commission's policy position regarding JEDI and actively opposing discrimination of any type to provide guidance and consistency for developing and implementing all other plan components.

This document provides potential concepts to include in a Commission JEDI policy statement. Staff will use feedback from the Commission on these concepts to help inform development of a Commission JEDI policy statement.

**Potential JEDI Policy Statement Concepts**

Positive vision

- Create a culture of respect for all persons as a fundamental characteristic of our organization and wider public community.
- Move forward in a just, equitable, and inclusive manner.
- Committed to ensuring California's fish and wildlife is managed with public confidence and participation.

Values we hold as central to our mission

- Integrity, transparency, innovation, collaboration, excellence, stewardship
- Justice, equity, diversity, and inclusion.
- Diversity and equity in workforce outreach recruitment efforts
- Ensuring that hiring practices are not discriminatory and are compliant with the state's merit system and anti-discrimination laws.
- Acknowledgement of well-documented and detrimental nature gap in historically marginalized and underserved communities and privilege associated with outdoor access.
- Importance of serving all people of California.
- We find extraordinary value in differences of culture, circumstance, lived experience and worldview and see varied backgrounds as experiential assets that strengthen our decision-making.

Actions to Commit to

- Recognize California Native American Tribes' connection to the environment, acknowledge significant past injustices, and amplify tribal voices and issues.
- Use our sphere of influence to counteract historic legacies and systems of exclusion

- Promote equity through more inclusive decision-making that considers and corrects for disproportionate burdens on historically marginalized communities, including but not limited to California Native American Tribes.
- Promote meaningful and long-term partnerships with communities and cultures that have relationships to activities, fish, or wildlife that we regulate.
- Promote engagement in Commission decision-making by all affected and interested people.
- Conduct the agency's business in a manner that operationalizes issues of justice, equity, diversity, and inclusion.
- Create and maintain a space where all ideas, values, and cultures are welcomed, heard, and respected.
- Champion equitable access to nature and abundant and healthy resources through careful stewardship.
- Improve and promote equity in access to natural spaces.
- Promote economic, cultural and community opportunities related to fish and wildlife.

## California Fish and Game Commission

### Justice, Equity, Diversity and Inclusion Plan Development: Sample Definitions for Key Terms

October 8, 2021

Term	Seattle Public Utilities	City of San Jose	City of Portland	California State Agency
<b>Diversity</b>	N/A	Diversity: A multiplicity of races, genders, sexual orientations, classes, ages, countries of origin, educational status, religions, physical, or cognitive abilities, documentation status, etc. within a community, organization or grouping of some kind. Pop wisdom: Achieving diversity is not the same thing as achieving inclusion or equity.	Diversity: includes all the ways in which people differ, and it encompasses all the different characteristics that make one individual or group different from one another. <i>Source: UC Berkeley Center for Equity, Inclusion and Diversity</i>	Diversity refers to the various characteristics and ways in which individuals or groups differ from one another. Diversity encompasses different races, ethnicities, sexual orientations, etc., as well as belief systems, ideas, and values. Diversity is necessary but not sufficient to achieve equity, which demands an ongoing commitment not just to include, but to value and empower, all people.
<b>Equity</b>	The distribution of resources that accounts for past history and current position, so that future outcomes are fairly distributed.	Fairness and justice in policy, practice, and opportunity consciously designed to address the distinct challenges of non-dominant social groups, with an eye to equitable outcomes. See also: Racial equity.	Equity Lens: is a critical thinking approach to undoing institutional and structural racism, which evaluates burdens, benefits, and outcomes to underserved communities.	Equity recognizes that because different individuals or groups have different histories and circumstances, they have different needs and unequal starting points. Using an equity approach, individuals and groups receive different resources, opportunities, support, or treatment based on their specific needs. By providing what each individual or group needs, they can have equal or fair outcomes.

Term	Seattle Public Utilities	City of San Jose	City of Portland	California State Agency
<b>Implicit Bias</b>	N/A	Also known as unconscious or hidden bias, implicit biases are negative associations that people unknowingly hold. They are expressed automatically, without conscious awareness. Implicit biases have been shown to trump individuals' stated commitments to equality and fairness, thereby producing behavior that diverges from the explicit attitudes that many people profess. The Implicit Association Test (IAT) is often used to measure implicit biases with regard to race, gender, sexual orientation, age, religion, and other topics.	The evaluation of one group and its members relative to one another, expressed indirectly, usually without awareness. This operates in one's subconscious.	<p>Unconscious thoughts, attitudes, and feelings that result in preferences for or aversions to certain types of people, often associated with stereotypes based on characteristics such as race, gender, appearance, etc. Implicit Bias operates both on the individual level and on the institutional level, and can create real-world consequences even when biases are not consciously known or recognized.</p> <p>Institutional Implicit Bias occurs when certain policies, programs, or processes routinely benefit one group over another, even if they do so unintentionally.</p>
<b>Institutional Racism</b>	Organizational programs, policies or procedures that work to the benefit of White people and to the detriment of people of color, usually unintentionally or inadvertently.	Institutional racism refers specifically to the ways in which institutional policies and practices create different outcomes for different racial groups. The institutional policies may never mention any racial group, but their effect is to create advantages for whites and oppression and disadvantage for people of color.	Occurs within institutions and systems of power. It is the unfair policies and discriminatory practices of particular institutions (schools, workplaces, etc.). <i>Source: Race Forward, Moving the Race Conversation Forward</i>	The ways in which policies and practices perpetuated by institutions, including governments and private groups, produce different outcomes for different racial groups in a manner that benefits the dominant group. In the United States, Institutional Racism includes policies that may not mention race, but still result in benefiting white people over people of color.

Term	Seattle Public Utilities	City of San Jose	City of Portland	California State Agency
<b>Racial Equity</b>	When social, economic, and political opportunities are not predicted based upon a person's race.	Racial equity is the condition that would be achieved if one's racial identity no longer predicted, in a statistical sense, how one fares. When we use the term, we are thinking about racial equity as one part of racial justice, and thus we also include work to address root causes of inequities not just their manifestation. This includes elimination of policies, practices, attitudes and cultural messages that reinforce differential outcomes by race or fail to eliminate them.	When race does not determine or predict the distribution of resources, opportunities, and burdens for group members in society.	The condition achieved when race can no longer be used to predict life outcomes and conditions for all groups are improved.
<b>Sources</b>	<a href="https://www.seattle.gov/utilities/protecting-our-environment/community-programs/environmental-justice-and-service-equity/glossary">https://www.seattle.gov/utilities/protecting-our-environment/community-programs/environmental-justice-and-service-equity/glossary</a>	<a href="https://www.sanjoseca.gov/your-government/departments-offices/office-of-the-city-manager/racial-equity-resources/racial-equity-glossary">https://www.sanjoseca.gov/your-government/departments-offices/office-of-the-city-manager/racial-equity-resources/racial-equity-glossary</a>	<a href="https://www.portland.gov/sites/default/files/2021/pbot-racial-equity-plan-123016_report.pdf">https://www.portland.gov/sites/default/files/2021/pbot-racial-equity-plan-123016_report.pdf</a>	Working definitions from a California State government entity

## **California Consolidated Appropriations Act Fisheries Relief Spend Plan Update**

On March 29, 2021, the Secretary of Commerce announced the allocation of an additional \$255 million in fisheries assistance funding provided by the Consolidated Appropriations Act of 2021. The purpose of the funding is to support commercial fishing and associated activities previously authorized under Sec. 12005 of the CARES Act. California was allocated \$15,315,740 under the Consolidated Appropriations Act.

CDFW coordinated with representatives of the California commercial fishing industry, NOAA and the PSMFC, to develop a spend plan consistent with the Consolidated Appropriations Act, the CARES Act, and NOAA's updated guidance. Per the spend plan, direct payments will be made to eligible and qualified individuals and businesses based on COVID-19 related losses scaled to available funds.

Applications will be available for a 45-day period starting at 12:00am (PDT) on Monday, October 4th, 2021, and will conclude at 11:59pm (PST) on Wednesday, November 17th, 2021.

Applicants should review California's Round 2 "[spend plan](#)" prior to applying to confirm eligibility. Participants seeking relief will apply electronically via a web-based application that can be found at [Pacific States Marine Fisheries Commission \(psmfc.org\)](https://psmfc.org).

For additional information and answers to Frequently Asked Questions please visit [wildlife.ca.gov/Regions/Marine/CARES-Act](https://wildlife.ca.gov/Regions/Marine/CARES-Act).

## Research



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# Disease-driven mass mortality event leads to widespread extirpation and variable recovery potential of a marine predator across the eastern Pacific

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The prevalence of disease-driven mass mortality events is increasing, but our understanding of spatial variation in their magnitude, timing and triggers are often poorly resolved. Here, we use a novel range-wide dataset comprised of 48 810 surveys to quantify how sea star wasting disease affected *Pycnopodia helianthoides*, the sunflower sea star, across its range from Baja California, Mexico to the Aleutian Islands, USA. We found that the outbreak occurred more rapidly, killed a greater percentage of the population and left fewer survivors in the southern half of the species's range. *Pycnopodia* now appears to be functionally extinct (greater than 99.2% declines) from Baja California, Mexico to Cape Flattery, Washington, USA and exhibited severe declines (greater than 87.8%) from the Salish Sea to the Gulf of Alaska. The importance of temperature in predicting *Pycnopodia* distribution rose more than fourfold after the outbreak, suggesting latitudinal variation in outbreak severity may stem from an interaction between disease severity and warmer waters. We found no evidence of population recovery in the years since the outbreak. Natural recovery in the southern half of the range is unlikely over the short term. Thus, assisted recovery will probably be required to restore the functional role of this predator on ecologically relevant time scales.

## 1. Introduction

While the prevalence of mass mortality events (MMEs) is increasing with climate change [1,2], spatial variation in their timing, magnitude and triggers often remain unknown rendering recovery potential difficult to predict and conservation interventions challenging to design. MMEs constitute ecological disasters, and when they involve the loss of strongly interacting predators or foundation species, effects can propagate throughout ecosystems. In coastal

marine ecosystems, echinoderms, such as sea urchins and sea stars, appear particularly susceptible to disease-driven MMEs [3,4]. Furthermore, many echinoderm species are strong ecological interactors as predators or major grazers in their systems. Little is known, however, about the interactions between echinoderm disease and changing ocean conditions, making it difficult to determine when and where these collapses may occur (but see [5,6]). Our limited understanding of echinoderm disease-driven MMEs leaves us unprepared to respond to events that can rapidly alter population, community and ecosystem dynamics at continental scales.

The sea star wasting disease (SSWD) epidemic, also known as sea star wasting syndrome or asteroid idiopathic wasting syndrome, began in 2013 and affected over 20 species of sea stars along with the Pacific coastline from Mexico to the Aleutian Islands [7,8]. Previous outbreaks of putative SSWD have occurred, particularly in southern California, but have never impacted stars on the scale observed since 2013 [4]. *Pycnopodia helianthoides* (hereafter *Pycnopodia*) appears to be the species most impacted by SSWD, with declines reaching 99–100% in some areas [6,9–11]. Prior to the outbreak, *Pycnopodia* was recognized as an important generalist mesopredator across northeastern Pacific near-shore food webs and can be an effective predator of small- and medium-sized sea urchins on rocky reefs [12,13]. Via top-down pressure on sea urchins, *Pycnopodia* can promote kelp abundance by affecting sea urchin abundance, behaviour and grazing rates, although the strength of this phenomenon varies substantially across their range [10,12–14].

The aetiological agent(s) driving SSWD remain unidentified. Current hypotheses focus on (i) a viral-sized aetiological agent (e.g. sea star-associated densovirus) and (ii) low oxygen at the surface of the skin maintained through subsequent bacterial proliferation [7,15]. Additionally, the relationship between temperature and SSWD is unresolved. In laboratory studies, the lesion growth rate increased with increasing temperature, but evidence for warm temperatures triggering SSWD is mixed [16–18]. Some studies showed a positive relationship between the timing of the outbreak and temperature [6,18,19], while others found no relationship [8,20] or a negative relationship [21]. Differences in disease detection could explain these variable field observations. SSWD is a fast-paced disease accelerating at the scale of weeks to months, so peak prevalence of infection is difficult to detect from seasonal or annual monitoring programmes [7]. Thus, the relationship between environmental triggers of an outbreak can easily be confounded with pandemic disease dynamics [22].

While previous papers have documented that SSWD caused dramatic losses in *Pycnopodia* in some places [7,9,10], here we compiled 48 810 surveys on *Pycnopodia* presence and density from 34 data contributors ranging from Baja California, Mexico, to the Aleutian Islands, USA, to create the most comprehensive dataset to date to quantify impacts to the species across its entire range. Using this unique dataset, we evaluate the population-level impacts of SSWD on *Pycnopodia* by asking the following. (i) How did the timing of the SSWD epidemic vary across *Pycnopodia*'s range? (ii) How did SSWD change the abundance and spatial distribution of *Pycnopodia*? (iii) How did environmental variables that predict *Pycnopodia* distribution differ pre- and post-outbreak? (iv) Is there evidence of population recovery in the years since populations first collapsed?

## 2. Methods

### (a) Data collection and compilation

Thirty research groups from Canada, the United States, Mexico, including First Nations, shared 34 datasets containing field surveys of *Pycnopodia* (electronic supplementary material, table S1). The data included 48 810 surveys from 1967 to 2020 derived from trawls, remotely operated vehicles, scuba dives and intertidal surveys. We compiled survey data into a standardized format that included at minimum the coordinates, date, depth, area surveyed and occurrence of *Pycnopodia* for each survey. When datasets contained more than one survey at a site in the same day (e.g. multiple transects), we divided the total *Pycnopodia* count in all surveys by the total survey area and averaged the latitude, longitude and depth as necessary. Using breaks in data coverage, political boundaries and biogeographic breaks, we assigned each survey to one of twelve regions: Aleutian Islands, west Gulf of Alaska (GOA), east GOA, southeast Alaska, British Columbia (excluding the Salish Sea), Salish Sea (including the Puget Sound), Washington outer coast (excluding the Puget Sound), Oregon, northern California, central California, southern California and the Pacific coast of Baja California (electronic supplementary material, figure S1).

### (b) Timeline of epidemic and population declines

We developed two timelines to define (i) epidemic phases describing how the epidemic progressed and (ii) population phases describing how *Pycnopodia* populations changed over time (electronic supplementary material, table S2).

#### (i) Epidemic phases

For each region, epidemic timelines were divided into four phases punctuated by three dates as follows: (i) pre-epidemic phase; (ii) date SSWD first observed; (iii) emerging epidemic phase; (iv) outbreak date; (v) epidemic phase; (vi) crash date and (vii) post-epidemic phase (electronic supplementary material, figure S2). To describe SSWD emergence, we used datasets from MARiNe (electronic supplementary material, table S1) and queried the date of the first symptomatic sea star observed at 594 sites distributed from Baja California, Mexico, to the western GOA, USA (see <http://data-products/sea-star-wasting/>). We used observations for both *Pisaster ochraceus* and *Pycnopodia* because *P. ochraceus* has more observations than *Pycnopodia* enabling more accurate estimates of outbreak timing among regions ( $n = 450$  and  $n = 247$  sites, respectively). *P. ochraceus* showed a slightly earlier date of first observation than *Pycnopodia*, but the timelines were otherwise very similar (See electronic supplementary material, figure S3).

We defined 'date SSWD first observed' as the earliest record of a symptomatic *Pycnopodia* or *P. ochraceus* in each region (electronic supplementary material, figure S2). This date defined the break between 'pre-epidemic' and 'emerging epidemic' phases. We defined 'outbreak date' by fitting a normal curve to the distributions of dates when SSWD was first observed at each site and calculated the 10th percentile; this served as the break between 'emerging epidemic' and 'epidemic' phases. The 10th percentile was chosen because we reasoned that when 10% of sites show signs of SSWD, the disease has probably transitioned to an outbreak, rather than persisting as isolated cases of infection. Further, our detection of disease at 10% of sites probably means the actual number of sites infected is much higher. The time elapsed between the 'date SSWD first observed' and the 'outbreak date' was considered the 'emerging epidemic' phase. As the epidemic progressed and *Pycnopodia* populations declined, we used trends in *Pycnopodia* occurrence (site-level presence or absence) to estimate 'crash date', defined as the date when the occurrence rate of *Pycnopodia* in a region decreased

by 75% from pre-outbreak levels. A 75% decline in occurrence was chosen because it is a substantial decline and because this threshold gave date estimates in all regions that were the most similar to the crash timelines reported elsewhere [8–10,12,21,23]. ‘Crash date’ defined the break between the ‘epidemic’ and the ‘post-epidemic’ phases.

We defined ‘emergence duration’ as the time elapsed between ‘date SSWD first observed’ and the ‘outbreak date’, which indicated how quickly the disease progressed in each region. The difference in time between the outbreak date and crash date in a region defined the ‘epidemic duration’. For further details, see electronic supplementary material, figure S2.

## (ii) Population phases

To define the effect of SSWD on *Pycnopodia* populations, we delineated three population phases: historical, decline and current (electronic supplementary material, figure S2). The ‘outbreak date’ in each region (defined above) determined the break between the ‘historical’ and ‘decline’ phases. The ‘current’ period includes data from 2017 to 2020. Region-specific dates associated with the ‘post-epidemic’ phase were not used to define ‘current’ population phase because (i) not all regions are necessarily in the ‘post-epidemic’ phase (see electronic supplementary materials) and (ii) many regions had recent crash dates (e.g. 2018 for Alaskan regions) with limited data in the ‘post-epidemic’ phase. Population phases were used in density and occurrence analyses, species distribution models and remnant population analysis.

## (c) Influence of sea star wasting disease on global sunflower sea star populations

To determine how *Pycnopodia* has been affected by SSWD, we examined how density and occurrence varied with population phase and region. We compared historical and current populations (defined above) in each region when possible. We modelled deep (greater than 25 m depth) and shallow (less than or equal to 25 m depth) populations separately because *Pycnopodia* were much more common at depths less than or equal to 25 m, and data from deep depths were unavailable for most regions. We performed all models in R v. 4.0.0 and RStudio v. 1.2.5042 [24]. For density models, we built zero-inflated generalized linear models [25] of *Pycnopodia* counts, using  $\log_{10}$  (area searched) as the offset variable, Poisson likelihoods and log link functions, fit by Type II sums of squares. For occurrence models, we constructed a generalized linear model [26] of *Pycnopodia* occurrence rate, using area searched as a covariate, binomial likelihoods and logit link functions, fit by Type II sums of squares. In some regions, low sample sizes led to low confidence in our estimates of occurrence and density, therefore we used grey shading in our tables to delineate values with low confidence. For further details on this modelling process and regional data limitations, see electronic supplementary materials.

## (d) Abiotic correlates of the population decline

We used MaxEnt species distribution models to (i) quantify abiotic conditions associated with *Pycnopodia* before and after SSWD and (ii) predict the distribution of remaining populations [27]. We created two MaxEnt models, one estimating the distribution of *Pycnopodia* prior to the SSWD outbreak (2009–2012) using 6206 observations and the other estimating the distribution of current populations (2017–2020) using 1702 observations. We used prior studies to select important abiotic variables [28,29] and eliminated highly correlated variables [30]. Abiotic variables in each model were the 90th percentile of sea surface temperature and mean chlorophyll from 2009 to 2012 and 2017 to 2020 for pre-outbreak and current models, respectively (NASA MODIS Aqua: <https://oceancolor.gsfc.nasa.gov/data/aqua/>), mean salinity from a

long-term climatology (NOAA: [https://www.nodc.noaa.gov/OC5/regional\\_climate/](https://www.nodc.noaa.gov/OC5/regional_climate/)), depth (NOAA ETOP01: <https://www.ngdc.noaa.gov/mgg/global/>), and substrate type (UC Boulder dbSEABED: <https://instaar.colorado.edu/~jenkinsc/dbseabed>) (see electronic supplementary materials for further details).

Datasets were clipped to the study area, defined as 0–456 m depth (our deepest observation of *Pycnopodia*) from 112.637° W, 24.874° N (our southernmost observation) and 170.196° W, 52.508° N (our northernmost/westernmost observation) [31]. Google Earth Engine was used to create temperature and chlorophyll metrics from MODIS data, and all other analyses were completed in R Studio [24,32]. We used our compiled *Pycnopodia* dataset to create 5000 background points for each model that mirrored the spatial sampling bias of the data itself [30]. Using the package ‘ENMeval’, we chose to use linear and quadratic features and a regularization parameter = 1 based on combined information from the training and evaluation Area Under the Curve metrics and Akaike’s information criterion (see electronic supplementary materials for further details) [33]. We adjusted the default average species probability parameter by calculating the average occurrence rate from the pre-outbreak (0.61%) and current periods (0.14%) from the compiled dataset [30].

## (e) Current status and recovery potential

### (i) Population density

To visualize changes in *Pycnopodia* density in shallow depths (less than 25 m) from historical (1987–outbreak date) to current populations (2017–2020), we used ArcGIS Pro 2.7 to generate a grid of 16 km<sup>2</sup> hexagonal cells across *Pycnopodia*’s range. For each time period, we used a spatial join to nest the available density surveys within each cell (historical,  $n = 3984$ ; current,  $n = 1344$ ) and calculated mean density within each cell for both time periods. Jenks natural break classification was selected to symbolize density due to the high variance within the dataset.

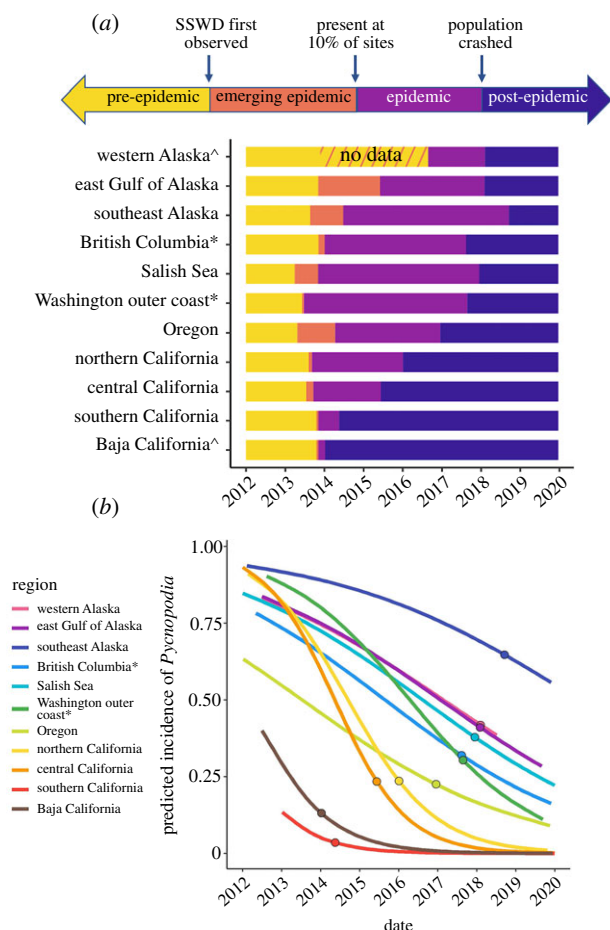
### (ii) Remnant populations

To determine where persistent remnant *Pycnopodia* populations have been found since 2017, we used ArcGIS Pro 2.7 to generate a grid of 16 km<sup>2</sup> hexagonal cells along with *Pycnopodia*’s range. We used a spatial join to nest the 6284 available surveys from shallow depths for 2017–2020 within each cell. We retained only those cells with surveys performed in at least three of the 4 years from 2017 to 2020. From these better-surveyed cells, we calculated the percentage of surveys with *Pycnopodia* occurrence, which indicated the persistence of the remnant population. Each cell was then classified as ‘absent’ = 0%, ‘rare’ = less than 25%, ‘common’ = less than 90% and ‘very common’  $\geq 90\%$ . Note that this method does not evaluate remnant *Pycnopodia* population dynamics. Remnant populations designated as common or even very common using this method can include populations that are (i) unaffected by SSWD and stable, (ii) affected by SSWD yet stable or (iii) affected by SSWD and declining.

## 3. Results

### (a) Latitudinal gradients in epidemic timing

Epidemic timelines showed that the date of first SSWD observed occurred in 2013 for nearly all regions (figure 1b; electronic supplementary material, table S2). Emergence duration (orange bar in figure 1b) was notably variable among regions. In British Columbia, the Washington outer coast, all California regions and Baja California, SSWD became an ‘outbreak’ (approx. 10% sites infected) within a few weeks to two months. The emergence duration was nearly a year



**Figure 1.** (a) Timeline of epidemic phases between January 2012 and December 2019 by region. Pre-epidemic phase (yellow) includes dates before the 'date SSWD first observed', when the first recorded symptomatic sea star was reported in each region (unknown in western Alaska). The emerging epidemic phase (orange) spans from the 'date SSWD first observed' to the 'outbreak date' when 10% of the sites within a region had reported SSWD observations. Epidemic phase (violet) spans the 'outbreak date' to the 'crash date' (defined above) and indicates how quickly the disease caused population declines. The post-epidemic phase (purple) includes dates after the crash date, though SSWD may still be present and driving further declines in the future. Caret: some dates inferred based on the dates in neighbouring regions. Asterisk: British Columbia and Washington outer coast exclude the Salish Sea. (b) Logistic model predictions for the occurrence of *Pycnopodia helianthoides* over the course of the epidemic by region. These models were used to estimate the 'crash date' (filled circles) of the populations in each region, defined as a 75% decline in occurrence from January 2012 to December 2019. (Online version in colour.)

in Oregon and over seven months in the Salish Sea, despite the Salish Sea having the earliest record of a SSWD-afflicted animal (30 March 2013). Southeast Alaska's emergence duration was similar to Oregon (10.1 months) but the emergence duration in the eastern GOA was nearly 19 months.

Epidemic duration (light purple bar in figure 1a) and the crash date (solid points in figure 1b) showed a marked latitudinal gradient, indicating that populations crashed more quickly in the southern part of the range (figure 1; electronic supplementary material, table S2). The logistic regression model showed significant declines in occurrence over time, which varied by region (electronic supplementary material, table S3). Populations crashed in Baja California within 2.1

months of the outbreak date and in southern California within 6.3 months. Declines took less than two years in central California, less than three years in northern California, Oregon and the east GOA, and around 4 years on the Washington outer coast, the Salish Sea, British Columbia and southeast Alaska. The west GOA and Aleutian Islands had an estimated 17-month epidemic duration, but limited sampling in these regions made these estimates uncertain.

For this analysis and others, lower data availability for much of Alaska and parts of British Columbia created greater uncertainty in regional estimates for these areas. We suspect, however, that the observed latitudinal gradient here is not driven only by generally lower sampling effort northward because northern regions with high sampling effort, such as southeast Alaska, also exhibited late outbreak dates and long emergence durations.

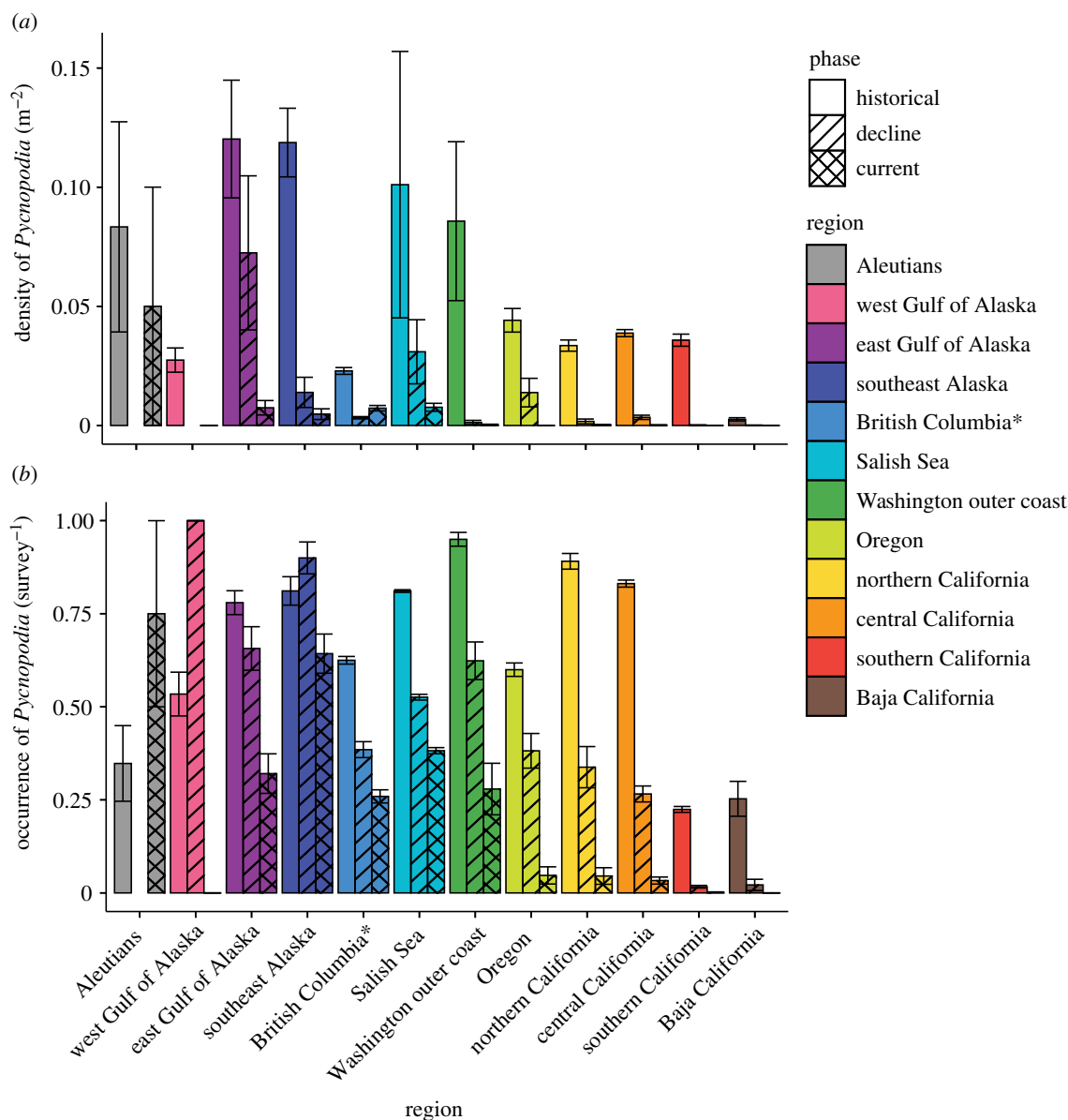
### (b) Latitudinal gradients in population declines

After the SSWD outbreak, *Pycnopodia* density declined range wide by 94.3% and the magnitude of this decline was similar in shallow and deep depths (92.5% and 96.5%, respectively, figure 2; electronic supplementary material, table S4). In shallow depths (where the vast majority of animals are found), the magnitude and significance of the decline differed by region (figure 2; electronic supplementary material, table S4 and table S5: population phase:  $p = 0.423_{7,3523}$ ; region  $\times$  population phase:  $p < 0.0001_{7,3523}$ ). Estimated density declines were greater than 87.9% in 11 of 12 regions and were greater than 99.2% in all regions of the outer coast of the contiguous USA and Mexico, with no *Pycnopodia* observed in Oregon, southern California, and Baja California since at least 2017 (figure 3; electronic supplementary material, table S4). In the Salish Sea, the British Columbia, southeast Alaska and the east GOA, declines were also severe (92.4%, 87.9%, 96.0% and 93.8%, respectively).

Occurrence declined range wide by 52.3% (figure 2; electronic supplementary material, table S4), and this decline was significant in shallow and deep depths (64.13% and 55.3%, respectively; electronic supplementary material, table S5:  $p_{1,3714} < 0.0001$  and  $p_{1,2148} < 0.0001$ , respectively). In shallow depths, regional patterns were similar to those for density declines (figures 2 and 3a,b; electronic supplementary material, table S4 and table S5: region  $\times$  population phase:  $p < 0.0001_{7,3714}$ ) with more severe declines in Oregon and southward (greater than 92.2% decline). In the Salish Sea, British Columbia, southeast Alaska and the east GOA, declines were substantial though less severe than southern regions (52.9%, 68.9%, 20.8% and 58.9%, respectively). Too few data were available to make confident estimates in the west GOA and the Aleutian Islands. Overall, *Pycnopodia* appears functionally extirpated along the southern 2700 km stretch of coastline from Baja California, Mexico, to Cape Flattery, Washington, USA, and experienced substantial declines in northern regions.

### (c) Temperature became more important in predicting *Pycnopodia* distributions

Prior to the outbreak of SSWD, MaxEnt models predicted a relatively even distribution of *Pycnopodia* from Baja California to the Aleutian Islands, and the predicted probability of *Pycnopodia* occurrence rarely dropped below 60% in coastal areas (figure 3c). Depth was by far the strongest predictor



**Figure 2.** Mean ( $\pm$ s.e.) *Pycnopodia helianthoides* (a) density (m<sup>2</sup>) and (b) occurrence in shallow depths (less than 25 m) among the 12 regions and population decline phases (historical, decline and current, see electronic supplementary material, table S2) over the SSWD outbreak. Asterisk: Washington outer coast and British Columbia exclude the Salish Sea. (Online version in colour.)

of *Pycnopodia* occurrence with permutation importance of nearly 75% of the total predictive capacity (figure 4a; electronic supplementary material, table S6) [28]. The predicted probability of *Pycnopodia* dropped exponentially as depth increased, approaching zero around 300 m (figure 4b).

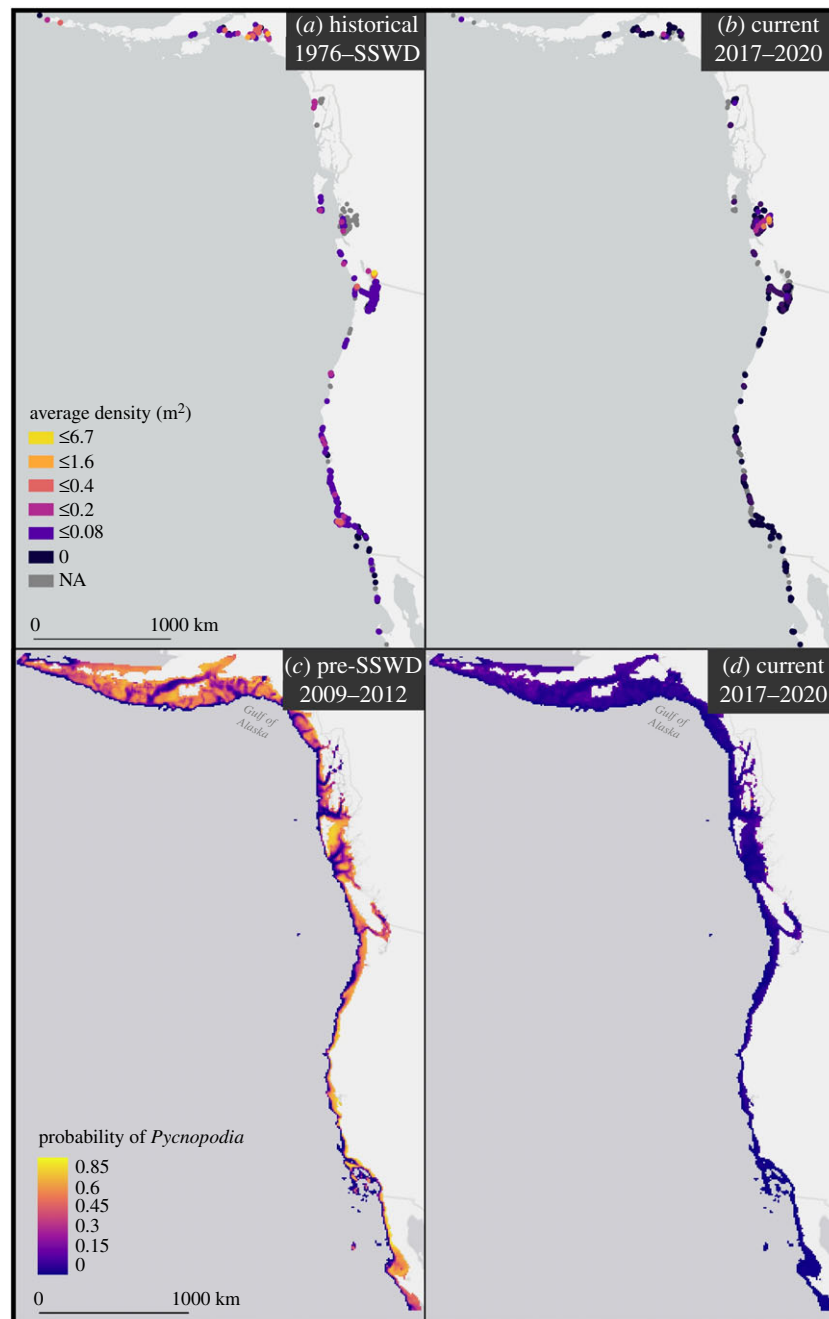
Compared to the pre-outbreak model, the probability of *Pycnopodia* occurrence plummeted range wide in the current model. MaxEnt models predicted nearly 0% probability in Baja California and southern California, and less than 10% probability across the outer coast of the US as far north as 48.4° latitude, around Cape Flattery, Washington (figure 3d). Moving northwards along inner coastal waters from Puget Sound to the Aleutian Islands, the current model predicted somewhat higher probabilities of occurrence around 15–25%. Along central British Columbia, southeast Alaska and the Aleutian Islands, the current model identified pockets of higher probabilities around 30–60% (figure 3d).

The importance of various abiotic variables in predicting *Pycnopodia* occurrence also differed between the pre-outbreak and current models. The importance of temperature increased

more than fourfold to nearly 40% permutation importance and was the most important predictor along with depth (figure 4a). Prior to the outbreak, the relationship between the probability of *Pycnopodia* and temperature formed a unimodal curve that peaked around 16°C (figure 4b). After the outbreak, this curve shifted dramatically towards colder temperatures, peaking around 5°C and decaying down to nearly 0% probability by 23°C (figure 4b). Conversely, depth maintained a similar relationship with predicted probability, although the peak at shallow depths fell to approximately 18% probability as opposed to approximately 75% pre-outbreak. Among the remaining variables, mean chlorophyll increased in importance to 10.7% permutation importance, substrate rose to 6.3% and mean salinity fell to become the least important variable (electronic supplementary material, table S6).

#### (d) No population recovery since 2017

We found no clear evidence that *Pycnopodia* have begun to recover on a large scale. Though some sites have seen the



**Figure 3.** Density ( $\text{m}^2$ ) of *Pycnopodia helianthoides* in shallow water (less than 25 m) from (a) historical (1976 to the outbreak date of SSWS) and (b) current (2017–2020) surveys. Grey cells represent areas where no surveys were conducted during the relevant timeframe, but were conducted within the dataset timeframe. MaxEnt species distribution model logistic predictions for *Pycnopodia helianthoides* (c) immediately pre-SSWD outbreak (2009–2012) and (d) currently (2017–2020). (Online version in colour.)

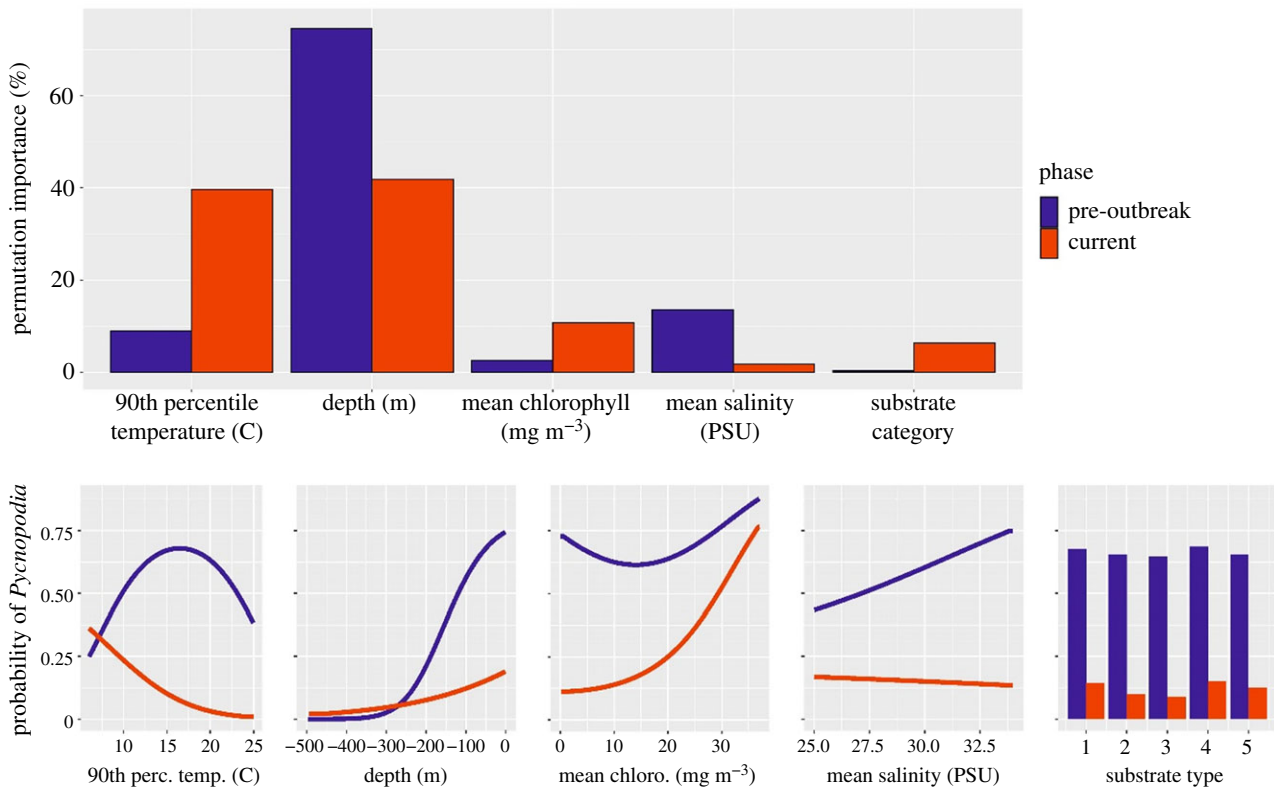
recruitment of small animals (A.L.G. & S.A.G. 2017–2020, personal observation), we observed no increases in *Pycnopodia* density in any region since 2017 (electronic supplementary material, figure S4). In fact, the southern regions from Baja California to the outer coast of Washington have ‘flat-lined’ at near-zero densities. Further, those regions with remaining animals either show no recovery (east GOA) or a continued decline in density from 2017 to 2020 (southeast Alaska, British Columbia, Salish Sea;  $p < 0.001$  for each region). However, fits by region were quite low ( $R < 0.09$  in all regions) because the remaining densities in these regions were variable.

When we investigated localized ( $16 \text{ km}^2$ ) persistence of remnant populations from 2017 to 2020, we found no cells with common or very common observations of *Pycnopodia* from Oregon to the southern range limit, and only two cells had

common populations on the Washington outer coast (figure 5). In the Salish Sea and north, the number of cells with common or very common observations increased, peaking at 60% of the cells in southeast Alaska. While the Aleutian Islands and west GOA had no regularly surveyed cells, we expect that common observations could be found there based on the increased probability of *Pycnopodia* in these regions predicted by the SDM models (figure 3) and cells with common observations in nearby regions of east GOA and southeast Alaska (figure 5).

#### 4. Discussion

We document the functional extirpation of *Pycnopodia* across 2700 km of coastline from Baja California, Mexico to Cape Flattery, WA, USA and severe declines across the rest of their



**Figure 4.** (a) Permutation importance of variables in MaxEnt model predictions of *Pycnopodia helianthoides* occurrence pre-outbreak (2009–2012) and current (2017–2020). (b) MaxEnt logistic output response curves showing the probability of *Pycnopodia* occurrence across the represented range of each variable pre-outbreak (2009–2012) and currently (2017–2020). (Online version in colour.)

range. Regions with warmer temperatures had faster, more severe population declines and fewer survivors. Currently, *Pycnopodia* populations show few signs of recovery, and populations in the northern half of the range may still be declining. The power of this analysis derived from the continental-scale collaboration that combined data from more than 30 contributors working across countries and sectors. If disease- and climate-driven MMEs continue to increase in frequency, this kind of multinational collaboration and data sharing will be critical to responding to these events, particularly for wide-ranging species like *Pycnopodia*. Our analysis sounds an urgent alarm for managers, policy-makers, conservationists and ocean-lovers across the Pacific Coast of North America. Without intervention, *Pycnopodia* are unlikely to recover to pre-wasting levels from Baja California to the outer coast of Washington in the near future. The persistence of the remnant populations throughout the rest of the range is also in question. Further, the widespread and potentially long-lasting loss of *Pycnopodia* may have ecosystem-level consequences, particularly for kelp forests, where this loss may erode their resilience via increased urchin grazing [10,12,13,34].

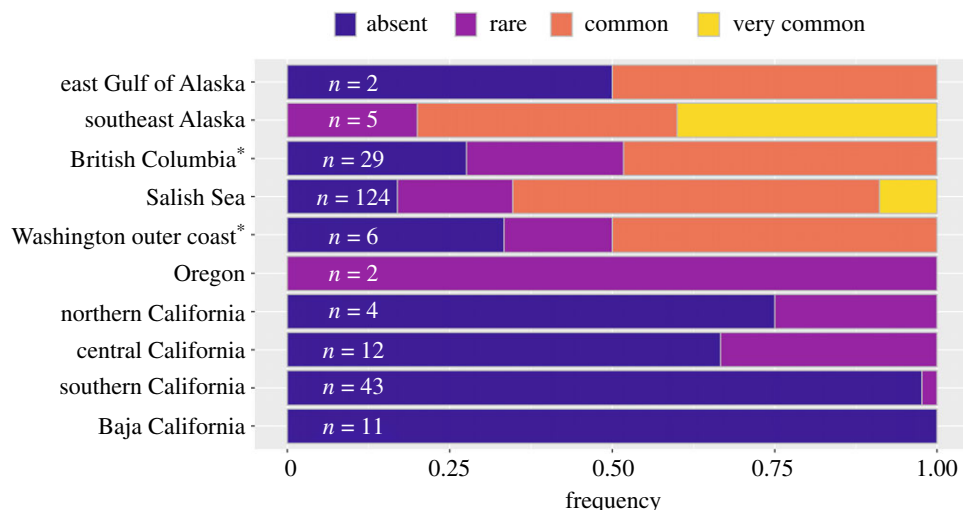
### (a) Latitudinal gradient in the speed and severity of sea star wasting disease

A strong latitudinal gradient structured the rate of regional *Pycnopodia* population crashes, suggesting that regional factors could be driving variation in disease response. Populations crashed within a few months in Baja California and southern California, 2 years in the rest of California and in 3–5 years in Oregon and northward. Populations may still be experiencing declines throughout Alaska (figure 1b), which is supported by

ongoing evidence of diseased *Pycnopodia* in many regions (P. Raimondi & K. Gavenus 2021, personal communication). The increased rate of disease spread in the southern latitudes suggests that environmental conditions either increased host susceptibility and/or disease transmission, or that genetic variability in the host or disease leads to a higher transmission rate (e.g. [35]). It will be difficult to disentangle these possibilities until a causative agent of SSWD has been identified.

The severity of SSWD-driven population declines also showed a marked latitudinal pattern. *Pycnopodia* populations appear to be approaching functional extirpation from Baja California, Mexico, to Cape Flattery, WA, USA. In our dataset, no *Pycnopodia* were observed in Baja California since 2015, none in California since 2018, and only a handful in Oregon and the Washington outer coast since 2018 (for more detail see [11]). In the Salish Sea and northward, *Pycnopodia* populations experienced severe declines but the chance of encountering an individual during a survey is greater than or equal to 32% in most of these northern regions. These remaining northward populations are patchily distributed, but occasionally harbour high densities of larger *Pycnopodia*. As with the rate of disease spread, the drivers of this variability could lie with the host, the disease or environmental interactions between the two. However, the variation in mortality, particularly within the northern regions, creates an excellent opportunity for future research.

The 4.5-fold increase in the importance of temperature in predicting *Pycnopodia* distribution post-outbreak suggests temperature could be a driving force behind the observed latitudinal patterns in the speed and severity of the disease. After SSWD, the relationship between *Pycnopodia* occurrence and temperature became strongly negative from 5 to 20°C, suggesting a



**Figure 5.** The frequency with which *Pycnopodia helianthoides* remnant populations were observed from 2017 to 2020 in each region. Surveys were aggregated into 16 km<sup>2</sup> grid cells and grid cells were only included if they contained shallow (less than 25 m) surveys from at least three different years from 2017 to 2020. *n* = the number of grid cells that fit this criterion (*n* = 0 for Aleutians and west GOA; not shown). Each grid cell was classified by the per cent of total surveys that observed *Pycnopodia*: absent = 0%, rare = less than 25%, common = less than 90% and very common  $\geq 90\%$ . Asterisk: British Columbia and Washington outer coast exclude the Salish Sea. (Online version in colour.)

disease-mediated shift in temperature associations. This is consistent with experimental studies that have shown warmer temperatures cause SSWD to progress more quickly and increase sea star mortality [16–18]. These studies documented increased individual-level impacts of SSWD over a range of 9–19°C, which mirrors the decreasing incidence of *Pycnopodia* over this range of temperatures currently.

Across systems, elevated temperatures generally increase virulence, growth rates and overwintering success of many pathogens, and heat stress in host organisms shifts energy allocation towards metabolic demands, leaving fewer resources for immunological functions [36,37]. Thus, the putative link between temperature and SSWD speed and severity is unsurprising. While we infer that temperature drove the latitudinal patterns documented here, this association is correlational and does not rule out confounding variables of temperature such as latitude, coastline complexity or nutrients (electronic supplementary material, figure S5). For instance, an alternative hypothesis for the geographic patterns seen here is that if a latitudinal gradient exists in genetic resistance to SSWD, with greater resistance in the northern half of the range than the south, then this could have created the same pattern in SSWD impacts that we infer temperature did. Additionally, this continental-scale analysis glosses over important regional-scale variability, and regional to local-scale investigations of the relationship between abiotic variables and population-level resistance to SSWD are warranted. While our analysis is strongly suggestive, it is not conclusive.

Additionally, whether climate change or warm temperatures triggered the outbreak remains unknown. Harvell *et al.* [6] showed that warm temperature anomalies explained more than a third of the variance in *Pycnopodia* outbreak timing in the Salish Sea [6]. Furthermore, Aalto *et al.* [19] modelled the initial outbreak spread dynamics and suggested that warm temperatures can trigger disease and increase mortality [19]. Conversely, several studies found that warmer ocean temperatures were not associated with SSWD outbreak timing in *Pisaster ochraceus* in Oregon and California [8,21]. Though we lack a mechanistic understanding of whether

temperature or climate change triggered the SSWD outbreak, this study adds to existing evidence that the speed and severity of SSWD are greater in warmer waters.

A recent hypothesis advanced from laboratory experiments suggests that elevated dissolved organic matter or low-dissolved oxygen triggers SSWD [15]. Because continental scale, near shore estimates of these variables do not exist at high enough spatial resolution to be incorporated into our models, we were unable to test this hypothesis. However, to our knowledge, no large-scale hypoxic event occurred prior to the SSWD epidemic. Further, large-scale hypoxic events have occurred periodically in places like Oregon [38] in recent decades with no subsequent outbreaks of SSWD. The proposed link between elevated dissolved organic matter, low-dissolved oxygen and SSWD remains a hypothesis that requires further evaluation in the field.

## (b) Supporting recovery

We found little evidence of region-wide recovery in *Pycnopodia* since 2017, and many southern regions show evidence of functional extirpation. Although we are aware of recent juvenile recruitment events in the GOA, southeast Alaska and British Columbia (K. Gavenus & P. Raimondi 2021, personal communication; A.L.G. 2017–2021, personal observation), in British Columbia juveniles appear to be failing to grow into adults, presumably because of recurring outbreaks of SSWD (A.L.G. 2017–2021, personal observation). Spatial variability in the impacts of SSWD creates variable recovery pathways for *Pycnopodia*. For example, protecting surviving adults in more northern regions will likely be critical for natural recovery. While *Pycnopodia* are not targeted in fisheries, adults may be killed as bycatch in trap and trawl fisheries, (T. Frierson 2021, personal communication) and bycatch mortality should be considered in recovery planning.

Southward, natural recovery will probably be impeded by low larval availability and Allee effects. We believe the time has come for active recovery of this IUCN-listed Critically Endangered species in the southern half of its range

[11]. Active recovery strategies include captive breeding plus reintroduction of young animals and translocations of adult animals from extant to locally extinct areas. The recent investment shows that captive breeding is feasible, but the capacity and effort required to scale breeding programmes to support recovery over large areas requires further investigation (J. Hodin 2021, personal communication). Recent work by Schiebelhut *et al.* [39] suggests a genetic underpinning for SSWD resistance, so it may be advisable to selectively breed resistant adults or to reintroduce a high number of younger, smaller and genetically diverse animals [39]. Comparatively, translocations are lower cost compared to captive rearing. However, translocation is problematic due to a lack of robust donor populations, the logistics of crossing international borders, losses of re-introduced animals to SSWD in transplanted locations, and risks of SSWD and other unintended introductions into target areas.

Closing key research gaps will increase the capacity for recovering *Pycnopodia* populations. Research into the aetiology of SSWD, how disease susceptibility varies among individuals, life stages and populations, and how environmental factors influence susceptibility and resistance are crucial. We also lack a basic understanding of important life-history information for *Pycnopodia*, including reproductive phenology, growth rates and genetic structure. Finally, while multiple studies have found that *Pycnopodia* can reduce grazing by sea urchins in subtidal kelp forests, we lack information on the variability in the magnitude and spatial scale of this interaction across *Pycnopodia*'s range [10,12,13]. Understanding the ecological, economic and social impacts of *Pycnopodia* recovery as a tool for restoring degraded kelp forest ecosystems is urgently needed given recent collapses in kelp forests within its range [34].

In times of rapidly changing ocean conditions, the plight of *Pycnopodia* highlights the importance of enhancing long-term monitoring (LTM) programmes to allow us to better monitor, maintain and strengthen the resilience of marine ecosystems. We cannot overstate the importance of well-coordinated LTM to this effort and future MME work. The 'what' and 'how' of LTM is also key. For example, if size frequency and vital rates data were available for *Pycnopodia*, size-based population models could have been constructed to help assess population growth rates and project time to quasi-extinction. We see a need to add information on organism size frequency, health, genetic diversity and ecological interactions to the ongoing LTM of population incidence and density. Additionally, citizen science, a crucial component of this study, increases the spatial scale and frequency of LTM and increases the likelihood of detecting incipient MMEs. For wide-ranging marine species, cross-boundary coordination of consistent minimum monitoring standards and data sharing pathways are critical. Overall, remarkable circumstances call for remarkable investment in and development of broad-scale LTM programmes.

## 5. Conclusion

This study documents the disease-driven extirpation of a marine predator over 2700 km of coastline. Eight years after

the SSWD outbreak began, the causative agent(s) of the disease remain unknown. This mismatch between the severity of the epidemic and the state of knowledge highlights the paucity of tools and support available to understand and respond to disease-driven MMEs, particularly in species that are neither commercially important nor charismatic. Currently, very few management, conservation or policy efforts have been developed to respond to MMEs in marine wildlife. Science, funding, management, conservation and policy often move slowly, yet if the frequency of MMEs continues to increase, institutions will need to respond much more quickly than they have to the SSWD epidemic. Increasing the capacity to monitor a wide variety of species, detect early warning signs of MMEs and rapidly research and respond to them will be increasingly important in the coming years.

**Data accessibility.** The compiled dataset and code to replicate the analyses conducted and figures created for this paper are available from the Dryad Digital Repository: <https://doi.org/10.5061/dryad.9kd51c5hg> [40].

**Authors' contributions.** S.L.H.: conceptualization, data curation, formal analysis, funding acquisition, investigation, methodology, project administration, visualization, writing-original draft, writing-review and editing; V.R.S.: formal analysis, investigation, methodology, visualization, writing-original draft, writing-review and editing; W.N.H.: conceptualization, funding acquisition, writing-original draft, writing-review and editing; A.L.G.: formal analysis, investigation, methodology, writing-original draft, writing-review and editing; S.I.L.: formal analysis, methodology, visualization, writing-original draft, writing-review and editing; R.B.-L.: methodology, writing-original draft, writing-review and editing; F.T.F.: methodology, writing-original draft, writing-review and editing; L.L.: methodology, writing-original draft, writing-review and editing; L.R.-B.: methodology, writing-original draft, writing-review and editing; A.K.S.: methodology, writing-original draft, writing-review and editing; S.A.G.: conceptualization, data curation, formal analysis, funding acquisition, investigation, methodology, project administration, supervision, visualization, writing-original draft, writing-review and editing.

All authors gave final approval for publication and agreed to be held accountable for the work performed therein.

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# 2021 Recreational Pacific Halibut Fishery To Reopen Sept. 3

August 31, 2021



The California Department of Fish and Wildlife (CDFW) has announced that the recreational Pacific halibut fishery will reopen on Friday, Sept. 3 at 12 a.m. and remain open until Nov. 15 or until the quota is reached, whichever is earlier. Based on the current estimates of catch through June, CDFW estimates that 20,964 net pounds of the 39,260 net pound quota remain for anglers to catch.

The 2021 recreational fishery was closed on June 30 due to projected attainment of the quota. Since that date, new 2021 catch information indicates that the catch volume in the early part of the season was much lower than projected. The new information prompted CDFW and its partners at National Marine Fisheries Service (NMFS), the International Pacific Halibut Commission (IPHC) and the Pacific Fishery

Management Council to evaluate the updated catch to date against the state's quota, leading to the decision to reopen the fishery.

CDFW is excited to provide this additional opportunity for anglers to participate in the 2021 recreational Pacific halibut fishery. CDFW field staff will continue to collect information from anglers at public launch ramps and charter boat landings to monitor catch through the remainder of the season. Anglers' cooperation aids CDFW field staff in monitoring the progress of the fishery to ensure the quota is not exceeded.

Anglers are always advised to check for updated information when planning a Pacific halibut fishing trip, as a season closure announcement could come at any time. Other regulatory information, including bag/possession limits and gear restrictions, can be found on CDFW's [Pacific halibut page](#). Public notification of any in-season change to regulations is made through the NMFS Pacific halibut hotline at (800) 662-9825 or CDFW's Groundfish and Pacific halibut Regulations Hotline at (831) 649-2801. Commercial Passenger Fishing Vessels are reminded that the appropriate IPHC license is required. For license application information, please visit the [IPHC website](#).

For current information about the Pacific halibut fishery, science or management, please check the following resources:

- NMFS Hotline, (800) 662-9825
- CDFW Recreational Groundfish Regulations Hotline, (831) 649-2801
- [CDFW's Pacific Halibut page](#)
- [IPHC website](#)

**California Fish and Game Commission**  
**Marine Resources Committee (MRC) Work Plan**  
**Scheduled Topics and Timeline for Items Referred to MRC**  
*Draft updated on Oct 1 for the October 14, 2021 Commission meeting*

TOPIC	CATEGORY	JUL 2021	NOV 2021	MAR 2022
<b>Planning Documents &amp; Fishery Management Plans (FMPs)</b>				
MLMA Master Plan (MP) for Fisheries – Implementation Updates	MP Implementation			
Red Abalone FMP / ARMP Update	FMP	X	X	X
California Halibut FMP	FMP		X	X
California Pink Shrimp FMP	FMP	X/R		
Market Squid Fishery Management Review	Management Review	X	X	X
Marine Protected Area Network – 2022 Decadal Management Review	Management Review	X	X	
<b>Regulations</b>				
Kelp and Algae Commercial Harvest – Bull Kelp	Commercial Kelp	X/R		
Kelp and Algae Commercial Harvest – Edible Algae (Seaweed)	Commercial Kelp			X
Kelp and Algae Commercial Harvest – <i>Postelsia</i> (sea palm)	Commercial Kelp			X/R
Use of Hydraulic Pump Gear to Take Clam: Review of Emergency Prohibition and Future Rulemaking	Recreational Take	X	X/R	
California Spiny Lobster FMP Implementing Regulations Review ( <i>added Feb 2019; timing TBD</i> )	FMP Implementing Regulations			
<b>Marine Aquaculture</b>				
Aquaculture Program Planning (State Aquaculture Action Plan)	Planning Document			X
Aquaculture State Water Bottom Leases: Existing & Future Lease Considerations	Current Leases / Planning	X	X	
Public Interest Determination Criteria for New Aquaculture Lease Applications	New Leases	X		X
Aquaculture Lease Best Management Practices (BMP) Plans (On hold, TBD)	Regulations			
<b>Emerging Management Issues</b>				
Kelp Restoration and Recovery Tracking	Kelp	X	X	
Invasive Non-native Kelp and Algae Species	Kelp / Invasive Species			
<b>Special Projects</b>				
California's Coastal Fishing Communities	MRC Special Project	X	X	X

**Key:** X = Discussion scheduled X/R = Recommendation may be developed and moved to FGC

**COMMITTEE STAFF SUMMARY FOR NOVEMBER 10, 2020 MRC***for Background Purposes Only***3. RECREATIONAL CALIFORNIA GRUNION****Today's Item****Information** ☐**Action** ☒

Discuss and consider potential committee recommendation on proposed regulations for the California grunion recreational fishery.

**Summary of Previous/Future Actions**

- |  |  |
|--|--|
| • FGC granted regulation change petition #2019-014 | Feb 21, 2020; Sacramento                         |
| • MRC discussed potential management measures      | Jul 29, 2020; MRC, Webinar/Teleconference        |
| • <b>Today's discussion</b>                        | <b>Nov 10, 2020; MRC, Webinar/Teleconference</b> |

**Background**

California grunion is known primarily for its unique spawning behavior, referred to as “grunion runs”, along southern California beaches on predictable nights of the year. Grunion may be harvested recreationally from Jun 1 through Mar 31 under current regulations.

In Feb 2020, FGC granted a petition to amend recreational take regulations for California grunion to be more conservative, and requested that DFW develop specific proposed changes upon completing an enhanced status report (ESR) for the species. At the Jul 2020 MRC meeting, DFW provided a written update (Exhibit 1), reporting that it completed the grunion ESR in May (available in the California Marine Species Portal at <https://marinespecies.wildlife.ca.gov/california-grunion/>) and, consistent with its findings, was developing potential regulation changes as requested by FGC, commencing with an online public survey and tribal outreach. Today, DFW will present specific potential regulation changes for MRC consideration and potential recommendation (Exhibit 2).

**Significant Public Comments**

The petitioner has offered to continue to support this rulemaking effort in any way possible.

**Recommendation**

**FGC staff:** Support the proposed management measures in a rulemaking as recommended by DFW under a timeline to be determined contingent upon regulatory staff capacity.

**DFW:** Advance a rulemaking to amend recreational take regulations for California grunion, to include: add a bag and possession limit of between 10 and 20 fish; and reduce the fishing season by one month, leading to a revised open season of Jul 1–Mar 31.

**Exhibits**

1. DFW written update on California grunion, received Jul 13, 2020
2. DFW presentation

**COMMITTEE STAFF SUMMARY FOR NOVEMBER 10, 2020 MRC**  
*for Background Purposes Only*

**Committee Direction/Recommendation**

The Marine Resources Committee recommends that the Commission advance a rulemaking with the proposed management measures for the California grunion recreational fishery as recommended by the California Department of Fish and Wildlife on a timeline to be determined.

**OR**

The Marine Resources Committee recommends that the Commission advance a rulemaking with the proposed management measures for the California grunion recreational fishery as recommended by the California Department of Fish and Wildlife, except \_\_\_\_\_, on a timeline to be determined.

## Memorandum

Signed Original on File  
Received September 27, 2021

Date: September 15, 2021

To: Melissa Miller-Henson, Executive Director  
Fish and Game Commission

From: Charlton H. Bonham  
Director

Subject: **Submission of Initial Statement of Reasons to Amend Sections 27.60(b) and 28.00, Title 14, California Code of Regulations, Re: California Grunion Limit and Season Changes**

The Department of Fish and Wildlife (Department) requests the Fish and Game Commission (Commission) authorize publishing notice of its intent to amend Sections 27.60(b) and 28.00 of Title 14, California Code of Regulations concerning the addition of a California Grunion (grunion) bag limit regulation and extension of the closed season. Authorization of the request to publish notice at the October 14, 2021 meeting, will allow for discussion at the December 16, 2021 meeting, and possible adoption at the February 2022 Commission meeting.

In 2019, the Commission received a petition (#2019-014) to increase restrictions on the take of grunion in the recreational fishery. The Commission granted this petition in concept at its February 2020 meeting, which began the process of reviewing recreational regulations for take of grunion and development of an Enhanced Status Report. Data provided by the initial petition and in the subsequent review of materials by the Department indicate that grunion populations have declined significantly over the past decade due to myriad factors including habitat loss, beach grooming, and fishing. The Department recommends the establishment of a bag limit and extension of the closed season to protect California grunion.

If you have any questions regarding this item, contact Dr. Craig Shuman, Marine Regional Manager at (916) 217-2370. The public notice for this rulemaking should identify Environmental Scientist, Armand Barilotti as the Department's point of contact. His contact information is (562) 342-7164 or [Armand.Barilotti@wildlife.ca.gov](mailto:Armand.Barilotti@wildlife.ca.gov).

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State of California  
Fish and Game Commission  
Initial Statement of Reasons for Regulatory Action

Amend Sections 27.60(b) and 28.00  
Title 14, California Code of Regulations (CCR)  
Re: California Grunion Limit and Season Changes

I. Date of Initial Statement of Reasons: August 18, 2021

II. Dates and Locations of Scheduled Hearings

(a) Notice Hearing

Date: October 14, 2021

Location: Sacramento

(b) Discussion Hearing

Date: December 16, 2021

Location: Sacramento

(c) Adoption Hearing

Date: February 2022

Location: Sacramento

III. Description of Regulatory Action

(a) Statement of Specific Purpose of Regulatory Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary

#### **BACKGROUND**

California grunion (*Leuresthes tenuis*, herein referred to as grunion) are a unique and iconic resource in California. They are endemic to California, only being found from central Baja California to the San Francisco Bay area. Due to their unique behavior of flopping up onto the beach to spawn, Californians for generations have gone to the beaches near midnight to watch these “grunion runs” and capture these fish. In 2019, the Fish and Game Commission (Commission) received a petition (#2019-014) to increase restrictions on the take of grunion in the recreational fishery. The Commission granted this petition in concept at its February 2020 meeting, which began the process of reviewing recreational regulations for take of grunion and writing an Enhanced Status Report. Data provided by the initial petition and in the subsequent review of materials by the Department of Fish and Wildlife (Department) have shown that the population of grunion may be declining, and that it is necessary to reduce take of grunion to protect its population.

There is no quantitative assessment of population size for grunion, and the limited data available indicate a relatively small population size when compared to other forage fish species. They are rarely caught by commercial fishers and are not caught with hook-and-line; grunion are only caught by hand when spawning on the beach in the middle of the night. The

California Recreational Fisheries Survey (CRFS) only samples fishing activities during daylight hours, so there is no long-term fishery-dependent data on catch and effort for grunion. The only available long-term data set is from the Grunion Greeters, a citizen scientist-based organization that qualitatively categorizes the abundance of grunion spawning on the beaches throughout California. Obtaining accurate quantitative estimates of grunion abundance is difficult since many grunion will make repeated trips from the water to the beach and back during a spawning run, and they only spawn in the middle of the night. A recent study (Martin et al. 2019), using data from the Grunion Greeters, has shown that the number of grunion spawning on beaches has declined significantly in the past decade. This population decline is most likely a result from a combination of environmental factors and human disturbances including habitat loss, beach grooming, fishing, sand nourishment projects, and coastal pollution (Martin et al. 2006; Martin and Adams 2020).

The Department acquired a portion of these data, including the maximum Walker scores recorded per grunion run series by the Grunion Greeters, from the twelve most frequently monitored beaches between 2004 and 2020 (Figure 1). The Walker Scale is a qualitative assessment of the abundance of spawning grunion on a beach. It is scored as follows: W0 is no spawning fish, W1 is less than 100 spawning fish at different times in one or several locations, W2 is 100 – 500 fish spawning at different times in one or several locations, W3 is hundreds of fish spawning in several locations or over a broad area, W4 is thousands of fish together for less than an hour, and W5 is fish covering the beach lasting for over an hour (Martin et al. 2019). The top beaches are: Coronado, Mission/Pacific, La Jolla, Oceanside, Doheny, Newport, Cabrillo, Topanga, Malibu, Ventura, East Beach (Santa Barbara), and Goleta. As these twelve beaches were surveyed the most consistently over time, they may more accurately show the status of the grunion population than beaches that are less frequently monitored. About a third of the monitored grunion runs from 2004-2011 had less than 100 fish. From 2012 through 2020, it was documented that at least half of the monitored runs had less than 100 grunion spawning on these same beaches. The years 2016 and 2017 documented similar runs to the mid-2000s, but from 2018-2020 the number of observed spawning grunion decreased again. It should be noted in 2020 there were very few monitored grunion runs, mostly due to beach closures and safety concerns during the COVID-19 pandemic.

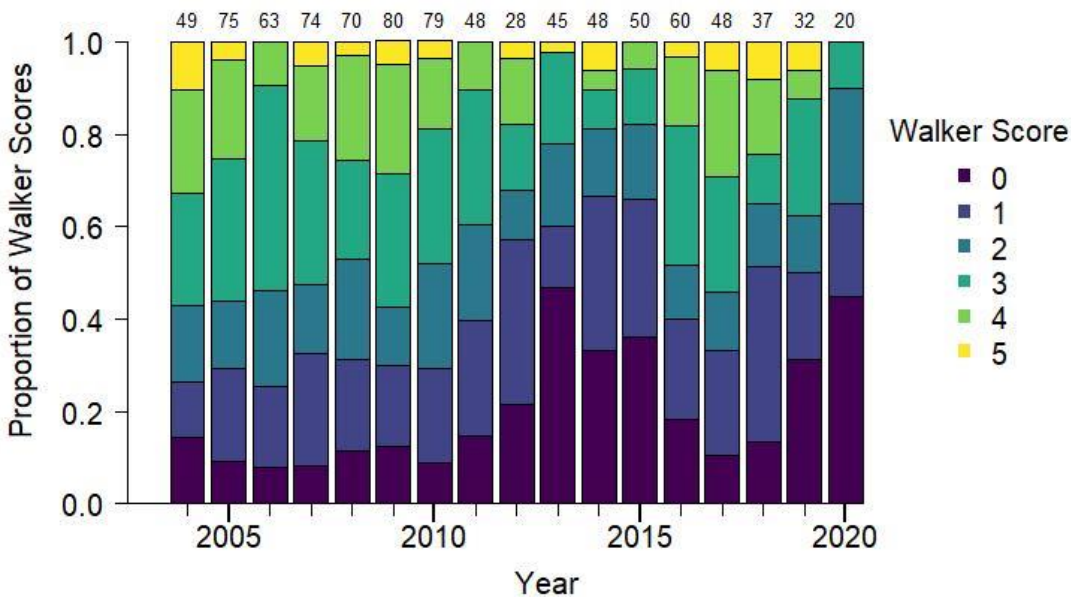


Figure 1. Proportion of Walker scores for the most surveyed beaches (n=12) by year from 2004 through 2020. The number on the top of each bar denotes the number of surveys conducted in that year. Walker score values: W0 is no spawning fish, W1 less than 100 spawning fish at different times in one or several locations, W2 is 100 – 500 fish spawning at different times in one of several locations, W3 is hundreds of fish spawning in several locations or over a broad area, W4 is thousands of fish together for less than an hour, and W5 is fish covering the beach lasting for over an hour. Years 2004-2018 data are from Martin et al. 2019, 2019-2020 Martin unpublished data, graphic and analysis by CDFW.

Grunion are primarily taken to be consumed or used as fishing bait. They are vulnerable to overexploitation because they form concentrated spawning groups along California beaches. Grunion surf the waves onto the beach and as the water recedes, females dig more than half their body into the wet sand to deposit their eggs while males wrap around them and release milt to fertilize the eggs. Grunion sometimes form dense spawning aggregations on the beach, which allows fishers the opportunity to catch tens to hundreds of them in a short period of time very easily from shore, without use of any equipment. The fishery for grunion is almost entirely recreational. There is no established commercial fishery, and a directed commercial fishery for grunion may not be started since they are a designated forage fish (Section 111, Title 14, CCR).

The Department has recently collected limited data on the amount of grunion collected by individuals. Participation can vary from just a few individuals at a beach to hundreds chasing and collecting grunion. Not surprisingly, the amount of take is dependent upon the size of the grunion run, but take over 100 fish is not uncommon. If the level of take is not reduced, the population of grunion could become depleted and unsustainable. Regulations put into place in the 1920s, which closed the season from April through June and eliminated the use of gear, helped recover stocks of grunion at that time. This season closure was relaxed in the late 1940s once stocks had rebounded.

## CURRENT REGULATIONS

The current regulations for recreational fishing state that grunion does not have a bag or possession limit (Section 27.60(b), Title 14, CCR), the fishery is open from June 1 through March 31 (Section 28.00, Title 14, CCR) and no appliances of any kind may be used to take grunion and no holes may be dug in the beach to entrap them (Section 29.00, Title 14, CCR).

## PROPOSED REGULATORY CHANGES

The proposed regulations will close the recreational fishing season from April 1 to June 30, effectively shortening the open season for recreational fishing to July 1 through March 31, and create a recreational bag and possession limit of [10 – 50] grunion.

### **Amend Section 27.60(b); Limit.**

Section 27.60(b) will be amended to exclude grunion from the list of finfish for which there is no limit. The purpose of this amendment is to allow the establishment of a bag and possession limit for the species.

### **Amend Section 28.00; Grunion, California.**

Section 28.00 will be amended to close the take of grunion from April 1 to June 30 and to establish a bag and possession limit of [10 – 50] fish. The purpose of this proposed amendment is twofold: first, to prevent take of the grunion during the peak of their spawning season (April-June), and second, to reduce the level of take to an number of fish that is useful for consumption and bait purposes, but which prevents excessive take or waste of fish. This will help ensure a more sustainable fishery, so that future generations can partake in grunion runs.

### **(b) Goals and Benefits of the Regulation**

Under the Marine Life Management Act (MLMA), it is the policy of the state to ensure the conservation, sustainable use, and restoration of California's living marine resources for the benefit of all citizens of the state (Fish and Game Code section 7050). The main goal of the proposed amendments is to protect the existing population of grunion. This will be accomplished by ensuring sustainable take of the species. Amending the regulations to establish a bag and possession limit of [10 - 50] will allow more fish to remain in the population and spawn multiple times. Increasing the seasonal closure to include June will allow grunion more opportunities to spawn uninterrupted, as human activities (e.g. chasing grunion, excessive use of flashlights, splashing in the nearshore surf zone) can halt a spawning run. These activities would be greatly reduced by closing the month of June to take, as that is during the height of their spawning period and will provide the greatest protection to their spawning activities.

Increasing the population size of grunion will benefit the residents of California because maintaining a large grunion population will ensure a sustainable fishery that all can participate in and enjoy in the future. These runs are culturally important and increase interest and involvement in the outdoors. Increasing the population size of grunion will also have positive impacts on the California marine ecosystem, since they are a key forage fish for an array of marine life including California halibut, kelp bass, California corbina, white seabass, and other

prized game fishes.

(c) Authority and Reference Sections from Fish and Game Code for Regulation

Section 27.60

Authority cited: Sections 200, 205, 265, 7071 and 8587.1, Fish and Game Code.

Reference: Sections 205, 255, 7071, 7120 and 8587.1, Fish and Game Code.

Section 28.00

Authority cited: Sections 200, 205, 219, 265 and 275, Fish and Game Code.

Reference: Sections 200, 205, 255, 265, 270 and 275, Fish and Game Code.

(d) Specific Technology or Equipment Required by Regulatory Change

None.

(e) Identification of Reports or Documents Supporting Regulation Change

Martin, K. L., Pierce, E. A., Quach, V. V., & Studer, M. 2019. Population trends of beach-spawning California grunion *Leuresthes tenuis* monitored by citizen scientists. ICES Journal of Marine Science, 77(6): 2226-2233.

Martin, K. L., 2019. Petition #2019-014 to the California Fish and Game Commission for Regulation Change: Increase Restrictions on California Grunion.

(f) Identification of Reports or Documents Providing Background Information:

Martin, K. L., & Adams, L. C. 2020. Effects of repeated sand replenishment projects on runs of a beach-spawning fish, the California grunion. Journal of Marine Science and Engineering, 8(3): 178.

(g) Public Discussions of Proposed Regulations Prior to Notice Publication

In June of 2020, the Department contacted 95 California Native American Tribes via letter regarding possible regulation changes for grunion; six Tribes responded. Half of the Tribes that responded did not traditionally fish for grunion and deferred to Tribes that fished for them. The other half were in favor of regulations that protected grunion. One phone discussion was held on June 25, 2020 with a representative from the Rincon Tribe. They requested that Tribes be given the opportunity to apply for special permits that would allow for the harvest beyond limit regulations to practice their ceremonies. Due to the delayed timeline of this rulemaking, staff are currently working on a re-notification letter which will be sent out August 2021.

The Department posted a grunion fishery questionnaire on its website in July 2020 to gather information from those who participate in the fishery. As of August 16, 2021, only 23 questionnaires have been completed. All but three respondents reported that their mean take was less than 50 grunion per night, and most fish for grunion in March, June and July. A vast majority of respondents fish for grunion two or more times per year. When asked about an appropriate limit, 50 grunion was the most common answer. Respondents were mixed on the need for an additional seasonal closure with close to 40% opposing any additional seasonal closures.

The Department discussed grunion and possible regulation changes at the Marine Resources Committee meeting on November 10, 2020. They concluded that the Commission should review potential regulation amendments for grunion, including a bag and possession limit for grunion and an additional month closure for the recreational fishery.

No other public meetings were held prior to the notice publication. The 45-day comment period provides adequate time for review of the proposed amendments.

#### IV. Description of Reasonable Alternatives to Regulatory Action

##### (a) Alternatives to Regulation Change

Shorten the existing open season from June 1 through March 31 (Section 28.00, Title 14, CCR ) by two additional months.

Adding an additional two months of seasonal closure while keeping the unrestricted bag and possession limit was considered but rejected. While this alternative would enhance certain aspects of protection for grunion, it would only allow fishers two months of access to the fishery as grunion typically spawn from March through August. This limited season would likely concentrate the number of fishers, and when coupled with unrestricted take, could negatively impact the grunion population leading to an unsustainable fishery. Take levels have been observed to be correlated with the size of spawning runs with fishers often taking hundreds of grunion during large runs. We do not know enough about grunion population dynamics to discount the possibility that these large runs are central to their overall population success. Since these large runs are unpredictable in time and space, it makes more sense to have a bag limit throughout the open season for grunion.

Shorten the open season from June 1 through March 31 (Section 28.00, Title 14, CCR ) to September 1 through March 31 north of Point Conception.

This alternative was also brought forward by the initial petition #2019-014, and was suggested to provide extra protection for grunion that occur north of Point Conception. This is based on a few surveys that documented spawning activities in this area during recent years. Available data suggest the proposed statewide regulation changes would adequately protect grunion in all regions, and there is no need to make a more complex regulation.

##### (b) No Change Alternative

If proposed amendments are not adopted, the grunion population may continue to decline and the fishery may not be sustainable.

##### (c) Description of Reasonable Alternatives that Would Lessen Adverse Impact on Small Business

None.

#### V. Mitigation Measures Required by Regulatory Action

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures are needed.

## VI. Impact of Regulatory Action

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

### (a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. No equipment may be used in the take of grunion (Section 29.00 Title 14, CCR ), so the new amendments to regulations will not result in the loss of revenue for tackle shops or other small businesses. The new amendments to regulations might result in a slight increase in sales for tackle and bait stores since some fishers might need to purchase bait or lures to replace grunion as a source of bait during the month of June.

### (b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment

The Commission does not anticipate any impacts on the creation or elimination of jobs, the creation of new business, the elimination of existing businesses or the expansion of businesses in California. The Commission does not anticipate any benefits to the health and welfare of California residents or worker safety.

The new regulations will benefit the environment by increasing the abundance of grunion. Grunion and their eggs are prey for many game fishes, birds, and other marine organisms, especially when they congregate for their spawning runs. Thus, increasing the grunion population should have positive impacts on the environment.

### (c) Cost Impacts on a Representative Private Person or Business

While many recreational grunion fishers (representative private persons) will not incur any change in costs, those who wish to substitute the bait uses of grunion that may no longer be harvested in June with another source of bait would incur new costs. The discretionary cost to fishers to purchase alternative forms of bait or artificial lures from tackle stores to replace grunion constitute the initial costs for an individual. A typical lure that imitates a grunion costs up to \$20.00, while frozen bait costs much less. Such lures generally last several years, so that the cost would be a one-time cost and not an annual cost. Bait and fishing tackle stores (representative businesses) would incur no new costs, but they would be the recipients of individual grunion fisher's expenditures on lures or bait.

### (d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State

None.

### (e) Nondiscretionary Costs/Savings to Local Agencies

None.

(f) Programs Mandated on Local Agencies or School Districts

None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code

None.

(h) Effect on Housing Costs

None.

## VII. Economic Impact Assessment

(a) Effects of the Regulation on the Creation or Elimination of Jobs Within the State

There is no perceived effect on the creation or elimination of jobs within the state by amending regulations for grunion because there is no directed commercial fishery for grunion. Additionally, no equipment may be used in the recreational capture of grunion, so there should be no loss of income for businesses selling fishing gear and no creation or loss of jobs resulting from these regulations.

(b) Effects of the Regulation on the Creation of New Businesses or the Elimination of Existing Businesses Within the State

There is no anticipated creation of new businesses or elimination of existing business within California due to the proposed amendment to the regulations for grunion. No equipment may be used in the capture of grunion, so sales will not necessarily change for existing businesses. The proposed shortening of the season may prompt some grunion fishers to purchase alternatives to grunion for bait use during the closure period. This is anticipated to result in small increases in sales for bait and tackle stores that would be absorbed by existing retail capacities.

(c) Effects of the Regulation on the Expansion of Businesses Currently Doing Business Within the State

The effects of the regulations should have little impact on the expansion of businesses currently doing business within the state. The new amendments to regulations might result in a slight increase in sales for bait and tackle stores since some fishers might need to replace grunion as a source of bait. These potential sales are expected to be minimal, so expansion of businesses within the state should not be affected by adoption of the proposed regulations.

(d) Benefits of the Regulation to the Health and Welfare of California Residents

These regulations are designed to reduce the take of grunion, which should not have direct, immediate benefits for the health and welfare of California residents. There could be some indirect health and welfare benefits as a result of these regulations. For example, increased populations of grunion will provide more opportunities to observe their unique spawning

behavior, which some may deem an enjoyable outdoor activity.

(e) Benefits of the Regulation to Worker Safety

These regulations will have no benefits for worker safety. The regulations are designed to reduce the take of grunion, which has no impact on worker safety, since there is no active commercial fishery for grunion.

(f) Benefits of the Regulation to the State's Environment

Regulations supporting the recovery and increase of grunion populations will benefit the State's environment. Grunion are low in the food web and are prey for many marine game fishes (e.g. California halibut, kelp bass, white seabass), marine birds (great blue heron, snowy egret, California least tern), and marine mammals (California sea lion, harbor seal, common bottlenose dolphin). In addition, shore birds and some surf fishes eat their eggs. By increasing the population of grunion, other species in the environment should benefit, thus improving the State's environment.

(g) Other Benefits of the Regulation

Grunion are endemic and culturally significant to Californian. Many non-consumptive users go to California's beaches at night to observe their spawning behavior. The proposed regulations will help protect and increase the grunion population will allow the continuation of current and future generations of Californians to observe and catch these fish.

## Informative Digest/Policy Statement Overview

Under current regulations grunion does not have a bag or possession limit (Section 27.60(b), Title 14, CCR), and the grunion fishery is open from June 1 through March 31 (Section 28.00, Title 14, CCR). Grunion may only be taken recreationally from June 1 through March 31 (Fish and Game Code section 8381) and no directed commercial fishery may be developed for grunion (Section 111, Title 14, CCR).

The proposed regulatory changes will establish a bag and possession limit of [10 – 50] grunion for recreational fishers and close the month of June to take of grunion, shortening the open season by one month, from July 1 through March 31, for recreational fishing.

### **Benefit of the Regulations:**

The proposed regulatory action is designed to address concerns over the health and long-term sustainability of the grunion fishery. Grunion are an endemic and culturally iconic species known for their spawning behavior, where they “run” onto beaches. Recent data have shown that the abundance of grunion has declined over the past decade. Past regulations enabled recovery of the grunion population, and the proposed regulations should likewise help to protect and recover the grunion population, thereby benefitting the sustainability of the fishery. These proposed regulations will further benefit future Californians by preserving grunion populations for all to observe and enjoy.

### **Consistency and Compatibility with Existing Regulations:**

The proposed regulations are neither inconsistent nor incompatible with existing state regulations. Section 20, article IV, of the California Constitution specifies that the Legislature may delegate to the Fish and Game Commission such powers relating to the protection and propagation of fish and game as the Legislature sees fit. The Commission has reviewed its own regulations and finds that the proposed regulations are neither inconsistent nor incompatible with existing state regulations. The Commission has searched the California Code of Regulations and finds no other state agency regulations pertaining to the commercial take of grunion.

## Proposed Regulatory Language

Section 27.60(b), title 14, CCR, is amended to read:

**§27.60 Limit**

...*[There is no change to subdivision (a)]*

(b) There is no limit on the following species: anchovy, ~~grunion~~, jacksmelt, topsmelt, Pacific butterfish (pompano), queenfish, sanddabs, skipjack, jack mackerel, Pacific mackerel, Pacific staghorn sculpin, round herring, Pacific sardine, petrale sole and starry flounder.

...*[There is no change to subdivision (c)]*

Note: Authority cited: Sections 200, 205, 265, 7071 and 8587.1, Fish and Game Code.

Reference: Sections 205, 255, 265, 7071, 7120, and 8587.1 Fish and Game Code.

Section 28.00, title 14, CCR, is amended to read:

**§28.00. Grunion, California.** ~~May be taken June 1 through March 31.~~

(a) It shall be unlawful to take grunion from April 1 through June 30.

(b) Limit: [10-50].

Note: Authority cited: Sections 200, 205, 219, 265 and 275, Fish and Game Code.

Reference: Sections 200, 205, 255, 265, 270, and 275, Fish and Game Code.

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**ECONOMIC IMPACT STATEMENT**

DEPARTMENT NAME <b>Fish and Game Commission</b>	CONTACT PERSON <b>Margaret.Duncan</b>	EMAIL ADDRESS <b>@wildlife.ca.gov</b>	TELEPHONE NUMBER <b>916-653-4899</b>
DESCRIPTIVE TITLE FROM NOTICE REGISTER OR FORM 400 <b>Amend Sections 27.60(b) and 28.0, Title 14, CCR, Re: California Grunion Limit and Season Changes</b>			NOTICE FILE NUMBER <b>Z</b>

**A. ESTIMATED PRIVATE SECTOR COST IMPACTS** *Include calculations and assumptions in the rulemaking record.*

1. Check the appropriate box(es) below to indicate whether this regulation:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> a. Impacts business and/or employees | <input type="checkbox"/> e. Imposes reporting requirements              |
| <input checked="" type="checkbox"/> b. Impacts small businesses          | <input type="checkbox"/> f. Imposes prescriptive instead of performance |
| <input type="checkbox"/> c. Impacts jobs or occupations                  | <input checked="" type="checkbox"/> g. Impacts individuals              |
| <input type="checkbox"/> d. Impacts California competitiveness           | <input type="checkbox"/> h. None of the above (Explain below):          |

*If any box in Items 1 a through g is checked, complete this Economic Impact Statement.**If box in Item 1.h. is checked, complete the Fiscal Impact Statement as appropriate.*2. The **Fish and Game Commission** estimates that the economic impact of this regulation (which includes the fiscal impact) is:  
(Agency/Department)

- ☒ Below \$10 million
- ☐ Between \$10 and \$25 million
- ☐ Between \$25 and \$50 million
- ☐ Over \$50 million *[If the economic impact is over \$50 million, agencies are required to submit a [Standardized Regulatory Impact Assessment](#) as specified in Government Code Section 11346.3(c)]*

3. Enter the total number of businesses impacted: **100**Describe the types of businesses (Include nonprofits): **Bait and Fishing Tackle Stores**Enter the number or percentage of total businesses impacted that are small businesses: **~80%**4. Enter the number of businesses that will be created: **0** eliminated: **0**Explain: **Minor sales impacts are anticipated to be absorbed by the existing numbers of businesses.**5. Indicate the geographic extent of impacts: ☐ Statewide  
☒ Local or regional (List areas): **Marine coastal areas where grunion run**6. Enter the number of jobs created: **0** and eliminated: **0**Describe the types of jobs or occupations impacted: **N/A; Small increases in bait or artificial lure sales at fishing tackle stores could be a result of the proposed regulation, however such increases in product sales are not expected to require more or less staff.**7. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here? ☐ YES ☒ NOIf YES, explain briefly: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

DRAFT DOCUMENT

**ECONOMIC IMPACT STATEMENT (CONTINUED)****B. ESTIMATED COSTS** *Include calculations and assumptions in the rulemaking record.*

1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime? \$ 20,000
- a. Initial costs for a small business: \$ 0 Annual ongoing costs: \$ 0 Years: 1
- b. Initial costs for a typical business: \$ 0 Annual ongoing costs: \$ 0 Years: 1
- c. Initial costs for an individual: \$ 20 Annual ongoing costs: \$ 0 Years: 1
- d. Describe other economic costs that may occur: An estimated 1,000 grunion fishers, who use grunion as live or dead bait, may purchase an artificial lure (@\$20 each) to cover their bait needs during the closure month of June: 1,000 x \$20 = \$20,000
2. If multiple industries are impacted, enter the share of total costs for each industry: N/A - Sport fishing industry is the only industry impacted.
3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements. *Include the dollar costs to do programming, record keeping, reporting, and other paperwork, whether or not the paperwork must be submitted.* \$ N/A
4. Will this regulation directly impact housing costs? ☐ YES ☒ NO  
If YES, enter the annual dollar cost per housing unit: \$ \_\_\_\_\_  
Number of units: \_\_\_\_\_
5. Are there comparable Federal regulations? ☐ YES ☒ NO  
Explain the need for State regulation given the existence or absence of Federal regulations: This recreational fishery is within State waters.
- Enter any additional costs to businesses and/or individuals that may be due to State - Federal differences: \$ 0

**C. ESTIMATED BENEFITS** *Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. Briefly summarize the benefits of the regulation, which may include among others, the health and welfare of California residents, worker safety and the State's environment: Health & welfare of California residents may benefit from the management of California grunion. Worker safety not affected. Benefits to the State's environment are anticipated through the management of California grunion, a forage fish that supports an array of marine life.
2. Are the benefits the result of: ☐ specific statutory requirements, or ☒ goals developed by the agency based on broad statutory authority?  
Explain: FGC code section 200 provides the "Commission's Power To Regulate Taking of Fish & Game"
3. What are the total statewide benefits from this regulation over its lifetime? \$ 20,000+ecosystem benefit:
4. Briefly describe any expansion of businesses currently doing business within the State of California that would result from this regulation: No impact on the expansion of businesses is anticipated.

**D. ALTERNATIVES TO THE REGULATION** *Include calculations and assumptions in the rulemaking record. Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not: ALT 1: Shorten the open season from June 1 to March 31. ALT 2: Reduce season length to September 1 through March 31 north of Point Conception. See Addendum for more detail.

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

DRAFT DOCUMENT

**ECONOMIC IMPACT STATEMENT (CONTINUED)**

2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:

Regulation: Benefit: \$ 20,000 Cost: \$ 20,000Alternative 1: Benefit: \$ 20,000 Cost: \$ 20,000Alternative 2: Benefit: \$ 20,000 Cost: \$ 20,000

3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives: The \$20,000 benefits = Estimated retail bait & tackle revenue, not including the difficult-to-monetize benefits of grunion conservation that could be influenced by unknown contingencies.

4. Rulemaking law requires agencies to consider performance standards as an alternative, if a regulation mandates the use of specific technologies or equipment, or prescribes specific actions or procedures. Were performance standards considered to lower compliance costs? ☐ YES ☒ NO

Explain: The grunion fishery does not allow the use of equipment so no prescriptive changes to specific technologies or equipment were considered. It is regulated by season length, which is the most effective manner to regulate take.

**E. MAJOR REGULATIONS** *Include calculations and assumptions in the rulemaking record.*

***California Environmental Protection Agency (Cal/EPA) boards, offices and departments are required to submit the following (per Health and Safety Code section 57005). Otherwise, skip to E4.***

1. Will the estimated costs of this regulation to California business enterprises **exceed \$10 million**? ☐ YES ☐ NO

***If YES, complete E2. and E3***

***If NO, skip to E4***

2. Briefly describe each alternative, or combination of alternatives, for which a cost-effectiveness analysis was performed:

Alternative 1: \_\_\_\_\_

Alternative 2: \_\_\_\_\_

*(Attach additional pages for other alternatives)*

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

Regulation: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

Alternative 1: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

Alternative 2: Total Cost \$ \_\_\_\_\_ Cost-effectiveness ratio: \$ \_\_\_\_\_

4. Will the regulation subject to OAL review have an estimated economic impact to business enterprises and individuals located in or doing business in California exceeding \$50 million in any 12-month period between the date the major regulation is estimated to be filed with the Secretary of State through 12 months after the major regulation is estimated to be fully implemented?

☐ YES ☒ NO

*If YES, agencies are required to submit a Standardized Regulatory Impact Assessment (SRIA) as specified in Government Code Section 11346.3(c) and to include the SRIA in the Initial Statement of Reasons.*

5. Briefly describe the following:

The increase or decrease of investment in the State: No effect on the level of investment in the State.

The incentive for innovation in products, materials or processes: No effect on the level of innovation in products, materials, or processes.

The benefits of the regulations, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the state's environment and quality of life, among any other benefits identified by the agency: Benefits to the State's environment with the management of California grunion, a forage fish that supports an array of marine life.

STATE OF CALIFORNIA — DEPARTMENT OF FINANCE  
**ECONOMIC AND FISCAL IMPACT STATEMENT**  
**(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

## FISCAL IMPACT STATEMENT

**A. FISCAL EFFECT ON LOCAL GOVERNMENT** *Indicate appropriate boxes 1 through 6 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

- ☐ 1. Additional expenditures in the current State Fiscal Year which are reimbursable by the State. (Approximate)  
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ \_\_\_\_\_

- ☐ a. Funding provided in \_\_\_\_\_

Budget Act of \_\_\_\_\_ or Chapter \_\_\_\_\_, Statutes of \_\_\_\_\_

- ☐ b. Funding will be requested in the Governor's Budget Act of \_\_\_\_\_

Fiscal Year: \_\_\_\_\_

- ☐ 2. Additional expenditures in the current State Fiscal Year which are NOT reimbursable by the State. (Approximate)  
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ \_\_\_\_\_

*Check reason(s) this regulation is not reimbursable and provide the appropriate information:*

- ☐ a. Implements the Federal mandate contained in \_\_\_\_\_

- ☐ b. Implements the court mandate set forth by the \_\_\_\_\_ Court.

Case of: \_\_\_\_\_ vs. \_\_\_\_\_

- ☐ c. Implements a mandate of the people of this State expressed in their approval of Proposition No. \_\_\_\_\_

Date of Election: \_\_\_\_\_

- ☐ d. Issued only in response to a specific request from affected local entity(s).

Local entity(s) affected: \_\_\_\_\_  
\_\_\_\_\_

- ☐ e. Will be fully financed from the fees, revenue, etc. from: \_\_\_\_\_

Authorized by Section: \_\_\_\_\_ of the \_\_\_\_\_ Code;

- ☐ f. Provides for savings to each affected unit of local government which will, at a minimum, offset any additional costs to each;

- ☐ g. Creates, eliminates, or changes the penalty for a new crime or infraction contained in \_\_\_\_\_

- ☐ 3. Annual Savings. (approximate)

\$ \_\_\_\_\_

- ☐ 4. No additional costs or savings. This regulation makes only technical, non-substantive or clarifying changes to current law regulations.

- ☒ 5. No fiscal impact exists. This regulation does not affect any local entity or program.

- ☐ 6. Other. Explain \_\_\_\_\_  
\_\_\_\_\_

**ECONOMIC AND FISCAL IMPACT STATEMENT  
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

**FISCAL IMPACT STATEMENT (CONTINUED)****B. FISCAL EFFECT ON STATE GOVERNMENT** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*☐ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

*It is anticipated that State agencies will:*☐ a. Absorb these additional costs within their existing budgets and resources.☐ b. Increase the currently authorized budget level for the \_\_\_\_\_ Fiscal Year☐ 2. Savings in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

☒ 3. No fiscal impact exists. This regulation does not affect any State agency or program.☐ 4. Other. Explain \_\_\_\_\_  
\_\_\_\_\_**C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*☐ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

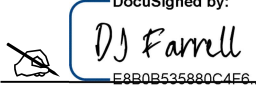
\$ \_\_\_\_\_

☐ 2. Savings in the current State Fiscal Year. (Approximate)

\$ \_\_\_\_\_

☒ 3. No fiscal impact exists. This regulation does not affect any federally funded State agency or program.☐ 4. Other. Explain \_\_\_\_\_  
\_\_\_\_\_

FISCAL OFFICER SIGNATURE

  
E8B0B535880C4E6

DATE

9/15/2021

*The signature attests that the agency has completed the STD. 399 according to the instructions in SAM sections 6601-6616, and understands the impacts of the proposed rulemaking. State boards, offices, or departments not under an Agency Secretary must have the form signed by the highest ranking official in the organization.*

AGENCY SECRETARY

DATE

*Finance approval and signature is required when SAM sections 6601-6616 require completion of Fiscal Impact Statement in the STD. 399.*

DEPARTMENT OF FINANCE PROGRAM BUDGET MANAGER

DATE





## Notice: California Grunion Limit and Season Changes



Photo Credit: CDFW

14 October 2021

*Presented to:*

**Fish and Game Commission**

*Presented by:*

**Armand Barilotti**

**Environmental Scientist  
CDFW Marine Region**



# California Grunion

- Scientific name: *Leuresthes tenuis* (family *Atherinopsidae*)
- Range: Bahía Magdalena, México to Tomales Bay, CA.
- Habitat: nearshore coastal waters and bays.
- Size/Age: up to 8 inches (19 cm) & 4 years old.
- Spawning season: February - September, peak April - June
- Reproduction: beach themselves at night during the 4 high tides following a full or new moon.
- Only caught by hand, primarily for food or bait.
- Culturally significant to Native Americans and Californians.
- Very limited fisheries data.

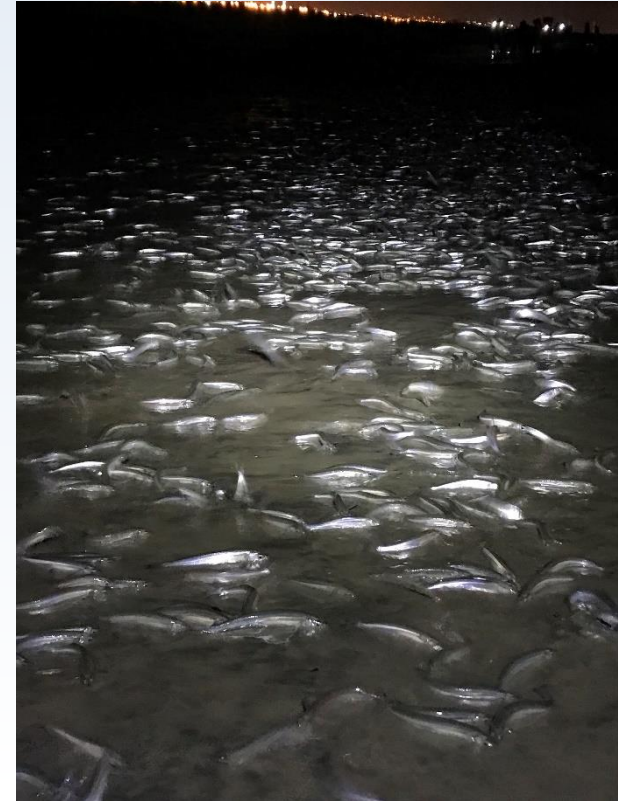


Photo Credit A Barilotti, CDFW



# Grunion Regulation Timeline

- Petition #2019-014
  - Concerns about declining grunion population
  - Granted concept in February 2020
- Enhanced Status Report
  - Published October 26, 2020
- Marine Resources Committee
  - November 10, 2020
- Notice Hearing (Today)
- Discussion Hearing
  - December 16, 2021
- Adoption Hearing
  - February 2022

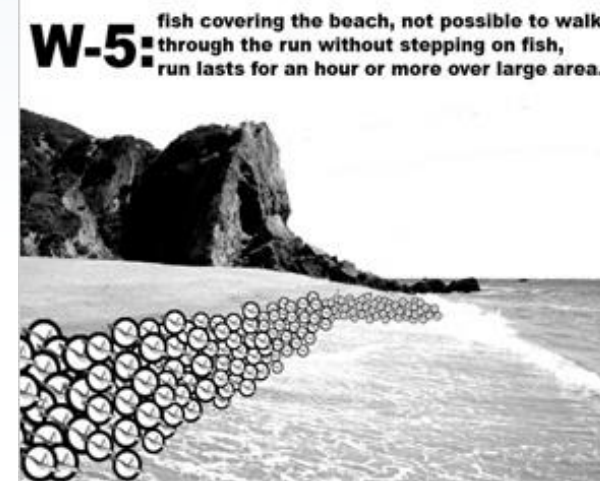
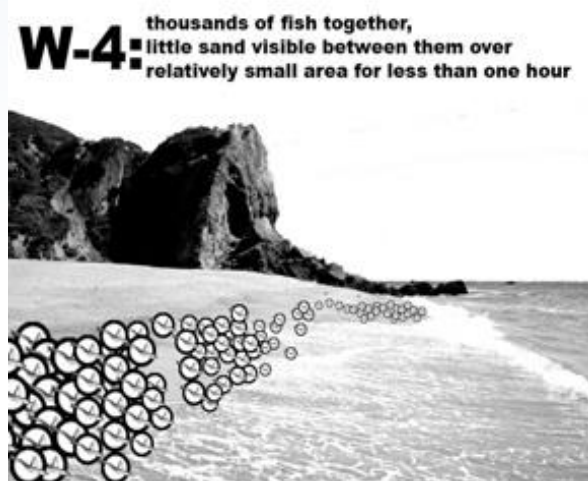
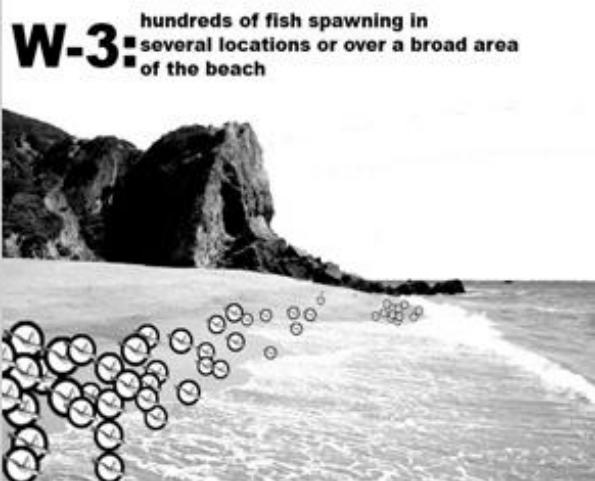
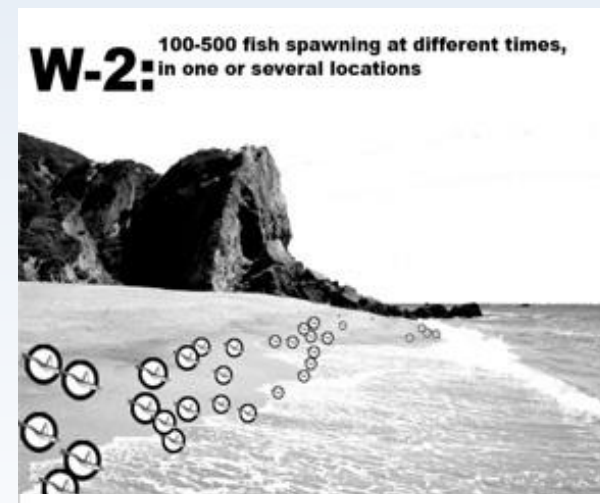
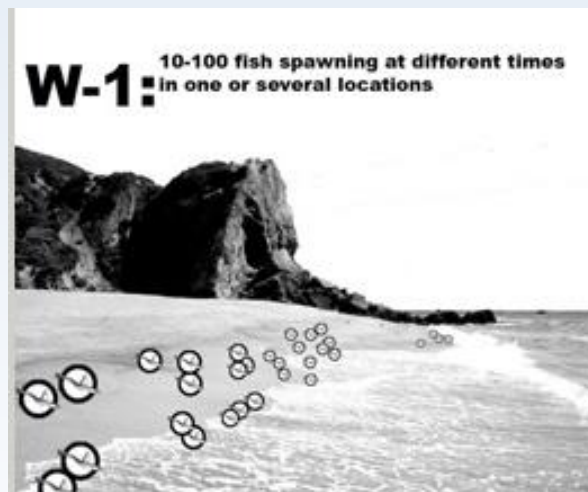


Photo Credit M. Haggerty, CDFW



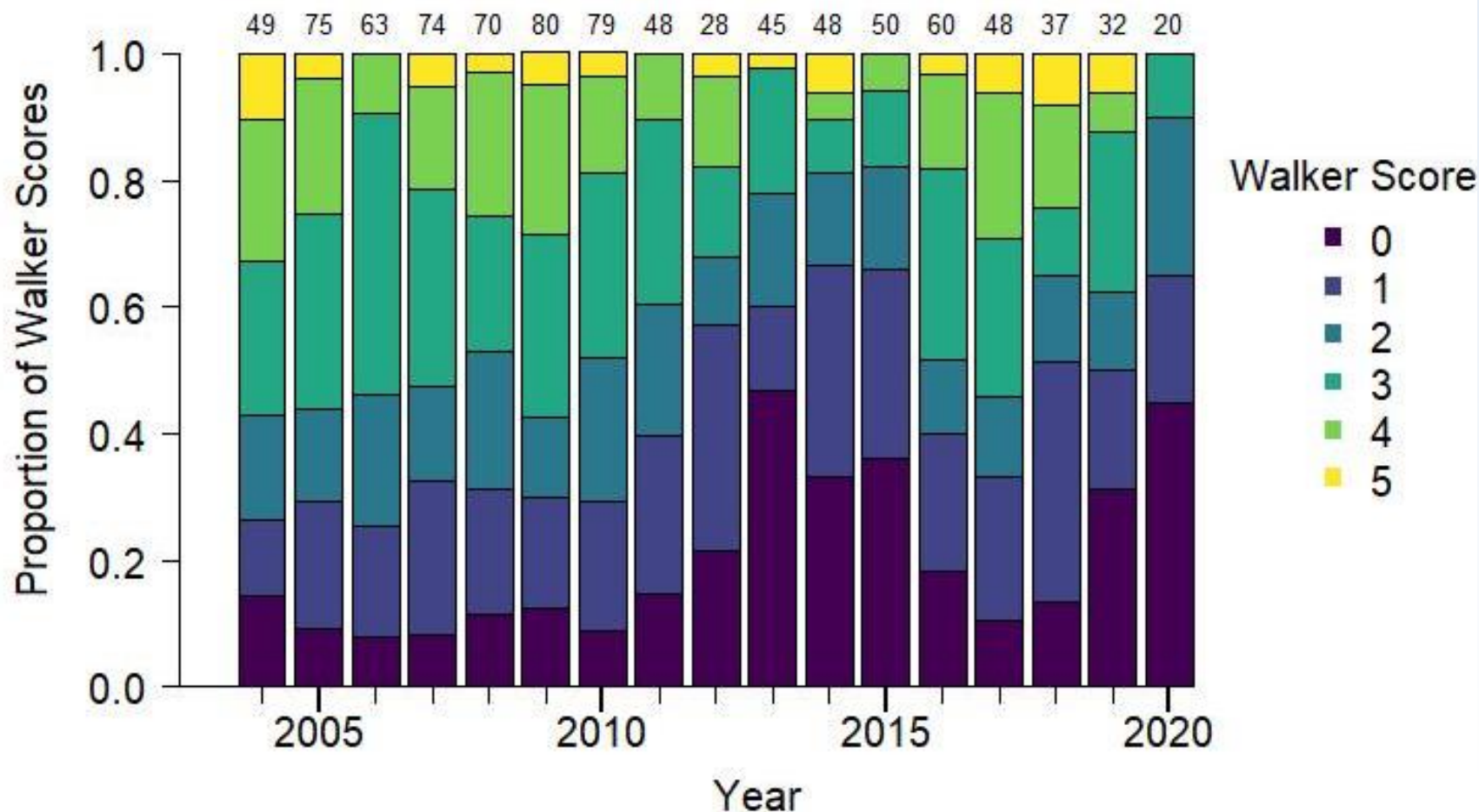
# Monitoring Grunion Abundance

- Grunion Greeters (citizen scientists) monitor grunion population in California.
- Walker Scale: qualitative metric used to estimate spawning grunion abundance.





# Declining Grunion Abundance 2004 - 2020



Source Years 2004-2018 data are from Martin et al. 2019, 2019-2020 Martin unpublished data, graphic and analysis by CDFW

- Causes for decline: habitat loss, beach grooming, harvesting, sand nourishment projects, pollution, effects from climate change, etc.



# Regulations for Recreational Fishery

- Past Regulations
  - 1927
    - Seasonal closure (April through June) &
    - Prohibition on use of equipment
  - 1947
    - June open
- Current Regulations
  - No bag or possession limit
  - Take by hand, no gear or dug holes are permitted.
  - Season closed from April 1 – May 31.



Photo Credit K. Walker, CDFW





# Tribal and Public Outreach

- Notification of the Californian Native American Tribes
  - Letters mailed to tribal leaders in June 2020 & August 2021.
- Grunion fishery questionnaire
  - Only 23 participants.
  - Most take 50 grunion or less.
  - Limit of 50 most common answer.
  - 40% oppose any additional closure.
- Grunion Fishery Surveys
  - Mean take 48 grunion per person,
    - range (0 – 660 per person)



Photo Credit CDFW



# Proposed Regulations

- Establish possession and bag limit for grunion from 10 - 50 fish
  - CDFW recommends a 30 grunion limit.
- Add June to fishing closure statewide
  - Proposed closed season April 1 – June 30.



Source B. Walker, 1952



Photo Credit A Barilotti, CDFW

# Thank You

**Armand Barilotti**

Environmental Scientist

Southern California Fisheries Research and Management Project

Department of Fish and Wildlife, Marine Region

4665 Lampson Avenue, Suite C

Los Alamitos, CA 90720

Phone: (562) 342-7164

Email: [Armand.Barilotti@Wildlife.ca.gov](mailto:Armand.Barilotti@Wildlife.ca.gov)

## Protecting Surfing fish such as Grunion

John Phibbs [REDACTED]

Sat 09/18/2021 01:40 PM

To: FGC <FGC@fgc.ca.gov>

**WARNING:** This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Dear sirs,

I'm writing to you about improving our management of Grunion fish and other species that live or use the tidal habitat.

I wish that the FGC would take up the following recommendations:

Closed season for harvesting Grunion (April - June)

Maximum limit of 5

Educational outreach program.

Thank you,  
John Phibbs

[REDACTED]

[REDACTED]

[REDACTED]

For background only  
STAFF SUMMARY FOR AUGUST 18, 2021

## 18. EXPERIMENTAL FISHING PERMIT PROGRAM, PHASE II

### Today's Item

Information ☐

Action ☒

Consider authorizing publication of notice of intent to establish the Experimental Fishing Permit (EFP) Program, Phase II.

### Summary of Previous/Future Actions

- |  |   |
|--|---|
| • FGC approved two-phase rulemaking approach | Jun 12-13, 2019; Redding                    |
| • MRC received overview of Phase II          | Nov 5, 2019; MRC, Sacramento                |
| • FGC adopted Phase I regulations            | Mar 23, 2020; Teleconference                |
| • MRC received update on Phase II            | Apr 29, 2020; MRC, Webinar/Teleconference   |
| • DFW update and MRC recommendation          | Jul 29, 2020; MRC, Webinar/Teleconference   |
| • <b>Today's notice hearing</b>              | <b>Aug 18, 2021; Webinar/Teleconference</b> |
| • Discussion hearing                         | Oct 13-14, 2021; Sacramento                 |
| • Adoption hearing                           | Dec 15-16, 2021; Sacramento                 |

### Background

The California Fisheries Innovation Act of 2018 (AB 1573; Chapter 477) gave FGC the authority to approve EFPs for commercial or recreational marine fishing activities that would otherwise be prohibited, upon adopting regulations establishing an EFP program. Permits must be for one or more of the following purposes: research, education, limited testing, data collection, compensation fishing, conservation engineering, or exploratory fishing.

Prior to 2019, FGC had authority to approve experimental gear permits for limited gear research purposes under California Fish and Game Code Section 8606. AB 1573 repealed Section 8606 and, with it, FGC's authority to approve experimental gear permits. Lacking other authorities, FGC has been unable to approve any new experimental permits since 2018.

In 2019, FGC approved a two-phased rulemaking approach to implementing an EFP program. Phase I focused on authorizing EFPs to continue experimental brown box crab fishing as previously authorized under experimental gear permits while a larger, programmatic rulemaking could be developed to build out the Marine Fisheries EFP Program under Phase II (see Exhibit 1 for background).

Due to the complexity of developing the new program, coupled with regulatory staff constraints, developing the Phase II program has taken longer than expected. It is important to move this rulemaking forward in order to restore FGC's ability to approve experimental permits after a nearly two-year interruption.

### Proposed Regulations

The proposed regulations for the Marine Fisheries EFP Program will establish a comprehensive regulatory framework for experimental marine fishing activities pursuant to Fish

For background only  
STAFF SUMMARY FOR AUGUST 18, 2021

and Game Code Section 1022. The following sections and subsections, are recommended to be amended, added, or repealed:

- EFP Program implementation
  - Add Section 91; Marine Fisheries EFP Program. This section will define an expeditious process for application, DFW review, public comment, FGC action, and DFW issuance and ongoing administration of EFPs, establish permit fees, and provide a process for appeal and reconsideration for any EFP that is revoked, suspended, canceled, or denied renewal by DFW. See Exhibit 2 for a detailed overview of the proposed regulatory section.
  - Amend Section 90 to establish a sunset date for the box crab EFP program.
  - Amend Section 704 to add Marine Fisheries EFP Program fees and form and other minor amendments.
- Changes for consistency with Fish and Game Code Section 1022
  - Amend subsection 120.1(c) related to experimental gear permits for pink shrimp trawling bycatch reduction devices. Under the proposed regulations, experimental fishing activities will fall under the purview of the Marine Fisheries EFP Program.
  - Amend subsection 180(g) to replace language referring to experimental gear permits with language referring to EFPs for commercial trap permits.
- Changes regarding non-operational experimental market squid vessel permit provisions
  - Amend Section 149 and repeal Section 149.3 to harmonize regulations associated with experimental fishing activities and avoid confusion over the use of the term “experimental” in reference to other permits outside the scope of the Marine Fisheries EFP Program; future experimental fishing for market squid will be subject to this program.

#### *Update to Proposed Regulatory Language*

As drafted (Exhibit 4), subsection 91(p) allows a licensee or applicant to appeal certain DFW decisions. The proposed regulation would require FGC to schedule a hearing to consider the appeal at its next available meeting. However, FGC cannot typically reach a decision on an administrative appeal on such a short timeframe. Therefore, FGC staff recommends omitting the text “to consider the reconsideration request at its next available meeting” from the end of the subsection.

#### **Significant Public Comments (N/A)**

#### **Recommendation**

**FGC staff:** Authorize publication of a notice of intent to adopt regulations to establish the process through which a state EFP program will be implemented, as recommended by DFW, without the language identified by FGC staff regarding appeals.

**Committee:** Advance to rulemaking the proposed Phase II regulations to establish an EFP program as proposed by DFW.

**DFW:** Authorize publication of a notice to adopt regulations to establish the process through

For background only  
STAFF SUMMARY FOR AUGUST 18, 2021

which a state EFP program will be implemented by FGC and DFW.

**Exhibits**

1. Staff summary from Mar 23, 2020 FGC meeting (for background purposes only)
2. FGC staff overview of proposed Section 91
3. DFW memo transmitting initial statement of reasons (ISOR), received Aug 9, 2021
4. Draft ISOR and regulation text
5. ISOR attachment
6. Draft form DFW 1103, Marine Fisheries: Experimental Fishing Permit Terms and Conditions
7. Draft economic and fiscal impact statement (Std. 399) and addendum
8. DFW presentation

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission authorizes publication of a notice of its intent to adopt Section 91, and amend sections 90, 120.1, 180, and 704 related to experimental fishing permit regulations, and amend Section 149 and repeal Section 149.3 related to experimental market squid vessel permits, as discussed today.

## Memorandum

**Date:** August 4, 2021

**To:** Melissa Miller-Henson  
Executive Director  
Fish and Game Commission

**From:** Charlton H. Bonham  
Director

**Subject:** **Agenda Item for the August 18-19 Fish and Game Commission Meeting; Request for Authorization to Publish Notice of the Commission's Intent to Add Section 91; Amend Sections 90, 120.1, 180, 149, 180 and 704; and Repeal Section 149.3 Title 14, California Code of Regulations, RE: Experimental Fishing Permit Program Phase II and Repeal of Nonoperational Experimental Market Squid Vessel Permits**

The California Department of Fish and Wildlife (Department) requests that the Fish and Game Commission (Commission) authorize publication of notice of its intent to add regulations to establish the process through which a state Experimental Fishing Permit (EFP) Program will be implemented by the Commission and the Department pursuant to Fish and Game Code (FGC) Section 1022. This will allow for discussion and adoption at the October and December 2021 Commission meetings, respectively.

The purpose of the EFP Program is to gather information for improving fisheries management by allowing researchers and fishers to engage in commercial or recreational marine fishing activities that are otherwise prohibited. Under current state law, the Commission is required to establish by regulations an expeditious process for Department review, public notice and comment, Commission approval, and prompt Department issuance of EFPs (FGC subdivision 1022(b)) for any or a combination of the following purposes: research, educational, limited testing, data collection, compensation fishing, conservation engineering, or exploratory fishing (FGC subdivision 1022(a)).

As a first step to implement FGC 1022, the Commission adopted the Phase I regulations in October 2019 which established a process of issuing EFPs to applicants previously approved by the Commission in 2018 to receive an experimental gear permit pursuant FGC 8606 (repealed, 2018) to study the potential for developing a new target fishery for brown box crab in California. No new requests for EFPs can be granted by the Commission until Phase II regulations (this proposal) are in place.

If you have any questions or need additional information, please contact Dr. Craig Shuman, Marine Region Manager, at (916) 217-2370 or by email at [Craig.Shuman@wildlife.ca.gov](mailto:Craig.Shuman@wildlife.ca.gov). The public notice for this rulemaking should identify Tom Mason, Senior Environmental Scientist Supervisor, as the Department's point of contact for this rulemaking. His contact is (562) 417-2791 or [Tom.Mason@wildlife.ca.gov](mailto:Tom.Mason@wildlife.ca.gov).

Melissa Miller-Henson  
Executive Director  
August 4, 2021  
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State of California  
Fish and Game Commission  
Initial Statement of Reasons for Regulatory Action

Add Section 91 and Amend Sections 90, 120.1, 180 and 704; and  
Amend Section 149 and Repeal Section 149.3,  
Title 14, California Code of Regulations  
Re: Implementation of Experimental Fishing Permit Program (Phase II) and  
Repeal of Nonoperational Experimental Market Squid Vessel Permits

I. Date of Initial Statement of Reasons: September 8, 2021

II. Dates and Locations of Scheduled Hearings

(a) Notice Hearing

Date: August 18-19, 2021

Location: Teleconference

(b) Discussion Hearing

Date: October 13-14, 2021

Location: Teleconference

(c) Adoption Hearing

Date: December 15-16, 2021

Location: Sacramento, CA

III. Description of Regulatory Action

(a) Statement of Specific Purpose of Regulatory Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary

Unless otherwise specified, all section references in this document are to Title 14 of the California Code of Regulations (CCR).

This regulatory proposal will add Section 91, and amend sections 90 and 704, to allow for full implementation of the Experimental Fishing Permit (EFP) Program pursuant to Assembly Bill (AB) 1573, also known as the California Fisheries Innovation Act of 2018. This regulatory proposal will also amend current regulations in sections 120.1, and 180 for consistency with changes to the Fish and Game Code (FGC) pertaining to experimental marine fishing activities as well as amend Section 149 and repeal Section 149.3 to remove nonoperational experimental market squid vessel permit provisions to harmonize regulations associated with experimental fishing activities and avoid confusion over the use of the term “experimental” in reference to other permits outside of the scope of the EFP Program.

The purpose of the EFP Program is to gather information for improving fisheries management by allowing researchers and fishers to engage in commercial or recreational marine fishing activities that are otherwise prohibited.

## **BACKGROUND**

Effective January 1, 2019, AB 1573 repealed the experimental gear permit (EGP) provisions in FGC Section 8606 and added new FGC Section 1022, which provides for the development of a state EFP Program to facilitate fishery-related exploration and experimentation to inform fisheries management. The new law requires the California Fish and Game Commission

(Commission) to establish by regulation an “expeditious process” for California Department of Fish and Wildlife (Department) review, public review and comment, Commission approval, and prompt Department issuance of EFPs (FGC subdivision 1022(b)). Under FGC Section 1022, the Commission has the authority to approve commercial or recreational marine fishing activities that would otherwise be prohibited by FGC or regulations adopted thereto for the purposes of research, education, limited testing, data collection, compensation fishing, conservation engineering, exploratory fishing, or any combination of these purposes. The new law requires EFPs to be issued by the Department, subject to certain conditions and requirements deemed necessary by the Commission to ensure that activities authorized under the EFP are consistent with overarching state management goals and policies set forth in FGC Section 7050 and any applicable fishery management plan (FGC subdivision 1022(a)).

Implementation of the EFP Program will occur in two phases. EFP Program Phase I regulations (sections 90 and 704), established a process of issuing EFPs to those applicants previously approved by the Commission in 2018 to receive an EGP for a collaborative experimental research program to evaluate the potential for a brown box crab (*Lopholithodes foraminatus*) fishery in California (herein referred to as box crab program) (OAL file # 2020-0227-02SR, effective March 24, 2020). At its December 12, 2018 meeting, and prior to the repeal of FGC Section 8606, the Commission approved the issuance of eight box crab EGPs to applicants who had requested to participate in the box crab program. Those permits were valid for 12 months, starting April 1, 2019, with the potential for annual renewal for a total project span of up to four consecutive years of permitted fishing. Consequently, following the repeal of FGC Section 8606, new regulations pursuant to FGC Section 1022 needed to be established to support the continuation of the box crab program before the EGPs expired on March 31, 2020. The regulations adopted by the Commission for EFP Phase I ensured that the current box crab program can continue without regulatory disruption while a larger programmatic rulemaking (EFP Program Phase II) can be developed to build out the EFP Program pursuant to FGC Section 1022.

EFP Program Phase II (this rulemaking) builds in more time for public scoping and participation (see Section III(f)) of this document) to implement FGC Section 1022 in its entirety. The proposed regulations will establish a comprehensive regulatory framework for experimental marine fishing activities pursuant to FGC Section 1022 (i.e., EFP Program), which will include a process for application, Department review, public comment, Commission action, and Department issuance and administration of EFPs. Once the EFP Program is fully implemented, there will be some overlap between Phase I and Phase II regulations. For purposes of this document, “Box Crab EFPs” are those EFPs that were issued pursuant to Section 90 and prior to the implementation of the proposed regulations for Phase II. “New” EFPs are those that will be issued in accordance with proposed Section 91 regulations.

## **CURRENT REGULATIONS**

As noted above, Phase I regulations for the EFP Program in Section 90 established specific requirements and limited issuance of EFPs to applicants who were previously approved in 2018 to participate in the box crab program. Currently, requests for new EFPs cannot be accommodated until Phase II regulations are in place (proposed Section 91).

Subsection 120.1(c) states a bycatch reduction device must be in possession on vessels for commercial pink shrimp trawling, and under this rulemaking would be updated to reflect the authority from the repealed FGC Section 8606 to FGC Section 1022.

Subsection 180(g) states a person may apply for an EGP when denied a trap permit, and under this rulemaking would be updated to reflect the authority from the repealed FGC Section 8606 to FGC Section 1022.

Existing fees and forms listed in Section 704 for EFPs will be updated to reflect the proposed new fee license items and new form.

Section 149 and 149.3 enumerate requirements for commercial take of market squid and experimental market squid vessel permits, respectively; amendments to Section 149 would eliminate cross reference to Section 149.3 for such vessel permits. Section 149.3 would be repealed, and future experimental fishing for market squid will be subject to the EFP Phase II aspect of the EFP Program.

## **PROPOSED REGULATORY CHANGES**

### **Amend Section 90; Issuance of Box Crab Experimental Fishing Permits.**

The title of Section 90 will be amended from “Issuance of Experimental Fishing Permits” to read “Issuance of Box Crab Experimental Fishing Permits.” This is necessary to clarify that current regulations under Section 90 are specific to EFPs for the box crab program only. All new EFPs must abide by the procedures and requirements set forth in proposed Section 91 (see new subsection 90(g)).

### **Add new Subsection 90(f); Box Crab EFP Sunset Clause.**

Section 90 will be amended to add a sunset provision (subsection 90(f)) that specifies that the section shall expire on April 1, 2023, which is the project end date for the box crab program. Because the purpose of Section 90 is to allow the box crab program to proceed without regulatory disruption while the EFP Program is being built out pursuant to FGC Section 1022, Section 90 will no longer be necessary once the box crab program ceases. This provision is necessary to render Section 90 void once the specified date is reached.

### **Add new Subsection 90(g); Clarification of Box Crab and other EFPs.**

The addition of new subsection 90(g) will make it clear that the regulations under current Section 90 apply to Box Crab EFPs only. All new EFPs will be subject to the procedures and requirements established in proposed Section 91. This provision is necessary for clarity and to inform the public of the scope of authorization that may be obtained under Section 90. Since both Section 90 and proposed Section 91 use similar terms (e.g., EFP, permit standard terms and special conditions, issuance, and renewal), separating the Box Crab EFPs (Phase I regulations) from new EFPs (proposed Phase II regulations) will help avoid any potential confusion.

### **Add new Section 91; Marine Fisheries: Experimental Fishing Permit Program.**

Proposed new Section 91 establishes a comprehensive state EFP program to comply with the objectives specified in AB 1573 and requirements of FGC Section 1022. The proposed regulations will establish the procedures for application submittal, Department review, public

notice and comment, Commission approval, and Department issuance and administration of the EFP. Table 1 provides a summary of Section 91 subject areas by subsection number.

The purpose of new Section 91 is to establish the structure for regulating the EFP Program statewide, and is necessary to explain the scope of the regulations. Section 91 will be referred throughout this document as “this Section.”

**Table 1. Summary of Proposed Subject Areas for Section 91, Marine Fisheries: Experimental Fishing Permit Program.**

<b>PROPOSED SUBSECTION NUMBER</b>	<b>REGULATION SUBJECT</b>
(a)	Marine Fisheries: Experimental Fishing Permit (EFP) Program purpose and scope
(b)	Definitions
(c)	Application procedures and application fee
(c)(1)	Pre-application consultation
(c)(2)	An application packet
(d)	Department review of an EFP application
(e)	Public notice of and comment on an EFP application
(f)	Commission action on an EFP application
(g)	Department issuance of an EFP
(h)	Permit standard terms
(i)	Permit special conditions
(j)	Prohibition on operation of an EFP in violation of the permit standard terms and special conditions
(k)	Permit updates and amendments
(l)	Reports
(m)	Permit tier structure and fees
(m)(1)	Initial permit issuance fee
(m)(2)	Annual permit fees
(m)(3)	Permit fee reduction option
(n)	Term of permit and renewal
(o)	Permit revocation, suspension, cancellation, or non-renewal
(p)	Reconsideration

**Add Subsection 91(a); Experimental Fishing Permits Purpose and Scope.**

Subsection 91(a) informs the public that the Commission may authorize the Department to issue an EFP for commercial and recreational marine fishing activities for one or more

combined purposes as specified in FGC Section 1022 (which, upon approval, are “authorized activities”) pursuant to the procedures, conditions, and criteria of this Section. Pursuant to FGC subdivision 1022(a), the EFP exempts an EFP holder only from the provisions of FGC and regulations adopted pursuant to FGC specified in the permit, and all other laws and regulations not specified as part of the EFP shall remain in effect. Pursuant to FGC subdivisions 1022(a) and (b), the EFP shall be issued by the Department pursuant to the process proposed under this Section.

This provision reaffirms the statutory requirements of the EFP (FGC Section 1022), and is necessary to provide clarity to the public of activities that are authorized under the scope of the proposed regulations and to distinguish the roles and responsibilities of the Commission and the Department in implementing the proposed regulations.

### **Add Subsection 91(b); Definitions.**

Subsection 91(b) defines the terms and phrases used within the proposed regulations. These definitions are necessary in that they provide the public with detail necessary to understand and comply with FGC Section 1022 and the proposed regulations.

For the purposes of the proposed regulations, subsection 91(b) explains that the definitions contained in FGC subdivision 1022(h) for “compensation fishing,” “conservation engineering,” and “exploratory fishing” apply. This is necessary to clarify to the public how those terms are used in the regulations and ensure consistency with the terms and definitions used in statute.

Subsection 91(b) further defines other specific terms that are pertinent to the proposed regulations.

Subsection 91(b)(1) defines “accepted application” as an EFP application packet accepted by the Department as complete and eligible for further consideration by the Commission. This definition is necessary to provide a means to clarify the status of an EFP application.

Subsection 91(b)(2) defines “applicant” as the individual or entity applying for the EFP who, upon approval by the Commission, becomes the EFP holder. This definition is necessary to clarify to the public that an EFP applicant can be either an individual or an entity, and that individual or entity will become the EFP holder once the EFP is approved by the Commission.

Subsection 91(b)(3) defines “authorized activities” as activities approved under the EFP for one or any combination of the following purposes: research, education, limited testing, data collection, compensation fishing, conservation engineering, or exploratory fishing. This definition is necessary to provide a means to refer to the activities authorized by the Commission for the purposes of the EFP in a short and succinct way.

Subsection 91(b)(4) defines “authorized agent” as an individual who may conduct authorized activities and serve in place of the EFP holder for all activities requiring the presence or action of the EFP holder and who is named on the DFW Form 1103, if applicable. The term authorized agent requires a definition because authorized agents need to be differentiated from the other key participants (i.e., EFP holder). There are a number of unique duties and responsibilities in the regulations that only apply to the EFP holder; therefore, this definition is necessary to avoid confusion between the roles of the EFP holder and their authorized agents.

Subsection 91(b)(5) defines “EFP holder” as the individual or entity to whom an EFP is issued. This definition is necessary to provide clarity as to who has primary responsibility to oversee the activities authorized under the EFP.

Subsection 91(b)(6) defines “entity” as a corporation, firm, partnership, association, institution or affiliation, Native American tribe, or a local, state, or federal agency. This is necessary to clarify a term necessary to differentiate between the type of permitholders (i.e., an individual or an entity).

Subsection 91(b)(7) defines “entity administrator” as an individual designated by an entity who shall oversee all activities conducted under the EFP on the entity’s behalf and serve as the primary point of contact for Department inquiries for the permit. Both the entity and entity administrator shall be liable for any violations of this section or any authorizations, terms, or conditions of the EFP. The entity administrator on a EFP may be changed by the entity, when necessary, subject to the approval by the Department (i.e., minor amendment). This is necessary to identify the person with the authority to legally act on the behalf of the entity.

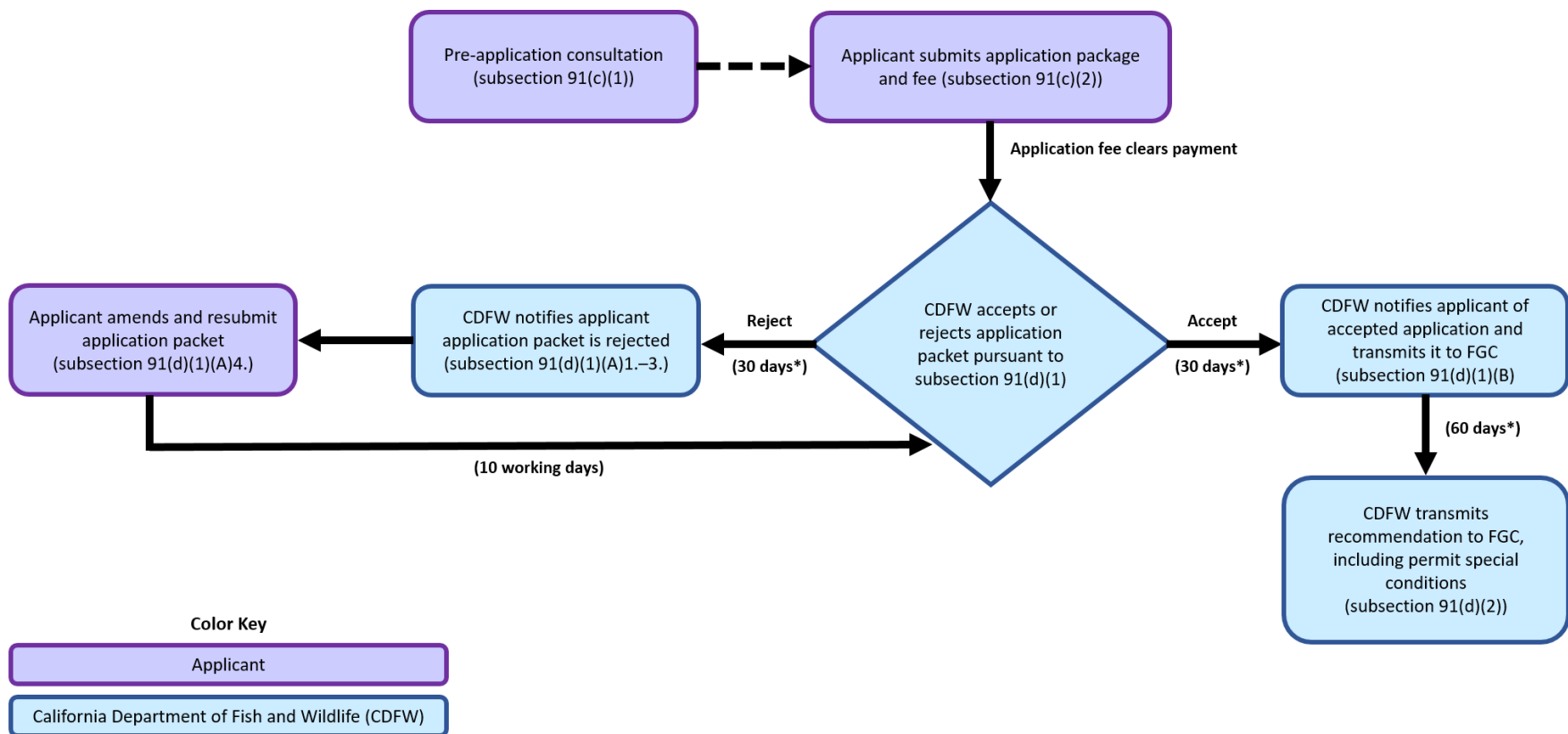
Subsection 91(b)(8) defines “interested persons” as every person who has informed the Commission of their interest in writing and has provided their mailing address or email address to be notified of any accepted applications. This definition is necessary to inform to the public that interest must be expressed in writing to the Commission for consideration as an interested person, and whom the Commission is obligated to notify as part of the public notice process.

Subsection 91(b)(9) defines “key participants” as project participants, including the applicant and, if applicable, the entity administrator and any authorized agents. This definition is necessary to refer to those involved in the EFP project in a short and succinct way.

Subsection 91(b)(10) defines “project” as the experimental fishing project for which an EFP is needed. This definition is necessary to further clarify what is meant by the term project in context of the proposed regulations.

#### **Add Subsection 91(c); Application Procedures and Application Fee.**

Subsection 91(c) specifies the application process for an EFP (Figure 1). The provision requires the EFP application to be submitted to the Department in accordance with the provisions of subsections 91(c)(1), if applicable, and 91(c)(2). This subsection is necessary for clarity and consistency with FGC subdivision 1022(b) that requires the Commission to establish a process for Department review of EFPs prior to Commission approval.



\*CDFW 30- and 60-day review period may be extended pursuant to subsection 91(d)(3)

Figure 1. Flow diagram of the EFP application submittal and review process pursuant to subsections 91(c) and 91(d).

### **Add Subsection 91(c)(1); Pre-Application Consultation.**

Subsection 91(c)(1) specifies that consultation with the Department's Marine Region is required before applying for an EFP ("pre-application consultation") if assistance will be requested from the Department to carry out the duties and responsibilities identified under subsection 91(c)(2)(C) or a reduction to the annual permit fee will be requested (see subsection 91(m)(3)) as part of the application. It also specifies that any request for consultation must be submitted to the Department by writing to the contact listed on the Department's EFP web page (<https://wildlife.ca.gov/Conservation/Marine/EFP>). This subsection is necessary to clarify the circumstances in which an applicant is required to consult with the Department and the procedure that must be followed to request the pre-application consultation with the Department.

The purpose of the pre-application consultation is to provide Department with preliminary information regarding the EFP project and to provide the applicant with preliminary information about EFP requirements, procedural requirements, environmental concerns, and other relevant matters before an application is submitted to the Department for formal review pursuant to subsection (d). During the pre-application consultation process, the applicant will be asked to explain or clarify the EFP project and Marine Region staff will provide preliminary feedback on the project, including any perceived issues or potential problems. The more information that an applicant can provide during the pre-application process, the more thorough the feedback from the Department.

For the purposes of performing any of the duties and responsibilities listed under subsection 91(c)(2)(C), applicants seeking assistance from the Department (i.e., a Tier 2 or Tier 4 EFP, see subsection 91(m)(2)) must complete pre-application consultation with Department Marine Region staff. The pre-application consultation does not guarantee the approval of the application by the Commission. This requirement is necessary to provide a process for an applicant to request that the Department provide technical or scientific assistance to carry out the project. This requirement is necessary for information sharing between the applicant and the Department to ensure that the applicant has all the pertinent information about the Department's capacity to assist on a proposed EFP project before they decide to apply for either a Tier 2 or Tier 4 permit.

Subsection 91(c)(1) also specifies that consultation prior to application is also required if an application will include a request for permit fee reduction option (see subsection 91(m)(3)). This requirement is cross referenced in subsection 91(m)(3)(B) and is necessary to provide clarification on how an applicant may request pre-application consultation with the Department.

For all other EFP proposals, pre-application consultation is encouraged but not required. Early consultation allows for effective and efficient coordination among prospective applicants, the Department, the Commission, and, if applicable, federal resource agencies, to avoid delays in the application review and approval process and implementation. Early engagement with the Department can create further context to inform the Commission in its decision-making and help to clarify application requirements, identify the appropriate permit tier for a proposed project, or identify possible substantive issues with the proposed EFP which could impede review or result in denial of an application.

### **Add Subsection 91(c)(2); An Application Packet.**

Subsection 91(c)(2) specifies how to apply for an EFP, and the information required to complete an application packet. All applicants must submit a written application packet to the Department either electronically via email or delivered to the mailing address listed on the Department EFP web page (<https://wildlife.ca.gov/Conservation/Marine/EFP>). The provision specifies that a complete application packet must contain all required elements specified in subsections 91(c)(2)(A)–(G): Contact Information for Key Participants, Statement of Purpose, Statement of Qualifications, Specific Permit Tier, Project Description, Project Vessels, and Signature. The applicant must also pay a non-refundable application fee as listed in subsection 704(b)(1). In accordance with the Department’s payment policy, fee payment may be made by personal or business check or credit card authorization form (DFW 1443b (8/15)) enclosed with the application packet, or through the Department’s online Licenses Sales and Services (<https://www.ca.wildlifelicense.com/InternetSales>). This provision ensures a standardized process to receive applications and collect appropriate information with which to review the application. This provision is also necessary to clearly inform the public of the required contents of an EFP application, how to submit the application for Department review, and the fee requirement for the application.

### **Add Subsection 91(c)(2)(A); Contact Information for Key Participants.**

Subsection 91(c)(2)(A) requires applicants to identify and provide contact information for all key participants on the project, including: name, title, affiliation, mailing address, email address, telephone number, and the Automated License Data System (ALDS) Get Outdoors ID (GOID) (for activities pertaining to recreational fisheries) or commercial fishing license (CFL) number (for activities pertaining to commercial fisheries). If a key participant does not have a GOID or CFL number, the provision (subsection 91(c)(2)(A)1.) requires that they provide the following information: their true name, residence address, date of birth, height, color of eyes, color of hair, weight, gender, telephone number, email address, and a form of identification as listed in subsection 700.4(c). This information is necessary for the Department to create a new customer profile in ALDS for tracking purposes. If the applicant is an entity, the contact information of the entity administrator is required (subsection 91(c)(2)(A)2.).

This provision is necessary so the Department knows who to contact regarding questions or issues with the application or permit and to identify individuals that will be involved in managing and implementing the EFP. The GOID and CFL numbers are necessary for the Department to not only keep record of EFP key participants involved in the EFP but also to retrieve the license and permit history from ALDS for review pursuant to subsection 91(d)). Because the purpose of the EFP is to allow for fishery-related activities that are otherwise prohibited, to assure public trust and confidence in the EFP Program, it is imperative that each key participant on an EFP project has a history of compliance (i.e., in good standing) with state and federal laws and regulations (see subsection 91(d)(1)(A)2.).

### **Add Subsection 91(c)(2)(B); Statement of Purpose.**

Subsection 91(c)(2)(B) requires applicants to provide a statement of purpose that clearly describes the specific purpose and goals of the project (subsection 91(c)(2)(B)1.). The statement of purpose must also identify the activities of the project that are currently prohibited under FGC or state fishing regulations, and the reasons why those activities should be

permitted under the EFP (subsection 91(c)(2)(B)2.). Because the practical regulatory effect of an EFP is the authorization to carry out certain commercial or recreational activities that otherwise would be prohibited under current state fishing laws or regulations, this information is not only necessary but essential to allow the Department to evaluate whether the project meets the intended purposes of the EFP and is consistent with FGC Section 7050, and to identify the exemptions that are needed pursuant to FGC subdivision 1022(a)(4).

#### **Add Subsection 91(c)(2)(C); Statement of Qualifications.**

Subsection 91(c)(2)(C) requires applicants provide a statement of relevant qualifications to demonstrate the ability of the applicant and, if applicable, other key participants to carry out the proposed project, including leading, managing, supervising, and coordinating the proposed fishing activities as described in subsection 91(c)(2)(C)1.–6. If the applicant does not have the capability to directly perform or oversee the performance of those duties and responsibilities, they may request assistance from the Department pursuant to subsection 91(c)(1). As discussed in subsection 91(c)(1) above, the Department's recommendation to the Commission concerning a Tier 2 or Tier 4 EFP is contingent upon a determination of its capacity (i.e., available resources) to accommodate an applicant's request.

This subsection is necessary for applicants to demonstrate capabilities and competency of the key participants to supervise and perform the necessary tasks to successfully carry out an EFP.

#### **Add Subsection 91(c)(2)(D); Specific Permit Tier.**

Subsection 91(c)(2)(D) requires applicants to specify the permit tier (see subsection 91(m)(2)) they are seeking and, if applicable, any consultation with the Department that has occurred. If the applicant has consulted with the Department pursuant to subsection 91(c)(1), the name of the Department staff and their contact information is required. This subsection is necessary to assist the Department in determining if the proposed project meets the qualifications of the requested permit tier and confirm whether consultation with the Department has occurred prior to application, as required pursuant to subsection 91(c)(2)(C) and subsection 91(m)(3).

#### **Add Subsection 91(c)(2)(E); Project Description.**

Subsection 91(c)(2)(E) requires applicants to provide a detailed description of the proposed project. The project description must contain all of the following components and include sufficient information for the Department to evaluate the proposed project: description of the experimental design and research plan (subsection 91(c)(2)(E)1.), a list of target species expected to be harvested as samples or compensation (subsection 91(c)(2)(E)2.), a list of species expected to be taken incidental to fishing conducted under the EFP (subsection 91(c)(2)(E)3.), description of the mechanisms or measures to ensure that any proposed catch limits (i.e., weight or number) are not exceeded and are accurately tracked or monitored (subsection 91(c)(2)(E)4.), description of any potential impacts on existing fisheries, habitat, or possible incidental interactions with threatened, endangered, or protected species that could occur as a result of the project (subsection 91(c)(2)(E)5.), the type and amount of gear to be used (subsection 91(c)(2)(E)6.), and the location and timing of the project (subsection 91(c)(2)(E)7.). The project description must also identify any fish activity that is expected to occur on the same trip as the project vessels for purposes other than those

provided by the EFP (subsection 91(c)(2)(E)7.). This information is necessary to evaluate project feasibility, identify any factors that could be grounds for denial of the application (see subsection 91(f)(2)), and identify whether any permit special conditions would be needed pursuant to subsection 91(i)(2) for research purposes and the conservation of marine resources and the environment.

#### **Add Subsection 91(c)(2)(F); Project Vessels.**

If vessels will be used to conduct the project, subsection 91(c)(2)(F) requires applicants to provide information about each vessel to be authorized under the EFP, including: the name of the vessel (subsection 91(c)(2)(F)1.), the name and contact information of the vessel owners and any operators (subsection 91(c)(2)(F)2.), and proof of registration (subsections 91(c)(2)(F)3. or 91(c)(2)(F)4.). For any vessel that will be used in a commercial fishing activity relating to the EFP, the provision (subsection 91(c)(2)(F)3.) requires applicants provide the commercial boat registration number issued to the vessel pursuant to FGC Section 7881. For any vessel that will not be used in commercial fishing activity relating to the EFP, the commercial boat registration number issued pursuant to FGC Section 7881 or a copy of the United States Coast Guard Certificate of Documentation (or a copy of the vessel's state registration if there is no Certificate of Documentation for the vessel) is required (subsection 91(c)(2)(F)4.). This information is necessary to identify the participating vessels for permit tracking and enforcement purposes.

#### **Add Subsection 91(c)(2)(G); Signature and Date.**

Subsection 91(c)(2)(G) requires applicants to sign and date the application. In place of a handwritten signature, a digital or electronic signature is acceptable if the application packet is submitted to the Department in an electronic format, such as PDF. This is necessary to set the date of the application and to certify that all information provided on the application is true and accurate. Applicants may be held accountable for any material misrepresentation associated with the EFP application (see subsections 91(f)(2)(B) and 91(o)).

#### **Add Subsection 91(d); Department Review of an EFP Application.**

The purpose of subsection 91(d) is to establish the procedures by which the Department receives, accepts, and reviews EFP applications, and transmits accepted applications and Department recommendations to the Commission for consideration. The Department application review process is depicted in Figure 1. This provision is necessary to create uniformity, consistency, and transparency in the Department application review process.

Subsection 91(d)(1) makes clear that following receipt of an application packet, the Department will determine if the application is complete within 30 days from the date the application fee payment clears, and will notify the applicant of its determination to accept or reject the application, and then notify the Commission of its determination to accept an application. This is necessary to provide the public with an understanding of the duration of the process. Based on experience in processing EGPs and consultation with federal EFP managers, the Department has determined that 30 days is an appropriate amount of time to complete an initial evaluation of the application packet for completeness and determine eligibility of key participants.

Subsection 91(d)(1)(A)1. provides that the Department must reject an application as incomplete if it is missing any of the required information specified in subsection 91(c)(2). This step is necessary to ensure that applicants understand that all required information is included in the application packet to improve the efficiency of the technical review process (see subsection 91(d)(2)).

Subsection 91(d)(1)(A)2. specifies the conditions for rejection of an application based on the past conduct of key participants (i.e., failed to comply with the terms or conditions of a state or federal fishing permit, violated any provision of the FGC or regulation adopted thereto, violated any applicable federal or state law regulating fishing activity, had a fishing license or permit suspended or revoked, or has been convicted of a crime of moral turpitude). Because the purpose of the EFP is to allow for fishery-related activities that are otherwise prohibited, to assure public trust and confidence in the EFP Program, it is imperative that each key participant on an EFP project has a history of compliance with state and federal marine fishing laws and regulations. The Department has determined that these are important factors in determining whether the key participant is fit for an EFP, and this provision is necessary to make clear such factors that will be considered for rejection of an EFP application.

If an application is rejected, subsection 91(d)(1)(A)3. requires the Department to notify the applicant and explain the specific reason for the rejection. The Department will accept an amended application under the same application fee if the applicant submits it within 10 working days of the rejection notice (subsection 91(d)(1)(A)4.). This is necessary to establish the action that must be taken by the Department after an application is rejected, including providing notice to and an opportunity for applicants to respond and correct any deficiencies with their application within a reasonable timeframe.

Subsection 91(d)(1)(A)5. specifies that the Department must notify the applicant of its final determination within 30 days of receiving an amended application in accordance with subsections 91(d)(1)(A)3. or 91(d)(1)(B). This is necessary to establish consistent procedures for informing applicants regarding the rejection or acceptance of an amended application.

If the application is deemed complete and not rejected, subsection 91(d)(1)(B) requires the Department to notify the applicant that the application has been accepted and transmit the accepted application to the Commission. This step is necessary to establish consistent procedures for informing applicants and the Commission of an accepted application.

Subsection 91(d)(2) establishes a 60-day timeframe for the Department to complete technical review of an accepted application and forward to the Commission for further consideration, its recommendation, including special conditions (see subsection 91(i)). This provision also provides that the Department may request of applicants any additional information it deems necessary to evaluate the project for purposes of developing permit special conditions, and shall inform the Commission of any failure by the applicant to comply with the information request. Based on experience in processing EGPs and consultation with federal EFP managers, the Department has determined that the 60-day technical review period is a reasonable timeframe for it to complete a detailed, substantive review of and develop recommendations for Commission action on an accepted application. While subsection 91(c) lists the information that the Department will need to conduct technical review; in some cases, additional information may be needed to verify or clarify something provided in the application.

This subsection is necessary to provide the Department the flexibility to request additional information when it needs to do so to fully evaluate the application for applicability and feasibility pursuant to the requirements of this Section and FGC Section 1022. In addition, this subsection ensures that particular issues or potential impacts related to the nature and scope of the project are addressed in the Department's recommendation of permit special conditions. As the agency tasked with reviewing, issuing, and overseeing EFPs, the Department has a vested interest in EFP research that has the potential to inform fisheries management as well as ensuring that authorized activities can be reasonably implemented, monitored, and enforced.

While subsections 91(d)(1) and 91(d)(2) specify a 30-day and 60-day review period, respectively, to promote transparency and predictability of the Department's review of an EFP application, subsection 91(d)(3) enables the Department to extend the review time. The Department must provide written notification of the time extension under subsection 91(d)(1) to the applicant, and under subsection 91(d)(2) to both the Commission and the applicant. The written notification must include the reason for why the additional time is required. This is necessary to ensure that the application review process is predictable while providing the Department the flexibility needed to respond to unforeseen circumstances or complex technical issues that could prolong the review time of an application. For example, a time extension may be necessary to work with the applicant to resolve issues pertaining to experimental design, for environmental review pursuant to the California Environmental Quality Act (CEQA), or to consult with subject matter experts from other agencies or organizations.

#### **Add Subsection 91(e); Public Notice of and Comment on an EFP Application.**

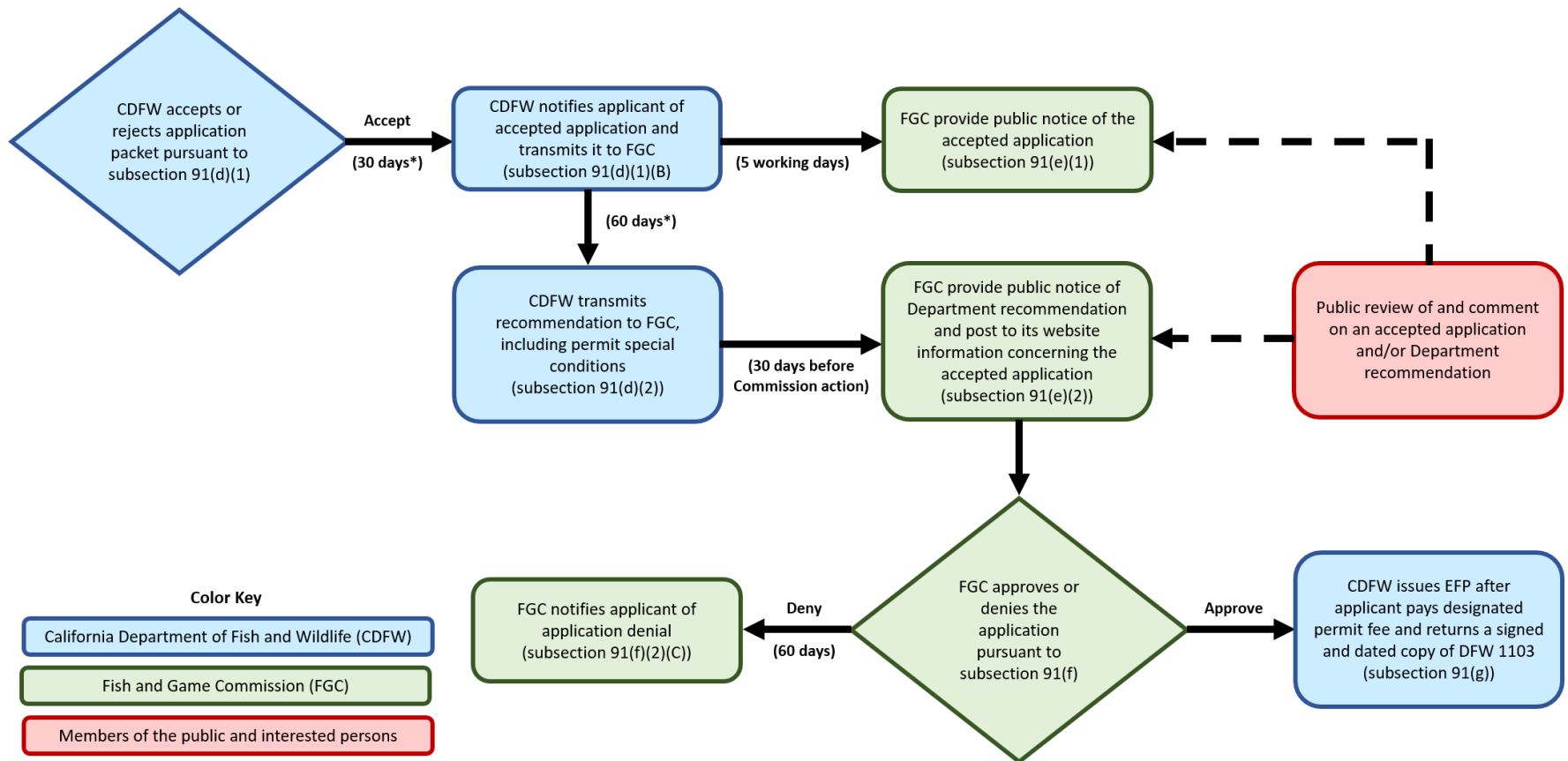
Subsection 91(e) establishes the Commission's process for notifying the public and interested parties of an accepted application (Figure 2). This subsection is necessary for clarity and consistency with FGC subdivision 1022(b) that requires the Commission to establish a process for public notice and comments on EFPs.

Subsection 91(e)(1) specifies that the Commission will send notice of receipt of an accepted EFP application to interested persons pursuant to subsection 91(e)(3) within five working days of receiving an accepted application from the Department. Based on experience in preparing and distributing other notices, the Commission has determined that five working days is an adequate amount of time for Commission staff to prepare and distribute a public notice concerning an accepted application. The notice will include information about the proposed EFP project, species, and how members of the public may comment. This subsection is necessary to provide opportunity for public review and make clear to interested parties on how they may comment at the key points during the application review and approval process.

Subsection 91(e)(2) specifies that the Commission will send notice of receipt of the Department's recommendation on an accepted application to interested persons pursuant to subsection 91(e)(3), and post information concerning the accepted application, including public notices themselves (subsection 91(e)(2)(A)), the application (subsection 91(e)(2)(B)), and Department recommendation (subsection 91(e)(2)(C)) to its website at least 30 days before an action is taken to approve or deny the application. The subsection is necessary to ensure that the public is informed and provided adequate opportunity to review and comment at the key points during the application review and approval process. It is the policy of the state to foster

an open, collaborative decision-making process that involves all interested parties in marine living resource management decisions.

Subsection 91(e)(3) establishes the procedures by which interested persons and the public will be notified of an accepted EFP application and the Department's recommendation. The Commission will mail or email every person who has expressed interest to be notified concerning matters related to EFPs (subsection 91(e)(3)(A)). The Commission may also mail or email any person or group of persons whom the Commission believes to be interested in receiving EFP notifications (subsection 91(e)(3)(B)). This subsection is necessary to clarify how notices will be distributed and who will receive direct EFP notifications from the Commission.



\*CDFW 30- and 60-day review period may be extended pursuant to subsection 91(d)(3)

Figure 2. Flow diagram of EFP processes for Department acceptance of an EFP application (subsection (d)(1)(B)), public review and comment (subsection 91(e)), Commission action (subsection 91(f)), and Department issuance (subsection 91(g)).

### **Add Subsection 91(f); Commission Action on an EFP Application.**

Subsection 91(f) establishes the procedures for the Commission to consider and act on an EFP application (Figure 2). This subsection is necessary for clarity and consistency with FGC subdivision 1022(b) that requires the Commission to establish a process for Commission approval of EFPs. The provision (subsection 91(f)(1)) requires that the Commission schedule for consideration an accepted application and any proposed permit special conditions at its next available meeting, but not sooner than 30 days after providing public notice pursuant to subsection 91(e)(2). This subsection is necessary to ensure prompt action by the Commission on an EFP application in accordance with FGC subdivision 1022(b). The provision (subsection 91(f)(2)) also specifies that the Commission may act to approve or deny an accepted application and/or any permit special conditions. If an application is approved by the Commission, subsection 91(f)(2)(A) requires the Department to issue the EFP pursuant to subsection (g). This is necessary to clarify to the public that the Department is responsible for permit issuance and administration after an EFP application has been approved by the Commission.

Subsection 90(f)(2)(B) lists the grounds for which the Commission may deny an EFP. This provision is necessary to provide clarity and transparency to the public regarding reasons the Commission may act to deny an EFP application or an amendment to an EFP. The provision (subsection 91(f)(2)(B)1.) specifies that an EFP application may be denied if the applicant fails to disclose material information or provides false, inaccurate, or misleading information. This is necessary to deter false statements or misrepresentation of material facts relating to the application. It is imperative that the information provided to the Department and the Commission be accurate and complete. The provision (subsection 91(f)(2)(B)2.) also specifies that an EFP may be denied if the project would have any adverse impact, either on its own or combined with other approved EFPs, to: any resource or resource allocation, established fisheries, or marine habitat; or other adverse impact on the well-being or sustainability of any fish stock, marine mammal, or species designated as Threatened, Endangered, or Fully Protected. Resource allocation includes the sustainability of fisheries resources for utilization and the Department resources to manage those activities (e.g., staff capacity and time). This is necessary to ensure that the EFP does not conflict with the state's management objectives and responsibility to ensure the conservation and sustainable use of the state's marine living resources. Finally, the provision (subsection 91(f)(2)(B)3.) specifies that an EFP may be denied if it is not consistent with the regulation proposed under Section 91, FGC sections 1022 and 7050, any applicable fishery management plan, or other applicable laws for which an exemption is not sought. This is necessary to ensure that the EFP does not conflict with other applicable policies, or federal or state laws or regulation governing marine fishing or the conservation of marine living resources.

If an EFP is denied, the provision (subsection 91(f)(2)(C)) requires the Commission to provide a written notice to the applicant within 60 days of the denial explaining the reason(s) for the denial. This is necessary to ensure that the applicant is informed of the reason for the action by the Commission.

### **Add Subsection 91(g); Department Issuance of an EFP.**

Subsection 91(g) elaborates on the Department permit issuance process (Figure 2). Specifically, upon approval of an application by the Commission, the Department is required to send to the applicant for signature a completed form DFW 1103, including the attachment of any permit special conditions approved pursuant to subsection 91(f)(2) (subsection 91(g)(1)). The permit shall be issued upon Department's receipt of payment of the applicable EFP fees and a signed and dated copy of form DFW 1103. This subsection is necessary to clarify the actions to be taken by the Department and the applicant after an application has been approved by the Commission.

### **Add Subsection 91(h); Permit Standard Terms.**

Subsection 91(h) establishes that the standard terms of the EFP are specified on form DFW 1103, Marine Fisheries: Experimental Fishing Permit Terms and Conditions. Form DFW 1103 is incorporated by reference in subsection 704(b)(2) to specify the requirements that apply to all EFP projects (see subsection 704(b)(2) for a detailed description and discussion of the permit standard terms). This is necessary to ensure compliance with the requirements of this Section and FGC Section 1022.

### **Add Subsection 91(i); Permit Special Conditions.**

Subsection 91(i) describes permit special conditions specific to an EFP project. Permit special conditions may be placed on a permit as necessary for research purposes or the conservation and management of marine resources and the environment (subsection 91(i)(2)) and, upon EFP issuance, are specified on form DFW 1103 (subsection 91(i)(1)). This provision is necessary to clarify that special conditions are additional to and do not fall under the standard terms of the permit. The following general categories (subsections 91(i)(2)(A)–(I)) are provided as examples of the types of special conditions and are not meant to be an exhaustive list.

- The maximum amount and size of each species that can be caught, harvested and/or landed during the term of the project, including trip, annual or other harvest limitations.
- The time(s) and place(s) where authorized activities may be conducted.
- A citation of current fishing laws and regulations from which the permit is exempted.
- The type, size, and amount of gear that may be used by each person or vessel operating under the EFP, and any other restrictions placed on the gear.
- The number, size, name, and identification number of any vessels and/or names and addresses of any authorized agents authorized to conduct fishing activities under the EFP and whether additional fishing permits or licenses are required.
- The method in which vessel or gear should be marked or identified to indicate the activity is operating under a current EFP.
- Any necessary procedures and/or equipment to be used to monitor and track the authorized activities, collect data, or provide for personnel safety.
- Data reporting requirements for the authorized activities including the method, content, format, and timeframe submitting data to the Department.

- Other conditions as may be necessary to ensure compliance with this Section or FGC Section 1022.

**Add Subsection 91(j); Prohibition on Operation of an EFP in Violation of Permit Standard Terms and Special Conditions.**

Subsection 91(j) establishes that it is unlawful to operate under an EFP in violation of permit standard terms and special conditions set forth on form DFW 1103. This is necessary for law enforcement to ensure that all activities conducted under the EFP comply with the requirements of this Section and FGC Section 1022.

**Add Subsection 91(k); Permit Updates and Amendments.**

Subsection 91(k) prescribes the manner in which an EFP may be amended after it has been approved by the Commission.

Subsection 91(k)(1) establishes that the Department may amend permit special conditions at any time during the term of the EFP as it deems necessary for research purposes or the conservation and management of marine resources and the environment. This enables the Department to act quickly and make amendments to the special conditions of an existing EFP based on new information about the on-the-water characteristics of the authorized activities to ensure protection of marine resources and the environment, as required by FGC Section 1022.

Subsection 91(k)(1)(A) further specifies that Department authorized amendments shall not exceed the allowances placed on the permit by the Commission concerning amount and type of species that may be taken, geographic location where fishing may occur, amount or type of gear that can be used, and the number of vessels or persons that may conduct the authorized activities (subsection 91(k)(1)(A)1.–4.). This is necessary to clarify the circumstances under which the permit special conditions may be amended by the Department. The proposed amendment process continues to subject all permit special conditions to the Commission's discretion, but does so in a way that provides the Department the ability to adequately address immediate problems with any given EFP.

Upon amending the permit special conditions, subsection 91(k)(1)(B) specifies that the Department must provide written notice to the EFP holder and the Commission, including the reasons for the amendment and the EFP holder's right to request reconsideration. This is necessary to not only inform the public on how the Department will contact EFP holders to inform them that amendments have been made to the special conditions of their permits, but provide information on how the EFP holder may seek review of the Department's decision to amend the special conditions of a permit.

Subsection 91(k)(1)(C) specifies that the Department may suspend the EFP if the EFP holder fails to return a signed and dated copy of the amended form DFW 1103 within 10 days following the date of the written notice from the Department. This is necessary to ensure timely actions are taken concerning an amended form DFW 1103 and also clarifies what action the Department may take to enforce compliance. A signed and dated DFW 1103 is proof to the Department that the EFP holder understands all related permit standard terms and special conditions.

Subsection 91(k)(2) specifies that EFP holders may request amendments to their EFP at any time during the term of the permit, by submitting a written request to the Department explaining the reason for the amendment and, if applicable, paying the applicable non-refundable amendment fee specified in Section 704. Subsection 91(k)(2)(A) further describes the types of amendments that EFP holders may request: administrative updates (subsection 91(k)(2)(A)1.), minor amendments (subsection 91(k)(2)(A)2.), and major amendments (subsection 91(k)(2)(A)3.). Administrative updates and minor amendments may be reviewed and approved by the Department while major amendments (proposed changes that exceed existing permit allowances) require public review and Commission action (subsections 91(d)(2) through 91(g)). As a matter of public discourse, this process is necessary to provide an opportunity for the public to review and comment on proposed changes that are considered major amendments prior to Commission action on a requested amendment. Because the purpose of the EFP is to discover the characteristics of experimental fishing activities while active on the water, this is necessary to enable EFP holders to make adjustments to their projects as needed.

Subsection 91(k)(2)(B) explains the action the Department will take if a request for administrative update or minor amendment is rejected. It specifies that the Department must provide written notification to the EFP holder explaining the reason for the rejection and their right to file a request for reconsideration. This provision is necessary to provide for consistent and complete documentation by the Department, and ensure that the EFP holder is fully informed.

Subsection 91(k)(3) specifies that approved amendments do not change or extend the expiration date of the EFP. This provision is necessary to make clear to the public that the expiration date of the EFP is not amendable.

#### **Add Subsection 91(l); Reports.**

Subsection 91(l) enumerates the general reporting requirements for all EFPs. Subsection 91(l)(1) specifies that the EFP holder is required to submit an annual report by the date specified in the permit special conditions summarizing the findings and activities completed during the term of the EFP and any additional information as required by form DFW 1103. It will be requested that the summary include a description of any impediments encountered or deviations that occurred in carrying out the EFP.

Subsection 91(l)(2) specifies that the EFP holder must submit a final report to the Department no later than 60 days after the EFP expires. The final report must contain: a summary describing the EFP project and its outcomes (e.g., research results and findings) (subsection 91(l)(2)(A); a discussion of the results and findings, including conclusions about the effectiveness of the authorized activity and recommendations for improving fisheries management or expanding fishing opportunities in the state (subsection 91(l)(2)(B); any additional information required as part of the special conditions of the EFP (subsection 91(l)(2)(C); and a list of all key participants on the EFP to acknowledge their role and contribution to the EFP research (subsection 91(l)(2)(D). The EFP holder is also required to submit any scientific reports or documents created as a result of the EFP, pursuant to FGC subdivision 1022(c).

This subsection is necessary to inform the Department, Commission, and public about the progress of the project, successes achieved and/or discoveries made as a result of the EFP, as well as any challenges or impediments encountered. The Commission may request the Department provide a presentation of the results of the EFP project. Because the findings of a project may justify regulatory change proposals or management action, both the annual and final reports may serve as supporting documents (subdivision 11346.2(b)(3), California Government Code). It is necessary to specify a timeline within which the Department must receive the report to clarify the reporting requirements and ensure timely reporting, and 60 days grants the EFP holder sufficient time for final data analyses and drafting of findings.

In addition, this is necessary to record and acknowledge the work that has been supported by the EFP Program. Pursuant to FGC Section 1022, the Department is required to post, and annually update, information regarding approved EFPs on its website (FGC subdivision 1022(e)) and report to the appropriate legislative committee summarizing the benefits of the EFP Program every five years starting no later than January 1, 2025 (FGC subdivision 1022(f)).

#### **Add Subsection 91(m); Permit Tier Structure and Fees.**

Subsection 91(m) establish the permit tiers and fees for the EFP and is necessary to reasonably recover implementation and administrative costs of the Department relating to the EFP in accordance with FGC Section 1022.

#### **Add Subsection 91(m)(1); Initial Permit Issuance Fee.**

Subsection 91(m)(1) establishes the initial permit issuance fee, which is a non-refundable fee to recover implementation and administrative costs of the Commission and the Department relating to the EFP. Except as provided for in subsection 91(m)(3), the Department is required to charge an initial permit issuance fee specified in Section 704(b)(3) for issuance of an EFP. Along with the annual permit fee, this one-time fee for initial permit issuance fee (for year 1 EFP only) must be paid to the Department prior to issuance of the EFP. This is necessary for the Commission and the Department to partially recover costs as provided for under FGC subdivision 1022(g) related to checking the eligibility of key participants by reviewing the Statement of Qualifications pursuant to 91(c)(2)(C), reviewing the technical and scientific merits of the application (91(c)(2)(E)), conditioning of the proposed EFP for Commission consideration (91(i)), transmitting the Department recommendation to the Commission, preparing public notice for distribution, reviewing Department recommendation and developing staff recommendation for Commission consideration.

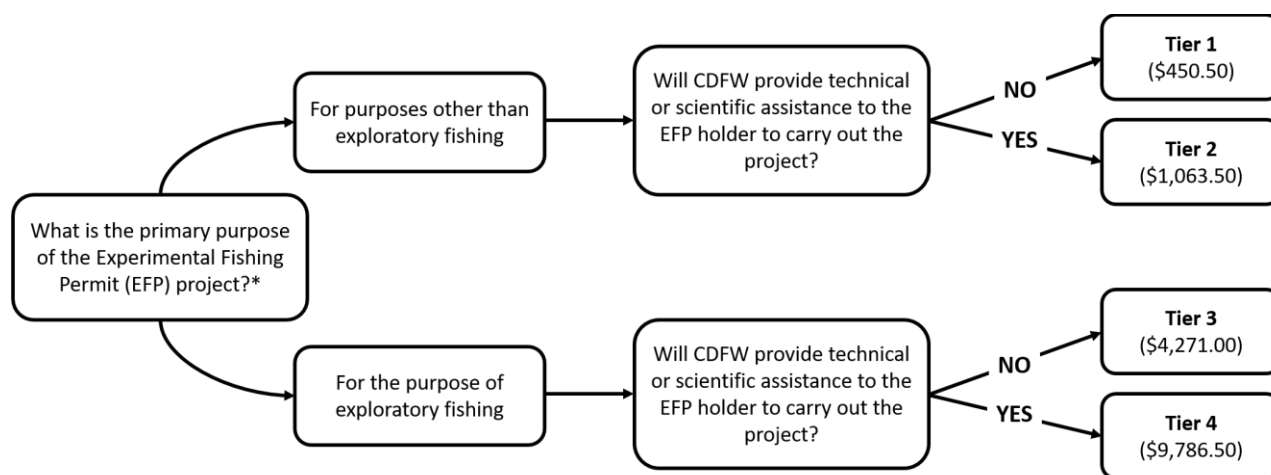
#### **Add Section 91(m)(2); Annual Permit Fees.**

Subsection 91(m)(2) establishes the permit tiers and associated non-refundable annual permit fees. The provision makes clear that, except as provided for in subsection (m)(3), payment of the designated annual permit fee listed in Section 704(b)(4) is required for all EFPs. The annual permit fee is determined by the permit tier approved for a specific project. Based on complexity, each project will be assigned a designated permit tier. Given that the EFP may be approved for a variety of purposes (i.e., for research, education, limited testing, data collection, compensation fishing, conservation engineering, exploratory fishing, or a variety of these purposes), the proposed permit tier structure provides predictable permit fees that are tailored

to the project. The annual permit fee will also be dependent on whether the project is facilitated by the Department (see subsection 91(c)(2)(C)). Subsections 91(m)(2)(A) through (D) define the permit tiers which the Department will use to determine the applicable permit fee for a project (Figure 3).

- Tier 1. EFP for the purpose identified under subsection 91(b)(3) except exploratory fishing.
- Tier 2. EFP for the purpose identified under subsection 91(b)(3) except for exploratory fishing *and* facilitated by the Department pursuant to subsection 91(c)(2)(C).
- Tier 3. EFP for the purpose of exploratory fishing.
- Tier 4. EFP for the purpose of exploratory fishing *and* facilitated by the Department pursuant to subsection 91(c)(2)(C).

Tiers 1 and 2 EFPs will be based around existing fisheries whereas Tiers 3 and 4 EFPs are specific to the development of new fishery resources. With greater potential for impacts, exploratory fishing will be subject to a higher level of Department oversight than other purposes. This subsection is necessary to categorize the varying scope and complexity of each type of EFP for the purpose of cost recovery pursuant to FGC subdivision 1022(g). The proposed four-tier permit fee structure provides for more permitting options for applicants and ensures that permit fees do not exceed the actual implementation and administrative costs of the Department relating to the EFP (see subsection 704(b)(4)).



\* Pursuant to Fish and Game Code Section 1022, the EFP may be approved for one or any combination of the following purposes: research, educational, limited testing, data collection, compensation fishing, conservation engineering, or exploratory fishing.

Figure 3. Decision tree for determining the applicable permit tier for a project.

### Add Subsection 91(m)(3); Permit Fee Reduction Option.

To accommodate stakeholder requests to provide lower permit fees, subsection 91(m)(3) establishes a permit fee reduction option which will allow for collaboration in the form of a 50/50 split of the initial permit issuance fee listed in subsection 704(b)(3) and the annual permit fee listed in subsection 704(b)(4) between the Department and EFP holders on specific EFPs identified by the Department as necessary to address a priority or need for fishery

management. The Commission will consider granting this option on a case-by-case basis, as recommended by the Department. If granted, the annual permit fee will be reduced by 50% for the applicable permit tier (see subsections 91(m)(2) and 704(b)(4)). The initial permit issuance fee (see subsections 91(m)(1) and 704(b)(3)) will also be reduced by 50% under this option. The permit fee reduction option is necessary to incentivize collaboration on research and experimentation that are of interest and importance for managing marine fisheries.

As an example, subsection 91(m)(3)(A) provides a list of general categories or areas of fishery research that may merit special consideration under the permit fee reduction option. These general categories include: innovative fishing gear and techniques to reduce incidental capture of non-target species, habitat impacts, and/or interactions with protected species (subsection 91(m)(3)(A)1.); data collection to fill essential fishery information gaps or monitoring needs for fisheries and associated habitats (subsection 91(m)(3)(A)2.); new data or methods to quantify catch and effort and/or standardized data reporting for recreational or commercial fisheries (subsection 91(m)(3)(A)4.); and other areas of research that may be necessary for the purpose of fishery management pursuant to FGC Section 7050 (subsection 91(m)(3)(A)4.). While it is impossible to provide an exhaustive list of specific research needs for management of the state's marine fisheries, this list of provided categories is necessary to inform applicants of the types of projects that are of interest to the Department for purposes of the reduced permit fee option.

Subsection 91(m)(3)(B) requires pre-application consultation with the Department pursuant to subsection 91(c)(1) for consideration of a permit fee reduction. This is necessary because it enables the Department to provide feedback on a project and ensures that the project is designed in consultation with the Department, incorporating elements it deems necessary to inform management and conservation of the state's marine resources.

#### **Add Subsection 91(n); Term of Permit and Renewal.**

Subsection 91(n) explains the permit renewal requirements. The provision clarifies that an EFP may be renewed annually by the Department up to three times (for a maximum project span of four consecutive years). Because an EFP is valid for a period of 12 months, any renewal must be done before the permit expiration date. Subsections 91(n)(1) through (3) further specify the conditions for renewal. For permit renewal, a written request to the email or mailing address listed on the Department's EFP web page (subsection 91(n)(1)) must be received by the Department 60 days before the permit expiration date. This provision is necessary to explain how and when an EFP holder can request permit renewal.

EFP holders are expected to renew their permits in a timely manner or cease all authorized activities by the permit expiration date to prevent a lapse in permit coverage. The Department has determined that 60 days is sufficient time for the Department to review and approve a renewal request pursuant to subsection 91(n)(2). Within the 60-day review period, the Department must determine that all key participants on the project have complied with the requirements, terms, and conditions of this Section and form DFW 1103 to approve the permit renewal request (subsection 91(n)(2)). This is necessary for enforcement purposes. The provision (subsection 91(n)(3)) also requires payment of the designated annual permit fee to the Department's License and Revenue Branch (LRB) on or before the permit expiration date of the permit. This is necessary to clarify when the permit fees are due to the Department.

### **Add Subsection 91(o); Permit Revocation, Suspension, Cancellation, or Non-Renewal.**

Subsection 91(o) specifies conditions for revocation, suspension, cancellation, or non-renewal of an EFP. It is necessary to provide information to the public on conditions that may warrant these actions by the Department.

Subsection 91(o)(1) specifies a process for permits to be cancelled by EFP holder requests. This provision is necessary to inform the Department of when an EFP is no longer needed for tracking and enforcement purposes, and removes the EFP holder of any requirements or liability attached to the permit.

Subsection 91(o)(2) defines the grounds on which an EFP may be suspended, revoked, cancelled, or denied renewal. The provision provides that Department action may be taken for any of the following reasons: failure to comply with permit authorizations, standard terms and special conditions (subsection 91(o)(2)(A)); failure to comply with any provisions of FGC or regulations adopted thereto that are not exempted by the permit; violation of any federal statute, regulation, or rule related to a regulated fishing activity, or conviction of a crime of moral turpitude (subsection 91(o)(2)(B)); reasons listed in FGC Section 1022 (subsection 91(o)(2)(C)); changes in the law or regulations (FGC or regulations adopted thereto, or federal statute, regulation, or rule) that prohibits the continuation of the authorized activities (subsection 91(o)(2)(D)); submittal of false information by the EFP holder for purposes of obtaining or renewing an EFP (subsection 91(o)(2)(E)); the purpose of the project has been achieved or the EFP produces information at a level deemed by the Department sufficient to support a management action (subsection 91(o)(2)(F)); or failure to pay the designated annual permit fee pursuant to subsection (n)(3) (subsection 91(o)(2)(G)).

This subsection is necessary for transparency and consistency when it comes to Department actions on EFPs. Consistent with Department's role as trustee agency, the Department views experimental fishing as a privilege even beyond recreational or commercial fishing, as the program allows activity that is otherwise unlawful as a tool for research, data collection, and experimentation that may ultimately benefit various fishery participants in the future. As such, the privilege may be withdrawn (i.e., permit suspension or cancellation) or terminated (i.e., permit revocation or non-renewal) under certain circumstances. Subsections 91(o)(2)(A) through (G) are necessary to inform the public of the specific scenarios in which an action may be taken by the Department for resource management and enforcement purposes.

Subsection 91(o)(3) requires the Department to inform the EFP holder if an action is taken against an EFP pursuant to subsection 91(o)(2). A written notification containing the name of the EFP holder, the EFP number, the reason for the Department action and, if applicable, any actions for the EFP holder to correct any deficiencies identified by the Department, and the EFP holder's rights to request reconsideration (see subsection 91(p)) is necessary to provide for consistent and complete documentation by the Department and fully inform the person receiving the notice.

Subsection 91(o)(4) describes actions to be taken by the EFP holder if an EFP is revoked, suspended, or cancelled. If a permit has been suspended or revoked, the provision requires the EFP holder to hand over all records produced under the terms and conditions of the EFP in accordance with the direction provided by the Department. This is necessary for the Department to have a record of the data and information generated under the EFP that may be

useful for current or future fishery management applications, pursuant to the objectives of AB 1573. For any permit that has been cancelled, suspended, revoked, or denied renewal, the EFP holder must turn over all Department-owned equipment (e.g., fishing gear, electronic monitoring equipment, storage devices, trap tags, etc.) that have been issued for the purposes of the project. The provision further specifies that failure to return Department owned equipment is unlawful. This is also necessary to enable the Department to retrieve or recover any Department-owned equipment upon revocation, suspension, or cancellation of a permit.

**Add Subsection 91(p); Reconsideration.**

Subsection 91(p) specifies a process for reconsideration in the event that a permit is revoked, suspended, cancelled, or amended by the Department or a request for permit renewal or permit amendment is rejected by the Department. This is necessary to establish a uniform and timely process available to all EFP holders, and is a means to contest the Department's decision should an EFP holder disagree with the action. It is necessary to require that the requests be made in writing and address the reasons for the request to allow the Department to review and consider all pertinent information to support a reconsideration request. The 30-day period of such requests is considered to be an adequate time for an EFP holder to prepare and submit a request.

**Amend subsection 120.1(c); Testing the Effectiveness of New or Improved Bycatch Reduction Device Designs for Pink Shrimp Trawling.**

Existing subsection 120.1(c) states that the Commission may approve an EGP to be issued by the Department for testing the effectiveness of new or improved bycatch reduction device designs pursuant to FGC Section 8606. The proposed amendment would delete current subsection 120.1(c)(2) referencing FGC Section 8606 (repealed 2018). The proposed change is necessary to reflect the changes in the FGC pursuant to AB 1573 and ensure consistency with the proposed EFP Program Phase II regulations. Under the proposed regulations, experimental fishing activities will fall under the purview of the EFP Program.

**Amend Section 149; Commercial Taking of Market Squid.**

Existing Section 149 enumerates the requirements for the commercial take of market squid. In particular, subsections 149(a), (f) and (j) contain references to existing Section 149.3 concerning experimental market squid vessel permits. Because Section 149.3 will be repealed as part of this current rulemaking, the proposed amendment would delete references to Section 149.3 from current provisions in Section 149 (i.e., subsections 149(a), (f) and (j)). This is necessary to harmonize the regulations and ensure consistency with the proposed EFP Program Phase II regulations.

**Repeal Section 149.3; Experimental Market Squid Vessel Permit.**

Existing Section 149.3 contains provisions for issuance of experimental market squid vessel permits. The regulations provide that the Commission may issue three non-transferable experimental market squid vessel permits to any individual for the purpose of developing a squid fishery in areas previously not utilized for squid production. Excepting initial permit issuance criteria contained in subsection 149.1(c), these permits are subject to the all the commercial squid fishing regulations and terms and conditions contained in Section 149.1. However, the application deadline for initial permit issuance contained in subsection

149.1(d)(1) was June 30, 2005, with annual permit renewal as prescribed in subsection 149.1(f). Since the deadline to apply for initial permit issuance has passed, Section 149.3 is now outdated. The proposal to repeal Section 149.3 is necessary to eliminate nonoperational provisions and avoid confusion with the use of the term “experimental” in reference to other permits outside of the scope of the EFP Program. Future experimental fishing for market squid will be subject to the Phase II aspect of the EFP Program.

#### **Amend subsection 180(g); Temporary Suspension or Denial of a Trap Permit.**

Existing subsection 180(g) states, in part, that if an application for a trap permit is denied by the Department, the permit applicant may apply to the Commission for an EGP under FGC Section 8606. The proposed amendment would remove the reference to FGC Section 8606 (repealed 2018) and update the regulatory language to refer to an EFP and Section 91 of the regulations. The proposed change is necessary to reflect the changes in the FGC pursuant to AB 1573 and ensure consistency with the proposed EFP Program Phase II regulations. Non-substantive updates are proposed to the authority and reference citations for Section 180 to list sections individually.

#### **Amend Section 704; Experimental Fishing Permits; Fees and Forms.**

Existing regulations in Section 704 specify the fee and the form for box crab EFP (EFP Phase I regulation) general terms and special conditions. Section 704 will be amended to add new items to the current fee schedule and specify the fees and form that pertain to the box crab EFPs and those that pertain to all new EFPs (EFP Phase II regulation). The fees specified in Section 704 are subject to an annual adjustment pursuant subsection 704(e).

#### **Amend Subsection 704(a); Box Crab Experimental Fishing Permits/Form.**

Section 704 will be amended to enumerate the forms and fee requirements for the current Box Crab EFP and all new EFPs approved under the proposed Phase II regulation. Subsection 704(a) will be amended to add “Box Crab Experimental Fishing” to clarify that subsection 704(a) relates to the permit fee and EFP terms and conditions (DFW 1085, NEW 01/01/2020) for the current box crab EFP issued by the Department pursuant to Section 90. This change is necessary to maintain continuity of the terms and conditions specific to the previously approved box crab EFP, including the cost-sharing scheme adopted by the Commission in October 2019 between the Department and the EFP participants, and to avoid confusion with the new fee requirements and terms and conditions form DFW 1103 for EFPs approved and issued under the proposed new Section 91.

#### **Renumber and add new Subsection 704(b); Marine Fisheries: Experimental Fishing Permit Program Fees and Form.**

Current subsection 704(b) will be renumbered to new subsection 704(e) and amended (see new see subsection 704(e)) to accommodate new subsections 704(b) through (d).

New subsection 704(b) lists the new fee items proposed under Section 91. The Commission is authorized to charge a fee “as necessary to fully recover, but not exceed, all reasonable implementation and administrative costs of the Department and Commission related to the EFP” (FGC subdivision 1022(g)). New subsection 704(b) is necessary for describing and collecting such fees. To establish a “reasonable” fee, the Department identified the services

and related costs of administering and enforcing the EFPs, evaluated past EGP costs, as well as reached out to the federal EFP managers to inform the Department's cost estimates. The costs of these services are expressed as fee items under Section 704. While the law allows for the Department to fully recover its costs, a full-cost recovery for those services is not sought. The Department conducted a Cost Recovery Analysis (Attachment 1 to this initial statement of reasons (ISOR)) to evaluate the full range of cost recovery for Department and Commission staff time. The analysis includes a "minimum," "mid," and "high" cost recovery for permit fees. In recognition of the expected benefits of EFPs to the state, some of the costs for the EFP would be shared by the Department (i.e., absorption of costs beyond the "minimum" estimate). Thus, the Department seeks "minimum" cost recovery of permanent staff time and enforcement (i.e., recovery of only certain aspects of costs at the lowest level of functioning service). Tables 2 and 3 provide a detailed breakdown of the minimum staffing needs (hours) for each EFP fee item. Temporary staff (e.g., Scientific Aids) may be involved in some level of reviewing and processing EFPs. However, the cost of staff time for these temporary positions is absorbed by the Department and is not included in Tables 2 or 3 as it would not be incurred either directly or indirectly by the applicant/EFP holder.

**Add Subsection 704(b)(1); Experimental Fishing Permit Application fee.**

Subsection 704(b)(1) specifies a flat fee for all EFP applications (\$153.25). This is necessary for recovering a portion the Department's cost for receiving and reviewing applications in accordance with proposed subsection 91(d)(1). As shown by calculation in Table 3a. below, the Application fee of \$153.25 includes Department staff time to review an application for completeness.

**Add Subsection 704(b)(2); Form DFW 1103 (NEW 04/06/21), Marine Fisheries: Experimental Fishing Permit Terms and Conditions.**

Subsection 704(b)(2) sets forth the form which is to be signed attached to the printed permit. Form DFW 1103, Marine Fisheries: Experimental Fishing Permit Terms and Conditions (NEW 04/06/21), is incorporated by reference because it would be unduly expensive and impractical to publish it in Title 14, CCR. Form DFW 1103 includes the following fields and sections to capture pertinent information about the permit.

- An "Experimental Fishing Permit No." field is necessary for the Department to track approved permits and provide verification of the approval for the applicant.
- A "Revision Date" field is necessary to capture and track any updates or amendments made to the EFP.
- Fields for the EFP holder/entity administrator and authorized agent names and addresses are necessary to clearly identify all persons approved to conduct the authorized activities for tracking and enforcement purposes.
- A "Vessel Name and ID #" field is necessary to clearly identify all vessels authorized to operate under the permit for tracking and enforcement purposes.
- A "Description of authorized activity" section is necessary to provide the Department a place to briefly describe the project for which the EFP is issued.

- A “Standard Terms” section is necessary to set general permit requirements that apply to all EFPs (see subsection 91(h)). Standard terms are further described below.
- A “Special Conditions” section is necessary to reference the authority in Section 91 to approve and amend special condition and detail the breadth of conditions that may be placed on a specific permit for research purposes and the conservation and management of marine resources and the environment (see subsection 91(i)). Permit special conditions will be added to form DFW 1103.
- A “Receipt and Acknowledgement” section and EFP holder signature and date fields are necessary to provide proof that to the Department that the EFP holder understands and agrees to abide by all standard terms, special conditions, and requirements for permit issuance (i.e., payment of EFP fees and submittal of a signed copy of DFW 1103).
- Additional fields under “Received by License and Revenue Branch (LRB)” for fee amount, EFP number, revision date, and LRB signature and date are necessary for internal tracking purposes.

**STANDARD TERMS.** As stated above, standard terms are set forth on form DFW 1103 and apply to all EFPs approved by the Commission. Standard terms are necessary to clearly lay out the general requirements and standard of conduct under the EFP and ensure compliance with applicable fishing laws and regulations. The following standard terms apply to all persons and vessels operating under the EFP.

- Standard Term 1 specifies that the permit shall be operated only on the vessels named on the form (if applicable) and either the EFP holder or authorized agent must be aboard the vessel when authorized activities are being conducted. The provision further specifies that both the EFP holder and authorized agent are responsible and accountable for meeting the requirements and limits of the permit. This is necessary to make clear the individuals and vessels who can operate under the EFP for enforcement purposes. This also provides transparency and clarifies the responsibility of the EFP holder and the authorize agent.
- Standard Term 2 requires the EFP holder or authorized agent to have a valid copy of the EFP attached to a signed copy of form DFW 1103 in possession when activities are being conducted under the permit. This is necessary for enforcement purposes.
- Standard Term 3 requires all persons conducting activities under an EFP comply with all appropriate state and federal fishing laws and regulations, including but not limited to those relating to protected species, minimum size limits, and seasons or areas closed to fishing that are not otherwise exempted by the permit. This is necessary for consistency with FGC subdivision 1022(a)(4) and enforcement purposes. Authorized activities that are exempt from the provisions of the FGC and regulations adopted thereto are specified on DFW 1103; all other applicable laws and regulations shall remain in effect.
- Standard Term 4 requires the EFP holder and authorized agent to cooperate with the Department by allowing personnel designated by the Department to board the fishing vessel on any fishing trip (if applicable) or enter a place of business operated by the EFP holder or authorized agent to retrieve, observe, or inspect any logbook, records,

data, equipment, procedures, or catch throughout the duration of the permit. This is necessary to enable the Department to obtain complete information about the EFP for resource management and enforcement purposes.

- Standard Term 5 requires the EFP holder or authorized agent to provide Department staff with a 24-hour notice prior to every fishing trip. The contact information for Department staff will be provided for this purpose at the time of permit issuance. A 24-hour minimum notification is necessary for tracking and enforcement purposes of fishing activities that are otherwise unauthorized except by the exemptions granted by the EFP (e.g., responding to a call-in tip line for reporting poaching or suspicious activity that is actually authorized under an EFP).

**SPECIAL CONDITIONS.** Any special conditions placed on the permit pursuant to subsection 91(i) will be added to DFW 1103. Because special conditions are project specific, it is necessary for the Department to provide a list of permit special conditions to make clear the specific special conditions approved for each EFP.

#### **Add Subsection 704(b)(3); Initial Permit Issuance Fee.**

Subsection 704(b)(3) specifies the fee in connection with proposed subsection 91(m)(1), and is necessary to recover the cost of the Department and the Commission cost pursuant to FGC subdivision 1022(g). As shown by calculation in Table 3b. below, the Initial Permit Issuance fee of \$880.50 includes Department staff time to review the qualifications and technical merit of the application and prepare the Department's recommendation and for Commission staff to prepare information for public notice.

#### **Add Subsection 704(b)(4); Annual Permit Tier Fees.**

Subsection 704(b)(4) specifies the annual permit fees in connection with proposed subsection 91(m)(2). This provision is necessary for the Department to recover cost for overseeing the EFP, consistent with FGC subdivision 1022(g). As discussed above (see subsection 91(m)(2)), permit fees are tiered according to the purpose of the EFP. The Department has determined that there are varying levels of effort involved in the administration of EFPs. It is anticipated that more staff time would be required to oversee EFPs pertaining to exploratory fishing compared to other purposes. Also, additional costs will be incurred for EFP projects that are facilitated (e.g., technical or scientific assistance) to some degree by the Department.

As shown by calculation in Table 3c.1 and 3c.2 below, the Tier 1 fee is \$450.50 and Tier 2 fee is \$1,063.50. However, the Department's LRB staff time is excluded from the cost recovery determination as this is considered a routine a service performed by the Department regardless of the type of permit. In addition, there will be no cost recovery for the law enforcement of Tiers 1 and 2 EFPs. In the interest of achieving the lowest possible annual permit fee, the Department will be absorbing the law enforcement costs for Tiers 1 and 2 EFPs as those would center around existing fisheries. Law enforcement costs, however, are included in the cost recovery for Tiers 3 and 4 EFPs. As shown by calculation in Table 3c.3 and 3c.4 below, the Tier 3 fee is \$4,271 and Tier 4 fee is \$9,786.50. Because special conditions for Tiers 3 and 4 EFPs informing the development of new or emerging fisheries (i.e., exploratory fishing) will be more extensive than Tiers 1 and 2 EFPs for improving the management of existing fisheries, the Department has determined that recovering the minimum estimated cost

for law enforcement is necessary to ensure compliance with the permit terms and special conditions as well as minimize potential conflicts between exploratory fishing EFPs and existing fisheries over resource allocation.

**Add Subsection 704(c); Permit Amendment Fees.**

Subsection 704(c) specifies the fees in connection with proposed subsections 91(k)(2)(A)2. and (k)(2)(A)3. (minor and major amendments, respectively), and is necessary to recover the Department's cost pursuant to FGC subdivision 1022(g). As shown by calculation in Table 3d.1 below, the minor amendment fee of \$191.50 includes Department staff time to review requested changes that fall within the allowances placed on the original permit. As noted in Table 3d.2 below, the major amendment fee of \$455.75 includes Department and Commission staff time to review and prepare for public notice requested changes to the original permit.

**Add Subsection 704(d); Box Crab Experimental Fishing Permits and Form Sunset Clause.**

Subsection 704(d) establishes that permit fee and form for the box crab EFP specified under subsection 704(a) will expire on April 1, 2023. This is necessary to clarify that subsection 704(a) will be invalid once the box crab EFP project ceases.

**Renumber and Add New Subsection 704(e); Annual Adjustments of Fees.**

In existing regulations, subsection 704(b) states that the Department shall annually adjust the fees of all licenses, stamps, permits, tags, or other entitlements required by the regulations of this section pursuant to the provisions of Section 699. Current subsection 704(b) will be renumbered to new subsection 704(e). This change is necessary to accommodate the addition of new fee items pertaining to this rulemaking.

In addition, because Section 699 relies on FGC Section 1050, this provision will be amended to reference the general statutory authority (i.e., FGC Section 1050) for the Department to make annual adjustments to the fees. This change is necessary to correctly rely upon and cite the primary authority under FGC.

Table 2. Cost recovery for Automated License Data System (ALDS) support

a. Startup costs

<b>Cost Description/ Personnel Classification</b>	<b>Program<sup>1</sup></b>	<b>Task</b>	<b>Time (hours)</b>	<b>Rate<sup>2</sup></b>	<b>Total Cost</b>
Information Technology Specialist I	ALDS IT	Item setup, configuration, and reporting	48	\$75.05	\$3,602.40
Total startup cost	--	--	--	--	\$3,602.40
Amortized over 5 years	--	--	--	--	\$720.48
Amortized startup cost per item <sup>3</sup>	--	--	--	--	\$48.03

b. Ongoing annual program costs

<b>Cost Description/ Personnel Classification</b>	<b>Program<sup>1</sup></b>	<b>Task</b>	<b>Time (hours)</b>	<b>Rate<sup>2</sup></b>	<b>Total Cost</b>
Information Technology Specialist I	ALDS IT	Item review	1	\$75.05	\$75.05
Total annual program costs	--	--	--	--	\$75.05
Annual program costs per item <sup>3</sup>	--	--	--	--	\$5.00

c. ALDS fee calculation

<b>Cost Description</b>	<b>Rate<sup>2</sup></b>	<b>Total Cost</b>
Amortized startup cost per item	--	\$48.03
Annual program costs per item	--	\$5.00
Overhead	24.32%	\$12.90
ALDS system costs per transaction	--	\$0.78
LRB operations cost per transaction	--	\$0.89
<b>Item fee</b>	--	<b>\$67.60</b>
<b>Item fee (rounded to nearest .25) per FGC Section 713</b>	--	<b>\$67.50</b>

Notes:

1. Program abbreviation: ALDS IT= Automated License Data System Information Technology
2. Rate equals median hourly wage with benefits by employee classification, or percentage of overhead.
3. Number of expected items sold per year is 15.

Sources: CalHR California State Civil Service Pay Scales by Classification (updated 1/21/2021); CDFW Budgets Branch for Staff Benefit Rates 2020/21 and Departmental Overhead Rates 2020/21.

Table 3. Estimated costs associated with implementing and administering the EFP Program for permanent Department staff

a. Experimental Fishing Permit application fee

<b>Fee Item/Personnel Classification</b>	<b>Program<sup>1</sup></b>	<b>Task</b>	<b>Time (hours)</b>	<b>Rate<sup>2</sup></b>	<b>Total Cost</b>
Environmental Scientist – Range C	MR	Review application for completeness	2	\$61.62	\$123.24
Subtotal	--	--	2	--	\$123.24
Overhead	--	--	--	24.32%	\$29.97
Total	--	--	2	--	\$153.21
Item fee (rounded to nearest 0.25) per FGC Section 713	--		--	--	\$153.25

b. Initial permit issuance fee

<b>Fee Item/Personnel Classification</b>	<b>Program<sup>1</sup></b>	<b>Task</b>	<b>Time (hours)</b>	<b>Rate<sup>2</sup></b>	<b>Total Cost</b>
Environmental Scientist – Range C	MR	Include, but not limited to, review application for content, develop permit special conditions, and prepare Department recommendation for Commission consideration	4	\$61.62	\$246.48
Sr. Environmental Scientist, Supervisor	MR	Review permit special conditions	1	\$96.42	\$96.42
Environmental Program Manager	MR	Review permit special conditions	0.5	\$111.49	\$55.75
Fish and Game Captain	LED	Review of fishing record of key participants and permit special conditions	2	\$92.49	\$184.98
Associate Governmental Program Analyst	LRB	Enter applicant information, assign tracking identification number, process payment, and issue permit	1	\$53.77	\$53.77
Associate Governmental Program Analyst	FGC	Prepare and distribute public notices	1	\$53.77	\$53.77
Sr. Environmental Scientist, Specialist	FGC	Review Department recommendations; prepare staff recommendation for Commission consideration	1	\$70.93	\$70.93
Subtotal <sup>3</sup>	--	--	9.5	--	\$708.33
Overhead	--	--	--	24.32%	\$172.27
Total	--	--	9.5	--	\$880.50

c. Experimental Fishing Permit annual permit fee

c.1. Tier 1 EFP

<b>Fee Item/Personnel Classification</b>	<b>Program<sup>1</sup></b>	<b>Task</b>	<b>Time (hours)</b>	<b>Rate<sup>2</sup></b>	<b>Total Cost</b>
Environmental Scientist – Range C	MR	Oversight of implementation of permit terms and conditions	5	\$61.62	\$308.10
Fish and Game Warden – Range B	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	5	\$60.62	\$303.10
Fish and Game Lieutenant, Supervisor	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	5	\$80.68	\$403.40
Fish and Game Captain	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	1	\$92.49	\$92.49
Large Vessel	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	5	\$196.00	\$980.00
Associate Governmental Program Analyst	LRB	Process payment and issue permit	1	\$53.77	\$53.77
Subtotal <sup>3</sup>	--	--	5	--	\$308.10
Overhead	--	--	--	24.32%	\$74.93
ALDS IT support <sup>4</sup>	--	--	--	--	\$67.50
Total	--	--	5	--	\$450.53
Item fee (rounded to nearest 0.25) per FGC Section 713	--		--	--	\$450.50

c.2. Tier 2 EFP

<b>Fee Item/Personnel Classification</b>	<b>Program<sup>1</sup></b>	<b>Task</b>	<b>Time (hours)</b>	<b>Rate<sup>2</sup></b>	<b>Total Cost</b>
Environmental Scientist – Range C	MR	Oversight of implementation of permit terms and conditions	13	\$61.62	\$801.06
Fish and Game Warden – Range B	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	5	\$60.62	\$303.10
Fish and Game Lieutenant, Supervisor	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	5	\$80.68	\$403.40
Fish and Game Captain	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	1	\$92.49	\$92.49
Large Vessel	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	5	\$196.00	\$980.00
Associate Governmental Program Analyst	LRB	Process payment and issue permit	1	\$53.77	\$53.77
Subtotal <sup>3</sup>	--	--	13	--	\$801.06
Overhead	--	--	--	24.32%	\$194.82
ALDS IT support <sup>4</sup>	--	--	--	--	\$67.50
Total	--	--	13	--	\$1,063.38
Item fee (rounded to nearest 0.25) per FGC Section 713	--		--	--	\$1,063.50

c.3. Tier 3 EFP

<b>Fee Item/Personnel Classification</b>	<b>Program<sup>1</sup></b>	<b>Task</b>	<b>Time (hours)</b>	<b>Rate<sup>2</sup></b>	<b>Total Cost</b>
Environmental Scientist – Range C	MR	Oversight of implementation of permit terms and conditions	26	\$61.62	\$1,602.12
Fish and Game Warden – Range B	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	5	\$60.62	\$303.10
Fish and Game Lieutenant, Supervisor	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	5	\$80.68	\$403.40
Fish and Game Captain	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	1	\$92.49	\$92.49
Large Vessel	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	5	\$196.00	\$980.00
Associate Governmental Program Analyst	LRB	Process payment and issue permit	1	\$53.77	\$53.77
Subtotal <sup>3</sup>	--	--	42	--	\$3,381.11
Overhead	--	--	--	24.32%	\$822.29
ALDS IT support <sup>4</sup>	--	--	--	--	\$67.50
Total	--	--	42	--	\$4,270.90
Item fee (rounded to nearest 0.25) per FGC Section 713	--		--	--	\$4,271.00

c.4. Tier 4 EFP

<b>Fee Item/Personnel Classification</b>	<b>Program<sup>1</sup></b>	<b>Task</b>	<b>Time (hours)</b>	<b>Rate<sup>2</sup></b>	<b>Total Cost</b>
Environmental Scientist – Range C	MR	Oversight of implementation of permit terms and conditions	98	\$61.62	\$6,038.76
Fish and Game Warden – Range B	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	5	\$60.62	\$303.10
Fish and Game Lieutenant, Supervisor	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	5	\$80.68	\$403.40
Fish and Game Captain	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	1	\$92.49	\$92.49
Large Vessel	LED	Enforce permit terms and conditions and related statutory and regulatory requirements	5	\$196.00	\$980.00
Associate Governmental Program Analyst	LRB	Process payment and issue permit	1	\$53.77	\$53.77
--	--	--	114	--	\$7,817.75
Subtotal <sup>3</sup>	--	--	--	24.32%	\$1,901.28
Overhead	--	--	--	--	\$67.50
ALDS IT support <sup>4</sup>	--	--	114	--	\$9,786.53
Total <sup>3</sup> (rounded to nearest 0.25) per FGC Section 713	--		--	--	\$9,786.50

d. Permit amendment fees

d.1. Minor amendment fee

<b>Fee Item/Personnel Classification</b>	<b>Program<sup>1</sup></b>	<b>Task</b>	<b>Time (hours)</b>	<b>Rate<sup>2</sup></b>	<b>Total Cost</b>
Environmental Scientist – Range C	MR	Review amendment request	1	\$61.62	\$61.62
Fish and Game Captain	LED	Review amendment request	1	\$92.49	\$92.49
Subtotal	--	--	2	--	\$154.11
Overhead	--	--	--	24.32%	\$37.48
Total	--	--	2	--	\$191.59
Item fee (rounded to nearest 0.25) per FGC Section 713	--		--	--	\$191.50

d.2. Major amendment fee

<b>Fee Item/Personnel Classification</b>	<b>Program<sup>1</sup></b>	<b>Task</b>	<b>Time (hours)</b>	<b>Rate<sup>2</sup></b>	<b>Total Cost</b>
Environmental Scientist – Range C	MR	Include, but not limited to, review amendment request and prepare Department recommendation for Commission consideration	3	\$61.62	\$184.86
Fish and Game Captain	LED	Review amendment request	1	\$92.49	\$92.49
Associate Governmental Program Analyst	FGC	Prepare and distribute public notice	1	\$53.77	\$53.77
Sr. Environmental Scientist (Specialist).	FGC	Prepare staff recommendation for Commission consideration	0.5	\$70.93	\$35.47
--	--	Subtotal	5.5	--	\$366.59
--	--	Overhead	--	24.32%	\$89.15
--	--	Total	5.5	--	\$455.74
Item fee (rounded to nearest 0.25) per FGC Section 713	--		--	--	\$455.75

Notes:

1. Program abbreviation: ALDS IT= Automated License Data System Information Technology; LED= Law Enforcement Division; LRB = License and Revenue Branch, MR= Marine Region, FGC = Fish and Game Commission
2. Rate equals median hourly wage with benefits (60.960% for Peace Officers and 52.734% for Non-Peace Officers) by employee classification, or percentage of overhead.
3. Excludes LRB's costs associated with Associate Governmental Program Analyst classification as intake and processing of fees and permit issuance are routine services provided by the Department LRB all EFP tiers; excludes LED personnel and vessel costs for Tier 1 and Tier 2 EFPs only.
4. See Table 3 for a detailed cost breakdown of tasks related to ALDS IT support.

Cost-sharing by the Department will occur in the form of in-kind services, including permanent staff and vessel time beyond the minimum hours estimated for cost-recovery and other non-permanent staff time (e.g., Scientific Aids).

The estimated costs do not include any applicable license buyer surcharge.

Sources: CalHR California State Civil Service Pay Scales by Classification (updated 1/20/2021); CDFW Budgets Branch for Staff Benefit Rates 2020/21 and Departmental Overhead Rates 2020/21.

#### (b) Goals and Benefits of the Regulation

The Legislature has declared that well-supervised, strategic experimentation that tests hypotheses and/or new management approaches and that aligns with overarching state management goals and research priorities would likely accelerate the development of innovative scientific and technology tools for improving state fisheries management. It is the policy of the state to establish an EFP Program that fosters collaborative and cooperative marine fisheries research that renders critical information for designing policies and management strategies to better protect California's ocean ecosystems and the fisheries and coastal communities they support. The proposed EFP Program Phase II regulations would establish a state process for integrating innovation, science, management, and leveraging collaboration with the fishing industry and research entities to fill data gaps and address priority research questions necessary to manage the long-term sustainability of state fisheries and other marine living resources. This rulemaking would provide a path for innovation and research in the existing management system by permitting limited exemptions from state fishing law and regulations for experimental fishing activities.

The benefits of the proposed regulations include valuable and productive state managed fisheries research to meet the challenges of rapid changes in ocean conditions and the climate; promotion of collaboration with stakeholders to develop information available for management and, in some cases, inform the development of fisheries management plans; and consistency with goals of the Marine Life Management Act (Section 7050, et seq., FGC). The proposed regulations will provide benefits by reducing the regulatory burden for stakeholders to pursue on-the-water experimentation and exploration that will improve or provide for new opportunities for fishing, provide stronger protections for marine habitats, and ensure long-term sustainable fisheries in California.

#### (c) Authority and Reference Sections from Fish and Game Code for Regulation

- Section 90:

Authority: Sections 1022, Fish and Game Code.

Reference: Section 1022, Fish and Game Code.

- Section 91:

Authority: Sections 200, 205 and 1022, Fish and Game Code.

Reference: Sections 200, 205 and 1022, Fish and Game Code.

- Section 120.1

Authority: 8591, 8841 and 8842, Fish and Game Code.

Reference: Sections 8591, 8841 and 8842, Fish and Game Code.

- Section 149

Authority: Sections 7078, 7701, 7708, 8026, 8425 and 8429.5, Fish and Game Code.

Reference: Sections 7701, 7708, 8026, 8425, 8429.5, 8429.7, 12159 and 12160, Fish and Game Code.

- Section 149.3

Authority: Sections 7071, 7078 and 8425, Fish and Game Code.

Reference: Sections 7070, 7071, 7075, 7078 and 7083, Fish and Game Code.

- Section 180

Authority: Sections 1022, 7701, 7708, 8491 and 8500, Fish and Game Code.

Reference: Sections 1022, 7700 through 7710.5, 8490, 8491, 8500, 9000 through 9011 and 9015, Fish and Game Code.

- Section 704:

Authority: Sections 713, 1022, and 1050, Fish and Game Code.

Reference: Sections 713, 1022, and 1050, Fish and Game Code.

(d) Specific Technology or Equipment Required by Regulatory Change

The proposed regulations do not mandate use of specific technologies or equipment; however, permit special conditions (subsection 91(e)) may stipulate gear configurations and/or procedures to support a system to monitor and track authorized activities deemed necessary for research purposes and the conservation and management of marine resources and the environment.

(e) Identification of Reports or Documents Supporting Regulation Change

None.

(f) Public Discussions of Proposed Regulations Prior to Notice Publication

March 20, 2019, Sacramento, California. The Department briefed the Commission's Marine Resources Committee (MRC) on the development of the EFP Program, including discussion of the phased approach for program implementation.

January 14, 2020, EFP Program Stakeholder Workshop (In-person and webinar). In collaboration with The Nature Conservancy (TNC), the Department and Commission held a public workshop to inform and solicit feedback and input from stakeholders on potential program components and core considerations in developing the EFP Program.

April 29, 2020, Teleconference. The Department briefed the MRC on key discussion topics and stakeholder recommendations from January 14 EFP Program workshop and progress on developing the implementing regulations for Phase II.

July 29, 2020. Teleconference. The Department updated the MRC on the development of the

proposed Phase II of the EFP Program, including application submittal and approval cycle, cost recovery approach (permit tier structure), and opportunities for enhancing collaboration. The Department noted that it will continue the development of the program while the rulemaking schedule is on hold due to the COVID-19 pandemic.

March 29, 2021. EFP Informational Webinar. The Department hosted a public webinar to provide information on the latest developments in implementing the California Fisheries Innovation Act of 2018. The Department provided an overview of the proposed draft regulatory framework for the EFP Program Phase II. Participants were invited to submit written comments which were discussed during a Q&A session at the end of the webinar.

#### IV. Description of Reasonable Alternatives to Regulatory Action

##### (a) Alternatives to Regulation Change

For the subject regulatory proposal, a couple of options for implementing EFP Phase II were considered. Bi-annual (i.e., twice a year) application deadline and approval cycles were considered and rejected due the time sensitive nature of the proposed review process and workload considerations for the reviewing programs within the Department's Marine Region.

Procedures to prioritize projects in regulations were considered but rejected. As part of the proposed approval process, the Commission decides the priorities when it makes decisions on the EFP applications.

A uniform permit fee reduction was considered to accommodate stakeholder requests but rejected. This alternative does not incentivize studies identified by the Department as a critical need or priority for improving fisheries management. In addition, this alternative is inconsistent with FGC subdivision 1022(g), resulting fees fall below reasonable cost recovery for administrating and enforcing EFPs.

No other alternatives have been identified by or brought to the attention of Commission staff that would have the same desired regulatory effect.

##### (b) No Change Alternative

The no change alternative would leave existing regulations in place; thereby, limiting the issuance of EFPs to those previously approved in 2018 for the Box Crab Program (Section 90) which expires in 2023. This would preclude full implementation of the EFP Program and cause the Commission to fall out of compliance with FGC Section 1022 as no new EFPs can be approved or issued under the EFP Program.

#### V. Mitigation Measures Required by Regulatory Action

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures are needed.

#### VI. Impact of Regulatory Action

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

##### (a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the

## Ability of California Businesses to Compete with Businesses in Other States:

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states.

No businesses are expected to be negatively impacted by the proposed regulations because the regulations are voluntary to those who will seek an EFP. The actual number of businesses that may be impacted by the proposed regulations is unknown, but based on estimates and interest from stakeholders may range around 100 businesses amongst commercial fisheries, commercial passenger fishing vessels (CPFVs), or partnerships of these types of business with research organizations. The proposed regulations implement a process for the Commission to authorize and the Department to issue EFPs. The economic impact to the state is anticipated to be unchanged with no adverse impacts to California businesses or their ability to compete with other businesses in other states.

## (b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The Commission does not anticipate any impacts on the creation or elimination of jobs, the creation of new business, the elimination of existing businesses or the expansion of businesses in California. The proposed regulations would establish a framework for permitting marine fishing activities that are otherwise prohibited under the FGC or state regulations that can improve the management of state fisheries, including but not limited to improving the sustainability of state marine fisheries, efficiency of fishing effort, and reducing capture/discard of non-target species. Any future management action stemming from the outcome of the EFP research will need to be addressed in a separate rulemaking process.

The Commission anticipates indirect benefits to the health and welfare of California residents. Providing opportunities for experimental fishing activities promotes the development of information available for the conservation and sustainable use of California's marine resources which provide valuable economic, aesthetic, recreational, educational, scientific, nutritional, social, and historic benefits to the people of the state.

The Commission does not anticipate any benefits to worker safety because the proposed regulations would not have any impact on working conditions.

The Commission anticipates benefits to the state's environment in the sustainable management of natural resources.

## (c) Cost Impacts on a Representative Private Person or Business:

The proposed regulations are necessary to fully implement a state EFP Program in accordance with FGC Section 1022. California businesses may elect to participate in the EFP program and will likely do so if they perceive that the cost of the EFP fees will yield an economically beneficial result from the authorized experimental marine fishing activities. Applicants and EFP holders will incur costs related to application review, EFP issuance, and oversight on EFP implementation by the Department. The proposed EFP fee items include application fee (\$153.25), initial permit issuance fee (\$880.50), permit fee based on the

specific permit tier (Tier 1 \$450.50, Tier 2 \$1,063.50, Tier 3 \$4,471.00, Tier 4 \$9,786.50), and amendment fees minor (\$191.50, major \$455.75). The proposed fees are necessary to recovery a portion of the implementation and administrative costs of the Department relating to the EFP, as provided under FGC subdivision 1022(g).

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

There will be ongoing costs for the Department to implement the EFP Program. A portion of these costs would be offset by the proposed EFP Program fees which were determined using a “minimum” cost recovery approach. The Department conducted a Cost Recovery Analysis (Attachment 1 to this ISOR) to evaluate the full range of cost recovery for Department and Commission staff time. The analysis includes a “minimum,” “mid,” and “high” cost recovery for permit fees. Recognizing the potential benefit of the EFP Program to the state, the Department opted for “minimum” cost recovery of permanent staff time and enforcement (i.e., recovery of only certain aspects of costs at the lowest level of functioning service) and not to pursue full cost recovery as provided by Fish and Game Code subdivision 1022(g).

There are no cost or savings in federal funding to the state.

(e) Nondiscretionary Costs/Savings to Local Agencies: None.

(f) Programs Mandated on Local Agencies or School Districts: None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code: None.

(h) Effect on Housing Costs: None.

## VII. Economic Impact Assessment

The state marine fishing economy consists of two industry sectors: 1) fishing operations, transport, and support; and 2) seafood sales, and processing. These sectors include several different marine-related industries: commercial harvesters, seafood processors and dealers, seafood wholesalers and distributors, and retail seafood sales. California businesses may elect to participate in the EFP program and will likely do so if they perceive that the cost of the EFP fees will yield an economically beneficial result from the authorized experimental marine fishing activities. The Department has received limited feedback from interested parties about their expected participation or the species that they would expect to use the permits for, and thus is not prepared to speculate about participation in the proposed EFP program at this time. However, the proposed regulation has the potential for research that would allow for new fishing opportunities in the state, which could potentially result in a positive economic impact.

(a) Effects of the Regulation on the Creation or Elimination of Jobs Within the State

The Commission does not anticipate any impacts to the creation or elimination of jobs within the state. The proposed regulations are not likely to have an impact on the number of commercial or sport fishing businesses currently in operation. The proposed regulations establish a regulatory framework for implementing the EFP Program (FGC Section 1022), and any activities authorized under the EFP must not have an adverse impact to established fisheries pursuant to FGC subdivision 1022(a)(2).

(b) Effects of the Regulation on the Creation of New Businesses or the Elimination of Existing

## Businesses Within the State

The Commission does not anticipate any impacts on the creation of new businesses or the elimination of existing businesses within the state. The proposed regulations establish the regulatory framework that meets the legislative intent for a state EFP Program that would promote collaborative and cooperative fisheries research and develop information for management of state fisheries. Any future management action stemming from the findings of the EFP will need to be addressed in a separate rulemaking process.

### (c) Effects of the Regulation on the Expansion of Businesses Currently Doing Business Within the State

The Commission does not anticipate any significant impacts on the expansion of businesses currently doing business within the state as the result of the proposed regulations. The intent of the proposed regulations is to provide opportunities for short-term fisheries research that specifically allow EFP holders (and their authorized agents) to conduct commercial or recreational marine fishing activities that would otherwise be prohibited under current state fishing laws or regulations pursuant to FGC Section 1022. Due to the experimental nature of the fishing operations conducted under the EFP and the number of permits expected to be issued (for the purposes of cost recovery, it is estimated to be no more than 15 permits issued at any given time), these permits are not expected to significantly change the level of commercial or recreational fishing activities in California or affect the expansion of businesses currently operating in the state. Any future management action stemming from the findings of the EFP will need to be addressed in a separate rulemaking process.

### (d) Benefits of the Regulation to the Health and Welfare of California Residents

The Commission anticipates indirect benefits to the health and welfare of California residents. In addition to delivering effect outcomes that protect the state's natural resources, port communities, and coastal economies; the proposed EFP Program is anticipated to produce more sustainable seafood through improved fishing practices and expand seafood choices by opening new fishing opportunities in the state for emerging species.

### (e) Benefits of the Regulation to Worker Safety

The Commission does not anticipate any benefits to worker safety because the proposed regulations would not have any impact on working conditions.

### (f) Benefits of the Regulation to the State's Environment

The Commission anticipates benefits to the state's environment in the sustainable management of natural resources. It is the policy of the state to ensure conservation, sustainable use, and where feasible, restoration of California's marine living resources for the benefit of all the citizens of the state (FGC subdivision 7050(b)). The proposed regulations will allow for experimentation and innovation that may improve the health, sustainability, and management of commercial and recreational marine fisheries.

## **Informative Digest/Policy Statement Overview**

Unless otherwise specified, all section references in this document are to Title 14 of the California Code of Regulations (CCR).

The California Department of Fish and Wildlife (Department) is recommending that California Fish and Game Commission (Commission) add new Section 91, which will establish a state Experimental Fishing Permit (EFP) Program for marine fisheries. This regulatory proposal will also amend current regulations in sections 90, 120.1, 180, and 704 for consistency with recent changes in the Fish and Game Code (FGC) pertaining experimental marine fishing activities and amend Section 149 and repeal Section 149.3 to remove nonoperational experimental market squid vessel permit provisions to harmonize the regulations associated with experimental fishing activities and avoid confusion with the use of the term “experimental” in reference to other permits outside the scope of the EFP Program.

The proposed regulations will implement Assembly Bill (AB) 1573, also known as the California Fisheries Innovation Act of 2018, which became effective on January 1, 2019. This legislative action repealed the experimental gear permit (EGP) provisions in FGC Section 8606 and added new FGC Section 1022, providing for an EFP program to facilitate fishery-related exploration and experimentation to inform state management of commercial and recreational fisheries.

Under current regulations (Section 90), EFPs may be issued only to those applicants previously approved by the Commission in 2018 to receive an experimental gear permit to participate in a collaborative research program evaluating the potential of a brown box crab fishery in California (box crab program). Section 90 regulations (EFP Program Phase I) implement, in part, AB 1573, ensuring that the current experimental box crab fishery research program can continue while a larger programmatic rulemaking (EFP Program Phase II) can be developed to build out an EFP program pursuant to FGC Section 1022. Requests for new EFPs cannot be accommodated until EFP Program Phase II regulations (this rulemaking) are in place.

The proposed regulations will add new Section 91, “Marine Fisheries: Experimental Fishing Permit Program,” which will establish the procedures for application submittal, Department review, public notice and comment, Commission approval, and Department issuance and administration of new EFPs. Specifically, Section 91 will:

- describe the purposes and scope of the EFP Program (subsection 91(a));
- define terms and phrases used within the proposed regulations (subsection 91(b));
- establish the application procedures and fees, including pre-application consultation and application requirements (subsection 91(c));
- establish the process for reviewing and accepting EFP applications by the Department (subsection 91(d));
- establish the process for public notice of and comment on an EFP application (subsection 91(e));
- establish the process for Commission action on an EFP application, including the

requirement for grounds for permit denial (subsection 91(f));

- establish the process for Department issuance of an EFP (subsection 91(g));
- establish the permit standard terms are set forth on form DFW 1103 (subsections 91(h));
- establish that permit special conditions may be placed on an EFP for research purposes and the conservation of marine resources and the environment and are specified on form DFW 1103 (subsection 91(i));
- establish that it is unlawful to operate an EFP in violation of the permit standard terms and special conditions (subsection 91(j));
- describe the types of updates and amendments that may be made to an approved EFP (subsection 91(k));
- describe the annual and final reporting requirements for EFPs (subsection 91(l));
- establish the permit tiers and annual permit fees, including a permit fee reduction option (subsection 91(m));
- describe the term of the EFP and the permit renewal process (subsection 91(n));
- describe the causes and procedures for permit suspension, revocation, cancellation, or non-renewal by the department (subsection 91(o)); and
- establish the process for reconsideration (subsection 91(p)).

In addition, Section 90 is proposed to be amended to add a sunset provision (subsection 90(f)) specifying that this section shall expire on April 1, 2023, which is the project end date of the Box Crab EFPs. Additionally, the title of Section 90 will be amended to read “Issuance of Box Crab Experimental Fishing Permits” and a new provision will be added (subsection 90(g)) to make clear that Section 90 applies only to the EFPs issued for the box crab program, and that the requirements of proposed Section 91 will not affect the Box Crab EFPs.

Section 704 will be amended to add fee items to the EFP fee schedule pertaining to Phase II, which includes an application fee, initial permit issuance fee, annual permit fees for Tiers 1–4 EFPs, and minor and major amendment fees. In addition, new form DFW 1103 (NEW 04/06/21), Marine Fisheries: Experimental Fishing Permit Terms and Conditions, is proposed to be incorporated by reference in Section 704 as it would be unduly expensive and impractical to publish in Title 14, CCR. This form, containing the EFP number, a description of the authorized activity, a list of all persons and vessels conducting activities under the EFP, and a list of the permit standard terms and special conditions, is required for all EFPs and is necessary for compliance with Section 91 and FGC Section 1022.

Amendments to regulations in sections 120.1, and 180 are necessary to reflect changes in the FGC pursuant to AB 1573 and ensure consistency with the proposed regulations.

Amendments to regulations in Section 149 would eliminate cross reference to Section 149.3 for experimental market squid vessel permits and nonoperational provisions of Section 149.3 would be repealed. Future experimental fishing for market squid will be subject to the Phase II aspect of the EFP Program.

Other minor, non-substantive editorial changes (subsection renumbering) to Section 704 are proposed to improve clarity and consistency of the regulations. Non-substantive updates are proposed to the authority and reference citations for Section 180 to list sections individually.

### **Benefit of the Regulations:**

The Legislature has declared that well-supervised, strategic experimentation that tests hypotheses and/or new management approaches and that aligns with overarching state management goals and research priorities would likely accelerate the development of innovative scientific and technology tools for improving state fisheries management. It is the policy of the state to establish an EFP Program that fosters collaborative and cooperative marine fisheries research that renders critical information for designing policies and management strategies to better protect California's ocean ecosystems and the fisheries and coastal communities they support. The proposed regulations would establish a state process for integrating innovation, science, management, and leveraging collaboration with the fishing industry and research entities to fill data gaps and address priority research questions necessary to manage the long-term sustainability of state fisheries and other marine living resources. This rulemaking would provide a path for innovation and research in the existing management system by permitting limited exemptions from state fishing law and regulations for experimental fishing activities.

The benefits of the proposed regulations include valuable and productive fisheries research for state managed fisheries to meet the challenges of rapid changes in ocean conditions and the climate; promotion of collaboration with stakeholders to develop information available for management and, in some cases, inform the development of fisheries management plans; and consistency with the goals of the Marine Life Management Act (FGC Section 7050 et seq.). The proposed regulations will provide benefits by reducing the regulatory burden for stakeholders to pursue on-the-water experimentation and exploration that will improve or provide for new opportunities for fishing, provide stronger protections for marine habitats, and ensure long-term sustainable fisheries in California.

### **Consistency and Compatibility with Existing Regulations:**

The proposed regulations are neither inconsistent nor incompatible with existing state regulations. Section 20, Article IV, of the state Constitution specifies that the Legislature may delegate to the Commission such powers relating to the protection and propagation of fish and game as the Legislature sees fit. The Legislature has delegated to the Commission the power to regulate the review, approval, and issuance of experimental fishing permits that authorize commercial or recreational marine fishing activity that is otherwise prohibited by law (FGC Section 1022). No other state agency has the authority to promulgate experimental fishing permit regulations. The Commission has reviewed its own regulations and finds that the proposed regulations are neither inconsistent nor incompatible with existing state regulations. The Commission has searched the CCR for any regulations regarding the review, approval, and issuance of experimental fishing permits and has found no such regulation; therefore, the Commission has concluded that the proposed regulations are neither inconsistent nor incompatible with existing state regulations.

## **Attachment 1 to the Initial Statement of Reasons (ISOR)**

### **Experimental Fishing Permit Program Phase II Cost Recovery Analysis for Permit Fees**

Pursuant to Fish and Game Code (FGC) subdivision 1022(g), the Fish and Game Commission (Commission) may establish a fee schedule to fully recover, but not exceed, all reasonable implementation and administrative costs of the Commission and the California Department of Fish and Wildlife (Department) relating to the experimental fishing permit (EFP). To determine what fees are reasonable, the Department considered both its and the Commission's cost of doing business. Estimates of the Commission and the Department staff time (by classification and median hourly rates) to complete EFP related assignments or responsibilities (i.e., application review, development of recommendations, preparation of public notices, issuance of permits, oversight, and enforcement of EFPs) were considered as part of the cost estimating process.

Due to the difficulty of predicting costs for a new permit program that can accommodate multiple purposes with varying levels of Department facilitation of the permit, the fee determination process used a range of cost estimates for the annual permit fee (minimum, mid, and high; see Table 1). It was determined that minimum cost recovery would yield the most accurate estimate of staff time as it is based on lowest operational costs and can be applied across all purposes of the EFP (Table 2). Mid- cost (Table 3) and High- cost (Table 4) recovery estimates were considered but rejected as the resulting fees would substantially scale up the EFP fees by 43-132%. To recognize the potential benefits of EFPs to the state (increased quantity and quality of data, inclusion of fisher's knowledge in science and management, and improved fisheries management), the Commission and the Department would absorb all costs above the minimum estimate. Overall, for annual permit fees, the minimum recovery is about half of the high recovery estimate (see the last row in Tables 2-4).

**Table 1: Summary of annual permit fees based on minimum, mid and high (approaching full) program cost recovery. Mid- and high- cost recovery estimates were considered but rejected.**

<b>Cost Recovery</b>	<b>Permit Tier 1</b>	<b>Permit Tier 2</b>	<b>Permit Tier 3</b>	<b>Permit Tier 4</b>
Minimum	<b>\$450.50</b>	<b>\$1,063.50</b>	<b>\$4,271.00</b>	<b>\$9,786.50</b>
Mid	<b>\$680.35</b>	<b>\$1,523.00</b>	<b>\$7,095.50</b>	<b>\$14,679.50</b>
High	<b>\$910.25</b>	<b>\$1,982.50</b>	<b>\$9,919.75</b>	<b>\$19,572.25</b>

**Table 2. Minimum Cost Recovery: Annual Permit Fee Tiers 1-4 (Proposed)**

Classification	Program <sup>1</sup>	Rate <sup>2</sup>	Tier 1 Hours	Tier 1 Total	Tier 2 Hours	Tier 2 Total	Tier 3 Hours	Tier 3 Total	Tier 4 Hours	Tier 4 Total
Environmental Scientist - Range C	MR	\$61.62	5	\$308.10	13	\$801.06	26	\$1,602.12	98	\$6,038.76
Sr. Environmental Scientist, Supervisor	MR	\$96.42	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
Environmental Program Manager	MR	\$111.49	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
Fish and Game Warden – Range B	LED	\$60.62	5	\$0.00 <sup>3</sup>	5	\$0.00 <sup>3</sup>	5	\$303.10	5	\$303.10
Fish and Game Lieutenant, Supervisor	LED	\$80.68	5	\$0.00 <sup>3</sup>	5	\$0.00 <sup>3</sup>	5	\$403.40	5	\$403.40
Fish and Game Captain	LED	\$92.49	1	\$0.00 <sup>3</sup>	1	\$0.00 <sup>3</sup>	1	\$92.49	1	\$92.49
Large vessel	LED	\$196.00	5	\$0.00 <sup>3</sup>	5	\$0.00 <sup>3</sup>	5	\$980.00	5	\$980.00
Associate Governmental Program Analyst	LRB	\$53.77	1	\$0.00 <sup>3</sup>	1	\$0.00 <sup>3</sup>	1	\$0.00 <sup>3</sup>	1	\$0.00 <sup>3</sup>
MR subtotal	-	-	5	\$308.10	13	\$801.06	26	\$1,602.12	98	\$6,038.76
LED subtotal	-	-	0	\$0.00	0	\$0.00	16	\$1,778.99	16	\$1,778.99
-	-	-	-	-	-	-	-	-	-	-
Subtotal <sup>3</sup>	-	-	5	\$308.10	13	\$801.06	42	\$3,381.11	114	\$7,817.75
Overhead	-	24.32%	-	\$74.93	-	\$194.82	-	\$822.29	-	\$1,901.28
ALDS IT Support <sup>4</sup>	-	-	-	\$67.50	-	\$67.50	-	\$67.50	-	\$67.50
<b>Grand total</b>	-	-	-	<b>\$450.53</b>	-	<b>\$1,063.38</b>	-	<b>\$4,270.90</b>	-	<b>\$9,786.53</b>
<b>Rounded to nearest .25 per FGC 713</b>	-	-	-	<b>\$450.50</b>	-	<b>\$1,063.50</b>	-	<b>\$4,271.00</b>	-	<b>\$9,786.50</b>

1. Program abbreviation: ALDS IT= Automated License Data System Information Technology; LED= Law Enforcement Division; LRB = License and Revenue Branch, MR= Marine Region, FGC = Fish and Game Commission
2. Rate equals median hourly wage with benefits (60.960% for Peace Officers and 52.734% for Non-Peace Officers) by employee classification, or percentage of overhead.
3. Excludes LRB's costs associated with Associate Governmental Program Analyst classification as intake and processing of fees and permit issuance are routine services provided by the Department LRB all EFP tiers; excludes LED personnel and vessel costs for Tier 1 and Tier 2 EFPs only.

4. See Table 2 of the ISOR for a detailed cost breakdown of tasks related to ALDS IT support.

Cost-sharing by the Department will occur in the form of in-kind services, including permanent staff and vessel time beyond the minimum hours estimated for cost-recovery and other non-permanent staff time (e.g., Scientific Aids).

The estimated costs do not include any applicable license buyer surcharge.

Sources: CalHR California State Civil Service Pay Scales by Classification (updated 1/20/2021); CDFW Budgets Branch for Staff Benefit Rates 2020/21 and Departmental Overhead Rates 2020/21.

**Table 3. Mid-level Cost Recovery: Annual Permit Fee Tiers 1-4 (Considered but Rejected)**

Classification	Program <sup>1</sup>	Rate <sup>2</sup>	Tier 1 Hours	Tier 1 Total	Tier 2 Hours	Tier 2 Total	Tier 3 Hours	Tier 3 Total	Tier 4 Hours	Tier 4 Total
Environmental Scientist - Range C	MR	\$61.62	8	\$492.96	19	\$1,170.78	34	\$2,095.08	133	\$8,195.46
Sr. Environmental Scientist, Supervisor	MR	\$96.42	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
Environmental Program Manager	MR	\$111.49	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
Fish and Game Warden – Range B	LED	\$60.62	5	\$0.00 <sup>3</sup>	5	\$0.00 <sup>3</sup>	10	\$606.20	10	\$606.20
Fish and Game Lieutenant, Supervisor	LED	\$80.68	5	\$0.00 <sup>3</sup>	5	\$0.00 <sup>3</sup>	10	\$806.80	10	\$806.80
Fish and Game Captain	LED	\$92.49	1	\$0.00 <sup>3</sup>	1	\$0.00 <sup>3</sup>	2	\$184.98	2	\$184.98
Large vessel	LED	\$196.00	5	\$0.00 <sup>3</sup>	5	\$0.00 <sup>3</sup>	10	\$1,960.00	10	\$1,960.00
Associate Governmental Program Analyst*	LRB	\$53.77	1	\$0.00 <sup>3</sup>	1	\$0.00 <sup>3</sup>	1	\$0.00 <sup>3</sup>	1	\$0.00 <sup>3</sup>
MR subtotal	-	-	8	\$492.96	19	\$1,170.78	34	\$2,095.08	133	\$8,195.46
LED subtotal	-	-	0	\$0.00	0	\$0.00	32	\$3,557.98	32	\$3,557.98
-	-	-	-	-	-	-	-	-	-	-
Subtotal <sup>3</sup>	-	-	8	\$492.96	19	\$1,170.78	66	\$5,653.06	165	\$11,753.44
Overhead	-	24.32%	-	\$119.89	-	\$284.73	-	\$1,374.82	-	\$2,858.44
ALDS IT Support <sup>4</sup>	-	-	-	\$67.50	-	\$67.50	-	\$67.50	-	\$67.50
<b>Grand total</b>	-	-	-	<b>\$680.35</b>	-	<b>\$1,523.01</b>	-	<b>\$7,095.38</b>	-	<b>\$14,679.38</b>
<b>% Increase from Minimum</b>			<b>51%</b>		<b>43%</b>		<b>66%</b>		<b>50%</b>	

**Table 4. High Cost Recovery (approaching full): Annual Permit Fee Tiers 1-4 (Considered but Rejected)**

Classification	Program <sup>1</sup>	Rate <sup>2</sup>	Tier 1 Hours	Tier 1 Total	Tier 2 Hours	Tier 2 Total	Tier 3 Hours	Tier 3 Total	Tier 4 Hours	Tier 4 Total
Environmental Scientist - Range C	MR	\$61.62	11	\$677.82	25	\$1,540.50	42	\$2,588.04	168	\$10,352.16
Sr. Environmental Scientist, Supervisor	MR	\$96.42	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
Environmental Program Manager	MR	\$111.49	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
Fish and Game Warden – Range B	LED	\$60.62	5	\$0.00 <sup>3</sup>	5	\$0.00 <sup>3</sup>	15	\$909.30	15	\$909.30
Fish and Game Lieutenant, Supervisor	LED	\$80.68	5	\$0.00 <sup>3</sup>	5	\$0.00 <sup>3</sup>	15	\$1,210.20	15	\$1,210.20
Fish and Game Captain	LED	\$92.49	1	\$0.00 <sup>3</sup>	1	\$0.00 <sup>3</sup>	3	\$277.47	3	\$277.47
Large vessel	LED	\$196.00	5	\$0.00 <sup>3</sup>	5	\$0.00 <sup>3</sup>	15	\$2,940.00	15	\$2,940.00
Associate Governmental Program Analyst*	LRB	\$53.77	1	\$0.00 <sup>3</sup>	1	\$0.00 <sup>3</sup>	1	\$0.00 <sup>3</sup>	1	\$0.00 <sup>3</sup>
MR subtotal	-	-	11	\$677.82	25	\$1,540.50	42	\$2,588.04	168	\$10,352.16
LED subtotal	-	-	0	\$0.00	0	\$0.00	48	\$5,336.97	48	\$5,336.97
-	-	-	-	-	-	-	-	-	-	-
Subtotal <sup>3</sup>	-	-	11	\$677.82	\$25.00	\$1,540.50	\$90.00	\$7,925.01	\$216.00	\$15,689.13
Overhead	-	24.32%	-	\$164.85	-	\$374.65	-	\$1,927.36	-	\$3,815.60
ALDS IT Support <sup>4</sup>	-	-	-	\$67.50	-	\$67.50	-	\$67.50	-	\$67.50
<b>Grand total</b>	-	-	-	<b>\$910.17</b>	-	<b>\$1,982.65</b>	-	<b>\$9,919.87</b>	-	<b>\$19,572.23</b>
<b>% Increase from Minimum</b>	-	-	-	<b>102%</b>	-	<b>86%</b>	-	<b>132%</b>	-	<b>100%</b>

In addition to the annual permit fees, the Department also evaluated a “high” (approaching full) cost recovery analysis for select other fees. The initial permit issuance fee aims to recover costs relating to review of the application for content, development of special conditions, preparing Department recommendations for the Commission, as well as reviewing fishing records of applicants, processing payment, preparing and distributing public notices, and preparing recommendations from Commission staff for Commissioner consideration (Table 5). The minimum cost recovery permit issuance fee is about 87% lower than the high cost recovery issuance fee.

**Table 5. Initial Permit Issuance Fee Minimum (Proposed) vs. High (Considered but Rejected)**

Classification	Program <sup>1</sup>	Rate <sup>2</sup>	Minimum Hours	Minimum Total	High Hours	High Total
Environmental Scientist - Range C	MR	\$61.62	4	\$246.48	14	\$862.68
Sr. Environmental Scientist, Supervisor	MR	\$96.42	1	\$96.42	1	\$96.42
Environmental Program Manager	MR	\$111.49	0.5	\$55.75	0.5	\$55.75
Fish and Game Warden – Range B	LED	\$60.62	0	\$0.00	0	\$0.00
Fish and Game Lieutenant, Supervisor	LED	\$80.68	0	\$0.00	0	\$0.00
Fish and Game Captain	LED	\$92.49	2	\$184.98	2	\$184.98
Associate Governmental Program Analyst	FGC	\$53.77	1	\$53.77	1	\$53.77
Environmental Scientist (Specialist)	FGC	\$70.93	1	\$70.93	1	\$70.93
-	MR	subtotal	5.5	\$398.65	15.5	\$1,014.85
-	LED	subtotal	2	\$184.98	2	\$184.98
-	FGC	subtotal	2	\$124.70	2	\$124.70
Subtotal	-	--	9.5	\$708.33	19.5	\$1,324.53
Overhead	-	24.32%	--	\$172.27	--	\$322.13
<b>Total</b>	-	-	<b>7.5</b>	<b>\$880.60</b>	<b>17.5</b>	<b>\$1,646.66</b>
<b>Rounded to nearest .25 per FGC 713</b>	-	-		<b>\$880.50</b>		<b>\$1,646.75</b>

**% Increase from Minimum**

**87%**

1. Program abbreviation: ALDS IT= Automated License Data System Information Technology; LED= Law Enforcement Division; LRB = License and Revenue Branch, MR= Marine Region, FGC = Fish and Game Commission
2. Rate equals median hourly wage with benefits (60.960% for Peace Officers and 52.734% for Non-Peace Officers) by employee classification, or percentage of overhead

Sources: CalHR California State Civil Service Pay Scales by Classification (updated 1/20/2021); CDFW Budgets Branch for Staff Benefit Rates 2020/21 and Departmental Overhead Rates 2020/21.

The permit application fee aims to recover costs relating to review of an application for completeness (Table 6). The minimum cost recovery permit application fee is about 50% lower than the high cost recovery application fee.

**Table 6. Permit Application Fee Minimum (Proposed) vs. High (Considered but Rejected)**

Classification	Program <sup>1</sup>	Rate <sup>2</sup>	Minimum Hours	Minimum Total	High Hours	High Total
Environmental Scientist - Range C	MR	\$61.62	2	\$123.24	3	\$184.86
-	-	-	-	-	-	-
Subtotal	-	-	-	\$123.24	-	\$184.86
Overhead	-	24.32%	-	\$29.97	-	\$44.96
<b>Total</b>	-	-	<b>2</b>	<b>\$153.21</b>	<b>3</b>	<b>\$229.82</b>
<b>Rounded to nearest .25 per FGC 713</b>	-	-	-	<b>\$153.25</b>	-	<b>\$229.75</b>

**% Increase from Minimum**

**50%**

1. Program abbreviation: MR= Marine Region
2. Rate equals median hourly wage with benefits (60.960% for Peace Officers and 52.734% for Non-Peace Officers) by employee classification, or percentage of overhead

Sources: CalHR California State Civil Service Pay Scales by Classification (updated 1/20/2021); CDFW Budgets Branch for Staff Benefit Rates 2020/21 and Departmental Overhead Rates 2020/21.

## Proposed Regulatory Language

Section 90, Title 14, CCR, is amended to read:

### **§90. Issuance of Box Crab Experimental Fishing Permits.**

*...No proposed changes to subsections (a) through (e)*

(f) This section will sunset on April 1, 2023.

(g) This section only applies to the Box Crab Experimental Fishing Permit, and Section 91 of these regulations does not apply to the Box Crab Experimental Fishing Permit.

Note: Authority cited: Section 1022, Fish and Game Code. Reference: Section 1022, Fish and Game Code.

Section 91, Title 14, CCR, is added to read:

### **§91. Marine Fisheries: Experimental Fishing Permit Program**

(a) Purpose and scope. This section implements the Experimental Fishing Permit (EFP) Program pursuant to Section 1022 of the Fish and Game Code. The commission may authorize the department to issue an EFP for commercial or recreational marine fishing activities otherwise prohibited by the Fish and Game Code or any regulation adopted pursuant thereto for authorized activities.

(b) Definitions. Definitions contained in subdivision (h) of Section 1022 of the Fish and Game Code for “compensation fishing,” “conservation engineering,” and “exploratory fishing” apply. In addition, for purposes of this section, the following definitions apply:

(1) Accepted application: An EFP application packet accepted by the department as complete and eligible for further consideration by the commission.

(2) Applicant: The individual or entity applying for the EFP who, upon approval by the commission, becomes the EFP holder.

(3) Authorized activities: Activities approved under the EFP for one or any combination of the following purposes: research, education, limited testing, data collection, compensation fishing, conservation engineering, or exploratory fishing.

(4) Authorized agent: An individual who may conduct authorized activities and serve in place of the EFP holder for all activities requiring the presence or action of the EFP holder and who is named on form DFW 1103, Marine Fisheries: Experimental Fishing Permit Terms and Conditions (see subsection 704(b)(2) of these regulations), if applicable.

(5) EFP holder: The individual or entity to whom an EFP is issued.

(6) Entity: A corporation, firm, partnership, association, institution or affiliation, Native American tribe, or a local, state, or federal agency.

(7) Entity administrator: An individual designated by an entity who shall oversee all activities conducted under the permit on the entity’s behalf and serve as the primary point of contact for department inquiries for the EFP. Both the entity and entity administrator shall be liable for any violations of this section or any authorizations, terms, or conditions of the EFP.

(8) Interested persons: Every person who has informed the commission in writing of their interest and has provided their mailing address or email address to be notified of any accepted applications.

(9) Key participants: Project participants including the applicant, and if applicable, the entity administrator and any authorized agents.

(10) Project: The experimental fishing project for which an EFP is needed.

(c) Application procedures and application fee. Each EFP application must be submitted to the department pursuant to the provisions in this subsection.

(1) Pre-application consultation. Prior to applying for the EFP, a prospective applicant must consult with the department's marine region for consideration of any request for assistance from the department pursuant to subsection (c)(2)(C) or a permit fee reduction option pursuant to subsection (m)(3). Pre-application consultation is encouraged but not required for all other EFP proposals. Requests for consultation must be submitted in writing to the appropriate point of contact listed on the department's EFP web page: <https://wildlife.ca.gov/Conservation/Marine/EFP>.

(2) An application packet. An applicant shall submit a written application packet, either electronically to the email address, or by delivery to the mailing address listed on the department's EFP web page (<https://wildlife.ca.gov/Conservation/Marine/EFP>) and pay the non-refundable application fee as specified in subsection 704(b)(1) of these regulations. To be complete, the application packet must contain the following elements:

(A) Contact information for key participants. Contact information must include the name, title, affiliation, mailing address, email address, telephone number, and the Automated License Data System Get Outdoors ID (GO ID) or commercial fishing license (CFL) number for all key participants.

1. If any key participant does not have a GO ID or CFL number, they must provide the following information: their true name, residence address, date of birth, height, color of eyes, color of hair, weight, gender, telephone number, email address, and a form of identification as listed in subsection 700.4(c) of these regulations.

2. If the applicant is an entity, the contact information should be that of the entity administrator.

(B) A statement of purpose, including:

1. A description of the purpose and goals of the proposed project, including how the project meets or is consistent with the policies in Section 7050 of the Fish and Game Code.

2. A list of project activities that are prohibited under current Fish and Game Code or state fishing regulations, and the reasons to justify the authorization of those activities.

(C) A statement of qualifications demonstrating the ability of the key participants to perform the duties and responsibilities listed in this subsection. If the applicant does not have the capability to directly perform or oversee the performance of the following duties and responsibilities, the applicant may request assistance from the department pursuant to subsection (c)(1).

1. Lead and provide supervisory oversight for all activities of the permit under the authorizations, standard terms pursuant to subsection (h), and special conditions pursuant to subsection (i).

2. Experience in identification, methods, and protocols specific to the requested taxa under subsection (c)(2)(E).

3. Obtain all appropriate authorizations and oversee quality control measures to assure conformance to the specified standards or requirements.

4. Train all persons operating under the permit.

5. Coordinate field activities and communicate field findings with the department's marine region.

6. Collect, analyze, and transmit data gathered under the EFP to the department's marine region.

(D) The specific permit tier (see subsection (m)(2)) for which the applicant is applying and what consultation, if any, has occurred with the department regarding the proposed project, including the name and contact information of the department staff with whom the applicant has consulted in accordance with subsection (c)(1).

(E) The project description, including:

1. A description of the experimental design and research plan, including the methodology of the project with specific procedures for data collection, storage, processing, and analysis; and a timeline for implementing the project, including, if applicable, the time period during which compensation fishing is expected to occur.

2. A list of target species expected to be harvested as samples or for compensation under the EFP, including anticipated amounts (weight or number) and disposition of target species taken (retained, sold, or other (e.g., tagged and released)).

3. A list of species expected to be taken incidental to fishing conducted under the EFP, including anticipated amounts (weight or number), disposition of incidental species taken (retained, sold, discarded, or other (e.g., tagged and released)), and a description of any measures that will be used to reduce incidental catch mortality.

4. A description of the mechanisms to ensure that the proposed catch limit (weight or number) for target and incidental species are not exceeded and are accurately tracked or monitored (e.g., at sea fisheries observers, electronic monitoring, or other reporting method), if any; and, if applicable, a description of the vessel's capacity to accommodate an onboard observer.

5. A description of any potential impacts on existing fisheries, habitat, or possible incidental interactions with threatened, endangered, or protected species (e.g., sea turtles, marine mammals, and birds) that could occur as a result of the project.

6. The type and amount of gear to be used, including gear specifications and design, and, if applicable, a description of any bycatch reduction devices that will be used. If the project involves gear modifications or other gear innovations, the description must include the means by which department staff can locate, retrieve, and inspect the proposed gear.

7. The location and timing of the project. The description must include trip specifications, such as fishing depth, anticipated number of trips, expected trip duration, and estimated number of hauls and average soak time (for fixed gear) or estimated number of tows/sets to be made per

day, and estimated duration and speed per tow (for mobile gear). For vessels listed under subsection (c)(2)(F), the description must also identify any fishing activity that is expected to occur on the same trip as the project for purposes other than those provided by the EFP.

(F) Project vessels to be authorized by the EFP (if applicable), including:

1. Vessel name.

2. Names, addresses, and telephone numbers of vessel owners, and any vessel operators.

3. For any vessel that will be used in commercial fishing activity related to the permit, the commercial boat registration number issued pursuant to Section 7881 of the Fish and Game Code.

4. For any vessel that will not be used in commercial fishing activity related to the permit, the commercial boat registration number issued pursuant to Section 7881 of the Fish and Game Code or a copy of the United States Coast Guard Certificate of Documentation. If there is no commercial boat registration number or Certificate of Documentation for the vessel, a copy of the vessel's state registration is required.

(G) Signature: The date of the application and the signature of the applicant.

(d) Department review of an EFP application.

(1) Following the receipt of an application, the department shall accept or reject an application and provide notification of such determination within 30 days from the date the application fee payment clears.

(A) Rejection of an application by the department.

1. The department shall reject the application as incomplete if it fails to contain the information required under subsection (c)(2).

2. The department may reject an application if any key participant has failed to comply with the terms or conditions of a state or federal fishing license or permit, has violated any provision of the Fish and Game Code or regulations adopted thereto or any applicable federal or state law regulating fishing activities, has had a fishing license or permit suspended or revoked, or has been convicted of a crime of moral turpitude.

3. If an application is rejected, the department shall provide written notification to the applicant with an explanation for the rejection.

4. Amended application. Within 10 working days of department notification of an application rejection, the applicant may submit an amended application packet that corrects deficiencies outlined in the notice of rejection under the original application fee.

5. Within 30 days of receiving an amended application, the department shall notify the applicant of its final determination in accordance with the provisions of subsections (d)(1)(A)3. or (d)(1)(B).

(B) Acceptance of an application by the department. The department shall accept an application if it is not rejected under subsection (d)(1)(A). The department shall notify the applicant that the application has been accepted and transmit the accepted application to the commission.

(2) Department technical review and recommendation. Within 60 days after an accepted application is transmitted to the commission, the department shall develop and transmit to the commission a recommendation, including any permit special conditions. In developing its recommendation, the department shall consider the information provided pursuant to subsection (c)(2) and may request of the applicant any additional information it deems necessary to evaluate the project for purposes of developing permit special conditions and shall report any failure to comply with such requests to the commission.

(3) Time extension for department review. During its review of an EFP application, the department may extend any of the time limits specified in subsection (d). The department shall provide written notification of the time extension under subsection (d)(1) to the applicant, and under subsection (d)(2) to the commission and the applicant. The written notification shall include an explanation of the reason additional time is required.

(e) Public notice of and comment on an EFP application.

(1) Notice of receipt of an accepted EFP application. Within 5 working days of receipt of an accepted application, the commission shall send notice to interested persons pursuant to subsection (e)(3), including a summary of the proposed project, species involved, and opportunities for public comment.

(2) Notice of receipt of department recommendation. At least 30 days prior to taking action on an accepted application, the commission shall send notice to interested persons pursuant to subsection (e)(3), and post on its website information concerning accepted EFP applications that include:

(A) Public notices related to the EFP application and the department recommendation.

(B) The application.

(C) Department recommendation, including any permit special conditions.

(3) Direct notification to interested persons.

(A) The commission shall mail or email the notice to interested persons.

(B) The commission may mail or email the notice to any person or group of persons whom the commission believes to be interested.

(f) Commission action on an EFP application.

(1) At its next available meeting, but not sooner than 30 days after public notice is given pursuant to subsection (e)(2), the commission shall schedule the application and any proposed permit special conditions for consideration.

(2) The commission may approve or deny the application and/or any permit special conditions.

(A) If the commission approves the application, the department shall issue the permit pursuant to subsection (g).

(B) The commission shall deny an application if it determines any of the following applies:

1. Key participants failed to disclose material information or provided false, misleading, or inaccurate statements as to any material fact in connection with the application.

2. Based on the best scientific information available, alone or in combination with other approved EFPs, the project would have a detrimental effect on any fish stock, marine mammal, or species designated as threatened, endangered, or fully protected; or have an adverse impact on any resource or resource allocation, established fisheries, or marine habitat.

3. The project is inconsistent with this section, Section 1022 or Section 7050 of the Fish and Game Code, any applicable fishery management plan, or other applicable law for which an exemption is not sought.

(C) If an application is denied, the commission shall notify the applicant in writing of the reasons for denial and the decision thereon within 60 days of the denial.

(g) Department issuance of an EFP.

(1) Upon approval of an application by the commission, the department shall send to the applicant for signature a completed form DFW 1103, including any commission-approved special conditions placed on the permit pursuant to subsection (f)(2).

(2) The EFP shall be issued upon department receipt of payment of the applicable EFP fees and a copy of form DFW 1103 signed and dated by the applicant.

(h) Permit standard terms. Standard terms of the EFP are set forth on form DFW 1103.

(i) Permit special conditions.

(1) Special conditions of the EFP are specified on form DFW 1103.

(2) Special conditions placed on a permit as necessary for research purposes or the conservation and management of marine resources and the environment may include:

(A) The maximum amount and size of each species that can be caught, harvested and/or landed during the term of the project, including bag/trip limit, annual harvest limit, or other restrictions placed on take.

(B) The timing of the authorized activities, and the geographic location where such activity may occur.

(C) A citation of current fishing laws and regulations from which the authorized activities are exempted.

(D) The type, size, and amount of gear that can be used by each person or vessel operating under the EFP, and any other restrictions placed on the gear.

(E) The number, size, name, and identification number of the vessels and/or names and addresses of authorized agents covered under the EFP, and identification of any additional fishing permits or licenses that are required to conduct the authorized activities.

(F) The method for marking or identifying gear or vessels operating under the EFP.

(G) The procedures and/or type of equipment to be used to monitor and track the authorized activities, collect data, or provide for personnel safety.

(H) Data reporting requirements for the authorized activities, including the method, format, content, and timeframe for submittal of the required information to the department.

(l) Other conditions necessary to ensure compliance with Section 1022 of the Fish and Game Code and the regulations provided in this section.

(j) It is unlawful to operate under an EFP in violation of the permit standard terms and special conditions as set forth on form DFW 1103.

(k) Permit updates and amendments.

(1) Department authorized amendments. At any time during the term of the permit, the department may amend the special conditions set forth on form DFW 1103 as it deems necessary for research purposes or the conservation and management of marine resources and the environment.

(A) Amendments to the special conditions shall not exceed the allowances placed on the permit by the commission pursuant to subsection (i) concerning:

1. the amount and type of species that may be taken,
2. the geographic location where fishing may occur,
3. the amount or type of gear that can be used, and
4. the number of vessels or persons that may conduct the authorized activities.

(B) Upon amending the special conditions of the EFP, the department shall provide written notification to the commission and EFP holder, including the reasons for the amendments, and the EFP holder's right to request that the department review and reconsider the department's amended conditions pursuant to subsection (p).

(C) The department may suspend the EFP if the EFP holder fails to return a signed and dated copy of an amended form DFW 1103 within 10 days following date of the written notice.

(2) EFP holder requested amendments. At any time during the term of the permit, EFP holders may request amendments to their EFP by submitting a written request, either electronically or by delivery to the mailing address listed on the department's EFP web page (<https://wildlife.ca.gov/Conservation/Marine/EFP>) and paying the applicable non-refundable amendment fee as specified in subsection 704(c) of these regulations. The written request must include a description of the proposed changes and the reasons for the changes.

(A) Types of EFP holder requested amendments.

1. Administrative updates. Updates to contact, affiliation, or vessel information are administrative changes that may be approved and made by the department and do not require payment of a fee.

2. Minor amendments. Amendments to the EFP that are subject to the limitations described in subsection (k)(1)(A) which may be approved and made by the department.

3. Major amendments. Amendments to the EFP that exceed the allowances placed on the permit concerning subsection (k)(1)(A), and are subject to the same department review, public notice, and commission action, and department issuance procedures specified in subsections (d)(2) through (g).

(B) If a request for administrative update or minor amendment is rejected, the department shall provide written notification to the EFP holder with an explanation for the rejection and the EFP holder's right to file a request for reconsideration pursuant to subsection (p).

(3) Approved amendments do not change or extend the expiration date of the original permit.

(l) Reports.

(1) The EFP holder shall submit an annual report to the department by the date specified in the permit special conditions summarizing the authorized activities carried out during the reporting period. The annual report must describe the activities conducted and results, including a summary of any impediments encountered or deviations that occurred.

(2) Within 60 days after the permit expiration date, the EFP holder shall submit to the department a final report and any scientific reports or other documents created as a result of the authorized activities. The final report must provide:

(A) A summary describing the original purpose and activities completed under the EFP.

(B) A discussion of results and findings of the EFP project, including any conclusions on the effectiveness of the authorized activities in achieving the goals of the project, and recommendations for improving fisheries management or expanding commercial or recreational opportunities.

(C) Any additional information as required by the special conditions of the EFP.

(D) A list of all key participants who participated, in whole or in part, including a description of their contribution to the project.

(m) Permit tier structure and fees.

(1) Initial permit issuance fee. Except as provided for in subsection (m)(3), the department shall charge a non-refundable fee for the initial issuance of an EFP, as specified in subsection 704(b)(3) of these regulations.

(2) Annual permit fee. Except as provided in subsection (m)(3), the EFP holder shall pay a non-refundable annual permit fee as specified in subsection 704(b)(4) of these regulations for the EFP based on the designated permit tier.

(A) Tier 1. EFP for the purpose identified under subsection (b)(3) except for exploratory fishing.

(B) Tier 2. EFP for the purpose identified under subsection (b)(3) except for exploratory fishing and facilitated by the department pursuant to subsection (c)(2)(C).

(C) Tier 3. EFP for the purpose of exploratory fishing.

(D) Tier 4. EFP for the purpose of exploratory fishing and facilitated by the department pursuant to subsection (c)(2)(C).

(3) Permit fee reduction option. A 50 percent reduction in the initial permit issuance fee listed in subsection 704(b)(3) and annual permit fee listed in subsection 704(b)(4) of these regulations may be considered and approved as a special condition by the commission at the time of approval of the EFP on a case-by-case basis, as recommended by the department.

(A) The department may identify projects for the permit fee reduction as it deems necessary to address a specific fishery management need or priority in any of the following categories:

1. Innovative fishing gear and techniques to reduce incidental capture of non-target species, habitat impacts, and/or interactions with protected species.

2. Data collection to fill essential fishery information gaps or monitoring needs for fisheries and associated habitat.

3. New data or methods to quantify catch and effort and/or standardize data reporting for recreational or commercial fisheries.

4. Other areas of research that may be necessary for the purpose of fishery management pursuant to Section 7050 of the Fish and Game Code.

(B) Pre-application consultation is required pursuant to subsection (c)(1).

(n) Term of permit and renewal. Permits are valid for one year and may be renewed annually by the department up to three times provided all of the following requirements are met:

(1) The EFP holder shall submit a written request to the email or mailing address listed on the department's EFP web page (<https://wildlife.ca.gov/Conservation/Marine/EFP>) to renew the EFP at least 60 days prior to the expiration date of the current permit.

(2) Upon review and determination by the department that all key participants have complied with the requirements, terms, and conditions of this section and form DFW 1103 to be eligible for a permit renewal.

(3) Payment of the designated annual permit fee pursuant to subsection (m)(2) must be received by the department's license and revenue branch on or before the annual expiration date of the EFP.

(o) Permit revocation, suspension, cancellation, or non-renewal.

(1) An EFP holder may submit a written request for cancellation to the department's license and revenue branch.

(2) The EFP shall be subject to revocation, suspension, cancellation, or non-renewal by the department for any of the following reasons:

(A) Failure to comply with the authorizations, conditions, or terms of the permit.

(B) Failure to comply with any provision of the Fish and Game Code or regulations adopted pursuant thereto that are not otherwise exempted by the permit; violation of any federal statute, regulation, or rule that is related to a regulated fishing activity; or conviction of a crime of moral turpitude.

(C) Reasons listed subdivision 1022(a)(2) of the Fish and Game Code.

(D) A change in the Fish and Game Code or regulations adopted pursuant thereto, or to any federal statute, regulation, or rule that prohibits the continuation of the authorized activities.

(E) Submittal of false information for the purposes of obtaining or renewing a permit.

(F) The purpose of the project has been achieved or the EFP produces information at a level deemed by the department sufficient to support a management action.

(G) Failure to pay the designated annual permit fee pursuant to subsection (n)(3).

(3) The department shall provide written notification to the EFP holder of any action to revoke, suspend, cancel, or deny renewal of an EFP. The notice must include: the name of the EFP holder, the EFP identification number, the reason for the revocation, suspension, cancellation, or renewal denial, a description of any actions necessary for the EFP holder to correct any deficiencies (if applicable), and the EFP holder's right to request reconsideration by the department.

(4) An EFP holder whose permit has been suspended or revoked shall turn over all records produced under the terms and conditions of the EFP pursuant to department's direction. If applicable, an EFP holder whose permit has been revoked, suspended, or cancelled or whose permit renewal has been denied shall turn over all department owned equipment including, but not limited to, fishing gear, electronic monitoring equipment, storage devices, trap tags, etc. Failure to return department owned equipment by a permittee as described in this subsection shall be unlawful.

(p) Reconsideration. A person or entity who receives a notice of revocation, suspension, cancellation, or modification of their permit from the department, or a notice that their permit renewal has been denied or permit amendment has been rejected by the department, may submit a written request for reconsideration to the department no later than 30 days following the date of the notification, and shall state the reasons for the requested reconsideration. The department shall consider any information submitted with the request, and it may reverse or amend its decision.

Note: Authority cited: Sections 200, 205 and 1022, Fish and Game Code. Reference: Section Sections 200, 205 and 1022, Fish and Game Code.

Section 120.1, Title 14, CCR, is amended to read:

### **§120.1. Pink Shrimp Trawling.**

*...No proposed changes to subsections (a) and (b)*

(c) Bycatch Reduction Device (BRD) Required. No shrimp trawl net may be possessed on board a vessel in the commercial pink shrimp fishery that does not include an approved bycatch reduction device.

*...No proposed changes to subsection (c)(1)*

~~(2) Upon approval by the Commission, an experimental gear permit may be issued by the Department for purposes of testing the effectiveness of new or improved BRD designs pursuant to Section 8606 of the Fish and Game Code.~~

*...No proposed changes to subsections (d) through (e)*

Note: Authority cited: Sections 8591, 8841 and 8842, Fish and Game Code. Reference: Sections 8591, ~~8606~~, 8841 and 8842, Fish and Game Code.

Section 149, Title 14, CCR, is amended to read:

### **§149. Commercial Taking of Market Squid**

Requirements of this Section apply both to vessels taking squid and to vessels attracting squid with lights for the purpose of commercial take. Incidental commercial take of market squid that meets the criteria specified in subsection (l) below, and commercial take of market squid for live bait as described in subsection (m) below are not subject to the requirements of this Section, unless expressly specified.

(a) Permit Required. No person shall take, land, or attract squid by light for commercial purposes, except as provided in subsections (l) and (m) below, unless the owner of that vessel has a valid market squid permit issued pursuant to Section 149.1 ~~or Section 149.3~~ of these regulations for use on that vessel that has not been suspended or revoked.

*...No proposed changes to subsections (b) through (e)*

(f) Use of Lights to Aggregate Squid. It is unlawful to attract squid by light except as authorized under permits described in subsection 149.1(b) ~~or Section 149.3~~ of these regulations. This regulation does not apply to seine skiffs of a permitted vessel, or to vessels pursuing squid for live bait purposes only.

*...No proposed changes to subsections (g) through (i)*

(j) Citations for violations of this Section may be issued to the vessel operator, crewmembers, and/or the holder of a market squid permit issued pursuant to Section 149.1 ~~or 149.3~~ of these regulations.

*...No proposed changes to subsections (k) through (m)*

Note: Authority cited: Sections 7078, 7701, 7708, 8026, 8425 and 8429.5, Fish and Game Code. Reference: Sections 7701, 7708, 8026, 8425, 8429.5, 8429.7, 12159 and 12160, Fish and Game Code.

Section 149.3, Title 14, CCR, is repealed:

### **~~§149.3. Experimental Market Squid Vessel Permits.~~**

~~(a) The commission may issue 3 Non-Transferable Market Squid Vessel Permits as described in Section 149.1 to any individual for placement on any vessel for purposes of developing a squid fishery in areas previously not utilized for squid production.~~

~~(b) Excepting initial issuance provisions defined in subsection 149.1(c), terms and conditions of Section 149.1 apply in entirety to permits issued pursuant to this Section.~~

~~(c) Individuals issued permits pursuant to this Section are subject to all commercial squid fishing regulations defined in Section 149, Title 14, CCR.~~

~~(d) Market Squid Vessel Permits issued pursuant to this Section may be suspended, revoked, or cancelled by the commission upon conviction of a violation of regulations contained in Section 149, Title 14, CCR, or violation of the terms and conditions of the permit.~~

~~Note: Authority cited: Sections 7071, 7078 and 8425, Fish and Game Code. Reference: Sections 7070, 7071, 7075, 7078 and 7083, Fish and Game Code.~~

Section 180, Title 14, CCR, is amended to read:

### **§180. Traps.**

Revocable, nontransferable permits to use traps for commercial purposes may be issued by the department to take fish, mollusks and crustaceans except market crabs (*Cancer magister*) and lobster under the following conditions:

*...No proposed changes to subsections (a) through (f)*

(g) The permit may be suspended temporarily by the Director for a breach or violation of the terms of the permit by the holder thereof, or any member of his crew on the designated vessel. In addition, the permit may be temporarily suspended or denied by the Director if he determines that the trap or its operation is detrimental to any of the ocean's living marine resources. The commission shall be notified of any such suspension, and subsequently may revoke or reinstate the permit or fix the period of its suspension after written notice to the permittee and after he has been afforded an opportunity to be heard. In the event a permit is denied by the Director the applicant may apply to the commission for an experimental gearfishing permit under ~~Section 8606 of the Fish and Game Code~~ Section 91 of these regulations.

*...No proposed changes to subsections (h) through (j)*

Note: Authority cited: Sections 1022, 7701, 7708, 8491 and 8500, Fish and Game Code.

Reference: Sections 1022, ~~7700-7710~~ 57700, 7701, 7702, 7702.1, 7703, 7704, 7705, 7706, 7707, 7708, 7709, 7710.1, 7710.5, 8490, 8491, 8500, ~~9000-9014~~ 9000, 9000.5, 9001, 9001.6, 9001.7, 9001.8, 9002, 9002.5, 9003, 9004, 9005, 9006, 9007, 9008, 9010, 9011, and 9015, Fish and Game Code.

Section 704, Title 14, CCR, is amended to read:

### **§704. Experimental Fishing Permits; Fees and Forms.**

<b><u>(a) Box Crab Experimental Fishing Permits/Form</u></b>	<b><u>Permit Fees (US\$)</u></b>
(1) Box Crab Experimental Fishing Permit	\$4,487.75
(2) Experimental Fishing Permit Terms and Conditions, DFW 1085 (New 01/01/2020), incorporated by reference herein.	

<b><u>(b) Marine Fisheries: Experimental Fishing Permit Program Fees and Form</u></b>	<b><u>Fees (US\$)</u></b>
<u>(1) Experimental Fishing Permit Application Fee</u>	<u>\$153.25</u>
<u>(2) Marine Fisheries: Experimental Fishing Permit Terms and Conditions, DFW 1103 (NEW 04/06/21), incorporated by reference herein.</u>	
<u>(3) Initial Permit Issuance Fee</u>	<u>\$880.50</u>
<u>(4) Annual Experimental Fishing Permit</u>	
<u>(A) Tier 1</u>	<u>\$450.50</u>

<b><u>(b) Marine Fisheries: Experimental Fishing Permit Program Fees and Form</u></b>	<b><u>Fees (US\$)</u></b>
<u>(B) Tier 2</u>	<u>\$1,063.50</u>
<u>(C) Tier 3</u>	<u>\$4,271.00</u>
<u>(D) Tier 4</u>	<u>\$9,786.50</u>

<b><u>(c) Marine Fisheries: Experimental Fishing Permit Permit Amendments</u></b>	<b><u>Fees (US\$)</u></b>
<u>(1) Minor Amendment Fee</u>	<u>\$191.50</u>
<u>(2) Major Amendment Fee</u>	<u>\$455.75</u>

(d) Pursuant to the provisions of Section 90, Title 14, the above subsection (a) will sunset on April 1, 2023.

~~(b)~~(e) Pursuant to the provisions of Section 699, Title 14 1050 of the Fish and Game Code, and in compliance with the provisions of section 713 of said Code, the department shall annually adjust the fees of all licenses, stamps, permits, tags, or other entitlements required by regulations set forth in this section.

Note: Authority cited: Sections 713, 1022, and 1050, Fish and Game Code. Reference: Sections 713, 1022, and 1050, Fish and Game Code.



**Experimental Fishing Permit No.**

**Revision Date:**

**MARINE FISHERIES: EXPERIMENTAL FISHING PERMIT TERMS AND CONDITIONS**

Pursuant to California Fish and Game Code (FGC) Section 1022 and Section 91, Title 14, California Code of Regulations (CCR), the Experimental Fishing Permit (EFP) holder is authorized to conduct experimental fishing activities according to the requirements of the EFP approved by the Fish and Game Commission (Commission) and issued by the California Department of Fish and Wildlife (Department).

EFP Holder/Entity Administrator Name:

EFP Holder/Entity Administrator Address:

Authorized Agent Name:

Authorized Agent Address:

Vessel Name and ID #

Description of authorized activity:

**STANDARD TERMS**

These standard terms shall apply to all persons or vessels conducting activities under the EFP.

1. The permit shall be operated only on the vessels named on this form, if applicable. Either the EFP holder or the authorized agent must be aboard the vessel when activities are being conducted under this permit, and both are responsible and accountable for meeting the requirements and limits of this permit.
2. Pursuant to FGC Section 7857(d), the EFP holder or authorized agent shall have a valid copy of the Department issued EFP attached to a signed copy of this form in possession when activities are being conducted under this permit.
3. All persons conducting activities under an EFP must comply with all appropriate state and federal fishing laws and regulations, including but not limited to those relating to protected species, minimum size limits, and seasons or areas closed to fishing that are not otherwise exempted by the permit (see special conditions).
4. The EFP holder and authorized agent shall cooperate with the Department by allowing personnel designated by the Department to board the fishing vessel on any fishing trip (if applicable) or enter a place of business operated by the EFP holder or authorized agent under this permit, to retrieve, observe, or inspect any logbook, records, data, equipment, procedures, or catch throughout the duration of the permit.



5. The EFP holder or authorized agent shall provide Department staff with a 24-hour notice prior to every fishing trip. The contact information for Department staff will be provided for this purpose at the time of permit issuance.

### **SPECIAL CONDITIONS**

As set forth in subsection 91(i), Title 14, CCR, special conditions may be placed on this permit for research purposes and the conservation and management of marine resources and the environment (see following page).

As set forth in subsection 91(k), Title 14, CCR, special conditions may be amended or repealed as necessary for research purposes and the conservation and management of marine resources and the environment.

### **RECEIPT AND ACKNOWLEDGEMENT**

The permit is not valid until the EFP holder has certified by their signature below that they have: 1) read and understand the standard terms and special conditions of the permit; 2) unless otherwise specified in special conditions, paid the appropriate fees specified in Section 704, Title 14, CCR; and 3) returned a signed copy of this form to the Department.

I have read, understand and agree to abide by all standard terms and special conditions of this permit.

\_\_\_\_\_  
EFP Holder Signature

\_\_\_\_\_  
Date

Received by License and Revenue Branch (LRB)

Fee \$ \_\_\_\_\_

Experimental Fishing Permit No. \_\_\_\_\_

Revision Date \_\_\_\_\_

\_\_\_\_\_  
By: LRB

\_\_\_\_\_  
Date



**Experimental Fishing Permit No.**  
**Revision Date:**

### **Authorization and Special Conditions**

List of approved special conditions, names and addresses of any additional authorized agents, and/or names and identification number of any additional authorized vessels.

**From:** Jeff Maassen [REDACTED]  
**Sent:** Thursday, October 1, 2020 4:29 PM  
**To:** FGC <FGC@fgc.ca.gov>  
**Cc:** Ashcraft, Susan@FGC <Susan.Ashcraft@fgc.ca.gov>  
**Subject:** Sargassum Horneri--Request for Commercial Kelp harvest permit

Dear California Department of Fish and Game Commission,

Please see attached request packet for a commercial permit to harvest Sargassum Horneri.

Respectfully,

Lance Maassen  
[REDACTED]  
[REDACTED]

# **SARGASSUM HORNERI**

Request for Commercial Kelp Harvest permit



Lance Maassen • October 2020

Dear California department of Fish and Game commissioners,

I am a Santa Barbara based Commercial Sea Urchin Fisherman and boat owner Over the last 35 years I have dive harvested within California's Subtidal waters for Sea Urchins from San Clemente Island to Fort Bragg. During this tenure I have collaborated and willingly shared information with CDF&W, UCSB, NOAA, Scripps, SDSU, USC, OPC and others to inform management and research and to hopefully ensure sustainable outcomes for Californias commercial fisheries.

I would like to request the issuance of a permit to Dive- harvest for the Invasive species "Sargassum Horneri". Over the past several years this species abundance appears to be spreading Northward has been observed to be over taking and choking out other indigenous species in the Southern California Bio region.

We are currently in discussions with San Luis Obispo based Kelp harvesting company "Kelpfulca" to collaborate in processing and distribution to explore opportunities utilizing Sargassum including utilizing in food as Seasonings, "Akamoku"(Soup), Beer, Soap and possibly a specialty fertilizer.

Pursuant to Title 14 regulatory compliance I would request some latitude and close collaboration with staff in tailoring some of the regulations and permit fees specifically towards the Hand harvesting of an invasive species which would be necessary to proceed. This would facilitate efficient scaling and enable measured ecological outcomes.

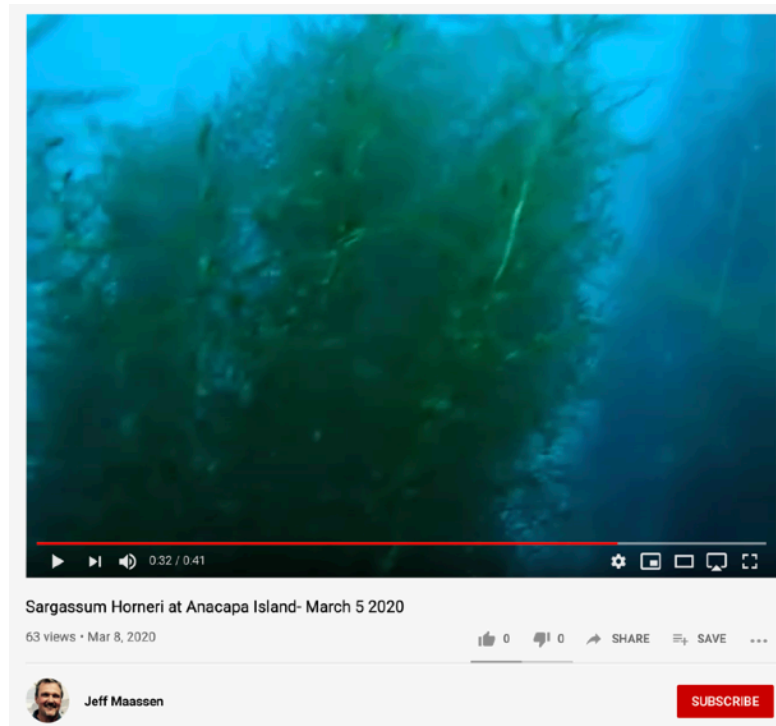
Thank You very much for your consideration,

**Lance Maassen**



f) All Other Species of Kelp.

(1) Applicant shall apply to the commission, outlining the species to be harvested, amount and location. The commission may set conditions and amount of royalty after review of the application.



**Reference Videos:**

Youtube video of Sargassum Horneri at Anacapa Island:

<https://www.youtube.com/watch?v=iqo9ASD5GAk>

<https://agris.fao.org/agris-search/search.do?recordID=JP2009005623>

# 1. § 165. Harvesting of Kelp and Other Aquatic Plants.

2.14 CA ADC § 165 BARCLAYS OFFICIAL CALIFORNIA CODE OF REGULATIONS

Term

Barclays Official California Code of Regulations [Currentness](#)

Title 14. Natural Resources

Division 1. Fish and Game Commission-Department of Fish and Game

Subdivision 1. Fish, Amphibians and Reptiles

Chapter 6. Fish, Commercial (Refs & Annos)

## **14 CCR § 165**

§ 165. Harvesting of Kelp and Other Aquatic Plants.

(a) General License Provisions. Pursuant to the provisions of Section 6651 of the Fish and Game Code, no kelp or other aquatic plants may be harvested for commercial purposes except under a revocable license issued by the department.

(1) Who Shall be Licensed. Each person harvesting kelp and other aquatic plants for profit shall apply each year for a license on 2015 Kelp Harvesting License Application (DFW 658 Rev. 08/14) which is incorporated by reference herein. License applications and a list of laws and regulations governing the harvest of kelp and other aquatic plants (including maps depicting administrative kelp beds) are available on request from the department's Los Alamitos office at 4665 Lampson Avenue, Suite C, Los Alamitos, CA 90720.

(2) Cost of License. See section 6651 of the Fish and Game Code.

(3) Where to Submit Applications. Application forms, together with the fee authorized by Section 6651 of the Fish and Game Code, shall be submitted to the department's Los Alamitos office, 4665 Lampson Avenue, Suite C, Los Alamitos, CA 90720.

(4) License Limitation. All provisions of sections 6650-6680 of the Fish and Game Code, and sections 165 and 165.5 of the commission regulations shall become a condition of all licenses issued under this section to be fully performed by the holders thereof, their agents, servants, employees or those acting under their direction or control.

(b) General Harvesting Provisions.

(1) Weighing of Kelp. A kelp harvester shall determine the weight of harvested kelp or other aquatic plants upon landing or delivery to the harvester's place of business. The harvester may determine the weight of harvested kelp or other aquatic plants by either direct weighing with a state certified scale or a volume conversion that has been approved by the department. If the weight is determined by a certified or licensed weighmaster, the harvester shall obtain a receipt and maintain the receipt in the landing record required under subsection (b)(3) below.

(2) Harvesting Records.

(A) Every person harvesting kelp and other aquatic plants and licensed pursuant to Section 6650 of the Fish and Game Code shall keep a record of the following:

1. Category of plants harvested as defined in subsections 165(c), (d) and (e).
2. The wet weight of harvested kelp or other aquatic plants recorded in pounds or tons (1 ton = 2000 lb).
3. Name and address of the person or firm to whom the plants are sold, unless utilized by the harvester.

(B) The record shall be open at all times for inspection by the department.

(3) Landing Records. Records of landing shall be prepared by all harvesters licensed pursuant to Section 6650 of the Fish and Game Code. Records of landing shall be made in triplicate using Kelp Harvester's Monthly Report forms FG 113 (Rev. 1/97, see Appendix A) and FG 114 (Rev. 1/07, see Appendix A).

(A) The landing records shall show:

1. The wet weight of all aquatic plants harvested in units as defined in subsection (b)(2)(A)2. above.
2. Name and address of harvester.
3. Department of Fish and Wildlife kelp harvester number.
4. Report period, royalty rate, balance of advance deposit (applicable to leased beds), royalty rate amount due and dates of landing.
5. Administrative kelp bed number and, if applicable, marine protected area where plants were harvested.

(B) A duplicate copy of the landing record shall be retained by a kelp harvester for a period of one year and shall be available for inspection at any time within that period by the department. A kelp harvester who harvests kelp from a marine protected area established under subsection 632(b) shall maintain a copy of the landing record on board the harvest vessel for all harvesting conducted during that harvest control period. The original and one copy of the landing record shall be submitted to the department's Accounting Services Branch at 1416 Ninth Street, Room 1215, Sacramento, CA 95814 (or by postal delivery to P.O. Box 944209, Sacramento, CA 94244-2090) on or before the 10th day of each month following the month to which the landing records pertain with the specified royalty required for all kelp and other aquatic plants harvested. Landing records that are mailed shall be postmarked on or before the 10th day of each month following the month to which the landing records pertain. The landing record shall be submitted whether or not harvest occurred.

(C) Failure to submit the required landing records of harvest activity and royalty fees within the prescribed time limit and/or failure to retain the required landing records for the prescribed time period(s) may result in revocation or suspension (including non-renewal) of the harvester's license for a period not to exceed one year. Any revocation, suspension, or nonrenewal may be appealed to the commission.

(4) No eel grass (*Zostera*) or surf grass (*Phyllospadix*) may be cut or disturbed.

(5) No kelp or other aquatic plant may be harvested in a state marine reserve or state marine park as per subsection 632(a).

Commercial harvest of kelp or other aquatic plants may be limited in state marine conservation areas as per subsection 632(b).

(6) It is unlawful to cause or permit waste of any kelp or other aquatic plants taken in the waters of this state or to take, receive or agree to receive more kelp or other aquatic plants than can be used without waste or spoilage.

(c) Harvesting of *Macrocystis* and *Nereocystis* (giant and bull kelp). In this subsection, kelp means both giant and bull kelp.

(1) A kelp harvester may harvest kelp by cutting and removing portions of attached kelp or by collecting unattached kelp.

(2) A kelp harvester may not cut attached kelp at a depth greater than four feet below the surface of the water at the time of cutting.

(3) No kelp received aboard a harvesting vessel shall be allowed to escape from the vessel or be deposited into the waters of this state.

(4) In beds north of Point Montara, *Nereocystis* (bull kelp) may only be taken by hand harvesting. No mechanical harvesters of any kind shall be allowed.

(5) Between April 1 and July 31, a kelp harvester may not harvest bull kelp from a nonleased kelp bed that lies partially or totally within the boundary of the Monterey Bay National Marine Sanctuary extending from Santa Rosa Creek, San Luis Obispo County, northward to Rocky Point, Marin County. This subsection does not preclude the removal of bull kelp from beaches within the Monterey Bay National Marine Sanctuary during the seasonal closure.

(6) Prior commission approval of a kelp harvest plan is necessary before a kelp harvester may use a mechanical harvester to harvest giant kelp.

(A) A kelp harvest plan must identify how a mechanical harvester will be used while avoiding:

1. repetitive harvest from individual giant kelp plants;
2. harvest of bull kelp from those portions of kelp beds that contain both giant kelp and bull kelp; and
3. harvest of giant kelp near sea otter rafting sites used by female sea otters with dependent pups.

(B) All kelp harvest plans shall also include the following:

1. the number of the designated bed or beds as shown in subsection 165.5(j), a description of the kelp bed or portion of the kelp bed requested and the designated number of square miles in each bed or portion thereof;
2. intended use of kelp;
3. amount of kelp proposed to harvest on a monthly and annual basis during the next five years;
4. estimated frequency of harvesting activities for each kelp bed;
5. number of harvest boats, maximum kelp holding capacity in wet tons for each boat, including the operating vessel gross tonnage and fuel tank capacity;
6. harvesting methodology (harvest operation description);
7. all locations (addresses) where kelp landing and weighing will take place;
8. specific details of wet kelp weighing equipment and methods to be used at the landing sites for accurate reporting; and
9. name, address, phone number, and license number of kelp processor and method of transporting the kelp to the processing location.

(C) Kelp harvest plans must be updated and submitted to the commission for approval every five years.

(7) In addition to the license fee, a kelp harvester shall pay a royalty of \$1.71 for each ton (2,000 lb) of wet kelp harvested from a non-leased bed.

(d) Harvesting of marine plants of the genera *Gelidium*, *Pterocladia*, *Gracilaria*, *Iridaea*, *Gloiopeltis* or *Gigartina* which are classified as agar-bearing plants.

(1) General Provisions.

(A) All agar-bearing plants must be harvested by cutting, except that drift or loose plants may be picked up by the harvester. Agar-bearing plants may be cut no closer than two inches to the holdfast and no holdfast may be removed or disturbed. All agar-bearing plants which are removed from a bed must be taken from the water for weighing and processing.

(B) While harvesting agar-bearing plants, it is unlawful to harvest abalone or to have abalone harvesting equipment in possession.

(C) License numbers of the harvesters will be displayed on both sides of the boat from which they are operating in 10-inch black numbers on a white background.

(D) A harvester may use conventional underwater diving gear or SCUBA when harvesting agar-bearing plants.

(2) Kelp Drying Permits. Pursuant to section 6653.5 of the Fish and Game Code, no company or individuals shall reduce the moisture content or otherwise dry agar-bearing plants harvested from waters of the state except under the authority of a kelp drying permit issued by the department. Drying permits shall be issued under the following conditions:

(A) Where Issued. Requests for kelp drying permits shall be submitted to the Department of Fish and Game at the address listed in section 165(a)(3).

(B) Cost of Permit. See subsection 699(b) of these regulations for the fee for this permit.

(C) Permit Review. The department shall return permit application forms to the applicant within three working days of receipt.

(D) Duration of Permits. Except as otherwise provided, kelp drying permits shall be valid for a term of one year from date of issue.

(E) Weighing of Kelp. All agar-bearing marine plants shall be weighed upon landing pursuant to the provisions of subsection (b)(1) of these regulations.

(F) Plant Delivery. Every person taking delivery of agar-bearing marine plants for drying purposes from persons licensed pursuant to section 6650 of the Fish and Game Code or harvesters drying their own plants shall keep a book or books recording the following:

1. A full and correct record of all agar-bearing plants received from other licensed agar harvesters or taken by permittee.
2. Names of the different species.
3. The number of pounds received.
4. Name, address and kelp harvester number of the person from whom the agar-bearing plants were received. The book(s) shall be open at all times for inspection by the department.

(G) Landing Receipts. Receipts shall be issued by all kelp drying permittees to harvesters licensed pursuant to subsection (b)(3) of these regulations and shall show:

1. Price paid.
2. Department origin block number where the agar-bearing plants were harvested.
3. Such other statistical information the department may require.

(H) The original signed copy of receipt shall be delivered to the agar harvester at the time of purchase or receipt of the agar-bearing plants. The duplicate copy shall be kept by the kelp drying permittee for a period of one year and shall be available for inspection at any time within that period by the department, and the triplicate shall be delivered to the department at the address indicated within 10 days after the close of each month, with a royalty of \$17.00 per wet ton (2,000 lbs.) for all agar-bearing seaweed received. Failure to submit the required landing receipts and royalty fees within the prescribed time limit is grounds for revocation of the permittee's drying permit.

(e) Harvesting of marine plants, including the genera Porphyra, Laminaria, Monostrema, and other aquatic plants utilized fresh or preserved as human food and classified as edible seaweed.

(1) General Provisions.

(A) Edible varieties of marine plants must be harvested by cutting or picking, except that drift or loose plants may be picked up by the harvester. All harvested plants must be processed.

(B) Edible seaweed may be harvested from state waters throughout the year, except as provided under section 164.

(C) While harvesting edible seaweed, it is unlawful to harvest abalone or to have abalone harvesting equipment in possession.

(D) A harvester may use conventional underwater diving gear or SCUBA while harvesting edible seaweed.

(2) Harvest of Bull Kelp for Human Consumption. Notwithstanding subsection 165(c) (5)(A), persons operating under the authority of an edible seaweed harvesters license may take, not to exceed, 2 tons (4,000 lbs) of bull kelp per year. The entire plant may be harvested.

(3) Weighing of Edible Marine Plants. All edible marine plants shall be weighed pursuant to the provisions of subsection (b)(1) of these regulations and landing receipts in duplicate issued as per subsection (b)(3).

(4) The original copy of the receipt shall be delivered to the department at the address indicated within 10 days after the close of each month with a royalty of \$24 per wet ton (2,000 lbs.) of edible marine plants harvested from state waters other than San Francisco Bay and Tomales Bay.

## F) All Other Species of Kelp.

(1) Applicant shall apply to the commission, outlining the species to be harvested, amount and location. The commission may set conditions and amount of royalty after review of the application.

Note: Authority cited: Sections 6653 and 6653.5, Fish and Game Code. Reference: Sections 6650, 6651, 6652, 6653, 6653.5, 6654, 6656 and 6680, Fish and Game Code.

1. Amendment of subsection (a)(3) filed 10-8-69 as an emergency; designated effective 11-10-69 (Register 69, No. 41). For prior history, see Register 69, No. 15.
2. Certificate of Compliance -section 11422.1, Gov. Code, filed 12-17-69 (Register 69, No. 51).
3. Amendment of subsection (a)(1)(E) filed 6-30-77 as an emergency; effective upon filing (Register 77, No. 27).
4. Certificate of Compliance filed 8-24-77 (Register 77, No. 35).
5. Amendment filed 3-9-81; effective thirtieth day thereafter (Register 81, No. 11).
6. Amendment filed 9-6-85; effective thirtieth day thereafter (Register 85, No. 36).
7. Change without regulatory effect of subsection (e)(3) filed 5-5-86; effective thirtieth day thereafter (Register 86, No. 19).
8. Amendment of subsections (a)(2), (a)(3) and (c)(5) filed 1-27-87; effective thirtieth day thereafter (Register 87, No. 5).
9. Amendment of subsection (c) filed 12-3-90; operative 1-2-91 (Register 91, No. 4).
10. Amendment of subsections (a) and (d) filed 4-18-91; operative 5-18-91 (Register 91, No. 21).
11. Editorial correction of printing error in subsection (c)(3) (Register 91, No. 31).
12. Amendment of subsections (a)(3) and (c)(2), new subsections (c)(5)-(c)(5)(B), subsection renumbering and amendment of newly designated subsection (c)(6), and new subsection (e)(3) and subsection renumbering filed 3-26-96; operative 3-26-96 pursuant to Government Code section 11343.4(d) (Register 96, No. 13).
13. Amendment filed 10-25-2001; operative 11-24-2001 (Register 2001, No. 43).
14. Amendment of subsection (b)(5) filed 3-8-2005; operative 4-7-2005 (Register 2005, No. 10).
15. Change without regulatory effect amending subsection (a)(3) filed 5-5-2005 pursuant to section 100, title 1, California Code of Regulations (Register 2005, No. 18).
16. Amendment of subsections (b)(1), (b)(3), (b)(3)(D)-(F) and (c)(4)(D) filed 8-22-2007; operative 9-21-2007 (Register 2007, No. 34).
17. Editorial correction restoring inadvertently omitted subsection (c)(5) (Register 2011, No. 5).
18. Amendment of section and Note filed 1-14-2014; operative 4-1-2014 (Register 2014, No. 3).
19. Change without regulatory effect amending subsection (a)(1) filed 5-22-2014 pursuant to section 100, title 1, California Code of Regulations (Register 2014, No. 21).
20. Change without regulatory effect amending subsection (a)(1) filed 6-24-2015 pursuant to section 100, title 1, California Code of Regulations (Register 2015, No. 26).
21. Change without regulatory effect amending subsection (b)(3)(B) filed 8-8-2019 pursuant to section 100, title 1, California Code of Regulations (Register 2019, No. 32).

This database is current through 9/11/20 Register 2020, No. 37 14 CCR § 165, **14 CA ADC § 165**

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**FW: Sargassum Horneri--Request for Commercial Kelp harvest permit**Ashcraft, Susan@FGC <[Susan.Ashcraft@fgc.ca.gov](mailto:Susan.Ashcraft@fgc.ca.gov)>

Tue 10/06/2020 10:10 AM

**To:** FGC <[FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov)>**Cc:** [REDACTED]; Dodgen, Rose-Contractor@FGC  
<[Rose.Dodgen@FGC.ca.gov](mailto:Rose.Dodgen@FGC.ca.gov)> 1 attachments (197 KB)

LanceMaassen\_2020\_Request\_Addendum.pdf;

Forwarding on behalf of Mr. Maassen, for attachment to his request (general public comment). Please append.

Susan

---

**From:** Jeff Maassen [REDACTED]**Sent:** Tuesday, October 6, 2020 10:01 AM**To:** Ashcraft, Susan@FGC <[Susan.Ashcraft@fgc.ca.gov](mailto:Susan.Ashcraft@fgc.ca.gov)>**Subject:** Re: Sargassum Horneri--Request for Commercial Kelp harvest permit

**Warning:** This email originated from outside of CDFW and should be treated with extra caution.

Hi Susan,

Attached please find an addendum to the Sargassum harvest permit request. Could you please include this in the proposal to the FGC for issuance of a harvest permit.

Thanks

Jeff

On Mon, Oct 5, 2020 at 9:10 AM Ashcraft, Susan@FGC <[Susan.Ashcraft@fgc.ca.gov](mailto:Susan.Ashcraft@fgc.ca.gov)> wrote:

Thanks Jeff.

---

**From:** Jeff Maassen [REDACTED]**Sent:** Saturday, October 3, 2020 1:08 PM**To:** Ashcraft, Susan@FGC <[Susan.Ashcraft@fgc.ca.gov](mailto:Susan.Ashcraft@fgc.ca.gov)>**Cc:** FGC <[FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov)>; Flores Miller, Rebecca@Wildlife  
<[Rebecca.FloresMiller@wildlife.ca.gov](mailto:Rebecca.FloresMiller@wildlife.ca.gov)>**Subject:** Re: Sargassum Horneri--Request for Commercial Kelp harvest permit

**Warning:** This email originated from outside of CDFW and should be treated with extra caution.

Hi Susan,

Yes, I can do that. Will send to you by Tuesday COB latest.

Info like;

Harvest location -Island , general reference location, IVO Lat-Lon, Block number, depth, est harvest amount per trip, expected port of landing.

Can utilize Sea Urchin Log Book etc.

Thank you

Jeff

On Fri, Oct 2, 2020 at 1:56 PM Ashcraft, Susan@FGC <[Susan.Ashcraft@fgc.ca.gov](mailto:Susan.Ashcraft@fgc.ca.gov)> wrote:

Jeff,

I noticed that you did not specify a proposed location or amount. That is part of the regulation requirement, so you'll need to offer up something to start from.

Would you be able to submit an update by our Supplemental Comments deadline (next Fri at noon)? An email would suffice to clarify **location** (Anacapa?) and amount, even a **range of potential harvest levels**, recognizing that your application asks to coordinate this with DFW before formalizing that detail. We can append it to your letter of application already submitted.

Thank you,  
Susan

---

**From:** Jeff Maassen [REDACTED]  
**Sent:** Thursday, October 1, 2020 4:29 PM  
**To:** FGC <[FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov)>  
**Cc:** Ashcraft, Susan@FGC <[Susan.Ashcraft@fgc.ca.gov](mailto:Susan.Ashcraft@fgc.ca.gov)>  
**Subject:** Sargassum Horneri--Request for Commercial Kelp harvest permit

**Warning:** This email originated from outside of CDFW and should be treated with extra caution.

Dear California Department of Fish and Game Commission,

Please see attached request packet for a commercial permit to harvest Sargassum Horneri.

Respectfully,

Lance Maassen

[Redacted]

[Redacted]

# SARGASSUM HARVEST NOTES

## **Sites 1 & 2**

1. Anacapa Island
2. Santa Rosa Island

## **General Reference Location:**

1. Arch Rock, East End
2. Brockway Point

## **IVO Lat-Lon (In-Vacinity-Of):**

1. N 34' 01.001' W 119'21.318'
2. N 34' 01.743' W 120' 08.674

## **F&W Block number:**

1. # 707
2. #688

## **Depth:**

1. 20'-30'
2. 15-25'

## **Estimated preliminary harvest amount per trip:**

1. 800-1200 lbs
2. 1000-1400 lbs

## **Expected port of landing:**

1. Oxnard
2. Santa Barbara

## **Misc.**

- Can utilize existing dive fisheries log book for CPUE for baseline data collection
- Kelp will be tested in lab to determine suitability for human consumption.

## 105232

## Species\* \_\_\_\_\_

Boat Name

Signature \_\_\_\_\_

```
print name
```

F&amp;G Boat Number

L Number

Each sea cucumber diver is required to fill out their own log.

Month of \_\_\_\_\_ Year \_\_\_\_\_

MAIL THIS PAGE BY THE 10TH OF THE MONTH, FOLLOWING THE RECORDED MONTH.

[illegible]

\*\* Each sea cucumber diver is required to fill out their own log

\*\*\* Total hrs underwater is combined time of all divers who harvested in this location, to nearest 1/2 hr

## Memorandum

Date: July 28, 2021

Original on file  
Received 8/2/21

To: Melissa Miller-Henson  
Executive Director  
Fish and Game Commission

From: Charlton H. Bonham  
Director

Subject: **Response to application to allow commercial harvest of marine alga, *Sargassum horneri***

### Background

On December 9, 2020, the California Fish and Game Commission (Commission) referred an application requesting permission to commercially harvest the invasive brown marine alga, *Sargassum horneri*, to the California Department of Fish and Wildlife (Department) for review and recommendation. Current regulations pursuant to Title 14, California Code of Regulations (CCR), Section 165(f)(1) allow for an applicant to apply to the Commission, outlining the species to be harvested, amount and location. The Commission may set conditions and the royalty amount due after review of the application. Mr. Maassen (Applicant) requests the ability to commercially harvest *S. horneri* by hand, including approximately 800-1,200 pounds (lb) per trip from depths approximately 20-30 feet in the vicinity of Arch Rock, east end (Anacapa Island) and approximately 1,000-1,400 lbs per trip from depths approximately 15-25 feet in the vicinity of Brockway Point (Santa Rosa Island). The expected ports of landing are Oxnard and Santa Barbara.

### Department Recommendation

The Department has reviewed the above referenced application and a subsequent addendum and recommends approving the application for commercial harvest of *S. horneri* with several conditions. *S. horneri* is an invasive alga that when established can impact the diversity and abundance of native algal communities. As such, the Department is concerned about the risks of inadvertently spreading this species due to harvest and expanding its distribution to new locations. However, with the following harvest conditions in place, the Department does not consider commercial harvest likely to increase the risk of perpetuating or expanding *S. horneri* populations in the proposed harvest locations. Further, the Department intends to work closely with the Applicant to determine the effectiveness and practicality of the harvest conditions and recommends the Commission authorize the Department to adaptively modify the conditions as necessary.

### *Sargassum horneri* Harvest Conditions

- 1) Only non-reproductive *S. horneri* may be harvested as determined by visual inspection for the absence of reproductive receptacles. Department approved materials for the identification of reproductive receptacles will be provided.

- 2) *S. horneri* may only be harvested by hand, or with hand tools such as dive knives, scissors, or clippers, and placed in sealed non-permeable bags underwater at the point of harvest, before being transferred to a vessel.
- 3) To limit potential for dispersal, *S. horneri* may not be transported greater than 500 feet underwater from the point of harvest to the vessel.
- 4) On the vessel, bags of harvested *S. horneri* must be placed within additional containment, such as fish totes, other similar hard-sided containers, or heavy duty brailer bags to limit distribution on the deck and reduce accidental spillage of *S. horneri* while transferring from the boat to the dockside. The secondary containers, such as fish totes or brailer bags may only be washed out at upland sites or into municipal wastewater systems where appropriate.
- 5) Any debris from harvesting activity must be washed from the deck or fish hold before leaving the harvest location. Fish holds shall not be openly connected to surrounding seawater while harvesting or transporting *S. horneri*. Fish holds used to transport *S. horneri* must be sterilized with a 10% bleach solution before reconnection to seawater.
- 6) To reduce the risk of spreading to new locations, *S. horneri* may only be harvested and possessed at approved harvest and landing locations and direct routes in between, as defined by the Department.
- 7) To reduce take of incidental species, epibionts and other species should be removed from *S. horneri* prior to placement in sealed non-permeable bags and care should be taken to not remove or disturb native species while harvesting.

All general license and harvesting provisions in Section 165 also apply.

### **Harvest Quantity and Locations**

The Department recommends the Applicant be permitted to harvest up to 1,500 lbs of *S. horneri* per trip from all approved harvest locations. The Department also recommends the Applicant be permitted to harvest from the following locations: 1) in the vicinity of Arch Rock (N 34° 01.001, W 119° 21.318) (Anacapa Island) and 2) in the vicinity of Brockway Point (N 34° 01.743, W 120° 08.674) (Santa Rosa Island), with the recommended approved ports of landing being Oxnard and Santa Barbara, respectively. However, the Department recommends the Commission authorize the Department to work with the Applicant to develop more specific harvest areas with defined boundaries represented by coordinates.

### **Harvest Logs and Royalty Fee**

Harvesting kelp, agar, or edible seaweed for commercial purposes requires an annual Commercial Kelp Harvesting License. License holders must submit harvest logs and harvest royalty payments monthly to the Department (Title 14, CCR, subsection 165(b)). The Department recommends that the Applicant report commercial *S. horneri* harvest monthly using the Edible Seaweed/Agarweed Aquatic

Plant Harvester's Monthly Report. The monthly harvest log must be submitted by the 10<sup>th</sup> of the month for the preceding month's harvest. In addition, the Department recommends commercial *S. horneri* harvest royalty payments, regardless of end use (edible or non-edible), be equivalent to the royalty rate for edible seaweed harvest, which is \$24.00 per wet ton (\$0.012 per wet lb) (Title 14, CCR, Section 165). However, the Department also recommends that revising royalty rates for commercial *S. horneri* harvest be explored as part of the future review of marine algae regulations.

If you have any questions regarding this item, please contact Senior Environmental Scientist Specialist James Ray by email [James.Ray@wildlife.ca.gov](mailto:James.Ray@wildlife.ca.gov).

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## Memorandum

Date: July 1, 2021

To: Melissa Miller-Henson  
Executive Director  
Fish and Game Commission

From: Charlton H. Bonham  
Director

Subject: **California Endangered Species Act Status Review for Pacific Leatherback Sea Turtle (*Dermochelys coriacea*)**

The California Department of Fish and Wildlife (Department) has completed its Status Review for Pacific leatherback sea turtle (leatherback, *Dermochelys coriacea*) (Status Review) under the California Endangered Species Act (CESA; Fish and Game Code section 2050 et seq.). The California Fish and Game Commission (Commission) published the Notice of Candidacy Findings on September 4, 2020, directing the Department to prepare a Status Review.

Pursuant to Fish and Game Code section 2074.6, this report contains the Department's review of the best scientific information available to the Department on the status of leatherback and serves as the basis for the Department's recommendation to the Commission on whether to list leatherback as a threatened or endangered species under CESA.

If you have any questions or need additional information, please contact Mr. John Ugoretz, Environmental Program Manager, Marine Region, at (562) 338-3068 or by email at [john.ugoretz@wildlife.ca.gov](mailto:john.ugoretz@wildlife.ca.gov).

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State of California  
Natural Resources Agency  
Department of Fish and Wildlife

REPORT TO THE FISH AND GAME COMMISSION

## **A Status Review of Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) in California**



Pacific Leatherback Sea Turtle, *Dermochelys coriacea*. (Photo Credit: Dane McDermott, CDFW)

California Department of Fish and Wildlife  
Marine Region

July 2021



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## List of Acronyms

CCA	Central California
CCE	California Current Ecosystem
CCR	California Code of Regulations
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
cm	Centimeters
CPUE	Catch Per Unit Effort
DGN	Drift Gillnet
DPS	Distinct Population Segment
EAC	East Australian Current
EEP	Equatorial Eastern Pacific
ESA	Endangered Species Act
FR	Federal Register
IND	Indonesian Sea
KE	Kuroshio Extension
mtDNA	Mitochondrial Deoxyribonucleic Acid
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
PCB	Polychlorinated Biphenyls
PNG	Papua New Guinea
POCTRT	Pacific Offshore Cetacean Reduction Team
RAMP	Risk Assessment and Mitigation Program
SCS	South China Sea
SI	Solomon Islands
TAS	Tasman Front
USFWS	United States Fish and Wildlife Service
WCPFC	Western and Central Pacific Fisheries Commission

## Executive Summary

This report contains the results of the California Department of Fish and Wildlife's (Department's) status review of the Pacific leatherback sea turtle (*Dermochelys coriacea*), including independent peer review of the report by scientists with relevant expertise. This status review contains the most current information available on the Pacific leatherback sea turtle and serves as a basis for the Department's recommendation to the California Fish and Game Commission (Commission) on whether to list the species as threatened or endangered under the California Endangered Species Act. The Center for Biological Diversity submitted a "Petition to list the Pacific leatherback sea turtle (*Dermochelys coriacea*) as an endangered species under the California Endangered Species Act" (Petition) to the Commission on January 23, 2020. At its scheduled public meeting on August 19, 2020, the Commission considered the Petition and, based in part on the Department's Petition Evaluation and recommendation, found that sufficient information existed to indicate the petitioned action may be warranted and accepted the Petition for consideration. Upon publication of the Commission's notice of findings, the Pacific leatherback sea turtle was designated a candidate species on September 4, 2020.

Leatherback sea turtles are the largest turtle species in the world. Pacific leatherback sea turtles are comprised of two subpopulations based on their distribution, biological and genetic characteristics: The East Pacific and the West Pacific. Individuals from the western Pacific population originate from nesting beaches in Indonesia, Papua New Guinea, and the Solomon Islands. A component of this population migrates across the Pacific Ocean to forage off the central and

northern U.S. west coast, including the Central California Coast. Eastern Pacific leatherbacks nest along the Pacific coast of the Americas, primarily in Mexico and Costa Rica, and forage throughout coastal and pelagic habitats of the southeastern Pacific Ocean.

Results of extensive monitoring and satellite tracking studies indicates that the Pacific leatherback sea turtle population has declined at all nesting beaches in the western and eastern Pacific and California foraging habitats within the last 30 years. Several factors such as nesting habitat degradation and destruction, harvest of adult turtles and eggs at nesting beaches, predation of eggs at nesting beaches, fisheries bycatch, marine debris, vessel strikes, natural disasters, and climate change threaten the continued existence of the species. Pacific leatherback sea turtle subpopulations (east and west) account for two of the seven federally recognized subpopulations. All subpopulations exhibit genetic discontinuity representative of marked separation from one another and can be considered nearly independent from each other. As such, the loss of all or a significant portion of the Pacific leatherback sea turtle population would result in a significant gap in the species' global nesting range and would significantly reduce the overall genetic diversity of the species. On an individual subpopulation level, the West Pacific subpopulation is recognized by some organizations as endangered and is also susceptible to the threats listed above.

The scientific information available indicates that Pacific leatherback sea turtles are in danger of becoming extinct due to one or more causes. However, it should be

noted that many threats are only present and significant outside of California (and the United States).

The West Pacific subpopulation is the only leatherback sea turtle population known to forage in waters off the U.S. west coast, including California. As such, information provided in this status review, unless stated otherwise, will focus on the western Pacific component of the Pacific population (i.e., West Pacific population).

Successful recovery of the West Pacific population found foraging off California will require Pacific-wide measures and international coordination and cooperation from multiple nations.

The scientific information available to the Department indicates that Pacific leatherback sea turtle are in danger of becoming extinct in all or a significant portion of its range. Based on the evaluations in this report, the Department recommends that the Commission find that the petitioned action to list the Pacific leatherback sea turtle as an endangered species is warranted. Also included in this report is the Department's identification of habitat essential to the continued existence of the species, and suggestions regarding management activities and other actions that may benefit the species.

## **1. Regulatory Process**

### **1.1. Petition Evaluation Process**

A Petition to list the Pacific leatherback sea turtle as endangered (Petition) pursuant to the California Endangered Species Act (CESA) was submitted to the Fish and Game Commission (Commission) on January 23, 2020 by the Center for Biological Diversity and Turtle Island Restoration Network. The Commission referred the Petition to the California Department of Fish and Wildlife (Department) for evaluation on February 3, 2020, in accordance with Fish and Game Code Section 2073 and published a formal notice of receipt of the petition on February 14, 2020 (California Regulatory Notice Register (Notice Register) 2020, No. 7-Z, p. 243). On February 7, 2020, the Department requested a 30-day extension of the 90-day Petition evaluation period. The Commission approved the extension request at its February 21, 2020 meeting. A petition to list or delist a species under CESA must include “information regarding the population trend, range, distribution, abundance, and life history of a species, the factors affecting the ability of the population to survive and reproduce, the degree and immediacy of the threat, the impact of existing management efforts, suggestions for future management, and the availability and sources of information. The petition shall also include information regarding the kind of habitat necessary for species survival, a detailed distribution map, and any other factors that the petitioner deems relevant.” (Fish & G. Code, § 2072.3.)

On June 2, 2020, the Department provided the Commission with its evaluation of the Petition<sup>1</sup> to assist the Commission in making a determination as to whether the petitioned action may be warranted based on the sufficiency of scientific information (Fish & G. Code, §§ 2073.5, 2074.2; Cal. Code Regs., tit. 14, § 670.1, subds. (d) & (e)). The Department recommended that the Commission accept the Petition.

At its scheduled public meeting on August 19, 2020, held online due to the COVID-19 pandemic, the Commission considered the Petition, the Department's petition evaluation and recommendation, and comments received. The Commission found that sufficient information existed to indicate the petitioned action may be warranted and accepted the Petition for consideration. Upon publication of the Commission's Notice of Findings on September 4, 2020, the Pacific leatherback sea turtle was designated a candidate species (Notice Register 2020, No. 36-Z, p. 1220).

## **1.2. Status Review Overview**

The Commission's action designating the Pacific leatherback sea turtle as a candidate species triggered the Department's process for conducting a status review to inform the Commission's decision on whether listing the species is warranted. This status review is not intended to be an exhaustive review of all published scientific literature relevant to the Pacific leatherback sea turtle; rather, it is intended to summarize the key points from the best scientific information available relevant to the status of the species, with much of the information adopted from the recently

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<sup>1</sup> Evaluation of a Petition from the Center for Biological Diversity and Turtle Island Restoration Network to List Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) as Endangered Under the California Endangered Species Act. May 2020.

published NMFS and USFWS (2020) global status review. This status review, based on the best scientific information available to the Department, is informed by independent peer review by scientists with expertise relevant to the Pacific leatherback sea turtle, and is intended to provide the Commission with the most current information on the Pacific leatherback sea turtle and to serve as the basis for the Department's recommendation to the Commission on whether the petitioned action is warranted. The status review also identifies habitat that may be essential to the continued existence of the species and provides management recommendations for recovery of the species (Fish & G. Code, § 2074.6). Receipt of this report is to be placed on the agenda for the next available meeting of the Commission after delivery. At that time, the report will be made available to the public for a 30-day public comment period prior to the Commission taking any action on the petition.

### **1.3. Federal Endangered Species Act Listing Status**

The leatherback sea turtle is listed as endangered under the federal Endangered Species Act (ESA). As such, it is illegal to/attempt to "...harass, harm, pursue, hunt, kill, or trap" leatherback sea turtles in the United States (35 Federal Register (FR) 8491). The National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) jointly administer the ESA and share jurisdiction of sea turtles. A 2013 NMFS and USFWS 5-year review of the species recommended conducting a status review to evaluate the population by applying the Policy Regarding the Recognition of Distinct Vertebrate Population Segments (DPSs) under the ESA (i.e., DPS Policy; 61 FR 4722; February 7, 1996; NMFS and USFWS 2013). On September 20, 2017, the Blue Water Fisherman's Association petitioned NMFS and

USFWS to identify the Northwest Atlantic leatherback sea turtle population as a DPS and to list it as threatened under the ESA (82 FR 57565). On December 6, 2017, NMFS and the USFWS (the Services) published a 90-day positive finding in the Federal Register (82 FR 57565) and announced a full (global) status review of the species would be conducted in response to the petition and as recommended in the 5-year review of the species. This global status review, published August 10, 2020 (85 FR 48332), identified seven leatherback populations that met the discreteness and significance criteria of the DPS Policy. However, all populations met the definition of an endangered species under the ESA because they are in danger of extinction throughout all of their ranges. Therefore, the Services concluded that disaggregating the global listing into seven endangered DPSs was not warranted and would be inconsistent with Congressional guidance to recognize DPSs “sparingly.” Disaggregating the listing would also bring about significant logistical complications without any meaningful corresponding conservation benefit. As a result, the current global listing of the species remained in effect. While there were no changes to the global listing of the leatherback turtle or the protections that it receives under the ESA, the Services recognized seven global populations:

1. Northwest Atlantic
2. Southwest Atlantic
3. Southeast Atlantic
4. Southwest Indian
5. Northeast Indian
6. East Pacific
7. West Pacific

## **2. Biology**

### **2.1. Species Description**

The leatherback sea turtle is the largest turtle species in the world and the fourth largest living reptile (McClain et al. 2015). Adults weigh an average of 453 kilograms (1,000 pounds) with the carapace length commonly exceeding 1.5 meters (4.9 feet) (McClain et al. 2015, Davenport et al. 2011). The skin covered carapace is predominantly black with pale spotting. (Figure 1; NMFS & USFWS 1998). The carapace is lined with seven longitudinal ridges, notably white in hatchlings, that taper posteriorly to a blunt point (Pritchard 2015). The underside is often mottled with white to pinkish to black coloration, and the degree of pigmentation is variable (NMFS & USFWS 1998). Leatherback hatchlings, in addition to their white longitudinal ridges, have a mottled underside and are covered with small polygonal bead-like scales (Figure 1). Unlike other sea turtle species, leatherback sea turtles have clawless flippers, with proportionally longer front flippers that span up to 2.7 meters (8.9 feet) wide in adults (NMFS & USFWS 1998). Leatherback sea turtles also have pointed tooth-like cusps in their upper jaw that, in addition to backward pointing keratinized papillae in the mouth and throat, aid in the capture and ingestion of gelatinous prey (Pritchard 2015).



**Figure 1.** Adult (left) and hatchling (right) leatherback sea turtle. From Center for Biological Diversity and Turtle Island Restoration Network 2020.

## 2.2. Taxonomy

Leatherback sea turtles are the last surviving species of the taxonomic family *Dermochelyidae* (NMFS & USFWS 1998). The species name *coriacea* was first used by Vandelli in 1761 and adopted by Linnaeus in 1776. The species name describes the unique leathery texture and scaleless skin of adults (NMFS & USFWS 1998). All other sea turtles belong to the family *Cheloniidae* and are characterized with bony carapaces that are plated with horny scutes. Leatherback sea turtles diverged from other sea turtles 100 to 150 million years ago (Zangerl 1980, Duchene et al. 2012, Pritchard 2015, Evers and Benson 2018). The species is recognized as follows:

Kingdom: Animalia

Phylum: Chordata

Class: Reptilia

Order: Testudines

Family: Dermochelyidae

Genus: *Dermochelys*

Species: *Dermochelys coriacea*

Common name: leatherback sea turtle

### **2.3. Genetics**

Leatherback sea turtles exhibit a shallow phylogeny as shown through mitochondrial deoxyribonucleic acid (mtDNA) analysis (Dutton et al. 1999). Significant extirpation events during the early Pleistocene glaciation likely reduced the species to a single lineage for the basis of current populations (Dutton et al 1999, Dutton 2004, Dutton et al. 2013). Unlike other sea turtle species which each have multiple mtDNA lineages, the genetic structure of leatherback sea turtles shows an expansion from a single mtDNA lineage approximately 0.17 million years ago (Bowen and Karl 1997, Dutton et al. 1996, Dutton et al. 1999, Duschene et al. 2012). Consequently, shared haplotypes between leatherback populations are most likely a result of common ancient ancestry rather than from gene flow through interbreeding (NMFS & USFWS 2020). As mentioned in section 1.3, all seven federally recognized subpopulations are discrete, exhibit genetic discontinuity representative of marked separation from one another, and each is significant to the global population (Wallace et al. 2010, NMFS and USFWS 2020). As such, each subpopulation can be considered nearly independent from other subpopulations. Any loss of one or more subpopulations would result in a significant gap in the global nesting range and reduce the overall genetic diversity of the species (NMFS and USFWS 2020).

In the Pacific Ocean, the two populations that exist are the West Pacific population and East Pacific population. Analysis of mtDNA showed a significant genetic differentiation between East Pacific population nesting sites (Mexico, Costa Rica)

and West Pacific population nesting sites (Solomon Islands, Indonesia, Papua New Guinea), verifying the discreteness between the two populations (Barragan et al. 1998, Dutton et al. 1999, Dutton et al. 2000b, Dutton et al. 2005, Dutton et al. 2006, Dutton et al. 2007). Though the East Pacific and West Pacific populations are genetically different, the two populations overlap in their marine foraging areas. Genetic analysis of leatherback sea turtles caught in longline and gillnet fisheries off Peru and Chili show approximately 15% of the leatherback sea turtles caught were from the West Pacific population (Donoso and Dutton 2010). The two populations, however, are reproductively isolated as mating occurs off nesting beaches and not at foraging sites.

The West Pacific population is the only leatherback sea turtle population known to forage in waters off the U.S. west coast, including California (NMFS & USFWS 2020). As such, henceforth information provided in this status review, unless stated otherwise, will focus on the western Pacific population of leatherback sea turtles (West Pacific population).

#### **2.4. Range and Current Distribution**

The range for the West Pacific population extends throughout the Pacific Ocean, with specific coastal and pelagic areas serving as important foraging and migratory habitats (NMFS & USFWS 2020). The NMFS and USFWS 2020 global status review defined the West Pacific population with the following boundaries: south of 71° N, north of 47° S, east of 120° E, and west of 117.124° W (Figure 2, NMFS and USFWS 2020). West Pacific leatherback sea turtles spend between 45 and 78 percent of the year foraging and migrating through at least 32 nations, including but not limited to:

Indonesia, Papua New Guinea, Solomon Islands, Philippines, Malaysia, Vietnam, Japan, Palau, Micronesia, Marshall Islands, Northern Mariana Islands, Guam, Fiji, Vanuatu, Australia, New Caledonia, New Zealand, Line Islands, Kiribati, and the United States (Harrison et al. 2018). Foraging occurs in seven ecoregions: South China/Sulu and Sulawesi Seas, Indonesian Seas, East Australian Current Extension, Tasman Front, Kuroshio Extension of the Central North Pacific, equatorial Eastern Pacific, and the California Current Ecosystem (Benson et al. 2011). Migratory and foraging behavior is complex as shown through satellite tracking of post-nesting West Pacific leatherback sea turtles (Figure 3, Benson et al. 2011).

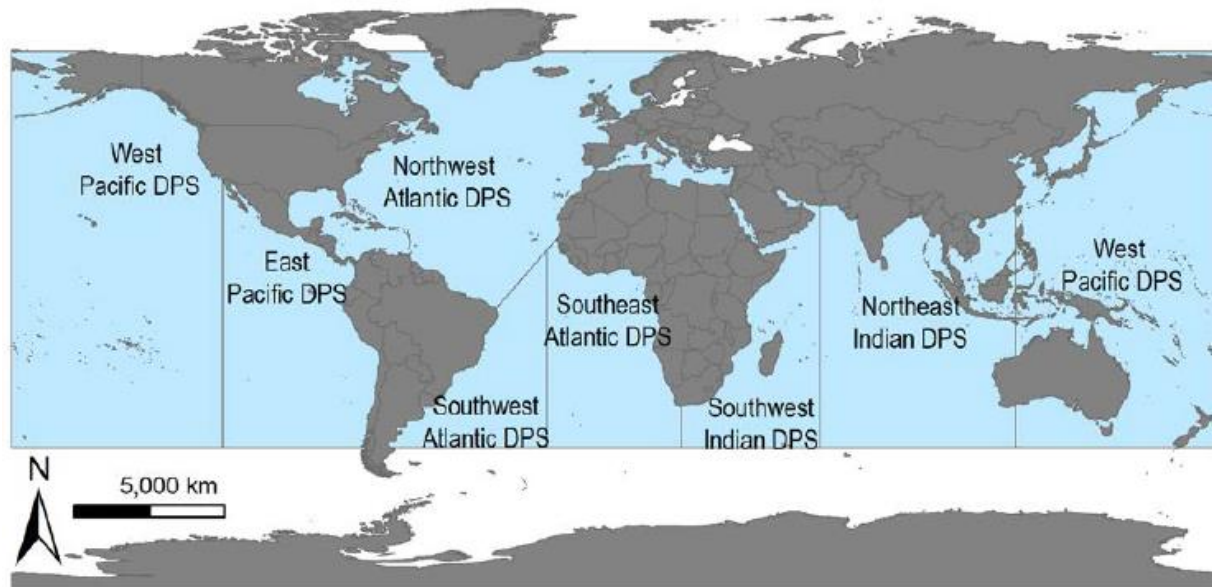
Western Pacific leatherback sea turtles originate and nest in at least 28 different beaches located in Indonesia, Papua New Guinea, Solomon Islands, and Vanuatu (Dutton et al. 2007). Approximately 50 to 75% of nesting activity occurs at two beaches, Jamursba-Medi and Wermon, on the north coast of Bird's Head Peninsula located in West Papua, Indonesia (NMFS & USFWS 2020, Tapilatu et al. 2013). West Pacific leatherback sea turtles nest year-round but exhibit a bimodal peak nesting pattern which determines their migratory behavior and marine habitat use. A proportion of females nest between November and January (winter nesting females) while others will nest between May and November (summer nesting females) (Benson et al. 2007a, Benson et al. 2007b, Dutton et al 2007).

Individuals exhibit site fidelity to specific foraging grounds which is likely the result of an individual's nesting season and post hatchling dispersal pattern (Gasper et al. 2012, Gasper and Lalire 2017, Harrison et al. 2018, Benson et al 2018). Winter nesting females from Papua New Guinea, Indonesia, and Solomon Islands migrate

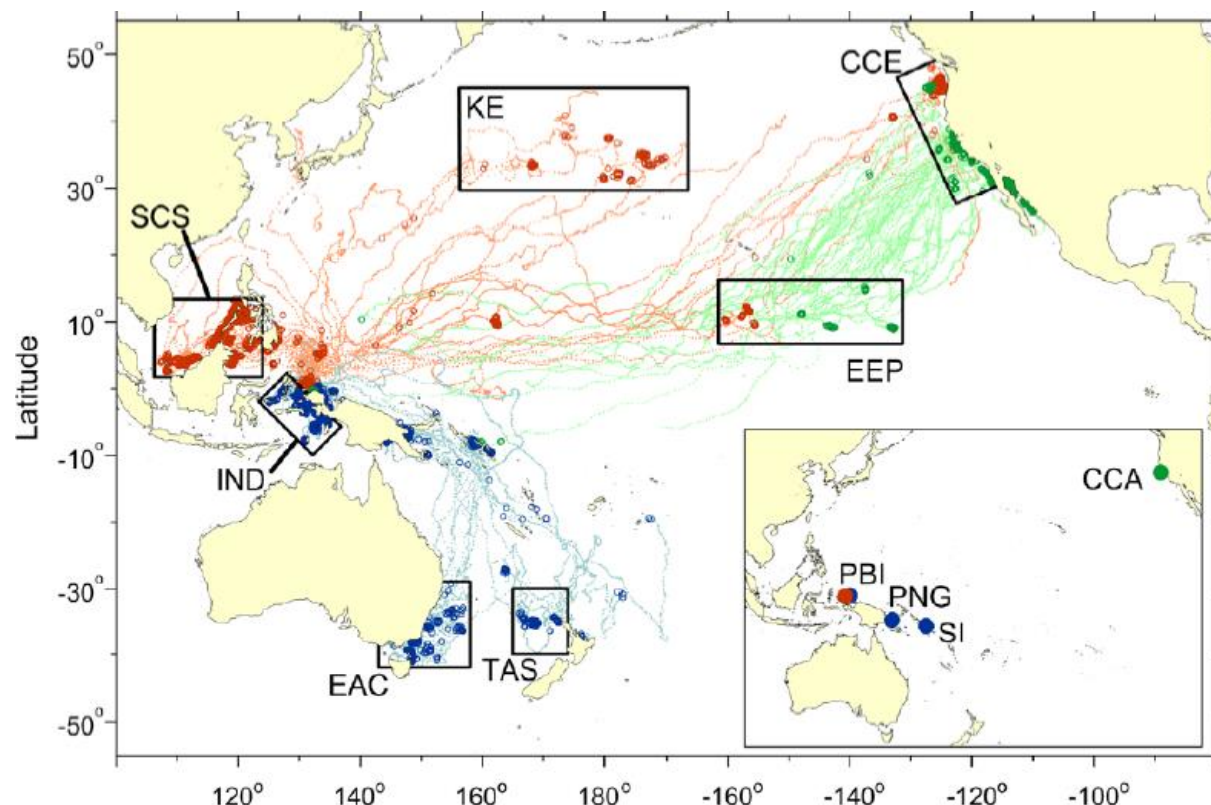
towards southern hemisphere temperate and tropical foraging areas in the Tasman Sea, East Australian Current, southwestern Pacific Ocean, and waters off South America (NMFS & USFWS 2020). Winter nesting females from Indonesia may also migrate westward to nearby Indonesian seas (Halmahera, Cerum, and Banda Seas). Summer nesting females from Indonesia, Solomon Islands, and likely Papua New Guinea can migrate in three predominant directions: northwestward toward the Sulawesi, Sulu, and South China Seas, northeastward along equatorial currents and then northward toward the west coast of North America, or northward into the Kuroshio Current Extension (Benson et al 2011, NMFS & USFWS 2020).

Within California, leatherback sea turtles are observed predominantly during mid-summer through late Fall (July - November), when adults and sub adults of both sexes forage in the eastern North Pacific, primarily off the coasts of California, Oregon, and Washington (Benson et al. 2007, 2011). Approximately 38-57% of summer nesting West Pacific leatherback sea turtles take advantage of food availability during the seasonal upwelling that occurs in the California Current Ecosystem (Benson et al., 2011; Seminoff et al., 2012; Lontoh 2014). Specifically, Monterey Bay, California was identified as a potential leatherback sea turtle “hot spot”, with sightings reported by recreational boaters, researchers, and whale watching operators (Benson et al. 2007b). Though the West Pacific population forages off California waters, leatherback sea turtles are not known to nest or come ashore in California (Benson et al. 2007b, Benson et al. 2011). Neritic (near coastal overlying the continental shelf) waters off central California is the only foraging ground that has been regularly monitored since 1990 (Peterson et al. 2006, Benson

et al. 2007a, Benson et al. 2020). Individuals in this foraging region migrate to the West Pacific nesting grounds during the breeding season every 2-6 years (Lontoh 2014).



**Figure 2.** Leatherback sea turtle subpopulation boundary map. From NMFS and USFWS 2020.



**Figure 3.** Movement of West Pacific leatherback sea turtles through satellite tracking from nests or foraging areas. Large circles represent foraging behavior. Smaller/lighter circles represent migratory routes. Red indicates summer nesting females. Blue indicates winter nesting females. Green indicates central California tagging. PBI = Papua Barat, Indonesia, PNG = Papua New Guinea, SI = Solomon Islands, CCA = central California. Black boxes represent ecoregions for which habitat associations were quantitatively examined: SCS = South China, Sulu and Sulawesi Seas, IND = Indonesian Seas, EAC = East Australia Current Extension, TAS = Tasman Front, KE = Kuroshio Extension, EEP = equatorial eastern Pacific, and CCE = California Current Ecosystem. From Benson et al. 2011.

## 2.5. Life History

Leatherback sea turtles are a highly migratory species that spend most of their life migrating and foraging at sea (Benson et al. 2007a, NMFS & USFWS 2020). Little is known of their life history at sea due to their complex migrating and foraging behavior, multiple life stages, and difficulty in locating and capturing leatherback sea turtles at sea. The NMFS and USFWS 2020 global status review described four life stages: egg, hatchling, immature (juvenile and subadults), and adult.

Leatherback sea turtle eggs are the heaviest among reptiles, weighing 71.8 to 84.3 grams (0.15 to 0.19 pounds; Eckert et al. 2012). Female leatherback sea turtles typically have a clutch size of 20 to 100 eggs per nest, with larger females laying larger clutch sizes (Eckert et al. 2012, Rostal 2015). Eggs are deposited in a subsurface nest chamber located approximately 70 centimeters (cm, 28 inches) below the sand (Billes and Fretey 2001). Similar to other sea turtles, temperature during egg incubation plays a critical role in sex determination (Binckley et al. 1998). Warmer egg temperatures during the second trimester of development results in a female skewed sex ratio, with embryonic death occurring at temperatures exceeding 32° Celsius (Mrosovsky et al. 1984, Hawkes et al. 2007). Hatchlings emerge after approximately two months of incubation within the nest chamber (Eckert et al. 2015).

Hatchlings emerge with a straight carapace length between 55 and 65 millimeters (2 to 2.5 inches, NMFS and USFWS 2020). Guided by the light differential between the land on the beach and bright ocean horizon, hatchlings will crawl immediately toward the sea (Hall 1987, Wyneken and Salmon 1992, Eckert et al. 2012). Little is known about hatchling dispersal patterns once hatchlings enter the ocean. In vitro studies suggest leatherback hatchlings will swim up to 24 hours away from land and enter a diel swimming pattern characterized by a 15 to 45% decrease in nighttime swimming (Eckert et al. 2012). Gaspar et al. (2012) hypothesized leatherback hatchlings enter an initial period of passive drift, followed by active swimming to warmer latitudes or higher latitudes. Swimming during this stage is accomplished through the synchronized beating of the fore flippers as the rear limbs make no contribution to propulsion (Davenport 1987). By two- to eight-weeks of age, leatherback hatchlings

begin to forage exclusively on gelatinous prey, a diet that remains the same in later life stages (Salmon et al. 2004).

Immature leatherback sea turtles, characterized by curved carapace length of less than 100 cm (40 inches), are rarely encountered. As a result, little is known about immature leatherback biology. However, existing data shows sightings of leatherback sea turtles with a curved carapace length under 100 cm (40 inches) were documented in exclusively warm, tropical waters (Eckert 2002). In addition, leatherback sea turtles grow at a faster rate compared with other sea turtles, a possible result of the presence of blood vessels running through the cartilaginous ends of the bones (Rhodin et al. 1996, Jones et al. 2011). Distribution of leatherback sea turtles in the immature life stage is likely determined by the distribution and abundance of their preferred gelatinous prey (Eckert et al. 2012). Based on simulated modeling of oceanic currents and habitat-driven movements, Gaspar and Lalire (2017) hypothesize that juveniles migrating across the Pacific may reach sexual maturity after 15 years, the mean age at which turtles reach the California ecoregion.

Adult leatherback sea turtles become sexually mature at approximately 17-19 years of age at an average curved carapace length of 129 cm (51 inches, Jones et al. 2011, Avens et al. 2020, NMFS and USFWS 2020). Adults use bathymetric and possibly geomagnetic cues to undergo long migrations back to nesting regions (Morreale et al. 1996, Gaspar et al. 2006, Shillinger et al. 2008). Analyses of genetic markers indicate Pacific leatherback sea turtles exhibit some natal homing/philopatry behavior (Dutton et al. 1999, Dutton et al. 2013b, Jenson et al. 2013). Nesting

females have been observed to return to the same natal region but not exclusively the same beach (Dutton et al. 1999, Dutton et al. 2007, Dutton et al. 2013b).

## **2.6. Reproduction**

Some reproductive information for the West Pacific population is lacking. Therefore, information from other leatherback populations is summarized in this section.

Females mate with multiple males, most likely in nearby waters off nesting beaches (Godfrey and Barreto 1998, Crim et al. 2002, James et al. 2005a, James et al 2005b, Rostal 2015, Figgner et al. 2012, Stewart and Dutton 2011, Stewart and Dutton 2014). As a result, multiple paternity has been observed within a single nest (Curtis 1998, Dutton and Davis 1998, Rieder et al. 1998, Dutton et al. 2000, Crim et al. 2002, Stewart and Dutton 2011, Stewart and Dutton 2014). Sperm competition and sperm storage likely occur (Dutton et al. 2000, Stewart and Dutton 2011). Pacific leatherback sea turtles average 5.5 clutches per season (Tapilatu et al. 2013), with an interval of seven to 15 days between nests (Eckert et al. 2012). As described in Eckert et al. 2012, the nesting process involves the following actions:

1. Emergence from the sea through steep approach or strong wave action to minimize crawl distance.
2. Selection of a nesting site above the tide line but below vegetation.
3. Removal of dry loose sand using front flippers and digging of nest chamber by hind flippers.
4. Laying of eggs and shelled albumen globs.
5. Filling of nest chamber by scooping and compacting sand with hind flippers.

6. Covering and concealing nest by displacing loose sand over a wide area over the nest.
7. Returning to sea using the light differential between land and ocean horizon.

Adults return to their foraging grounds after the nesting season. The remigration interval, or time needed to acquire enough resources for migration and egg production (also considered the time between nesting seasons for individual females) is, on average, two to six years (Lontoh 2014, Eckert 2015). Oceanographic conditions, climate conditions, and primary productivity directly influence prey availability, which likely impacts the remigration interval (Hays 2000, Rivalan et al. 2005, Wallace et al. 2006a, Saba et al. 2008, Reina et al. 2009, Saba et al. 2015).

## **2.7. Foraging Ecology**

Eckert et al. (2012) and Jones and Seminoff (2013) summarized previous studies identifying leatherback sea turtle diet that concluded leatherback sea turtles primarily feed on gelatinous prey such as jellyfish (Cnidaria), tunicates (Tunicata/Urochordata), and ctenophores (Ctenophora). Pelagic medusa are preferred prey, though other organisms and plastics may be opportunistically or accidentally consumed. As gelatinous prey have low energy content per unit wet mass, leatherback sea turtles must consume large quantities of prey to meet metabolic demands (Heaslip et al. 2012, Jones et al. 2012, Wallace et al. 2018). Leatherback sea turtles likely align foraging behavior with prey availability/distribution to maximize caloric intake (Sherill-Mix et al. 2007). As a result, leatherback sea turtles forage in a variety of marine ecosystems and within a wide range of the water column. Leatherback sea turtles dive in excess of 1,200

meters (3,937 feet), though most are recorded diving between 50 to 200 meters (164 to 656 feet) (Houghton et al. 2006).

Benson et al. (2007b, 2020) documented a positive relationship between leatherback sea turtle abundance in the neritic waters off California and the average annual Northern Oscillation Index, an index of climate variability associated with El Niño and La Niña events (Schwing et al. 2002). Favorable upwelling along the California coast occurs in years with positive Northern Oscillation Index values, resulting in phytoplankton and zooplankton production (including jellyfish). As a result, leatherback sea turtles forage on dense aggregations of jellyfish, primarily Pacific sea nettles (*Chrysaora fuscescens*) in the summer and fall months in nearshore regions off central California (Benson et al. 2007b, 2020, Hetherington et al. 2019).

### **3. Habitat Essential for the Continued Existence of the Species**

Based on the best available science, habitat essential for the continued existence of the West Pacific leatherback population, and for sea turtles in general, includes quality foraging areas, safe migratory routes, and nesting grounds. The waters off the coasts of California, Oregon, and Washington within the California Current Ecosystem represent an important foraging habitat for the West Pacific leatherback turtle population (Benson et al. 2007b, Harris et al. 2011, NMFS and USFW 1998). Significant numbers of leatherback sea turtles have been documented foraging on the abundant aggregations of jellyfish between Point Conception and Cape Mendocino between July and October, a time when the California Current Ecosystem exhibits stronger seasonal upwelling (Huyer 1983, Benson et al. 2007b, Benson et al. 2020). In 2001, the Pacific Leatherback Conservation area was established to reduce Pacific leatherback mortality by prohibiting drift gillnet fishing between August 15 and November 15. In 2012, in effort to protect leatherback biological resources (jellyfish prey), the federal government identified California's offshore waters between the shoreline following the line of extreme low water and the 3000-meter (9,843 feet) isobath from Point Arguello to Point Arena as Pacific leatherback critical habitat (70 FR 4170; January 26, 2012).

West Pacific leatherback sea turtles have also been documented to migrate and forage throughout Southeast Asia, including the coastal waters of the Philippines, Malaysia, and Indonesia (Benson et al. 2007a, Benson et al. 2011). Several studies have documented West Pacific leatherback sea turtles around the northeast and southeast coasts of Palawan Island, Philippines. Similarly, West Pacific leatherback

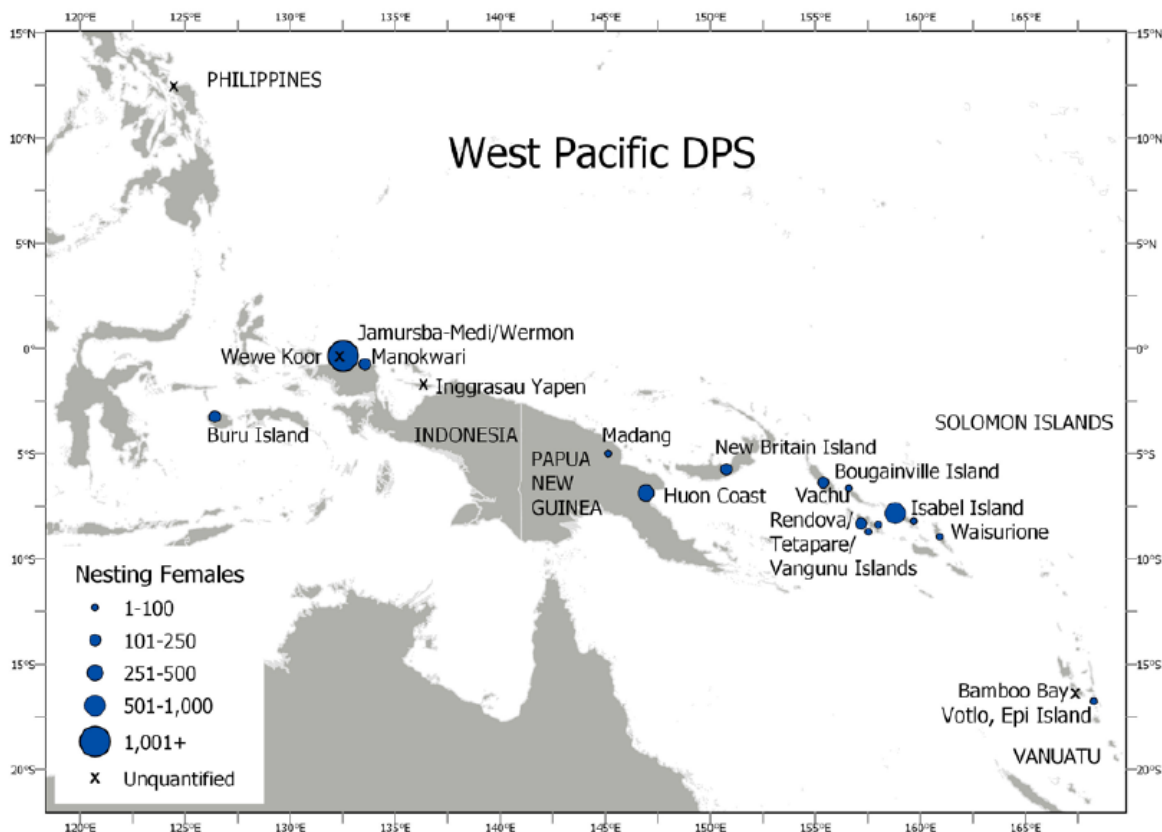
sea turtle sightings in the Philippines and Maluku region of Indonesia in the Kei Islands were linked with large jellyfish aggregations (Benson et al. 2007b, MRF 2010, Benson et al. 2011). As described in section 2.7, leatherback sea turtles maximize caloric intake of gelatinous prey by aligning foraging behavior with prey availability and distribution. Starbird et al. (1993) documented the occurrence of leatherback sea turtles off California to a sea surface temperature of 15-16° Celsius during late summer and early fall.

West Pacific leatherback sea turtles utilize several areas as migratory routes (Figure 3). As described in section 2.4, migratory and foraging areas differ depending on the nesting season (Benson et al. 2007a, Benson et al. 2007b, Benson et al. 2011, Harrison et al. 2018). Once West Pacific leatherback sea turtles reach foraging habitats, individuals may remain in the foraging area for many months (Benson et al. 2011). Migration and foraging strategies are believed to vary based on nesting season, likely due to prevailing offshore currents and seasonal monsoon-related effects experienced as hatchlings (Gaspar *et al.* 2012). The lack of crossover among seasonal nesting populations suggests that leatherback turtles develop fidelity for specific foraging regions likely based on juvenile dispersal patterns (Benson *et al.* 2011; Gaspar *et al.* 2012; Gaspar and Lalire 2017). Oceanic currents help to structure the spatial and temporal distribution of juveniles which lead them to foraging and developmental habitats (e.g., the North Pacific Transition Zone); they undertake seasonal migrations seeking favorable oceanic habitats/temperatures and abundant foraging resources, such as the central California ecoregion (Gaspar and Lalire 2017).

Stable isotopes, linked to particular foraging regions, confirm nesting season fidelity to specific foraging regions (Seminoff *et al.* 2012, Lontoh 2014). For example, approximately 30 to 60 percent of Jamursba-Medi summer nesting females (n=78 in 2007 and 2010) foraged in waters off California (Seminoff *et al.* 2012). Lontoh (2014) sampled additional Jamursba-Medi nesting turtles in 2011 resulting in a sample size of 207 leatherback turtles, demonstrating that the foraging ground composition differed between nesting seasons. Stable isotope analysis combined with satellite telemetry found that animals sampled in 2010 foraged largely within the North East Pacific Ocean and North Pacific Transition Zone (proportions of 48 and 38 percent, respectively), whereas the South China Sea was dominant in 2011 (43 percent) with other animals (roughly 30 percent each) utilizing the North Pacific Transition Zone and North East Pacific Ocean (Lontoh 2014; Seminoff *et al.* 2012). Once in their foraging habitats, West Pacific leatherback turtles do not appear to undertake systematic seasonal movements, and some individuals may remain virtually ‘stationary’ for many months, including those in the central California ecoregion and adjacent to the Kei Islands, Indonesia, which was occupied year-round (Benson *et al.* 2011).

All nesting sites for the West Pacific population are critical for the continued existence of the species. As described in section 2.4, West Pacific leatherback sea turtles nest in Indonesia, Papua New Guinea, Solomon Islands, and Vanuatu and share haplotype frequencies (Figure 4; NMFS and USFWS 2020). The nesting beaches in the West Pacific are typically associated with deep water approaches and strong waves. Nesting females prefer to nest on unobstructed, mildly sloped,

coarse-grained sand, along continental shores free of rocks, coral, or other abrasive obstructions (NMFS and USFWS 1998, Eckert et al. 2012). The greatest threats to leatherback sea turtle marine and terrestrial habitats are those relating to the direct take (harvest) of eggs and turtles (juveniles and adults), predation by dogs (domestic and feral) and pigs (primarily), bycatch in pelagic and coastal fisheries, marine debris, pollution, ship strikes, coastal development, and beach erosion resulting from sea level rise (NMFS & USFWS 2020).



**Figure 4.** Nesting sites of the West Pacific DPS. The size of the circle represents the index of female abundance based on the best available data. "X" indicates nesting was documented, or suspected, but not quantified. (From NMFS and USFWS 2020).

## **4. Abundance and Population Trends**

### **4.1. Population Trend**

In the Pacific Ocean, the West Pacific leatherback sea turtle population has declined at all major nesting beaches. It is estimated that within the last 30 years, the population has undergone an overall 95% decline (NMFS and USFWS 2020; Chan and Liew 1996, Tapilatu et al. 2013). Nesting activity has significantly declined at the primary index beaches of Jamursba-Medi and Wermon located on the north coast of Bird's Head Peninsula in West Papua, Indonesia, where 50 to 75% of West Pacific leatherback sea turtle nesting activity occurs (Tapilatu et al. 2013, NMFS and USFWS 2020). Between 1984 and 2011, the number of nesting females at Jamursba-Medi declined by 78.3% (Tapilatu et al. 2013). A similar observation was documented at Wermon between 2002 and 2011, where the number of nesting females declined by 62.8% (Tapilatu et al. 2013). As a result, Tapilatu et al. (2013) calculated a combined 5.9% annual decline from the two beaches, and the recent global population assessment estimated a 5.7% annual rate of decline (NMFS and USFWS 2020).

Recent analysis of population trends in the California foraging areas show a similar pattern of decline. The neritic waters off California are the only West Pacific leatherback foraging ground that has been monitored (Peterson et al. 2006, Benson et al. 2007a). Approximately 38-57% of summer nesting West Pacific leatherback sea turtles, mainly from Indonesia, use the central California foraging area during the summer and fall. Utilizing aerial survey data from 1990 to 2017, Benson et al. (2020) estimated an annual 5.6% decline of foraging West Pacific leatherback sea turtles off

central California. The study concluded the decline was not attributed to habitat conditions as the study documented no deterioration of foraging habitat or prey abundance (Benson et al. 2020). The study noted Northern Oscillation Index values and sea nettle (i.e. leatherback prey) catch per unit effort (CPUE) were variable between 1990 and 2017, but not enough to influence West Pacific leatherback sea turtle occurrence in the area. It is likely the decline observed in the central California foraging area is linked to the estimated 5.7% and 5.9% annual decline of West Pacific nesting beaches described above. The study attributes the West Pacific leatherback population decline to multiple anthropogenic causes such as fishery bycatch of juvenile and adult turtles, harvesting of eggs at nesting beaches, habitat degradation at nesting beaches, and climate variability (Benson et al. 2020).

#### **4.2. Abundance**

The most recent estimate of the total index of nesting female abundance of the West Pacific population is 1,277 females (NMFS and USFWS 2020). The number represented an index of nesting female abundance rather than actual nesting female abundance because the review only included recent data (as of 2014) and data from nesting beaches that were consistently monitored. As a result, only nesting data from Jamursba-Medi and Wermon in Indonesia were used. Nesting activity from other beaches in Indonesia, Papua New Guinea, Solomon Islands, or Vanuatu were not consistently or recently monitored during the required timeframe and therefore were not included in the calculation. However, nests from these beaches may account for 25% to 50% of total nests for the West Pacific population (NMFS and USFWS 2020). As a result, actual nesting female abundance may be higher. In 2013, Tapilatu et al.

(2013) estimated the total number of mature turtles utilizing Jamursba-Medi and Wermon, including males, to be 1,438 Pacific leatherback sea turtles. Given the decline in nesting abundance described above, the estimate provided in the 2020 NMFS and USFWS global status review were consistent with past estimates and current trends (NMFS and USFWS 2020).

Foraging abundance in central California displayed similar patterns. Benson et al. (2007b) estimated an annual average of 140 West Pacific leatherback sea turtles foraging in central California waters using aerial survey data from 1990 to 2003, although there was substantial interannual variability. In a subsequent analysis of central California aerial survey data that spanned 28 years, Benson et al. (2020) presented a revised average annual abundance estimate of 128 leatherback turtles during 1990-2003, and a new average annual abundance estimate of 55 turtles during 2004-2017. During the course of their 28-year study, from 1990 to 2017, an overall population decline of 80% was documented (-5.6% annual rate of decline).

Though all studies conclude the West Pacific leatherback sea turtle population is declining, several factors lead to substantial uncertainty in abundance estimates for the West Pacific population. Outside of nesting beaches of Jamursba-Medi and Wermon, monitoring of nesting activity is inconsistent, opportunistic, and/or spatially limited (NMFS and USFWS 2020). Nesting beaches are often difficult to access and far from adjacent towns and cities, making it difficult to implement standardized monitoring programs. Cultural and economic influences impact the effectiveness of monitoring programs as they often rely on community support and financial incentives (Kinch 2006). Lastly, records from sporadically monitored nesting beaches

are confounded by changes in names, location descriptions, and jurisdictional boundaries over the last three decades (NMFS and USFWS 2020). Despite the uncertainty caused by the above factors, research and analysis show West Pacific leatherback sea turtle abundances at nesting beaches and foraging grounds are declining. The Department concludes that West Pacific leatherback sea turtle abundance continues to decline throughout the entirety of its range and within the species range in California.

## **5. Factors affecting the Ability to Survive and Reproduce**

### **5.1. Destruction, Modification, Curtailment of Nesting Habitat**

Based on review of the best available science, the destruction or modification of habitats outside California described in section 3.0 is a threat to the West Pacific population. Beach erosion and/or ocean inundation (e.g., sea level rise) negatively impact nesting habitat, whether as a result of natural occurrences or related to climate change. High energy beaches, such as the nesting beaches in the West Pacific, are subject to beach erosion during naturally occurring seasonal patterns. In Indonesia, the monsoon season beginning in September has been documented to remove entire beaches at Jamursba-Medi, making the beach unsuitable for nesting (Hitipeuw et al. 2007). In the 2003-2004 nesting season, 80% of marked nests at Jamursba-Medi were washed away before hatching (Hitipeuw et al. 2007). A similar threat occurs at Wermon, with 23% and 26% of nests lost due to beach inundation during the 2003-2004 and 2008-2009 nesting seasons, respectively (NMFS and USFWS 2020). Beach erosion at less consistently monitored beaches in Papua New Guinea and Vanuatu has also been documented, with low hatching success in years with turbulent water activity caused by storms, floods, and high tides (Petro et al. 2007, Pilcher 2008, WSB 2016 referenced in NMFS and USFWS 2020).

Recently, management and conservation programs have relocated erosion-prone nests to improve hatching success. Relocation of nests that are likely to succumb to beach erosion or inundation has been documented in Indonesia, Papua New Guinea, and Solomon Islands (NMFS and USFWS 2020). However, the relocation of nests is project (and funding) dependent, and therefore not a consistent mitigation

measure. At Wermon during the 2017-2018 nesting season, “at risk” nests were unable to be relocated due to lack of access provided by beach owners, resulting in all but three nests being washed away (NMFS and USFWS 2020). In Papua New Guinea, 47% and 41% of nests were relocated during the 2011-2012 nesting season and 2009-2010 nesting season, respectively (Pilcher 2012). Relocation of “at risk” nests remains an ongoing and necessary management strategy for the West Pacific population. Though it can be argued that leatherbacks have evolved to deal with changes in beach habitats, as reflected by the turtle’s long existence on earth and their ability to sustain some (unquantified) nest loss, it is unknown if leatherback life history plasticity can respond adequately to the pace at which leatherback habitat is being destroyed or modified (NMFS and USFWS 2020, Bryan Wallace, Duke University, pers. comm., 2020). Any threat that reduces the productivity of the population, including the loss of nests and nesting females, is detrimental to the population. Increases in the occurrence of storms and other high-water events will exacerbate the problem. Therefore, the destruction and modification of nesting habitat has been documented to adversely impact the West Pacific population (NMFS and USFWS 2013, Bellagio Sea Turtle Conservation Initiative 2008).

## **5.2. Legal and Illegal Take**

The NMFS and USFWS 2020 global status review concluded the primary threat to the West Pacific population is the legal and illegal harvest of turtles at nesting beaches and in their foraging habitats. Additionally, the take of leatherback sea turtles and their eggs occurs in all four countries where the West Pacific population nests and is well documented (Bellagio Sea Turtle Conservation Initiative 2008, Jino

et al. 2018, Kinch 2009, Petro et al. 2007, Suarez and Starbird 1996, Tiwari et al. 2013a, NMFS and USFWS 2013, Tapilatu et al. 2017, NMFS and USFWS 2020). In Indonesia, leatherback turtle and egg take at Jamursba-Medi and Wermon has been eliminated since the enactment of the monitoring program in 1993 (Hitipeuw et al. 2007). However, recent surveys show leatherback turtle eggs are harvested from other Indonesian beaches and sold in local markets. Between 2016 and 2017 at Buru Island, Indonesia, it is estimated three to five nesting females were killed and approximately 114 of 203 leatherback nests were harvested (WWF 2018). It is estimated that three to five females are killed annually at Buru Island (USFW and NMFS 2020). The killing of leatherback turtles (juveniles and adults) in the Kei Islands foraging habitat is also an ongoing threat to the population (NMFS and USFWS 2020). Prior information on the local tradition of hunting Pacific leatherbacks in the Kei Islands suggested up to 100 adult leatherbacks are killed annually (Kinan 2005). Similarly, in Papua New Guinea, leatherback sea turtles have been protected since 1976, but illegal take of turtles and eggs continues throughout the country due to lack of enforcement and long-standing community-based traditions (Bellagio Sea Turtle Conservation Initiative 2008). Kinch (2009) documented the taking of 21 nesting females in Bougainville Island, Papua New Guinea. From 2008 to 2013, a conservation measure providing financial rewards to locals for non-harvest of eggs and turtles increased hatchling emergence success by 60% (Pilcher 2013 referenced in NMFS and USFWS 2020). However, egg and turtle harvest resumed when the program ended in 2013 (NMFS and USFWS 2020). Egg and turtle harvest have also been well documented in Vanuatu and the Solomon Islands despite similar

conservation efforts (NMFS and USFWS 2020). In 2011 at Isabel Island, Solomon Islands, nearly all the eggs in 315 leatherback nests were taken (USFWS and NMFS 2020). On Vangunu Island, Solomon Islands, Jino et al. (2018) found that approximately 10-20 nesting females are taken annually.

Harvest of West Pacific leatherback eggs and turtles remains a major threat to the population. Though regulatory mechanisms exist in all four nations where the population nests, the laws are rarely enforced. Lack of community buy-in and conservation funding combined with the continued practice of traditional customs has made mitigation from the threat of harvest difficult (Kinch 2006, Gjersten and Pakiding 2012, Von Essen et al. 2014). Though the exact number of West Pacific leatherbacks removed from the population via harvest is unquantified, the removal of West Pacific leatherback turtles and eggs reduces both abundance and productivity (NMFS and USFWS 2020). The taking of female turtles directly removes reproductive individuals from the population, reducing the overall reproductive potential of the population. Similarly, egg harvest reduces future population recruitment. Given the declining abundance and population trends described in section 4.0, the continued harvest of leatherback turtles and eggs in the West Pacific adversely impacts the population.

### **5.3. Disease and Predation**

All species of turtles have the potential to develop disease and cancers, but due to a generalized immune system and other adaptations, disease is a relatively rare occurrence and has not been well documented or studied in West Pacific

leatherbacks (USFWS and NMFS 2020). Disease is not currently considered a significant threat or concern to the population.

Predation of leatherback sea turtle eggs is a well-documented threat to the West Pacific population. Nest predation by feral pigs, feral dogs, and monitor lizards (*Varanus salvator*) occurs at many beaches in Indonesia, Papua New Guinea, and Solomon Islands (Bellagio Sea Turtle Conservation Initiative, 2008; NMFS and USFWS 2020). For example, between June and July of 2005, 29.3% of nests were destroyed by pigs at Jamursba-Medi (Tapilatu and Tiwari 2007). At Wermon, 21% of nests were lost to predation during the 2004-2005 nesting season (Wurlianty and Hitipeuw 2005). In Papua New Guinea, predation by village dogs is a significant threat to nests. All nests laid during the 2003-2004 and 2004-2005 nesting season were lost to predation by dogs (NMFS and USFWS 2020). Management efforts to mitigate nest predation have resulted in some success. Mitigation measures at Jamursba-Medi during the 2016-2017 nesting season resulted in a 5% reduction in nest predation (NMFS and USFWS 2020). The placement of bamboo grids over nests helped prevent dogs from preying on eggs in Papua New Guinea which resulted in increased hatching success (Pilcher 2009; 2011; 2013; WRFMC 2015).

As described in section 5.2, the loss of eggs reduces future population recruitment and population productivity. Although adult leatherback sea turtles have few natural predators, nest predation is widespread throughout the West Pacific population range, with a 100% predation rate at some nesting beaches (NMFS and USFWS 2020). Predation by feral and domesticated animals remains a significant threat to the West Pacific population.

#### **5.4. Fisheries Bycatch**

The West Pacific population foraging range and migratory routes expose the population to coastal and pelagic fisheries in many nations and open ocean. At sea bycatch from a variety of gillnet and longline fisheries has historically been a major source of mortality (Wallace et al. 2013, NMFS and USFWS 2020). As described in previous sections, the West Pacific population has exhibited site fidelity to foraging grounds in the North Pacific Ocean, southwestern Pacific Ocean, and Indo-Pacific tropical seas (Bailey *et al.* 2012; Benson *et al.* 2011, Seminoff *et al.* 2012; Roe *et al.* 2014). The West Pacific Population migratory routes and foraging destinations put the population at risk of interacting with pelagic and coastal fisheries in the United States, Japan, Philippines, Malaysia, Korea, and Taiwan (Benson et al. 2011). Significant global leatherback mortalities were documented in the North Pacific high seas driftnet fishery from the late 1970s until 1992 when the driftnet fishery was banned by a United Nations resolution (Benson et al. 2015). It is estimated that a total of 5,000 to 10,000 West Pacific leatherback sea turtles were taken between the late 1970s and 1992, and this is likely a significant factor in the population declines observed during the 1980s and 1990s (Benson et al. 2015). NMFS currently estimates approximately 13.3 leatherback sea turtle interactions have occurred between 2001 and 2018 in the DGN fishery, with approximately 7.7 mortality/serious injury occurrences (Carretta 2020). Many nations participate in the longline fishery while targeting pelagic species such as yellowfin tuna, bigeye tuna, albacore tuna, and swordfish. Over the last 30 years, an estimated 3,000 to 6,000 longline vessels fished in the western and central Pacific Ocean, including 100 to 140 vessels in the

U.S. Hawaii longline fishery (NMS 2019). The West Pacific population is exposed to high fishing effort throughout the population's pan-Pacific range. Bycatch and mortality rates, though difficult to determine, indicate that fisheries bycatch remains a major threat to the West Pacific population (NMFS and USFWS 2020). The following sections describe West Pacific leatherback sea turtle interactions in international pelagic fisheries, southeast Asian fisheries, U.S. Pacific Pelagic Fisheries, and East Pacific fisheries.

#### **5.4.1.     *International Pelagic Fisheries***

Accurately characterizing West Pacific leatherback sea turtle interactions in international longline pelagic fisheries is difficult due to inconsistent reporting and varying levels of observer coverage (often < 5%) (Bryan Wallace, Duke University, pers. comm., 2021). Analysis of multinational turtle bycatch data from 1990 to 2004 showed interactions in the purse seine, shallow-set longline, deep-set longline, and albacore longline fisheries resulted in an average of 100 leatherback sea turtle mortalities annually (Molony 2005). Lewison et al. (2004) estimated as many as 3,200 leatherback sea turtles (including both East and West Pacific populations) were killed by pelagic longlining in 2000 by analyzing catch data from 40 nations and 13 observer programs (Lewison et al. 2004). It should be noted that mortality estimates by Lewison et al. (2004) may be overestimated as CPUE calculations were not differentiated between deep-set and shallow-set fisheries (Clarke et al. 2014). Using a different CPUE estimate in their calculations, Beverly and Chapman estimated Pacific leatherback (including both East and West Pacific populations) mortalities to

be approximately 200 to 640 turtles annually, or 20% of that estimated by Lewison et al. (2004) (Beverly and Chapman 2007).

Pacific leatherback sea turtle interactions with pelagic fisheries are also dependent on gear type. Several studies have documented that the use of circle hooks and finfish bait significantly reduce leatherback sea turtle bycatch rates in longline fisheries (Gilman et al. 2007; Swimmer et al. 2017). In 2010, the Western and Central Pacific Fisheries Commission (WCPFC) enacted the WCPFC Sea Turtle Conservation and Management Measure (CMM 2008-03). The measure required participants in the shallow-set longline swordfish fishery to use circle hooks, finfish bait, and safe handling and release procedures for sea turtles. However, a workshop to determine the effectiveness of CMM 2008-03 found participating members of the WCPFC could "...formulate their own definition of shallow-set", resulting in less than 1% of the WCPFC longline fleet being subject to the measure even though approximately 20% of the WCPFC longline fleet consisted of shallow-set gear (Clarke 2017). In 2017, a study analyzing fishery observer data between 1989 and 2015 found 331 Pacific leatherback (including East and West subpopulations) interactions with purse seine and longline fleets and concluded mitigation effects would have been greater if CMM 2008-003 had also been applied to deep-set gear, which also have the potential to interact with Pacific Leatherback Sea Turtles (Clarke 2017). On January 1, 2020, CMM 2018-04 replaced CMM 2008-03 and expanded the requirements to reduce sea turtle mortality in fishing operations to all shallow-set longline vessels (CMM 2018-04). Despite the evidence of reduced interactions with circle hooks and finfish bait, many nations do not use the circle hook/finfish bait

combination. For example, Taiwan and China, which utilize J-style hooks with squid bait, have significantly higher sea turtle bycatch and mortality rates compared to the Hawaii longline fisheries (Lewison et al. 2004, Bartram and Kaneko 2010; Chan and Pan 2012). Deep-set gear, typically targeting tuna, operate at depths more than 60 meters (197 feet) and generally have lower bycatch rates (Beverly and Chapman 2007). However, deep-set tuna targeting fisheries constitute four times greater effort compared with shallow-set fisheries and do not have gear mitigation measures (Clarke 2017). Deep-set gear has significantly lower sea turtle interaction rates but higher sea turtle mortality rates compared with shallow-set gear, as caught sea turtles in deep-set gear are more likely to drown (Lewison et al. 2004; Kaplan 2005; Gilman et al. 2007; Beverly and Chapman 2007). Little information is known about the bycatch from small-scale coastal fisheries, but it has been considered a contributor to population declines in many regions (Kaplan 2005, Alfaro-Shigueto et al. 2011; Peckham et al. 2007). Therefore, international pelagic fishery bycatch is considered a significant threat to the West Pacific population (NMFS and USFWS 2020).

#### **5.4.2. Southeast Asian Fisheries**

The West Pacific population nests, migrates, and forages in the densely populated and exploited coastal waters off southeast Asia (Bellagio Sea Turtle Conservation Initiative, 2008; Benson et al. 2011; Lewison et al. 2014; Roe et al. 2014; Harrison et al. 2018). Few quantitative estimates of fisheries interactions exist in this region and those that do are either brief “snapshots” or outdated. In Indonesia, a rapid assessment survey from 2013 to 2016 revealed several hundred sea turtles

(primarily green and olive ridley turtles) were caught in gillnet fisheries, with three adult leatherback interactions in 2016 (Zainudin et al. 2017, NMFS and USFWS 2020). Leatherback sea turtles have been reported to be stranded dead or injured on Philippine beaches, likely a result of gillnet fishery interactions (Bagarinao 2011, MRF 2010, NMFS and USFWS 2020). In Malaysia, bycatch of leatherback sea turtles was confirmed using interview-based surveys (Pilcher 2009). In Australia, bycatch records indicate West Pacific leatherback sea turtles are encountered as turtles migrate into the Southern Hemisphere. Between 2004 and 2014, the Australian shallow-set fishery estimated 29 to 178 leatherback interactions based on 2-10 observations (Mackay et al. 2014). New Zealand has documented 288 stranding and bycatch records of leatherback sea turtles from 1982 to 2015, and an estimated 90 leatherback sea turtle interactions in New Zealand's shallow-set longline fishery between 2008 and 2015 (Godoy et al. 2016). Therefore, southeast Asian pelagic and coastal fishery bycatch has the potential to adversely impact the West Pacific population.

#### **5.4.3. U.S. Pelagic and Fixed Gear Fisheries**

U.S. managed pelagic fisheries are federally mandated to meet high levels of observer coverage. As a result, detailed West Pacific leatherback sea turtle bycatch data are available.

In the Hawaii longline fishery (shallow-set and deep-set), approximately nine leatherback sea turtle mortalities occurred annually prior to 2001 (McCracken 2000). Since 2005, leatherback sea turtle mortality in the Hawaii longline fishery (shallow-set and deep-set) has decreased to approximately seven turtles annually (NMFS

2018). Between 2004 and 2017, there have been 99 total leatherback turtle interactions in the shallow-set fishery (or approximately 8 turtles annually), based on 100 percent observer coverage (WPRFMC 2018). Between 2002 and 2016, an estimated 168 interactions may have occurred in the Hawaii deep-set fishery (or approximately 12 annually), an extrapolation based on 20 percent observer coverage (WPRFMC 2018). The American Samoa longline fishery estimated 59 total interactions between 2010 and 2017 based on 5-40% observer coverage (WPRFMC 2018).

The U.S. tuna purse seine fishery operating in the Western and Central Pacific Ocean had approximately 16 leatherback sea turtle interactions between 2008 and 2015 based on 20-100% observer coverage (NMFS and USFW 2020).

In California, 24 West Pacific leatherback sea turtle interactions were observed in the California drift gillnet fishery between 1990 and 2009 based on 15.6% observer coverage (Martin et al. 2015, NMFS and USFWS 2020). In 2001, NMFS implemented regulations establishing the Pacific Leatherback Conservation area for leatherback sea turtles, a large time-and-area closure extending between central California and southern Oregon where most Pacific leatherback sea turtle interactions with the drift gillnet fishery (DGN) occurred. The closure prohibits drift gillnet fishing in the area from August 15 to November 15 each year and reduced interactions by approximately 80-90%, with only two leatherback interactions since the conservation area's enactment (NMFS and USFWS 2020). NMFS currently estimates approximately 13.3 leatherback sea turtle interactions have occurred

between 2001 to 2018 in the DGN fishery, with approximately 7.7 mortality/serious injury occurrences (Carretta 2020).

U.S. fixed-gear fisheries also have the potential to interact with the West Pacific population. Since 2008, one Pacific leatherback sea turtle interaction was observed in the sablefish fishery (NMFS 2013). The commercial Dungeness crab fishery overlaps with leatherback foraging habitat off central California during late spring and late fall months, with one recorded Pacific leatherback sea turtle interaction in 2015 and another in 2016 (S. Benson, NMFS, pers. comm., 2018 in NMFS and USFWS 2020). In 2019, a fatal leatherback entanglement occurred off Ventura County in rock crab fixed gear.

Whereas West Pacific leatherback sea turtle mortality is minimized under U.S. managed pelagic fishery regulations, U.S. mortalities should not be ignored. In 2015, Curtis et al. concluded no more than 7.7 West Pacific leatherback mortalities could occur over a five-year period in the West Coast Exclusive Economic Zone in order to prevent the population from decline further. U.S. fishery bycatch may be a threat to the West Pacific population, though of lower magnitude compared to international fisheries.

#### **5.4.4. East Pacific Fisheries**

West Pacific leatherback sea turtles that forage in the East Pacific Ocean may be caught in the fisheries of Peru and Chili (Donoso and Dutton, 2010; Alfaro-Shigueto et al. 2007, 2011, 2018). A minimum of 440 leatherback sea turtles (including East and West Pacific populations) have been caught in East Pacific pelagic, coastal, drift

gillnet, and small-scale fisheries since 2012, with an estimated 15% of individuals originating from the West Pacific population (Red Laúd OPO Network 2020, Dutton et al. 2010, Dunoso and Dutton 2010). Therefore, although fisheries in this area have a larger impact on the East Pacific population, East Pacific fishery bycatch remains a threat to the West Pacific population.

## **5.5. Pollution**

Few studies have documented the effects of pollution on the West Pacific population. In general, entanglement by marine debris, particularly ghost fishing gear, can limit the mobility of sea turtles. Ingestion of marine debris can cause internal damage and blockage. In both cases, the effects of marine debris can lead to starvation and death. Leatherback sea turtles may mistakenly ingest plastic that resembles gelatinous prey. The highest risk areas in the Pacific Ocean for the West Pacific population include the North Pacific Gyre, South China Sea, and off the east coast of Australia (Schuyler et al. 2014). Mrosovsky et al. (2009) summarized existing leatherback autopsy literature and found 37.2% of autopsy reports starting from 1968 reported plastic in the gastrointestinal tract. However, another study that examined the gastrointestinal tracts of two leatherback sea turtle carcasses from 1993 and 2011 found no evidence of plastics (Wedemeyer-Strombel et al. 2015). A study examining three Pacific leatherback sea turtle carcasses from Pacific longline fisheries captured between 2012 and 2016 found no evidence of plastics in the gastrointestinal tracts (Clukey et al. 2017). Given the amount of floating debris in the Pacific Ocean and some evidence of ingestion of plastics by leatherback sea turtles,

marine debris has the potential to be a threat to the population (Mrosovsky et al. 2009, Lebreton et al. 2018). However, any potential impact is currently unquantified.

The West Pacific population has also been documented as being exposed to heavy metals and polychlorinated biphenyls (PCBs). Harris et al. (2011) found heavy metal exposure in Pacific leatherback sea turtles foraging off California was nine times higher compared with leatherback sea turtles in the St. Croix nesting population. Stewart et al. (2011) determined PCBs were more likely to be transferred from females to their eggs rather than the environment to the eggs. Given the potential for leatherback sea turtles to ingest or become entangled in marine debris, pollution is a threat to the West Pacific population, though the severity of the threat is unknown.

## **5.6. Vessel Strikes**

The West Pacific population range overlaps with high vessel traffic areas especially near coastal habitats. Between 1981 and 2016, 11 Pacific leatherback sea turtle strandings in central California were determined to be the result of vessel strikes (NMFS and USFWS 2020). It is possible many vessel strikes are often unreported and undocumented. Several Pacific leatherback sea turtle strandings have occurred in Hawaii, Philippines, Australia, and New Zealand, though none were attributed to vessel strikes (Mackay et al. 2014, NMFS and USFWS 2020). Vessel strikes that result in mortality are a threat to the West Pacific population, though the severity of threat is unknown.

### **5.7. Natural Disasters**

Natural disasters that affect the West Pacific population include tsunamis, typhoons, earthquakes, and flash floods. As described in section 5.1, natural disasters have the potential to modify or destroy nesting habitat used by the West Pacific population outside California. Furthermore, natural disasters may deposit marine debris on nesting beaches and in foraging grounds. It is hypothesized that the 2006 Indonesian earthquake and 2011 Japan tsunami deposited large amounts of debris in the West Pacific population's foraging habitat and migratory routes (NMFS and USFWS 2020). Though leatherback sea turtles have outlived natural disasters of varying degrees for millions of years, increased frequency of severe environmental events linked to climate change can reduce the population's abundance and productivity (Goby et al. 2010, NMFS and USFWS 2020). Therefore, natural disasters that result in increased mortality are a threat to the West Pacific population.

### **5.8. Climate Change**

As described in section 5.7, increased frequency of abnormal environmental conditions as a result of climate change can impact the survivability of West Pacific leatherback turtles. Rising sea levels can adversely change nesting habitat and increase the risk of beach erosion (Benson et al. 2015). Warmer temperatures at nesting sites have the potential to increase the occurrence of lethal incubation temperatures, alter incubation times, and change hatchling sex ratios (Benson et al. 2015). In 2007, Tapilatu and Tiwari attributed low hatching success and a female skewed sex ratio to high average sand temperatures (Tapilatu and Tiwari 2007). In

Papua New Guinea, incubation duration was observed to decrease as beach temperatures warmed (Steckenreuter et al. 2010).

For West Pacific leatherback sea turtles foraging off the California Coast, an additional impact of climate change is the effect on prey availability. Benson et al. (2007a) found a correlation between annual abundance of West Pacific leatherback sea turtles foraging off California between 1990 and 2003 and the strength of upwelling each year, indicating the West Pacific cohort that forages off California may be impacted by ocean productivity. Weak upwelling and lower ocean productivity, particularly if exacerbated by climate change, has the potential to reduce prey availability and alter West Pacific leatherback foraging behavior. The change in foraging behavior and accompanying shift in distribution would have unknown consequences on survival and reproduction.

Climate change has the potential to alter and/or degrade Pacific leatherback foraging habitat. As global temperature rises, ocean characteristics such as ocean currents, nutrient availability, water column stratification, and species abundance and composition can change (Willis-Norton et al. 2015). A study by Willis-Norton et al. (2015) identified that the “core pelagic habitat” for East Pacific leatherback populations was characterized by low sea surface temperatures and low chlorophyll-a, and that the core pelagic habitat will decline by 15% within the next century. Though more research is needed, it is possible that West Pacific populations foraging off California also have a “core pelagic habitat” that is similarly threatened by climate change. As mentioned previously, a study documented the occurrence of West Pacific leatherback sea turtles off California to a sea surface temperature of

15-16° Celsius during late summer and early fall (Starbird et al. 1993). Because of above mentioned threats, climate change is a threat to the West Pacific population, although the severity of the threat is unknown.

## **6. Regulatory Status and Existing Management Efforts**

### **6.1. International Status and Management Efforts**

As stated in section 5.2, legislation to protect West Pacific leatherback turtles and eggs exists in all four nations where nesting occurs (Indonesia, Papua New Guinea, Solomon Islands, Vanuatu). All four countries prohibit the take, harm, or sale of leatherback sea turtles, though allowances for indigenous populations exist (NMFS and USFWS 2020). However, laws may not be effectively enforced and/or followed by the local communities (NMFS and USFWS 2020). Many nesting beaches are extremely remote and are community owned, making consistent and effective enforcement difficult. Communities within the nations with nesting beaches view the ownership of natural resources, including turtles and their eggs, belonging to the local community (Kinch 2006, McDonald 2006). As a result, government led conservation efforts and legislation is often incompatible with traditional practices (Von Essen et al. 2014).

In Indonesia, harvest of all sea turtles has been prohibited since 1999. However, the sale of sea turtle meat and other parts still occurs throughout the country (Westerlaken 2016). Furthermore, a documented ceremonial harvest of green turtles occurs in Bali, Indonesia which may add confusion regarding sea turtle protections (Westerlaken 2016). Additionally, the take of protected turtles is still allowed for the purposes of research, science, and the rescue of wildlife itself.

In Papua New Guinea, the leatherback sea turtle is the only turtle species protected under the 1976 Fauna Act. The killing and taking of leatherback sea turtles and eggs

are illegal, as well as the sale and possession of leatherback sea turtle meat and eggs. However, the 1976 Fauna Act has provisions for persons with customary rights to take turtles that makes the protective laws related to leatherback turtles confusing or nebulous. Further, the national government in Papua New Guinea has little influence over the protection of Pacific leatherback sea turtle nests as many nesting beaches in Papua New Guinea are locally owned and managed. Papua New Guinea villagers have been noted to not recognize foreign or “western” concepts of sustainability, protection, and conservation (Kinch 2006).

In the Solomon Islands, the Solomon Islands Fisheries Act of 1993 protects all nesting sea turtles and eggs during the nesting season. The act also prohibits the sale, purchase, and export of sea turtle parts. However, 85% of the land in the Solomon Islands is locally managed by chiefs and village leaders that is sometimes not aligned with national legislation since a vast majority of the population rely on the natural resources of the land to make a living. Communities have long practiced their own natural resource management strategies. Therefore, Pacific leatherback sea turtle conservation efforts must originate from chiefs and village leaders, making enforcement of national regulations difficult (McDonald 2006).

In Vanuatu, the Vanuatu Fisheries Act of 2009 prohibits the take, harm, capture, sale, or possession of any sea turtle. However, a person may be exempt from the act if he or she applies for an exemption in writing for the purposes of carrying out customary practices, education, and research. Similar to other Melanesian countries, Pacific leatherback sea turtle conservation is best implemented at the local community level rather than by national legislation (USFWS and NMFS 2020).

As described in section 5.4.1, the WCPFC adopted the sea turtle conservation and management measure CMM 2018-04. Similar to CMM 2008-03, CMM 2018-04 included the adoption of guidelines to safely handle and reduce bycatch of sea turtles by using large circle hooks, whole finfish bait, and any other approved mitigation plan or activity. While CMM 2018-04 applies to all shallow-set fleets, it does not apply to longline deep-set tuna targeting fleets, which comprise most of the WCPFC longline fleets and are known to interact with Pacific leatherback sea turtles. Analysis of the previous conservation management measure, CMM 2008-03, showed only a small percentage of fleets complied with CMM 2008-03 and/or implemented mitigation measures.

In summary, international regulatory legislation exists to protect the West Pacific population throughout its range. However, implementation and enforcement of laws are often inadequate. Provisions provided within the regulations are often misaligned with conservation efforts. As a result, existing international management efforts may not provide adequate protections to the West Pacific population.

## **6.2. Federal Status and Management Efforts**

The leatherback sea turtle is listed as endangered under the federal Endangered Species Act (ESA). As such, it is illegal to/attempt to "...harass, harm, pursue, hunt, kill, or trap" leatherback sea turtles in the United States. Furthermore, section seven of the ESA states "...agencies must consult with NOAA fisheries when any action the agency carries out, funds, or authorizes may affect either a species listed as threatened or endangered under the Act, or any critical habitat designated for it." This includes actions to authorize federal commercial fisheries, and several

management efforts since listing have aimed to reduce Pacific leatherback bycatch incidences and mortality rates. In 2001, NMFS implemented regulations as part of the Highly Migratory Species Fishery Management Plan establishing the Pacific Leatherback Conservation Area, a large time-and-area closure extending between central California and southern Oregon where most Pacific leatherback sea turtle interactions with the DGN fishery have occurred (50 CFR § 660.713(c)). The annual closure prohibits drift gillnet fishing in the area from August 15 to November 15. As noted in section 5.4.3 this closure reduced interactions by approximately 80-90%, with only two leatherback interactions since the conservation area's enactment (NMFS and USFWS 2020).

In 2004, improved management requirements in the Hawaii shallow-set swordfish targeting fishery and deep-set tuna targeting fishery included the following items (see 50 CFR Part 665):

1. Gear and handling measures designed to reduce sea turtle bycatch rates and post hooking mortality.
2. Annual hard cap limit on the number of allowable interactions in the shallow-set fishery.
3. 100% observer coverage in the shallow-set fishery.
4. 20% observer coverage in the deep-set fishery.

Other regulatory measures implemented in federal fisheries to reduce marine mammal interactions likely reduce Pacific leatherback sea turtle interactions as well. For example, measures implemented by the Pacific Offshore Cetacean Take

Reduction Team (POCTRT), such as required use of extenders which lower drift gillnets in the water to avoid surface swimming animals may reduce interactions with Pacific leatherback sea turtles foraging off California.

### **6.3. California Management Efforts**

In 2015, the California Dungeness Crab Fishing Gear Working Group, a group comprised of commercial and recreational fisherman, environmental organization representatives, members of the disentanglement network, and government agencies was established for the purpose of evaluating and responding to the potential risk of marine life entanglement in the commercial Dungeness crab fishery. The working group developed a Best Management Practices guide for the Dungeness crab fishery and criteria to pilot a Risk Assessment and Mitigation Program (RAMP). In accordance with Section 8276.1 of the Fish and Game Code, the Department consulted with the California Dungeness Crab Fishing Gear Working Group in adopting regulations that establish criteria and protocols to identify and reduce entanglements, formalizing the RAMP on November 1, 2020. RAMP defines the authority for the Department Director to restrict the commercial Dungeness crab fishery when a significant entanglement risk is present for actionable species, this includes the Pacific leatherback sea turtle. The Director may take the following actions if there is an elevated risk of Pacific leatherback entanglement or an entanglement has occurred involving a Pacific leatherback sea turtle:

1. Closure of the fishing zone containing a single Pacific leatherback sea turtle and/or entanglement. "Fishing zone" refers to one of seven zones along the

California coast that extends from zero to 200 nautical miles offshore (U.S. Exclusive Economic Zone).

2. Issuance of a fleet advisory to employ measures (i.e. best fishing practices) to reduce the risk of entanglements.
3. In-season decrease in the number of the vertical lines and/or gear per permit holder.
4. Use a depth constraint during the fishing season where Dungeness crab may not be taken or possessed in waters within a specified depth range.
5. In-season authorization for the use of alternative gear within any closed fishing zones.

Since its implementation, RAMP has consolidated data relating to Pacific Leatherback sea turtle movements and entanglements for evaluation of possible entanglement risk during the regular risk assessments. RAMP is designed to reduce the risk of sea turtle and large whale entanglements in the commercial Dungeness crab fishery using the best available science to respond to and mitigate entanglement risk while the season is open.

In 2018, California enacted Senate Bill 1017, which established a DGN transition program with the goal of reducing bycatch and enabling a sustainable swordfish fishery through the use of lower impact fishing gear. The Department adopted implementing regulations in 2019. The Transition Program enables DGN permit holders to voluntarily surrender their DGN permit and DGN gear in exchange for monetary compensation. Senate Bill 1017 described the persistent bycatch concern with the use of drift gillnets and aimed to reduce the impacts to "...whales, dolphins,

sharks, pinnipeds, and sea turtles, including the California state marine reptile, the Pacific leatherback sea turtle” (SB 1017). This program has the potential of reducing the number of active participants in the DGN fishery off California. At the time the program was initiated, there were 68 California DGN permits, though most of these were not being actively fished. As of March 31, 2021, 16 active and 7 inactive permits have been surrendered and an additional 20 permittees have indicated an intent to participate. If all potential participants surrender their permits, the number of previously active permittees would be reduced from more than 30 to 4, significantly reducing the risk of sea turtle and other protected species entanglement.

In 2019, the Department established the Lost or Abandoned Dungeness Crab Trap Gear Retrieval Program. The goal of the program is to remove commercial Dungeness crab trap gear that remains in the ocean after the end of the fishing season. Under the program, the Department issues a retrieval permit to qualified entities who then remove lost or abandoned Dungeness crab gear. During the programs first year of implementation (2020), 521 traps were removed from California waters, mostly from central and northern California. The removal of derelict gear further reduces the risk of entanglement, navigational hazards, and other threats to marine life.

The National Environmental Policy Act (NEPA) of 1969 requires federal agencies to evaluate the environmental impact, including impacts on endangered species, of management projects and/or actions. Under NEPA, federal agencies must prepare environmental assessments or environmental impact statements that document the environmental impacts of proposed projects/actions as well as alternatives to those

actions. As a federally listed endangered species, impacts to West Pacific leatherback sea turtles must be considered during NEPA analysis. NEPA does not require federal agencies to mitigate or minimize environmental impacts identified during analysis. The California Environmental Quality Act (CEQA) also requires state and local agencies to conduct environmental assessments to identify and analyze environmental impacts. However, CEQA differs from NEPA in that CEQA requires mitigation for any identified adverse effects. More information on CEQA can be found in section 8.1.

## **7. Summary of Listing Factors**

CESA directs the Department to prepare this report regarding the status of the Pacific leatherback sea turtle based upon the best scientific information available to the Department (Fish & G. Code, § 2074.6). CESA's implementing regulations identify key factors that are relevant to the Department's analyses. Specifically, a "species shall be listed as endangered or threatened ... if the Commission determines that its continued existence is in serious danger or is threatened by any one or any combination of the following factors: 1. Present or threatened modification or destruction of its habitat; 2. Overexploitation; 3. Predation; 4. Competition; 5. Disease; or 6. Other natural occurrences or human-related activities." (Cal. Code Regs., tit. 14, § 670.1, subd. (i)). The preceding sections of this Status Review describe the best scientific information available to the Department, with respect to the key factors identified in the regulations. This section provides summaries of information from the foregoing sections of this status review, arranged under each of the factors to be considered by the Commission in determining whether listing is warranted

### **7.1. Present of Threatened Modification or Destruction of Habitat**

Based on review of the best available science, the destruction or modification of nesting habitats is a threat to the West Pacific population. Whether a result of natural occurrences, human activities, or related to climate change, beach erosion and/or ocean inundation negatively impact nesting habitat. Increased frequency of abnormal climate conditions (high water events, greater storm frequency and intensity, warmer weather) may result in the unnatural and unsustainable loss or inundation of nests

and eggs. The loss of eggs and reduced hatching success will lower the productivity of the West Pacific population, which is already at historic lows. Furthermore, despite recent research showing California's leatherback foraging habitat is not responsible for the declining abundance and population trends, climate change has the potential to reduce prey availability by altering ocean productivity. The change in prey availability can alter foraging behavior and would have unknown consequences on leatherback survival and reproduction (Benson et al. 2020). The Department considers destruction or loss of nesting habitat a threat to the continued existence of the species, albeit a threat not currently present in California.

## **7.2. Legal and Illegal Take**

Legal and illegal take of Pacific leatherback sea turtles and Pacific leatherback sea turtle eggs are the primary threat to the West Pacific population. The harvest of leatherback sea turtles and eggs occurs in all four countries where the West Pacific population nests and is well documented. Despite regulatory protections, the laws are rarely enforced. Although sustainable levels of exploitation have not been established worldwide, and many sources of take outside the U.S. are unquantified, the taking of female turtles directly removes reproductive individuals from the population and reduces the overall reproductive potential of the population. Similarly, egg harvest reduces future population recruitment. Given the documented declining abundance and population trends, the continued harvest of leatherback turtles and eggs in the West Pacific adversely impacts the population. In the United States, harvest of leatherback sea turtles and eggs is not a threat as the ESA prohibiting the take of sea turtles is adequately enforced. The Department considers harvest of

adults and eggs a significant threat to the continued existence of the species, albeit not a threat currently present in California.

### **7.3. Predation**

Predation of leatherback sea turtle eggs is a well-documented threat to the West Pacific population. Nest predation by feral pigs, feral dogs, and monitor lizards (*Varanus salvator*) is widespread throughout the West Pacific population's range, with a 100% predation rate at some nesting beaches. The loss of eggs reduces future population recruitment and population productivity. The Department considers predation to be a significant threat to the continued existence of the species, albeit not a threat present in California.

### **7.4. Competition**

Competition for prey between other Pacific leatherback sea turtles or other species (including other sea turtles) is nonexistent or not well understood. The Department does not consider competition to be a significant threat to the continued existence of the species.

### **7.5. Disease**

Information related to disease in leatherback sea turtles is currently unquantified. The Department does not consider disease a threat to the continued existence of the species.

## **7.6. Other Natural Occurrences or Human-related Activities**

### **7.6.1. Fishery Bycatch**

The West Pacific population's foraging range and migratory routes expose the population to coastal and pelagic fisheries in many nations and international waters. Information on bycatch and Pacific leatherback mortality in international pelagic and coastal fisheries suggest these fisheries negatively impact the population. U.S. managed fisheries operate under strict regulatory management regimes designed to mitigate sea turtle bycatch and mortality and have significantly reduced Pacific leatherback sea turtle interactions. NMFS currently estimates approximately 13.3 leatherback sea turtle interactions have occurred between 2001 and 2018 in the DGN fishery, with approximately 7.7 mortality/serious injury occurrences (Carretta 2020). In California, the RAMP and Trap Gear Retrieval Program are designed to reduce the entanglement risks of Pacific leatherback sea turtles in the commercial Dungeness crab fishery and the Drift Gillnet Transition Program is designed to reduce potential bycatch in the large-mesh drift gillnet fishery. Nonetheless, any mortality of females (including those in California) reduces the population's productivity. The Department concludes that fisheries bycatch is a significant threat to the continued existence of the species, although this threat is mitigated by existing regulations in California and the United States and its severity is significantly greater in certain international fisheries.

### **7.6.2. Pollution**

The West Pacific population is exposed to a large amount of marine debris in their pelagic habitats. Though the potential for pollution to injure or kill Pacific leatherback

sea turtles exists, quantitative estimates of such cases are not available. The Department concludes pollution may pose a threat to the West Pacific population, but the level of impact is currently unquantified.

#### **7.6.3. Vessel Strikes**

Eleven vessel strikes of Pacific leatherback sea turtles have been documented in California between 1981 and 2016, although the actual number of vessel strike mortalities are unknown. The Department concludes vessel strikes may pose a threat to the continued existence of the species, but the level of impact is currently unknown.

#### **7.6.4. Climate Change**

Climate change is a threat to the West Pacific population. Increased frequency and intensity of abnormal environmental conditions and storms can negatively impact the survivability of West Pacific leatherback nests and hatchlings. Rising sea levels can adversely change beach morphology and increase the risk of beach erosion or nest inundation. Warmer temperatures have the potential to increase the occurrence of lethal incubation temperatures, alter incubation times, and change sex ratios. In California, climate change has the potential to alter ocean productivity, prey availability, and foraging conditions. While the impacts of a changing climate on the West Pacific leatherback turtle population is still being studied and has yet to be quantified, the Department concludes that climate change is a potential threat to the continued existence of the species.

## **7.7. Summary of Key Findings**

In the Pacific Ocean, the West Pacific leatherback sea turtle population has declined at all major nesting beaches. It is estimated that within the last 30 years, the population has undergone an overall 95% decline, including an annual 5.7% rate of decline. Approximately 38-57% of summer nesting West Pacific leatherback sea turtles, mainly from Indonesia, use the central California foraging area during the summer and fall. Recent analysis of the population trends in this foraging area shows a similar pattern of decline. An estimated 5.6% decline of foraging West Pacific leatherback sea turtles off central California was observed between 1990 and 2017.

Based on the best scientific information available to the Department at the time of preparation of this review and in agreement with the NMFS and USFWS full status evaluation, the Department concludes the West Pacific leatherback sea turtle is currently in serious danger of becoming extinct throughout all of its range. The Department evaluated factors such as habitat loss, legal and illegal take, disease, predation, fisheries bycatch, pollution, vessel strikes, natural disasters, and climate change. With the exception of disease, the Department's analysis determined all factors are a threat to the continued existence of the species. However, it should be noted that many threats are only significant and present outside of California (and the United States). Successful recovery of the West Pacific population found foraging off California will require Pacific-wide measures and international coordination and cooperation.

## 8. Listing Recommendations

The CESA directs the Department to prepare this report regarding the status of the Pacific leatherback sea turtle in California waters based upon the best scientific information available (Fish & G. Code, § 2074.6). The CESA also directs the Department, based on its analysis, to indicate in the status report whether the petitioned action is warranted. (Fish and Game Code Section 207.46; Section 670.1(f), Title 14, California Code of Regulations).

An endangered species under CESA is one “which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease” (Fish & G. Code, § 2062). A threatened species under CESA is one “that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts required by [CESA]” (Fish & G. Code, § 2067). A species’ range for CESA purposes is the species’ California range (*Cal. Forestry Assn. v. Cal. Fish and Game Com.* (2007) 156 Cal. App. 4th 1535, 1551).

The Legislature left to the Department and the Commission, which are responsible for providing the best scientific information and for making listing decisions, respectively, the interpretation of what constitutes a “species or subspecies” under CESA. (*Cal. Forestry Assn. v. Cal. Fish and G. Com.* (2007) 156 Cal.App.4th 1535, 1548-49). Courts should give a “great deal of deference” to Commission listing

determinations supported by Department scientific expertise (*Central Coast Forest Assn. v. Fish & G. Com.* (2018) 18 Cal. App. 5th 1191, 1198-99)

The Department includes and makes its recommendation in its status report as submitted to the Commission in an advisory capacity based on the best available science. In consideration of the scientific information contained herein, the Department has determined that the petitioned action is warranted.

### **8.1. Protections Afforded by Listing**

It is the policy of the State to conserve, protect, restore and enhance any endangered or any threatened species and its habitat (Fish & G. Code, § 2052). The conservation, protection, and enhancement of listed species and their habitat is of statewide concern (Fish & G. Code, § 2051(c)). If listed as an endangered or threatened species, unauthorized “take” of Pacific leatherback sea turtles will be prohibited. It should be noted that unauthorized “take” of Pacific leatherback is already prohibited by federal law under ESA. As noted earlier, Fish and Game Code defines “take” as hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill (Fish & G. Code, § 86). Any violation of the take prohibition is punishable under State law. As to authorized take on the state level, the Fish and Game Code provides the Department with related authority under certain circumstances, including incidental take permits and memoranda of understanding (for scientific, educational, or management purposes) (Fish and Game Code Sections 2081, 2081.1, 2086, 2087, 2835). Impacts of authorized take of Pacific leatherback sea turtles through incidental take permits must be minimized and fully mitigated according to State standards. Obtaining an ITP is voluntary. The

Department cannot force compliance; however, any person violating the take prohibition may be criminally and civilly liable under state law. For species listed under both the federal ESA and CESA, the Director of CDFW may, under certain circumstances, find that a federal take authorization is consistent with CESA in which case no further authorization or approval under CESA is necessary. (Fish & G. Code, § 2080.1.) Additional protections for Pacific leatherback sea turtles following listing are also likely with required public agency environmental review under CEQA. This act requires affected public agencies to analyze and disclose project related environmental effects, including potentially significant impacts on endangered, threatened, rare, or special status species. Under CEQA's "substantive mandate," state and local agencies in California must avoid or substantially lessen significant environmental effects to the extent feasible. In common practice, potential impacts to listed species are examined more closely in CEQA documents than potential impacts to unlisted species. Where significant impacts are identified under CEQA, the Department expects project-specific required avoidance, minimization, and mitigation measures will also benefit the species. State listing, in this respect, and required consultation with the Department during state and local agency environmental law review under CEQA, is also expected to benefit the Pacific Leatherback Sea Turtle in terms of related impacts for individual projects that might otherwise occur in the absence of listing.

Listing the Pacific leatherback sea turtle increases the likelihood that the State land and resource management agencies will allocate funds towards protection and recovery actions. CESA listing can lead to increased interagency coordination,

particularly between the National Marine Fisheries Service and the Department. It is possible with increased coordination that state and federal agencies may allocate additional funds towards Pacific leatherback research, protection, and recovery actions. CESA listing may also result in increased priority for limited conservation funds from State Wildlife Grants and other funding opportunities.

## 9. Recommendations for Management

The following recommendations were generated by the Department to benefit Pacific leatherback sea turtles. Given that the most significant threats to leatherbacks are found outside California and the United States and that significant state and federal protections already exist, they focus on prioritizing conservation, research, regulation, and monitoring activities:

- Increase coordination with state, federal, and international fisheries agencies to establish continuity in management goals, enforcement, and conformance in regulations.
- Encourage studies designed to reduce interactions with fishing operations, especially with longline, drift net, and fixed gear fisheries that have the potential to interact with foraging Pacific leatherback sea turtles. Research should include exploration of gear and fishing method modifications (soak time, pop-up gear, etc.) that reduce interactions.
- Continue to support the Dungeness trap gear retrieval program to remove abandoned or lost fishing gear to reduce negative impacts to habitats and reduce risk of entanglement.
- Support research specifically focused on Pacific leatherback sea turtle movements and distribution, foraging ecology, and population status and abundance trends in California and other areas within their range. Efforts should include:
  - The expansion of genetic research to include analysis of samples from both foraging and nesting sites.

- Continued life history research of all life stages of Pacific leatherback sea turtles including migration, habitat use and range, feeding ecology and reproduction.
- Continued tagging studies from nesting sites and foraging areas.
- Continued efforts to determine the effects of persistent environmental pollutants, and environmental changes related to climate change, such as ocean productivity, on Pacific leatherback abundance/behavior and their preferred prey species.
- Research and awareness of less common factors, such as predation, disease, and the potential for plastic ingestion across all life stages.

## **10. Economic Considerations**

The Department is charged in an advisory capacity in the present context to provide a written report and a related recommendation to the Commission based on the best scientific information available regarding the status of the Pacific Leatherback Sea Turtle in California. The Department is not required to prepare an analysis of economic impacts (See Fish & G. Code, § 2074.6; Cal. Code Regs., tit. 14, § 670.1, subd. (f)).

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## Appendix A. Peer Review

Below is a compilation of peer review comments on the Pacific Leatherback Sea Turtle Status Review and California Department of Fish and Wildlife (Department) Responses (Table A-1). Peer review comments were provided by Scott Benson (NOAA Fisheries), Christina Fahy (NOAA Fisheries), Irene Kelly (NOAA Fisheries), Dr. James Harvey (Moss Landing Marine Laboratories), and Dr. Bryan Wallace (Duke University). Based on peer review feedback, no substantive changes were made to the Department's recommendation that the petitioned action is warranted. All responses to comments, which are compiled and attached in a single document, were largely clarifications of statements and the addition of information where necessary.

Table A-1. Peer review comments received and Department responses.

Commenter	Page	Paragraph	Reviewer Comment	Department Response
Irene Kelly	1	2	We didn't actually end up designating DPSs under the ESA. Perhaps best to say that there are two subpopulations in the Pacific, the West Pacific and the East Pacific. I provide some suggestions.	Accepted changes, using "subpopulations"
Bryan Wallace	2	3	While this is technically true, the DPS designation, as well as the fact that this is a subpopulation recognized by and assessed on the IUCN Red List (Critically Endangered) and identified as a regional management unit (RMU) by the MTSG means that this population and its status require assessment and conservation regardless of the status of other populations. Put simply, it doesn't matter whether the 'global population' is endangered. This West Pacific RMU/subpopulation/DPS is a standalone unit that requires management.	Change incorporated, added clarification
Bryan Wallace	2	3	Very important to recognize. Whether or not CA designates leatherbacks officially on its ESA list won't necessarily affect the conservation status of this population, especially if conservation management measures are focused solely in CA. There's only so much that can be done in CA.	Correct, no change

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Commenter	Page	Paragraph	Reviewer Comment	Department Response
Irene Kelly	2	4	I would confirm this with the SWFSC. This information is needed to describe why this document only focuses only on the WP population and not also the EP.	Scott Benson responded and confirmed statement in status evaluation is accurate. No change per Scott Benson
Tina Fahy	6	1	Within the federal ESA, we use "conservation" v. continued existence.	No change - this is CESA
Scott Benson	9	1	I'd suggest. "The skin covered carapace is predominantly black with pale spotting".	Accepted changes
Bryan Wallace	11	1	Again, each DPS/RMU/subpopulation should really be considered nearly independent from the other DPSs/subpopulations, so this statement could perhaps be strengthened to clarify.	Change incorporated, edited and modified the statement here and in executive summary.
Bryan Wallace	12	2	They do	Removed "may"
Bryan Wallace	12	2	Reference?	added
Irene Kelly	12	3	This is an important point. I brought this into the Executive Summary, but also confirm this is true with SWFSC and no EP leatherback turtles have been documented in CA waters/fisheries.	Scott Benson responded and confirmed statement in status evaluation is accurate. No change per Scott Benson
Scott Benson	13	2	Why was Tapilatu et al. 2013 deleted? This statement was included in that study.	Tapilatu reference deleted by Irene Kelly, rejected deletion
Bryan Wallace	14	4	Insert months	added
Irene Kelly	14	4	Reference?	added
Bryan Wallace	14	4	There might be others, but this one is clearly identified because a long-term effort exists	no change
Scott Benson	14	4	Lontoh 2014 reference added below.	Reference accepted
Bryan Wallace	17	2	Binckley et al. 1998 Sex Determination and Sex Ratios of Pacific Leatherback Turtles, <i>Dermochelys Coriacea</i> , Copeia 1998, No. 2. (May 1, 1998), pp. 291-300	added
Jim Harvey	17	3	Not sure of this sentence, can it be reworded to be more understandable.	changed

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Commenter	Page	Paragraph	Reviewer Comment	Department Response
Bryan Wallace	18	4	Newer reference: Avens et al. (2020) Regional comparison of leatherback sea turtle maturation attributes and reproductive longevity Vol.:(0112 33456789) Marine Biology (2020) 167:4 <a href="https://doi.org/10.1007/s00227-019-3617-y">https://doi.org/10.1007/s00227-019-3617-y</a>	added by Scott Benson
Scott Benson	18	4	Avens et al. 2020 reference added below.	added by Scott Benson
Bryan Wallace	19	4	not always the case, but ok	no change
Bryan Wallace	19	1	Crim et al (2002) The leatherback turtle, <i>Dermochelys coriacea</i> , exhibits both polyandry and polygyny. Molecular Ecology (2002) 11, 2097–2106	added
Irene Kelly	19	1	Note that all these are extrapolations from other non-Western Pacific populations. You might want to clarify as we don't know if any of this is true for the WP population. Plus the clutch size is quite different for WP population. Suggest using references and information from the status review.	Accepted first sentence change to state "information from other populations are summarized"
Irene Kelly	19	1	Make specific for the WP population	Accepted change to "5.5 clutches per season"
Irene Kelly	19	1	Is the nesting process really necessary? Just seems like a lot of text and information that isn't really relevant.	left in for completeness
Bryan Wallace	20	1	? Or just by chomping prey like any other predator?	Removed sentence
Bryan Wallace	20	1	Have low energy content per unit wet mass	added
Irene Kelly	21	2	Did this remain constant over time? What does Benson et al. 2020 say about this?	Scott Benson responded and confirmed statement in status evaluation is accurate
Scott Benson	21	2	Hetherington et al. 2019 reference added below.	added
Tina Fahy	22	1	Just checking, is this the determination of CDFW and just for West Pacific leatherbacks or a general statement for sea turtles (per Irene's edits)?	Prefer to keep the sentence specific to the west pacific population. Rejected edit to generalize the statement for all sea turtles.
Tina Fahy	22	1	Used federally for critical habitat designations.	This is CESA, rejected change
Tina Fahy	22	1	Should be "east of the 3,000 meter contour"? (or isobath)	Accepted correction by Scott Benson

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Commenter	Page	Paragraph	Reviewer Comment	Department Response
Irene Kelly	22	1	What protections are included? Summarize what it means to have CH and conservation area established. Are fisheries excluded etc.? Drift gillnet fishing is prohibited annually from August 15 to November 15 within the California leatherback turtle conservation area	added
Scott Benson	22	1	CH was designated to protect biological resources (jellyfish prey). The Leatherback Conservation Area prohibits drift gillnet fishing between 15 August – 15 November.	added
Tina Fahy	22	1	Note that this was in place <i>before</i> critical habitat was designated and was put in place to protect the animals, not their habitat – and as Irene points out, it is in place specifically to prohibit drift gillnet fishing. It may still be worth mentioning since it includes areas off CA but just need to be careful wrt context.	Reworded and sentence moved up
Irene Kelly	24	4	Critical habitat for nesting beaches have not been established. CH only exist in CA. Tina: includes areas off the west coast. CH can only include U.S. waters.	Accepted changes, removed "habitat"
Irene Kelly	24	4	Activity or threats?	Changed "activity" to "threats"
Irene Kelly	25	4	But they do occur in CA marine habitats. This paragraph needs to be clarified. Not sure what you are trying to get at. If your point is anthropogenic impacts to terrestrial habitats, then remove marine threats (fisheries, marine debris, pollution, ship strike etc should not be mentioned if your focus is terrestrial impacts).	Removed sentence
Scott Benson	27	1	This population was considered to be part of the Northeast Indian Ocean population.	Removed malaysian population statement
Bryan Wallace	27	1	Bryan Wallace - Please update this statement with a newer reference Laud OPO Network (2020) <a href="https://www.nature.com/articles/s41598-020-60581-7">https://www.nature.com/articles/s41598-020-60581-7</a>	Removed eastern population statement

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Commenter	Page	Paragraph	Reviewer Comment	Department Response
Irene Kelly	27	1	In previous sentence you say the population has undergone a 95% decline, and now its 96%? Some revision is needed in this section.	Removed eastern population statement
Irene Kelly	27	2	Annual rate of decline or overall declining trend over time?	Added "annual"
Bryan Wallace	29	2	So this is ~10% of the total number of nesting females, and usually less. And includes males. It's worth noting that while CA is definitely important to this population, most of the animals are always elsewhere, and the ones that are in CA are a small proportion, part of the year.	Stated in section 2.4 "Approximately 38-57% of summer nesting West Pacific leatherback sea turtles take advantage of food availability during the seasonal upwelling that occurs in the California Current Ecosystem (Benson et al., 2011; Seminoff et al., 2012; Lontoh 2014". Not sure if we should add another statement here.
Scott Benson	29	2	178 was the estimate for California. The estimate for central California was 140.	Accepted change to 140
Irene Kelly	30	3	Services? What Department? California Dpt of Fish and Game?	Accepted change earlier in the document that established "department"
Bryan Wallace	32	2	This part is undoubtedly true, given the evolutionary history of the population described in a previous section. The issue is the pace at which current climate change is happening might be too fast for leatherback life history plasticity to respond adequately.	Added, modified statement
Bryan Wallace	32	1	Please consider whether using this term is appropriate. In some circles, it is no longer used, and less pejorative terms are preferred.	Changed to "taking"
Bryan Wallace	33	1	Still the case? This was a while ago	From what I can find, yes as these beaches are well monitored.
Bryan Wallace	33	1	More information is needed on the Kei Island traditional harvest. This is a well-known occurrence that apparently affects a large number of late-stage turtles. As such, its relevance to the population is paramount.	Added additional statement above

Commenter	Page	Paragraph	Reviewer Comment	Department Response
Bryan Wallace	34	2	These are more generic, introductory sentences. By this point in the section, there should be population-specific conclusions based on numbers presented.	Added preceding statements
Bryan Wallace	34	2	This might be true, but this section does not provide sufficient evidence to justify this statement. What is the number of turtles harvested per year? What is the % of nests harvested? Is 0% harvest the only 'sustainable' level? Or could some harvest be allowed? What if bycatch were eliminated? I'm not saying that it's the job of this document to do these types of analyses, but it should at least provide the background levels of harvest/consumption to justify a conclusion that harvest is unsustainable.	Changed "unsustainable" to "adversely impacts..."
Irene Kelly	34	1	Where was FP documented in leatherbacks? Has it ever been documented in California? This paper is related to chelonids in Florida and not applicable. We were not able to find any evidence of disease in leatherbacks in our review – suggest removing reference of FP for leatherbacks. As per the status review: While we could not find any information on disease, predation of eggs is a major and well documented threat to the West Pacific DPS, likely second to poaching (i.e., nests not taken by humans are typically predated; Bellagio Sea Turtle Conservation Initiative, 2008).	Removed FP information.
Bryan Wallace	35	2	So 5% of the 29.3% described above? So to something like 25% now?	29.3% refers to nests lost in 2005. This statement for 2016-2017.
Bryan Wallace	35	3	It's important to separate natural predation from predation by feral—i.e., anthropogenic—animals. Different management, different implications.	Both occur, added "feral and domesticated" to clarify.
Bryan Wallace	36	1	Need references	added
Bryan Wallace	36	1	Please clarify if this is a total for that time period	added

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Commenter	Page	Paragraph	Reviewer Comment	Department Response
Bryan Wallace	37	1	This is an understatement. It would be worth mentioning that the WCPFC passed a resolution requiring a minimum of 5% observer coverage, and yet barely any country meets it, besides the USA.	added
Bryan Wallace	37	1	Please be careful with all of the different terms to describe bycatch. 'Take' is carefully defined in USA ESA terms, but that is not universally understood. Interactions with gear are one thing, but how many animals actually die as a result of those interactions is what's important to the actual population dynamics. Please be sure to clarify when describing results of studies between 'interactions' and 'mortality'.	Added clarification
Bryan Wallace	37	1	Again, be careful with number of turtle interactions and number of turtle deaths. Any bycatch interaction is negative for turtles, of course, but if animals are released alive, that's also important.	Added mortalities
Bryan Wallace	38	2	Yes, but turtle bycatch rates are much lower for deep-set gear	No change. Lower bycatch rate statement below.
Irene Kelly	39	2	Longline?	No change. A lot of focus on longline, but other gear types apply.
Irene Kelly	40	1	Reference? Or is this a conclusion of the CA Dept of Game or was this a conclusion of the status review? NMFS and USFWS concluded that international fishery bycatch is a significant threat, but I'm not sure we specifically identified Asian fisheries significant compared to all international fisheries.	Removed significant. As data is sparse and mainly interactions (rather than mortalities), I added "potential". Should we remove the section?
Bryan Wallace	40	1	It would be very useful to compile all of these bycatch estimates into a table: country/time period/gear type/estimated turtles caught/estimated mortality rate	Unnecessary - no change

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Commenter	Page	Paragraph	Reviewer Comment	Department Response
Bryan Wallace	40	2	Mortality or catch? Just making sure because the next line says 8 leatherbacks annually caught in shallow-set, and no way 7 of those die every year. If the 7 dead/year is for shallow-set and deep-set combined, please clarify in the first sentence	Mortality. Clarified statement
Bryan Wallace	41	2	Bryan Wallace - These are observed, not fleet-wide estimates, correct? And how many dead?	Accepted Irene's edit which clarified "12 annually". Not sure how many dead
Bryan Wallace	41	3	And nearly 0 mortality; leatherbacks are rarely caught in PS operations, and even more rarely do they die as a result	no change needed
Bryan Wallace	41	4	So, < 1 mortality every other year. Again, would be interesting to compare these across gear types. Because the CA drift gillnet fishery is the one that has received the most attention, and has been under the most scrutiny, relative to its actual interactions with leatherbacks (followed closely by Hawaii LL). The point here is that there isn't too much more the USA fisheries can do at this point other than stop fishing entirely...	no change needed
Irene Kelly	42	5	This statement should be updated with current information. What about interactions btwn 2017 and 2020? If there have been no documented interactions during this time then say so with reference. Any other CA fisheries that might be of concern?	Scott Benson responded with "no CA interaction with D. Crab from 2017-2020. One rock crab interaction in 2019, not sure if COM or REC"

Commenter	Page	Paragraph	Reviewer Comment	Department Response
Irene Kelly	42	6	Reference? Or who concludes this? Is it really less significant? It is better quantified based on high observer coverage and we have smaller fleets proportionally relative to the international industry, but I'm not sure you can conclude its less significant. You can say US fishery bycatch cannot be discounted and remains a threat to the population.	Accepted Scott Benson's suggestion of "less magnitude." Full response: 'less significant' could be replaced with 'of lower magnitude'. While it's true that US fishery bycatch is better quantified and monitored, and US fleets are smaller relative to the international fleet, there have been some estimates of bycatch on the high seas and international waters, as referenced previously in this document. Authors could also reference Peatman and Nicol 2020 (after receiving permission from SPC and/or WCPFC) who provided annual rough estimates of 600-1900 leatherbacks caught incidentally during 2003-2018 within the Western and Central Pacific Fishery Commission Convention Area, but caution that limited and uneven fishery monitoring introduces substantial uncertainty. Peatman, T., Nicol, S., 2020. Updated longline bycatch estimates in the WCPO. In: 16th Meeting of the Scientific Committee of the Western and Central Pacific Fisheries Commission, WCPFC-SC16, Electronic Meeting, 11 e 20 August 2020. WCPFC-SC16-2020/ST-IP-11.
Bryan Wallace	42	6	Good, this is a balanced concluding statement.	No change needed

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Commenter	Page	Paragraph	Reviewer Comment	Department Response
Bryan Wallace	42	1	This compilation included mostly coastal/small-scale fisheries, not only pelagic. Chile's longline fleet does fish in pelagic waters, but the others included in the 440 were a lot of national-scale drift gillnet bycatch reports.	Added clarification
Scott Benson	43	1	The sample size is small, however, authors could also cite Mrosovsky et al. 2009 (Leatherback turtles: The menace of plastic; Marine Pollution Bulletin 58 (2009) 287–289) to support the statement that marine debris has the potential to be a significant threat.	added
Scott Benson	46	2	This statement is speculative, as we have no direct data on climate impacts on prey and leatherbacks. Poor upwelling strength correlated with lower leatherback abundance in neritic waters, likely due to reduced prey availability. If weak upwelling and productivity are exacerbated by climate change, leatherbacks that forage in neritic central California waters would likely shift their distribution and forage elsewhere; however, it is unknown what impact this would have on leatherback survival, reproduction and population trends.	Revised statement
Scott Benson	47	3	This would most likely result in a distributional shift with unknown consequences for survival and reproduction.	Revised the statement
Bryan Wallace	48	1	Are there any exceptions for traditional or subsistence use?	Added statement
Bryan Wallace	48	1	Really critical point...and in part why I flagged use of the word 'poaching'	No response needed
Bryan Wallace	49	3	Need to revised the statement above about national-scale prohibitions on take	Revised the statement
Bryan Wallace	50	6	Perhaps worth noting that the IATTC passed a similar resolution in 2019, which thus covers the entire range of the population	Added CMM 2018-04 information to section 5.4.1.

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Commenter	Page	Paragraph	Reviewer Comment	Department Response
Irene Kelly	50	6	Update this section to reference the new ST Conservation and Management Measure 2018-04 which has expanded gear/handling requirements to ALL shallow-set longline fisheries operating within the Commission's area.	Added info on CMM 2018-04
Bryan Wallace	52	1	Considering that the population is already listed on the federal ESA, and all of the below is already happening/has happened in CA, I'm left thinking what more will an official, state-level ESA listing do for leatherbacks? Is it largely symbolic? That's still important, of course, but wondering about what (if any) management tools become available that weren't available already. And if state resource management agencies now have to include leatherbacks on what I'm sure is a long list of ESA-listed species, will they also get resources needed to implement new measures? I know that these considerations are not part of the listing determination process, but still noteworthy in the broader context.	Comment noted
Irene Kelly	53	1	What is the 'zone'? Maybe define for those who are not familiar with the fishery or the area.	added
Irene Kelly	53	1	What are these measures?	added
Irene Kelly	53	1	Is this real time decrease? Or in subsequent fishing season?	Clarification added
Irene Kelly	53	1	Again is this real time implementation or in subsequent year?	Clarification added
Bryan Wallace	53	2	So this has been implemented? Or the CA senate simply passed this bill?	Added implemented
Bryan Wallace	54	2	How many total permits exist?	Added details on numbers of permits.

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Commenter	Page	Paragraph	Reviewer Comment	Department Response
Bryan Wallace	56	1	What does CA's ESA law require in terms of quantification of degree of threat? Is it enough for this statement (and others like them above) to simply state that something is a threat because there is some form of negative effect on leatherbacks? It might not be required by the statute, but numbers do matter, especially when put in the population context. Are leatherbacks affected by gillnet bycatch? Sure. But are those 'threats'? Perhaps. I suggest that the loggerhead and Kemp's ridley biological status reviews and ESA listing determinations be reviewed for ways to put in context the relative population-level impacts of different threats to a sea turtle population. This is particularly important in this case as this report and consequent listing decision only really applies to the state of CA.	It is true that many of the threats are unquantified. However, the science shows the population has declined significantly and is endangered. Though unquantified, the threats described in this evaluation do negatively impact the population, which I feel we have demonstrated. Thoughts?
Irene Kelly	56	1	This sentence doesn't fit with the subject of habitat destruction.	Removed sentence
Bryan Wallace	56	1	If someone has made this argument to your knowledge, please add references. Otherwise this sounds like something that came up in an informal conversation.	Removed sentence
Irene Kelly	57	1	Since this section is about habitat destruction, I think you need to incorporate discussion about foraging habitat as well given that CA foraging habitat is of relevance to this document.	added

Status Review of the Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) in California  
California Department of Fish and Wildlife July 2021

Commenter	Page	Paragraph	Reviewer Comment	Department Response
Bryan Wallace	57	1	This word suggests an established level of exploitation above which the population will decline. Has such a level been established? For this or any other threat? If so, please provide and highlight this type of analysis in this report, as it would provide really critical context for the overall and threat-specific assessments.	Most sources of mortality are not quantified outside the U.S. In section 5.4.3, it is stated that Curtis et al. identified a limit reference point of a maximum of 7.7 mortalities over a 5 year period in the U.S. EEZ in order to prevent further decline. As far as I know, a limit reference point has not been established for the nesting habitat range.
Bryan Wallace	57	1	Still has not been described where, why, and how much this happens.	Added statements to section 5.2
Bryan Wallace	57	1	See previous comments	Added statements to section 5.2
Bryan Wallace	58	1	So no more restrictions are necessary on US-based fisheries? If you're referring specifically here to exploitation for human consumption vs incidental takes in fisheries, please clarify here and throughout.	Added clarifying statement
Irene Kelly	58	1	This paper references chelonid turtles (green & loggerheads) in Florida, not relevant to leatherbacks.	Accepted deletion
Bryan Wallace	59	1	Compared to what? Do you mean that what is known about leatherback bycatch suggests negative population-level impacts? What about national-scale fisheries management? (aside from the USA)	Added clarification
Irene Kelly	59	1	This information is not included in the previous fishery bycatch section and should be there. Not sure there's value in including it here as this section is an overview/summary of bycatch impacts. Suggest a summary sentence or two summarizing interactions in US fisheries and interactions in international fisheries.	Added to section 5.4
Bryan Wallace	59	1	Everywhere? Including in CA?	Added clarification

Status Review of the Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) in California  
California Department of Fish and Wildlife July 2021

Commenter	Page	Paragraph	Reviewer Comment	Department Response
Bryan Wallace	60	1	I appreciate this nuance, but it suggests that it only applies when there is literally no information. One could argue that the 'level of impact' has not been demonstrated in this document for any of the threats evaluated.	Changed unknown to unquantified
Bryan Wallace	60	1	Almost similar to gillnet bycatch rates...	No response needed
Irene Kelly	60	1	Add this information to habitat section	added
Bryan Wallace	60	1	Not sure. If the Benson paper did not highlight any clear climate effects on long-term resource availability, on what basis is the Department making this claim? Is this focused on nesting beach effects?	added "potential"
Scott Benson	61	1	This nesting population was considered to be part of the Northeast Indian Ocean population in the recent global status review (NMFS and USFWS 2020).	Removed Malaysian population statement
Irene Kelly	61	1	Concludes? or agrees with NOAA and USFWS (2020) conclusion that the West Pacific leatherback turtle population is currently at risk of extinction.	added
Irene Kelly	61	1	at risk of extinction	Is the current text CESA language? Edited to match CESA language
Bryan Wallace	63	1	Wondering if much of this doesn't belong up above somewhere, prior to this point in the document? I note that this section largely addresses my previous comment.	No change in order to keep format
Bryan Wallace	63	1	So would this be new, or already in place due to national listing, technically?	Edited statement
Irene Kelly	63	1	what about for research?	Edited statement
Bryan Wallace	64	2	Like offshore wind/wave energy projects, for example? What about shipping, recreational boat traffic, recreational fishing, etc.? could all of those be subject to CEQA review if leatherbacks were state-listed.	No change
Bryan Wallace	66	1	But perhaps with a focus on what can be done in CA?	Very little can be done in CA, but these are in the suggested measures

Status Review of the Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) in California  
California Department of Fish and Wildlife July 2021

Commenter	Page	Paragraph	Reviewer Comment	Department Response
Bryan Wallace	67	1	These should precede the others. The other research is good, but the management actions are the most important things.	agreed, moved
Irene Kelly	67	1	Longline gear? Because both shallow and deep-set LL fisheries interact with sea turtles. What about drift net?	added
Irene Kelly	67	1	Is this when the retrieval program operates? Otherwise no need to mention season as that's not really relevant.	Removed

March 18, 2021

Scott Benson, Research Fishery Biologist  
NOAA/NMFS/Southwest Fishery Science Center  
Marine Mammal and Turtle Division  
7544 Sandholdt Road  
Moss Landing, CA 95039  
Scott.Benson@noaa.gov

Dear Mr. Benson:

RE: Pacific Leatherback Sea Turtle (*Dermochelys coriacea*)

Department of Fish and Wildlife, Status Report Peer Review

Thank you for agreeing to serve as a scientific peer reviewer for the Department of Fish and Wildlife's (Department) Draft Status Review of the Pacific Leatherback Sea Turtle (*Dermochelys coriacea*). A copy of this report, dated March 2, 2021, is enclosed for your use in that review. The Department seeks your expert analysis regarding the scientific validity of the report and its assessment of the status of the Pacific Leatherback Sea Turtle in California. **The Department would appreciate receiving your peer review input on or before May 7, 2021.**

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(e.) Focusing on the information available relating to each of the relevant categories, the Department recommended to the Commission that the Petition be accepted.

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Sincerely,

Craig Shuman, D. Env.  
Regional Manager

Enclosure

Status Review of the Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) in California  
California Department of Fish and Wildlife July 2021

Re: Peer Review of Pacific Leatherback Status Evaluation



scott benson <scott.benson@noaa.gov>

To Huang, Harrison@Wildlife

Cc Irene Kelly - NOAA Federal; Christina Fahy - NOAA Federal

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Fri 5/7/2021 10:42 AM



You replied to this message on 5/10/2021 2:10 PM.

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Hello Harrison,

I've attached the review draft of the Pacific leatherback CESA status review with comments and suggested edits from Irene Kelly, Christina (Tina) Fahy and myself. Tina had not fully completed her review before sending the document to myself and will send an updated review when finished.

Thank you for the opportunity to review the document. Please let me know if I can be of further assistance.

Best,  
Scott

March 18, 2021

Christina Fahy, Sea Turtle Recovery Coordinator  
National Marine Fisheries Service  
West Coast Regional Office  
501 West Ocean Blvd. Suite 4200  
Long Beach, California 90802  
[Christina.Fahy@noaa.gov](mailto:Christina.Fahy@noaa.gov)

Dear Ms. Fahy:

RE: Pacific Leatherback Sea Turtle (*Dermochelys coriacea*)  
Department of Fish and Wildlife, Status Report Peer Review

Thank you for agreeing to serve as a scientific peer reviewer for the Department of Fish and Wildlife's (Department) Draft Status Review of the Pacific Leatherback Sea Turtle (*Dermochelys coriacea*). A copy of this report, dated March 2, 2021, is enclosed for your use in that review. The Department seeks your expert analysis regarding the scientific validity of the report and its assessment of the status of the Pacific Leatherback Sea Turtle in California. **The Department would appreciate receiving your peer review input on or before May 7, 2021.**

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The enclosed draft report reflects the Department's effort to identify and analyze available scientific information regarding Pacific Leatherback Sea Turtle status in California. An endangered species is defined as "a native species or subspecies...which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease" (Fish and G. Code, § 2062). A threatened species is defined as "a native species or subspecies...that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by [CESA]" (Fish and G. Code, § 2067). At this time, the Department suggests listing the Pacific Leatherback Sea Turtle as endangered under CESA is warranted. We underscore, however, that scientific peer review plays a critical role in the Department's effort to develop and finalize its recommendations to the Commission as required by the Fish and Game Code.

Because of the importance of your effort, we ask you to focus your review on the scientific information regarding the status of Pacific Leatherback Sea Turtle in California. As with our own effort to date, your peer review of the science and analysis regarding each of the listing factors prescribed in CESA (Cal. Code Regs., Tit. 14, § 670.1(i)(1)(A)) (i.e., present or threatened habitat modification, overexploitation, predation, competition, disease, and other natural occurrences or human-related activities that could affect the species) are particularly important.

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If there is anything the Department can do to facilitate your review, please let me know. Thank you again for your contribution to the status review effort and the important input it provides during the Commission's related proceedings.

Sincerely,

Craig Shuman, D. Env.  
Regional Manager

Enclosure

Status Review of the Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) in California  
California Department of Fish and Wildlife July 2021

Re: Peer Review of Pacific Leatherback Status Evaluation



Christina Fahy - NOAA Federal <christina.fahy@noaa.gov>

To: Huang, Harrison@Wildlife

Cc: Scott Benson - NOAA Federal; Irene Kelly - NOAA Federal

Reply Reply All Forward

Fri 4/30/2021 10:16 AM

You replied to this message on 4/30/2021 10:21 AM.  
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Hi Harrison--

Thank you, I was about to check in with you today. I am going to start reviewing the status review later this afternoon but I wanted to check and see whether it was okay to work from Irene's draft before I begin. She and I (and Scott) were part of the leatherback status review team for a number of years so I suspect many of her comments/additions may have to do with incorporating information from our status review to ensure it is consistent and current with the status review for CDFW, and whether that makes sense or is relevant. Thus, much of what I may be reviewing/editing may be duplicative.

Please let me know how I should proceed. Thanks so much,

Tina

March 18, 2021

Irene K. Kelly, Sea Turtle Recovery Coordinator  
NOAA Fisheries  
Pacific Islands Region  
1845 Wasp Blvd.  
Honolulu, HI 96818  
Irene.Kelly@noaa.gov

Dear Ms. Kelly:

RE: Pacific Leatherback Sea Turtle (*Dermochelys coriacea*)

Department of Fish and Wildlife, Status Report Peer Review

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Craig Shuman, D. Env.  
Regional Manager

Enclosure

Status Review of the Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) in California  
California Department of Fish and Wildlife July 2021

Re: Peer Review of Pacific Leatherback Status Evaluation



Irene Kelly - NOAA Federal <irene.kelly@noaa.gov>

To Huang, Harrison@Wildlife

Cc Christina Fahy - NOAA Federal

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Wed 4/21/2021 5:44 PM



You replied to this message on 4/22/2021 12:00 PM.

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Aloha Harrison,

Attached are my comments and edits for your consideration. I'll be out of the office April 30 - May 9 so wanted to get this off my plate before then. I'm sharing this with Christina Fahy so she can add any additional edits that she may have from her perspective. Please let me know if there are any questions.

Regards,

**Irene K. Kelly**

*Sea Turtle Recovery Coordinator*

*NOAA Fisheries - Pacific Islands Region*

[Irene.Kelly@noaa.gov](mailto:Irene.Kelly@noaa.gov)

808.725-5141 (office)

808.542.9474 (mobile/text)

March 18, 2021

James T. Harvey, Director  
San José State University  
Moss Landing Marine Laboratories  
8272 Moss Landing Rd.  
Moss Landing, CA 95039  
jharvey@mlml.calstate.edu

Dear Dr. Harvey:

RE: Pacific Leatherback Sea Turtle (*Dermochelys coriacea*)

Department of Fish and Wildlife, Status Report Peer Review

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Sincerely,

Craig Shuman, D. Env.  
Regional Manager

Enclosure

Status Review of the Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) in California  
California Department of Fish and Wildlife July 2021

Re: Peer Review of Pacific Leatherback Status Evaluation



Jim Harvey <jharvey@mlml.calstate.edu>

To Huang, Harrison@Wildlife

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...

Thu 5/6/2021 12:48 PM



You replied to this message on 5/6/2021 3:46 PM.

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Hi Harrison: Please find attached my comments regarding the Status Review of the Pacific Leatherback Sea Turtle. This is a well written, accurate, and important document. As such, I had very few substantive comments, and most of my suggested changes are editorial.

I hope you find my few edits useful.

Cheers Jim

March 18, 2021

Bryan P. Wallace, Adjunct Associate Professor and Chief Scientist  
Duke University  
The Oceanic Society  
624 Keefer PI NW  
Washington, DC 20010  
bryanpwallace@gmail.com

Dear Dr. Wallace:

RE: Pacific Leatherback Sea Turtle (*Dermochelys coriacea*)

Department of Fish and Wildlife, Status Report Peer Review

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The Commission first received the "Petition to List the Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) as an endangered species under the California Endangered Species Act" (Petition) on January 23, 2020 and published a formal notice of receipt on February 3, 2020 (Cal. Reg. Notice Register 2020, No. 7-Z, p. 243). On June 24, 2020, the Department provided the Commission with its "Evaluation of a petition from Center for Biological Diversity and Turtle Island Restoration Network to list Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) as Endangered under the California Endangered Species Act" to assist the Commission in making a determination as to whether the petitioned action may be warranted based on the sufficiency of scientific information. (Fish & G. Code, §§ 2073.5 & 2074.2; Cal. Code Regs., tit. 14, § 670.1, subds. (d) &

(e.) Focusing on the information available relating to each of the relevant categories, the Department recommended to the Commission that the Petition be accepted.

The enclosed draft report reflects the Department's effort to identify and analyze available scientific information regarding Pacific Leatherback Sea Turtle status in California. An endangered species is defined as "a native species or subspecies...which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease" (Fish and G. Code, § 2062). A threatened species is defined as "a native species or subspecies...that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by [CESA]" (Fish and G. Code, § 2067). At this time, the Department suggests listing the Pacific Leatherback Sea Turtle as endangered under CESA is warranted. We underscore, however, that scientific peer review plays a critical role in the Department's effort to develop and finalize its recommendations to the Commission as required by the Fish and Game Code.

Because of the importance of your effort, we ask you to focus your review on the scientific information regarding the status of Pacific Leatherback Sea Turtle in California. As with our own effort to date, your peer review of the science and analysis regarding each of the listing factors prescribed in CESA (Cal. Code Regs., Tit. 14, § 670.1(i)(1)(A)) (i.e., present or threatened habitat modification, overexploitation, predation, competition, disease, and other natural occurrences or human-related activities that could affect the species) are particularly important.

Please note the Department releases this peer review report to you solely as part of the peer review process, and it is not yet public.

For ease of review, I invite you to use "Track Changes" in Microsoft Word, or provide comments in list form by page number, section header, and paragraph. Please submit your comments electronically to John Ugoretz, Environmental Program Manager with the Marine Region at [John.Ugoretz@wildlife.ca.gov](mailto:John.Ugoretz@wildlife.ca.gov). If you have any questions, you may reach him by email or phone at (562) 338-3068.

If there is anything the Department can do to facilitate your review, please let me know. Thank you again for your contribution to the status review effort and the important input it provides during the Commission's related proceedings.

Sincerely,

Craig Shuman, D. Env.  
Regional Manager

Enclosure

Status Review of the Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) in California  
California Department of Fish and Wildlife July 2021

Re: Peer Review of Pacific Leatherback Status Evaluation



Bryan Wallace <bryan@ecolibrum-inc.com>

To: Huang, Harrison@Wildlife

Reply

Reply All

Forward

Mon 5/10/2021 11:25 AM



You replied to this message on 5/10/2021 2:03 PM.

If there are problems with how this message is displayed, click here to view it in a web browser.



ReviewDraft\_Leatherback\_CESA\_StatusReview\_210322\_bwallace.docx

1 MB

Hi Harrison

I grabbed some time today to review the document. My congratulations to the folks who worked on it; it's a succinct yet comprehensive summary of available, relevant information for this assessment and listing determination.

I made several comments in the attached word doc. Please let me know if anything requires further clarification or discussion.

Thanks for the opportunity to review, and for the patience in me getting it to you!

Take care,  
Bryan

---

**Bryan Wallace**

Ecolibrum, Inc

email: [bryan@ecolibrum-inc.com](mailto:bryan@ecolibrum-inc.com)

cell/WhatsApp: +01 202 295 7535



## Pacific Leatherback Sea Turtle (*Dermochelys coriacea*) CESA One Year Status Review Report



Presented to:  
California Fish and Game Commission

Presented by:  
Harrison Huang  
Environmental Scientist  
Pelagic Fisheries and Ecosystem Program  
Marine Region

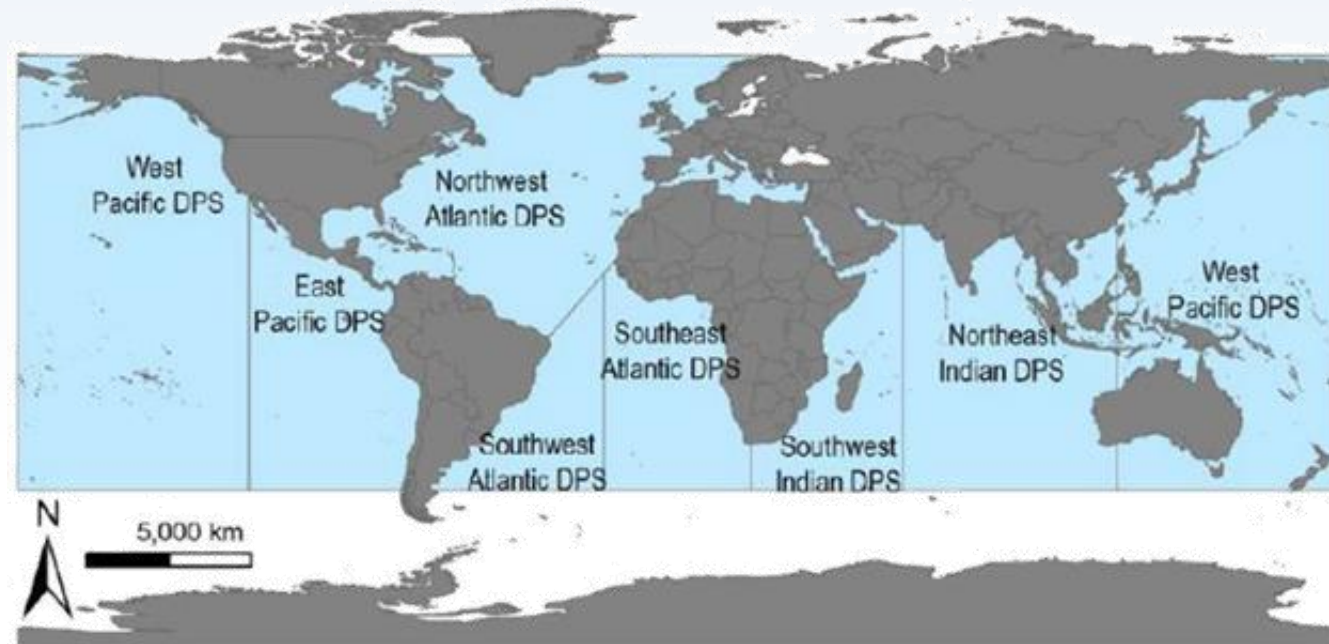


# Listing History

- Federal ESA
  - June 1970: Listed as endangered
- California ESA
  - January 2020: Petition submitted to Commission
  - February 2020: Petition received by CDFW
    - 30-day extension approved
  - June 2020: Department Evaluation received by Commission
  - August 2020: Commencement of one-year status review

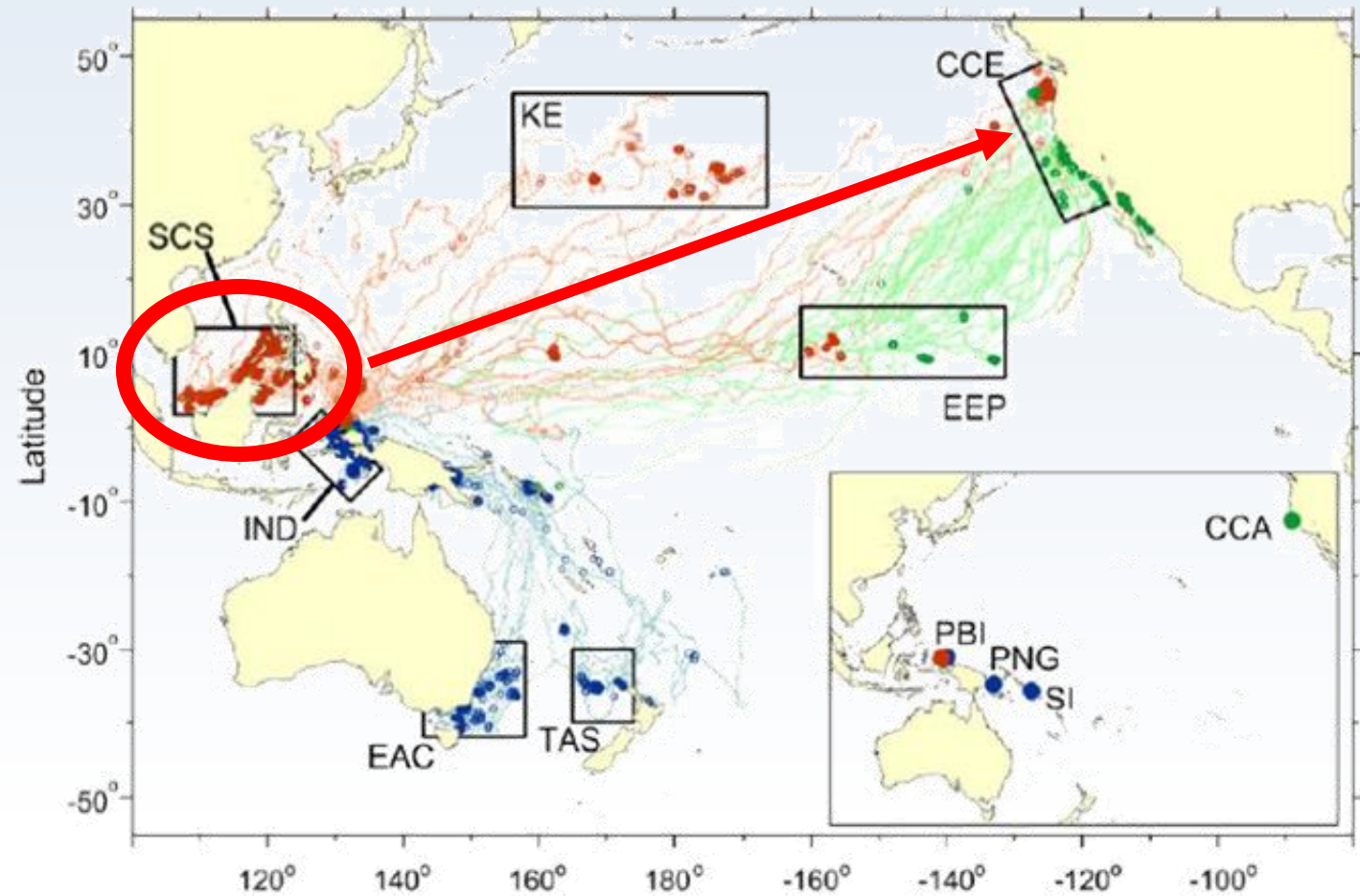
# Biology

- Largest sea turtle species (1.5-2 m, 900 kg)
- Soft ridged carapace, large flippers
- Temperature during incubation influences gender
- Seven distinct subpopulations



# Range

- 2 distinct Pacific subpopulations
  - Eastern Pacific
  - Western Pacific
- A portion of West Pacific stock migrates to North America west coast
  - Forage July-November

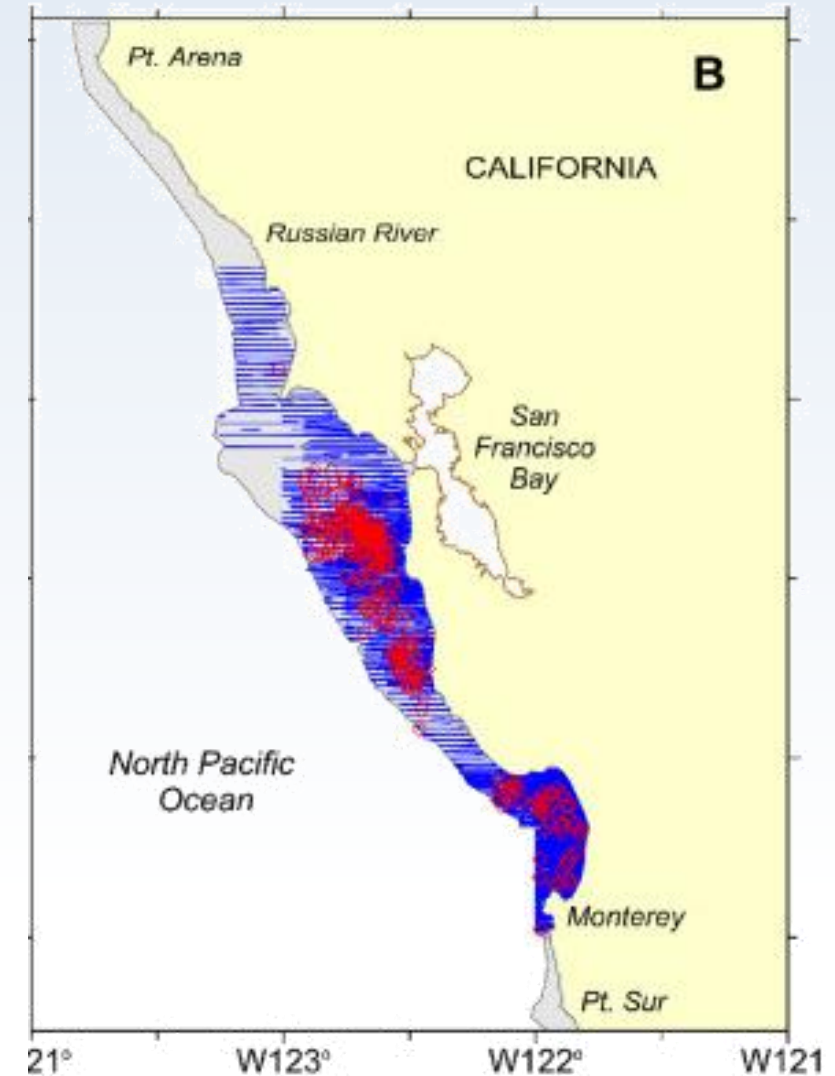


Source: Benson et al. 2011



# California Range

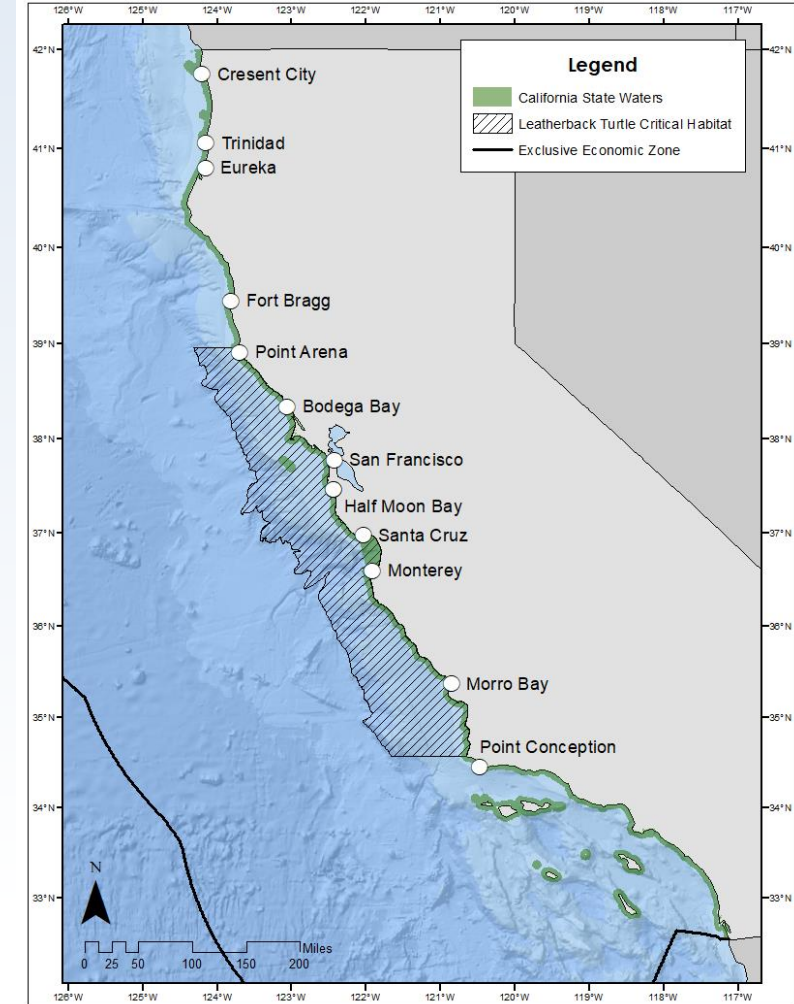
- CA-OR border to U.S.-Mexico border
  - Concentrated sightings in central CA July-November
  - Primary foraging is from Monterey Bay to Point Arena
- Presence related to seasonal upwelling
  - Jellyfish prey availability
- No nesting or coming ashore in California





# Necessary Habitat

- Highly migratory species
  - Needs ability to transit
- Quality foraging areas
  - Pt. Arena to Pt. Arguello is critical habitat
  - Favorable upwelling conditions
- Quality nesting beaches (OUTSIDE U.S.)
  - Unobstructed and mildly sloped
  - Pristine and sandy
  - Continental shores with deep offshore waters





# Population Status/Trends

- 1,277 nesting females<sup>1</sup>
  - 1984-2011: 5.9% annual decline in Indonesian nesting population<sup>2</sup>
  - 2001-2017: annual 6.1% decline<sup>3</sup>
- California foraging leatherbacks
  - Current: estimated 55 turtles<sup>4</sup>
  - 5.6% annual decline from 1990 to 2017, or 80% for the period<sup>5</sup>

<sup>1</sup> NMFS & USFWS 2020

<sup>2</sup> Tapilatu et al. 2013

<sup>3</sup> Martin et al. 2020

<sup>4</sup> Benson, pers. comm 2020

<sup>5</sup> Benson et al. 2020



# Threats to the Population

## Primarily Outside U.S.

- Destruction, modification of nesting habitat
- Legal and illegal take
- Fisheries bycatch
- Pollution and vessel strikes
- Natural disasters and climate change



Source: Center for Biological Diversity and Turtle Island Restoration Network 2020



## Listing Recommendation

**Listing Pacific leatherback sea turtle  
as endangered under CESA  
is warranted**

# Thank You

**Harrison Huang**  
**Environmental Scientist**  
**Pelagic Fisheries and Ecosystem Program**  
**(562) 342-7199**  
**Harrison.Huang@wildlife.ca.gov**



Source: <https://www.fws.gov/northflorida/SeaTurtles/Turtle%20Factsheets/leatherback-sea-turtle.htm>

**From:** Robert E. Rutkowski [REDACTED]  
**Sent:** Monday, August 16, 2021 1:53 PM  
**To:** FGC  
**Cc:** Keith Abouchar  
**Subject:** California Agency Recommends Listing Leatherback Sea Turtles as Endangered, Prehistoric Reptiles Threatened by Fishing

Melissa Miller-Henson  
Executive Director  
California Fish and Game Commission  
1416 Ninth Street, Suite 1320, Sacramento, CA 95814  
[fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov) | (916) 653-4899, (916) 653-7229

Re: California Agency Recommends Listing Leatherback Sea Turtles as Endangered, Prehistoric Reptiles Threatened by Fishing

Dear Executive Director:

The California Department of Fish and Wildlife released its recommendation today to protect leatherback sea turtles as endangered under the state's Endangered Species Act. The status review precedes an October 2021 vote, by the California Fish and Game Commission, on whether to list the turtles.

The state's report makes clear that entanglement in fishing gear is the biggest threat to leatherback sea turtles. These enormous, charismatic sea turtles are threatened in California's waters and internationally. For millions of years, leatherbacks have travelled across the Pacific using their long flippers, which can easily catch on fishing lines. Now California has to commit to ensuring they survive by converting to ropeless pots and traps and doing research to prevent entanglement in other gear.

Scientists estimate that leatherback sea turtles have declined in abundance off California by 5.6% annually over nearly 30 years. An estimated 50 Pacific leatherbacks now forage in California waters annually, as compared to 178 Pacific leatherbacks during the years 1990-2003. Whale-watching trips observed three leatherback sea turtles in August 2020 in Monterey Bay.

California's action today is a decisive step in the recovery of critically endangered leatherback turtles, one of California's most giant, gentle and unique marine species. Combined with earlier action to declare the leatherback the official marine reptile of California, we now must redouble our efforts to eliminate all threats from commercial fishing, pollution and climate change.

Protecting leatherbacks under the California Endangered Species Act would make them a state conservation priority. Despite the lack of regular monitoring of state fisheries, leatherback sea turtles have been found tangled in commercial rock crab (2019) and Dungeness crab gear (2015, 2016).

In June 2020 the California Department of Fish and Wildlife determined that increased protections may be warranted and began the status review. The action came in response to a petition from the Center for Biological Diversity and Turtle Island Restoration Network.

A review of leatherback sea turtle science last year concluded that West Pacific leatherbacks, one of seven distinct populations of leatherback sea turtles worldwide, face a high extinction risk. The National Marine Fisheries Service and U.S. Fish and Wildlife Service found that all seven leatherback sea turtle populations remain endangered and denied a petition by the commercial fishing industry to relax some protections.

The Center and TIRN sued the Trump administration after a fishing permit issued in 2019 exempted vessels from the federal ban on longline gear off California. Longlines stretch up to 60 miles, with thousands of baited hooks. A federal judge in Oakland ruled that the federal government had failed to adequately consider impacts on leatherbacks when it revived longline fishing, blocking the permit.

Yours sincerely,  
Robert E. Rutkowski

cc:  
Legislative Correspondence Team  
Longworth House Office Building  
Washington DC 20515  
[keith.abouchar@mail.house.gov](mailto:keith.abouchar@mail.house.gov)





September 30, 2021

California Fish and Game Commission  
715 P Street, 16th floor  
Sacramento, CA 95814

Agenda item #25: Pacific leatherback sea turtle, CESA listing determination — Support

Dear President Silva and Commissioners:

As a California resident, I write in support of designating the Pacific leatherback sea turtle as endangered under California's Endangered Species Act.

Pacific leatherback sea turtles roamed the earth with dinosaurs, having survived for 100 million years virtually unchanged. But now these animals are disappearing from the oceans – their numbers have declined 95% over the last thirty years, and recent studies show they are continuing to decline off California. Hatched on beaches in Indonesia, full-grown leatherbacks make an impressive migration from these nesting beaches to California waters to feed on jellyfish – a 12,000 mile, round-trip journey. Once they arrive off the West Coast, Pacific leatherbacks face a gauntlet of threats, most notably entanglement in fishing gear. Combined with threats at their nesting sites, the future of the world's largest sea turtle is in danger.

It's not too late to save California's official state marine reptile from becoming extinct. As we approach California's ninth annual Pacific Leatherback Conservation Day, we must do more to prioritize monitoring and research efforts and provide safe passage for these sea turtles to freely swim and feed. Please make protection of these amazing ocean animals a conservation priority by listing them as Endangered under the state's Endangered Species Act, consistent with the recommendation of the California Department of Fish and Wildlife.

Sincerely,

2,155 California residents

<u>First Name</u>	<u>Last Name</u>	<u>City</u>	<u>State</u>	<u>Zip Code</u>
Paul	Aagaard	Newbury Park	CA	91320
Johanna	Abate	San Francisco	CA	94109
Rachel	Abdel	San Francisco	CA	94132
Mimi	Abers	Berkeley	CA	94707
Gianna	Abondolo	Richmond	CA	94804
Carroll	Abshier	Lakewood	CA	90713
Alberto	Acosta	Burbank	CA	91505
Carlos	Acosta	Los Angeles	CA	90033
Mike	Acosta	Riverside	CA	92504
David	Adams	Penn Valley	CA	95946
James	Adams	Sacramento	CA	95827
L	Adams	Escondido	CA	92026
Elizabeth	Adan	Carmichael	CA	95608
Steven	Aderhold	Fallbrook	CA	92088
Carolina	Adler	Studio City	CA	91604
Jill	Adler	Manteca	CA	95337
Roshanne	Aghevli	La Crescenta	CA	91214
Veronica	Aguirre-Dutton	Carpinteria	CA	93013
Natalie	Aharonian	North Hollywood	CA	91605
Karen	Ahn	Sebastopol	CA	95472
Achilles	Aiken	Whittier	CA	90601
Gloria	Albert	Santa Monica	CA	90403
Frances	Alet	Calabasas	CA	91302
Elaine	Alfaro	Felton	CA	95018
Alice	Alford	Blythe	CA	92226
Iona	Ali	San Francisco	CA	94112
Julie	Alicea	Denair	CA	95316
Becky	Alkire	Wilton	CA	95693
Ann	Allen	San Rafael	CA	94903
Michael	Allen	Santa Barbara	CA	93105
Gregory	Alper	Pacific Palisades	CA	90272
Kenneth	Althiser	Cherry Valley	CA	92223
Megan	Alvarado	Lakeside	CA	92040
Kate	Amar	Orangevale	CA	95662
Judy	Amarena	San Carlos	CA	94070
Cristina	Amarillas	Santa Rosa	CA	95405
Mary	Ames	Temecula	CA	92592
Liz	Amsden	Los Angeles	CA	90042
Celeste	Anacker	Santa Barbara	CA	93105
Kristine	Andarmani	Saratoga	CA	95070
Evette	Andersen	Grass Valley	CA	95945
Anabelle	Anderson	La Verne	CA	91750
Judith S	Anderson	Long Beach	CA	90807
Joan	Andersson	Berkeley	CA	94708
Sharyl	Andreatta	Rancho Murieta	CA	95683
S	Andregg	Emeryville	CA	94608
Karen	Andrew	Santa Rosa	CA	95404
JL	Angell	Rescue	CA	95672

Tina	Ann	Bolinas	CA	94924
Murielle	Antoku	San Jose	CA	95123
Patricia	Appel	Laguna Beach	CA	92651
Jacki	Apple	Los Angeles	CA	90034
Marylucia	Arace	Oceanside	CA	92057
Marybeth	Arago	Fort Bragg	CA	95437
Tim	Arai	Berkeley	CA	94702
Elisabeth	Armendarez	Santa Ana	CA	92703
Marsha	Armstrong	Los Gatos	CA	95032
Thomas	Arnold	San Jose	CA	95111
Sherrie	Arra	Fallbrook	CA	92028
Marianne	Arreaga	Los Angeles	CA	90046
Alejandro	Artigas	Glendale	CA	91206
Mary	Arum	Oakland	CA	94611
Mark	Ashby	Orinda	CA	94563
Kate	Ashley	Redwood City	CA	94061
Mee	Asks	Oakland	CA	94606
John	Asprey	Moraga	CA	94556
John	Astaunda	San Diego	CA	92129
Cliff	Atendido	Burlingame	CA	94010
Tom	Atha	Alhambra	CA	91801
Dolores	Athuil	Los Angeles	CA	90048
Ed	Atkins	Boulder Creek	CA	95006
Melissa	Atkinson	Los Angeles	CA	90064
Martha	Aubin	Santa Barbara	CA	93109
Colleen	Auernig	Folsom	CA	95630
Jane	August	Topanga	CA	90290
Abbey	Austin	Thousand Oaks	CA	91360
Teresa	Awtrey	San Jose	CA	95129
Kelly	Ayers	Ontario	CA	91761
M	Baca	Fremont	CA	94536
Kimberly	Bach	Shingle Springs	CA	95682
Michelle	Baik	Brea	CA	92821
Mary	Bailey	Soquel	CA	95073
Rich	Bailey	Santa Maria	CA	93458
Jennifer	Bair	Sacramento	CA	95818
Donna	Baker	Hemet	CA	92545
Thomas	Baker	San Diego	CA	92109
Steven	Bal	San Diego	CA	92108
Jo Ann	Baldiwn	Antioch	CA	94509
Josephine	Baldwin	La Mesa	CA	91941
Barbara	Ballenger	Thousand Oaks	CA	91361
Susan	Bally	Mentone	CA	92359
Susan	Balthasar	Los Osos	CA	93402
Elizabeth	Balvin	La Mesa	CA	91942
Carol	Banever	Los Angeles	CA	90046
Eric	Banks	Ukiah	CA	95482
Graciela	Barajas	San Diego	CA	92102
Kelly	Baraka	El Sobrante	CA	94803

Maria	Barakos	Arleta	CA	91331
Jeffrey	Barile	San Carlos	CA	94070
Jim	Barker	San Jose	CA	95119
Scott	Barlow	Sunnyvale	CA	94087
Michael	Barnes	San Diego	CA	92103
Jerry	Barnett	El Cajon	CA	92021
Judith	Barnett	Tarzana	CA	91356
S.	Barnhart	Berkeley	CA	94507
John	Barone	Santa Monica	CA	90401
Anne	Barr	Kentfield	CA	94904
Elaine	Barrett	San Diego	CA	92103
Tim	Barrington	San Jose	CA	95112
Elizabeth	Barris	Topanga	CA	90290
Sandra	Barros	Saint Helena	CA	94574
S	Barryte	Rancho Palos Verdes	CA	90275
Paula	Barsamian	Santa Cruz	CA	95062
Sharon	Bartlett	Orinda	CA	94563
N. J.	Bast	Morro Bay	CA	93442
Lori	Bates	Oxnard	CA	93035
Leslie	Batista	Fontana	CA	92337
Henning	Bauer	San Francisco	CA	94132
Miriam	Baum	Rancho Cucamonga	CA	91701
Gary	Baxel	Cathedral City	CA	92234
Susannah	Baxendale	Culver City	CA	90232
Jo	Baxter	Laguna Beach	CA	92651
Jon	Bazinet	Vallejo	CA	94591
Donna	Beal	Del Mar	CA	92014
Heidi Jo	Bean	Corona	CA	92879
Jackie	Bear	Los Angeles	CA	90048
Suzi	Beaton	Beverly Hills	CA	90210
Catherine	Beauchamp	Pasadena	CA	91103
Paul	Bechtel	Redlands	CA	92373
Rachel	Beck	Oakland	CA	94609
Carol	Becker	Sherman Oaks	CA	91423
Shari	Becker	West Hills	CA	91307
Pauline	Bedford	Joshua Tree	CA	92252
Lorrie	Beggs	Palmdale	CA	93550
Elise	Behnke	Campbell	CA	95008
Wendy R	Behrbaum	Santa Rosa	CA	95404
Rich	Behymer	Sacramento	CA	95864
Elise	Beliak	Foster City	CA	94404
Kimberly	Beliveau	Vallejo	CA	94589
Mary	Bell	Vista	CA	92083
Cindy	Belleau	Forestville	CA	95436
Michael	Belli	South San Francisco	CA	94080
Sal	Bellia	Oakland	CA	94610
Hilarey	Benda	Sherman Oaks	CA	91423
Doug	Bender	Redondo Beach	CA	90277
Matt	Bender	Cardiff By The Sea	CA	92007

Barb	Benedict	Martinez	CA	94553
Brian	Benjamin	Alpine	CA	91901
Elaine	Benjamin	Alpine	CA	91901
Travis	Benneian	Lake Elsinore	CA	92532
Dixie	Bennett	Canoga Park	CA	91304
Annette	Benton	Pittsburg	CA	94565
Suzanne	Benton	Toluca Lake	CA	91602
Myra	Berario	Castaic	CA	91384
Cheryl	Berg	Carmichael	CA	95608
Karen	Berger	Montrose	CA	91020
Colleen	Bergh	Santa Ana	CA	92704
Eric	Bergman	Santa Clarita	CA	91351
Lynda	Berkhan	San Clemente	CA	92672
Diane	Berliner	Los Angeles	CA	90046
Rainelee	Bernardino	Murrieta	CA	92563
Tricia	Berns	Laguna Beach	CA	92651
Adam	Bernstein	Los Angeles	CA	90012
David	Berry	Los Angeles	CA	90024
Kelly	Berry	San Rafael	CA	94903
Sherry	Berry	Ventura	CA	93003
Skyler	Berry	Cupertino	CA	95014
Alisha	Bettinsoli	Reedley	CA	93654
Sandra	Bever	San Diego	CA	92124
Louise	Bianco	Tarzana	CA	91356
Henry	Biggins	Ukiah	CA	95482
Jane	Biggins	Ukiah	CA	95482
Kathy	Bilicke	Los Angeles	CA	90069
Benjamin	Billhardt	Fontana	CA	92336
Barbara	Bills	Placerville	CA	95667
Janet	Bindas	Walnut Creek	CA	94598
Kevin	Bissonnette	San Clemente	CA	92672
Diana	Black	Aliso Viejo	CA	92656
Jennifer	Black	Auburn	CA	95603
Elke	Blair	Folsom	CA	95630
Meike	Blanc	Beverly Hills	CA	90210
Anne	Blandin	Calexico	CA	92231
Natalie	Blasco	Anderson	CA	96007
Amanda	Blatchford	Pleasant Hill	CA	94523
Patricia	Blevins	San Jose	CA	95118
Don	Bliss	Ukiah	CA	95482
Waundra	Blizzeard	Alturas	CA	96101
Martin	Bloom	San Francisco	CA	94132
Joseph	Blum	San Francisco	CA	94110
Harry	Blumenthal	Eureka	CA	95501
Frances	Blythe	Dixon	CA	95620
Ralph	Bocchetti	Fontana	CA	92337
Kathryn	Boeddiker	Wilton	CA	95693
Sondra	Boes	Campbell	CA	95008
Kathy	Boettcher	Redondo Beach	CA	90277

Susan	Bogdanovich	San Pedro	CA	90732
Ronald	Bogin	El Cerrito	CA	94530
Stephen	Bohac	Twain Harte	CA	95383
Richard	Bold	Vista	CA	92084
Kathie	Boley	Three Rivers	CA	93271
Charlotte	Bolinger	Grass Valley	CA	95945
Kate	Bolton	Petaluma	CA	94952
Randall	Boltz	San Diego	CA	92111
Maryann	Bomarito	Marina	CA	93933
Janet	Bond	Petaluma	CA	94954
Michael	Bordenave	Fresno	CA	93728
R.	Bostaph	Healdsburg	CA	95448
Marty	Bostic	Los Angeles	CA	90025
Vic	Bostock	Altadena	CA	91001
Robert	Boughton	Sacramento	CA	95831
Dave	Boules	Camarillo	CA	93010
Cindi	Bouvier	Carlsbad	CA	92008
Jason	Bowman	Sacramento	CA	95823
Carol	Boyd	Escondido	CA	92027
Ernest	Boyd	Sunnyvale	CA	94087
Gloria	Boyd	Atascadero	CA	93423
David	Boyer	Palo Alto	CA	94304
Jill	Boyle	Claremont	CA	91711
Lynne	Boynton	Corte Madera	CA	94925
Taryn	Braband	Agoura	CA	91301
Mary Ellen	Braden	Glendale	CA	91208
Jennifer	Bradford	Spring Valley	CA	91977
Sean	Brandlin	El Segundo	CA	90245
Karen	Brant	San Francisco	CA	94117
Michael	Braude	Menlo Park	CA	94025
Nicole	Braun	San Diego	CA	92130
Lena	Bravo	Pleasanton	CA	94588
Colleena	Brazen	Walnut Creek	CA	94598
Joan	Breiding	San Francisco	CA	94117
Gayle	Brennan	Woodland Hills	CA	91367
Georgia	Brewer	Sherman Oaks	CA	91401
Wendy	Bridges	Berkeley	CA	94705
C	Briggs	Arcata	CA	95518
William	Briggs	Hermosa Beach	CA	90254
Michael	Brinegan	San Diego	CA	92101
Susan	Brisby	Lancaster	CA	93536
Jordan	Briskin	Palo Alto	CA	94306
Joanne	Britton	San Diego	CA	92115
Blaise	Brockman	Arcadia	CA	91007
Kerstin	Bromander	Concord	CA	94519
Gane	Brooking	Ventura	CA	93004
Jennifer	Brooks	Los Altos	CA	94022
Heather	Brophy	Santa Barbara	CA	93109
Jacqueline	Broulard	Calabasas	CA	91302

Beth	Brown	San Francisco	CA	94141
Damon	Brown	Los Angeles	CA	90016
Kimberly	Brown	Pacific Grove	CA	93950
Meg	Brown	Maricopa	CA	93252
Terri	Brown	Los Angeles	CA	90095
Edie	Bruce	El Cerrito	CA	94530
Iris	Bruel	San Rafael	CA	94901
Joshua	Brumett	Atwater	CA	95301
Bruce	Bryan	Lancaster	CA	93536
Theresa	Bucher	Tarzana	CA	91356
Leo	Buckley	San Francisco	CA	94110
Joseph	Buhowsky	San Ramon	CA	94582
Nancy	Bukowski	Carmichael	CA	95608
Tammy	Bullock	Ramona	CA	92065
Christy	Bulskov	Encinitas	CA	92024
Sharon	Bunch	Piedmont	CA	94611
Deborah	Burge	Garden Valley	CA	95633
Kat	Burgess	Santa Monica	CA	90404
Holly	Burgin	Van Nuys	CA	91405
Russell	Burke	Guerneville	CA	95446
Ruth	Burman	San Carlos	CA	94070
George	Burnash	Rancho Cordova	CA	95670
Jen	Burton	El Cajon	CA	92020
Uc	Burton	Santa Monica	CA	90405
Andrew	Bush	Topanga	CA	90290
Maria	Bustamante	Oakley	CA	94561
Claire	Butler	Hollister	CA	95023
Sam	Butler	Los Angeles	CA	90045
Charles	Byrne	San Francisco	CA	94115
Maria L.	Cabrera	Davis	CA	95617
Sharon	Cagey	Sherman Oaks	CA	91411
Gene	Cain	Sacramento	CA	95826
Tamara	Cain	Sacramento	CA	95826
Dennis	Cajas	Apple Valley	CA	92308
Carlo	Calabi	Angwin	CA	94508
Linda	Calbreath	Chico	CA	95928
Kyle	Calcagno	Encinitas	CA	92024
Jesse	Caldron	Baldwin Park	CA	91706
Charles	Calhoun	San Francisco	CA	94115
Micheal	Cameron	Pacific Grove	CA	93950
Sharon	Camhi	San Francisco	CA	94121
David	Camp	Burbank	CA	91501
Allan	Campbell	San Jose	CA	95132
Brooke	Campbell	Lake Forest	CA	92630
Dudley And Candace	Campbell	Van Nuys	CA	91401
Norma	Campbell	Campbell	CA	95008
T J	Campbell	Studio City	CA	91604
Maya	Camu	Encino	CA	91436
Geraldine	Card-Derr	Exeter	CA	93221

Sylvia	Cardella	Hydesville	CA	95547
Maryfrances	Careccia	Los Angeles	CA	90046
Rebecca	Carey	Santa Maria	CA	93454
Angela	Carleton	Beverly Hills	CA	90212
David	Carlson	West Hollywood	CA	90069
Thomas	Carlton	Culver City	CA	90232
Jim	Carnal	Bakersfield	CA	93309
Kermit	Carraway	Auburn	CA	95602
Paula	Carrier	San Diego	CA	92101
Martha	Carrington	Santa Cruz	CA	95062
John	Carroll	Elk Grove	CA	95624
Angela	Carter	San Pedro	CA	90731
Carl	Cartwright	Whittier	CA	90605
Jennifer	Cartwright	San Clemente	CA	92673
Megan	Casey	Petaluma	CA	94954
Stewart	Casey	Garden Grove	CA	92841
Veronica	Casey	Navarro	CA	95463
Tina	Cash	San Rafael	CA	94901
Max	Casias	Modesto	CA	95355
Thom	Cassidy	Clovis	CA	93611
Robert	Cassinelli	Sacramento	CA	95821
James	Castaldi	Palmdale	CA	93550
Sandy	Castle	Alpine	CA	91901
Susan	Castner-Paine	Burlingame	CA	94010
Jill	Casty	Seaside	CA	93955
Monica	Catalano	Richmond	CA	94805
Joe	Catania	Fresno	CA	93728
Paula	Cavagnaro	Livermore	CA	94550
Michael	Cavanaugh	Redondo Beach	CA	90278
Edward	Cavasian	Palo Alto	CA	94303
G	Caviglia	Morgan Hill	CA	95038
Emilio	Ceballos	Bakersfield	CA	93305
Geoff	Cech	Escondido	CA	92026
Kathy	Cencirulo	Redlands	CA	92373
Carina	Chadwick	Los Angeles	CA	90019
Claire	Chambers	Oakdale	CA	95361
Diane	Chandler	Crescent City	CA	95531
Phil	Chandler	Oxnard	CA	93035
Sharon	Chang	Clearlake Oaks	CA	95423
Carl	Chao	Los Angeles	CA	90042
S.	Chapek	San Francisco	CA	94118
Elaine	Charkowski	Fort Bragg	CA	95437
Stacie	Charlebois	Sebastopol	CA	95472
Anik	Charron	Marina Del Rey	CA	90292
Felicia	Chase	Encino	CA	91436
Joan	Chatman	Albany	CA	94706
Phyllis	Chavez	Santa Monica	CA	90405
Melvin	Cheitlin	San Francisco	CA	94109
Paul	Chek	Falbrook	CA	92028

Paul	Cheney	Watsonville	CA	95076
Cari	Chenkin	Citrus Heights	CA	95610
Justin	Chernow	Paso Robles	CA	93446
Laura	Chico	Marina Del Rey	CA	90292
Deborah	Childers	Modesto	CA	95350
Alysa	Chin	Redwood City	CA	94061
James	Christian	Los Angeles	CA	90034
Sandra	Christopher	Burbank	CA	91505
Thane	Christopher	Burbank	CA	91522
Jonathan	Chu	Fremont	CA	94539
Phyllis	Chu	San Francisco	CA	94134
Wesley	Chuang	Los Angeles	CA	90024
Susan	Ciaramella	Sylmar	CA	91342
Alberto	Cisn	Sunnyvale	CA	94085
Amelia	Clark	La Mesa	CA	91941
Hilary	Clark	Berkeley	CA	94705
Rebecca	Clark	West Hills	CA	91307
Stephanie	Clark	Pleasant Hill	CA	94523
M	Clarke	San Francisco	CA	94122
Richard	Clarke	Palm Desert	CA	92211
Suzan	Clausen	San Diego	CA	92103
Sarada	Cleary	Oceanside	CA	92056
Berna	Cliffe	Long Beach	CA	90803
Barbara	Clifford	Escondido	CA	92026
Frederick	Cliver	Long Beach	CA	90815
Diana	Clock	Berkeley	CA	94705
Jim	Clough	Glendale	CA	91204
Mary	Clumeck	Santa Ana	CA	92705
Luz	Cobarrubias	San Francisco	CA	94114
Alice	Cochran	San Rafael	CA	94901
Lisa	Coffman	Los Osos	CA	93402
David	Cogswell	San Francisco	CA	94118
Joanne	Cohen	San Diego	CA	92117
Karl	Cohen	San Francisco	CA	94117
Tina	Colafranceschi	Whitethorn	CA	95589
J	Cole	Joshua Tree	CA	92252
Cayla	Coleman	San Rafael	CA	94901
David	Coleman	Cobb	CA	95426
Laura	Collins	Rancho Cordova	CA	95670
Britt	Colton	San Diego	CA	92116
Rev. And Mrs.	Colvin	San Francisco	CA	94105
Sandy	Commons	Sacramento	CA	95821
Linc	Conard	Altadena	CA	91001
Vira	Confectioner	Sunol	CA	94586
Senseria	Conley	East Palo Alto	CA	94303
Kristen	Conner	San Pablo	CA	94806
Lyn	Conner	Laguna Niguel	CA	92677
Lauren	Coodley	Napa	CA	94558
Carol	Cook	San Mateo	CA	94403

Claudia	Cook	Ontario	CA	91762
Michael	Cooper	Santa Cruz	CA	95060
Philip	Cooper	Davis	CA	95616
RJ	Cooper	Santa Ana	CA	92705
A	Corbet	Oakland	CA	94610
Kris	Cordova	Loma Linda	CA	92354
Mike	Corleone	Downey	CA	90240
Rod	Cornelius	Sacramento	CA	95833
Stacy	Cornelius	Laguna Beach	CA	92651
John	Cornish	Concord	CA	94521
Stephanie	Corona	Downey	CA	90240
Ronit	Corry	Santa Barbara	CA	93101
Michael	Cortez	Tustin	CA	92780
MC	Corvalan	Redondo Beach	CA	90278
Deborah	Cosentino	Sacramento	CA	95864
David	Cotner	Ventura	CA	93001
Rachel	Courter	Long Beach	CA	90804
Tim	Covey	Ventura	CA	93003
Linda	Cowgill	Santa Monica	CA	90405
Antonia	Cox	Berkeley	CA	94720
Tim	Cox	Claremont	CA	91711
Anna	Craig	Redwood City	CA	94061
Mark	Crane	Los Angeles	CA	90068
Judy	Cribbins	Nevada City	CA	95959
David	Cristini	Westminster	CA	92683
Susan	Croce	Sunnyvale	CA	94087
Jeff	Crossley	Carmichael	CA	95608
Kurt	Cruger	Long Beach	CA	90804
Cathy	Crum	Agoura Hills	CA	91301
John	Cruz	Roseville	CA	95747
Tara	Cufaude	Sacramento	CA	95819
Kermit	Cuff	Mountain View	CA	94041
Sherrell	Cuneo	Los Angeles	CA	90027
Alan	Cunningham	Carmel Valley	CA	93924
Barbara	Cunningham	Glendale	CA	91205
Debra	Cunningham	Oceanside	CA	92054
Jim	Curland	Moss Landing	CA	95039
Barbette	Curran	Laguna Woods	CA	92637
Michael	Curtis	San Diego	CA	92103
Romona	Czichos-Slaughter	Hollister	CA	95023
Isabella	Dadseresht	Murrieta	CA	92562
Rhea	Damon	Calabasas	CA	91302
Krista	Dana	Sunnyvale	CA	94087
Hilary	Danehy	Fremont	CA	94539
Jessica	Dardarian	Folsom	CA	95630
Julia	Darling	Carlsbad	CA	92009
Kimble	Darlington	Smith River	CA	95567
Antonia	Darragh	San Diego	CA	92122
Billy	David	Winters	CA	95694

Lynne	Davies	San Francisco	CA	94114
Jill	Davine	Culver City	CA	90232
Amy	Davis	Carlsbad	CA	92018
Cheryl	Davis	Rio Linda	CA	95673
Jean	Davis	Montrose	CA	91020
Patti	Davis	Santa Monica	CA	90403
Ryan	Davis	Burbank	CA	91502
Shellee	Davis	Cotati	CA	94931
Vicki	Davis	Emerald Hills	CA	94062
James	Dawson	Davis	CA	95618
Patricia	Day	Victorville	CA	92394
Jamie	De Anda	Los Angeles	CA	90045
Jorge	De Cecco	Ukiah	CA	95482
Kenneth	De La Rosa	Anaheim	CA	92804
Carolyn	De Mirjian	Van Nuys	CA	91401
Rayline	Dean	Ridgecrest	CA	93555
Vic	Deangelo	San Francisco	CA	94121
Glen	Deardorff	Castro Valley	CA	94546
Therese	Debing	Pacific Grove	CA	93950
Yves	Decargouet	Lucerne	CA	95458
Terri	Decker	Redding	CA	96001
Bonnie	Declark	San Rafael	CA	94901
Mary	Dederer	Menlo Park	CA	94025
Ester	Deel	Oakland	CA	94603
Mary	Degagne	Santa Rosa	CA	95409
Dolores	Delgado	Sebastopol	CA	95472
Roxanne	Delgado	Antioch	CA	94509
Giuliano	Demartini	Walnut Creek	CA	94596
Lawrence	Deng	San Jose	CA	95120
Marilyn	Dennis	North Hills	CA	91343
Brett	Dennison	Garden Grove	CA	92840
Kim	Desenberg	Richmond	CA	94801
Antonio	Dettori	San Diego	CA	92117
G	Devine	Altadena	CA	91001
Karla	Devine	Manhattan Beach	CA	90266
DJ	Dewitt	Sacramento	CA	95821
David	Dexter	Mill Valley	CA	94941
Deanna	Diaz	La Puente	CA	91744
Leilani	Dicato	Orange	CA	92868
Lori	Dick	Claremont	CA	91711
Amy	Differding	Oakland	CA	94619
Lawrence	Dillard	San Francisco	CA	94124
Sanja	Dimitrijevic	Coronado	CA	92118
Larry	Dinger	Rocklin	CA	95677
Laura	Divenere	Los Angeles	CA	90020
Judy	Doane	San Francisco	CA	94115
Mary	Doane	Watsonville	CA	95076
Jennice	Dobroszczyk	Clovis	CA	93612
Irene	Dobrzanski	Arcadia	CA	91007

David	Doering	San Francisco	CA	94109
Ian	Dogole	Novato	CA	94947
Mari	Dominguez	Lodi	CA	95240
Britton	Donaldson	San Diego	CA	92103
L.L.	Dored	Los Angeles	CA	90046
Ann	Dorsey	Los Angeles	CA	91325
Rob	Doucette	Playa Del Rey	CA	90293
Dennis	Dougherty	Novato	CA	94945
Paulette	Doulatshahi	Playa Del Rey	CA	90293
Jeri	Downing	San Francisco	CA	94134
Sharon	Downs	Crescent City	CA	95531
Christine	Doyka	Garberville	CA	95542
Nikki	Doyle	Oakland	CA	94602
Ramona	Draeger	San Francisco	CA	94117
Peggy	Draper	La Mesa	CA	91942
Karen	Drellich	Lafayette	CA	94549
Tim	Dressel	Oceanside	CA	92056
Mary	Driskill	Mission Viejo	CA	92692
Gary	Droeger	Huntington Beach	CA	92647
Nancy	Dubuc	Pasadena	CA	91104
Monica	Duclaud	San Francisco	CA	94107
Laura	Dufel	Carlsbad	CA	92011
Kellen	Dunn	Manhattan Beach	CA	90266
Arnaud	Dunoyer	Venice	CA	90291
Nico	Duon	Aliso Viejo	CA	92656
Nicolas	Duon	Santa Ana	CA	92705
Cindy	Dupray	Escondido	CA	92025
Kira	Durbin	Sherman Oaks	CA	91423
Samuel	Durkin	Fairfield	CA	94534
Carolyn	Duryea	Saint Helena	CA	94574
Claude	Duss	Auburn	CA	95602
Laura	Dutton	Los Angeles	CA	90004
Darcy	Duval	Oceanside	CA	92054
Denise	Dynan	Santa Rosa	CA	95409
Lee	Eames	Long Beach	CA	90815
Shinann	Earnshaw	Fortuna	CA	95540
Carol	Easton	Aptos	CA	95003
Chris	Eaton	Los Angeles	CA	90041
Amber	Eby	San Francisco	CA	94118
Andres	Echeverria	Culver City	CA	90232
Elaine	Edell	Westlake Village	CA	91362
Robert	Edelman	Santa Cruz	CA	95062
Jonathan	Eden	Berkeley	CA	94707
Iris	Edinger	Woodland Hills	CA	91367
Zoe	Edington	Monterey	CA	93940
Teresa	Edmonds	Carmel Valley	CA	93924
Rick	Edmondson	Danville	CA	94526
Molly	Egan	Shingle Springs	CA	95682
Rhonda	Egan	Oxnard	CA	93035

Susie	Egan	San Diego	CA	92163
Francene	Eguren	Redondo Beach	CA	90277
Vivian	Ehresman	Chatsworth	CA	91311
Sammy	Ehrnman	Alta Loma	CA	91701
Liz	Eisenbeis	Lodi	CA	95242
Laurie	Eisler	Cotati	CA	94931
Nancy	Eisman	Inverness	CA	94937
Diana	Ekholm	Simi Valley	CA	93063
W	El-Ahdab	Oakland	CA	94610
Rich	Elam	San Diego	CA	92117
Holland	Elder	Culver City	CA	90230
Evan	Elias	San Francisco	CA	94109
Anaundda	Elijah	San Luis Obispo	CA	93401
Cheryl	Elkins	San Diego	CA	92105
Caleb	Ellis	Los Angeles	CA	90046
Julie	Ellis	Fort Bragg	CA	95437
Koll	Ellis	Kensington	CA	94707
Bonnie	Elsten	Long Beach	CA	90803
Karen	Emanuel	Tarzana	CA	91356
Scott	Emsley	Carmel	CA	93923
Marilyn	Eng	Diamond Bar	CA	91765
Helen	Engledow	Sonora	CA	95370
Kelly	Erwin	Cathedral City	CA	92234
Dan	Esposito	Manhattan Beach	CA	90266
Nicholas	Esser	Simi Valley	CA	93065
John	Essman	Healdsburg	CA	95448
Keisha	Evans	East Palo Alto	CA	94303
Shalyah	Evans	Los Angeles	CA	90027
Luci	Evanston	San Bruno	CA	94066
John	Everett	Grass Valley	CA	95945
Carol Lynne	Eyster	Redlands	CA	92373
Janice	Fagan	Calabasas	CA	91372
Rita	Fahrner	San Francisco	CA	94110
Judith	Falck-Madsen	Carpinteria	CA	93013
Gael	Faller	Oxnard	CA	93033
Maryam	Faresh	Sherman Oaks	CA	91423
David	Farwell	Carmel	CA	93923
Deb	Federin	La Jolla	CA	92037
Christine	Fedon	Santee	CA	92071
Daniel	Fehr	Redding	CA	96001
James	Feichtl	Belmont	CA	94002
Marla	Feierabend	Santa Barbara	CA	93109
John	Feissel	Sonoma	CA	95476
Ruth	Felix	Walnut Creek	CA	94597
Jon	Fell	Hayward	CA	94544
Amanda	Felt	Covina	CA	91722
Cynthia	Ferguson	Sacramento	CA	95827
Lisa	Ferguson	San Pedro	CA	90731
Kathleen	Fernandez	Huntington Beach	CA	92646

Andrea	Ferrari	Oceanside	CA	92056
Asano	Fertig	Berkeley	CA	94702
Aixa	Fielder	Los Angeles	CA	90028
Heidi	Fielding	North Hollywood	CA	91606
Madeleine	Fields	Aliso Viejo	CA	92656
Chris	Figueroa	Monrovia	CA	91016
Thomas	Filip	Moorpark	CA	93020
Anthony	Fillipone II	San Diego	CA	92122
Linda	Finley	San Pedro	CA	90731
Jim	Finn	Cazadero	CA	95421
Klara	Firestone	Beverly Hills	CA	90212
Carole	Firestone-Gillis	Healdsburg	CA	95448
Jason	Fish	Fair Oaks	CA	95628
Larry	Fish	Moreno Valley	CA	92557
Austin	Fite	Santa Monica	CA	90401
F	Fitz	Irvine	CA	92604
Stan	Fitzgerald	Walnut Creek	CA	94595
Brian	Flaigmore	San Diego	CA	92105
Sara	Flamm	Los Angeles	CA	90034
M	Flannery	Oakland	CA	94609
Elise	Flashman	Los Angeles	CA	90065
Carol	Fleitz	Alameda	CA	94501
Stephanie	Flesner	Lakewood	CA	90713
Byron	Fogel	Panorama City	CA	91402
Susie	Foot	Mckinleyville	CA	95519
Jane	Forbes	Santa Cruz	CA	95060
Sterling	Forbes	Santa Cruz	CA	95062
Kathleen	Ford	Burbank	CA	91505
Megan	Forester	Antelope	CA	95843
William	Fornaciari	San Diego	CA	92130
Kim	Forrest	Los Banos	CA	93635
Douglas	Forsell	Point Arena	CA	95468
Genette	Foster	Pasadena	CA	91106
Elena	Fowler	Palm Desert	CA	92260
Joy	Fox	Valley Village	CA	91607
Janene	Frahm	San Anselmo	CA	94979
Carly	Fraizer	Orangevale	CA	95662
Laurie	Fraker	El Centro	CA	92243
Darren	Frale	Los Angeles	CA	90065
Barbara	Frances	Aromas	CA	95004
Marion	Frank	Berkeley	CA	94704
William	Franklin	Oakdale	CA	95361
Amy	Franz	La Habra Hts.	CA	90631
Mary	Franz	Laguna Beach	CA	92651
Marivee	Framer	Boulder Creek	CA	95006
Cary	Frazee	Eureka	CA	95503
Barbara	Frazer	Sacramento	CA	95816
Kelly	Frazier	Desert Hot Springs	CA	92240
Rea	Freedom	Los Gatos	CA	95033

Linda	Freeman	Yuba City	CA	95991
Jan	Friel	Fullerton	CA	92831
Friend	Friend	Santa Clara	CA	95050
Nicolette	Froehlich	Acampo	CA	95220
Jeff	Fromberg	Los Angeles	CA	90024
Kristina	Fukuda	Los Angeles	CA	90034
Judy	Fukunaga	Arroyo Grande	CA	93421
Marilyn	Fuller	Los Gatos	CA	95033
Carol	Fusco	Berkeley	CA	94708
Mal	Gaff	Lompoc	CA	93436
Joyce	Galantai	Los Angeles	CA	90004
Angela	Gantos	Tiburon	CA	94920
Sharma	Gaponoff	Grass Valley	CA	95949
Marcia	Garceau	San Diego	CA	92129
Armando A.	Garcia	Perris	CA	92571
Hector	Garcia	Pasadena	CA	91103
Jeffery	Garcia	Mendocino	CA	95460
Ked	Garden	Lemon Grove	CA	91945
Gabriel	Gardner	Lakewood	CA	90712
Jan	Gardner	Rolling Hills Estates	CA	90274
Glenn	Garland	Sherman Oaks	CA	91403
Dana	Garman Jacobsen	Santa Monica	CA	90404
Jamila	Garrecht	Petaluma	CA	94952
Jessie	Gates	San Diego	CA	92131
Patricia	Gavigan	Los Angeles	CA	90036
Gertrude	Gebin	Daly City	CA	94015
Lisa	Gee	La Crescenta	CA	91224
Steffanie	Gee	Los Angeles	CA	90064
Sandra	Geist	Santa Cruz	CA	95060
Jenny	Gelbard	Sacramento	CA	95821
H Clarke	Gentry	Oakland	CA	94609
George	Georganas	Elk	CA	95432
Catherine	George	Napa	CA	94559
Alexis	Georgiou	Santa Clara	CA	95054
Mark	Geraghty	Santa Monica	CA	90405
Michael	Gertz	San Francisco	CA	94117
Lisa	Gherardi	Los Gatos	CA	95032
Phoenix	Giffen	Fairfax	CA	94930
Camille	Gilbert	Santa Barbara	CA	93101
Nancy	Gillis	North Hollywood	CA	91602
Barbara	Ginsberg	Santa Cruz	CA	95062
Mark	Giordani	Woodland Hills	CA	91303
Asiah	Giuntori	Palmdale	CA	93551
Barbara	Gladfelter	Dixon	CA	95620
Catherine	Glahn	San Mateo	CA	94402
Paula	Glaser	Pico Rivera	CA	90660
Mark	Glasser	Los Angeles	CA	90066
Susan	Glasser	Los Angeles	CA	90066
Joe	Glaston	Desert Hot Springs	CA	92240

Robert	Glover	Fresno	CA	93726
Gary	Goetz	Pacific Grove	CA	93950
Frances	Goff	Pasadena	CA	91107
Geoff	Goins	Vallejo	CA	94590
Sandra	Gold	Poway	CA	92064
Daniel	Goldberg	Santa Cruz	CA	95060
John	Golding	Oakland	CA	94619
Jill	Goldman	Toluca Lake	CA	91610
Kathleen	Goldman	Manhattan Beach	CA	90266
Susan	Goldstein	Danville	CA	94526
Vola	Golena	Beverly Hills	CA	90210
Eleanor	Gomez	Cloverdale	CA	95425
Adriana	Gonzalez	Fresno	CA	93722
Alan	Gonzalez	Long Beach	CA	90815
Margarita	Gonzalez	Sylmar	CA	91342
Renaldo	Gonzalez	Yucca Valley	CA	92284
Theresa	Gonzalez	Redwood City	CA	94063
Yazmin	Gonzalez	Bellflower	CA	90706
Margaret	Goodman	Pacific Grove	CA	93950
Patti	Goodman	Encinitas	CA	92024
Christine	Goodstein	Studio City	CA	91604
Carol	Gordon	Los Angeles	CA	90027
Ingrid	Gordon	Berkeley	CA	94710
Robert	Gordon	Santa Monica	CA	90403
Mark	Gotvald	Pleasant Hill	CA	94523
Crystal	Govea	Placentia	CA	92870
Kathy	Govreau	Morongo Valley	CA	92256
Kathlyn	Grabenstein	Costa Mesa	CA	92626
Steve	Graff	Los Angeles	CA	90025
Katherine	Gramoglia	Orange	CA	92867
Donna	Grampp	Fullerton	CA	92831
Fred	Granlund	N Hollywood	CA	91601
Gia	Granucci	Healdsburg	CA	95448
Ann	Graves	San Leandro	CA	94578
Caryn	Graves	Berkeley	CA	94702
Margery	Gray	San Francisco	CA	94116
Randy	Gray	San Marcos	CA	92078
Mechtilde	Grebner	Redondo Beach	CA	90277
Edward	Green	San Diego	CA	92107
Jamie	Green	Ventura	CA	93004
Pamela	Green	Tiburon	CA	94920
Corinne	Greenberg	Berkeley	CA	94707
Jeanne	Greene	Chico	CA	95928
Linda	Greene	La Habra	CA	90631
Brigette	Greener	San Jose	CA	95126
Rodman	Gregg	Los Angeles	CA	90034
Faye	Gregory	Colton	CA	92324
Kris	Gregory	San Jose	CA	95112
William L	Grgurich	Palo Alto	CA	94301

Debi	Griepsma	Fontana	CA	92335
Joan	Griffin	Nevada City	CA	95959
David	Griffith	Rancho Cucamonga	CA	91737
Antonio	Grijalva	Los Angeles	CA	90068
David	Grimshaw	Copperopolis	CA	95228
Maria	Gritsch	Los Angeles	CA	90046
Alexis	Grone	Oceanside	CA	92058
Sandy	Gross	Lynwood	CA	90262
Ann	Grow	Cardiff By The Sea	CA	92007
Paul	Gruber	Berkeley	CA	94703
Adriana	Guastavino	Jamestown	CA	95327
Stacy	Guillen	Oceanside	CA	92056
Bridgette	Guin	Manteca	CA	95336
Melodi	Gulsen	Fullerton	CA	92831
Geralyn	Gulseth	Alameda	CA	94502
Bob	Gunn	Santa Barbara	CA	93103
Sylvia	Gunning	Newbury Park	CA	91320
J. Barry	Gurdin	San Francisco	CA	94122
David O.	Gurley	Santa Rosa	CA	95404
Jill	Gustafson	Albany	CA	94706
Elin	Guthrie	Los Angeles	CA	90019
David	Gutierrez	Los Angeles	CA	90031
Stefanie	Guynn	Berkeley	CA	94707
Mario	Guzman	San Jose	CA	95112
Dale	Haas	San Diego	CA	92115
Natalie	Haddad	Los Angeles	CA	90015
Dvera	Hadden	Mill Valley	CA	94941
Sherry	Haffenden	Canoga Park	CA	91303
Gloria	Hafner	Rohnert Park	CA	94928
Alan	Haggard	San Diego	CA	92105
Sean	Hagstrom	Redlands	CA	92375
Michael	Hague	Yuba City	CA	95993
Brenda	Haig	Long Beach	CA	90803
Denise	Halbe	Sonoma	CA	95476
Christopher	Hall	Glendale	CA	91203
Diana	Hall	Mountain View	CA	94041
Ellen	Hall	Pacifica	CA	94044
Holly	Hall	Temecula	CA	92592
Karen	Hall	Sonoma	CA	95476
Sue	Hall	Castro Valley	CA	94546
Frederick	Hamilton	Rancho Cucamonga	CA	91739
Pamela	Hamilton	West Sacramento	CA	95605
Patricia	Hammons-Lewis	Los Angeles	CA	90034
Clarice	Hampel	Foster City	CA	94404
Susanna	Han	San Diego	CA	92103
Sharon	Handa	San Francisco	CA	94131
Khai	Hang	Baldwin Park	CA	91706
Steve	Hanlon	Los Angeles	CA	90049
Rayan	Hanna	Los Angeles	CA	91343

Ron	Hansel	West Covina	CA	91790
Karin	Hansen	Oakland	CA	94609
Kathy	Hanson	Huntington Beach	CA	92649
Barbara	Harper	Castroville	CA	95012
Charesa	Harper	Napa	CA	94558
Silva	Harr	Concord	CA	94521
Gabrielle	Harradine	Malibu	CA	90265
Jan	Harrell	W. H.	CA	91367
Marc	Harries	Beverly Hills	CA	90210
Beverly	Harris	Beverly Hills	CA	90212
David	Harris	Ventura	CA	93003
John	Harris	Bay Point	CA	94565
Laurel	Harris	Rutherford	CA	94573
Lois	Harris	Claremont	CA	91711
Zoe	Harris	San Anselmo	CA	94979
Jennifer	Harrison	San Francisco	CA	94131
John	Harter	Marina	CA	93933
Heidi	Hartman	Simi Valley	CA	93065
Nancy	Hartman	Lafayette	CA	94549
Randall	Hartman	San Clemente	CA	92673
Erfin	Hartojo	Walnut	CA	91789
Peter	Hartzman	Sunnyvale	CA	94087
Brit	Harvey	Berkeley	CA	94702
Claudia	Hasenhuttl	Glendale	CA	91206
Pratiksha	Hasji	North Highlands	CA	95660
David	Haskins	San Diego	CA	92105
Nadine	Hatcher	Camarillo	CA	93010
James	Hatchett	Reseda	CA	91335
Susan	Hathaway	Pico Rivera	CA	90660
Artineh	Havan	Burbank	CA	91501
Alys	Hay	Windsor	CA	95492
Noah	Haydon	Daly City	CA	94015
Christine	Hayes	Upland	CA	91786
T.	Haynes	Capistrano Beach	CA	92624
Michael	Hazelton	San Jose	CA	95112
Susan	Head	Sausalito	CA	94965
Kevin	Hearle Ph.D.	San Mateo	CA	94402
Sarah	Hearon	Santa Barbara	CA	93103
Nancy	Heck	Santa Maria	CA	93454
Kyle	Heger	Albany	CA	94706
Jessica	Heiden	Eureka	CA	95503
Christine	Hein	Huntington Beach	CA	92648
Bridgett	Heinly	San Diego	CA	92107
Amanda	Heinrich	Goleta	CA	93117
Penny	Heintz	Cedar Ridge	CA	95924
Lesle	Helgason	Pebble Beach	CA	93953
Karen	Hellwig	Los Angeles	CA	90056
Miranda	Helly	Oakland	CA	94612
Karla	Henderson	San Ysidro	CA	92173

Lynette K	Henderson	Chatsworth	CA	91311
Mike	Henderson	San Luis Obispo	CA	93405
Nancy	Henderson	Orinda	CA	94563
Sandra	Hendricks	Sutter Creek	CA	95685
Christa	Hennessy	Alta Loma	CA	91701
Birgit	Hermann	San Francisco	CA	94117
Birgit	Hermann	San Francisco	CA	94117
Thomas	Hernandez	Corona	CA	92881
Beth	Herndobler	Pasadena	CA	91106
Laura	Herndon	Burbank	CA	91505
Ana	Herold	Pacifica	CA	94044
Alexandra	Herrera	Santa Clarita	CA	91387
Raymond	Herrera	Torrance	CA	90502
Eleanor	Herscher	Culver City	CA	90230
Darienne	Hetherman	Altadena	CA	91001
Suzanne	Hewey	San Diego	CA	92123
Joyce	Heyn	Poway	CA	92064
Jacquie	Hicks	Santa Ana	CA	92704
Robert	Hicks	Long Beach	CA	90803
Nancy	Hiestand	Davis	CA	95616
Julie	Higgins	Mendocino	CA	95460
Diane	Higgs	West Hills	CA	91307
Eleanor	High	Ventura	CA	93003
Debra	Hill	Eureka	CA	95501
Eloise	Hill	Alameda	CA	94501
Dana	Hinkle	Red Bluff	CA	96080
Deborah	Hirsh	San Leandro	CA	94577
Ah	Ho	Foster City	CA	94404
Lynn	Hoang	Fullerton	CA	92833
Karen	Hobday	Los Angeles	CA	90046
Zora	Hocking	Santa Rosa	CA	95401
Cindy	Hodges	Danville	CA	94506
Suzanne	Hodges	Rancho Cordova	CA	95670
John	Hoffman	Whittier	CA	90602
Mary	Hoffman	Santa Barbara	CA	93105
Michael	Hogan	Del Mar	CA	92014
Peter	Hogan	Glendale	CA	91206
Donald	Holcomb	El Cajon	CA	92019
Cathy	Holden	Sacramento	CA	95865
Carla	Holguin	Los Angeles	CA	90027
Howard	Holko	San Anselmo	CA	94960
Candace	Hollis-Franklyn	Belvedere Tiburon	CA	94920
Sidney J.P.	Hollister	San Francisco	CA	94133
Stephen	Holman	Alhambra	CA	91801
Steven	Holzberg	Fair Oaks	CA	95628
Shelby	Homer	San Diego	CA	92104
Mike	Honda	Santa Ana	CA	92706
Susan	Hood	Sacramento	CA	95821
Stoney	Hooker	San Diego	CA	92121

Grace	Hoolihan	Simi Valley	CA	93065
Winifred	Hopkins	Fullerton	CA	92833
Martin	Horwitz	San Francisco	CA	94122
Cyndi	Houck	Santa Rosa	CA	95405
Erin	Howard	Oakland	CA	94602
John	Howard	Venice	CA	90291
Lynn	Howard	San Diego	CA	92109
Robin	Howe	Escondido	CA	92027
Sherrie	Howell	Pleasanton	CA	94588
Linda	Howie	Woodland Hills	CA	91367
Angela	Hoyes	Alta Loma	CA	91737
Katherine	Hsu	Cerritos	CA	90703
Gabriel	Hubbard	Richmond	CA	94805
Raymie	Huerta	Chula Vista	CA	91911
Vicki	Hughes	Huntington Beach	CA	92648
Saroyan	Humphrey	San Francisco	CA	94117
Paul	Hunrichs	Santee	CA	92071
Jane	Hunziker	Venice	CA	90291
Mark	Hurst	Orinda	CA	94563
Jacob	Huskey	Santa Cruz	CA	95060
Melissa	Hutchinson	Pacific Grove	CA	93950
Charles	Huynh	Irvine	CA	92612
Harvey	Hyman	Orangevale	CA	95662
Deborah	Iannizzotto	Escondido	CA	92027
Kim	Ina	Daly City	CA	94014
Maryan	Infield	San Luis Obispo	CA	93401
Kajsa	Ingelsson	West Hollywood	CA	90046
Vanessa	Ipsen	San Carlos	CA	94070
Lynn	Ireland	Larkspur	CA	94977
Yvette	Irwin	Martinez	CA	94553
Karole	Ishida	Los Gatos	CA	95033
Lisa	Isley	Mill Valley	CA	94941
Tasha	Isolani	Berkeley	CA	94708
Julia	Ivanova	Los Angeles	CA	90210
Steve	Iverson	Newport Beach	CA	92660
Elizabeth	Jache	Lemon Grove	CA	91945
Alicia	Jackson	Vallejo	CA	94591
Gregory	Jackson	Los Angeles	CA	90046
Laura	Jacobson	Walnut Creek	CA	94595
Karen	Jacques	Sacramento	CA	95811
Paula	Jain	Nevada City	CA	95959
Corinne	James	Clovis	CA	93613
Reva	James-Frye	San Francisco	CA	94115
Anthony	Jammal	Roseville	CA	95661
Ramsey	Jammal	Daly City	CA	94015
Jenniferlynn	Jankesh	Santa Monica	CA	90403
Robert	Jardine	Cupertino	CA	95014
Richard	Jellerson	Blue Jay	CA	92317
Jeffrey	Jenkins	Diamond Bar	CA	91765

Beverly	Jennings	Santa Cruz	CA	95060
Gina	Jennings	Azusa	CA	91702
Elaine	Jensen	Vista	CA	92081
Lisa	Jensen	Santa Cruz	CA	95062
Sakura	Jimenez	Van Nuys	CA	91405
Cristina	Jitcov	Torrance	CA	90504
Heather	John	Inglewood	CA	90302
Alice	Johnson	Sacramento	CA	95841
Brittany	Johnson	Simi Valley	CA	93065
Christine	Johnson	Indio	CA	92201
Karen	Johnson	Laguna Hills	CA	92653
Larry	Johnson	Pomona	CA	91767
Randy	Johnson	Sebastopol	CA	95472
Robert	Johnson	El Segundo	CA	90245
Shawn	Johnson	Encinitas	CA	92024
Tom	Johnson	Emerald Hills	CA	94062
Evelyn	Johnson-Todd	Fresno	CA	93727
Don	Johnston	Davis	CA	95618
Karen	Johnston	Chatsworth	CA	91311
Linda	Johnston	Roseville	CA	95747
Michael A	Johnston	San Diego	CA	92176
Amelia	Jones	Santa Monica	CA	90405
Diana	Jones	Hacienda Heights	CA	91745
Jan	Jones	El Cerrito	CA	94530
Jeff	Jones	El Cajon	CA	92019
Ronald	Jones	San Diego	CA	92107
S	Jones	Costa Mesa	CA	92627
Shawn	Jones-Bunn	Avila Beach	CA	93424
Aga	Kadlubowska	Los Angeles	CA	90020
Pauline	Kahney	San Francisco	CA	94102
Marianne	Kai	Sherman Oaks	CA	91403
N.	Kaluza	El Sobrante	CA	94803
Constance	Kao	San Francisco	CA	94110
Ann	Kaplan	Mill Valley	CA	94941
Eileen	Karzen	Los Angeles	CA	90064
Michael	Kast	Panorama City	CA	91402
Lise	Kastigar	Laguna Niguel	CA	92677
Hannah	Kasulka	Los Angeles	CA	90027
M S	Kate	Redwood City	CA	94062
Paula	Katz	San Francisco	CA	94116
Andrea	Kaufman	Guerneville	CA	95446
Michael	Kavanaugh	San Francisco	CA	94116
Tony	Kazmer	Fresno	CA	93710
Robert	Keats	Santa Barbara	CA	93101
Lauren	Keenan	Salinas	CA	93908
Lori	Kegler	San Pedro	CA	90731
Nancy	Keleher	Ferndale	CA	95536
Lisa	Kellman	San Francisco	CA	94131
Keith	Kellogg	Santa Cruz	CA	95060

Beverly	Kelly	Quincy	CA	95971
Jessica	Kelmon	Concord	CA	94518
Ballinger	Kemp	Richmond	CA	94804
Donna	Kemp	Chico	CA	95973
Erik	Kemper	Laguna Niguel	CA	92677
Aaron	Kenna	La Mesa	CA	91942
Eden	Kennan	Van Nuys	CA	91405
Ella	Kennedy	San Francisco	CA	94118
Ian	Kent	Kirkwood	CA	95646
Devon	Kerbow	Norco	CA	92860
Charlene	Kerchevall	Oceanside	CA	92054
Cathy	Kermer	Culver City	CA	90230
Carol	Kerridge	Del Mar	CA	92014
Rhonda	Kess	Burbank	CA	91506
Kristen	Kessler	Ventura	CA	93004
Marco M.	Khanlian	La Crescenta	CA	91214
Rubi	Khilnani	San Mateo	CA	94402
Barbara	Kiernan	Olivehurst	CA	95961
Vanessa	Killingsworth	Spring Valley	CA	91977
Karen	Kim	Los Angeles	CA	90020
Sarah	Kim	Santa Clara	CA	95051
Elli	Kimbauer	Crescent City	CA	95531
Christopher	King	Oregon House	CA	95962
Jean	King	Livermore	CA	94550
Nanook	Kinnear	Santa Ana	CA	92705
Heather	Kinney Fortin	Long Beach	CA	90802
Rachel	Kinsolving	Santa Cruz	CA	95062
Abi	Kirby	Los Angeles	CA	91303
Connie	Kirkham	Clearlake Oaks	CA	95423
Peggie	Kirkpatrick	Yorba Linda	CA	92886
Sydney	Kirsop	Valley Village	CA	91607
Elmone	Kissling	Eureka	CA	95503
Amanda	Klauk	Hemet	CA	92545
Leslie	Klein	Los Angeles	CA	90027
Linda	Klein	El Segundo	CA	90245
Renee	Klein	Marina Del Rey	CA	90292
Priscilla	Klemic	Sherman Oaks	CA	91401
Diana	Kliche	Long Beach	CA	90804
Martina	Klingenfuss	Belmont	CA	94002
George	Klipfel li	Cathedral City	CA	92234
Thomas	Knecht, Md, PhD	Nipomo	CA	93444
Kendra	Knight	Burlingame	CA	94010
Elena	Knox	Volcano	CA	95689
Valerie A	Kobal	Vineburg	CA	95487
Anne	Kobayashi	San Diego	CA	92122
Valeria	Kobzak	Los Angeles	CA	90210
Cindy	Koch	Long Beach	CA	90807
Martha	Koch	Burlingame	CA	94010
Bridget	Koch-Timothy	Sacramento	CA	95818

Diana	Koeck	Costa Mesa	CA	92626
Patricia	Kolchins	Calabasas	CA	91302
Robert	Kolesnik	Upland	CA	91784
Rashmika	Kommidi	San Jose	CA	95135
Jennifer	Kopczynski	Camarillo	CA	93010
Steven	Korson	Riverside	CA	92505
Kathy	Kosinski	Goleta	CA	93117
Bettina	Kotrich	Los Angeles	CA	90034
Rick	Koury	Los Gatos	CA	95032
Leslie	Kowalczyk	Sonora	CA	95370
Danelia	Kracht	Clayton	CA	94517
Karyn	Kraft	Mill Valley	CA	94941
Gail	Krieger	Valley Springs	CA	95242
Evan Jane	Kriss	Sausalito	CA	94965
Kevin	Krywko	San Marcos	CA	92069
Jerine	Kurashige	Berkeley	CA	94707
Sheri	Kuticka	Concord	CA	94518
Adela	La Pez	Anaheim	CA	92801
Laakea	Laano	Oakland	CA	94611
Georgia	Labey	Palm Desert	CA	92211
Roxanne	Lachapelle	Orange	CA	92867
Rochelle	Lafrinere	San Diego	CA	92114
Carol	Lam	Irvine	CA	92602
Stephanie	Laman	San Diego	CA	92115
Kelley	Lamke	Rohnert Park	CA	95405
Michael	Lamperd	San Francisco	CA	94122
Beth	Lander	San Diego	CA	92115
Katherine	Lander	Westminster	CA	92683
Dennis	Landi	Los Angeles	CA	90003
Dana	Landis	San Francisco	CA	94114
Marisa	Landsberg	Manhattan Beach	CA	90266
Jeri	Langham	Sacramento	CA	95827
Billie Lee	Langley	Torrance	CA	90501
Jason	Lannum	Pittsburg	CA	94565
Catherine	Lanzl	Encinitas	CA	92024
Kenneth	Lapointe	Los Angeles	CA	90031
Joann	Lapolla	San Diego	CA	92122
Laura	Larocca	Toluca Lake	CA	91602
Rebekah	Laros	Novato	CA	94949
Linda	Larsen	Inglewood	CA	90304
Nadine	Larsen	San Juan Capistrano	CA	92675
Elaine	Larson	Sonoma	CA	95476
R Dene	Larson Jr	San Francisco	CA	94117
Natacha	Lascano	Rocklin	CA	95765
Liana	Laskin	Sunnyvale	CA	94087
Sharon	Latta	Lincoln	CA	95648
Corey	Lavallee	Simi Valley	CA	93065
Kathleen	Lavelle	Los Angeles	CA	90065
Susana	Lavery	Fort Bragg	CA	95437

Brandon	Lawrence	Pleasant Hill	CA	94523
Jamie	Le	Alameda	CA	94501
Jan	Leath	Glendale	CA	91205
Jared	Leavitt	Oceanside	CA	92058
Harlan	Lebo	La Mirada	CA	90637
Audrey	Lee	Lodi	CA	95242
Brenda	Lee	Lakewood	CA	90712
Hansol	Lee	Pasadena	CA	91106
Peter	Lee	San Francisco	CA	94118
Richard	Lee	Salinas	CA	93907
Susie	Lee	Fullerton	CA	92835
Nancy	Leech	East Palo Alto	CA	94303
Cindy	Leerer	Berkeley	CA	94702
Harriet	Leff	San Francisco	CA	94108
Rose	Leidolph	Citrus Heights	CA	95621
Nicholas	Lenchner	Santa Rosa	CA	95403
Viki	Leonard	Santa Rosa	CA	95403
Penelope	Lepome	Ridgecrest	CA	93555
Lynne	Lerner	Van Nuys	CA	91406
Jim	Leske	North Hills	CA	91343
Vivian	Leung	Emeryville	CA	94608
Mary	Leveque	Santa Rosa	CA	95405
Jeffrey	Levicke	Valley Village	CA	91607
Marilyn	Levine	Mountain View	CA	94041
Molly	Levine	Paso Robles	CA	93446
Arthur	Levitt	Venice	CA	90291
Lacey	Levitt	San Diego	CA	92120
Elizabeth	Levy	Richmond	CA	94805
Ashley	Lewis	San Anselmo	CA	94960
Beverly	Lewis	Chatsworth	CA	91311
Linda	Lewis	Del Mar	CA	92014
Lisa	Lewis	Santa Cruz	CA	95062
Nora	Lewis	Nipomo	CA	93444
O	Lewis	Los Angeles	CA	90009
Patricia	Lewis	Los Angeles	CA	90034
Sherman	Lewis	Hayward	CA	94542
Frank	Leykamm	San Francisco	CA	94114
John	Liddy	Lake Forest	CA	92630
Louise	Lieb	Sebastopol	CA	95472
Sharon	Lieberman	Annapolis	CA	95412
Elizabeth	Liebert	Berkeley	CA	94708
Chingyi	Lin	San Diego	CA	92130
David	Lin	San Francisco	CA	94124
Emily	Lin	San Diego	CA	92123
Kathy	Linale	Napa	CA	94558
Stephanie	Linam	Benicia	CA	94510
Michelle	Lind	Hawthorne	CA	90250
Vince	Lindain	Fremont	CA	94555
Connie	Lindgren	Arcata	CA	95521

James	Lindgren	Cerritos	CA	90703
Carrie	Lindh	Richmond	CA	94805
Denise	Link	Studio City	CA	91602
Bev	Lips	San Francisco	CA	94104
Christopher	Lish	San Rafael	CA	94903
Kris	Listoe	Santa Barbara	CA	93110
Florence	Litton	Valley Center	CA	92082
Elaine	Livesey-Fassel	Los Angeles	CA	90064
John	Livingston	Redding	CA	96001
Colleen	Lobel	San Diego	CA	92126
Abby	Loeb	Porter Ranch	CA	91326
Adrian	Loeb	Los Angeles	CA	90034
Bruce	Long	San Jose	CA	95134
Clare	Long	Petaluma	CA	94975
Ned	Long	Los Osos	CA	93402
Amy	Longanecker	San Diego	CA	92111
Donald	Longo	Irvine	CA	92620
Chris	Loo	Morgan Hill	CA	95037
Kathryn	Loper	San Diego	CA	92120
Holly	Lopez	Sherman Oaks	CA	91403
Jon	Losee	San Diego	CA	92107
Rodney	Love	Newbury Park	CA	91320
Lanelle	Lovelace	Columbia	CA	95310
Marsha	Lowry	El Sobrante	CA	94803
Diana	Lubin	La Mesa	CA	91941
Matthew	Lubs	El Segundo	CA	90245
Janie	Lucas	San Francisco	CA	94110
Rosa	Lucas	Palm Desert	CA	92260
Sharon	Lucas	San Bruno	CA	94066
Daniel	Lucchesi	Rohnert Park	CA	94928
Carl	Luhring	Vista	CA	92083
Joseph	Luke	National City	CA	91950
James	Lundeen	Sonora	CA	95370
Jimmie	Lunsford	San Diego	CA	92176
Andy	Lupenko	Lemon Grove	CA	91945
Karola	Luttringhaus	Davis	CA	95616
Heather	Lutz	Carlsbad	CA	92008
Thomas	Lux	San Leandro	CA	94579
Rosann	Lynch	Monterey	CA	93940
Dawn	Lyons	Encinitas	CA	92024
Noah	Mabon	Atwater	CA	95301
Edward	Macan	Eureka	CA	95501
Sherry	Macias	Sacramento	CA	95825
Silamith	Maclean	Toluca Lake	CA	91602
Bonnie	Macraith	Arcata	CA	95521
Scott	Madia	Santa Rosa	CA	95407
Karen	Mae	Larkspur	CA	94939
Pamela	Magers	San Francisco	CA	94110
Mario	Magpale	Palmdale	CA	93550

Terrie	Maguire	Chino	CA	91710
Gina	Mahmoud	San Francisco	CA	94132
Victor	Maisano	San Diego	CA	92107
Janet	Maker	Los Angeles	CA	90024
Paul And Katherine	Malchiodi	San Diego	CA	92110
Bonnie	Maloney	Hawthorne	CA	90250
Ilene	Malt	San Anselmo	CA	94960
Robert	Mammon	El Sobrante	CA	94803
Susan	Manning	San Francisco	CA	94109
Amira	Mansour	Irvine	CA	92612
Paul	Marceau	Santa Barbara	CA	93108
Patricia	Marchant	Castro Valley	CA	94552
Cindy	Marconi	Brentwood	CA	94513
Martin	Marcus	San Diego	CA	92120
Sybil	Marcus	Berkeley	CA	94705
Penny	Marie	Malibu	CA	90265
Aida	Marina	South Pasadena	CA	91030
Stephen	Markel	Los Angeles	CA	90066
Kevin	Markoe	Watsonville	CA	95076
Anne	Marlborough	Van Nuys	CA	91406
Amber	Maron	Redondo Beach	CA	90277
Gina	Marrero	Palm Springs	CA	92264
Pat	Marriott	Los Altos	CA	94024
Sherry	Marsh	Oceanside	CA	92056
Amy	Marshall	San Diego	CA	92103
Dorrine	Marshall	Irvine	CA	92620
Val	Marshall	Fort Bragg	CA	95437
Ben	Martin	Mountain View	CA	94040
Jill	Martin	Lodi	CA	95240
Tyson	Martin	Burbank	CA	91505
Erika	Martinez	San Rafael	CA	94901
John	Martinez	Lomita	CA	90717
Mario E	Martinez	Torrance	CA	90504
M	Masek	Danville	CA	94526
Franceil	Masi	Tarzana	CA	91356
Grace	Mason	San Jacinto	CA	92583
Mary	Masters	Stanford	CA	94305
Susan	Mathison	West Hollywood	CA	90069
Sharon	Mattern	Palm Desert	CA	92260
Nan	Matthews	Pacifica	CA	94044
Barbara	Matz	Cloverdale	CA	95425
Marcia	Matz	Napa	CA	94558
Casee	Maxfield	Los Angeles	CA	90028
Dana	May	Garden Grove	CA	92840
Joe	May	El Cajon	CA	92019
Julie	May	Los Angeles	CA	90034
Katherine	Maynard	Pacific Palisades	CA	90272
Nico	Mcafee	Tiburon	CA	94920
Mary	McAuliffe	Los Angeles	CA	90028

Lisa	McCallister	Santa Cruz	CA	95060
Ellen	McCann	Escondido	CA	92027
Karen	McCaw	View Park	CA	90043
Kalyn	McCloud	Port Hueneme	CA	93044
Barney	McComas	San Diego	CA	92103
Tracy	McCowan	Laguna Woods	CA	92637
Maryann	McCoy	Torrance	CA	90505
Maria	McCready	Orange	CA	92865
Kimberly	McCullough	San Jose	CA	95122
Shereen	McDade	Los Angeles	CA	90018
Terry	McDaniel	San Marcos	CA	92078
Evan	McDermitt	Fullerton	CA	92832
Joseph	McDonough	Hemet	CA	92544
Kelley	McDowell	Colusa	CA	95932
Denise	McEvoy	San Francisco	CA	94117
Deric	McGee	Sacramento	CA	95835
Kerri	McGoldrick	Castro Valley	CA	94546
Rebecca	McGrew	Altadena	CA	91001
Cynthia	McHugh	La Mesa	CA	91941
Heather	McHugh	Oakland	CA	94611
Patricia	McHugh	Monterey	CA	93940
Jean	McKay	San Jose	CA	95152
Daniel	McKeighen	Rocklin	CA	95765
Kevin	McKelvie	Palm Springs	CA	92264
Laura	McKinney	Los Angeles	CA	90004
Tracy	McLarnon	Arcata	CA	95521
Alexa	McMahan	Huntington Beach	CA	92649
Michael	McMahan	Huntington Beach	CA	92649
Philip	McMorrow	Calabasas	CA	91301
Nina	McNitzky	Redwood City	CA	94065
Tracy	McPherson	Jacumba Hot Springs	CA	91934
Stacey	McRae	Fallbrook	CA	92028
Johanna	McShane	Walnut Creek	CA	94598
Dennis	McVey	Kentfield	CA	94904
Pattie	Meade	San Clemente	CA	92672
Deborah	Medina	Calistoga	CA	94515
Ventura	Medina	Porter Ranch	CA	91326
Desire	Medlen	Oakley	CA	94561
Don	Meehan	San Jose	CA	95124
Phillipo	Mehalopolis	Richmond	CA	94805
Louise	Mehler	Sacramento	CA	95818
Robert	Meier	Los Angeles	CA	90042
Lily	Mejia	Hemet	CA	92543
Marianna	Mejia Contact	Soquel	CA	95073
Scott	Mendelsohn	Novato	CA	94947
Miranda	Mendoza	Santa Rosa	CA	95401
Wendy	Mendoza	Sacramento	CA	95831
Suzanne	Menne	Camarillo	CA	93010
Leah	Mercado	Covina	CA	91722

Mike	Merlesena	San Diego	CA	92104
Beth	Merrill	Newbury Park	CA	91320
Barbara	Mesney	Los Angeles	CA	90066
Anna	Meyer	Los Angeles	CA	90034
Twyla	Meyer	Pomona	CA	91767
Adrianne	Micco	Vacaville	CA	95687
Veronica	Michael	Fairfield	CA	94533
August	Michaelle	San Diego	CA	92107
Kris Johnson	Michiels	Richmond	CA	94804
Allison	Mielniczuk	Petaluma	CA	94952
Neale	Miglani	Danville	CA	94526
Aaron	Miller	Van Nuys	CA	91401
Bob	Miller	Santa Rosa	CA	95404
Christine	Miller	San Diego	CA	92127
Dale	Miller	Rancho Cordova	CA	95670
Janet	Miller	Sherman Oaks	CA	91423
Kellie	Miller	Santa Ana	CA	92704
Kelly	Miller	Oceanside	CA	92056
Kenneth	Miller	Topanga	CA	90290
Valerie	Miller	Los Angeles	CA	90046
Victoria	Miller	Encino	CA	91436
Erin	Millikin	San Diego	CA	92154
Randy	Mills	Culver City	CA	90230
Catherine	Milovina	Hopland	CA	95449
Isaac	Miranda	Ontario	CA	91762
Rocio	Miranda	Oakland	CA	94619
Jill	Mistretta	Kentfield	CA	94904
Bonnie	Mitchell	Aliso Viejo	CA	92656
Desiree	Mitchell	San Francisco	CA	94102
Madison	Mitchell	Simi Valley	CA	93063
Jessica	Mitchell-Shihabi	Antelope	CA	95843
Cody	Mitcheltree	Yorba Linda	CA	92886
Robert	Mizar	Bodega Bay	CA	94923
Allison	Moffett	Pasadena	CA	91105
Nick	Moidja	Gold River	CA	95670
Bianca	Molgora	San Francisco	CA	94110
C E	Mone	Trinidad	CA	95570
Janet	Monfredini	San Francisco	CA	94127
Bruce	Monfross	Fair Oaks	CA	95628
Myrian	Monnet	Pasadena	CA	91101
James R	Monroe	Concord	CA	94521
Anthony	Montapert	Santa Maria	CA	93455
Jorge	Monterrozo	Rancho Cucamonga	CA	91730
Elaine	Mont-Eton	San Rafael	CA	94901
Todd	Montgomery	Malibu	CA	90265
Shannon	Montoya	Rohnert Park	CA	94928
Pam	Montroy	San Diego	CA	92115
Pam	Moore	Grass Valley	CA	95945
Sandra	Moore	Santa Barbara	CA	93108

Emily	Morales	Riverside	CA	92507
John	Moreau	San Leandro	CA	94577
Lorilie	Morey	Santa Rosa	CA	95401
Sandra	Morey	Oakland	CA	94602
Dan	Morgan	Rosamond	CA	93560
Linda	Morgan	San Pablo	CA	94806
John B	Morgen	Beaumont	CA	92223
Dorothea	Morgenstern	Sacramento	CA	95831
Alexis	Morris	San Francisco	CA	94122
Gary	Morris	Napa	CA	94559
Grace	Morsberger	Claremont	CA	91711
Dennis	Morton	Santa Cruz	CA	95060
Robin	Morton	Sebastopol	CA	95472
Rich	Moser	Santa Barbara	CA	93111
Anna	Mosqueda	Orangevale	CA	95662
Carol	Moss	Sacramento	CA	95816
Pavel	Mracek	Los Angeles	CA	90025
Andrew	Mueckenberger	Alameda	CA	94501
Karsten	Mueller	Santa Cruz	CA	95060
Lindsay	Mugglestone	Berkeley	CA	94705
Jill	Mulato	Dana Point	CA	92629
Sharon	Mulkey	Oceano	CA	93445
Sharon	Mullane	Los Angeles	CA	90066
Glenn	Mullins	Buena Park	CA	90620
George	Munoz	Stockton	CA	95207
G	Muramoto	Torrance	CA	90503
Beverly	Murata	Alhambra	CA	91801
Garrett	Murphy	Oakland	CA	94612
Jeannine	Murphy	Monterey	CA	93940
Joan	Murray	Los Angeles	CA	90066
Kai	Myer	San Pedro	CA	90732
John	Nadolski	Antelope	CA	95843
Ankita	Nagvekar	Redwood City	CA	94403
Kenneth	Nahigian	Sacramento	CA	95827
Sabrina	Napier	San Diego	CA	92111
Raquel	Narvios	San Francisco	CA	94134
Tem	Narvios	San Francisco	CA	94134
Gida	Naser	Vacaville	CA	95687
Tom	Nash	Rohnert Park	CA	94928
Laurie	Neill	Smith River	CA	95567
Deborah	Nelson	Simi Valley	CA	93065
Victor	Nepomnyashchy	North Hills	CA	91343
Kim	Nero	Costa Mesa	CA	92627
Edward	Neville	Hayward	CA	94541
Cyndee	Newick	Campbell	CA	95008
Evelyn	Newman	San Mateo	CA	94401
Roberta	Newman	Mill Valley	CA	94941
Ingrid	Newstadt	Los Angeles	CA	90065
Guy	Nguyen	Costa Mesa	CA	92627

Eric	Nichandros	Castro Valley	CA	94552
Debra	Nichols	Palmdale	CA	93551
Florence	Nicholson	La Crescenta	CA	91214
Kim	Nicholson	Toluca Lake	CA	91602
Michael	Nicosia	Rancho Cucamonga	CA	91739
Sheree	Noeth	Concord	CA	94521
James	Noordyk	San Diego	CA	92109
Kristin	Norby	North Hollywood	CA	91606
Rick And Sharon	Norlund	Durham	CA	95938
Diana	North	Carmel	CA	93923
Aaron	Norton	San Luis Obispo	CA	93403
Maria	Nowicki	San Francisco	CA	94116
Tom	Nulty	Dana Point	CA	92629
Jean	Nunamaker	Santee	CA	92071
Jennifer	Nunes	San Diego	CA	92106
Carlos	Nunez	Reseda	CA	91335
Stephanie	Nunez	Van Nuys	CA	91405
Richard	Nuno	Stevenson Ranch	CA	91381
Heidi	Nurse	Sacramento	CA	95819
Kate	Nyne	Oakland	CA	94601
Sandra	Obleas	Mission Viejo	CA	92692
Abraham	Oboruemuh	Riverside	CA	92505
Kathy	Obrien	Redway	CA	95560
Colleen	O'Brien	Sacramento	CA	95826
Cynthia	Obyrne	Lompoc	CA	93436
Maureen	O'Connell	Valley Village	CA	91607
Richard Michael	O'Donnell	La Quinta	CA	92253
David	Ohrberg	Beaumont	CA	92223
Sofia	Okolowicz	Temecula	CA	92592
Jean	Olds	Dublin	CA	94568
Alyssa	Olivas	Brentwood	CA	94513
Bill	Oliver	Fairfield	CA	94533
Katherine	Olson	Roseville	CA	95747
Krister	Olsson	Los Angeles	CA	90013
Robert L.	Oman	Sylmar	CA	91342
Cara	O'Neil	Calistoga	CA	94515
Sheri	Opp	Sacramento	CA	95819
Gordon	Orlick	Los Angeles	CA	90069
Erik	Ornelas	Fresno	CA	93720
Dennis	Ororke	Monte Rio	CA	95462
Karen	Orourke	Canoga Park	CA	91304
Frank	Ortiz	Los Angeles	CA	90022
Henry	Ortiz	Whittier	CA	90605
June	Osbourn	Sonoma	CA	95476
Judith	Ostapik	San Francisco	CA	94127
Julie	Ostoich	Sacramento	CA	95826
Darcy	Ostop	Cardiff By The Sea	CA	92007
Dianne	Ostrow	Wrightwood	CA	92397
Hillary	Ostrow	Encino	CA	91316

Mike	Ovard	Long Beach	CA	90815
Rhonda	Oxley	Capitola	CA	95010
John	Paladin	Valencia	CA	91380
Beatriz	Pallanes	Santa Ana	CA	92704
Allie	Palmer	San Clemente	CA	92672
Heidi	Palmer	Rancho Cucamonga	CA	91739
Susan	Palmer	Manteca	CA	95336
Aydee	Palomino	La Quinta	CA	92253
Sharon	Paltin	Laytonville	CA	95454
Jim	Panagos	Simi Valley	CA	93065
Bonnie	Pannell	Crockett	CA	94525
Marie	Pappas	Berkeley	CA	94705
Barbara	Park	Pasadena	CA	91107
Benjamin	Park	West Hollywood	CA	90046
Jason	Park	Arcadia	CA	91006
Candace	Parker	Los Angeles	CA	90034
Doug	Parker	Apple Valley	CA	92307
Cheryl	Parkins	Oakland	CA	94611
Janet	Parkins	Oakland	CA	94611
Elissa	Parra	Indio	CA	92203
Ron	Parsons	South San Francisco	CA	94080
Nancy	Paskowitz	Oakland	CA	94609
Richard	Patenaude	Hayward	CA	94541
Narendra	Patni	Palo Alto	CA	94306
Katherine	Patterson	Ukiah	CA	95482
Barbara	Patton	Sunnyvale	CA	94087
James	Patton	Los Altos	CA	94024
Lisa	Patton	San Francisco	CA	94115
Brandon	Paul	Menifee	CA	92584
Jacob	Paul	San Jacinto	CA	92583
Justin	Paul	San Jacinto	CA	92583
David	Paulsen	Morro Bay	CA	93442
Richard	Payne	Los Gatos	CA	95032
Nancy	Pearlman	Los Angeles	CA	90035
Juliet	Pearson	Grass Valley	CA	95949
Karin	Peck	Orangevale	CA	95662
Lynn	Peckham	Altadena	CA	91001
Joshua	Pederson	Santa Cruz	CA	95060
Dr Kenneth R	Pelletier	Carmel	CA	93923
Josie	Peluso	Santa Rosa	CA	95409
Melina	Pena	San Ysidro	CA	92173
Sherry	Pennell	Aromas	CA	95004
Greg	Pennington	San Francisco	CA	94109
Holly	Perez	Chula Vista	CA	91910
Margarita	Perez	Sylmar	CA	91342
Deborah	Peri	Santa Cruz	CA	95060
Susan	Perkins	Mountain View	CA	94041
Janet	Perlman	Berkeley	CA	94705
Bryce	Perog	Dana Point	CA	92629

Anithra	Perry	Winchester	CA	92596
Brenda	Perry	Napa	CA	94559
Marie	Perry	Ceres	CA	95307
Theresa	Perry	Los Angeles	CA	91040
Robert W	Peters	Porter Ranch	CA	91326
Don	Petersen	Pleasanton	CA	94566
Christine	Peterson	San Francisco	CA	94164
Ellen	Peterson	Berkeley	CA	94705
John	Peterson	Temecula	CA	92592
Jim	Petkiewicz	San Jose	CA	95125
Jamie	Pfister	San Jose	CA	95139
Margaret	Phelps	Los Angeles	CA	90024
Tami	Phelps	Redding	CA	96003
Elizabeth	Philbrook	Beaumont	CA	92223
Marvis J.	Phillips	San Francisco	CA	94102
Rochelle	Phillips	Mission Viejo	CA	92692
John	Picot	San Francisco	CA	94103
Kevin	Pierson	Roseville	CA	95747
Navil	Pineda	Moreno Valley	CA	92555
Lynn	Pique	Redwood City	CA	94063
L.	Piquett	Davenport	CA	95017
Tina	Pirazzi	Long Beach	CA	90814
Peter	Pitsker	Huntington Beach	CA	92648
Diane	Pitzel	San Diego	CA	92109
Mary F	Platter-Rieger	San Diego	CA	92105
Lauren	Pliska	Laguna Niguel	CA	92677
Joel	Ploscowe	San Francisco	CA	94114
Joseph	Pluta	Bakersfield	CA	93301
Andrew T	Pohorsky	Soquel	CA	95073
Barbara	Poland	La Crescenta	CA	91214
Alice	Polesky	San Francisco	CA	94107
Tony	Policelli	Beverly Hills	CA	90210
Bret	Polish	Tarzana	CA	91335
Nancy	Polito	Orangevale	CA	95662
Jackie	Pomies	San Francisco	CA	94122
Bonnell	Poole	Hesperia	CA	92345
Douglas	Poore	Vacaville	CA	95688
Samuel	Popailo	West Hollywood	CA	90046
Chris	Popp	Trinidad	CA	95570
Donnal	Poppe	Sherwood Forest	CA	91325
Melissa	Porter	San Leandro	CA	94577
Penny	Porter	San Francisco	CA	94109
Sharon	Porter	Paradise	CA	95969
Susan	Porter	Pasadena	CA	91103
Jon	Porter Md	Garden Grove	CA	92845
Cheri	Porter-Keisner	Piercy	CA	95587
Penny	Potter	Santa Cruz	CA	95062
Antonia	Powell	Venice	CA	90291
Kathleen	Powell	Vallejo	CA	94590

Kim	Powell	Bermuda Dunes	CA	92203
Matt	Powell	Woodland Hills	CA	91364
Judith	Poxon	Sacramento	CA	95816
Francesca	Prada	San Francisco	CA	94146
Jhosselyn	Prado	Los Angeles	CA	90004
Linda	Prandi	Sacramento	CA	95834
Brooke	Prather	Kelseyville	CA	95451
Wendy	Pratt	Redondo Beach	CA	90277
Lynne	Preston	San Francisco	CA	94110
Marilyn	Price	Mill Valley	CA	94941
Michael	Price	Los Angeles	CA	90024
Rosalie	Prieto	Bakersfield	CA	93311
Micaela	Pronio	Oakland	CA	94609
Megan	Pruiett	San Francisco	CA	94121
Felena	Puentes	Bakersfield	CA	93312
Brianda	Puig	Los Angeles	CA	90071
Robert	Quarrick	Benicia	CA	94510
Jennifer	Quednau	Sherman Oaks	CA	91403
April	Quigley	Crescent City	CA	95531
Robert	Quijada	Bakersfield	CA	93313
Timothy	Quinn	Davis	CA	95618
Audrey	Quintero	San Mateo	CA	94403
Paul	Rabjohns	Los Angeles	CA	90027
Carolyn	Radcliff	Roseville	CA	95678
Rick	Raddue	Woodacre	CA	94973
Mary	Ragsdale	Ripon	CA	95366
Annette	Raible	Petaluma	CA	94952
Delilah	Ramirez	Fullerton	CA	92833
Graciela	Ramirez	Eureka	CA	95502
Brooklynn	Ramos	Los Osos	CA	93402
Paul	Ramos	Santa Ynez	CA	93460
Sigrid	Ramos	Van Nuys	CA	91405
Rudy	Ramp	Arcata	CA	95521
Elizabeth	Ramsey	Davis	CA	95616
Dee	Randolph	Chico	CA	95926
Denise	Ranidae	Orange	CA	92867
Valerie	Ranne	Sacramento	CA	95822
Christine	Ranney	Oakland	CA	94608
Sofia	Ratcovich	Santa Monica	CA	90404
Greg	Ratkovsky	Oakland	CA	94619
Laurie	Ratto	Alameda	CA	94501
Nicholas	Ratto	Alameda	CA	94501
Robert	Rauh	Victorville	CA	92395
Jenise	Rauser	Bakersfield	CA	93308
Marianne	Ray	Ontario	CA	91761
Wendy	Raymond	Laguna Niguel	CA	92677
Michael	Raysses	Los Angeles	CA	91362
Mark	Reback	Los Angeles	CA	90039
Isela	Redman	Rohnert Park	CA	94928

Liz	Redwing	Pine Mountain Club	CA	93222
Kaylynn	Reeb	Geyserville	CA	95441
Robert	Reed	Laguna Beach	CA	92651
Geoff	Regalado	Burbank	CA	91503
Matthew	Reid	Calistoga	CA	94515
Misti	Reif	San Francisco	CA	94118
Sylvia	Ren	Sebastopol	CA	95472
Carla	Resnik	El Segundo	CA	90245
Karin	Rettig	Hemet	CA	92543
F. Carlene	Reuscher	Costa Mesa	CA	92626
Debra L.	Reuter	Martinez	CA	94553
Christian	Reyes	Moreno Valley	CA	92555
Juan	Reyes	Upland	CA	91786
Mike	Reyes	Los Angeles	CA	90035
Lloyd	Reynolds	Fountain Valley	CA	92708
David	Rhoades	Belvedere	CA	94920
Genevieve	Riber	San Diego	CA	92103
Mark	Ricci	Point Arena	CA	95468
Robert	Ricewasser	Monrovia	CA	91016
Michael	Richardson	Long Beach	CA	90802
Lonna	Richmond	Muir Beach	CA	94965
Lynette	Ridder	Concord	CA	94521
Ellen	Riegelhuth	Walnut Creek	CA	94595
Jean	Riehl	Fairfield	CA	94533
Callie	Riley	Citrus Heights	CA	95610
Laura	Riley	Citrus Heights	CA	95610
Ron	Riskin	Santa Barbara	CA	93103
Rev. Maria	Riter Wilson	San Dimas	CA	91773
Briana	Rivera	San Diego	CA	92117
Christine	Rivera	Concord	CA	94521
Debbie	Rivera	Moreno Valley	CA	92555
Tony	Robbins	San Francisco	CA	94122
Daniel	Roberto	Pasadena	CA	91104
Rob	Roberto	Santee	CA	92071
Margaret	Roberts	Mendocino	CA	95460
Francis	Robertson	Lompoc	CA	93436
Valeen	Robertson	San Mateo	CA	94403
Etta	Robin	Bakersfield	CA	93312
Nancy	Robinson	Ridgecrest	CA	93555
R	Robinson	Modesto	CA	95356
Candace	Rocha	Los Angeles	CA	90032
Silvia	Rocha	Azusa	CA	91702
Suzette	Rochat	Sebastopol	CA	95472
David	Roche	San Francisco	CA	94117
Sophie	Rocheleau	Arcata	CA	95521
Donald	Rock	San Diego	CA	92106
Lenore	Rodah	South Pasadena	CA	91030
Marykay	Rodarte	Phelan	CA	92371
Sharon	Rodrigues	Fremont	CA	94539

Laizio	Rodrigues De Oliveira	Adelanto	CA	92301
Doris	Rodriguez	Ontario	CA	91762
Vanessa	Rodriguez	West Sacramento	CA	95605
Cherrie	Roeser	Stockton	CA	95207
Judith	Rogers	Richmond	CA	94804
Margaret	Rogers	Redwood City	CA	94062
Pamela	Rogers	San Bernardino	CA	92404
Shanna	Rojas	Hesperia	CA	92345
Mary	Rojeski	Santa Monica	CA	90405
Mike	Rolbeck	Placerville	CA	95667
Kalyani	Roldan	Santa Barbara	CA	93101
Michele	Roma	Pleasant Hill	CA	94523
Pia	Romano	Vista	CA	92081
Valerie	Romero	Los Angeles	CA	90038
Rob	Rondanini	Roseville	CA	95678
Irene	Roos	Lakeside	CA	92040
Barbara	Root	Santa Barbara	CA	93108
Greg	Rosas	Castro Valley	CA	94546
Tona	Rose	Rancho Murieta	CA	95683
Ken	Rosen	Beverly Hills	CA	90212
Kenneth	Rosenblad	Berkeley	CA	94709
Jo	Rosenbloom	Studio City	CA	91602
Stephen	Rosenblum	Palo Alto	CA	94301
Darlene	Ross	Woodbridge	CA	95258
Gregory	Ross	San Leandro	CA	94577
Alexis	Rossiter	North Highlands	CA	95660
Phillip	Roullard	San Diego	CA	92119
Mckenna	Rowe	Los Angeles	CA	90068
James	Royer	San Diego	CA	92117
Vickie	Rozell	Menlo Park	CA	94025
Rita	Rubin	El Cerrito	CA	94530
Lois	Ruble	San Marcos	CA	92078
Patricia	Rudner	Cypress	CA	90630
Katrina	Rudnick	Fresno	CA	93720
M. K.	Russell	Mill Valley	CA	94941
Brian	Rutkin	Culver City	CA	90230
Elvia	Ryan	Oceanside	CA	92057
Faye	Rye	Torrance	CA	90505
Jessica M	Saavedra	Tustin	CA	92780
Eli	Saddler	Acton	CA	93510
Bonnie	Sadrpour	Los Angeles	CA	90045
G	Saffren	Los Angeles	CA	90025
Mukesh	Sahu	Sacramento	CA	95818
Jan	Salas	Santa Cruz	CA	95062
Alicia	Salazar	Los Angeles	CA	90032
Lisa	Salazar	Shasta Lake	CA	96089
Lisa	Salazar	Shasta Lake	CA	96089
Deborah	Salazar Shapiro	San Diego	CA	92130
Dalia	Salgado	Los Angeles	CA	90017

Jackie	Samallo	Walnut	CA	91789
Jolie	Samaniego	Altadena	CA	91001
Jonathan	Sampson	Santa Rosa	CA	95404
Sean	San Jose	San Francisco	CA	94112
Dorothy	Sanches	Santa Cruz	CA	95062
Michele	Sanderson	Walnut Creek	CA	94595
B	Sadow	Richmond	CA	94804
Deirdre	Santaniello	Willits	CA	95490
Harry	Santi	San Leandro	CA	94579
Sophia	Santitoro	Simi Valley	CA	93065
Alfa	Santos	Chula Vista	CA	91910
Rita	Santos-Oyama	Long Beach	CA	90803
Michelle	Santy	El Granada	CA	94018
Natasha	Saravanja	San Francisco	CA	94131
Arlene	Saretsky	Valencia	CA	91354
Deborah	Sargent	San Diego	CA	92128
Vicki	Sarnecki	Bangor	CA	95914
Julie	Sasaoka	Concord	CA	94518
Rondi	Saslow	Oakland	CA	94618
Angelina	Saucedo	Montebello	CA	90640
Felicia	Saunders	Goleta	CA	93117
Alice	Savage	San Diego	CA	92128
Antonina	Scalera	Altadena	CA	91001
Kevin	Schader	Pleasant Hill	CA	94523
Marty	Schaefer	El Cerrito	CA	94530
Carol	Schaffer	San Pablo	CA	94806
Susan	Schairer	Anaheim	CA	92806
Roberta	Schear	Oakland	CA	94618
Myra	Schegloff	Santa Monica	CA	90405
Janice	Schenfisch	Cypress	CA	90630
Lauren	Schiffman	El Cerrito	CA	94530
Bob	Schildgen	Berkeley	CA	94703
Paulette	Schindele	San Marcos	CA	92069
Steven	Schlam	San Diego	CA	92104
William	Schlesinger	Los Angeles	CA	90046
Henry	Schlinger	Glendale	CA	91201
Christie	Schmidt	Irvine	CA	92603
Heidi	Schmitz	Sausalito	CA	94965
Lesley	Schultz	Oakland	CA	94610
Brandy	Schumacher	Citrus Heights	CA	95610
Laura	Schuman	Sherman Oaks	CA	91403
Jeanne	Schuster	West Covina	CA	91791
Patricia	Schwab Rn	San Diego	CA	92119
Amanda	Schwartz	Sherman Oaks	CA	91411
Barry	Schwartz	Napa	CA	94559
Louise	Schwartz	Los Angeles	CA	90077
Marge	Schwartz	Santa Barbara	CA	93121
Dena	Schwimmer	Los Angeles	CA	90019
Andrea	Scott	Los Angeles	CA	90077

Bruce	Scott	Pacific Palisades	CA	90272
Kari Lorraine	Scott	San Diego	CA	92116
M	Scott	Los Angeles	CA	90028
Megan	Scott	West Hollywood	CA	90046
Chris	Seaton	Santa Barbara	CA	93101
Kathy	Seeba	Rocklin	CA	95677
Patricia	Seffens	Oakland	CA	94610
Patricia	Seffens	Oakland	CA	94610
Harold	Segelstad	Redwood City	CA	94062
Lisa	Segnitz	Santa Cruz	CA	95060
Mary Jill	Seibel	Petaluma	CA	94952
Fredrick	Seil	Berkeley	CA	94708
Rob	Seltzer	Malibu	CA	90265
Ron	Semenza	San Jose	CA	95119
Leila	Sen	San Francisco	CA	94123
Breanna	Senate	South Lake Tahoe	CA	96150
Lynn	Sentenn	Brea	CA	92821
Chtistine	Sepulveda	Upland	CA	91786
Amie	Serio	Burbank	CA	91506
Rafael	Serna	Fresno	CA	93705
Krista	Sexton	San Marcos	CA	92078
Victoria	Shankling	Aliso Viejo	CA	92656
Lily	Share	Sherman Oaks	CA	91423
Donna	Sharee	San Francisco	CA	94112
Robyn	Sharp	Topanga	CA	90290
Donna	Shaw	Simi Valley	CA	93065
Julie	Shaw	Sebastopol	CA	95472
Al	Shayne	Los Angeles	CA	90036
Maria	Shazer	Fallbrook	CA	92028
Robert	Sheffield	Cardiff By The Sea	CA	92007
Kacie	Shelton	Pasadena	CA	91101
Ye	Shen	Daly City	CA	94014
Jason	Shepherd	Newbury Park	CA	91320
Marilyn	Shepherd	Trinidad	CA	95570
Philip	Sherman	Sacramento	CA	95814
Stuart	Sherman	Santa Barbara	CA	93105
Erika	Shershun	San Francisco	CA	94109
Dana	Shields	Menlo Park	CA	94025
Laura	Shifley	Oakland	CA	94611
Earl	Shimaoka	Sunnyvale	CA	94086
Veronika	Shishido	Bayside	CA	95524
Judy	Shively	San Diego	CA	92101
Zoe	Shoats	Pacific Grove	CA	93950
Lu	Shoberg	San Jose	CA	95116
Elizabeth Myrin	Shore	San Anselmo	CA	94979
Tracy	Shortle	Los Alamitos	CA	90720
Lois	Shubert	Camarillo	CA	93010
Lois	Shubert	Camarillo	CA	93010
Amir	Siassi	Los Angeles	CA	90049

Martha	Siegel	Santa Barbara	CA	93105
Jeff	Sierra	Emeryville	CA	94608
D G	Sifuentes	Mammoth Lakes	CA	93546
Sheila	Silan	Somerset	CA	95684
Erin	Silberstein	Woodland Hills	CA	91364
Grace	Silva	North Hollywood	CA	91605
Marc	Silverman	Los Angeles	CA	90068
Kathy	Simington	Ontario	CA	91764
Hilary	Simonetti	Cathedral City	CA	92234
Claire	Simonich	Half Moon Bay	CA	94019
Catherine	Simonton	Fort Bragg	CA	95437
Charlotte	Sines	Yosemite National Park	CA	95389
Jerry	Singer	San Francisco	CA	94114
Lara	Sinkovich	Los Angeles	CA	90042
Christine	Sirias	Alhambra	CA	91801
Mila	Siric	Los Angeles	CA	90039
Sarah	Sismondo	Duarte	CA	91010
Daniel	Situnayake	Sunnyvale	CA	94085
Amara	Siva	Vista	CA	92081
Steve	Sketo	Bakersfield	CA	93312
Kevin	Slauson	Alameda	CA	94501
Susan	Sloan	Los Angeles	CA	90064
Bret	Smith	Santa Cruz	CA	95063
Bryson	Smith	Santa Barbara	CA	93101
Cristina	Smith	Los Angeles	CA	90019
Erin	Smith	Monterey	CA	93940
Gayle	Smith	Carmel	CA	93923
Joe	Smith	El Cajon	CA	92020
Judith	Smith	Oakland	CA	94601
Julie	Smith	Los Osos	CA	93402
Kate	Smith	Concord	CA	94521
Kathleen	Smith	San Jose	CA	95112
Leslie	Smith	Oakland	CA	94611
Missie	Smith	Tehachapi	CA	93561
Nancy	Smith	San Diego	CA	92106
Stephanie	Smith	Laguna Beach	CA	92651
Crystal	Smith-Connelly	Los Angeles	CA	90027
Robert	Smithfield	Fairfax	CA	94930
Paula	Sneddon	Pebble Beach	CA	93953
Renee	Snyder	Oakland	CA	94611
Robert	Snyder	Rancho Palos Verdes	CA	90275
Todd	Snyder	San Francisco	CA	94115
Genevieve	Soares	Oakland	CA	94610
Monique	Soares	Freedom	CA	95019
Susan	Soh	Woodland Hills	CA	91367
Thad	Solloway	Costa Mesa	CA	92627
Benny	Soltero	Ventura	CA	93001
Allison	Souza	San Diego	CA	92109
Jan	Sownie	Bellflower	CA	90706

Margrit	Spear	Jamul	CA	91935
Barbara	Speidel	La Mesa	CA	91942
Brent	Spencer	Paramount	CA	90723
D R	Spencer	San Diego	CA	92104
Anne	Spesick	Cool	CA	95614
Stephanie	Spiers	San Diego	CA	92107
Jane	Spini	Arcata	CA	95521
Leslie	Spoon	Los Osos	CA	93402
Natalia	Spornik	Studio City	CA	91604
Kathryn	St John	Boulder Creek	CA	95006
Ken	Stack	Los Angeles	CA	90004
Musia	Stagg	Oakland	CA	94608
Bettina	Staib	Los Angeles	CA	90019
Jane	Stallman	San Jose	CA	95117
Katie	Stamps	Santa Clara	CA	95050
Roxanne	Staniorski	Santa Ana	CA	92707
Jan	Stark	Westminster	CA	92683
Todd	Stark	San Leandro	CA	94577
Mary Beth	Starzel	Arroyo Grande	CA	93420
Celia	Stauty	Pacific Grove	CA	93950
Patricia	Stearns	Exeter	CA	93221
Jenifer	Steele	Berkeley	CA	94703
Karen	Steele	Eureka	CA	95501
Regina	Stefaniak	Berkeley	CA	94708
Wayne	Steffes	Redding	CA	96001
Richard	Steiger	Oakland	CA	94611
Beth	Stein	Los Angeles	CA	90066
Cindy	Stein	Thousand Oaks	CA	91360
Emma	Stein	Modesto	CA	95355
M.A.	Steinberger	Tujunga	CA	91042
Neal	Steiner	Los Angeles	CA	90034
Salllye	Steiner Bowyer	Soquel	CA	95073
Shelley	Sterrett	Santa Monica	CA	90402
Lee	Stevens	Yucaipa	CA	92399
Judy	Stewart	Santa Barbara	CA	93108
Katherine S	Stewart	San Diego	CA	92111
Michael	Stewart	Elk Grove	CA	95624
Michele	Stewart	San Diego	CA	92128
Brian	Still	San Diego	CA	92103
Amy	Stinstrom	Sherman Oaks	CA	91413
Linda	Stock	Cypress	CA	90630
Helen	Stone	Gardena	CA	90249
Peggy	Stone	San Diego	CA	92101
Russell	Stone	San Jose	CA	95148
Carol	Stormberg	San Jose	CA	95129
Kat	Stranger	San Rafael	CA	94901
Erich	Stratmann	Santa Monica	CA	90402
Ann	Stratten	La Mesa	CA	91941
Terry	Strauss	Mill Valley	CA	94941

Brenda	Street	Downey	CA	90241
Laura	Strom	Los Angeles	CA	90034
Carey	Suckow	San Francisco	CA	94114
Eva	Suhr	Palo Alto	CA	94306
Brendan	Sullivan	San Diego	CA	92119
Edward	Sullivan	San Francisco	CA	94116
Elizabeth	Sullivan	Penngrove	CA	94951
Kirsten	Sullivan	Cloverdale	CA	95425
Melissa	Sullivan	Oceanside	CA	92054
Lynn	Sunday	Half Moon Bay	CA	94019
Stacie	Surabian	Los Angeles	CA	90068
Guru	Suryanarayana	Alviso	CA	95002
Guruprasad	Suryanarayana	Menlo Park	CA	94025
Julie	Svendsen	Burbank	CA	91505
Anne	Swanson	Campbell	CA	95008
Rebecca	Swanson	Mariposa	CA	95338
Roberta	Swanson	Walnut	CA	91789
Debra	Swartz	Los Angeles	CA	90034
Roy	Sweet	Aliso Viejo	CA	92656
Richard	Swift	Camarillo	CA	93010
F	Sylvester	Millbrae	CA	94030
Jim	Szewczak	Redwood City	CA	94062
Daniel	Szymanowski	La Mesa	CA	91942
Keith	Taber	Santa Barbara	CA	93111
Barbara	Tacker	Camarillo	CA	93012
Theresa	Tafoya	Temecula	CA	92591
Carol	Taggart	Menlo Park	CA	94025
Michael	Talbot	San Rafael	CA	94901
Susan	Tamura	San Diego	CA	92129
Singgih	Tan	San Jose	CA	95123
Tina	Tanner	Placerville	CA	95667
Carol	Tao	Salinas	CA	93901
Fred	Tashima	Los Angeles	CA	90066
Leslie	Tate	National City	CA	91950
Susan	Tatro	Eureka	CA	95503
Tammy	Taunt	Oceanside	CA	92057
Donald	Taylor	Fair Oaks	CA	95628
Melinda	Taylor	Long Beach	CA	90814
Melvin	Taylor	Sacramento	CA	95823
Pat	Taylor	Sacramento	CA	95814
John	Teevan	Chula Vista	CA	91914
Susan	Telese	Los Angeles	CA	90027
Dennise	Templeton	Castro Valley	CA	94546
Sara	Templeton	San Francisco	CA	94112
Joanne	Tenney	Escondido	CA	92026
Jeff	Thayer	San Diego	CA	92117
Tanya	Thienngern	Orange	CA	92865
Rita	Thio	Walnut	CA	91789
Eva	Thomas	Woodside	CA	94062

Robert	Thomas	Fremont	CA	94539
Shakayla	Thomas	Compton	CA	90220
Linda	Thompson	Torrance	CA	90503
Linda	Thompson	Santa Rosa	CA	95407
Melanie	Thompson	Santa Monica	CA	90405
Pat	Thompson	Roseville	CA	95678
Paula	Thompson	San Diego	CA	92117
Sandra	Thompson	Roseville	CA	95678
Nancy	Thomsen	Napa	CA	94559
Matthew	Thorn	San Diego	CA	92116
Tammy	Tillack	Lajolla	CA	92037
Elena	Tillman	San Diego	CA	92102
Lydia	Tinder	Stockton	CA	95219
Maryann	Tittle	Phelan	CA	92371
Kalita	Todd	Grass Valley	CA	95945
Lisa	Toliver	Carlsbad	CA	92009
April	Toller	Corona	CA	92883
Margaret	Tollner	Lakewood	CA	90713
Pela	Tomasello	Santa Cruz	CA	95062
Michael	Tomczyszyn	San Francisco	CA	94132
Jessica	Tong	San Francisco	CA	94118
Ava	Torre-Bueno	San Diego	CA	92105
Myra	Toth	Ojai	CA	93023
Lana	Touchstone	Vallejo	CA	94591
Alan	Townsend	San Francisco	CA	94110
Candice	Toyoda	El Cerrito	CA	94530
Rich	Toyon	La Crescenta	CA	91214
Lila	Trachtenberg	Santa Barbara	CA	93105
Judy	Trahan	Hayward	CA	94544
Kim	Tran	Santa Ana	CA	92707
Gene	Trapp	Davis	CA	95616
Tami	Trearse	Sacramento	CA	95820
Linda	Trevillian	Alhambra	CA	91803
Tia	Triplett	Los Angeles	CA	90066
Martin	Tripp	Santa Clarita	CA	91390
Christine	Troche	Fremont	CA	94555
Justin	Truong	San Francisco	CA	94112
Linda	Tuan	Poway	CA	92064
Ellen	Tubbs	Sacramento	CA	95864
Anne	Tuddenham	El Cerrito	CA	94530
Jerold	Tuller	Auburn	CA	95603
Anthony	Tupasi	San Francisco	CA	94122
Virginia	Turner	Woodland Hills	CA	91367
Ilya	Turov	Moreno Valley	CA	92555
Natascha	Tuznik	West Sacramento	CA	95691
Glen A	Twombly	Arcata	CA	95521
Bob	Tyson	Lincoln	CA	95648
Canan	Tzelil	Beverly Hills	CA	90210
Patricia	Ulloa	Pasadena	CA	91105

Linda	Ulvaeus	Santa Barbara	CA	93109
Robert	Underwood	Concord	CA	94519
Jeff	Urdank	Sherman Oaks	CA	91403
Rose	Urias	Gilroy	CA	95020
Matt	Uzzi	Murrieta	CA	92563
Sandra	Vadhin	West Hills	CA	91307
Sylvia	Vairo	Santa Cruz	CA	95062
Jacqueline	Valadez	Santa Ana	CA	92704
Kim	Valentine	Carson	CA	90745
Paul	Van Duine	Woodland Hills	CA	91364
Sara	Van Dusen	Palo Alto	CA	94303
Jeremy	Van Hecke	Mountain View	CA	94043
Chris	Van Hook	Pacific Palisades	CA	90272
Corinne	Van Houten	Sacramento	CA	95835
Shana	Van Meter	Irvine	CA	92623
Kristopher J	Van Stralen	Orinda	CA	94563
Robin	Van Tassell	Summerland	CA	93067
Richard	Vanella	Morgan Hill	CA	95037
Erik	Vanlier	Van Nuys	CA	91405
John	Varga	Rancho Mirage	CA	92270
Natasha	Varner	Santa Cruz	CA	95062
Melissa	Vasconcellos	Ventura	CA	93006
Silvia	Vasquez	Sacramento	CA	95841
Iris	Vaughan	San Francisco	CA	94102
V C	Vcar	San Jose	CA	95134
Monica	Ventrice	Loma Mar	CA	94021
Dirk	Verbeuren	Valley Village	CA	91607
Paul	Vesper	Berkeley	CA	94703
Lori	Vest	Potter Valley	CA	95469
Keith	Vezina	San Luis Obispo	CA	93401
Timothy	Vila	Burbank	CA	91506
Juan	Villasenor	Live Oak	CA	95953
Carlene	Visperas	Concord	CA	94521
Chris	Vitali	Yucca Valley	CA	92284
Melanie	Vliet	La Mirada	CA	90638
Pablo	Voitzuk	Oakland	CA	94618
Sheryl	Volkman	Livermore	CA	94550
Alexander	Vollmer	San Rafael	CA	94901
Janice	Von Itter	Oakland	CA	94609
Susan	Von Schmacht	Watsonville	CA	95076
Carol	Vonsederholm	Chula Vista	CA	91913
Vulpes	Vulpes	Fresno	CA	93730
Kris	Waara	Boulder Creek	CA	95006
Mary	Wade	La Mesa	CA	91942
Victoria	Wade	Marina	CA	93933
Nicholin	Wagner Quackenbush	Moorpark	CA	93021
Morgan	Waldroup	Redding	CA	96001
Daman	Walia	Clovis	CA	93619
Cameron	Walker	Irvine	CA	92620

Greg	Walker	Riverside	CA	92507
James	Walker	Mckinleyville	CA	95519
Steph	Walkowiak	Costa Mesa	CA	92627
Markie	Wallace	Riverbank	CA	95367
Michael	Wallace	Santa Cruz	CA	95062
Patrice	Wallace	Santa Cruz	CA	95060
Paul	Waller	Woodland Hills	CA	91367
Jennifer	Walls	Los Angeles	CA	90004
Nina	Waloewandja	Pinole	CA	94564
Ernie	Walters	Union City	CA	94587
Will F	Walworth	Downey	CA	90242
Rebecca	Wang	Alhambra	CA	91801
Maria	Wanless	Herlong	CA	96113
Penelope	Ward	Topanga	CA	90290
Christopher	Ware	Fremont	CA	94539
Ronald	Warren	Glendale	CA	91206
Lisa	Wasilewski	Redwood City	CA	94063
Debbie	Watanabe	San Luis Obispo	CA	93401
Melissa	Waters	Laguna Niguel	CA	92677
Michael	Watson	Sonoma	CA	95476
Rachel	Watson	Los Angeles	CA	90018
Richard	Watson	Long Beach	CA	90807
Susan	Watts	Riverside	CA	92506
Linda	Webb	Rancho Palos Verdes	CA	90275
Sally	Webb	Santa Barbara	CA	93108
Trish	Webb	Palm Springs	CA	92264
Dave	Webster	Petaluma	CA	94952
Jennifer	Wechsler	Sausalito	CA	94965
Vicki	Wegscheider-Kissinger	Placerville	CA	95667
Cheryl	Weiden	Los Altos	CA	94022
Gwen	Weil	Oakland	CA	94610
Linda	Weiner	San Francisco	CA	94110
Robin	Weirich	Irvine	CA	92618
Joe	Weis	Reedley	CA	93654
Lynne	Weiske	Los Angeles	CA	90048
Russell	Weisz	Santa Cruz	CA	95060
Jeannette	Welling	Thousand Oaks	CA	91362
John	Wendell	Santa Rosa	CA	95401
David	Wendt	Walnut Creek	CA	94596
Margaret	Wessels	Aptos	CA	95003
Amanda	West	Mountain View	CA	94043
Richard	Whaley	Eureka	CA	95503
Janet	Wheeler	Murrieta	CA	92563
Michelle	Wheeler	Anaheim	CA	92802
Brandon	Wheelock	Vista	CA	92081
Heidi	Whelchel	Rancho Cucamonga	CA	91730
Howard	Whitaker	Gold River	CA	95670
David	White	Beverly Hills	CA	90212
Edwina	White	Sacramento	CA	95811

Lori	White	Lower Lake	CA	95457
Frances	Whiteside	Montclair	CA	91763
Helene	Whitson	Berkeley	CA	94709
Barbara I	Whyman	Ventura	CA	93001
Joan	Wickham	Pasadena	CA	91107
Cara	Wicks	Oceanside	CA	92057
Charles	Wieland	San Ramon	CA	94583
Connie	Wigen	Sacramento	CA	95831
Richard	Wightman	Arcadia	CA	91006
Stewart	Wilber	San Francisco	CA	94114
Stephanie	Wilder	Mount Shasta	CA	96067
Sharon	Wilensky	San Francisco	CA	94122
Carol	Wiley	Victorville	CA	92394
Ramona	Wilkerson	Oakland	CA	94604
Debbie	Williams	Menifee	CA	92586
Gerry	Williams	Thousand Oaks	CA	91360
Melissa	Williams	Sacramento	CA	95823
Robin	Williams	Nicasio	CA	94946
William	Willis	Fallbrook	CA	92028
Jennifer	Willison	Morro Bay	CA	93442
John	Wills	Oakland	CA	94603
Clyde	Willson	Oakland	CA	94606
Norm	Wilmes	Yuba City	CA	95991
Amy	Wilson	San Mateo	CA	94401
Ken	Wilson	Santa Rosa	CA	95409
Martha	Wilson	Davis	CA	95618
Merlin	Wilson	Salinas	CA	93906
Bruce	Wimberley	El Segundo	CA	90245
Karsten	Windt	Point Richmond	CA	94801
Cami	Winikoff	Malibu	CA	90265
Lisa	Winningham	Los Gatos	CA	95032
Heidi	Winslow	Santa Barbara	CA	93105
Theresa	Winters	Sylmar	CA	91342
Anita	Wisch	Santa Clarita	CA	91355
Anita	Wisch	Valencia	CA	91355
Anita	Wisch	Valencia	CA	91355
Jason	Witchel	San Rafael	CA	94901
Lynn	Wolf	Saugus	CA	91350
Rachel	Wolf	Santa Cruz	CA	95060
Alan	Wolfe	San Francisco	CA	94117
Michael	Wollman	San Luis Obispo	CA	93401
Sabrina	Wong	Danville	CA	94526
Jud	Woodard	Sutter Creek	CA	95685
Bill	Woodbridge	Santa Barbara	CA	93111
Peg	Woodin	Oroville	CA	95966
Tansy	Woods	San Diego	CA	92101
Annie	Woodward	San Diego	CA	92101
Linda	Woodward	Pleasant Hill	CA	94523
Vivian	Woolfson	Altadena	CA	91001

Claudia	Wornum	Oakland	CA	94605
Don	Wright	Goleta	CA	93117
Keith	Wright	Glendale	CA	91201
Kimberly	Wright	San Diego	CA	92128
W	Wright	Cambria	CA	93428
Blake	Wu	Lafayette	CA	94549
Dana	Wullenwaber	Redding	CA	96001
Jak	Wyld	Los Angeles	CA	90036
Finale	Xiong	Stockton	CA	95209
June	Yamada	Westminster	CA	92683
Jennifer	Yamamoto	Manhattan Beach	CA	90266
Kyle	Yaskin	Los Angeles	CA	90046
Chloe	Yeap	Milpitas	CA	95035
Carolyn	Yee	Sacramento	CA	95822
Kobi	Yonai	Sunnyvale	CA	94087
Jimmie	Yonemoto	San Jose	CA	95126
Brittney	Yore	Huntington Beach	CA	92647
Angela	York	El Cajon	CA	92021
Bing	York	Mendocino	CA	95460
Amanda	Young	Lake Forest	CA	92630
Amy	Young	Reseda	CA	91335
Dennis	Young	Pismo Beach	CA	93449
Jay	Young	Windsor	CA	95492
Kathleen	Young	Oakland	CA	94619
Kristin	Young	Buena Park	CA	90620
Kyle	Young	Rosamond	CA	93560
Lyn	Younger	San Jose	CA	95111
Christopher	Yrarrazaval-Correa	Santa Ana	CA	92706
Brian	Yu	Santa Monica	CA	90404
Barry	Zakar	Vallejo	CA	94591
Rena	Zaman-Zade	Escondido	CA	92027
Sondra	Zanassi	Oceanside	CA	92058
Charlene	Zanella	Redwood Valley	CA	95470
Sandra	Zaninovich	Los Angeles	CA	90024
Sandy	Zelasko	Valley Center	CA	92082
Rudy	Zeller	Benicia	CA	94510
Jess	Zelniker	North Hollywood	CA	91601
Esther	Zepeda	Los Angeles	CA	90026
Paula	Zerzan	Sonoma	CA	95476
Dawn	Ziegler	San Diego	CA	92107
Teresa	Zollars	Fresno	CA	93704
Pilar	Zorrilla	West Hills	CA	91307
Ronnie	Zuckerberg	San Francisco	CA	94131
Ruth	Zulas	Corona	CA	92883
Helen	Zung	Oakland	CA	94610
Arleen	Zuniga	Guerneville	CA	95446
Stephanie	Zuniga	Huntington Park	CA	90255
Kristina	Zweig	Pacheco	CA	94553
Maxine	Zylberberg	San Francisco	CA	94110

## CALIFORNIA FISH AND GAME COMMISSION PETITIONS FOR REGULATION CHANGE - ACTION

FGC - California Fish and Game Commission    DFW - California Department of Fish and Wildlife    WRC - Wildlife Resources Committee    MRC - Marine Resources Committee

Grant: FGC is willing to consider the petitioned action through a process    Deny: FGC is not willing to consider the petitioned action    Refer: FGC needs more information before the final decision

Tracking No.	Name of Petitioner	Subject of Request	Short Description	FGC Receipt	FGC Initial Action	Initial Staff Recommendation
2021-013	Tom Noto	Commercial fishing: Market squid	Revise regulations for commercial market squid fishing in Monterey Bay, including changes to allowed days, times, and lighting.	8/18/2021	10/14/2021	DENY; the petitioner has not provided documentation to substantiate that a significant biological risk is imminent, or to justify that immediate action is necessary at this time. Recommend that the petitioner work with DFW or an academic partner to consider how to evaluate the observations and concerns. Additionally, DFW is in the early stages of conducting a squid management review process; petitioner is encouraged to work within that process to bring forward the concerns and potential regulation changes.



Tracking Number: (2021-013\_)

To request a change to regulations under the authority of the California Fish and Game Commission (Commission), you are required to submit this completed form to: California Fish and Game Commission, (physical address) 1416 Ninth Street, Suite 1320, Sacramento, CA 95814, (mailing address) P.O. Box 944209, Sacramento, CA 94244-2090 or via email to FGC@fgc.ca.gov. Note: This form is not intended for listing petitions for threatened or endangered species (see Section 670.1 of Title 14).

Incomplete forms will not be accepted. A petition is incomplete if it is not submitted on this form or fails to contain necessary information in each of the required categories listed on this form (Section I). A petition will be rejected if it does not pertain to issues under the Commission's authority. A petition may be denied if any petition requesting a functionally equivalent regulation change was considered within the previous 12 months and no information or data is being submitted beyond what was previously submitted. If you need help with this form, please contact Commission staff at (916) 653-4899 or FGC@fgc.ca.gov.

## SECTION I: Required Information.

*Please be succinct. Responses for Section I should not exceed five pages*

### 1. Person or organization requesting the change (Required)

Name of primary contact person: Tom Noto

Address: [REDACTED]

Telephone number: ([REDACTED])

Email address: [REDACTED]

**2) Rulemaking Authority (Required)** - Reference to the statutory or constitutional authority of the Commission to take the action requested Sections 7078, 7701, 7708, 8026, 8425 and 8429.5, Fish and Game Code:

**3) Overview (Required)** - Summarize the proposed changes to regulations:

This petition will be to change regulations in Section 149 of Title 14, California Code of Regulations. Return the fishing times in the Monterey Bay region back to the way they were historically: Fishing to be allowed starting Monday morning at 12:00am to 11:59am every day through Friday at noon. Additionally, there shall be no squid commercial fishing from noon Friday through 11:59pm Sunday night. The area for which the proposed additional time restrictions would apply is within a line that starts at Cypress Point and then goes north-east to the Moss Landing Harbor entrance, and all waters therein shoreward. Additionally, no vessel participating in this fishery shall display any lights prior to the opening time other than navigation lights.

**4) Rationale (Required)** - Describe the problem and the reason for the proposed change.  
It is our deep concern that increased in fishing pressure in this area is not allowing enough time for squid to spawn.



As the Commission knows, the sustainability of market squid is addressed using three tools: 1) the California coastwide cap on harvest of 118,000 short tons, 2) a number of state MPA's are in regions of known frequent squid spawning, thereby guaranteeing safe spawning areas, and 3) time closures to allow for spawning, which are the subject of this petition to modify.

Over the past approximately ten years, Districts 16 and part of 17 in or near Monterey Bay have seen an increasingly large fleet of permitted purse sein vessels and light boats fishing squid very hard. These vessels will set on small schools of squid of only a ton or two, and fish in any weather. It is the observation of Monterey's historic squid fishermen, who represent three generations of current, active fishing, that the existing time closure rule (open noon Sunday through noon Friday) does not offer enough time for squid to adequately spawn in these conditions of high-pressure fishing. This conclusion has developed over several years of observations.

In offering this petition to the Commission, we want to be very clear that we are only addressing conditions in the Monterey Bay region; we make no assertion that concerns about inadequate spawning time exists in any other California region.

The area for which the proposed additional time restriction would include is all waters shoreward of a line drawn from Cypress Point north-east to the Moss Landing Harbor entrance.

To equitably regulate the start time, we propose that no vessel participating in this fishery shall display any lights prior to the opening time other than navigation lights.

Monterey's Historic Squid Boat Owners are also aware of the national and state discussions of concepts of regional management. This is in part due to anticipated effects of changing ocean conditions, and also from the body of socioeconomic work that concludes that those who live in communities that have a direct interest in the condition of the natural resources that those communities rely on can/should contribute to the management of those resources.

Last, the time closure proposed by this petition is requested for a five year period, with the expectation that a report will be provided to the Commission with a recommendation to either renew, or end, the additional harvest time restrictions.

## **SECTION II: Optional Information**

5) **Date of Petition:**

6) **Category of Proposed Change**

- ☐ Sport Fishing
- ☒ Commercial Fishing
- ☐ Hunting
- ☐ Other, please specify:



7) **The proposal is to:** (To determine section number(s), see current year regulation booklet or <https://govt.westlaw.com/calregs>)

1. ☒ Amend Title 14 Section(s) 14 CCR § 149

§ 149. Commercial Taking of Market Squid.

c) Time Closures. North of a westerly extension of the United States - Republic of Mexico boundary line:

(1) Fishing Days: Market squid may not be taken for commercial purposes between 1200 hours (noon) on Friday and 1200 hours (noon) on Sunday of each week, except as provided below: The allowed fishing times in the area seaward of a line drawn from Cypress Point north-east to the Moss Landing Harbor entrance in the Monterey Bay region will start Monday night at 12:00am through 11:59am every day through Friday at noon. No squid commercial fishing in this area from noon Friday through 11:59pm Sunday night. Additionally, no vessel participating in this fishery shall display any lights prior to the opening time other than navigation lights.

☐ Add New Title 14 Section(s): [Click here to enter text.](#)

☐ Repeal Title 14 Section(s): [Click here to enter text.](#)

*Amend this section as shown above.*

2. **If the proposal is related to a previously submitted petition that was rejected, specify the tracking number of the previously submitted petition** [Click here to enter text.](#)

Or ☒ Not applicable.

3. **Effective date:** If applicable, identify the desired effective date of the regulation. If the proposed change requires immediate implementation, explain the nature of the emergency:

September 1, 2021 or immediately

**Supporting documentation:** Identify and attach to the petition any information supporting the proposal including data, reports and other documents: Reports from Sunday & Monday fish caught.

4. **Economic or Fiscal Impacts:** Identify any known impacts of the proposed regulation change on revenues to the California Department of Fish and Wildlife, individuals, businesses, jobs, other state agencies, local agencies, schools, or housing: [Click here to enter text.](#)

5. **Forms:** If applicable, list any forms to be created, amended or repealed:

N/A

### SECTION 3: FGC Staff Only

Date received: 6/18/2021

FGC staff action:

X Accept - complete



- ☐ Reject - incomplete
- ☐ Reject - outside scope of FGC authority

Tracking Number

Date petitioner was notified of receipt of petition and pending action: 6/18/21, 7/14/21

Meeting date for FGC consideration: Oct 13-14, 2021

FGC action: 6/18/21,

- ☐ Denied by FGC
- ☐ Denied - same as petition

Tracking Number

- ☐ Granted for consideration of regulation change

**CALIFORNIA FISH AND GAME COMMISSION PETITIONS FOR REGULATION CHANGE - ACTION**

FGC - California Fish and Game Commission    DFW - California Department of Fish and Wildlife    WRC - Wildlife Resources Committee    MRC - Marine Resources Committee

Grant: FGC is willing to consider the petitioned action through a process    Deny: FGC is not willing to consider the petitioned action    Refer: FGC needs more information before the final decision

Tracking No.	Name of Petitioner	Subject of Request	Short Description	Marine, Wildlife, or Admin?	FGC Receipt	FGC Initial Action	Initial Staff Recommendation	Referral Date	Referred to	Final Staff Recommendation
2020-015 AM1	Ken Bates	Commercial take of Pacific herring; Lampara bait nets	Amend commercial Pacific herring regulations to clarify that lampara bait nets, as described in Fish and Game Code Section 8780, are exempt from the current prohibition on the use of round haul nets to take herring.	Marine	12/9-10/2020	2/10/2021	REFER to DFW for review and recommendation.	2/10/2021	DFW	GRANT for consideration in a future rulemaking based on DFW evaluation and recommendation; see DFW memo Oct 2021 meeting binder (Exhibit 26B.3).
2021-001	Steve Rebuck	Recreational and commercial red abalone fishery; San Miguel Island	Open a three-month biological fishery for red abalone at San Miguel Island, Santa Barbara County, relying upon Appendix H of the Abalone Recovery and Management Plan. A detailed proposal is offered, including data collection and habitat/resource recovery and mitigation actions.	Marine	4/14/2021	6/16-17/2021	REFER to DFW for review and recommendation and REFER to FGC legal counsel for review of reliance on Appendix H of the Abalone Recovery and Management Plan to reopen the fishery, as proposed.	6/16-17/2021	DFW; and FGC legal counsel	DENY based on DFW review and recommendation. In 2012 red abalone densities at San Miguel Island were determined to be insufficient to support a fishery, and DFW highlights that density declines have recently been documented by the Channel Islands National Park kelp forest monitoring program (2018-2019). Rationale is detailed in DFW review and recommendations memo in Oct 2021 meeting binder (Exhibit 26B.4). FGC legal counsel has determined that reliance on Appendix H of the Abalone Recovery and Management Plan to reopen the fishery, as proposed, is a resource management determination, not a legal one.



Tracking Number: (2020-015 AM1)

To request a change to regulations under the authority of the California Fish and Game Commission (Commission), you are required to submit this completed form to: California Fish and Game Commission, (physical address) 1416 Ninth Street, Suite 1320, Sacramento, CA 95814, (mailing address) P.O. Box 944209, Sacramento, CA 94244-2090 or via email to [FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov). Note: This form is not intended for listing petitions for threatened or endangered species (see Section 670.1 of Title 14).

Incomplete forms will not be accepted. A petition is incomplete if it is not submitted on this form or fails to contain necessary information in each of the required categories listed on this form (Section I). A petition will be rejected if it does not pertain to issues under the Commission's authority. A petition may be denied if any petition requesting a functionally equivalent regulation change was considered within the previous 12 months and no information or data is being submitted beyond what was previously submitted. If you need help with this form, please contact Commission staff at (916) 653-4899 or [FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov).

## **SECTION I: Required Information.**

*Please be succinct. Responses for Section I should not exceed five pages*

### **1. Person or organization requesting the change (Required)**

Name of primary contact person: Ken Bates

Address: [REDACTED]

Telephone number: [REDACTED]

Email address: [REDACTED]

**2. Rulemaking Authority (Required)** - Reference to the statutory or constitutional authority of the Commission to take the action requested: "The MLMA requires that fishery management be adaptive. The MLMA defines adaptive management as a policy that seeks to improve management by viewing management actions as tools for learning, even if they fail [90.1]. **The MLMA stipulates that management should: ensure that management is proactive and responds quickly to changing environmental conditions and market or other socio-economic factors and to the concerns of fishery participants [7056(1)].**" This is quoted directly from the Commission's 2018 Master Plan for Fisheries, Implementation of the MLMA. *Staff Note: Petitioner-identified authority of Fish and Game Code Section 8780, under I.3-Overview, satisfies this requirement. (Note was added 11/17/2020)*

### **3. Overview (Required)** - Summarize the proposed changes to regulations:

I am requesting an amendment to Title 14 CCR Sect. 163 (2), Harvest of Herring. Amended as follows: Sect. 163 (2) "the use of round haul nets (**except Lampara bait nets as described in Fish and Game code section 8780**) to take herring is prohibited.

### **4. Rationale (Required)** - Describe the problem and the reason for the proposed change:

I am applying to take limited amounts of Pacific Herring with Lampara Bait Net gear as described in the Fish and Game code. In 2008, Eureka Ice and Cold Storage, located in Eureka closed. Loss of freezing capacity shut down the "herring roe" fishery in both Humboldt and Crescent City permit areas. In 2018/2019, I developed limited markets for fresh Pacific herring. Catching herring for these markets by use of gillnet gear is irresponsible, as there is



no way to control harvest rate with gillnet gear. I can say this with much assurance as I have 24 years experience with small scale Lampara gear and have done two years of volunteer sampling of Humboldt Bay Herring for the Fish and Game Commission and the Department. This is the logical way to take small amounts of fish and avoid wanton waste and discards. All unused fish in the net are released alive ( see YouTube- Humboldt Bay Herring Lampara Net).

## **SECTION II: Optional Information**

**5. Date of Petition: October 14, 2020**

**6. Category of Proposed Change**

- ☐ Sport Fishing
- ☐ Commercial Fishing 0
- ☐ Hunting
- ☐ Other, please specify: [Click here to enter text.](#)

**7. The proposal is to:** *(To determine section number(s), see current year regulation booklet or <https://govt.westlaw.com/calregs>).* **The goal of the proposal is to exercise provision [7056(1)] of the Commissions Marine Life Management Act 2018 Implementation Plan by amending Title 14, Section 163 (2)**

X Amend Title 14 Section(s): 163(2)

- ☐ Add New Title 14 Section(s): N/A
- ☐ Repeal Title 14 Section(s): N/A

**8. If the proposal is related to a previously submitted petition that was rejected, specify the tracking number of the previously submitted petition**

Or ☐ Not applicable.

**9. Effective date:** If applicable, identify the desired effective date of the regulation. **January 2, 2021**

If the proposed change requires immediate implementation, explain the nature of the emergency:

**10. Supporting documentation:** Identify and attach to the petition any information supporting the proposal including data, reports and other documents:

During the public comment process of the Herring FMP, I repeatedly lobbied Ryan Bartling, Sarah Valencia, Nick Sorhakoff and other team members to include a provision in the FMP to consider “alternative fishing gears” to take herring. Contained in \*Appendix A of the Herring FMP is a discussion of the use of “Lampara round haul gear” as a potential alternative gear type to take small amounts of Pacific Herring. \*See Pacific Herring FMP; Appendix A.

**11. Economic or Fiscal Impacts:** Identify any known impacts of the proposed regulation change on revenues to the California Department of Fish and Wildlife, individuals, businesses, jobs, other state agencies, local agencies, schools, or housing:  
Increased revenue to Fish and Wildlife through landing and research taxes, economic benefit to the recipients of fresh fish.



**12. Forms:** If applicable, list any forms to be created, amended or repealed:

[Click here to enter text.](#)

### **SECTION 3: FGC Staff Only**

Date received: [Click here to enter text.](#)

FGC staff action:

- ☐ Accept - complete
- ☐ Reject - incomplete
- ☐ Reject - outside scope of FGC authority

Tracking Number

Date petitioner was notified of receipt of petition and pending action: \_\_\_\_\_

Meeting date for FGC consideration: \_\_\_\_\_

FGC action:

- ☐ Denied by FGC
- ☐ Denied - same as petition \_\_\_\_\_

Tracking Number

- ☐ Granted for consideration of regulation change

## Memorandum

Date: September 13, 2021

Received 9/21/2021  
Original copy on file

To: Melissa Miller-Henson  
Executive Director  
Fish and Game Commission

From: Charlton H. Bonham  
Director

Subject: **Response to Petition 2020-015 AM1: Use of Bait Nets for Commercial Take of Herring**

### Background

At their February 10, 2021, meeting, the California Fish and Game Commission (Commission) referred a petition for regulation change (2020-015 AM1) to the Department of Fish and Wildlife (Department) for its review and recommendation. This petition, submitted by Humboldt Bay Herring permittee Mr. Ken Bates (Applicant), requests to amend Pacific herring regulations to exempt lampara bait nets from gear restrictions, allowing the applicant to take small quantities of Pacific herring in Humboldt Bay.

Current regulations in Title 14, California Code of Regulations, Sections 163, 163.1, 163.5, and 164, which implement the Pacific Herring Fishery Management Plan (Herring FMP) specific to commercial take, divide the herring fishery into two sectors: Herring and Herring Eggs on Kelp (HEOK). Regulations for the Herring sector currently allow take of whole fish for any market purpose by gill net only. The Herring FMP generally considers round haul nets, a gear category that includes lampara-style bait nets, within the context of historical purse seining in San Francisco Bay. This historical sector of the commercial herring fishery took large quantities of fish with low selectivity. Use of this type of gear was phased out in favor of gill nets of specified mesh size to allow selectivity of older fish with low bycatch, promoting the long-term health of the stock.

However, the Herring FMP allows changes in gear type through a Commission rulemaking to allow for future flexibility and market access. In particular, the Herring FMP suggests that future gear changes may be explored through Experimental Fishing Permits. This process allows the Department to evaluate potential impacts of the new gear type, including bycatch, habitat impacts, and reproductive impacts to the stock from gear selectivity. In this case, the applicant assisted Department scientists with sampling using the specific lampara net gear-type being requested. This collaborative sampling enabled the Department to evaluate the potential impacts described in the Herring FMP and has already fulfilled the purpose of seeking an Experimental Fishing Permit.

Because of the small scale at which the Applicant proposes to use the requested lampara-net gear type, Department scientists do not anticipate resource concerns related to gear selectivity and the reproductive health of the stock, or habitat impacts. Due to specifics of how target fish are removed by dip net from the lampara net, while others are released unharmed, the Department does not consider there to be a high risk of bycatch.

### **Department Recommendation**

The Department recommends the Applicant's petition be granted in concept, and that a Commission rulemaking be considered to allow for limited commercial take of Pacific herring by lampara gear. If approved and prioritized, Department scientists would work with the Applicant and other interested parties to develop adequate definitions for such gear, including net dimensions and construction, as well as bounds on use, including spatial and temporal limits governing where and when use of such gear would be allowed.

If you have any questions regarding this item, please contact Dr. Craig Shuman, Marine Regional Manager, Marine Region, at (916) 215-9694.

cc: Garry Kelley, Acting Deputy Director  
Wildlife and Fisheries Division  
[Garry.Kelley@Wildlife.ca.gov](mailto:Garry.Kelley@Wildlife.ca.gov)

David Bess, Chief  
Law Enforcement Division  
[David.Bess@Wildlife.ca.gov](mailto:David.Bess@Wildlife.ca.gov)

Craig Shuman, D. Env., Regional Manager  
Marine Region  
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Tom Greiner, Environmental Scientist  
Marine Region  
[Tom.Greiner@wildlife.ca.gov](mailto:Tom.Greiner@wildlife.ca.gov)



Tracking Number: (2021-001)

To request a change to regulations under the authority of the California Fish and Game Commission (Commission), you are required to submit this completed form to: California Fish and Game Commission, (physical address) 1416 Ninth Street, Suite 1320, Sacramento, CA 95814, (mailing address) P.O. Box 944209, Sacramento, CA 94244-2090 or via email to FGC@fgc.ca.gov. Note: This form is not intended for listing petitions for threatened or endangered species (see Section 670.1 of Title 14).

Incomplete forms will not be accepted. A petition is incomplete if it is not submitted on this form or fails to contain necessary information in each of the required categories listed on this form (Section I). A petition will be rejected if it does not pertain to issues under the Commission's authority. A petition may be denied if any petition requesting a functionally equivalent regulation change was considered within the previous 12 months and no information or data is being submitted beyond what was previously submitted. If you need help with this form, please contact Commission staff at (916) 653-4899 or FGC@fgc.ca.gov.

## **SECTION I: Required Information.**

*Please be succinct. Responses for Section I should not exceed five pages*

### **1. Person or organization requesting the change (Required)**

Name of primary contact person: Steven L. Rebuck

Address: [REDACTED]

Telephone number: [REDACTED]

Email address: [REDACTED]

### **2. Rulemaking Authority (Required) - Reference to the statutory or constitutional authority of the Commission to take the action requested: Section 29.15. Abalone 14CCR, S.45, 200, 203, 205, 206, 209, 210, 211, 215, 218, 219, 220, 265, 3990.**

### **3. Overview (Required) - Summarize the proposed changes to regulations: Restore recreational and commercial harvest of red abalone, Regulations, south of San Francisco to pre-1998 status, San Miguel Island, Santa Barbara County California only.**

### **4. Rationale (Required) - Describe the problem and the reason for the proposed change: See attached Rationale**

## **SECTION II: Optional Information**

### **5. Date of Petition: February 22, 2021.**

### **6. Category of Proposed Change**

☒ Sport Fishing

☒ Commercial Fishing

☐ Hunting

☐ Other, please specify: [Click here to enter text.](#)



7. **The proposal is to:** *(To determine section number(s), see current year regulation booklet or <https://govt.westlaw.com/calregs>)*  
☒ Amend Title 14 Section(s):   
☐ Add New Title 14 Section(s):   
☐ Repeal Title 14 Section(s):
8. **If the proposal is related to a previously submitted petition that was rejected, specify the tracking number of the previously submitted petition**   
Or ☐ Not applicable.
9. **Effective date:** If applicable, identify the desired effective date of the regulation.  
If the proposed change requires immediate implementation, explain the nature of the emergency:
10. **Supporting documentation:** Identify and attach to the petition any information supporting the proposal including data, reports and other documents:
11. **Economic or Fiscal Impacts:** Identify any known impacts of the proposed regulation change on revenues to the California Department of Fish and Wildlife, individuals, businesses, jobs, other state agencies, local agencies, schools, or housing:
12. **Forms:** If applicable, list any forms to be created, amended or repealed:

### SECTION 3: FGC Staff Only

Date received:

FGC staff action:

- ☐ Accept - complete  
☐ Reject - incomplete  
☐ Reject - outside scope of FGC authority

Tracking Number

Date petitioner was notified of receipt of petition and pending action:

Meeting date for FGC consideration:

FGC action:

- ☐ Denied by FGC  
☐ Denied - same as petition   
Tracking Number  
☐ Granted for consideration of regulation change

# Biological Red Abalone Fishery for San Miguel Island

March 2021

By Steven L. Rebuck



These details of a Biological Fishery for red abalone at San Miguel Island (SMI) are in addition, and pursuant to our Petition for Regulatory Change, Submission, February 22, 2021, using Abalone Recovery and Management Plan (ARMP) Appendix H. We propose these details to assist the California Fish and Game Commission (FGC) in consideration of our petition.

- 1) We propose to use Fish and Game Code Sections on commercial and recreational abalone as they existed prior to the Moratorium, May, 1997.
- 2) We propose a fishery season of July, August, September, 2021 , at San Miguel Island (SMI) only.
- 3) Only properly permitted commercial or recreational fishermen will be allowed to participate.
- 4) All red abalone fishing will be conducted pursuant to ARMP Appendix H, and related regulations.
- 5) Fishermen must contact California Department of Fish and Wildlife (CDFW) before departure.
- 6) We propose a Biological Fishery where all red abalone catch, commercial (E-Tix/Dock Ticket) and recreational (fixed tag/smart phone) must be reported before fishermen leave SMI. All abalone landed will be presented to CDFW agents at a Santa Barbara location.
- 7) After examination, CDFW agents will return remaining shell, trim and meat to the fishermen or processor.
- 8) CDFG will only close these fisheries when:
  - A) Total Allowable Catch limit is reached;
  - B) September 30, 2021 is reached;
  - C) Biological data suggest the fishery should close.
  - D) In season adjustments may be considered.

## Habitat/Resource Recovery and Mitigation

- 1) Encourage purple urchin removal. Allow mixed commercial loads of abalone, red urchin and purple sea urchin. This creates a financial incentive for those with both commercial abalone and sea urchin permits to remove excess purple urchins. Currently, there is a limited market only for purple sea urchin. What to do with them remains a problem. Commercial and recreational divers prefer smashing of purple urchins.
- 2) Fishery will initially target the largest and oldest of the red abalone observed at SMI. However, Appendix H suggests a slot size between 7  $\frac{3}{4}$ " and 8" (p. H-7). It would appear logical to remove larger size animals first, providing increase habitat for abalone recruiting into the fishery. A slot limit will make this difficult.
- 3) Using underwater GoPro video cameras, commercial divers will video each dive, collecting data on density, size variation, kelp, and other biological factors. Upon delivery of abalone, divers will turn over memory cards to CDFW. Once data is downloaded, memory cards will be returned for reuse.
- 4) Encourage abalone enhancement through out-planting of juvenile red abalone. The commercial divers in Santa Barbara have out-planting history going back approximately 40 years to the early 1980s. Onboard "Deck Spawning" is another option.
- 5) Commercial divers will engage in cooperative research projects with: National Park Service (NPS), Channel Islands Marine Sanctuary (CIMS), County of Santa Barbara (CSB), Ocean Protection Council (OPC), Reef Check (RC), and Dept. of Fish and Wildlife (CDFW).
- 6) Encourage, and assist kelp enhancement projects.

Overview/Rationale: Former Commercial Abalone Diver  
Support for Abalone Recovery and Management Plan,  
Appendix H (revised February 18, 2021)

Steven L. Rebuck, Former Commercial Abalone Divers

*" A biomass estimate of 3 million emergent abalone indicate a harvestable population of 75,000 to 150,000 red abalone at SMI. An initial total allowable catch (TAC) of 15,000 red abalone is proposed at SMI. Harvesting 10-20% of those abalone falls within the slot size should have a negligible effect on the population as a whole." Abalone Recovery and Management Plan, Appendix H, Page H-9*

#### OVERVIEW

- 1) The range of red abalone, *Haliotis rufescens* is Sunset Bay, Oregon to Bahia Tortugas, Baja, Mexico.\_1/.
- 2) Red abalone, *Haliotis rufescens*, are not a State or Federal threatened and/or endangered species.
- 3) This is not an "Experimental Fishery". We propose to reestablish former abalone fishing regulations used prior to 1998.
- 4) We propose using Abalone Advisory Group (AAG) Fishery Management Option A: Red Abalone Demonstration Fishery. \_2/.
- 5) The former commercial abalone divers of California support the use of the Abalone Recovery and Management Plan (ARMP) Appendix H (A-H)\_3/ as a management vehicle to reopen San Miguel Island, Santa Barbara County, for commercial and recreational red abalone diving.
- 6) Multiple studies have been produced demonstrating the possibility of reestablishing commercial and recreational fisheries at San Miguel Island. \_4/5/6/7/8/.....

#### HISTORY

Drafting of what became A-H began in August 19, 2005 with the submission of a plan titled: "Components of an Experimental Commercial Red Abalone Fishery", Steven L. Rebuck, to the California Fish and Game Commission (Commission). Commission President Michael Flores requested staff (John Ugoretz) include this submission into the ARMP discussion. By September 2005, the California Abalone

Association (CAA) had created a subcommittee to explore and draft a plan for San Miguel Island. A DRAFT of this plan was submitted to the Commission September the 2005. At this meeting, the Commission directed staff to work with CAA on this project. Originally, this effort was title Alternative 8. Within a couple years, a Technical Panel (TP) was formed and began drafting language for what became A-H. *\_6/ followed by a Review Panel\_ 7/. This effort coincided with the appointment of the Abalone Advisory Group (AAG) .*

## JUSTIFICATION

A-H, as crafted, and included with the ARMP, offers a Fishery Management Plan (FMP) for SMI. A-H contains the following:

- \* Suggests use of ARMP required Index Sites, in coordination with California Department of Fish and Wildlife (DFW), Director's Abalone Advisory Committee (DAAC), National Park Service (NPS)/Kelp Forest Monitoring Program (KMP), and California Abalone Association (CAA).
- \* Identifies Collaborative Abalone Research Program (CARP) and Adams Cove, Castle Rock, and Crooks Point as Index Sites. CAA had previously installed on monitoring site at Tyler Bight, monitored by NPS/KMP.
- \* Identifies a Total Allowable Catch (TAC) for both commercial and recreational abalone fishing for red abalone only.
- \* Fisheries Management: Integrates Marine Protected Areas (MPAs) at SMI: Judith Rock, near Pt. Bennett, which includes Adams Cove.
- \* Use of Position Indicating Transponders (PIT).
- \* Identifies Landing Taxes and Resource Rents.
- \* Creates Fishery Dependent and Fishery Independent Data which DFW does not currently have.
- \* Creates a financial stream for DFW, management and law enforcement, which they currently does not have.

We propose a domestic use fishery only. No export out of the USA.

## BIOLOGICAL FISHERY

As proposed by the California Department of Fish and Wildlife (DFW)  
This group of former commercial abalone divers support this concept.

- 1) All abalone harvested will be reported to DFW at the time of harvest. Photographs of ones fishing trip, location, time of day, dates, etc. will be reported.
- 2) Once a fishing trip is completed, the boat crew will contact DFW and report the estimated time of return to port.
- 3) Crew will meet with DFW biological team and allow them to examine all abalone harvested.
- 4) Once DFW biological team has examined and/or taken tissue samples, abalone will be returned to boat crew and/or abalone processor.
- 5) Catch reporting: Title 14, S 197, E-Tix, <http://etix.psmfc.org>

Excerpted Source: Sonke Mastrup, pers. comm., et al

## TERRITORIAL USE RIGHTS for FISHING (TURF)

*"TURFs allocate exclusive harvest for one or more marine species in a specific area. TURFs are ideal for species like abalone that will not move beyond TURF boundaries, but they can be designed for more mobile species as well. TURFs may occur independently, or they may be part of a broader system of TURFs. Well designed networks of TURFs can be used to manage more complex fisheries, including those with mobile species or multiple groups of fishermen."*

What are TURF Reserves?

*"TURF Reserves are TURFs paired with no-take reserves, which are areas where no fishing is permitted. Theory and practice show that fishermen have greater incentive to implement and enforce TURF Reserves because they directly benefit from the fish that spill over from no-take reserves to their TURF. The fishery management combination is growing in interest, allowing local government to reap the rewards of being responsible stewards of their fisheries."*

Source: Environmental Defense

## SUPPORTING LITERATURE

1. Cox, Keith, 1962, California Abalones, Family Haliotidae, Fish Bulletin 118, California Department of Fish and Game.
2. Abalone Advisory Group Report, January 29, 2010, Management Options for Establishing a Potential Red Abalone Fishery at San Miguel Island, For Presentation to the Marine Resources committee of the California fish and Game Commission, February 16, 2010.
3. Appendix H. Proposed Amendments to Alternative 1 in ARMP as Submitted by Commercial Constituents to the Fish and Game Commission, an amendment to the Abalone Recovery and Management Plan, Alternative 1.
4. Taniguchi, Ian, D. Stein, K. Lampson, The San Miguel Island Red Abalone Resource: Results of Survey Conducted from July-October 2007, Marine Invertebrate Management Project, DFG.
5. Jloa, Yan, L. Rogers-Bennett, P. Crone, J. Butler, April 10, 2009, Appendix H.
6. Appendix B: DFG San Miguel Island Red Abalone Surveys (2006, 2007, 2008).
7. Prince, Jerome, California Abalone Marketing Association, February 6, 2012/Revised May 30, 2012, Proposal for Red abalone Research Fishery at San Miguel Island (SMI).
8. Bren School, 2010, Economic Viability and Sustainable Management of a California Red Abalone Fishing Cooperative.

## Memorandum

Date: September 13, 2021

Received 9/24/2021  
Signed original on file

To: Melissa Miller-Henson  
Executive Director  
Fish and Game Commission

From: Charlton H. Bonham  
Director

Subject: **Response to Petition 2021-001: San Miguel Island Abalone Fishery**

At their June 17, 2021, meeting the California Fish and Game Commission (Commission) referred a petition for regulation change (2021-001) to the Department of Fish and Wildlife (Department) for its review and recommendation. This petition, submitted by Mr. Steve Rebuck, proposes to establish a commercial Red Abalone fishery at San Miguel Island. The Department has reviewed the petition and finds that the proposal does not provide sufficient information to warrant consideration of a red abalone fishery at San Miguel Island at this time and recommends the Commission reject the petition.

The Commission last reviewed a similar petition in 2012 and found that the red abalone stock at the island was insufficient to support a fishery. This finding was based on two reports that summarized several years of work to assess the viability of re-establishing a fishery at the island. Since that time, conditions for abalone at the island have deteriorated, including both an increase in purple sea urchins and a dramatic loss in kelp following the marine heatwave in 2014-2016. Prior to this, sea stars, specifically the sunflower star, a major sea urchin predator, succumbed to disease and is now locally extinct in both California and Baja California, Mexico. Unfortunately, these poor environmental conditions have led to declines in the abundance of red abalone as quantified by the 2019 Kelp Forest Monitoring Program (KFMP) surveys conducted by our partners at the Channel Islands National Park. The latest data from the KFMP show that all three sites at San Miguel Island, including the area known as the "Miracle Mile" known for high red abalone abundances, are all in poor condition and are characterized as new sea urchin barrens with high densities of purple and red sea urchins.

The Department is interested in working with partners to further assess the situation as San Miguel Island to determine if there any effective ways to improve conditions. Please direct questions to Dr. Craig Shuman, Marine Regional Manager, at (916) 215-9694 or by email at [Craig.Shuman@Wildlife.ca.gov](mailto:Craig.Shuman@Wildlife.ca.gov).

ec: Garry Kelley, Acting Deputy Director  
Wildlife and Fisheries Division  
[Garry.Kelley@Wildlife.ca.gov](mailto:Garry.Kelley@Wildlife.ca.gov)

Melissa Miller-Henson, Executive Director  
Fish and Game Commission  
September 13, 2021  
Page 2

David Bess, Chief  
Law Enforcement Division  
[David.Bess@Wildlife.ca.gov](mailto:David.Bess@Wildlife.ca.gov)

Craig Shuman, D. Env. Regional Manager  
Marine Region  
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Sonke Mastrup, Environmental Program Manager  
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[Sonke.Mastrup@Wildlife.ca.gov](mailto:Sonke.Mastrup@Wildlife.ca.gov)

Mike Stefanak, Assistant Chief  
Law Enforcement Division  
[Mike.Stefanak@Wildlife.ca.gov](mailto:Mike.Stefanak@Wildlife.ca.gov)

## Synopsis of Channel Islands National Park Kelp Forest Monitoring Sites at San Miguel Island – 2018, 2019

Channel Islands National Park (CINP) has conducted long-term ecological monitoring of the kelp forests around San Miguel, Santa Rosa, Santa Cruz, Anacapa and Santa Barbara Islands since 1982. The following synopsis of Kelp Forest Monitoring (KFM) at San Miguel Island covers the years 2018 and 2019 for the three KFM sites established at the island, Wykoff Ledge (southside), Hare Rock (northside), and Miracle Mile (southside). The synopsis for each year includes an overall status summary of kelp forests at the island followed by detailed site notes for each site.

### 2018

The two sites on the south side of San Miguel Island were categorized as transitioning to urchin barren from kelp forest. Hare Rock, on the north remains dominated by *Strongylocentrotus* spp. *Strongylocentrotus purpuratus* density has increased dramatically since the release from predation after SSWD event caused *Pycnopodia helianthoides* to be extirpated from the Channel Islands in 2013-2014. There are fewer urchin predators at San Miguel Island when compared to the other islands, and *P. helianthoides* were the last predator capable of keeping *S. purpuratus* densities under control. With the explosion of dramatic increase in *S. purpuratus*, *M. pyrifera* has declined significantly.

This signifies a change for San Miguel Island, which has historically had lush kelp forest over the rocky reefs of the south side. A continuation of this trend could negatively impact the population of *Haliotis rufescens* and other species. The highest density of *H. rufescens* ever recorded was at Miracle Mile in 2018. The size frequency distribution of *H. rufescens* has shifted dramatically in the last two years, with a wider distribution towards smaller size classes which used to be outliers and are now part of the interquartile range. The shift in the size distribution and the increase in density indicate that many juvenile *H. rufescens* emerged from crevice habitat to forage for food. These smaller individuals are not usually sampled because they are too deep in crevices to see or to measure. Now that they have emerged, the density of abalone is higher and mean size is smaller. It is likely that the densities were always this high, but there is no way to capture smaller a representative sample with our non-invasive sampling techniques. These trends will be of the utmost importance to monitor in coming years.

*Kelletia kelletii* density have increased at Hare Rock since 2013. *Megastraea undosa* density increased following the 2015-2016 El Niño. *Patiria miniata* densities remain relatively low due to the warm water condition this region had experienced from 2014 2016. However, their densities have been greater at the cold-water islands of Santa Rosa and San Miguel than at the warmer water islands in the Park. *Pisaster giganteus* densities have remained low since the 2013-2014 SSWD event. *Crassadoma gigantea*

densities have steadily increased since 2013, with the highest densities ever recorded for San Miguel Island in 2018.

2018 SMI site notes:

**Site #1, Wyckoff Ledge, San Miguel Island**

**2018 status: Transition state from kelp forest to urchin barren dominated**

**Percent Canopy Cover: 10%**

**Sampling Dates and Work Completed**

09/24/2018: All sampling protocols were completed (1 m<sup>2</sup> quadrats, 5 m<sup>2</sup> quadrats, band transects, random point contact, fish size frequency, video transect, visual fish transect, roving diver fish count) including natural habitat size frequencies for *Macrocystis pyrifera*, *Tethya aurantia*, *Lophogorgia chilensis*, *Muricea californica*, *Megathura crenulata*, *Kelletia kelletii*, *Crassedoma gigantea*, *Haliotis rufescens*, *Lithopoma gibberosa*, *Megastrea undosa*, *Lytechinus anamesus*, *Strongylocentrotus franciscanus*, *Strongylocentrotus purpuratus*, *Patiria miniata*, and *Pisaster giganteus*. The temperature loggers were retrieved and deployed.

*Site Notes*

This site had changed significantly since the previous year, much like what we had observed for the rest of San Miguel Island. There was a decrease in the amount of *Macrocystis pyrifera* and there were emerging sea urchin barrens. We observed less than 200 *M. pyrifera* individuals, which is fewer than in recent years. Though several urchin fronts were present at the site, there were still some small, intact patches of kelp forests with dense understories of red algae. We observed some areas that were devoid of *M. pyrifera* and *Pterygophora californica* but still had moderate cover of red algae, most of which were *Cryptopleura* sp. and *Callophyllis* sp. Both *Cryptopleura* sp. and *Callophyllis* sp. are less palatable to urchins, which may explain their continued presence. We believe all these changes are due to the die-off of *Pycnopodia helianthoides* in 2013/14 from the disease event that occurred throughout the Pacific Northeast. Our observations from four weeks ago and our conversations with local fishers have led us to understand that the decline in macroalgae and the increase in sea urchins, or rather the increase in urchins out of crevice habitat, is a developing and very recent event (perhaps as recent as August). Other than the decline in macroalgae and increase in urchins, the site appears to be similar to past years. *Ulva* sp. were scattered around the site and were mostly small-sized. We observed very little *Cystoseira* sp. *Desmarestia* sp. were scattered around the site. We observed less *Dictyoneuropsis* sp. than last year. The other brown algae recorded during RPCs were all *Dictyoneuropsis* sp. *Pterygophora californica* were less

abundant than last year. *Cryptopleura* spp. were the most abundant algae at the site. Other red algae were still moderately abundant, but less abundant than usual.

The most common miscellaneous invertebrate on RPCs were hydroids. *Epiactis* spp. were common. Small-sized *Urticina lofotensis* were moderately abundant. We observed the hydroids *Aglaophenia* sp. and *Obelia* sp. We observed some *Balanus nubilus*. We observed at least ten *Cancer* sp., which is more than last year. We observed bryozoans encrusting on red algae. Tunicates consisted of *Pycnoclavella stanleyi* and *Cystodytes lobatus*. *Pista elongata* were moderately abundant.

The *Aplysia californica* that we observed were mostly large-sized. We observed that highest abundance of *Bursa californica* than we have possibly observed anywhere. Many of the *B. californica* were small-sized, but all sizes were present. We observed two *Cryptochiton stelleri*.

Like what we have observed during survey dives and at Miracle Mile, the *Strongylocentrotus purpuratus* and *Strongylocentrotus franciscanus* are emerging from crevice habitat, forming urchin fronts, and completely grazing down all macroalgae. We observed at least ten *Dermasterias imbricata*, all of which were medium to large-sized. The *Lytechinus anamesus* were mostly large-sized.

The *Parastichopus parvimensis* were mostly huge in size, but individuals were rare. We did not observe any *Pycnopodia helianthoides* were observed. All the urchins appeared very healthy with good looking spines; there was no evidence of disease. Most of the urchins were out of the crevice habitat and actively foraging.

We observed fewer *Embiotoca lateralis* and *Chromis punctipinnis* than we typically see. Overall, there seemed to be fewer fish than usual for this site. We did not observe any *Sebastes miniatus* (vermillion rockfish).

There was one old cement bottom of a lobster trap on the site and two crab traps east of the site.

## **Site #2, Hare Rock, San Miguel Island**

**2018 status: Dominated by *Strongylocentrotus purpuratus* and, at a lower density, *Strongylocentrotus franciscanus***

**Percent Canopy Cover: 0%**

### **Sampling Dates and Work Completed**

09/25/2018: All sampling protocols were completed (1 m<sup>2</sup> quadrats, 5 m<sup>2</sup> quadrats, band transects, random point contact, fish size frequency, video transect, visual fish transect, roving diver fish count) including natural habitat size frequencies

for *Macrocystis pyrifera*, *Tethya aurantia*, *Lophogorgia chilensis*, *Muricea californica*, *Megathura crenulata*, *Kelletia kelletii*, *Tegula regina*, *Crassedoma gigantea*, *Haliotis rufescens*, *Lithopoma gibberosa*, *Megastraea undosa*, *Lytechinus anamesus*, *Strongylocentrotus franciscanus*, *Strongylocentrotus purpuratus*, *Patiria miniata*, and *Pisaster giganteus*. The temperature loggers were retrieved and deployed. Five breaks of the lead line were repaired.

#### Site Notes

The site was devoid of all macroalgae. The most abundant algae were *Laurencia pacifica*, and there were a few *Codium fragile* individuals. Other red algae consisted mostly of filamentous red algae.

The most common miscellaneous invertebrates on RPCs were *Dodecaceria fewkesi*. *Tethya aurantia* were rare. *Corynactis californica* were abundant on the tops of rocks. We observed some very large-sized *Urticina lofotensis*. *Diopatra ornata* were rare. We did not observe any mysids. Terebellid worms were moderately abundant.

*Crassedoma gigantea* density and sizes increased compared to previous years. This increase in *C. gigantea* density could be a result of the dramatic decline of *Pisaster giganteus* and *Pycnopodia helianthoides* from the 2013/14 wasting disease event. There were substantial mussel beds forming as deep as 25 ft. at the 25-m point of the transect. These mussel beds were also scattered around the transect in low-lying cobble areas. *Cypraea spadicea* were observed out in the open. We observed only one live *Haliotis rufescens*, and it was small-sized. We collected 42 fresh *H. rufescens* shells, ranging from 15-96 mm. We observed a wide range of sizes of *Kelletia kelletii*. The *Megastraea undosa* were mostly all the same size. However, we observed one small-sized individual that was less than 15 mm. We only observed several *Megathura crenulata*. We only observed one *Tegula regina*.

The most notable change at the site was the increase in abundance of *Ophiothrix spiculata*, which were mostly large-sized. The site continued to be mostly dominated by small-sized *Strongylocentrotus purpuratus*, which had very high densities along most of the transect. Small-sized *Strongylocentrotus franciscanus* were moderately abundant, but smaller in size than has been observed over the past 35 years. We observed three large-sized *Centrostephanus coronatus*. We observed two *Leptasterias* sp. All the *Lytechinus anamesus* were large-sized. Few *Parastichopus parvimensis* were observed, and most were very large in size. We observed four *Patiria miniata* with wasting disease. The *P. miniata* were all sizes and had the fourth highest densities observed this year out of all 33 KFM sites. However, the *P. miniata* densities were still lower than past years, prior to the recent warm water event. We only observed twelve *Pisaster giganteus*, some of which were very large-sized. We observed only one *Pycnopodia helianthoides*, and it measured at 25 mm, one

of only a few observed for the entire field season since the 2013/14 sea star wasting disease event.

We observed only four *Chromis punctipinnis*.

## **Site #21, Miracle Mile, San Miguel Island**

**2018 status: Rapidly developing sea urchin barren dominated by large *S. purpuratus* and *S. franciscanus***

**Percent Canopy Cover: 5%**

### **Sampling Dates and Work Completed**

08/22/2018: All sampling protocols were completed (1 m<sup>2</sup> quadrats, 5 m<sup>2</sup> quadrats, band transects, random point contact, fish size frequency, video transect, visual fish transect, roving diver fish count) including natural habitat size frequencies for *Macrocystis pyrifera*, *Tethya aurantia*, *Megathura crenulata*, *Haliotis rufescens*, *Megastrea undosa*, *Kelletia kelletii*, *Crassostrea giganteus*, *Lithopoma gibberosa*, *Strongylocentrotus franciscanus*, *Strongylocentrotus purpuratus*, *Pisaster giganteus*, *Pycnopodia helianthoides* and *Patiria miniata*. The temperature loggers were retrieved and deployed. All the ARMs were sampled for all indicator species.

### *Site Notes*

There was a dramatic decline in both *Macrocystis pyrifera* and understory algae compared to past years. We observed fewer *Pterygophora californica*, *Eisenia arborea*, and red algae. *Desmarestia* sp. were observed growing on *Haliotis* spp. shells. Encrusting coralline algae were more abundant than in past years. We observed a high abundance of *Norrisia norrisi* on *M. pyrifera* and *E. arborea*, which weighed down the blades, allowing abalone and urchins to feed on the plants. *Strongylocentrotus purpuratus* were observed eating the holdfasts of both dead and live *M. pyrifera* and *E. arborea*.

The most common miscellaneous invertebrates on RPCs were hydroids. *Balanus* sp. were observed covering *Haliotis* spp. shells. While no live individuals were observed, many *Cancer* sp. molts were present. There were high density patches of *Membranipora* spp. on all the kelp plants. A high diversity of tunicate species was observed on boulders. *Styela montereyensis* were observed and most individuals were large-sized. We observed an increased abundance of *Phragmatopoma californica* over much of the transect. *Membranipora* spp. were abundant on *M. pyrifera*. Small clouds of mysids were common along the benthos. We observed several 10 cm x 10 cm patches of *Mytilus californianus* on the tops of rocks,

which we do not recall ever observing before. The presence of *M. californianus* is likely due to the reduced sea star populations.

*Haliotis rufescens* were more abundant than we have ever observed at this site. As reflected in the band transect data, there were high densities of *H. rufescens* along the 0-35 m offshore side of the transect and the 0-10 m onshore side of the transect, particularly in the low-lying sand channel, offshore of the transect. *Haliotis rufescens* were mostly comprised of individuals larger than 140 mm. The *H. rufescens* that are typically not emergent (<100 mm) were out in the open. David Kushner thinks that these small *H. rufescens* may account for much of the increase in abalone densities. All the *H. rufescens* appeared hungry and we observed several that were shrunken and looked like they were starving. While we collected some *Haliotis* spp. shells, like past years, there were so many shells that collecting them all was not feasible. There were some, but not many, fresh shells. We expect that with current conditions of low food supply, there will be a high mortality event soon of *H. rufescens*. Three *Aplysia vaccaria* and two *Aplysia californica* were observed on the site. Most *Crassadoma gigantea* observed were small-sized. There were more *Cryptochiton stelleri* than we had ever observed here before. We observed five *C. stelleri* during band transects, and there were likely several others at the site. Some of the *C. stelleri* were small-sized, and potentially more visible due to the barren state of the site. While *Megastrea undosa* were assigned a "common" score on the species list, they were considerably abundant for San Miguel Island.

The site has changed dramatically with most of the sea urchins out of crevices and actively foraging. At least half of the site was an urchin barren. Most of the emergent urchins were larger-sized than other urchin-dominated areas. Along the 40-75 m offshore side of the transect is a large boulder field that used to hide most of the very difficult to access urchins. The deep crevices of this boulder field are now devoid of urchins, presumably because they were out in the open foraging for food. *Strongylocentrotus purpuratus* and *S. franciscanus* dominated along the transect. One 28 mm *Pycnopodia helianthoides* was observed, the first one observed all year.

We observed *Sebastes mystinus* feeding on small clouds of mysids.

There were relatively high numbers of abalone within the ARMs.

## 2019

All three San Miguel Island sites were categorized as dominated by echinoderms, primarily *Strongylocentrotus* spp. This marks the completion of a major shift from kelp forest, especially on the south side, to urchin barren. This trend has led to a massive decline in the population of *Haliotis rufescens* from Miracle Mile and Wyckoff Ledge. Most macroalgae at San Miguel which were historically abundant, are now absent or near absent. *Pycnopodia helianthoides* remain absent following the 2013-2014 SSWD.

*Pisaster giganteus* and *Patiria miniata* densities remain low. *Strongylocentrotus franciscanus* densities have remained stable, while *Strongylocentrotus purpuratus* densities have continued to increase. *Styela montereyensis* densities remain near zero following the recent decline. *Kelletia kelletii* densities have increased significantly at Hare Rock. *Crassadoma gigantea* densities remain high after the increase from recent years. *Balanophyllia elegans* densities increased at Miracle Mile. *Serpulorbis squamigerus* densities increased at Miracle Mile. Bryozoan and tunicate percent cover have decreased. San Miguel is still undergoing a major shift in its kelp forest community structure and these trends will be of the utmost importance to continue monitoring.

#### 2019 SMI site notes:

##### **Site # 1, Wyckoff Ledge, San Miguel Island**

**2019 Status: Dominated by echinoderms (*S. franciscanus* & *S. purpuratus*)**

**Percent Canopy Cover: 0%**

#### ***Sampling Dates and Work Completed***

09/24/2019: All sampling protocols were completed (1 m<sup>2</sup> quadrats, 5 m<sup>2</sup> quadrats, band transects, random point contact, fish size frequency, video transect, visual fish transect, roving diver fish count). Natural habitat size frequencies were completed for *Tethya aurantia*, *Megathura crenulata*, *Haliotis rufescens*, *Kelletia kelletii*, *Crassadoma gigantea*, *Megastrea undosa*, *Lithopoma gibberosa*, *Lytechinus anamesus*, *Strongylocentrotus franciscanus*, *Strongylocentrotus purpuratus*, *Patiria miniata*, and *Pisaster giganteus*. Temperature loggers were retrieved and deployed. A ten-minute acoustic recording was taken for the NPS Soundscape project. *Parastichopus parvimensis* size frequency data were collected on behalf of CDFW.

#### ***Site Notes:***

This site was barren and almost entirely void of macroalgae. The only algae present were found on large boulders. High relief areas primarily hosted juvenile *Macrocystis pyrifera*, several small *Desmarestia* spp., some *Ulva* sp., and one *Dictyoneuropsis* sp. Red algae were present in aggregations, often near *Diopatra ornata* and articulated coralline. The red algae taxa included: *Rhodomenia* spp., *Callophyllis* spp., *Cryptopleura* spp., *Halymenia* sp., and filamentous red algae. Encrusting coralline algae was abundant, often under a light covering of sand.

The most common miscellaneous invertebrates observed on Random Point Contacts were anemones. *Tethya aurantia* were present in moderate numbers with the majority being medium to large-sized and covered by sand and silt. *Anthopleura* spp. were common and mostly large sized. *Astrangia lajollaensis*, *Balanophyllia elegans*,

and *Corynactis californica* were all found in moderate numbers on high relief areas and appeared healthy. One *Metridium* spp. was observed. *Urticina lofotensis* were abundant across size classes. *Diopatra ornata* were present in moderate numbers with most covered in red algae. *Phragmatopoma californica* were mostly small with scattered colonies. A few *Spirobranchus spinosus* were observed. *Balanus* spp. were large-sized and present in moderate numbers. One live *Cancer* sp. and one molt were observed. Few tunicates were observed, most were encrusting, however, some *Pycnoclavella* sp. and *Didemnum* sp. were present.

One *Aplysia californica* was observed. All size classes of *Crassadoma gigantea* were present and found in moderate numbers. Forty-one *Haliotis rufescens* were found and measured. *Kelletia kelletii* were common and mainly small sized.

One *Megastraea undosa* was observed. Medium to large sized *Megathura crenulata* were present.

*Strongylocentrotus franciscanus* and *Strongylocentrotus purpuratus* were abundant and found outside of crevice habitat. All urchins appeared healthy with no signs of wasting disease or black spot. Many urchins had drift red algae attached to their spines. *Lytechinus anamesus* were rare and most were large-sized. *Ophiothrix spiculata* were found in low abundance. *Parastichopus parvimensis* were common and most were large-sized. Seventeen *Pisaster giganteus* were observed.

*Coryphopterus nicholsii* were common. A school of *Phanerodon furcatus* (white surfperch) were observed, as well as a few *Pleuronichthys coenosus* (c-o turbot) and *Citharichthys sordidus* (Pacific sanddab).

## **Site # 2, Hare Rock, San Miguel Island**

**2019 Status: Dominated by *S. purpuratus* and *Ophiothrix spiculata***

**Percent Canopy Cover: 0%**

### ***Sampling Dates and Work Completed***

10/8/2019: All sampling protocols were completed (1 m<sup>2</sup> quadrats, 5 m<sup>2</sup> quadrats, band transects, random point contact, fish size frequency, video transect, visual fish transect, roving diver fish count). Natural habitat size frequencies were completed for *Tethya aurantia*, *Megathura crenulata*, *Tegula regina*, *Kelletia kelletii*, *Crassadoma gigantea*, *Megastraea undosa*, *Lithopoma gibberosa*, *Lytechinus anamesus*, *Strongylocentrotus franciscanus*, *Strongylocentrotus purpuratus*, *Patiria miniata*, and *Pisaster giganteus*. Temperature loggers were retrieved and deployed. A ten-minute acoustic recording was taken for the NPS Soundscape

project. *Parastichopus parvimensis* size frequency data were collected on behalf of CDFW.

### **Site Notes:**

The site was nearly devoid of macroalgae. One adult *Eisenia arborea* plant was present which was the only brown algae observed. The most abundant species of algae were *Laurencia* sp. A few large sized *Codium fragile* were present. Small amounts of filamentous red and green algae were present. Several *Gigartina* spp. were present, mostly on the onshore side of the transect line.

The most common miscellaneous invertebrates on Random Point Contacts were barnacles, followed by *Dodecaceria* sp. The *Tethya aurantia* looked unhealthy. All sizes of *Anthopleura* spp. were present and abundant in shallow areas. One *Metridium* sp. was present. There were no dense patches of *Diopatra ornata*. *Balanus* sp. were abundant in all size classes. Mysids were abundant. Amphipod tube mats were common. Two *Megathura crenulata* were observed. Most *Lytechinus anamesus* were near the 100 m end of the transect line, on the onshore side. *Parastichopus parvimensis* were mostly large sized. Two *Pisaster ochraceus* were observed. *Strongylocentrotus purpuratus* appeared smaller sized and more abundant than they have been in recent years, with very high-density patches present. Similarly, *Strongylocentrotus franciscanus* were small and abundant. *Strongylocentrotus* spp. dominated much of the site in very high-density patches. Similarly, *Ophiothrix spiculata* dominated some areas and appeared more abundant than in recent years.

### **Site # 21, Miracle Mile, San Miguel Island**

**2019 Status: Dominated by urchins (*S. franciscanus* & *S. purpuratus*)**

**Percent Canopy Cover: 0%**

### **Sampling Dates and Work Completed**

09/25/2019: All sampling protocols were completed (1 m<sup>2</sup> quadrats, 5 m<sup>2</sup> quadrats, band transects, random point contact, fish size frequency, video transect, visual fish transect, roving diver fish count). Natural habitat size frequencies were completed for *Tethya aurantia*, *Megathura crenulata*, *Haliotis rufescens*, *Kelletia kelletii*, *Crassostrea gigantea*, *Megastrea undosa*, *Lithopoma gibberosa*, *Lytechinus anamesus*, *Strongylocentrotus franciscanus*, *Strongylocentrotus purpuratus*, *Patiria miniata* and *Pisaster giganteus*. A ten-minute acoustic recording was taken for the NPS Soundscape project. Kelp blades and eDNA water samples were collected and sent to Carolyn Freedman at University of Washington for testing of Withering Syndrome Rickettsiales-like Organism

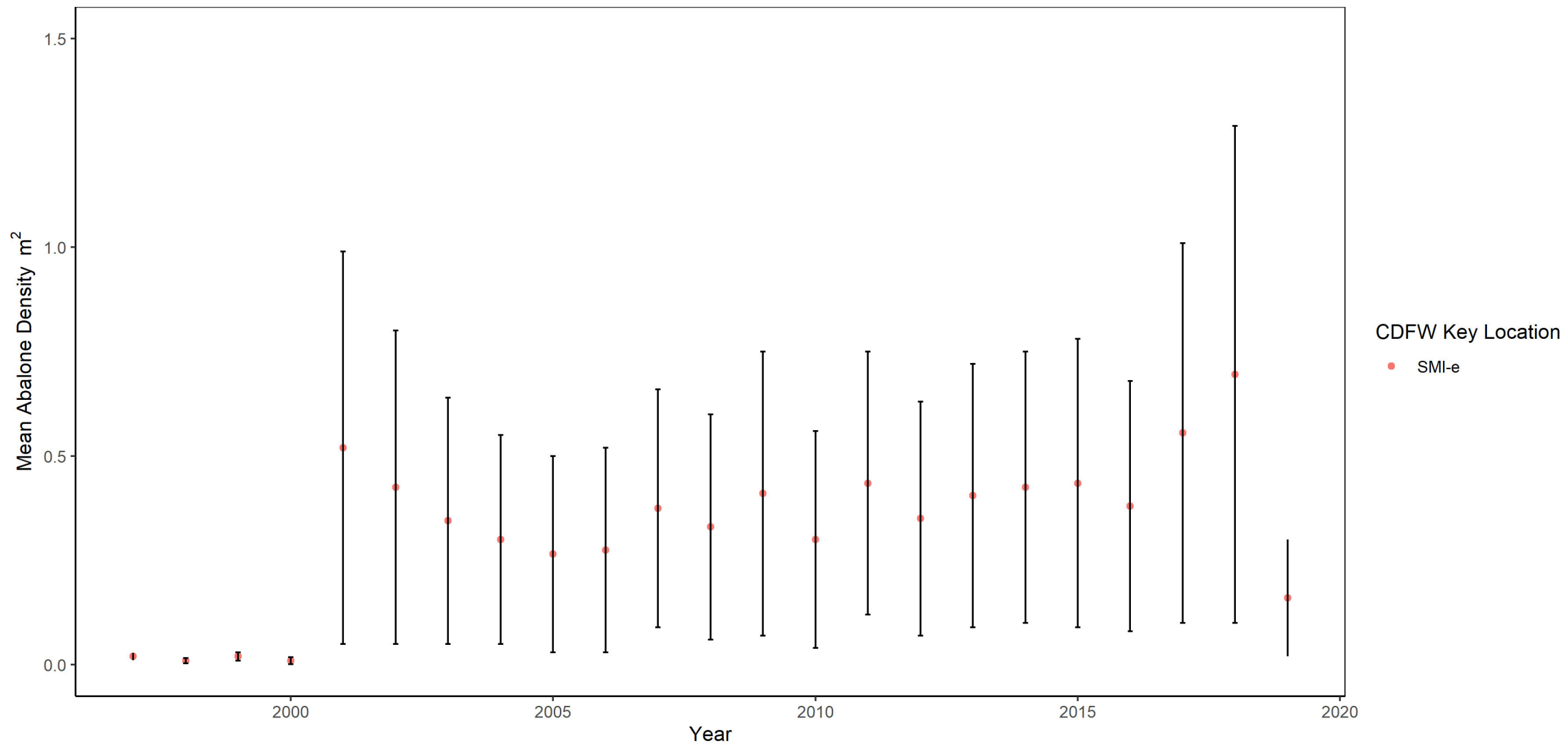
(WS-RLO). No *Parastichopus parvimensis* size frequency data were collected on behalf of CDFW.

**Site Notes:**

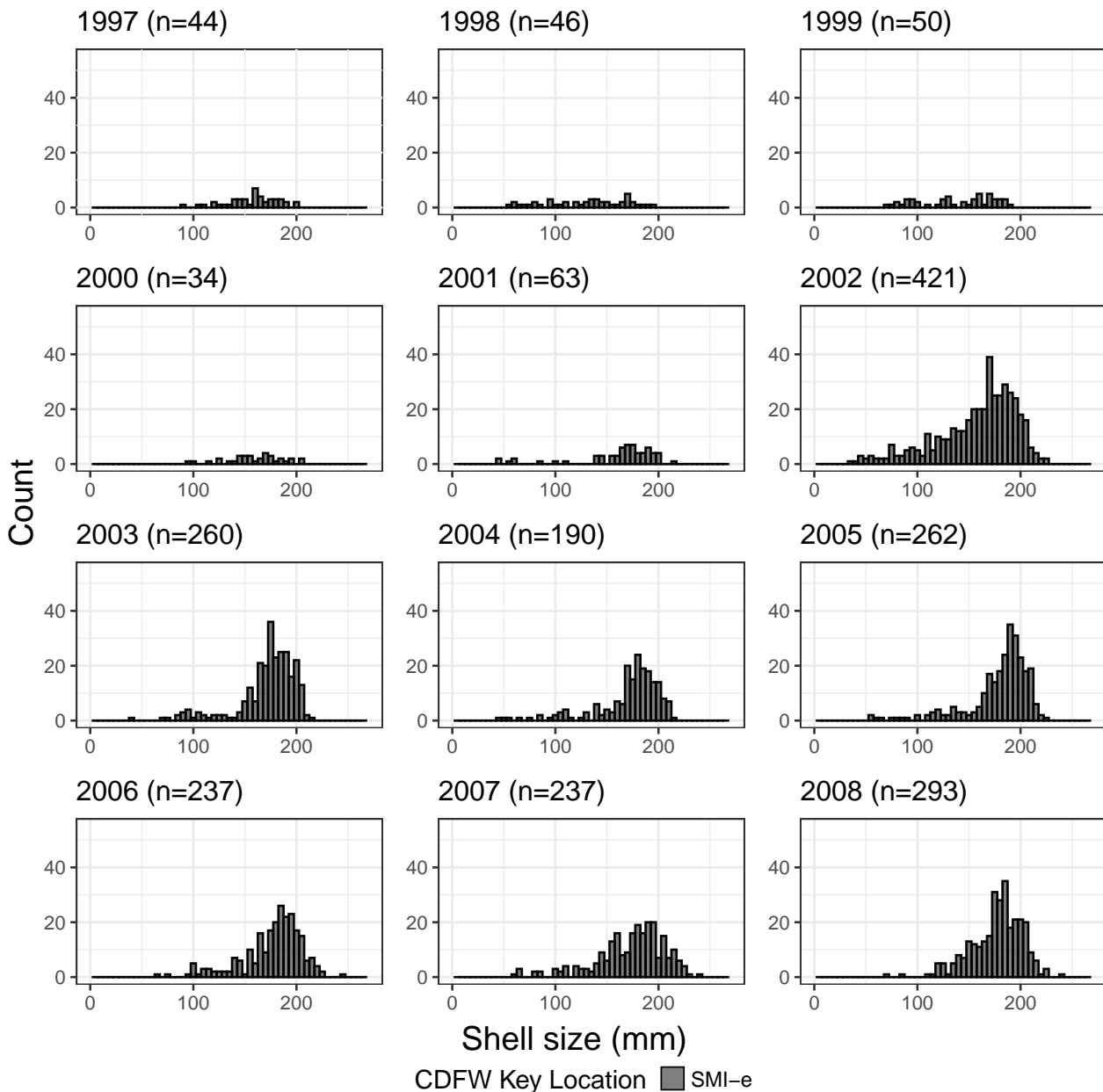
This site was almost completely devoid of any macroalgae. Juvenile *Eisenia arborea* and *Macrocystis pyrifera* were rare. No *M. pyrifera* adults or subadults were observed. A few *Pterygophora californica* and *M. pyrifera* adults were seen 3 m inshore from the transect area. The *P. californica* observed off the site had tattered fronds. *Codium fragile* were present in moderate numbers. *Dictyota* and *Pachydictyon* were rare and were confined to small patches on high relief areas. High relief areas had similar trends to prior years, containing the only algae, mainly *Rhodomenia* spp., *Faucheia laciniata*, *Cryptopleura* spp., *Gigartina* spp., filamentous red algae, and *Desmarestia* spp. Miscellaneous plants, mainly diatoms, were common.

The most common miscellaneous invertebrates on Random Point Contacts were anemones, mainly *Urticina columbiana* and *Epiactis* sp. After anemones, hydroids were the next most common miscellaneous invertebrates on RPCs, primarily *Hydractinia* sp. Tunicates, sponges, hydroids, *Cucumaria* spp. and anemones were common on the high relief boulders. *Haliclona* sp. were observed in moderate numbers. *Hymenamphista cyanocrypta* were observed primarily in the ARMs. We observed several patches of *Polymastia pacifica*. Additionally, *Spheciospongia* sp. were present, however appeared less abundant than in prior years. *Phragmatopoma californica* were observed in high density patches and covering large areas of the site, including high relief areas. *Mytilus* sp. were present in small patches in high relief areas. We observed two *Cancer* sp. in the ARMs and one on the site.

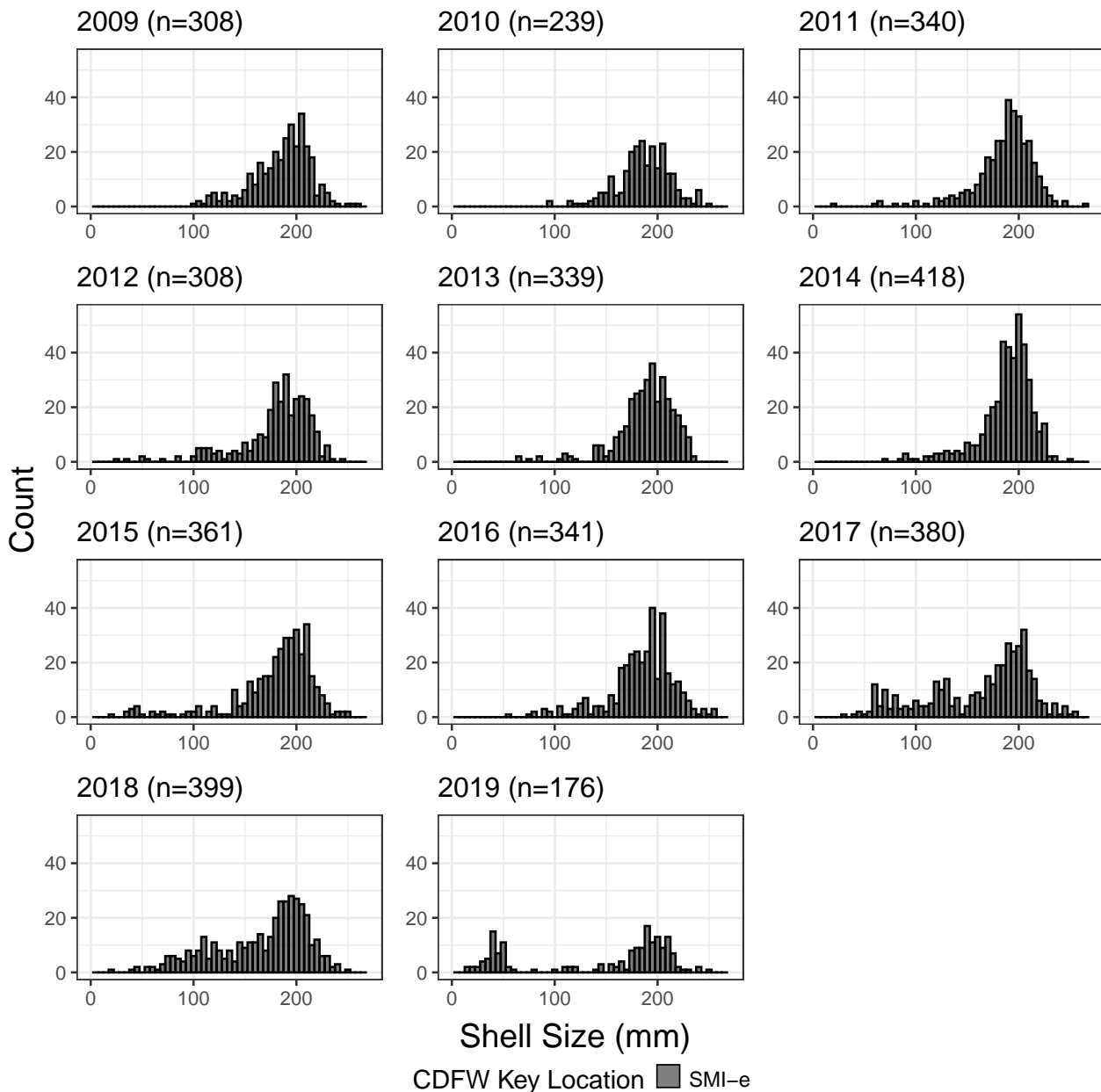
KFM Data: San Miguel Island, SMI-e Red Abalone Mean Density 1997-2019



# KFM Data: San Miguel Island, SMI-e Red Abalone Size Frequency 1997-2008



# KFM Data: San Miguel Island, SMI-e Red Abalone Size Frequency 2009-2019



RECEIVED  
CALIFORNIA  
FISH AND GAME  
COMMISSION

2021 JUL 12 PM 3:33

TO CALIFORNIA FISH + GAME  
COMMISSION,

ATTN - SUSAN ASHCROFT

DEAR SUSAN,

THANK YOU FOR TAKING THE TIME  
TO WORK WITH US ON THE ABOVE  
REOPENER AT SAN MIGUEL ISLAND.

I'm DIVING FOR SEA URCHINS NOW.  
I SEE MOSTLY ABALONE AT SAN MIGUEL  
NOW, THEY HAVE RECOVERED IT LOOKS AS  
GOOD AS IT DID IN 1972. I'm IN SUPPORT  
OF OPENING RED ABALON AT SAN MIGUEL  
ISLAND. I'm LOOKING FORWARD WORKING  
WITH THE FISH + GAME AND MAKE THIS  
ABALONE FISHERY WORK!! THANK YOU

SINCERELY

Jeff Baldwin

CALIFORNIA FISH AND GAME COMMISSION

ATTENTION: SUSAN ASHCROFT / MARINE ADVISOR

ENCLOSED:

FOR THE RECORD

LETTER DATED.... JULY 12, 2021

RE: PETITION for Regulation Change (Tracking Number 2021-001)

\*\*\*\*\*E MAIL LETTER TO EXECUTIVE DIRECTOR and COMMISSIONERS

RE: SUPPORT FOR ARMP APPENDIX H

DATED JUNE 14, 2021

\*\*\*\*\*APPARENTLY RECEIVED TOO LATE TO BE CONSIDERED FOR THE  
JUNE 17, 2021 MEETING

\*\*NOW BEING RE-SUBMITTED

RWmck

[REDACTED]  
[REDACTED]  
[REDACTED]  
July 12, 2021

California Fish and Game Commission

PO Box 944209

Sacramento, CA., 95814

ATTENTION: Susan Ashcroft / Marine Advisor

**FOR THE RECORD**

RE. Petition for Regulation Change (Tracking Number 2021-001)

Requesting: To RE-OPEN Recreational and Commercial Red Abalone Harvesting at San Miguel Island.

As a former Commercial Abalone Permit Holder, Petition Signee and longtime Sea Urchin Permittee, I am very familiar with the Red Abalone footprint at San Miguel Island. We, the commercial Abalone Divers, have always been the conservators and conservationists of this most precious resource. We were willingly obligated to protect and monitor our livelihood. Those of us with Sea Urchin Diving permits, continue on with this mission; hoping that one day soon, we will have an opportunity to Harvest Red Abalone, once again.

Since the '96/'97 season closure, 24 years (TWENTY-FOUR), have passed; still NO Management Plan. In comparison, the Colosseum in Rome only took 10 years to construct.

The time for change has come. I whole heartedly Support the ARMP (Abalone Recovery And Management Plan) Appendix H. This Plan is a Win-Win for all involved, concerned parties.

This is a golden opportunity to establish a Real, Viable and Biological Fishery. The Commercial Divers would work in co-operation with the Department of Fish and Game. It would be a joint venture, whereby, the divers would collect and furnish the necessary Data, to the Department, in a Real Time Assessment.

RWmcK

The added Bonus is, this would be achieved, **At NO Cost to the Department**. The additional bonus would be, that we would finally be in tune with the rest of the world's fisheries, that have successful Management Plans in place.

Even with the proposed 3-month fishery, the co-lateral, positive Economic effects would be immediate. The Commercial Divers would have Income and the Department would have Permit and Tag fees. This would create an avalanche of economic gain, from processors hiring new employees and acquiring delivery personnel, all the way down to the consumer. Harbor businesses would benefit from the locals and tourists coming down to see the once dormant Abalone fleet, back in action.

The only downside would be...to continue Doing Nothing.

In order to achieve something, you Actually have to do something.

Sincerely

Robert W McKinley

Robert W McKinley

[Redacted]

[Redacted]

[Redacted]

[Redacted]

RWmck

June 17th Meeting /Agenda # 25 A.1

Mon 6/14/2021 8:03 AM

To: fgc@fgc.ca.gov <fgc@fgc.ca.gov>

Executive Director Miller-Henson

Commissioners : Silva, Murray, Hostler-Carmesin, Sklar and Zavaleta

FOR THE RECORD

I am a former Abalone Permit Holder giving my Support to the (ARMP), Abalone Recovery and Management Plan proposed in

Appendix H. I am also one of the 25 signed Petitioners submitted to you, requesting a Re-Evaluation of the closure of San Miguel Island to all abalone take.

A resource cannot be protected or advanced without a game plan. After 24 years, there is still no game plan.

Biologists, Politicians, Advisory Groups, Scientists et al, cannot agree on a game plan. Armchair analysis is not a Management Plan.

One can theorize, hypothesize, project and create computer models all you want, but without affirmative action, it becomes meaningless.

There is an old saying in the Fishing/Diving industry...You'll Never Know...Unless You Go.

Opening San Miguel Island to an Abalone Fishery will be a Win/Win for everyone.

The Divers are given an opportunity to pick Abalone again and the data collected would benefit in creating a Real Fisheries Management Plan, for generations to come.

Win, Lose or Draw, we would know and you, the Commissioners, would know, the sustainability of the fishery.

In 1999 another Abalone Permit Holder, Robert Hay, and I, took it upon ourselves to do our own scientific data collection.

During our lunch break from Sea Urchin Diving, we filmed one area at Crook Point (the exact same area), over a period of several years.

No one else has ever done this.

To view this Video:

Please go to..... YouTube Crook Point Abalone

It is a short 9-minute Video.

Thank You For Your Consideration

Robert McKinley

Robert W McKinley

RwMcK

## CALIFORNIA FISH AND GAME COMMISSION - NON-REGULATORY REQUESTS - ACTION

FGC - California Fish and Game Commission   DFW - California Department of Fish and Wildlife   WRC - Wildlife Resources Committee   MRC - Marine Resources Committee

[illegible]



Tracking Number: (2021-010\_)

To request a change to regulations under the authority of the California Fish and Game Commission (Commission), you are required to submit this completed form to: California Fish and Game Commission, (physical address) 1416 Ninth Street, Suite 1320, Sacramento, CA 95814, (mailing address) P.O. Box 944209, Sacramento, CA 94244-2090 or via email to FGC@fgc.ca.gov. Note: This form is not intended for listing petitions for threatened or endangered species (see Section 670.1 of Title 14).

Incomplete forms will not be accepted. A petition is incomplete if it is not submitted on this form or fails to contain necessary information in each of the required categories listed on this form (Section I). A petition will be rejected if it does not pertain to issues under the Commission's authority. A petition may be denied if any petition requesting a functionally equivalent regulation change was considered within the previous 12 months and no information or data is being submitted beyond what was previously submitted. If you need help with this form, please contact Commission staff at (916) 653-4899 or FGC@fgc.ca.gov.

## **SECTION I: Required Information.**

*Please be succinct. Responses for Section I should not exceed five pages*

### **1. Person or organization requesting the change (Required)**

Name of primary contact person: Grassroots Coalition, Patricia McPherson

Address: [REDACTED]

Telephone number: [REDACTED]

Email address: [REDACTED]

Grassroots Coalition is a nonprofit public interest environmental organization that has long worked (30 years) to protect Ballona Wetlands and was instrumental in the fact finding, working with the Los Angeles Department of Building & Safety, which brought about a willing seller, PLAYA CAPITAL LLC, as the City of LA determined that no residential building should occur west of Lincoln Blvd. due to the underlying potential hazards of SoCalGas/ Playa del Rey. Grassroots Coalition is dedicated to the protection of species and their habitats through science, policy and environmental law.

### **2. Rulemaking Authority (Required) - Reference to the statutory or constitutional authority of the Commission to take the action requested:** Title 14, pursuant to sections 1580, 1581, 1584 of the Fish and Game Code and to implement, interpret or make specific sections 1580-1585 and 1600-1603 of said Code, and per Section 630, Title 14, California Code of Regulations, relating to Ballona Wetlands Ecological Reserve. And, Fish & Game Code 703 (a), 703.3, 101.5, 108€, 64, 89.1 in compliance with 13050 Water Code. And, per Section 630 as cited by Commission in 2005—pursuant to the authority vested by the Fish & Game Code additional Sections 1526, 1528, 1530, 1590, 1591 & 1901.

### **3. Overview (Required) - Summarize the proposed changes to regulations:** Amend language of Section 630, Title 14 CCR, prepared for Ballona Wetlands and its inclusion as an Ecological Reserve, for the purpose of clarification of its historical ecological function not known at the time of its inclusion under Section 630 but subsequently became known via Historical Ecology of the Ballona Creek Watershed by Travis Longcore, Eric Stein, Darko et al. And, per the availability of the 1959 Poland et al Report; Congressional House Document 389. (1. a., b. LINK 4.) The proposed language



change would include / emphasize protection to Ballona's freshwater and its underlying freshwater aquifers. (Department of Water Resources Map, Silverado, Bellflower and Ballona aquifers-LINK attached)

This proposed amendment is intended to clarify, implement and make specific the BWER (Section 630) language per freshwater to ensure evaluation for protection purposes takes place as was ordered by the Fish and Game Commission via Section 630 language and via Commission implementation codes, and implemented as is currently understood per the Groundwater Sustainability Act (Governor Executive Order N-10-19; Sustainable Groundwater Management Act).

**GROUNDWATER DEPENDENT ECOSYSTEMS:** ecological communities or species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface. [23 CCR § 351(m).]

Including 23 CCR 354.16(g); 23 CCR 351(o), and impacts to Water Code 10727.4(l); 10721(x)(6).

Ballona Wetlands is a groundwater dependent ecosystem. (Poland et al; Congressional House Document 389, creation of Marina del Rey; Playa Vista Phase 1 EIR (LINKS provided below)

**4. Rationale (Required) - Describe the problem and the reason for the proposed change:**

Section 630, Title 14, California Code of Regulations pertaining to Ballona Wetlands Ecological Reserve pursuant to Fish & Game Code-

**§ 1584. "Ecological reserve"**

As used in this article, "ecological reserve" means land or land and water areas that are designated as an ecological reserve by the commission pursuant to Section 1580 and that are to be preserved in a natural condition, or which are to be provided some level of protection as determined by the commission, for the benefit of the general public to observe native flora and fauna and for scientific study or research.

**HISTORY:**

Added Stats 1968 ch 1257 § 1 Amended Stats 1985 ch 635 § 2 Stats 1993 ch 667 § 2 (AB 521)



## **TITLE 14. FISH AND GAME COMMISSION**

### **NOTICE OF PROPOSED CHANGES IN REGULATIONS**

**NOTICE IS HEREBY GIVEN** that the Fish and Game Commission (Commission), pursuant to the authority vested by sections 1580, 1581, 1583 and 1907 of the Fish and Game Code and to implement, interpret or make specific sections 1526, 1528, 1530, 1580–1585, 1590 and 1591 of said Code, proposes to amend Section 630, Title 14, California Code of Regulations, relating to Ballona Wetlands Ecological Reserve.

### **INFORMATIVE DIGEST/POLICY STATEMENT OVERVIEW**

Currently, there are 132 ecological reserves designated in Section 630, Title 14, CCR, for the purpose of protecting sensitive habitats and species. The department is requesting that this section be amended to add one new ecological reserve, Ballona Wetlands, to this listing.

Ballona Wetlands consisting of 553 acres in Los Angeles County is proposed for designation as an ecological reserve for the protection and enhancement of coastal salt marsh and freshwater marsh habitats, and associated species, including the state listed endangered Belding's savannah sparrow. The area is also an important wildlife movement corridor to other public lands in the vicinity of the wetlands.

The reasons for listing this property in Title 14 are



*...”Since the property contains sensitive species, including a state endangered species, sensitive species, sensitive vegetation communities, and acts as a linkage for other important protected lands, it is necessary and appropriate to provide this level of regulatory protection to prevent improper use and degradation of wildlife resources.” (BWER Section 630)*

*The regulatory language of BWER also goes on to add Department of Fish & Wildlife actions which are intended to ONLY PROVIDE ADDITIONAL LEVELS OF PROTECTION and not less.*

### **§ 703. General policies; Response to requests**

(a) General policies for the conduct of the department shall be formulated by the commission. The director shall be guided by those policies and shall be responsible to the commission for the administration of the department in accordance with those policies.

This action is sought to ensure the responsibilities of the Fish & Game Commission and administration and implementation of its language and policies of Section 630 on behalf of Ballona Wetlands Ecological Reserve are carried out as written and intended.

Based upon the current Ballona Wetlands Ecological Reserve Section 630 language of “protection and enhancement of coastal salt marsh and **freshwater** marsh habitats,...”, the California Department of Fish & Wildlife (CDFW) has failed to adhere to this specific language under the California Code of Regulations. Throughout the Environmental Impact Report evaluations of Ballona Wetlands for its restoration, CDFW failed to include evaluations to 1) understand the hydrology of Ballona Wetlands, and 2) include information pertaining to readily available knowledge of potential and ongoing harm to those freshwater resources, and 3) has failed to provide measures designed to protect the freshwater resources of Ballona Wetlands. Instead, CDFW has aided in the harm to Ballona’s freshwater resources by having failed to acknowledge, be publicly transparent about, and/or failed to willingly stop harmful dewatering of Ballona Wetlands Ecological Reserve. Example: Grassroots Coalition v Playa Vista and CDFW. This lawsuit was brought by Grassroots Coalition as a result of inaction on the part of CDFW to willingly seal two unpermitted drains in the Reserve. Repeated letters citing violations of the Coastal Act from the California Coastal Commission(CCC) Enforcement Branch to Playa Vista and CDFW, citing the drains as unpermitted and harming the hydrology of the wetlands, CDFW failed to respond and/or be responsive to requests for sealing the drainage areas.(CCC letters included Letter of 4/11/14 to Playa Vista, CDFW)

Grassroots Coalition (GC) subsequently litigated against both Playa Vista and CDFW, and prevailed which gave rise to the California Coastal Commission enforcement of ‘capping the two unpermitted and harmful drainage areas in the Reserve. The outcome of the sealing of the drains has been freshwater ponding returning seasonally to this area of the Reserve and has allowed for expansive growth of pickleweed throughout the area that is significant due to the need of Belding’s Savannah Sparrow habitat expansion (a state listed endangered species dependent upon large swaths of pickleweed for nesting.)(images of before/after are included via Dr. Margot Griswold, restoration ecologist; u tube 4/20/21 Margot Griswold Phd Presents Ballona Wetlands FEIR Inconsistency and Overlooked Opportunities)

As determined via Historical Ecology of the Ballona Creek Watershed- Travis Longcore Phd et al,



Ballona Wetlands is a predominantly closed to the ocean, predominantly seasonal freshwater system which includes salt pans, uplands, rare grasslands and man made openings to the Ballona Channel. Typically, seasonal rainwater ponding can last for months on Ballona Wetlands (Terry Huffman Phd 1986 USEPA , Region IX, Determination of the Presence of Aquatic and Wetland Habitats Subject to Federal Regulatory Jurisdiction Within The Ballona Creek Land Tract) which, in part percolates into the watershed of Ballona and its underlying freshwater aquifers: Silverado at the base, Bellflower and Ballona which act as one throughout (DWR Map 1961 & CDM 1998) and the freshwater table is at or near surface (Playa Vista EIR Phase 1, 1990). The freshwater is classified by the Los Angeles Regional Water Quality Control Board as Potential Drinking Water, and in a recent Prop. 65 court decision was classified as Drinking Water for purposes of remediation ordered upon SoCalGas/ Playa del Rey underground gas storage operations.

### **§ 703.3. Resource management decision-making**

It is the policy of the state that the department and commission use ecosystem-based management informed by credible science in all resource management decisions to the extent feasible. It is further the policy of the state that scientific professionals at the department and commission, and all resource management decisions of the department and commission, be governed by a scientific quality assurance and integrity policy, and follow well-established standard protocols of the scientific profession, including, but not limited to, the use of peer review, publication, and science review panels where appropriate. Resource management decisions of the department and commission should also incorporate adaptive management to the extent possible.

CDFW has failed to include any hydrology evaluations in order to protect the underlying freshwater aquifers from potential harm. The force of law per the CCR Title 14, Section 630 for Ballona Wetlands Ecological Reserve has been ignored and needs to have adherence.

The United States Fish & Wildlife Service (USFWS) utilizing its jurisdiction over Ballona Wetlands Ecological Reserve, has made clear, in both response comments to the Ballona DEIR and in the letter attached, their concerns related to protection of freshwater marsh aspects of Ballona Wetlands Ecological Reserve as well as the protection to the freshwater of Ballona Wetlands Ecological Reserve.

Per the Code cited below it would be appropriate for the Commission to advance, in any manner it has at its avail, to implement via the Department of Fish & Wildlife or itself, to work with pertinent agencies and departments (ie. The City/County of Los Angeles and Los Angeles Regional Water Quality Control Board (LARWQCB) and the Department of Water Resources (DWR) ) in order to further the protection of the freshwater resources of Ballona Wetlands Ecological Reserve.



**§ 703.3. Resource management decision-making**

It is the policy of the state that the department and commission use ecosystem-based management informed by credible science in all resource management decisions to the extent feasible. It is further the policy of the state that scientific professionals at the department and commission, and all resource management decisions of the department and commission, be governed by a scientific quality assurance and integrity policy, and follow well-established standard protocols of the scientific profession, including, but not limited to, the use of peer review, publication, and science review panels where appropriate. Resource management decisions of the department and commission should also incorporate adaptive management to the extent possible.

**Under Article 4. Ecological Reserves; 1580** provides for the Ca. Fish & Game Commission To:

The commission may adopt regulations for the occupation, utilization, operation, protection, enhancement, maintenance, and administration of ecological reserves. The ecological reserves shall not be classified as wildlife management areas pursuant to Section 1504 and shall be exempt from Section 1504.

**§ 1581. Acquisition to be in name of state; Governing rules and regulations**

Any property acquired in fee for ecological reserves shall be acquired in the name of the state, and shall, at all times, be subject to such rules and regulations as may be prescribed from time to time by the commission for the occupation, use, operation, protection, and administration of such property as ecological reserves

Attachments:

1. California Regulatory Notice Register 2005, Volume No. 20-Z, Starting on page 663 Ballona Wetlands Ecological Reserve

[https://www.dhcs.ca.gov/services/medi-cal/Documents/AB1629/ZREG/ZREG%2020-Z\\_5.20.05\\_notice.pdf](https://www.dhcs.ca.gov/services/medi-cal/Documents/AB1629/ZREG/ZREG%2020-Z_5.20.05_notice.pdf)

2. California Fish & Game Code

<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178840&inline> Ca. Fish & Game Code

3. DWR AQUIFER MAP 1961/ CDM 1998 , scroll to 1. (c)

<https://saveballona.org/jvstop-drying-out-ballona-wetlands-ecological-reserve-stop-playa-vistas-confiscation-and-throw-away-ballonas-freshwater-resources.html>

4. Poland Report; Congressional House Document 389 are in the LINK above at 1. a., b. respectively.

5. As cited in the [California Coastal Commission \(CCC\) Letter \(4/11/14\) to Playa Vista and CDFW ... draining Ballona is harmful to the ecosystem:](#)



USFWS LETTER 2021 June- Christine Medak-

-----Original Message-----

From: Medak, Christine <[Christine\\_Medak@fws.gov](mailto:Christine_Medak@fws.gov)>

To: [lori.webber@waterboards.ca.gov](mailto:lori.webber@waterboards.ca.gov) <[lori.webber@waterboards.ca.gov](mailto:lori.webber@waterboards.ca.gov)>

Cc: [patriciamcpherson1@verizon.net](mailto:patriciamcpherson1@verizon.net) <[patriciamcpherson1@verizon.net](mailto:patriciamcpherson1@verizon.net)>

Sent: Mon, Jun 7, 2021 2:53 pm

Subject: Fw: [EXTERNAL] Fwd: Santa Monica Basin Groundwater Sustainability Plan (GSP) Stakeholder Workshop June 2021 Invite

Hi Lori,

Do you know if there have been or are planned to be any groundwater management plans developed for the area including the Ballona Ecological Reserve? I am not able to respond to this question because I have not previously been involved in groundwater planning. If you are not the appropriate contact, can you please refer me to a contact within your agency that can provide some information on how this type of planning effort is typically initiated? I agree that Ballona wetlands would benefit from additional freshwater that is currently diverted to sanitary sewers or directly to Ballona Channel (through an underground culvert).

Christine L. Medak  
Fish and Wildlife Biologist  
U.S. Fish and Wildlife Service  
2177 Salk Avenue, Suite 250  
Carlsbad, CA 92008

*I am currently working from home indefinitely. Please contact me via email.*



[https://saveballona.org/system/files/TR\\_671\\_UrbanWildLands.Org.resources-Ballona\\_Historical\\_Ecology.pdf](https://saveballona.org/system/files/TR_671_UrbanWildLands.Org.resources-Ballona_Historical_Ecology.pdf)

<https://www.youtube.com/watch?v=avpCqRoEbd4> 4/20/21 Margot Griswold Presents Ballona Wetlands FEIR Inconsistency & Overlooked Opportunities (30:28 Timecode setting for images of pre-sealed drains and post-sealed unpermitted drains.

## SECTION II: Optional Information

5. **Date of Petition: June 14, 2021**

6. **Category of Proposed Change**

☐ Sport Fishing

☐ Commercial Fishing

☐ Hunting

x Other, please specify: Amend Section 630, Title 14, CCR

7. **The proposal is to:** *(To determine section number(s), see current year regulation booklet or <https://govt.westlaw.com/calregs>)*

x Amend Title 14 Section(s): Section 630 Ecological Reserve Ballona Wetlands |

☐ Add New Title 14 Section(s): [Click here to enter text.](#)

☐ Repeal Title 14 Section(s): [Click here to enter text.](#)

8. **If the proposal is related to a previously submitted petition that was rejected, specify the tracking number of the previously submitted petition** [Click here to enter text.](#)

Or X Not applicable.

9. **Effective date:** If applicable, identify the desired effective date of the regulation.

If the proposed change requires immediate implementation, explain the nature of the emergency:

**A**n exigency exists for implementation of the protection of Ballona Wetlands Ecological Reserve's freshwater resources as they are currently in jeopardy of degradation and loss due to waste of clean, fresh groundwater pumping and diversion by Playa Vista to both the ocean and the Los Angeles Sanitary Sewer System. The Ballona Conservancy has oversight of this freshwater diversion and CDFW states that it is a board member of this Conservancy however, CDFW as a board member, has failed to stop the waste and throwaway of this freshwater formerly available year-round to the Reserve. Thus, Grassroots Coalition requests this Petition be approved to provide **for implementation by the Fish & Game Commission** and for clarification to and enforcement from CDFW per Section 630, Title 14, CCR for the purpose of protecting Ballona Wetlands Ecological Reserve, its freshwater including the freshwater aquifers.



California Fish & Game Commission- created by Section 20 of Article IV of the Constitution.

-And, per decisions made by the Fish and Game Commissioners under Ca. Fish & Game Code

101.5 ....in relevant part- ..'the Commission makes complex public policy decisions and biological decisions on behalf of the people of California. '

-And, per Section 630 BWER protection to its freshwater as **implementation of regulations and policies** are provided for in California Fish & Game Code 108 (e) :

(e) A commissioner shall preserve the public's welfare and the integrity of the commission, and act to maintain the public's trust in the commission and the implementation of its regulations and policies.

- And, per Ca. Fish & Game Code 64. Order, Rule, Regulation are terms used interchangeably and each includes the other.

-And, that the 630 BWER protections include its freshwater marshes, that would include direction from Ca. Fish & Game Code 89.1 Waters of the State as in compliance with Section 13050 of the Water Code.

**10. Supporting documentation:** Identify and attach to the petition any information supporting the proposal including data, reports and other documents: *see attachments, LINKS above.*

**11. Economic or Fiscal Impacts:** Identify any known impacts of the proposed regulation change on revenues to the California Department of Fish and Wildlife, individuals, businesses, jobs, other state agencies, local agencies, schools, or housing: *None known*

**12. Forms:** If applicable, list any forms to be created, amended or repealed:

*None known*

### SECTION 3: FGC Staff Only

Date received: [Click here to enter text.](#)

FGC staff action:

- ☐ Accept - complete
- ☐ Reject - incomplete
- ☐ Reject - outside scope of FGC authority

Tracking Number

Date petitioner was notified of receipt of petition and pending action: \_\_\_\_\_

Meeting date for FGC consideration: \_\_\_\_\_

FGC action:

- ☐ Denied by FGC



State of California – Fish and Game Commission

**PETITION TO THE CALIFORNIA FISH AND GAME COMMISSION FOR REGULATION CHANGE**

FGC 1 (Rev 06/19) Page 10 of 10

☐ Denied - same as petition

Tracking Number

☐ Granted for consideration of regulation change

**From:** patricia mcpherson <[REDACTED]>  
**Sent:** Monday, August 2, 2021 5:24 PM  
**To:** FGC <FGC@fgc.ca.gov>  
**Cc:** Jeanette Vosburg <[REDACTED]>; Todd T. Cardiff Esq. <[REDACTED]>  
**Subject:** Grassroots Coalition Petition Ballona Wetlands Ecological Reserve CAL SPAN historical data of August 10, 2005 Fish & Game Commission approval as ER



Dear FGC,

Please include the information included herein as background for the Petition request sent by Grassroots Coalition pertaining to the  
Section 630, Ecological Reserve, Ballona Wetlands Ecological Reserve.

- C SPAN Fish & Game Commission Meeting August 10, 2005

This meeting discusses the approval of the Ecological Reserve status conferred upon Ballona Wetlands.

a) CDFW's Terri Stewart affirms that money has been released by the State Coastal Conservancy (\$15 million) for the restoration planning for Ballona Wetlands.

b) CDFW's Terri Stewart cites that once approved as an ER then CDFW would proceed to performing a Land Management Plan (LMP). (Approximately 3:43:10 and on)

No LMP has been produced for Ballona Wetlands Ecological Reserve which would have utilized the Purpose and Goals as stipulated for the acquisition of Ballona

Wetlands. And, the EIR for Ballona does not use the Purpose and Goals of the Fish & Game Commission 630 language for Ballona as the premise of the EIR.

**CAL SPAN- California Fish & Game Commission Meeting of August 10, 2005. (Ballona Wetlands' designation as an Ecological Reserve is approved.)**

<https://cal-span.org/unipage/?site=cal-span&owner=CFG&date=2005-08-19&mode=large>

CDFW's Terri Stewart states at approximately 3:43:10 and thereafter, that the State Coastal Conservancy has just released 15 million dollars for Ballona's restoration planning and that per the approval of the Ecological Reserve designation on this day, then a Land Management Plan would follow the next.

Therefore, the video establishes the available money and an acknowledgement of the performance start for a Land Management Plan.

However, since this timeframe no LMP has been performed for the Ballona Wetlands Ecological Reserve and the Purpose and Goals of the Section 630 ER language. Hence, the leading language for the Land Management Plan, the Purpose and Goals has not been utilized and/or had adherence. Similarly, the EIR does not lead with the Purpose and Goals of the Section 630 ER language as is normal for EIRs for Ecological Reserves.

It is abundantly clear that Ecological Reserves are acquired via the Wildlife Conservation Board and given Section 630 entry and protective status via the Fish & Game Commission.

It is abundantly clear that Ecological Reserves are to adhere to the Section 630 language in both the Land Management Plan and any/all subsequent EIRs.

Ballona Wetlands Ecological Reserve was provided with no such adherence to the Section 630 language and instead, no Land Management Plan has been performed. Additionally, the EIR language leads with contrary language to the Section 630 Purpose and Goals for acquisition of Ballona Wetlands Ecological Reserve ('restoring the ebb and flow of the ocean'), with the FEIR preferred alternative promoting a goal of creation of a full tidal bay which was not sanctioned by the Section 630 language of the Fish & Game Commission.

Neither the public approved bond dollars nor the Ballona Wetlands Ecological Reserve's Section 630, Purpose and Goals language for Ballona's acquisition and management envisioned the destruction and replacement of the unique ecosystems of freshwater marshes, salt pans and upland wildlife corridors, underlain by freshwater aquifers into instead, conversion to a full tidal bay.

By way of comparison, had full tidal been the intended directives from the Fish & Game Commission then that would have been clearly stated in the Purpose and Goals of acquisition (Section 630 language) as it was clearly stated in other Ecological Reserves such as Batiquitos Lagoon ER Section 630 Purpose and Goals for acquisition.

The Fish & Game Commission has authority to clarify, amend, enforce via various means, to ensure the Section 630, Purpose and Goals language of the Ballona Wetlands Ecological Reserve has adherence to the language and process—including a Land Management Plan for the ER boundaries. The boundaries of the Ballona Wetlands Ecological Reserve do not include the County and USACE owned/maintained Ballona Flood Control Channel. The Department of Fish & Wildlife does have jurisdiction over the 'freshwater marsh system' via their acknowledgement of being a member to the Board of Ballona Conservancy (Playa Vista) as well as via the 1603 Streambed Agreement with Playa Vista.

Thank you for your time of review of this additional information,  
Patricia McPherson, Grassroots Coalition

**From:** patricia mcpherson <[REDACTED]>

**Sent:** Tuesday, July 27, 2021 1:52 PM

**To:** FGC <FGC@fgc.ca.gov>

**Cc:** [REDACTED]

**Subject:** Petition Ballona Wetlands Ecological Reserve ...additional data- CDFW Land Management Plan - South Coast Region



Good Afternoon FGC,

Please add and consider the additional Wildlife Conservation Board directive and information to the Grassroots Coalition Petition RE: Title 14, Section 630 Ballona Wetlands Ecological Reserve.

Grassroots Coalition's submission of additional information on July 21, 2021 included Public Record Act requests to CDFW per Ballona Wetlands Ecological Reserve and a Land Management Plan.

Today-July 27, 2021

Please include in your response an explanation as to how the following response from Mr. Brody comports with the Wildlife Conservation Board's directive for performance of a Land Management Plan for Ballona Wetlands Ecological Reserve. Clearly, the legislature did appropriate publicly approved bond funds for studies per Ballona Wetlands Ecological Reserve including but not limited to Prop. 12 funding that explicitly included evaluation funding.

CDFW has recently received another \$2 million from the State Coastal Conservancy in public funds/Prop.12 for redoing another flood control study after 2 inaccurate studies (wasting \$4 mill of public funds already) for an area that includes a flood control channel that is NOT part of the Ecological Reserve...namely the County/Federal property that is Ballona Flood Control Channel.

Currently, there is no demonstration of any agreements and/or approvals by either USACE or the County of Los Angeles to either support the CDFW FEIR preferred plan and/or provide any funding for such plan's evaluation.

It does appear, as shown below, that the Wildlife Conservation Board directed a Land Management Plan to be performed for Ballona Wetlands Ecological Reserve but none was done. Additionally the timeframe for completion of a LMP per Fish & Game Code section 1019 also demonstrates that an LMP is past due per the LMP directive included below.

Thank you for your attention to these matters of great PUBLIC TRUST concern and importance,  
Patricia McPherson, Grassroots Coalition

**From:** Brody, Richard@Wildlife [<mailto:Richard.Brody@wildlife.ca.gov>]  
**Sent:** Tuesday, July 20, 2021 12:04 PM  
**To:** Todd T. Cardiff, Esq.  
**Subject:** RE: Draft or Final Management Plan for Ballona Wetlands Ecological Reserve

Greetings Mr. Cardiff,

Thank you for your inquiry.

The state legislature did not provide money to prepare a land management plan for the Ballona Wetlands Ecological Reserve. The Department intends to develop a land management plan for public review as funding is available to complete and process one.

Brody

**R.C. Brody (he/him)**

Land Manager, Ballona Wetlands Ecological Reserve  
California Department of Fish and Wildlife  
P.O. Box 1653 Topanga, CA 90290  
(o) 310-455-3243



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3. CDFW Land Management Plan - South Coast Region

# CDFW Land Management Plan - South Coast Region

## Summary

SCH Number

2019110462

Public Agency

California Department of Fish and Wildlife, Habitat Conservation Planning (CDFW)

Document Title

CDFW Land Management Plan - South Coast Region

Document Type

NOE - Notice of Exemption

Received

11/22/2019

Posted

11/22/2019

Document Description

The proposed project will complete and deliver a land management plan for the CDFW Land Management Plan-South Coast Region.

---

## Contact Information

Name

John P. Donnelly

Agency Name  
Department of Fish and Wildlife Conservation Board  
Contact Types  
Lead/Public Agency  
Address  
[PO Bpx 944209-2090](#)  
[Sacramento, CA 95814](#)  
Phone  
(916) 445-0137

---

## Location

Cities  
see attached NOE  
Counties  
Los Angeles, Riverside, San Diego  
Other Location Info  
Boden Canyon Ecological Reserve (ER), city of Escondido; Ballena Wetlands ER, city of Los Angeles; Batiiquitos Lagoon ER, City of Carlsbad; Hollenbeck Canyon Wildlife Area, community of Jamul, and Oak Grove Unit of San Felipe Valley Wildlife Area.

---

## Notice of Exemption

Exempt Status  
Statutory Exemption  
Type, Section or Code  
15262  
Reasons for Exemption  
Section 15262 Feasibility and Planning Studies - A project involving only feasibility or planning studies for possible future actions, which the board has not approved, adopted, or funded.

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## Attachments

Notice of Exemption

[2019110462 CDFW Lamd](#) [PDF](#) [724 K](#)

Disclaimer: The Governor's Office of Planning and Research (OPR) accepts no responsibility for the content or accessibility of these documents. To obtain an attachment in a different format, please contact the lead agency at the contact information listed above. You may also contact the OPR via email at [state.clearinghouse@opr.ca.gov](mailto:state.clearinghouse@opr.ca.gov) or via phone at (916) 445-0613. For more information, please visit [OPR's Accessibility Site](#).

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**From:** patriciamcpherson1@verizon.net <[REDACTED]>  
**Sent:** Wednesday, July 21, 2021 12:30 PM  
**To:** FGC <FGC@fgc.ca.gov>  
**Cc:** todd@tcardiffllaw.com; [REDACTED]  
**Subject:** Grassroots Coalition Petition per 630/ Ballona Wetland Ecological Reserve; QUERY- Draft or Final Management Plan for Ballona Wetlands Ecological Reserve



Good Morning FGC,

Please add and consider the following information per:

**Additional Information For Grassroots Coalition Petition RE: Title 14, Section 630 Amendment to Ballona Wetlands Ecological Reserve.**

**CDFW has failed to adhere to the Title 14, Section 630 Purpose and Goals as cited by the Fish & Game Commission and has not adhered to the Fish & Game Commission's Section 630, Purpose and Goals as leading guidance on a Land Management Plan per Section 1019, or as necessarily providing the leading guidance of Purpose and Goals for CEQA evaluation.**

The following Public Record Act requests and CDFW response is, unfortunately, typical of, and a red flag indicator as to how CDFW communicates with the public regarding Ballona Wetlands Ecological Reserve. Virtually everything the public learns from CDFW regarding Ballona is not through open and respectful discussions and meetings as cited in the FEIR for Ballona Wetlands Ecological Reserve. Instead communication is overwhelmingly via Public Record Act requests where one attempts to craft questions that will compel meaningful response. Below, is but one more example of 'tooth pulling' as one tries to garner an understanding of Fish & Game Commission's Section 630 authority and Ca. Code section 1019 and its relationship with how CDFW has managed and/or mismanaged Ballona Wetlands Ecological Reserve. The public should not need to work this hard, to work with agencies to which the public has, in good faith, provided millions of dollars as 'legislative' funding for both acquiring Ballona Wetlands and provided for studies and restoration.

That said, the following Public Record Act request response from Mr. Brody, on behalf of CDFW, while not providing a meaningful response, also creates a great deal of confusion as to what he is talking about. And, what and why was over \$2 million in public dollars, that was appropriated via the legislation of the Prop. 12 bond funds, just given (2021) to CDFW by the California Coastal Conservancy--the financial gate keepers of the legislatively acquired

bond funds from the public? Why was this money not assigned to a very long overdue Section 1019 LAND MANAGEMENT PLAN for Ballona Wetlands Ecological Reserve?

Neither when the Ecological Reserve status was assigned to Ballona by the Fish & Game Commission (2004) was the timeline enforced per Section 1019, nor when CDFW became lead agency in 2012 was any timeline enforced per Section 1019 for a LAND MANAGEMENT PLAN performed under the auspices of the Fish & Game Commission's Purpose and Goals for Ballona Wetlands Ecological Reserve. Legislatively acquired funding was and remains available as Proposition 12 money which has never been used or requested for use by CDFW per Section 1019 as is normal fare for Title 14, Section 630 Ecological Reserves to have performed.

In effect, the public paid \$140 million, for the Ballona Wetlands Ecological Reserve and it received the highest protective status of an Ecological Reserve by the Fish & Game Commission's Purpose and Goals(2004). Millions more in public bond funds, via Prop 12, simultaneously also provide funding for studies and restoration of Ballona Wetlands Ecological Reserve. Studies and restoration goals were to adhere to the Purpose and Goals as set forth by the Fish & Game Commission's Section 630 protective language for Ballona Wetlands. The Section 630 language was also in sync with the bond language for both acquisition, study and restoration.

**Because, the Section 630 language of Purpose and Goals for protecting Ballona Wetlands Ecological Reserve has not been implemented by CDFW in either a LAND MANAGEMENT PLAN or in a CEQA (EIR) Purpose and Goals, this Petition seeks to amend the Section 630 language to clarify and provide greater specificity to align the Purpose and Goals of the Section 630 language for Ballona Wetlands Ecological Reserve, for its CEQA- EIR and a Section 1019 Land Management Plan and for any/all Groundwater Dependent Ecosystem studies for which funding is also available.**

The noncompliance of CDFW to the Section 630 language has created a violation of the Coastal Act for having caused harm to Ballona Wetlands Ecological Reserve's hydrology as cited by the California Coastal Commission. CDFW noncompliance has led to, what appears to be a recent,(2021) misappropriation of public bond funds ( \$2 million plus) given to CDFW for yet another hydraulics study of the Ballona Channel. (The first two failed studies have already been acknowledged by CDFW for a loss of \$ 4 million in public funds). The current CDFW FEIR Plan for Ballona has also been acknowledged as cause of loss of Belding Savannah Sparrow habitat within the next 30 years, due to sea level rise destruction of pickle weed nesting habitat. Failure to protect the freshwater marsh aspects of Ballona and the failure to protect Belding Savannah Sparrow habitat are both in direct contradiction to the Fish & Game Commission's Purpose and Goals for Ballona Wetlands Ecological Reserve.

The Ballona Wetlands Ecological Reserve, Section 630 language also comports with the 2014 Governor's Order under the Sustainable Groundwater Management Act and attendant Biodiversity Act both of which are part of protection of Ballona as a Groundwater Dependent Ecosystem. Ballona Wetlands Ecological Reserve has now been acknowledged as having been left out of Groundwater Sustainability Planning(GSP) for the Santa Monica Basin. The GSP planners now acknowledge Ballona as a Groundwater Dependent Ecosystem and thus the need for its inclusion in the Groundwater Sustainability Planning studies.

It is time for CDFW to adhere to the Title 14, Section 630 Purpose and Goals for protecting Ballona and its freshwater marsh aspects and the endangered species, the Belding's Savannah Sparrow and its native nesting habitat--pickleweed.

Thank you for your attention to these matters of great PUBLIC TRUST importance,  
Patricia McPherson, Grassroots Coalition

**CCC LETTER LINK:**

**As cited in the [California Coastal Commission \(CCC\) Letter \(4/11/14\) to Playa Vista and CDFW ... draining Ballona is harmful to the ecosystem](#)**

-----Original Message-----

From: Todd T. Cardiff, Esq. <[todd@tcardifflaw.com](mailto:todd@tcardifflaw.com)>

To: 'Brody, Richard@Wildlife' <[Richard.Brody@wildlife.ca.gov](mailto:Richard.Brody@wildlife.ca.gov)>

Cc: 'Gary E. Tavetian' <[Gary.Tavetian@doj.ca.gov](mailto:Gary.Tavetian@doj.ca.gov)>; John Sasaki <[John.Sasaki@doj.ca.gov](mailto:John.Sasaki@doj.ca.gov)>

Sent: Tue, Jul 20, 2021 1:19 pm

Subject: RE: Draft or Final Management Plan for Ballona Wetlands Ecological Reserve

Mr. Brody,

I have CC'd CDFW's trial counsel as well.

I am now interested in knowing whether you, personally, as the manager of BWER, were aware of the requirements of Fish and Game Code section 1019.

1. Please provide any and all documents that demonstrate an attempt by CDFW to comply with Fish and Game Code section 1019 as applied to the Ballona Wetlands Ecological Reserve (BWER) , including any and all requests to the legislature to provide funding for the BWER.
2. Please provide any and all documents which discuss an interest in preparing a land management plan for BWER.
3. Please provide any and all documents which discuss the lack of funding for preparing a Land Management Plan for BWER.
4. Please provide any and all emails either received or sent by you (Richard Brody) discussing, relating to, or referring to Fish and Game Code section 1019.
5. Please provide any and all lists CDFW has sent to the legislature since January 1, 2002, in compliance with Fish and Game Code section 1019(b), regardless of whether such lists mention the Ballona Wetlands.

Please consider this a Public Records Act request under Gov. Code section 6250. Please respond within 10 days. (Gov. Code section 6253.) Please forward this PRA request to the appropriate personnel. (Gov. Code 6253.1.) I look forward to hearing from you.

Todd T. Cardiff, Esq.  
LAW OFFICE OF TODD T. CARDIFF  
1901 First Avenue, Ste. 219  
San Diego, CA 92101  
Tel: (619) 546-5123  
Fax: (619) 546-5133

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**From:** Brody, Richard@Wildlife [<mailto:Richard.Brody@wildlife.ca.gov>]  
**Sent:** Tuesday, July 20, 2021 12:04 PM  
**To:** Todd T. Cardiff, Esq.  
**Subject:** RE: Draft or Final Management Plan for Ballona Wetlands Ecological Reserve

Greetings Mr. Cardiff,

Thank you for your inquiry.

The state legislature did not provide money to prepare a land management plan for the Ballona Wetlands Ecological Reserve. The Department intends to develop a land management plan for public review as funding is available to complete and process one.

Brody

**R.C. Brody (he/him)**  
Land Manager, Ballona Wetlands Ecological Reserve  
California Department of Fish and Wildlife  
P.O. Box 1653 Topanga, CA 90290  
(o) 310-455-3243



**From:** Todd T. Cardiff, Esq. <[todd@tcardifflaw.com](mailto:todd@tcardifflaw.com)>  
**Sent:** Monday, July 12, 2021 10:44 AM  
**To:** Brody, Richard@Wildlife <[Richard.Brody@wildlife.ca.gov](mailto:Richard.Brody@wildlife.ca.gov)>; 'Gary E. Tavetian' <[Gary.Tavetian@doj.ca.gov](mailto:Gary.Tavetian@doj.ca.gov)>; John Sasaki <[John.Sasaki@doj.ca.gov](mailto:John.Sasaki@doj.ca.gov)>  
**Subject:** Draft or Final Management Plan for Ballona Wetlands Ecological Reserve

**WARNING:** This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Hello Mr. Brody,

I have CC'd the litigation attorneys in this email.

I am interested in knowing whether a Draft or Final Management Plan has ever been prepared for the BWER in compliance with Fish and Game Code section 1019? (See Also Assembly Bill 1414 (Dickerson – 2002). If so, can you please provide the original Draft Management Plan that was prepared? A Management Plan was supposed to be prepared with 18 months of acquisition of the BWER. (Fish and Game Code 1019(a).) Please consider this a request under the Public Records Act. (Gov. Code section 6250 et. seq.)

Todd T. Cardiff, Esq.  
LAW OFFICE OF TODD T. CARDIFF  
1901 First Avenue, Ste. 219  
San Diego, CA 92101  
Tel: (619) 546-5123  
Fax: (619) 546-5133

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**From:** [REDACTED] <[REDACTED]>  
**Sent:** Tuesday, July 13, 2021 11:06 AM  
**To:** FGC <[FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov)>  
**Cc:** [todd@tcardifflaw.com](mailto:todd@tcardifflaw.com) <[todd@tcardifflaw.com](mailto:todd@tcardifflaw.com)>; [REDACTED] <[REDACTED]>;  
[REDACTED] <[REDACTED]>; [REDACTED] <[REDACTED]>;  
[REDACTED] <[REDACTED]>; [REDACTED]  
<[REDACTED]>  
**Subject:** Grassroots Coalition Petition Fish & Game Commission--Ballona Wetlands Ecological Reserve--  
Additional Information LINK ADDED

Good Morning FGC,

PLEASE NOTE Number 2. below, Grassroots Coalition has added a link to the Burton Mesa Ecological Reserve's Land Management Plan (LMP) for easy informational purposes in our Petition Request for Ballona Wetlands Ecological Reserve. The link was inadvertently dropped from the previous July 12, 2021 email ( Additional Petition Information) from Grassroots Coalition. The LMP for Burton Mesa Ecological Reserve appears to demonstrate the Land Management Plan, as both separate and distinct from the CEQA review (to which the LMP is added as an additional resource in the index) but also demonstrates the reassertion of, and adherence to the Title 14, Section 630 Purpose/goals and Description/ what/why/how of inclusive evaluations per the Section 630 ER language dictated by the Fish & Game Commission--the PURPOSE of the LMP.  
And, the purpose to which the CEQA evaluations were to include, but did not for Ballona Wetlands Ecological Reserve.

Thank you,  
Patricia McPherson, Grassroots Coalition

-----Original Message-----  
**From:** patricia mcpherson <[REDACTED]>  
**To:** [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov)  
**Cc:** Todd T. Cardiff Esq. <[todd@tcardifflaw.com](mailto:todd@tcardifflaw.com)>; Griswold Margot <[REDACTED]>;  
[REDACTED]; chiefrbwife <[REDACTED]>; Rex Frankel <[REDACTED]>;  
Kathy Knight <[REDACTED]>  
**Sent:** Mon, Jul 12, 2021 1:48 pm  
**Subject:** Grassroots Coalition Petition Fish & Game Commission--Ballona Wetlands Ecological Reserve--  
Additional Information



**ATTENTION FGC: ADDITIONAL INFORMATION FOR GRASSROOTS COALITION PETITION RE:  
Ballona Wetlands ECOLOGICAL RESERVE**

**FGC please add and include the following information re:**

Additional Information for the Grassroots Coalition Petition for Amending Fish and Game Commission's Title 14, Section 630 Ecological Reserve language for purposes of clarity and/ or guidance/ directive authority from the California Fish & Game Commission to CDFW pertaining to Ballona Wetlands Ecological Reserve. This Petition seeks amendments to clarify to the California Department of Fish & Wildlife, the Fish & Game Commission's Purpose and Descriptions/ Goals for management protection of the Ballona Wetlands Ecological Reserve's freshwater marsh aspects and attendant freshwater/groundwater dependent ecosystem inclusive of the endangered species—Belding's Savannah Sparrow and its explicit habitat needs as cited in the Commission's Title 14, Section 630 language.

Two examples are provided below that merit the authority input ( inclusive of adding regulatory language in general rules and/or regulations for clarification of monitoring and/or evaluation under the Sustainable Groundwater Management Act; Clean Water Act etc.) by the Fish & Game Commission that Grassroots Coalition believes serve as models for applicable circumstances to Ballona Wetlands Ecological Reserve and the Fish & Game Commission's ability to provide authoritative guidance to CDFW pertaining to Title 14, Section 630 status amendments requested in the Grassroots Coalition Petition.

**1. Unresolved Issues and Potential Options for the Integrated Preferred Alternative... needing clarity and/or guidance/ recommendations from the Fish & Game Commission.**

As in the Marine Life Protection Act (MPA) examples provided in the following Department of Fish and Game Report below, Grassroots Coalition believes numerous unresolved issues that require clarification and /or guidance from the Fish and Game Commission similarly exist for Ballona Wetlands Ecological Reserve (BWER).

The BWER has been determined to be a Groundwater Dependent Ecosystem (GDE) per the Sustainable Groundwater Management Act (SGMA) and is located in the Groundwater Sustainability Planning (GSP) area known as the Santa Monica Basin. The ongoing GSP is now seeking information to include that pertains to BWER as a GDE. CDFW has not yet addressed BWER per the SGMA and/or Ballona Reserve as a Groundwater Dependent Ecosystem. This data gap is but one unresolved issue category. And, similar to the broad categories listed below for other Ecological Reserves that the Fish & Game Commission has authority for clarification and/or guidance to CDFW, Grassroots Coalition believes the Fish & Game Commission has similar authority for Ballona Wetlands Ecological Reserve.

[https://dfg.ca.gov/mlpa/pdfs/scmpas\\_report\\_030310.pdf](https://dfg.ca.gov/mlpa/pdfs/scmpas_report_030310.pdf).

2. [https://dfg.ca.gov/mlpa/pdfs/scmpas\\_report\\_030310.pdf](https://dfg.ca.gov/mlpa/pdfs/scmpas_report_030310.pdf)

<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=84926>  
2007 /LMP by Condor Environmental

Burton Mesa Ecological Reserve

The following are typical headers for an Ecological Reserve's LAND MANAGEMENT PLAN, prepared by the CDFW and per the Purpose and Description OF THE TITLE 14, Section 630 directives by the Fish & Game Commission on any Ecological Reserve.

Purpose of and History of Acquisition

Purpose of This Management Plan

Property Description

- Geographical Setting
- Property Boundaries and Adjacent Lands
- Geology, Soils, Climate, Hydrology
- Cultural Features

Habitat and Species Description

Management Goals and Environmental Impacts

Operation and Maintenance Summary

Climate Change Strategies

Future Revisions to Land Management Plans

References

APPENDICES:

Legal Description of Property

Plant Species with Potential to Occur in Vicinity of Ecological Reserve

Animal Species with Potential to Occur in Vicinity of Ecological Reserve

Environmental Review (CEQA)

Public Comments and Department Responses

**Ballona Wetlands ECOLOGICAL RESERVE was not provided a LAND MANAGEMENT PLAN (LMP) by CDFW. CDFW became the sole authority over the Ecological Reserve habitat per the boundary assignment from 2004/5 by the Fish & Game Commission. Why was no LMP performed by CDFW per CA Fish & Game Code 1019?**

**The CURRENT PETITION REQUESTS AMENDMENT to also provide for adherence to the Purpose and recognition of the importance of the description (description = management objectives at this property) of what is to be preserved and how/why as is provided for other Ecological Reserves in both the Fish & Game Commission Title 14, Section 630 language and any/all subsequent Land Management Plans inclusive of CEQA Reports. Such Land Management Plans necessarily include the Fish & Game Commission Purpose and Description as the leading intent within the CEQA language. Purpose is provided by the Fish & Game Commission to guide management of habitats, species, and programs to achieve the goals of the Fish & Game Commission's Purpose for assigning Section 630 status upon an Ecological Reserve.**

**Without such Management Plan, the Fish & Game Commission's Purpose and Directives for protection to Ballona Wetlands Ecological Reserve have been left out of any Management Plan and left out of any attached CEQA review. This is the case with Ballona Wetlands Ecological Reserve.**

**Amendments to the Title 14, Section 630 language could include clarification of the current description by way of additional language for the current protective language to the freshwater marsh aspects of Ballona as has been applied in other Ecological Reserve descriptions such as 'To protect the Ballona freshwater sources which necessarily include protection to the water supply, quality, and quantity as it is critical in maintaining the necessary habitat for the Belding's Savannah Sparrow (pickle weed habitat and endangered bird) cited already in the Ballona**

**Description MANAGEMENT OBJECTIVE LANGUAGE.** <https://wildlife.ca.gov/Lands/Planning/CCR-Sec-630-b-63-ER>

Acknowledgement of the **lack of fulfillment** of providing for the Title 14, Section 630 language denoting Purpose/ Description of freshwater marsh protection, a key part of the Purpose and Directives (description) of the 630 status given by the Fish and Game Commission, was established in addition to what Grassroots Coalition has already provided to the Fish & Game Commission Petition ( namely that CDFW violated the Ca. Coastal Act according to the Ca. Coastal Commission while allowing unpermitted drains giving rise to drainage of Ballona's freshwater for the past 20 years thereby harming the hydrology of Ballona Wetlands Ecological Reserve. The DEIR also contained no information pertaining to the ongoing, unpermitted drains and drainage.). The following also demonstrates CDFW non adherence to the Fish & Game Commission's Title 14, Section 630 Purpose and Description of Ballona Wetlands Ecological Reserve by:

1) CDFW's Director Bonham, during the May 27, 2021 Meeting of the California Coastal Conservancy, cited that no evaluation had taken place per a predominantly seasonal freshwater wetland Alternative for Ballona Wetlands Ecological Reserve (namely, a hydrology evaluation for Ballona Wetlands itself) and,

2) The CEQA portion of the Ecological Reserve's evaluation also establishes that no CEQA qualified hydrological evaluation was performed for Ballona Wetlands itself. Instead, there were two hydraulics evaluations of the the water flow of the Ballona Channel, both of which have been acknowledged by CDFW (and the Army Corps of Engineers) as inaccurate and unacceptable.

**The hydraulics evaluations were also based upon potential BOUNDARY CHANGES outside the Ecological Reserve Boundaries.**

The BOUNDARY of the Ballona Wetlands Ecological Reserve does NOT include the Ballona Channel and its levees. The Section 630 Ecological Reserve acquisition BOUNDARIES are the lands within the purchase area from Playa Capital LLC. The Ballona Channel and its levees are distinct areas outside the Ecological Reserve as acquired and PURPOSED by the Title 14, Section 630 language in 2004/5. No apparent LAND MANAGEMENT PLAN was created by the Department of Fish & Wildlife. The public was never provided an opportunity to interface with CDFW per a Draft or other CDFW Land Management Plan for Ballona Wetlands Ecological Reserve.

3) CDFW's lack of adherence to the Governor's Order: Sustainable Groundwater Management Act and its protection to Groundwater Dependent Ecosystems (ie. Ballona Wetlands Ecological Reserve)

As part of the Sustainable Groundwater Management Act, **The Governor's Order also establishes the requirement for preservation of biodiversity.** Ballona is a unique and now very rare, predominantly seasonal freshwater wetland. (See attached Chart / video of biodiversity gains and losses in So. Cal.. Ballona now supports the rarest of coastal wetland attributes such as salt panne and freshwater resources). <https://www.youtube.com/watch?v=qgtRMZe8gFc>. This presentation by Restoration Expert Margot Griswold Phd, includes citation to studies affirming the nature of Ballona as a predominantly seasonal freshwater wetland. Earlier studies ie. Poland et al 1959 hydrology studies of the LA Basin and the congressional document of the creation of Marina del Rey, known as House Document 389 also affirm the unique freshwater nature of Ballona. Neither available studies were addressed in the FEIR or the Draft EIR.

<https://saveballona.org/water-laws-effecting-ballona-poland-report-grandfather-all-ballona-hydrology-1959-house-documents-389-and-780-establish-marina-del-rey.html>

Ballona Wetlands is now ( 2021) acknowledged as a Groundwater Dependent Ecosystem for inclusion into the Groundwater Sustainability Planning for the Santa Monica Basin.

While CDFW has protocol for and has been engaged elsewhere in Groundwater Dependent Ecosystem Planning evaluations and protection; CDFW has not applied any of this protocol and/or protection to Ballona Wetlands Ecological Reserve. CDFW is thus far, not participating in the ongoing GSP which includes Ballona Wetlands Ecological Reserve and its freshwater/fresh groundwater resources.

4). While the DEIR contains **US Fish & Wildlife (USFW)** comments of concerns and requests for freshwater evaluation and protection to Ballona Wetlands Ecological Reserve, CDFW has been non responsive in the Final EIR.

And, even as USFW requests information from agencies per adherence to protection of Ballona's groundwater and surface water, per the Sustainable Groundwater Management Act ( SGMA) and per Ballona as a Groundwater Dependent Ecosystem(GDE) , CDFW has remained non responsive and has not

engaged in any manner towards fulfillment of SGMA or towards protecting Ballona as a GDE. (Attached Is a USFW letter request per Groundwater Sustainability Planning and Ballona Wetlands Ecological Reserve)

5) The Fish & Game Commission's directives within the Section 630 ER language for Ballona that directs protection to Ballona's freshwater marsh aspects, can also be further clarified via the status of the lands and freshwaters of Ballona as an Indigenous People's—SACRED SITE as registered by the Native American of standing—John Tommy Rosas. Guidance and clarity needs to be provided to CDFW by the Fish & Game Commission as CDFW has not

acted in good faith and/or been responsive to Mr. Rosas or Ballona's status as a registered SACRED SITE and his arguments for protection to the Sacred Site's freshwater restoration. Mr. Rosas specifically cites to what he writes as an illegal taking and diversion and throwaway of both the freshwater of Ballona and his ancestor's remains that are within that freshwater. <https://saveballona.org/john-tommy-rosas-ccc-tongva-burial-grounds-2005-video-maxine-waters-freshwater-marsh.html>

#### **BOUNDARIES OF ECOLOGICAL RESERVES ( PETITION REQUEST TO INCLUDE BOUNDARY Management language clarification/ recommendations )**

The current FEIR PLAN of conversion of Ballona Wetlands into a saltwater bay by CDFW IS CONTINGENT UPON APPROVAL for inclusion of areas managed, controlled by, and liabilities held by both the County of Los Angeles and the Army Corps of Engineers that are OUTSIDE the Ecological Reserve Boundaries as acquired in 2004/5.

The former Water Resource Development Act (WRDA) 2012 agreement for studying the removal and relocation of the current levees for Ballona Channel reconstruction (which necessitated the previously unforeseen hydraulics evaluation) is NO LONGER IN EFFECT. 1) the two hydraulics studies were inaccurate and not acceptable by the USACE and/or the County of Los Angeles, and 2) the WRDA agreement is no longer a priority status agreement by either the County of LA and/or the USACE and 3) no financing currently exists for the USACE and/or County engagement at this time and 4) there is no showing that either the County of LA and/or the USACE have any intention of maintaining engagement with the CDFW for the CDFW conversion plan for Ballona to move forward.

Attachments for informational purposes:

Link is Blue (LETTER 4/11/14)

**As cited in the [California Coastal Commission \(CCC\) Letter \(4/11/14\) to Playa Vista and CDFW](#) ... draining Ballona is harmful to the ecosystem:**

USFWS LETTER 2021 June- Christine Medak-

-----Original Message-----

From: Medak, Christine <[Christine\\_Medak@fws.gov](mailto:Christine_Medak@fws.gov)>

To: [lori.webber@waterboards.ca.gov](mailto:lori.webber@waterboards.ca.gov) <[lori.webber@waterboards.ca.gov](mailto:lori.webber@waterboards.ca.gov)>

Cc: <>

Sent: Mon, Jun 7, 2021 2:53 pm

Subject: Fw: [EXTERNAL] Fwd: Santa Monica Basin Groundwater Sustainability Plan (GSP) Stakeholder Workshop June 2021 Invite

Hi Lori,

Do you know if there have been or are planned to be any groundwater management plans developed for the area including the Ballona Ecological Reserve? I am not able to respond to this question because I have not previously been involved in groundwater planning. If you are not the appropriate contact, can you please refer me to a contact within your agency that can provide some information on how this type of planning effort is typically initiated? I agree that Ballona wetlands would benefit from additional freshwater that is currently diverted to sanitary sewers or directly to Ballona Channel (through an underground culvert).

Christine L. Medak

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

2177 Salk Avenue, Suite 250

Carlsbad, CA 92008

*I am currently working from home indefinitely. Please contact me via email.*

The following slide presentation provides information on the SGMA and the ongoing Groundwater Sustainability Planning for the Santa Monica Basin.

Ballona, at the time of the creation of this ppt was not included in the GSP but now is acknowledged as a Groundwater Dependent Ecosystem by the

GSP planners who now seek information pertaining to Ballona Wetlands Ecological Reserve and its environs to fill in all the data gaps pertaining to all the ongoing groundwater diversions, including diversions to which CDFW has partaken and are ongoing as CDFW states that it is a board member of the Playa Vista Ballona Conservancy which manages the water diversions.

Jeanette Vosburg has shared a OneDrive file with you. To view it, click the link below.

 [PATRICIA FINAL PPT 3.15.21 Presentation1 2.pptx](#)

The following image depicts one of CDFW's and its partner's, Playa Vista, unpermitted drains that since CDFW's ownership (in Public Trust) of Ballona (2004) through to 2017, had been illegally draining and throwing away (into the ocean) Ballona's ponding rainwater resources. Grassroots Coalition, after prevailing in court against both CDFW and Playa Vista, Grassroots Coalition's Settlement Agreement provided ultimately for the closure of these illegal drains by the California Coastal Commission who decried the drains as a Violation of the Coastal Act and harming the hydrology of Ballona. (CCC Letter 2014— A letter to which neither CDFW nor Playa Vista was responsive)

As is readily apparent below, the pickle- weed photographed by Restoration Expert, Margo Griswold Phd, below right as part of one of her presentation slides, attests to the native pickle weed regrowth throughout this area, post sealing the harmful drains.



**October 2012 Pre-capping** Photo J. Coffin

Photos to East  
of South Drain  
Area B



**August 2020 Three years post capping** Photo M. Griswold



Unpermitted drains in Area B  
in currently preserved areas that support  
wetland vegetation once drains were capped.

FEIR has inconsistencies of existing  
Hydrology and Vegetation: Capping the  
unpermitted drains in B north  
resulted in native pickleweed wetland habitat.

Ballona's habitat has become the rarest along Southern California.

## CHANGE IN LAGOON HABITAT TYPES NORTH SAN DIEGO COUNTY

	Historical (acres)	Contemporary (acres)	% Change
<b>SALT MARSH</b>	1,330	1,170	-12%
<b>SALT FLAT (SEASONALLY FLOODED)</b>	1,230	120	-90%
<b>OPEN WATER MUD FLAT</b>	140	980	615%
<b>FRESHWATER/ BRACKISH WETLAND</b>	1,650	760	-54%
<b>DEVELOPED</b>		1,440	

**NORTHERN SAN DIEGO COUNTY LAGOONS Historical Ecology Investigation** REGIONAL PATTERNS,  
LOCAL DIVERSITY, AND LANDSCAPE TRAJECTORIES  
San Francisco Estuary Institute



Please accept this additional information as offered in our phone conversation, and Grassroots Coalition looks forward to a positive resolution to the all of the unresolved issues and potential alternatives that will protect Ballona Wetlands Ecological Reserve as was intended in the Section 630 Ecological Reserve

language for Ballona Wetlands. Please also let us know if you seek any further clarification of what Grassroots Coalition has provided for this Petition review.

Thank you for your attentiveness to these matters of great public importance,  
Patricia McPherson, Grassroots Coalition



Tracking Number: (2021-010\_)

To request a change to regulations under the authority of the California Fish and Game Commission (Commission), you are required to submit this completed form to: California Fish and Game Commission, (physical address) 1416 Ninth Street, Suite 1320, Sacramento, CA 95814, (mailing address) P.O. Box 944209, Sacramento, CA 94244-2090 or via email to [FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov). Note: This form is not intended for listing petitions for threatened or endangered species (see Section 670.1 of Title 14).

Incomplete forms will not be accepted. A petition is incomplete if it is not submitted on this form or fails to contain necessary information in each of the required categories listed on this form (Section I). A petition will be rejected if it does not pertain to issues under the Commission's authority. A petition may be denied if any petition requesting a functionally equivalent regulation change was considered within the previous 12 months and no information or data is being submitted beyond what was previously submitted. If you need help with this form, please contact Commission staff at (916) 653-4899 or [FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov).

## **SECTION I: Required Information.**

*Please be succinct. Responses for Section I should not exceed five pages*

### **1. Person or organization requesting the change (Required)**

Name of primary contact person: Grassroots Coalition, Patricia McPherson

Address: [REDACTED]

Telephone number: [REDACTED]

Email address: [REDACTED]

Grassroots Coalition is a nonprofit public interest environmental organization that has long worked (30 years) to protect Ballona Wetlands and was instrumental in the fact finding, working with the Los Angeles Department of Building & Safety, which brought about a willing seller, PLAYA CAPITAL LLC, as the City of LA determined that no residential building should occur west of Lincoln Blvd. due to the underlying potential hazards of SoCalGas/ Playa del Rey. Grassroots Coalition is dedicated to the protection of species and their habitats through science, policy and environmental law.

### **2. Rulemaking Authority (Required) - Reference to the statutory or constitutional authority of**

**the Commission to take the action requested:** Title 14, pursuant to sections 1580, 1581, 1584 of the Fish and Game Code and to implement, interpret or make specific sections 1580-1585 and 1600-1603 of said Code, and per Section 630, Title 14, California Code of Regulations, relating to Ballona Wetlands Ecological Reserve. And, Fish & Game Code 703 (a), 703.3, 101.5, 108€, 64, 89.1 in compliance with 13050 Water Code. And, per Section 630 as cited by Commission in 2005—pursuant to the authority vested by the Fish & Game Code additional Sections 1526, 1528, 1530, 1590, 1591 & 1901.

### **3. Overview (Required) - Summarize the proposed changes to regulations:**

Amend language of Section 630, Title 14 CCR, prepared for Ballona Wetlands and its inclusion as an Ecological Reserve, for the purpose of clarification of its historical ecological function not known at the time of its inclusion under Section 630 but subsequently became known via Historical Ecology of the Ballona Creek Watershed by Travis Longcore, Eric Stein, Darko et al. And, per the availability of the 1959 Poland et al Report; Congressional House Document 389. (1. a., b. LINK 4.) The proposed language



change would include / emphasize protection to Ballona's freshwater and its underlying freshwater aquifers. (Department of Water Resources Map, Silverado, Bellflower and Ballona aquifers-LINK attached)

This proposed amendment is intended to clarify, implement and make specific the BWER (Section 630) language per freshwater to ensure evaluation for protection purposes takes place as was ordered by the Fish and Game Commission via Section 630 language and via Commission implementation codes, and implemented as is currently understood per the Groundwater Sustainability Act (Governor Executive Order N-10-19; Sustainable Groundwater Management Act).

**GROUNDWATER DEPENDENT ECOSYSTEMS:** ecological communities or species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface. [23 CCR § 351(m).]

Including 23 CCR 354.16(g); 23 CCR 351(o), and impacts to Water Code 10727.4(l); 10721(x)(6).

Ballona Wetlands is a groundwater dependent ecosystem. (Poland et al; Congressional House Document 389, creation of Marina del Rey; Playa Vista Phase 1 EIR (LINKS provided below)

**4. Rationale (Required) - Describe the problem and the reason for the proposed change:**

Section 630, Title 14, California Code of Regulations pertaining to Ballona Wetlands Ecological Reserve pursuant to Fish & Game Code-

**§ 1584. "Ecological reserve"**

As used in this article, "ecological reserve" means land or land and water areas that are designated as an ecological reserve by the commission pursuant to Section 1580 and that are to be preserved in a natural condition, or which are to be provided some level of protection as determined by the commission, for the benefit of the general public to observe native flora and fauna and for scientific study or research.

**HISTORY:**

Added Stats 1968 ch 1257 § 1 Amended Stats 1985 ch 635 § 2 Stats 1993 ch 667 § 2 (AB 521)



## **TITLE 14. FISH AND GAME COMMISSION**

### **NOTICE OF PROPOSED CHANGES IN REGULATIONS**

**NOTICE IS HEREBY GIVEN** that the Fish and Game Commission (Commission), pursuant to the authority vested by sections 1580, 1581, 1583 and 1907 of the Fish and Game Code and to implement, interpret or make specific sections 1526, 1528, 1530, 1580–1585, 1590 and 1591 of said Code, proposes to amend Section 630, Title 14, California Code of Regulations, relating to Ballona Wetlands Ecological Reserve.

### **INFORMATIVE DIGEST/POLICY STATEMENT OVERVIEW**

Currently, there are 132 ecological reserves designated in Section 630, Title 14, CCR, for the purpose of protecting sensitive habitats and species. The department is requesting that this section be amended to add one new ecological reserve, Ballona Wetlands, to this listing.

Ballona Wetlands consisting of 553 acres in Los Angeles County is proposed for designation as an ecological reserve for the protection and enhancement of coastal salt marsh and freshwater marsh habitats, and associated species, including the state listed endangered Belding's savannah sparrow. The area is also an important wildlife movement corridor to other public lands in the vicinity of the wetlands.

The reasons for listing this property in Title 14 are



*...”Since the property contains sensitive species, including a state endangered species, sensitive species, sensitive vegetation communities, and acts as a linkage for other important protected lands, it is necessary and appropriate to provide this level of regulatory protection to prevent improper use and degradation of wildlife resources.” (BWER Section 630)*

*The regulatory language of BWER also goes on to add Department of Fish & Wildlife actions which are intended to ONLY PROVIDE ADDITIONAL LEVELS OF PROTECTION and not less.*

### **§ 703. General policies; Response to requests**

(a) General policies for the conduct of the department shall be formulated by the commission. The director shall be guided by those policies and shall be responsible to the commission for the administration of the department in accordance with those policies.

This action is sought to ensure the responsibilities of the Fish & Game Commission and administration and implementation of its language and policies of Section 630 on behalf of Ballona Wetlands Ecological Reserve are carried out as written and intended.

Based upon the current Ballona Wetlands Ecological Reserve Section 630 language of “protection and enhancement of coastal salt marsh and **freshwater** marsh habitats,...”, the California Department of Fish & Wildlife (CDFW) has failed to adhere to this specific language under the California Code of Regulations. Throughout the Environmental Impact Report evaluations of Ballona Wetlands for its restoration, CDFW failed to include evaluations to 1) understand the hydrology of Ballona Wetlands, and 2) include information pertaining to readily available knowledge of potential and ongoing harm to those freshwater resources, and 3) has failed to provide measures designed to protect the freshwater resources of Ballona Wetlands. Instead, CDFW has aided in the harm to Ballona’s freshwater resources by having failed to acknowledge, be publicly transparent about, and/or failed to willingly stop harmful dewatering of Ballona Wetlands Ecological Reserve. Example: Grassroots Coalition v Playa Vista and CDFW. This lawsuit was brought by Grassroots Coalition as a result of inaction on the part of CDFW to willingly seal two unpermitted drains in the Reserve. Repeated letters citing violations of the Coastal Act from the California Coastal Commission(CCC) Enforcement Branch to Playa Vista and CDFW, citing the drains as unpermitted and harming the hydrology of the wetlands, CDFW failed to respond and/or be responsive to requests for sealing the drainage areas.(CCC letters included Letter of 4/11/14 to Playa Vista, CDFW)

Grassroots Coalition (GC) subsequently litigated against both Playa Vista and CDFW, and prevailed which gave rise to the California Coastal Commission enforcement of ‘capping the two unpermitted and harmful drainage areas in the Reserve. The outcome of the sealing of the drains has been freshwater ponding returning seasonally to this area of the Reserve and has allowed for expansive growth of pickleweed throughout the area that is significant due to the need of Belding’s Savannah Sparrow habitat expansion (a state listed endangered species dependent upon large swaths of pickleweed for nesting.)(images of before/after are included via Dr. Margot Griswold, restoration ecologist; u tube 4/20/21 Margot Griswold Phd Presents Ballona Wetlands FEIR Inconsistency and Overlooked Opportunities)

As determined via Historical Ecology of the Ballona Creek Watershed- Travis Longcore Phd et al,



Ballona Wetlands is a predominantly closed to the ocean, predominantly seasonal freshwater system which includes salt pans, uplands, rare grasslands and man made openings to the Ballona Channel. Typically, seasonal rainwater ponding can last for months on Ballona Wetlands (Terry Huffman Phd 1986 USEPA , Region IX, Determination of the Presence of Aquatic and Wetland Habitats Subject to Federal Regulatory Jurisdiction Within The Ballona Creek Land Tract) which, in part percolates into the watershed of Ballona and its underlying freshwater aquifers: Silverado at the base, Bellflower and Ballona which act as one throughout (DWR Map 1961 & CDM 1998) and the freshwater table is at or near surface (Playa Vista EIR Phase 1, 1990). The freshwater is classified by the Los Angeles Regional Water Quality Control Board as Potential Drinking Water, and in a recent Prop. 65 court decision was classified as Drinking Water for purposes of remediation ordered upon SoCalGas/ Playa del Rey underground gas storage operations.

### **§ 703.3. Resource management decision-making**

It is the policy of the state that the department and commission use ecosystem-based management informed by credible science in all resource management decisions to the extent feasible. It is further the policy of the state that scientific professionals at the department and commission, and all resource management decisions of the department and commission, be governed by a scientific quality assurance and integrity policy, and follow well-established standard protocols of the scientific profession, including, but not limited to, the use of peer review, publication, and science review panels where appropriate. Resource management decisions of the department and commission should also incorporate adaptive management to the extent possible.

CDFW has failed to include any hydrology evaluations in order to protect the underlying freshwater aquifers from potential harm. The force of law per the CCR Title 14, Section 630 for Ballona Wetlands Ecological Reserve has been ignored and needs to have adherence.

The United States Fish & Wildlife Service (USFWS) utilizing its jurisdiction over Ballona Wetlands Ecological Reserve, has made clear, in both response comments to the Ballona DEIR and in the letter attached, their concerns related to protection of freshwater marsh aspects of Ballona Wetlands Ecological Reserve as well as the protection to the freshwater of Ballona Wetlands Ecological Reserve.

Per the Code cited below it would be appropriate for the Commission to advance, in any manner it has at its avail, to implement via the Department of Fish & Wildlife or itself, to work with pertinent agencies and departments (ie. The City/County of Los Angeles and Los Angeles Regional Water Quality Control Board (LARWQCB) and the Department of Water Resources (DWR) ) in order to further the protection of the freshwater resources of Ballona Wetlands Ecological Reserve.



### **§ 703.3. Resource management decision-making**

It is the policy of the state that the department and commission use ecosystem-based management informed by credible science in all resource management decisions to the extent feasible. It is further the policy of the state that scientific professionals at the department and commission, and all resource management decisions of the department and commission, be governed by a scientific quality assurance and integrity policy, and follow well-established standard protocols of the scientific profession, including, but not limited to, the use of peer review, publication, and science review panels where appropriate. Resource management decisions of the department and commission should also incorporate adaptive management to the extent possible.

**Under Article 4. Ecological Reserves; 1580** provides for the Ca. Fish & Game Commission To:

The commission may adopt regulations for the occupation, utilization, operation, protection, enhancement, maintenance, and administration of ecological reserves. The ecological reserves shall not be classified as wildlife management areas pursuant to Section 1504 and shall be exempt from Section 1504.

### **§ 1581. Acquisition to be in name of state; Governing rules and regulations**

Any property acquired in fee for ecological reserves shall be acquired in the name of the state, and shall, at all times, be subject to such rules and regulations as may be prescribed from time to time by the commission for the occupation, use, operation, protection, and administration of such property as ecological reserves

Attachments:

1. California Regulatory Notice Register 2005, Volume No. 20-Z, Starting on page 663 Ballona Wetlands Ecological Reserve

[https://www.dhcs.ca.gov/services/medi-cal/Documents/AB1629/ZREG/ZREG%2020-Z\\_5.20.05\\_notice.pdf](https://www.dhcs.ca.gov/services/medi-cal/Documents/AB1629/ZREG/ZREG%2020-Z_5.20.05_notice.pdf)

2. California Fish & Game Code

<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178840&inline> Ca. Fish & Game Code

3. DWR AQUIFER MAP 1961/ CDM 1998 , scroll to 1. (c)

<https://saveballona.org/jvstop-drying-out-ballona-wetlands-ecological-reserve-stop-playa-vistas-confiscation-and-throw-away-ballonas-freshwater-resources.html>

4. Poland Report; Congressional House Document 389 are in the LINK above at 1. a., b. respectively.

5. As cited in the [California Coastal Commission \(CCC\) Letter \(4/11/14\) to Playa Vista and CDFW ... draining Ballona is harmful to the ecosystem:](#)



USFWS LETTER 2021 June- Christine Medak-

-----Original Message-----

From: Medak, Christine <[Christine\\_Medak@fws.gov](mailto:Christine_Medak@fws.gov)>

To: [lori.webber@waterboards.ca.gov](mailto:lori.webber@waterboards.ca.gov) <[lori.webber@waterboards.ca.gov](mailto:lori.webber@waterboards.ca.gov)>

Cc: <[REDACTED]>

Sent: Mon, Jun 7, 2021 2:53 pm

Subject: Fw: [EXTERNAL] Fwd: Santa Monica Basin Groundwater Sustainability Plan (GSP) Stakeholder Workshop June 2021 Invite

Hi Lori,

Do you know if there have been or are planned to be any groundwater management plans developed for the area including the Ballona Ecological Reserve? I am not able to respond to this question because I have not previously been involved in groundwater planning. If you are not the appropriate contact, can you please refer me to a contact within your agency that can provide some information on how this type of planning effort is typically initiated? I agree that Ballona wetlands would benefit from additional freshwater that is currently diverted to sanitary sewers or directly to Ballona Channel (through an underground culvert).

Christine L. Medak  
Fish and Wildlife Biologist  
U.S. Fish and Wildlife Service  
2177 Salk Avenue, Suite 250  
Carlsbad, CA 92008

*I am currently working from home indefinitely. Please contact me via email.*



[https://saveballona.org/system/files/TR\\_671\\_UrbanWildLands.Org.resources-Ballona\\_Historical\\_Ecology.pdf](https://saveballona.org/system/files/TR_671_UrbanWildLands.Org.resources-Ballona_Historical_Ecology.pdf)

<https://www.youtube.com/watch?v=avpCqRoEbdc> 4/20/21 Margot Griswold Presents Ballona Wetlands FEIR Inconsistency & Overlooked Opportunities (30:28 Timecode setting for images of pre-sealed drains and post-sealed unpermitted drains.

## SECTION II: Optional Information

5. **Date of Petition: June 14, 2021**

6. **Category of Proposed Change**

☐ Sport Fishing

☐ Commercial Fishing

☐ Hunting

x Other, please specify: Amend Section 630, Title 14, CCR

7. **The proposal is to:** *(To determine section number(s), see current year regulation booklet or <https://govt.westlaw.com/calregs>)*

x Amend Title 14 Section(s). Section 630 Ecological Reserve Ballona Wetlands |

☐ Add New Title 14 Section(s): [Click here to enter text.](#)

☐ Repeal Title 14 Section(s): [Click here to enter text.](#)

8. **If the proposal is related to a previously submitted petition that was rejected, specify the tracking number of the previously submitted petition** [Click here to enter text.](#)

Or X Not applicable.

9. **Effective date:** If applicable, identify the desired effective date of the regulation.

If the proposed change requires immediate implementation, explain the nature of the emergency:

**A**n exigency exists for implementation of the protection of Ballona Wetlands Ecological Reserve's freshwater resources as they are currently in jeopardy of degradation and loss due to waste of clean, fresh groundwater pumping and diversion by Playa Vista to both the ocean and the Los Angeles Sanitary Sewer System. The Ballona Conservancy has oversight of this freshwater diversion and CDFW states that it is a board member of this Conservancy however, CDFW as a board member, has failed to stop the waste and throwaway of this freshwater formerly available year-round to the Reserve. Thus, Grassroots Coalition requests this Petition be approved to provide **for implementation by the Fish & Game Commission** and for clarification to and enforcement from CDFW per Section 630, Title 14, CCR for the purpose of protecting Ballona Wetlands Ecological Reserve, its freshwater including the freshwater aquifers.



California Fish & Game Commission- created by Section 20 of Article IV of the Constitution.

-And, per decisions made by the Fish and Game Commissioners under Ca. Fish & Game Code

101.5 ....in relevant part- ..'the Commission makes complex public policy decisions and biological decisions on behalf of the people of California. '

-And, per Section 630 BWER protection to its freshwater as **implementation of regulations and policies** are provided for in California Fish & Game Code 108 (e) :

(e) A commissioner shall preserve the public's welfare and the integrity of the commission, and act to maintain the public's trust in the commission and the implementation of its regulations and policies.

- And, per Ca. Fish & Game Code 64. Order, Rule, Regulation are terms used interchangeably and each includes the other.

-And, that the 630 BWER protections include its freshwater marshes, that would include direction from Ca. Fish & Game Code 89.1 Waters of the State as in compliance with Section 13050 of the Water Code.

**10. Supporting documentation:** Identify and attach to the petition any information supporting the proposal including data, reports and other documents: *see attachments, LINKS above.*

**11. Economic or Fiscal Impacts:** Identify any known impacts of the proposed regulation change on revenues to the California Department of Fish and Wildlife, individuals, businesses, jobs, other state agencies, local agencies, schools, or housing: *None known*

**12. Forms:** If applicable, list any forms to be created, amended or repealed:

*None known*

### SECTION 3: FGC Staff Only

Date received: [Click here to enter text.](#)

FGC staff action:

- ☐ Accept - complete
- ☐ Reject - incomplete
- ☐ Reject - outside scope of FGC authority

Tracking Number

Date petitioner was notified of receipt of petition and pending action: \_\_\_\_\_

Meeting date for FGC consideration: \_\_\_\_\_

FGC action:

- ☐ Denied by FGC



State of California – Fish and Game Commission

**PETITION TO THE CALIFORNIA FISH AND GAME COMMISSION FOR REGULATION CHANGE**

FGC 1 (Rev 06/19) Page 10 of 10

☐ Denied - same as petition

Tracking Number

☐ Granted for consideration of regulation change

# Memorandum

Signed Original on File  
Received September 29, 2021

**Date:** September 27, 2021

**To:** Melissa Miller-Henson  
Executive Director  
Fish and Game Commission

**From:** Charlton H. Bonham  
Director

**Subject:** Request for Changes to the Fish and Game Commission's Timetable for Anticipated Regulatory Actions

The Department of Fish and Wildlife (Department) requests the following schedule changes to the Fish and Game Commission's (Commission's) 2021 and 2022 regulatory timetables:

- Add a rulemaking ("Emergency Low Flow Restrictions Due to Drought Conditions") to amend subsections (a) and (b) of Section 8.00 and subsection (b)(40)(A)(1) of Section 7.40, Title 14, CCR to extend the end date of the current low flow restrictions through April 30<sup>th</sup>. This change is necessary due to extreme drought conditions and is intended to increase the survival of adult Steelhead Trout, Coho Salmon and Coastal Chinook Salmon.
  - The proposed meeting schedule is notice and adoption at the December 2021 meeting with a target effective date prior to January 31, 2022.
- Delay the rulemaking ("Pink Shrimp Fishery Management Plan Implementing Regulations") to add new Article 7 in Chapter 5.5 under Fishery Management Plans (FMP) and amend Sections 120.1 and 120.2, Title 14, CCR, to implement the pink shrimp FMP. The FMP was scheduled for receipt in October 2021 and adoption in December 2021, but has been delayed and will now be received at the December meeting and will be up for adoption in April 2022. The notice hearing for the implementing regulations will be likewise be delayed one meeting.
  - The proposed meeting schedule for the implementing regulations is notice at the February meeting, and discussion and adoption at the June 2022 meeting.
- Add a rulemaking ("Game Fish Contests") to amend Section 230, Title 14, CCR to set forth in regulation the process by which permits may be issued for contests offering prizes for the take of game fish. Amendments to subsections (a)(1) and (a)(2) and addition of a new subsection will establish, in regulation, the guidelines

that have been utilized to successfully facilitate the tournament scheduling process for the past several years.

- The proposed meeting schedule is notice at the February 2022 meeting, discussion at the April 2022 meeting, and adoption at the May 2022 teleconference.

If you have any questions or need additional information, please contact Regulations Unit Manager, Ona Alminas by email at [Ona.Alminas@wildlife.ca.gov](mailto:Ona.Alminas@wildlife.ca.gov).

cc: Garry Kelley, Acting Deputy Director  
Wildlife and Fisheries Division  
[Garry.Kelley@wildlife.ca.gov](mailto:Garry.Kelley@wildlife.ca.gov)

David Bess, Chief  
Law Enforcement Division  
[David.Bess@wildlife.ca.gov](mailto:David.Bess@wildlife.ca.gov)

Craig Shuman, D. Env., Regional Manager  
Marine Region  
[Craig.Shuman@wildlife.ca.gov](mailto:Craig.Shuman@wildlife.ca.gov)

Ona Alminas, Program Manager  
Regulations Unit  
Wildlife and Fisheries Division  
[Ona.Alminas@wildlife.ca.gov](mailto:Ona.Alminas@wildlife.ca.gov)

**Fish and Game Commission:**

David Thesell, Program Manager  
Fish and Game Commission  
[David.Thesell@fgc.ca.gov](mailto:David.Thesell@fgc.ca.gov)

# California Fish and Game Commission: Perpetual Timetable for Anticipated Regulatory Actions

Updated October 6, 2021

Items proposed for change are shown in blue underlined or strikeout font

Regulatory Change Category	Title 14 Section(s)	FGC Webinar/Teleconference Oct 14, 2021	MRC Webinar/Teleconference Nov 9, 2021	TC Webinar/Teleconference Dec 14, 2021	FGC Webinar/Teleconference Dec 15, 2021	FGC Webinar/Teleconference Dec 16, 2021	WRC Sacramento Jan 13, 2022	FGC Sacramento February 16, 2022	FGC Sacramento February 17, 2022	MRC Sacramento Mar 24, 2022	TC Monterey / Santa Cruz Area Apr 19, 2022	FGC Monterey / Santa Cruz Area Apr 20, 2022	FGC Monterey / Santa Cruz Area Apr 21, 2022	FGC Teleconference May 19, 2022	WRC Redding May 19, 2022	FGC Los Angeles / Orange County June 15, 2022	FGC Los Angeles / Orange County June 16, 2022	MRC San Diego Area July 14, 2022	TC Fortuna August 16, 2022	FGC Fortuna August 17, 2022	FGC Fortuna August 18, 2022	WRC Los Angeles / Inland Empire Area September 15, 2022
Recreational Clam, Sand Crab, and Shrimp Gear Emergency <sup>6</sup>	29.20, 29.80						EE 1/8															
Recreational Clam, San Crab, and Shrimp Gear Emergency (First 90-day Extension) <sup>6</sup>	29.20, 29.80	A					E-1/8 E 1/8				EE-4/8 EE 4/8											
Recreational Clam, Sand Crab, and Shrimp Gear Emergency (Second 90-day Extension) <sup>6</sup>	29.20, 29.80								A		E 4/1							EE 7/1				
Recreational Clam, Sand Crab, and Shrimp Gear (Implementing Certificate of Compliance) <sup>6</sup>	29.20, 29.80					N		D				A						E 7/1				
Central Valley Sport Fishing (Annual)	7.40(b)(4), (43), (66), (80)								N				D	A				E-7/4	E 7/16			
Klamath River Basin Sport Fishing (Annual)	7.40(b)(50)								N				D	A				E-7/4	E 8/15			
Waterfowl (Annual)	502				N				D				A					E 7/1				
CA Grunion Limit and Season Changes (FGC Petition #2019-014)	27.60(b), 28.00	N				D		A								E 6/1						
Pink Shrimp Fishery Management Plan Implementing Regulations	120.1, 120.2					N		D/A N								D/A		E-7/4				
Big Game Preference Point Reinstatement and Tag Refunds	<del>708.49</del> 708.14	N			D				A									E 7/1				
Harvesting of Kelp and Other Aquatic Plants, Commercial Marine Algae Management Policies	165, 165.5, <del>706</del> 705.1					N		D/A										E 7/1				
Emergency Low Flow Restrictions Due to Drought, Conditions	7.40(b)(40)(A)1., 8.00 (a), 8.00 (b)				N/A			E 1/30														
Game Fish Contests	230								N				D	A				E 7/1				
Western Joshua Tree Dead Hazard Trees 2084 Emergency	749.11		EE 11/9																			
Western Joshua Tree Dead Hazard Trees 2084 Emergency (90-day Extension)	749.11	A	E 11/9				EE 2/7															
Western Joshua Tree Local Government 2084 Emergency	749.12		EE 11/9																			
Western Joshua Tree Local Government 2084 Emergency (90-day Extension)	749.12	A	E 11/9				EE 2/7															
Recreational Crab Marine Life Protection Measures	29.80, 29.85, 701		E 11/1																			
Experimental Fishing Permit (EFP) Program Phase II	90, 91, 120.1, 149, 149.3, 180, 704	D				A					E 4/1											

Rulemaking Schedule to be Determined	Title 14 Section(s)	FGC Webinar/Teleconference Oct 14, 2021	MRC Webinar/Teleconference Nov 9, 2021	TC Webinar/Teleconference Dec 14, 2021	FGC Webinar/Teleconference Dec 15, 2021	FGC Webinar/Teleconference Dec 16, 2021	WRC Sacramento Jan 13, 2022	FGC Sacramento February 16, 2022	FGC Sacramento February 17, 2022	MRC Sacramento Mar 24, 2022	TC Monterey / Santa Cruz Area Apr 19, 2022	FGC Monterey / Santa Cruz Area Apr 20, 2022	FGC Monterey / Santa Cruz Area Apr 21, 2022	FGC Teleconference May 19, 2022	WRC Redding May 19, 2022	FGC Los Angeles / Orange County June 15, 2022	FGC Los Angeles / Orange County June 16, 2022	MRC San Diego Area July 14, 2022	TC Fortuna August 16, 2022	FGC Fortuna August 17, 2022	FGC Fortuna August 18, 2022	WRC Los Angeles / Inland Empire Area September 15, 2022
Pre-Existing Structures in Marine Protected Areas (MPAs), Marine Managed Areas (MMAs), and Special Closures	632																					
Santa Cruz Harbor Salmon Fishing (FGC Petition #2016-018)	TBD																					
European Green Crab (FGC Petition #2017-006)	TBD																					
Wildlife Areas/Public Lands <sup>4</sup>	TBD																					
Possess Game / Process Into Food	TBD																					
American Zoological Association / Zoo and Aquarium Association	671.1																					
Night Hunting in Gray Wolf Range (FGC Petition #2015- 010)	474																					
Shellfish Aquaculture Best Management Practices	TBD																					
Ban of Neonicotinoid Pesticides on Department Lands (FGC Petition #2017-008)	TBD																					
Ridgeback Prawn Incidental Take Allowance	120(e)																					

## KEY

FGC = California Fish and Game Commission MRC = FGC Marine Resources Committee WRC = FGC Wildlife Resources Committee TC = FGC Tribal Committee

EM = Emergency EE = Emergency Expires E = Anticipated Effective Date (RED "X" = expedited OAL review)

N = Notice Hearing D = Discussion Hearing A = Adoption Hearing V = Vetting R = Committee Recommendation

4 = Includes FGC Petition #2018-003 6 = Includes FGC Petition #2019-012

**California Fish and Game Commission**  
**Potential Agenda Items for December 2021 Commission Meeting**  
*October 10, 2021*

The next Commission meeting is scheduled for December 15-16, 2021. Staff is currently planning for public participation by webinar/teleconference, pursuant to California Government Code Section 11133. This document identifies potential agenda items for the meeting, including items to be received from Commission staff and the California Department of Fish and Wildlife (Department).

**Wednesday, December 15: Wildlife- and inland fisheries-related and administrative items**

1. General public comment for items not on the agenda (day 1)
2. Executive director's report
3. Receive Department informational items (director's report)
4. Receive the Department's one-year status review report on the petition to list Shasta snow-wreath as endangered under the California Endangered Species Act (CESA)
5. Receive the Department's 90-day evaluation report on the petition to list Lime Ridge eriastrum as endangered under CESA
6. Ratify findings on the decision to list upper Klamath-Trinity river spring Chinook salmon as threatened under CESA
7. Ratify findings on the decision to list northern California summer steelhead as endangered under CESA
8. Notice: Waterfowl hunting (annual)
9. Discussion: Big game preference points reinstatement and tag refunds due to public land closures (if approved at this meeting)
10. Notice and adoption: Emergency low-flow restrictions due to drought conditions (if approved at this meeting)
11. Receive Department informational items (wildlife and inland fisheries)
12. Wildlife Resources Committee
13. Items of interest from previous meetings (wildlife and inland fisheries)
14. Action on wildlife and inland fisheries petitions for regulation change
15. Action on wildlife and inland fisheries non-regulatory requests from previous meetings
16. Executive (closed) session

**Thursday, December 16: Marine-related items and administrative items**

17. General public comment for items not on the agenda (day 2)
18. Tribal Committee
19. Legislation and other agency regulations
20. Justice, equity, diversity, and inclusion plan

21. Receive Department informational items (marine)
22. Marine Resources Committee
23. Notice: Recreational clam, sand crab, and shrimp gear certificate of compliance
24. Notice: Harvesting of kelp and other aquatic plants, and commercial marine algae management policies
25. Discussion: California grunion limit and season changes
26. Adoption: Experimental Fishing Permit Program, Phase II
27. Receive and discuss draft pink shrimp fisheries management plan
28. Receive annual report on the Department Statewide Marine Protected Areas Program management activities
29. Items of interest from previous meetings (marine)
30. Action on marine petitions for regulation change from previous meetings
31. Action on marine non-regulatory requests from previous meetings
32. Administrative items (next meeting agenda, rulemaking timetable, new business)