

California Fish and Game Commission Meeting Binder

Day 2 + Executive Session



December 11-12, 2019
Sacramento

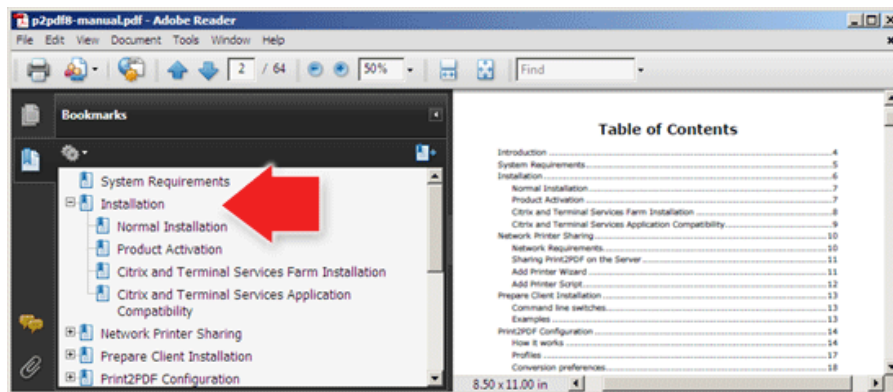
EASY GUIDE TO USING THE BINDER

Note: We make every effort to ensure that documents we produce are compliant with Americans with Disabilities Act standards, pursuant to state and federal law; however, some materials included in our meeting binders that are produced by other organizations and members of the public may not be compliant.

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 FISH AND GAME COMMISSION BUSINESS MEETINGS

- This year marks the beginning of the 150th year of operation of the California Fish and Game 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. These meetings are vital in achieving that goal. In that spirit, we provide the following information to be as effective and efficient toward that end. Welcome and please let us know if you have any questions.
- We are operating under the Bagley-Keene Open Meeting Act and these proceedings are being recorded and broadcast via <https://videobookcase.com/>.
- In the unlikely event of an emergency, please note the location of the nearest emergency exits. Additionally, the restrooms are located _____.
- Items may be heard in any order pursuant to the determination of the Commission President.
- The amount of time for each agenda item may be adjusted based on time available and the number of speakers.
- Speaker cards need to be filled out **legibly** and turned in to the staff **before** we start the agenda item. Please make sure to list the agenda items you wish to speak to on the speaker card.
- We will be calling the names of several speakers at a time so please line up behind the speakers' podium when your name is called. If you are not in the room when your name is called you may forfeit your opportunity to speak on the item.
- When you speak, please state your name and any affiliation. Please be respectful. Disruptions from the audience 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, and sign up for our electronic mailing lists.
- All petitions for regulation change must be submitted in writing on the authorized petition form, FGC 1, Petition to the California Fish and Game Commission for Regulation Change, available at <https://fgc.ca.gov/Regulations/Petition-for-Regulation-Change>.
- **Reminder!** Please silence your mobile devices and computers to avoid interruptions.
- **Warning!** The use of a laser pointer by someone other than a speaker doing a presentation may result in arrest.

INTRODUCTIONS FOR FISH AND GAME COMMISSION MEETINGS

Fish and Game Commission

Eric Sklar	President (Saint Helena)
Jacque Hostler-Carmesin	Vice President (McKinleyville)
Russell Burns	Member (Napa)
Peter Silva	Member (Jamul)
Samantha Murray	Member (Del Mar)

Commission Staff

Melissa Miller-Henson	Executive Director
Susan Ashcraft	Acting Deputy Executive Director
Mike Yaun	Legal Counsel
Elizabeth Pope	Acting Marine Advisor
Ari Cornman	Wildlife Advisor
Sherrie Fonbuena	Analyst
Sergey Kinchak	Analyst

California Department of Fish and Wildlife

Chuck Bonham	Director
Wendy Bogdan	General Counsel
David Bess	Deputy Director and Chief, Law Enforcement Division
Stafford Lehr	Deputy Director, Wildlife and Fisheries Division
Clark Blanchard	Assistant Deputy Director, Office of Communications, Education and Outreach
Kari Lewis	Chief, Wildlife Branch
Kevin Shaffer	Chief, Fisheries Branch
Craig Shuman	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)

Commissioners
Eric Sklar, President
Saint Helena

Jacque Hostler-Carmesin, Vice President
McKinleyville

Russell E. Burns, Member
Napa

Peter S. Silva, Member
Jamul

Samantha Murray, Member
Del Mar

STATE OF CALIFORNIA
Gavin Newsom, Governor

Fish and Game Commission



Wildlife Heritage and Conservation
Since 1870

Melissa Miller-Henson
Executive Director
P.O. Box 944209
Sacramento, CA 94244-2090
(916) 653-4899
fgc@fgc.ca.gov
www.fgc.ca.gov

REVISED* MEETING AGENDA **December 11-12, 2019**

Natural Resources Building – Auditorium, First Floor
1416 Ninth Street, Sacramento, CA 95814

The meeting will be live streamed; visit www.fgc.ca.gov the day of the meeting.

***This agenda is revised to change the meeting start time on December 11 to 9:30 AM, add Item 4(B) concerning western Joshua tree, and delete Item 36(B)(I) concerning Petition #2019-002: Trap endorsement for commercial nearshore fishery permits (which has been withdrawn).**

Note: See important meeting deadlines and procedures at the end of the agenda. Unless otherwise indicated, the California Department of Fish and Wildlife is identified as Department and CCR indicates California Code of Regulations.

Invitation: The Commission invites members of the public to join commissioners and staff for a field trip related to falconry that will take place west of Sacramento following the meeting on Thursday afternoon; details will be released before the Commission meeting. Members of the public are welcome but must provide their own transportation.

DAY 1 – DECEMBER 11, 2019, 9:30 AM

Call to order/roll call to establish quorum

1. Consider approving agenda and order of items

2. General public comment for items not on agenda

Receive public comment regarding topics within the Commission's authority that are not included on the agenda.

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).

3. California Waterfowler's Hall of Fame

Commission recognition of newly-inducted members of the California Waterfowler's Hall of Fame.

CONSENT ITEMS

4. Western Joshua tree

- (A) Receive a petition to list western Joshua tree (*Yucca brevifolia*) as a threatened or endangered species under the California Endangered Species Act (CESA). (Pursuant to Section 2073.3, Fish and Game Code, and subsection 670.1(c), Title 14, CCR)
- (B) Consider approving the Department's request for a 30-day extension to review the petition. (Pursuant to Section 2073.5, Fish and Game Code)

5. Shasta snow-wreath

- (A) Receive a petition to list Shasta snow-wreath (*Neviusia cliftonii*) as a threatened or endangered species under CESA. (Pursuant to Section 2073.3, Fish and Game Code, and subsection 670.1(c), Title 14, CCR)
- (B) Consider approving the Department's request for a 30-day extension to review the petition. (Pursuant to Section 2073.5, Fish and Game Code)

6. Mountain lion

Receive 90-day evaluation report from the Department for the petition to list mountain lion (*Puma concolor*) as a threatened or endangered species under CESA. (Pursuant to Section 2073.5, Fish and Game Code)

The Department will recommend that this item be continued to a future meeting.

7. Wild trout waters policy

Receive Department recommendation and consider adopting proposed amendments to the Commission's Designated Wild Trout Waters policy. (Pursuant to Section 1727, Fish and Game Code)

8. Possession of nongame animals (nutria)

Consider adopting proposed changes to regulations for possession of nongame animals, in order to exclude nutria (*Myocastor coypus*) from the list of nongame animals that can be possessed alive with a special permit. (Amend Section 473, Title 14, CCR)

9. Delta Fisheries Management Policy and Striped Bass Policy

Discuss and consider adopting a Commission Delta Fisheries Management Policy and an amended Striped Bass Policy.

10. Executive director's report

Receive an update from the executive director on staffing and legislative information.

(A) Staff report

- I. Consider staff request to submit comments to the California Law Revision Commission for Phase I review of its tentative recommendation for a new California Fish and Wildlife Code

(B) Legislative report and possible action

- I. Discuss HR 3399 and consider authorizing a comment letter to support including California in the federal nutria eradication program

11. Strategic planning

Receive an update on the strategic planning process and discuss potential goals and objectives.

12. Department informational items (wildlife and inland fisheries)

The Department will highlight wildlife and inland fisheries items of note since the last Commission meeting.

(A) Director's report

(B) Law Enforcement Division

(C) Wildlife and Fisheries Division, and Ecosystem Conservation Division

- I. Inland salmon 2019 season update and water flow
- II. Update on Wildlife Waystation closure transition

13. Tribal Committee

Discuss and consider approving draft agenda topics for the next committee meeting. Consider approving new topics to address at a future committee meeting.

(A) Work plan development

- I. Update on work plan and draft timeline
- II. Discuss and consider approving new topics

14. Wildlife Resources Committee

Discuss and consider approving draft agenda topics for the next committee meeting. Consider approving new topics to address at a future committee meeting.

(A) Work plan development

- I. Update on work plan and draft timeline
- II. Discuss and consider approving new topics

15. Mammal hunting

Consider authorizing publication of notice of intent to amend mammal hunting tag quotas and seasons regulations.

(Amend sections 360, 361, 362, 364, and 364.1, Title 14, CCR)

16. Waterfowl hunting (annual)

Consider authorizing publication of notice of intent to amend waterfowl hunting regulations.

(Amend sections 502 and 507, Title 14, CCR)

- 17. Public use of Department of Fish and Wildlife lands**
Consider authorizing publication of notice of intent to amend wildlife areas and ecological reserves regulations.
(Amend sections 550, 550.5, 551, 552, 630, and 702, Title 14, CCR)
- 18. Central Valley sport fishing**
Consider authorizing publication of notice of intent to amend Central Valley sport fishing regulations.
(Amend sections 2.35 and 7.00, and amend subsections 7.50(b)(5), (68), (124), and (156.5), Title 14, CCR)
- 19. Klamath River Basin sport fishing**
Consider authorizing publication of notice of intent to amend Klamath River Basin sport fishing regulations.
(Amend subsection 7.50(b)(91.1), Title 14, CCR)
- 20. Upper Klamath-Trinity spring Chinook salmon sport fishing emergency regulations (90-day extension)**
Consider adopting a 90-day extension of the upper Klamath-Trinity river spring Chinook salmon emergency regulations.
(Re-adopt subsection 7.50(b)(91.2), Title 14, CCR)
- 21. Upper Klamath-Trinity spring Chinook salmon sport fishing (certification of compliance)**
Consider authorizing publication of notice of intent to implement a certificate of compliance for the upper Klamath-Trinity river spring Chinook salmon emergency regulations.
(Add subsection 7.50(b)(91.2), Title 14, CCR)
- 22. Foothill yellow-legged frog**
Consider and potentially act on the petition, Department's evaluation report, and comments received to determine whether listing foothill yellow-legged frog (*Rana boylei*) as an endangered or threatened species under CESA is warranted.
(Pursuant to sections 2075 and 2075.5, Fish and Game Code)
Note: Findings will be adopted at a future meeting.
- 23. Status reviews for threatened and endangered species**
Receive status reviews from the Department for Baker's larkspur (*Delphinium bakeri*) and Clara Hunt's milkvetch (*Astragalus claranus*), which are listed as threatened or endangered under CESA, including a presentation on the legal mandate and process.
(Pursuant to Section 2077, Fish and Game Code)
- 24. Wildlife and inland fisheries petitions for regulation change**
Consider requests submitted by members of the public to adopt, amend, or repeal a regulation.
(Pursuant to Section 662, Title 14, CCR)
 - (A) Action on current petitions
 - I. Petition #2019-019 AM 1: Remove reticulated Gila monster from list of restricted species

- II. Petition #2019-020: Increase brown trout bag and possession limit within the Klamath-Trinity River basin
- III. Petition #2019-021: Change leader length restriction for fishing tackle in anadromous waters from less than six feet to less than thirteen feet
- (B) Action on pending regulation petitions referred to staff or the Department for review – None scheduled at this time

25. Wildlife and inland fisheries non-regulatory requests from previous meetings

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

Recess

DAY 2 – DECEMBER 12, 2019, 8:30 AM

Call to order/roll call to establish quorum

26. General public comment for items not on agenda

Receive public comment regarding topics within the Commission's authority that are not included on the agenda.

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).

27. Department informational items (marine)

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

- (A) Director's report
- (B) Law Enforcement Division
- (C) Marine Region
 - I. Sea cucumber fishery collaborative management
 - II. Pacific Fishery Management Council update

28. Marine Resources Committee

Discuss updates and recommendations from the November 5, 2019 committee meeting. Consider approving new topics to address at a future committee meeting.

- (A) November 5, 2019 meeting summary
 - I. Receive and consider adopting recommendations
- (B) Work plan development
 - I. Update on work plan and draft timeline
 - II. Discuss and consider approving new topics

29. Annual recreational ocean salmon and Pacific halibut regulations

Receive and discuss an update on Pacific Fishery Management Council process and timeline, and automatic conformance to federal regulations.
(Pursuant to Section 1.95, Title 14, CCR)

- 30. Whale and turtle protections in the recreational Dungeness crab fishery**
Receive update and potentially provide direction on draft Department-proposed regulation changes to provide additional whale and turtle protections in the recreational Dungeness crab fishery.
- 31. Statewide Marine Protected Areas (MPAs) Program**
Receive annual report from the Department on management activities of its Statewide MPAs Program.
- 32. Marine Life Management Act (MLMA) Master Plan implementation**
Receive Department update and possibly provide direction on a draft prioritized list of fisheries for more focused management, as prescribed in the MLMA master plan prioritization framework.
- 33. Hog Island Oyster Company**
Consider approving lease amendments applied for by Hog Island Oyster Company for State Water Bottom Lease Nos. M-430-10, M-430-11, M-430-12, and M-430-15 for purposes of aquaculture in Tomales Bay.
(Pursuant to Section 15400, Fish and Game Code)
- 34. Charles Friend Oyster Company State Water Bottom Lease No. M-430-04**
Consider approving renewal of Charles Friend Oyster Company's State Water Bottom Lease No. M-430-04 for purposes of aquaculture in Tomales Bay for a period of 15 years.
(Pursuant to Section 15406, Fish and Game Code)
- 35. Marine items of interest from previous meetings**
These items are generally updates on agenda topics recently heard before the Commission.
- (A) Department overview of razor clam sampling for domoic acid levels
- 36. Marine petitions for regulation change**
Consider requests submitted by members of the public to adopt, amend, or repeal a regulation.
(Pursuant to Section 662, Title 14, CCR)
- (A) Action on current petitions – None scheduled at this time
(B) Action on pending regulation petitions referred to staff or the Department for review
- I. Petition #2019-004 Retrieval of abandoned lobster traps
- 37. Commission administrative items**
- (A) Next meeting – February 5-6, 2020 in Sacramento (dates to be reconsidered)
(B) Rulemaking timetable updates
(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. Dennis Sturgell v. California Department of Fish and Wildlife, and California Fish and Game Commission (revocation of Dungeness crab vessel permit No. CT0544-T1)
 - II. Public Interest Coalition v. California Fish and Game Commission (CEQA compliance during adoption of dog collar regulation)
 - III. Aaron Lance Newman v. California Fish and Game Commission (revocation of hunting and sport fishing privileges)
 - IV. Adam Aliotti and Alicia Dawn, Inc. v. California Fish and Game Commission, and California Department of Fish and Wildlife (suspension of commercial fishing license and tier-1 spot prawn trap vessel permit)
 - V. 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)
- (B) Possible litigation involving the Commission
- (C) Staffing
- (D) Deliberation and action on license and permit items
 - I. Consider Agency Case No. 18ALJ11-FGC, the appeal filed by Louis Ferrari regarding transferability of a nearshore fisheries permit.
 - II. Consider the Proposed Decision in Agency Case No. 18ALJ04-FGC, the appeal filed by Meo Nguyen regarding the Department's denial of a request to transfer a salmon vessel permit.

California Fish and Game Commission 2020 Meeting Schedule

Note: As meeting dates and locations can change, please visit www.fgc.ca.gov for the most current list of meeting dates and locations.

Meeting Date	Commission Meeting	Committee Meeting	Other Meetings
January 16		Wildlife Resources Los Angeles area	
January 17		Tribal Los Angeles area	
February 5 - 6 (dates to be reconsidered)	Natural Resources Building Auditorium, First Floor 1416 Ninth Street Sacramento, CA 95814		
March 5		Wildlife Resources* Natural Resources Building 1416 Ninth Street Sacramento, CA 95814 <i>* Purpose of meeting is to discuss simplification of statewide inland fishing regulations proposal</i>	
March 17		Marine Resources Justice Joseph A. Rattigan Building Conference Room 410 (4th Floor) 50 D Street Santa Rosa, CA 95404	
March 18			Annual Tribal Planning
April 15 - 16	Natural Resources Building Auditorium, First Floor 1416 Ninth Street Sacramento, CA 95814		
May 14	Teleconference Santa Rosa, Sacramento, Arcata and San Diego		
May 14		Wildlife Resources Justice Joseph A. Rattigan Building Conference Room 410 50 D Street Santa Rosa, CA 95404	
June 24 - 25	Santa Ana area		

Meeting Date	Commission Meeting	Committee Meeting	Other Meetings
July 21		Marine Resources San Clemente area	
August 18		Tribal Fortuna area	
August 19 - 20	Fortuna area		
September 17		Wildlife Resources Natural Resources Building Redwood Room, 14 th Floor 1416 Ninth Street Sacramento, CA 95814	
October 14 - 15	Elihu M Harris Building Auditorium 1515 Clay Street Oakland, CA 94612		
November 9		Tribal Monterey area	
November 10		Marine Resources Monterey area	
December 9 - 10	San Diego area		

OTHER 2020 MEETINGS OF INTEREST

Association of Fish and Wildlife Agencies

- March 8-13, Omaha, NE
- September 13-16, Sacramento, CA

Pacific Fishery Management Council

- March 3-9, Rohnert Park, CA
- April 3-10, Vancouver, WA
- June 11-18, San Diego, CA
- September 10-17, Spokane, WA
- November 13-20, Garden Grove, CA

Pacific Flyway Council

- March 10 Omaha, NE
- August (date/location TBD)

Western Association of Fish and Wildlife Agencies

- January 9-12, Monterey, CA
- July 9-14, Park City, UT

Wildlife Conservation Board

- February 26, Sacramento, CA
- May 20, Sacramento, CA
- August 26, Sacramento, CA
- November 18, Sacramento, CA

IMPORTANT COMMISSION MEETING PROCEDURES INFORMATION

WELCOME TO A MEETING OF THE CALIFORNIA FISH AND GAME COMMISSION

This year marks the beginning of the 150th 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. In that spirit, we provide the following 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 Reasonable Accommodation Coordinator at (916) 651-1214. Requests for facility and/or meeting accessibility should be received at least 10 working days prior to the meeting to ensure the request can be accommodated.

STAY INFORMED

To receive meeting agendas and regulatory notices about those subjects of interest to you, please visit the Commission's website, 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; mail to California Fish and Game Commission, P.O. Box 944209, Sacramento, CA 94244-2090; delivery to California Fish and Game Commission, 1416 Ninth Street, Room 1320, Sacramento, CA 95814; or hand-deliver to a Commission meeting. Materials provided to the Commission may be made available to the general public.

COMMENT DEADLINES

The Written Comment Deadline for this meeting is 5:00 p.m. on November 27, 2019. Written comments received at the Commission office by this deadline will be made available to Commissioners prior to the meeting.

The Late Comment Deadline for this meeting is noon on December 6, 2019. Comments received by this deadline will be made available to Commissioners at the meeting.

After these deadlines, written comments may be delivered in person to the meeting – Please bring ten (10) copies of written comments to the meeting.

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 Late 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 business meeting.

PETITIONS FOR REGULATION CHANGE

Any person requesting that the Commission adopt, amend, or repeal a regulation must complete and submit form FGC 1, titled, "Petition to the California Fish and Game Commission for Regulation Change" (as required by Section 662, Title 14, CCR). The form is 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 Late Comment Deadline (or delivered during general public comment at the meeting). Petitions received at this meeting will be scheduled for consideration at the next business meeting, unless the petition is rejected under staff review pursuant to subsection 662(b), Title 14, CCR.

VISUAL PRESENTATIONS/MATERIALS

All electronic presentations must be submitted by the Late 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.
2. All electronic formats must be Windows PC compatible.
3. It is recommended that a print copy of any electronic presentation be submitted in case of technical difficulties.
4. A data projector, laptop and presentation mouse will be available for use at the meeting.

CONSENT CALENDAR

A summary of all items will be available for review at the meeting. Items on the consent calendar are generally non-controversial items for which no opposition has been received and will be voted upon under single action without discussion. Any item may be removed from the consent calendar by the Commission upon request of a Commissioner, the Department, or member of the public who wishes to speak to that item, to allow for discussion and separate action.

LASER POINTERS

Laser pointers may only be used by a speaker during a presentation; use at any other time may result in arrest.

SPEAKING AT THE MEETING

To speak on an agenda item, please complete a "Speaker Card" and give it to the designated staff member before the agenda item is announced. Cards will be available near the entrance of the meeting room. Only one speaker card is necessary for speaking to multiple items.

1. Speakers will be called in groups; please line up 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. The presiding commissioner may allow up to five minutes to an individual speaker if a minimum of three individuals who are present when the agenda item is called have ceded their time to the designated spokesperson, and the individuals ceding time forfeit their right to speak to the agenda item.

- b. 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 Late 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.
 - c. An individual requiring an interpreter is entitled to at least twice the allotted time pursuant to Government Code Section 11125.7(c).
 - d. An individual may receive additional time to speak to an agenda item at the request of any commissioner.
5. If you are presenting handouts/written material to the Commission at the meeting, please provide **ten** (10) copies to the designated staff member just prior to speaking.

STAFF SUMMARY FOR DECEMBER 11-12, 2019

26. GENERAL PUBLIC COMMENT (DAY 2)**Today's Item****Information** ☒**Action** ☐

Receive public comments, petitions for regulation change, and requests for non-regulatory actions for items not on the agenda.

Summary of Previous/Future Actions

- **Today's receipt of requests and comments** **Dec 11-12, 2019; Sacramento**
- Consider granting, denying or referring Feb 5-6, 2020; Sacramento

Background

This agenda item is primarily to provide the public an opportunity to address FGC on topics not on the agenda. Staff also includes written materials and comments received prior to the meeting as exhibits in the meeting binder (if received by written comment deadline), or as late comments at the meeting (if received by late comment deadline), for official FGC "receipt."

Public comments are generally categorized into three types under general public comment: (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 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 in-person FGC meeting following staff evaluation (currently Feb 5-6, 2020).

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 titled "Petitions for regulation change." Action on non-regulatory requests received at previous meetings is scheduled under a separate agenda item titled "Non-regulatory requests."

Significant Public Comments

All written comments were summarized and provided as exhibits under Agenda Item 2, "General public comment for items not on agenda".

Recommendation

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

Exhibits

See exhibits for Agenda Item 2.

Motion/Direction (N/A)

STAFF SUMMARY FOR DECEMBER 11-12, 2019

27. DEPARTMENT INFORMATIONAL ITEMS (MARINE)**Today's Item****Information** ☒**Action** ☐

This is a standing agenda item to receive and discuss informational updates from DFW.

- (A) Director's report
- (B) Law Enforcement Division
- (C) Marine Region
 - I. Sea cucumber fishery collaborative management
 - II. Pacific Fishery Management Council (PFMC) update

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

Verbal reports on items of interest since the last FGC meeting are expected at the meeting for items (A) through (C). DFW news releases of potential interest are provided as exhibits C1-C2.

Under Item (C), Marine Region staff will:

- I. Present a video which highlights DFW's collaborative research efforts with members of the fishing community, National Park Service, and Marine Applied Research & Exploration, to collect essential fishery information related to managing the commercial warty sea cucumber dive fishery; and
- II. Provide an update on outcomes from the most recent PFMC meeting (see Exhibit C3).

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

- C1. [DFW news release: First White Abalone Release Marks Major Milestone for Species Facing Extinction](#), Nov 15, 2019
- C2. [DFW news release: Dungeness Crab Commercial Season Update](#), Nov 20, 2019
- C3. [PFMC decision summary document](#), Nov 15-20, 2019

Motion/Direction (N/A)

STAFF SUMMARY FOR DECEMBER 11-12, 2019

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

Receive summary from Nov 5, 2019 MRC meeting and consider adopting MRC recommendations. Receive update on MRC work plan. Discuss and consider approving new topics to address at a future committee meeting.

Summary of Previous/Future Actions

- | | |
|---|------------------------------------|
| • Most recent MRC meeting | Nov 5, 2019; MRC, Sacramento |
| • Today consider approving MRC recommendations | Dec 11-12, 2019; Sacramento |
| • Next MRC meeting | Mar 17, 2020; MRC, Santa Rosa |

Background

MRC works under FGC direction to set and accomplish its work plan (Exhibit 1).

MRC Meeting Summary

The MRC met on Nov 5, 2019 and discussed:

- Experimental Fishing Permit Program, Phase II
- MLMA master plan for fisheries implementation
- Kelp and algae commercial harvest regulations
- Kelp restoration and recovery efforts
- Red abalone fishery management plan development
- Whale and turtle protections in managing the recreational Dungeness crab fishery
- Coastal Fishing Communities Project

The Nov 5 meeting summary will be distributed at today's meeting and posted to the website.

Update on Action Related to Coastal Fishing Communities Project

In Aug 2019, FGC approved an MRC recommendation to direct staff to post the final draft staff report synthesizing outcomes from coastal fishing communities public meetings held in 2017-2018, and to work with stakeholders to develop a definition of coastal fishing community. At its Nov 2019 meeting, MRC accepted the final report as posted on the new project webpage (<https://fgc.ca.gov/Committees/Marine/Coastal-Fishing-Communities-Project>). In addition, staff introduced a collaboratively-developed draft definition for "coastal fishing community" crafted through a stakeholder work session. Consistent with FGC direction, MRC has adopted a draft working definition that will be used for the Coastal Fishing Communities Project as the project moves forward (see Exhibit 2, Agenda Item 10).

MRC Recommendations

Based on the Nov 5, 2019 meeting discussion, MRC developed four recommendations for FGC consideration.

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1. *Marine Life Management Act (MLMA) master plan implementation:* (a) Support the species prioritization as developed by DFW and moving forward to the next steps in the process; (b) encourage DFW to complete ecological risk assessment (ERA) analyses [the second analytical tool used to inform prioritization] for the remaining invertebrate fisheries as soon as feasible to integrate into prioritization; and (c) schedule a discussion about the species prioritization list at the Dec 2019 FGC meeting under the DFW Marine Region update. *(Due to time-sensitive considerations for actions related to this recommendation, President Sklar, under his authority, approved the addition of this topic to the Dec 2019 meeting – see Agenda Item 32, this meeting.)*
2. *Commercial kelp and algae harvest management:* Schedule the commercial kelp and algae harvest management rulemaking for notice in Jun 2020 and potential adoption in Aug, to be preceded by DFW presentation of detailed proposals to the Tribal Committee and MRC in Jan and Mar 2020, respectively.
3. *Recreational Dungeness crab:* (a) Request that DFW return to FGC at its Dec 2019 meeting with a suite of options for whale and turtle protections to be analyzed for potential regulatory actions that may include part or all of the fishery management proposals DFW presented to MRC; and (b) support scheduling a rulemaking on a timeline commencing with notice in Apr 2020. *(Due to time-sensitive considerations for actions related to this recommendation, President Sklar, under his authority, approved the addition of this topic to the Dec 2019 meeting – see Agenda Item 30, this meeting.)*
4. *Future agenda items:* Remove the referred subject of “commercial fisheries not under Commission authority” from the MRC work plan, based upon follow up with stakeholders and commercial fishing representatives.

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

FGC staff: Approve MRC recommendations 2 and 4 under this agenda item; consider recommendation 1 under Agenda Item 32 (this meeting); and consider recommendation 3 under Agenda Item 30 (this meeting).

Exhibits

1. [MRC work plan](#), updated Nov 27, 2019
2. WRC meeting summary for Nov 5, 2019 (to be posted no later than Dec 12, 2019)

Motion/Direction

Moved by _____ and seconded by _____ that the Commission approves recommendation #2, concerning commercial kelp and algae harvest management, and recommendation #4, concerning removal of a referred topic from the committee work plan, from the November 5, 2019 Marine Resources Committee meeting as proposed.

OR

Moved by _____ and seconded by _____ that the Commission approves recommendation #2 and #4 from the November 5, 2019 Marine Resources Committee meeting as proposed, except _____.

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29. RECREATIONAL OCEAN SALMON AND PACIFIC HALIBUT REGULATIONS**Today's Item****Information** ☒**Action** ☐

Receive and discuss an update on Pacific Fishery Management Council (PFMC) process and timeline, and automatic conformance to federal regulations.

Summary of Previous/Future Actions

- | | |
|-------------------------|------------------------------------|
| • Today's update | Dec 11-12, 2019; Sacramento |
| • Next update | Feb 5-6, 2020; Sacramento |
| • Final update | Apr 15-16, 2020; Sacramento |

Background

This agenda item is to inform the public that FGC intends for ocean salmon and Pacific halibut recreational fishing regulations to auto-conform to federal regulations recommended by PFMC and adopted by the National Marine Fisheries Service (NMFS) in 2020.

At its Aug 16, 2017 meeting, FGC adopted regulations that allow a process to auto-conform state ocean salmon and Pacific halibut recreational fishing regulations to federal regulations. The auto-conformance regulations went into effect Jan 1, 2018; Exhibit 1 provides an outline of the auto-conformance process.

Exhibits 2 and 3 provide an overview of the PFMC process for developing annual recommendations for salmon and Pacific halibut federal regulations. If deemed necessary, FGC may adopt ocean salmon and/or Pacific halibut recreational fishing regulations that are different from federal regulations. However, since FGC is not initiating the regular rulemaking process at this meeting, if it decides to adopt regulations different from federal regulations, it may need to take emergency action at a future meeting in order to have the regulations effective by the beginning of the ocean salmon and Pacific halibut seasons.

At this time, there is no indication that the state may need to consider regulations different from federal regulations. Therefore, regular rulemakings for ocean salmon and Pacific halibut are not proposed for 2020.

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

FGC staff: Use the auto-conformance process for ocean salmon and Pacific halibut recreational fishing regulations for 2020.

Exhibits

1. [Staff summary for Agenda Item 17, Aug 16, 2017 FGC meeting](#) (for background only)
2. [PFMC salmon fact sheet](#), updated Jan 31, 2019
3. [PFMC Pacific halibut fact sheet](#), updated Jan 29, 2019

Motion/Direction (N/A)

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30. WHALE AND TURTLE PROTECTIONS IN THE RECREATIONAL DUNGENESS CRAB FISHERY**Today's Item****Information** ☐**Action** ☒

Receive update and potentially provide direction on draft DFW-proposed regulations to provide additional whale and turtle protections in the recreational Dungeness crab fishery.

Summary of Previous/Future Actions

- | | |
|---|------------------------------------|
| • FGC discussed entanglement settlement and referral to MRC | Apr 17, 2019; Santa Monica |
| • MRC discussed possible management measures for recreational fishery | Jul 11, 2019; MRC, Ventura |
| • FGC supported considering recreational measures per MRC recommendation | Aug 7-8, 2019; Sacramento |
| • MRC discussed proposed recreational management measures | Nov 5, 2019; MRC, Sacramento |
| • Today's discussion on proposed management measures referred by MRC | Dec 11-12, 2019; Sacramento |

Background

FGC has authority to regulate the recreational Dungeness crab fishery, while authority over the commercial Dungeness crab fishery is held by DFW and the California State Legislature.

In recent years, whale populations in California's waters have increased, leading to greater presence in Dungeness crab fishing grounds and an increased risk of entanglement in deployed fishing gear. While focus had centered on the commercial fishery, in Apr 2019 FGC referred a discussion on the recreational Dungeness crab fishery to MRC; the purpose was to proactively explore if new management measures might be warranted. See Exhibit 1 for additional background.

In Aug 2019, FGC approved an MRC recommendation for DFW to explore possible "common-sense" recreational management measures and consider including the recreational fishery in its federal habitat conservation plan/incidental take permit application (see Exhibit 1). In Nov 2019, DFW presented MRC with six potential management measures for the recreational fishery (Exhibit 2):

1. *Trap limits* - currently the recreational fishery does not have a trap limit
2. *Stamp program* - currently there is no participation reporting structure
3. *Enhanced gear marking* - currently only a GO ID number is required
4. *Service intervals* - currently there is no service interval requirement for traps
5. *Gear configuration* - currently there are no requirements that specify scope
6. *Director of DFW authority for in-season action* - current authority is split between DFW and the legislature (commercial trapping) and FGC (recreational trapping)

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On Dec 3, 2019, DFW hosted a webinar to engage recreational Dungeness crab fishermen and other members of the public in dialogue about the potential management measures.

Today DFW will present the proposed range of management options for potential application to the recreational fishery. DFW and FGC staff will be seeking guidance on a potential regulatory timeline.

Significant Public Comments

1. The California Dungeness Crab Fishing Gear Working Group provided a summary of key themes and next steps for the industry from its Oct 15 and 31 preseason risk assessment meetings. The working group presented a number of recommendations on the design and implementation of the 2019-2020 Risk Assessment and Mitigation Program, including data gathering, gear innovation, and communication efforts. The initial recommendation was to open the season as scheduled, and that the fleet implement voluntary actions to prevent entanglements (Exhibit 3).
2. The California Coast Crab Association, representing commercial fishermen and buyers, sent a letter supporting the efforts to pursue whale and turtle protections in the recreational fishery to both minimize entanglements and to provide parity with the commercial fishery (Exhibit 4).

Recommendation

FGC staff: Schedule a rulemaking for the recreational fishery with notice in Apr 2020, as recommended by DFW. FGC staff supports the suite of potential management measures in general, but recommends that FGC provide direction on which measures to include in a draft initial statement of reasons.

Committee: Support DFW providing a suite of options to be analyzed for potential regulatory action that may include part or all of the management measures generally described at the Nov 5 MRC meeting.

DFW: Authorize publication of a notice for a suite of proposed regulations for the recreational fishery in Apr 2020.

Exhibits

1. [Staff summary from Nov 5, 2019 MRC meeting](#), Agenda Item 9 (for background purposes only)
2. [DFW presentation to MRC](#), made Nov 5, 2019
3. [Letter with transmittal email](#) from Kelly Sayce of Strategic Earth on behalf of the California Dungeness Crab Fishing Gear Working Group, received Nov 12, 2019
4. [Letter from Ben Platt](#), President of the California Coast Crab Association, received Nov 27, 2019

Motion/Direction

Moved by _____ and seconded by _____ that the Commission recommends a rulemaking to commence in April 2020 that includes the six proposed management measures for the recreational Dungeness crab fishery as recommended by the Department to minimize the

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risk of whale and turtle entanglements in the recreational Dungeness crab fishery. Further, the Commission supports including the recreational Dungeness crab fishery in the federal habitat conservation plan/incidental take permit application.

OR

Moved by _____ and seconded by _____ that the Commission recommends a rulemaking to commence in _____, supporting the following proposed management measures for the recreational Dungeness crab fishery recommended by the Department to minimize the risk of whale and turtle entanglements: _____. Further, the Commission supports including the recreational Dungeness crab fishery in the federal habitat conservation plan/incidental take permit application.

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31. STATEWIDE MARINE PROTECTED AREAS (MPAS) PROGRAM**Today's Item****Information** ☒**Action** ☐

Receive annual update on DFW's marine protected areas (MPAs) program management activities.

Summary of Previous/Future Actions

- | | |
|--|------------------------------------|
| • Final MPA master plan adopted | Aug 24-25, 2016; Sacramento |
| • Annual update on management | Dec 12-13, 2018; Oceanside |
| • Today receive annual update on management | Dec 11-12, 2019; Sacramento |

Background

In 2016, FGC adopted the final master plan for MPAs, which formally established DFW's MPA Management Program. As the primary managing agency for the state's MPAs, DFW and core partners manage California's MPAs as a statewide network using a collaborative partnership-based approach. DFW's program has four components: (1) Outreach and education, (2) research and monitoring, (3) enforcement and compliance, and (4) policy and permitting.

DFW's overall approach is essential to inform adaptive management of the MPA network and to help meet the goals of the Marine Life Protection Act. When it adopted the final master plan for MPAs, FGC requested that DFW provide an annual report of program activities. For 2019, DFW has provided a memo detailing actions in the past year for each of the four components (Exhibit 1). At today's meeting, DFW will present highlights from the 2019 management activities and significant events such as the Northern Channel Islands MPAs gaining global recognition (Exhibit 2).

Significant Public Comments

1. An update on Marin's Marine Protected Area Watch program, a partnership of the Environmental Action Committee of West Marin with Point Reyes National Seashore and California Academy of Sciences. The program trains volunteers to monitor beaches in Marin County as part of the statewide citizen science program, MPA Watch, and has collected five years of data that is available upon request (Exhibit 3).

Recommendation (N/A)**Exhibits**

1. [DFW memo](#), received Nov 22, 2019
2. [Northern Channel Islands Marine Protected Areas](#) Join Growing Network of Global Ocean Refuges, Marine Management News, Nov 4, 2019
3. [Letter from Morgan Patton, Executive Director, and Ashley Eagle-Gibbs](#), Conservation Director, Environmental Action Committee of West Marin, received Nov 26, 2019

Motion/Direction (N/A)

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32. MARINE LIFE MANAGEMENT ACT (MLMA) MASTER PLAN IMPLEMENTATION**Today's Item****Information ☒****Action ☐**

Receive DFW update and potentially provide direction on a draft prioritized list of fisheries for more focused management, as prescribed in the MLMA master plan prioritization framework.

Summary of Previous/Future Actions

- | | |
|---|------------------------------------|
| • FGC adopted 2018 master plan for fisheries | Jun 20-21, 2018; Sacramento |
| • Implementation update | Mar 20, 2019; MRC, Sacramento |
| • Implementation update | Jul 11, 2019; MRC, San Clemente |
| • Implementation update | Nov 5, 2019; MRC, Sacramento |
| • Today's update and discussion on DFW draft prioritized list of fisheries | Dec 11-12, 2019; Sacramento |

Background

Adopted by FGC, the *2018 Master Plan for Fisheries: A Guide for Implementation of the Marine Life Management Act (2018 Master Plan)* serves as a framework for Marine Life Management Act (MLMA) basic management. A key implementation step, as required in California Fish and Game Code Section 7073(b)(2) and consistent with the 2018 Master Plan, DFW has developed a prioritized list of species to inform more focused management. Species prioritization is intended to focus scaled management, including fishery management plans (FMPs), on those that DFW determines have the greatest need for changes in conservation and management measures, and to maximize resources and ecosystem benefits (Exhibit 1). Based on landings data, 45 fisheries have been identified for prioritization efforts.

In order to prioritize 45 fisheries for management efforts, DFW developed two tools: a productivity susceptibility analysis (PSA) and an ecological risk assessment (ERA). The PSA scores a fishery by focusing on the attributes of the target species and the ERA scores a fishery by focusing its ecosystem impacts (bycatch and habitat). DFW created an interim priority list using the PSA tool only, until the ERA tool could be developed, and then created a single prioritized list by adding the PSA and ERA scores; this combined ranking process has been completed for 32 of the 45 identified fisheries. The prioritization offers a pathway to provide guidance to DFW on which fisheries have the most immediate need for management evaluation and can serve as a starting point for MLMA master plan-based implementation of scaled fishery management efforts (Exhibit 2).

In Nov 2019, DFW presented to the Marine Resources Committee (MRC) the outcomes of the combined results from the PSA and ERA tools and indicated its desire to commence management planning efforts upon support from MRC and FGC.

Today DFW will update FGC on the species prioritization effort and potential next steps for management actions, and seeks feedback on next steps for developing scaled management (Exhibit 3).

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

FGC staff: Approve MRC's recommendation.

MRC: (a) Support the species prioritization process as developed by DFW and support moving forward to the next steps in prioritizing management efforts; and (b) encourage DFW to complete ERA analyses for the remaining invertebrate fisheries as soon as feasible to integrate into prioritization efforts.

Exhibits

1. [2018 Master Plan, Chapter 2 - Prioritizing Management Efforts](#)
2. [Staff summary for Agenda Item 5](#), Nov 5, 2019 MRC meeting (for background only)
3. [DFW presentation](#)

Motion/Direction

Moved by _____ and seconded by _____ that, as recommended by the Marine Resources Committee, the Commission supports use of the species prioritization tools developed by DFW for prioritizing fisheries management efforts; and (b) encourages DFW to complete ecological risk assessment analyses for the remaining invertebrate fisheries as soon as feasible to integrate into the prioritization outcomes.

OR

Moved by _____ and seconded by _____ that the Commission provides the following direction concerning species prioritization developed by DFW to date: _____.

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33. HOG ISLAND OYSTER COMPANY**Today's Item****Information** ☐**Action** ☒

Consider approving amendments to Hog Island Oyster Company's state water bottom lease numbers M-430-10, M-430-11, M-430-12 and M-430-15 for the purposes of aquaculture in Tomales Bay.

Summary of Previous/Future Actions

- | | |
|--|------------------------------------|
| • Approved Lease M-430-10 renewal for 25 years | Nov 3, 2005; Santa Barbara |
| • Approved Lease M-430-11 renewal for 25 years | Feb 8, 2008; San Diego |
| • Approved Lease M-430-12 renewal for 15 years | Aug 3, 2011; Sacramento |
| • Approved Lease M-430-15 renewal for 15 years | Dec 9-10, 2015; San Diego |
| • FGC received request for four lease amendments | Feb 6, 2019; Sacramento |
| • FGC confirmed that continued operations were authorized during amendment process | Jun 11, 2019; Redding |
| • Today approve amendments for four Leases | Dec 11-12, 2019; Sacramento |

Background

FGC has the authority to lease state water bottoms to any person for aquaculture for an initial lease term not to exceed 25 years (sections 15400 and 15405, California Fish and Game Code). Regulations require that any changes to existing leases must be approved by FGC (Section 237(c)(1), Title 14, California Code of Regulations).

Hog Island Oyster Company (HIOC) currently cultures shellfish on four state water bottom leases (M-430-10, M-430-11, M-430-12 and M-430-15) for purposes of aquaculture in Tomales Bay under lease renewals approved by FGC between 2005 and 2015 for periods of 25 or 15 years. At its Feb 2019 meeting, FGC received a request from HIOC to amend the four leases to ensure consistency in the types of species and culture methods authorized, following its application to the California Coastal Commission (CCC) to update and consolidate coastal development permits for the lease areas (Exhibit 1).

The culture species requested by HIOC for the four lease areas are Pacific oyster (*Crassostrea gigas*), Eastern oyster (*Crassostrea virginica*), Kumamoto oyster (*Crassostrea sikamea*), European flat oyster (*Ostrea edulis*), Olympia oyster (*Ostrea lurida*), Manila clam (*Venerupis philipinarum*), and Mediterranean mussel (*Mytilus galloprovincialis*).

The culture methods requested for the four lease areas are rack and bag, bottom bag, intertidal longlines, floating longlines, rafts and bottom trays; the request for bottom trays was later withdrawn by the lessee and is not considered further here.

HIOC acknowledged inconsistencies in its current operations relative to lease authorizations, which it wishes to rectify through the proposed lease amendments; a comparison of desired versus authorized species and methods by lease are shown in Exhibit 2. In May 2019, FGC staff notified HIOC that it would be allowed to continue its current operations within the

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existing, legally-defined lease boundaries for one year while the lease amendment process ensued (Exhibit 3); FGC affirmed this action at its Jun 2019 meeting.

As part of the CCC's CDP amendment process, the proposed species and methods were evaluated for environmental impacts. For purposes of the proposed CDP amendment, CCC prepared a substitute environmental document consistent with its certified regulatory program identified in the California Environmental Quality Act (CEQA) guidelines and codified in Section 15251 of Title 14, California Code of Regulations. In so doing, CCC determined that the project, as conditioned, incorporates measures necessary to avoid any significant environmental effects based on the CCC's permit conditions (Exhibit 4).

FGC staff and DFW have reviewed the CCC's record on behalf of FGC as a responsible agency and concurs that no significant effects will result from the approval of the project based not only on the CDP conditions, but also the conditions in the draft lease amendments.

Based on its review of the proposed culture species and methods, DFW supports authorizing the species and methods (excluding bottom trays) in the four lease areas for consistency, recognizing that FGC approval does not supersede permit conditions from other regulatory agencies (Exhibit 5).

Subsequent to its application for lease amendments, HIOC notified FGC staff and DFW staff that it wishes to amend the boundary lines for two of the lease areas (M-430-10 and M-430-12), consistent with its approved CDP; DFW staff will work with HIOC to resolve boundary inconsistencies and the request will be scheduled for FGC consideration at a later date.

Significant Public Comments

The Environmental Action Committee of West Marin supports the HIOC lease agreements as well as development of an aquaculture best management practices rulemaking (Exhibit 6).

Recommendation

FGC staff: Support the DFW recommendation. In exercising its own independent judgment, FGC can rely upon the California Coastal Commission's substitute environmental document with FGC as a responsible agency under Section 15253 of the CEQA guidelines.

DFW: Support the lease amendments for cultivating the species and methods requested by HIOC and evaluated under the California Coastal Commission's CDP for leases M-430-10, M-430-11, M-430-12, and M-430-15 for the purposes of aquaculture.

Exhibits

1. [Letter from John Finger](#), Hog Island Oyster Company, requesting lease amendments, received via email on Jan 30, 2019
2. [Tables depicting authorized and desired species and methods](#) for Hog Island Oyster Company leases
3. [Letter from FGC to John Finger](#), Hog Island Oyster Company, dated May 30, 2019
4. [Adopted Findings, Hog Island Oyster Company, Inc.](#), California Coastal Commission, dated Feb 8, 2019

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5. [DFW memo](#), dated Nov 19, 2019
6. [Email letter from Morgan Patton and Ashley Eagle-Gibbs](#), Environmental Action Committee of West Marin, received Nov 26, 2019

Motion/Direction

Moved by _____ and seconded by _____ that the Commission has reviewed and considered the California Coastal Commission's substitute environmental document and related documents, as well as the record before this Commission. This Commission has determined, consistent with Section 15253 of the CEQA implementing guidelines, that changes or alterations have been required through the coastal development permit which avoid any significant environmental effects as identified in the substitute environmental document and the project as approved will not have a significant effect on the environment due to coastal development permit conditions and the amended lease conditions. Therefore, this Commission approves the amendments to state water bottom leases with Hog Island Oyster Company, numbers M-430-10, M-430-11, M-430-12 and M-430-15, to allow for cultivation of the species and cultivation methods identified in the staff summary.

OR

Moved by _____ and seconded by _____ that the Commission denies the application for lease amendments to the species and methods by Hog Island Oyster Company for state water bottom lease numbers M-430-10, M-430-11, M-430-12, and M-430-15 for purposes of aquaculture in Tomales Bay.

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34. CHARLES FRIEND OYSTER COMPANY**Today's Item****Information** ☐**Action** ☒

Consider renewing Charles Friend Oyster Company's state water bottom lease for purposes of aquaculture in Tomales Bay for a period of 15 years.

Summary of Previous/Future Actions

- | | |
|---|------------------------------------|
| • Received request to renew lease | Aug 4-5, 2015; Fortuna |
| • Approved request to extend lease for one year | Feb 10-11, 2016; Sacramento |
| • Approved request to extend lease for one year | Feb 8-9, 2017; Rohnert Park |
| • Approved request to extend lease for one year | Feb 7-8, 2018; Sacramento |
| • Approved request to extend lease for one year | Feb 6, 2019; Sacramento |
| • Today consider lease renewal | Dec 11-12, 2019; Sacramento |

Background

FGC has the authority to lease state water bottoms to any person for aquaculture for an initial lease term not to exceed 25 years (sections 15400 and 15405, California Fish and Game Code). A lessee shall have a prior right to renew the lease on terms agreed upon between FGC and the lessee (Section 15406, Fish and Game Code).

Charles Friend Oyster Company, Inc. (CFOC) has held FGC-issued State Water Bottom Lease No. M-430-04 since 1999 for the purposes of culturing shellfish in Tomales Bay (Exhibit 1). CFOC requested to renew the lease prior to its expiration on Feb 29, 2016. However, in lieu of renewal, FGC granted a limited-term lease extension while specific non-compliance issues were addressed by the company. To date, four one-year lease extensions have been granted (Exhibit 2).

The most recent extension (granted Feb 6, 2019) was intended to provide Ms. Heidi Gregory, the new farm manager for CFOC, time to familiarize herself with CFOC operations and fulfill remaining requirements for lease clean-up and permitting with the appropriate regulatory agencies. The lease extension expires Feb 6, 2020.

In Sep 2019, DFW conducted a lease inspection and confirmed that the operations are now in good working order and that previously-noted areas of disrepair and noncompliance were adequately corrected. In addition, DFW has confirmed that CFOC has secured approval from the California Coastal Commission for operations on the lease site and has made notable progress toward coming into full permit compliance with other agencies, as detailed in DFW's memo (Exhibit 3). DFW considers the progress to be sufficient to warrant recommending full renewal of the lease.

The proposed project is subject to the "Class 1" or "Existing Facilities" categorical exemption pursuant to California Environmental Quality Act (CEQA) guidelines (Section 15301). The lease does not increase, decrease, or change existing operations or allow for new activities by the lessee (Exhibit 4). Staff has reviewed all of the available information possessed by FGC

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relevant to the issue and does not believe renewing the lease poses any unusual circumstances that would constitute an exception to the Class 1 categorical exemption.

If approved, under this renewal rent would be updated to reflect the current fee structure, which bases fees on the average past ten years of production. DFW has identified that CFOC classifies as a “low productivity site” and, as such, CFOC’s annual rent would now be \$50/acre/year. The total acreage for the lease is 6.19 acres, for an annual rent of \$3,095/year. A draft lease using the current lease template is provided as Exhibit 5.

Significant Public Comments

Morgan Patton and Ashley Eagle-Gibbs of the Environmental Action Committee of West Marin support the CFOC lease renewal as well as developing an aquaculture best management practices rulemaking (Exhibit 6).

Recommendation

FGC staff: Approve CFOC’s lease renewal, consistent with DFW’s recommendation.

DFW: Approve CFOC’s request to renew State Water Bottom Lease M-430-04, for a period of 15 years.

Exhibits

1. [Current State Water Bottom Lease M-430-04](#) and amendments (for background only)
2. [Staff summary from Feb 6, 2019 FGC meeting](#), Agenda Item 27 (for background only)
3. [DFW memo](#), received Nov 26, 2019
4. [Draft notice of exemption](#) with attachment
5. [Lease renewal package](#): draft lease renewal, legal description, and map
6. [Letter from Morgan Patton, Executive Director, and Ashley Eagle-Gibbs](#), Conservation Director, Environmental Action Committee of West Marin, received Nov 26, 2019

Motion/Direction

Moved by _____ and seconded by _____ that the Commission determines the project is exempt from CEQA as being categorically exempt based on the record and approves the renewal of State Water Bottom Lease M-430-04, to Charles Friend Oyster Company, Inc. for a period of 15 years.

OR

Moved by _____ and seconded by _____ that the Commission does not approve the renewal of State Water Bottom Lease M-430-04, to Charles Friend Oyster Company, Inc..

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35. MARINE ITEMS OF INTEREST FROM PREVIOUS MEETINGS**Today's Item****Information** ☒**Action** ☐

Standing agenda item to provide FGC with updates on items of interest from previous meetings. Today: Receive DFW overview of razor clam sampling for domoic acid levels.

Summary of Previous/Future Actions

- | | |
|--|------------------------------------|
| • Adopted emergency razor clam regulations | Apr 25, 2016; teleconference |
| • Update on domoic acid levels | Jun 22-23, 2016; Bakersfield |
| • Update on domoic acid levels | Aug 22-23, 2018; Fortuna |
| • Update on domoic acid levels and request for sampling overview | Oct 9-10, 2019; Valley Center |
| • Today's overview | Dec 11-12, 2019; Sacramento |

Background

The recreational razor clam fishery has been closed since Apr 2016, when FGC adopted an emergency closure in Humboldt and Del Norte counties. The closure was in response to persistently high concentrations of domoic acid in clam meat and guts and a closure recommendation from the Office of Environmental Health Hazard Assessment to protect human health. Regular sampling has confirmed persistence of high levels of domoic acid.

In Oct 2019, FGC received an update that samples collected from Clam Beach on Aug 3, 2019 indicated concentrations had lowered overall; however, some samples remained above the alert level of 20 parts per million (ppm) and ranged from less than 2.5 ppm to 37 ppm (Exhibit 1). At the meeting, FGC requested that DFW provide an overview of razor clam sampling. In response, DFW has provided a description of sampling and a general location map where DFW collects samples of razor clam (Exhibit 2). Updated samples collected Oct 28, 2019 at Crescent Beach reflect that all samples had domoic acid concentrations above the alert levels with an average of 145 ppm (Exhibit 3).

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

1. [Email and sample results from Joe Christen](#), California Department of Public Health, received Sep 4, 2019
2. [Email from James Ray, DFW, and map of area sampled at Clam Beach](#), received Nov 22, 2019
3. [Email and sample results from Joe Christen](#), California Department of Public Health, received Nov 6, 2019
4. [DFW presentation](#)

Motion/Direction (N/A)

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

This is a standing agenda item for FGC to act on regulation petitions from the public that are marine in nature. For this meeting:

- (A) Action on current petitions – *none scheduled*
- (B) Pending regulation petition referred to DFW for review

Summary of Previous/Future Actions

(A)

N/A

(B)

- FGC received petition #2019-004 Apr 17, 2019; Santa Monica
- FGC referred petition to DFW Jun 12-13, 2019; Redding
- **Today's action on petition Dec 11-12, 2019; Sacramento**

Background

Pursuant to Section 662, any request for FGC to adopt, amend, or repeal a regulation must be submitted on form FGC 1, "Petition to the California Fish and Game Commission for Regulation Change." Petitions received at an FGC meeting are scheduled for consideration at the next business meeting under (A), unless the petition is rejected under 10-day staff review as prescribed in subsection 662(b). A petition may be (1) denied, (2) granted, or (3) referred to 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*

No new regulation petitions are scheduled for action at this meeting. Note that *Petition #2019-002, Trap endorsement for commercial nearshore fishery permits*, was originally scheduled for action at this meeting; however, the petitioner has withdrawn the petition, as reflected in the revised meeting agenda.

(B) *Pending regulation petitions*

DFW has completed its review and prepared a memo that provides a recommendation for a petition previously referred to DFW.

Petition #2019-004: Retrieval of abandoned lobster traps (Exhibit B1). The DFW memo addresses the larger issue of potential misuse of derelict gear retrieval provisions in regulation since Apr 2017, and suggests denying the petition and allowing DFW law enforcement to investigate allegations, with an additional commitment from DFW to "meet with fishery participants at the end of the 2019/20 season to scope potential regulatory changes to improve the fishery in a comprehensive rulemaking."

Significant Public Comments (N/A)

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Recommendation

- (A) **N/A**
- (B) **FGC staff:** Deny Petition #2019-004 for the reasons outlined in this summary and exhibit, and request that DFW provide an update to MRC following the future meeting it plans to have with fishery participants per Exhibit B2.
- DFW:** Deny Petition #2019-004 for reasons set forth in the DFW memo (Exhibit B2).

Exhibits

- B1. [Petition #2019-004](#), received Feb 4, 2019
- B2. [DFW memo](#), received Nov 19, 2019

Motion/Direction

Moved by _____ and seconded by _____ that the Commission adopts the staff recommendation for Petition #2019-004.

OR

Moved by _____ and seconded by _____ that the Commission adopts the following action for Petition #2019-004: _____.

STAFF SUMMARY FOR DECEMBER 11-12, 2019

37A. ADMINISTRATIVE ITEMS – NEXT MEETING**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 FGC meeting is scheduled for Feb 5-6, 2020 in Sacramento. Staff does not anticipate any special logistics for this meeting. However, a change in the Feb meeting dates is proposed due to scheduling conflicts for two commissioners. Potential new dates, when the Natural Resources Building Auditorium is available, are Feb 3, 4, 10, 11, 12, 20 and 21; staff requests FGC determine whether to retain the existing dates or approve new dates.

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

Note that for two-day FGC meetings in 2020, marine items will be heard on the first day and wildlife and inland fisheries items will be heard on the second day.

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

FGC staff: Approve potential agenda items for the Feb 2020 FGC meeting, and identify and approve new Feb 2020 meeting dates or confirm Feb 5-6.

Exhibits

1. [Potential agenda items for the Feb 2020 FGC meeting](#)

Motion/Direction

Moved by _____ and seconded by _____ that the Commission approves the draft agenda items for the February 2020 Commission meeting, as amended today, and approves moving the February 5-6, 2020 Commission meeting to February _____, 2020.

OR

Moved by _____ and seconded by _____ that the Commission approves the draft agenda items for the February 2020 Commission meeting, as amended today, and makes no changes to the February 5-6, 2020 Commission meeting dates.

STAFF SUMMARY FOR DECEMBER 11-12, 2019

37B. ADMINISTRATIVE ITEMS – RULEMAKING TIMETABLE**Today's Item****Information** ☐**Action** ☒

Review and consider approving requested changes to the perpetual timetable for anticipated regulatory actions.

Summary of Previous/Future Actions

- FGC approved changes to rulemaking timetable Oct 9-10, 2019; Valley Center
- **Today consider approving proposed changes to the rulemaking timetable Dec 11-12, 2019; Sacramento**

Background

This is a standing agenda item for FGC staff or DFW to request changes to the FGC regulatory timetable. FGC staff is not proposing changes for this meeting; however, DFW requests (Exhibit 1) two changes to the FGC regulatory timetable:

- Add a rulemaking to amend sections 163 and 164 related to the commercial harvest of herring eggs on kelp (HEOK) and schedule for notice at the Apr 2020 meeting, discussion at the Jun 2020 meeting, and adoption at the Aug 2020 meeting.

Rationale: At FGC's Oct 2019 meeting, during the hearing to adopt implementing regulations for the Pacific Herring Fishery Management Plan, errors and concerns were identified related to commercial HEOK by a fishery participant. To avoid holding up FGC adoption of the broader rulemaking, DFW committed to undertake a rulemaking to address the concerns with the goal of having the regulations effective prior to the start of the next season.

FGC staff notes that a commercial fishery rulemaking may be completed in a two-meeting process, as was discussed at the Nov 2019 Marine Resources Committee meeting. Given the desire to have the regulations approved in time to issue permits for the next commercial HEOK season, staff recommends scheduling this new rulemaking for notice in Apr 2020 and discussion/adoption in Jun 2020.

- Add a rulemaking titled "Recreational Dungeness Crab Marine Life Protection Measures" to amend sections 1.74, 29.80, 29.85 and 29.91. The proposed schedule is notice at the Apr 2020 meeting, discussion at the Jun 2020 meeting, and adoption at the Aug 2020 meeting.

Rationale: The proposed rulemaking would add provisions to the recreational Dungeness crab fishery to contribute to whale-safe actions concurrent with the whale-safe measures and in-season management actions planned or already underway for the commercial Dungeness crab fishery. This request is consistent with FGC's Aug 2019 approval of an MRC recommendation that DFW explore a suite of common-sense management measures for the recreational crab fishery, and is directly related to Agenda Item 30 (this meeting) regarding whale and turtle protections in the recreational Dungeness crab fishery.

STAFF SUMMARY FOR DECEMBER 11-12, 2019

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

FGC staff: Adopt proposed changes to the timetable for anticipated regulatory actions (Exhibit 2), including any rulemaking changes identified during the meeting, except specify a two-meeting process for the commercial HEOK rulemaking with notice in Apr 2020 and discussion/adoption in Jun 2020.

Exhibits

1. [DFW memo, received Dec 2, 2019](#)
2. [Proposed timetable for anticipated regulatory actions, dated Dec 4, 2019](#)

Motion/Direction

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

STAFF SUMMARY FOR DECEMBER 11-12, 2019

37C. 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/Direction (N/A)**

STAFF SUMMARY FOR DEC 11-12, 2019

EXECUTIVE SESSION

Today's Item	Information <input type="checkbox"/>	Action <input checked="" type="checkbox"/>
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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

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 Government Code subsections 11126(a)(1), (c)(3), and (e)(1), and Section 309 of the Fish and Game Code. FGC will address four 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

None to report at the time the meeting binder was prepared.

(C) Staffing

For other details about staffing, see the executive director's report under Agenda Item 10(A) for today's meeting.

(D) Deliberation and action on license and permit items

- I. *Ferrari nearshore fishery permit appeal:* Consider Agency Case No. 18ALJ11-FGC, the appeal filed by Louis Ferrari regarding the transferability of a nearshore fisheries permit. In 2003, DFW issued a Non-Transferable North-Central Coast Nearshore Fishery Permit to Mr. Ferrari in response to Mr. Ferrari's 2003 request for a transferable version of the permit. Mr. Ferrari had 60 days to appeal the non-transferable permit designation to FGC.

In Oct 2016, DFW provided Mr. Ferrari a letter responding to his Jul 2016 request to convert his non-transferable permit to a transferable permit (Exhibit D1). In its letter, DFW declined to revisit the 2003 decision due to its untimely submittal. In Jan 2018, Mr. Ferrari filed an appeal with FGC (Exhibit D2) based on the 2016 DFW letter. In Oct 2018, DFW submitted an objection about the timing of the appeal after the appeal deadline (Exhibit D3). This appeal was originally scheduled for consideration in Apr 2019 and then rescheduled for Aug 2019; in both instances the appeal was continued at the request of Mr. Ferrari.

STAFF SUMMARY FOR DEC 11-12, 2019

- II. *Nguyen salmon appeal*: Consider the Proposed Decision in Agency Case No. 18ALJ04-FGC, the appeal filed by Meo Nguyen regarding DFW's denial of a request to transfer a salmon vessel permit. On Mar 6, 2018, DFW provided Meo Nguyen notice that DFW was not accepting an application to transfer a salmon permit (Exhibit D4). Fish and Game Code Section 8246.6 allows a person to contest a denial of a salmon permit transfer within 60 days of the DFW decision; this 60-day limit expired on May 5, 2018. On Jun 11, 2018, Mr. Nguyen submitted an untimely appeal to FGC (Exhibit D5). At the Aug 2018 meeting, FGC accepted the appeal and referred the matter to the Office of Administrative Hearings to consider the matter and provide a proposed decision. FGC received a copy of a proposed decision on Oct 31, 2019 (Exhibit D6).

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

- (D) **FGC staff**: Deny the appeal filed by Mr. Ferarri as untimely. Adopt the proposed decision regarding the appeal by Mr. Nguyen.

Exhibits

- D1. [Letter from DFW to Louis Ferrari, dated Oct 6, 2016](#)
- D2. [Letter from Louis Ferrari to FGC, received Jan 18, 2018](#)
- D3. [Email from David Kiene to Michael Yaun, received Oct 10, 2018](#)
- D4. [Letter from DFW to Meo Nguyen, dated Mar 6, 2018](#)
- D5. [Email from Meo Nguyen to FGC, received Jun 11, 2018](#)
- D6. [Proposed Decision in Case No. 18ALJ04-FGC, dated Oct 29, 2019](#)

Motion/Direction

- (D) Moved by _____ and seconded by _____ that the Commission denies the appeal by Mr. Ferarri regarding the transferability of a nearshore fisheries permit as untimely.

AND

Moved by _____ and seconded by _____ that the Commission adopts the proposed decision regarding the appeal by Mr. Nguyen of the California Department of Fish and Wildlife's nonacceptance of a salmon vessel permit transfer application.



First White Abalone Release Marks Major Milestone for Species Facing Extinction

November 15, 2019

A career dedicated to mollusks isn't always easy. Sometimes progress can occur at a snail's pace.

But a team of scientists are close to reaching a significant milestone in their efforts to bring white abalone — a species of sea snail — back from the brink of extinction.

During the week of Nov. 18, thousands of white abalone hatched in a marine lab will be planted in the ocean near Los Angeles and San Diego. It will be the first time that scientists attempt to introduce captive-bred white abalone into the wild.

“It’s thrilling to think that our hard work is going to pay off as far as putting juvenile white abalone in the wild and setting them free,” said California Department of Fish and Wildlife (CDFW) co-lead researcher Dr. Laura Rogers-Bennett.

California’s abalone population has been decimated by a combination of commercial overfishing, ocean warming and poor kelp growth. White abalone, sought by divers because of its tender meat, was hit especially hard. The declines resulted in a 1997 ban on all recreational and commercial abalone fishing south of San Francisco, and in 2001 white abalone became the first marine invertebrate to be listed as an endangered species.

It’s been almost two decades since Dr. Rogers-Bennett and her team have found a live juvenile white abalone in the wild.

“Captive breeding might be the only way this population can recover,” she said.

From 1999 to 2004, a team of divers including Dr. Rogers-Bennett and co-lead researcher Ian Taniguchi collected 21 white abalone from the deep reefs in the Channel Islands. Those 21 abalone ultimately led to the production of thousands of offspring at the Bodega Marine Laboratory at University of California, Davis (UC Davis).

CDFW estimates there are only 2,400 wild white abalone living in the ocean off California’s coast. They plan to plant more than 3,000 during the week of Nov. 18.

“It’s a huge milestone, but it’s also just the beginning,” said Taniguchi. “We hope this will be the first of many successful outplants aimed at reestablishing a self-sustaining wild population.”

CDFW is grateful to its many conservation partners for their collaboration on this project including the UC Davis Bodega Marine Lab, National Oceanic and Atmospheric Administration, The Bay Foundation and Aquarium of the Pacific. This project would not have been possible without significant funding provided by NOAA through its Section 6 grant program.

Media Contacts:

Ken Paglia, CDFW Communications, (916) 825-7120

Dr. Laura Rogers-Bennett, Senior Env. Scientist, (707) 875-2035



Dungeness Crab Commercial Season Update

November 20, 2019 by kmacinty, posted in crab, domoic acid, Environmental Science, Fisheries, Fishing (Commercial), Marine, Public Participation, Public Safety

Based on updated information and in response to concerns from the commercial Dungeness crab fleet, including written requests from Port Associations to further delay, California Department of Fish and Wildlife (CDFW) Director Charlton H. Bonham intends to further delay the start date for the California Dungeness crab fishery south of the Mendocino/Sonoma county line.

Today, Director Bonham issued a **preliminary determination** that the Nov. 22, 2019 start date poses a significant risk of marine life entanglement. The anticipated management response is a further delay of the opening of the commercial Dungeness crab fishery in that area until Dec. 15, 2019.

An aerial survey conducted by CDFW within Greater Farallones and Monterey Bay National Marine Sanctuaries on Monday, Nov. 18 showed whales throughout the survey area with concentrations foraging in depths between 30 and 50 fathoms off Point Reyes and Half Moon

Bay. CDFW is working to schedule a follow up aerial reconnaissance flight to further evaluate whale presence in advance of Dec. 15 and will convene the California Dungeness Crab Fishing Gear Working Group the first week of December to conduct a risk evaluation.

Under the authority of Fish and Game Code, section 8276.1(c)(1), the Director may restrict take of commercial Dungeness crab if there is a significant risk of marine life entanglement due to fishing gear. As required in Fish and Game Code, section 8276.1(c)(4), the Director is providing 48 hours' notice to the California Dungeness Crab Fishing Gear Working Group and other stakeholders.

Director Bonham will consider any recommendations or new information provided by 4:45 p.m. on Friday, Nov. 22, 2019. Anyone with recommendations and information related to this preliminary determination should submit it to whalesafefisheries@wildlife.ca.gov by that deadline.

No vessel may take, possess or land crab in an area closed for a significant entanglement risk. Fishing gear may not be deployed in any area closed to fishing.

CDFW, the fleet and the interested stakeholders are still at the start of an emerging effort to implement real-time decision-making processes. For the last 24 hours, CDFW has been engaged in real-time discussion and decision making, responding to industry requests for further delay.

Everyone recognizes the risks and all are committed to addressing that risk and developing the tools to assess and manage risk with more refinement. CDFW is committed to continuing to evaluate information as it is available in real-time to ensure that restrictions on the fishery are lifted as expeditiously as possible. CDFW appreciates the challenges and difficulties that come with the beginning of a new approach, and we appreciate the understanding of the public, the fleet, the Working Group and Californians hungry for crabs.

In related news, test results received today from the California Department of Public Health show there is no longer a public health concern regarding the safety of crab from the Mendocino/Sonoma county line to the California/Mexico border.

For the latest information on the Dungeness crab season, please visit www.wildlife.ca.gov/crab and **2019-2020 Dungeness Crab Fishery Best Practices Guide**.

###

Media Contacts:

Ryan Bartling, CDFW Marine Region, (415) 761-1843

Jordan Traverso, CDFW Communications, (916) 654-9937

Decision Summary Document

Pacific Fishery Management Council

November 15-20, 2019

Council Meeting Decision Summary Documents are highlights of significant decisions made at Council meetings. Results of agenda items that do not reach a level of highlight significance are typically not described in the Decision Summary Document. For a more detailed account of Council meeting discussions, see the [Council meeting record and transcripts](#) or the [Council newsletter](#).

Coastal Pelagic Species

Preliminary Review of New 2019 Exempted Fishing Permits

The Council adopted, for public review, two proposals for exempted fishing permits, from the [California Wetfish Producers Association](#) and the [West Coast Pelagic Conservation Group](#). The Council is scheduled to give final approval at the April 2020 meeting.

Central Subpopulation of Northern Anchovy Nearshore Estimation Methodology, Frequency of Overfishing Limit Reviews, and Accountability Measures

The Council directed the Coastal Pelagic Species Management Team to continue developing a framework and proposed flowchart to guide decisions on the frequency of revisiting management reference points for the central subpopulation of northern anchovy. The Coastal Pelagic Species Management Team will report back to the Council at the April 2020 meeting, to recommend a schedule for further consideration of the draft [framework](#).

Salmon Management

Final Methodology Review

Four topics were discussed under this [agenda item](#). The assignment to review the methodology used to develop abundance forecasts for Willapa Bay coho was incomplete. Work on this topic will continue, and the Council will review this topic at the March 2020 Council meeting. The Council approved the updated Fishery Regulation Assessment Model user manual, which will be provided on the Council website in the near future. The Council agreed that the salmon management boundary line at Horse Mountain could be included as part of the Fishery Management Plan Amendment 20 on the annual management cycle which is scheduled to begin in April 2020. In addition, for the upper Columbia Summer Chinook topic, the Council agreed that no formal methodology review is required, and that any needed data input changes would be made in time for the 2020 preseason process.

2020 Preseason Management Schedule and Scope Annual Management Cycle Amendment

The Council adopted the tentative [2020 salmon management schedule](#) including the tentative dates and sites for the public hearings, except that the California hearing will be held in Eureka, California.

The Council also decided to begin the process for amending the salmon fishery management plan (FMP) in order to potentially modify the schedule for the annual salmon management cycle. Included in this FMP amendment process will be additional changes, including a change in a salmon management boundary line (from Horse Mountain 40° 05' a line at 40° 10'), as well as [‘housekeeping items’](#).

Pacific Halibut Management

2020 Catch Sharing Plan and Annual Regulations - Final Action

The Council adopted final changes to the 2020 Catch Sharing Plan and annual fishing regulations consistent with the recommendations provided by [Washington Department of Fish and Wildlife](#) and [Oregon Department of Fish and Wildlife](#), excluding the recommendation for use of longleader gear.

Commercial Directed Fishery Regulations for 2020

The Council adopted a final recommendation for a season consisting of a 3-day fishing period to begin at 0800 on day 1 and conclude at 1800 on day 3. The season would begin on the fourth Monday in June 2020, and subsequent periods would be scheduled as necessary to achieve the allowable catch level. This recommendation will be forwarded to the International Pacific Halibut Commission for consideration.

Habitat

Current Habitat Issues

The Council directed staff to work with the Habitat Committee and California Department of Fish and Wildlife on a letter to National Marine Fisheries Service Assistant Administrator Chris Oliver and West Coast Regional Manager Barry Thom, as well as the Mid-Pacific Regional Director Ernest Conant of the Bureau of Reclamation, highlighting concerns about the Central Valley Project/State Water Project Biological Opinion and the impacts of the project on essential fish habitat and Council-managed and constraining species. In order to raise concerns prior to the implementation of this Biological Opinion, the Council tasked Council staff with developing the letter before the end of 2019.

The Council also directed staff to work with the Habitat Committee and Oregon Department of Fish and Wildlife on a letter to the Federal Energy Regulatory Commission regarding the Jordan Cove liquefied natural gas project Final Environmental Impact Statement. The letter, which is due December 15, will draw from previous Council letters to the Federal Energy Regulatory

Commission, the US Forest Service and Bureau of Land Management, and including safety concerns referenced by the Salmon Advisory Subpanel and the Groundfish Advisory Subpanel.

Groundfish Management

Workload and New Management Measure Update

The Council received a brief [report](#) from the Groundfish Management Team regarding their workload and the groundfish management measures list. No new management measures were added to the existing list for Council consideration. The Council will take this agenda item up in April to review and revise the existing list and potentially prioritize groundfish workload for 2020.

Electronic Monitoring Program Guidelines and Manual Review

The Council reviewed, but did not finalize, their recommendations on the revised electronic monitoring (EM) Program Guidelines and the Draft EM Manual. Instead, the Council will send a letter to the National Marine Fisheries Service (NMFS) stating they would like to delay implementation of the EM regulations until 2022 and will consider an extension of the EM Exempted Fishing Permit at the March meeting. The Council requested more information regarding the appropriate level of video review for vessel steam time (nonfishing activity). In addition, an analysis is needed to understand the effect of applying vessel-specific halibut discard mortality estimates to non-reviewed trips as noted in [Supplemental GEMPAC/TAC Report 4](#). Finally, the Council remains concerned about the cost effectiveness of the program and would like the industry to continue to work with NMFS and Pacific States Marine Fisheries Commission to examine ways to develop a mechanism for industry to fund a portion of the EM Program.

2020 Harvest Specifications for Cowcod and Shortbelly Rockfish - Final Action

The Council adopted final preferred alternatives for 2020 harvest specifications for cowcod south of 40° 10' N. lat. and shortbelly rockfish to mitigate against premature closures of affected fisheries next year. The Council action for cowcod south of 40° 10' N. lat. recommends removal of the 2020 annual catch target of 6 mt, coupled with a reduction of the research set-aside to 1 mt, to determine an annual vessel limit of 1,264 pounds for affected participants in the limited entry trawl fishery south of 40° 10' N. lat. The Council action for shortbelly rockfish recommends increasing the 2020 annual catch limit to 3,000 mt to reduce the risk of closing midwater trawl fisheries north of 40° 10' N. lat. The final rule for these actions is anticipated to be implemented prior to the start of Pacific whiting fisheries in mid-May next year.

Preliminary Exempted Fishing Permit (EFP) Approval for 2021-2022

The Council decided to move seven EFPs forward for public review and adopted the set-asides for those EFPs recommended in Table 2 of the [Groundfish Management Team \(GMT\) report](#). EFPs by the following proponents were moved forward: [West Coast Seafood Processors Association](#), [Oregon Trawl Commission](#), [Midwater Trawlers Cooperative](#), and [Environmental Defense Fund](#); [California Department of Fish and Wildlife](#); [Coastal Conservation Association](#) [California Okuma Fishing Tackle Corp](#); [San Francisco Community Fishing Association & Dan Platt](#);

[Scott Cook](#); [Washington Department of Fish and Wildlife](#). The Council recommended that the EFPs be modified per the specific guidance in the GMT report and taking into account the recommendations of the [Enforcement Consultants](#) report. At its March meeting, the Council will consider including the trawl sector electronic monitoring EFPs and will also check in on the development of other EFPs, as needed.

Harvest Specifications for 2021-2022 Management Including Final Overfishing Limits and Acceptable Biological Catches

The Council adopted final 2020 and 2021 harvest specifications for all stocks and stock complexes under [default harvest control rules](#) except for cowcod south of 40° 10' N. lat., Oregon black rockfish, petrale sole, sablefish, and shortbelly rockfish. [Alternative harvest specifications](#) are considered for these stocks. Preliminary preferred alternatives for these stocks were identified as follows:

- Cowcod south of 40° 10' 0.N lat.: ACL = ABC ($P^* = 0.4$)
- Oregon black rockfish: ACL = ABC = 512 mt in 2021 and 2022
- Petrale sole: ACL = ABC ($P^* = 0.4$)
- Sablefish: ABC ($P^* = 0.45$) with options for the 5-year average and long-term apportionment methods for determining area-specific ACLs as described by the [GMT](#)
- Shortbelly rockfish: ACL = 3,000 mt in 2021 and 2022

The impacts associated with these alternatives will be analyzed to inform final decisions on 2021 and 2022 harvest specifications in April 2020.

Gear Switching and Sablefish Area Management Update

The Council provided general guidance relative to the [purpose and need statement](#) developed by the Sablefish Management and Trawl Allocation Attainment Committee and requested that the analysis include a focus on the four potential causes of under-attainment of the northern trawl allocations that are identified in the purpose and need statement. At its June 2020, the Council will consider whether to move this issue forward by adopting a range of alternatives for analysis.

Biennial Management Measures for 2021-2022

The Council adopted a range of management measures necessary to implement the 2021-22 harvest specifications as recommended by the Groundfish Management Team (GMT) (in Supplemental Reports [1](#), [2](#) and [3](#)), [Groundfish Advisory Subpanel](#), and the [Tribes](#). Further, the Council also adopted a suite of management measure recommendations from California (in Supplemental CDFW Reports [1](#) and [2](#)) and [Washington](#) for analysis by the GMT. Additional measures decided for detailed analysis include 1) modifications to existing allocations for lingcod south of 40° 10' N. lat., Slope Rockfish south of 40° 10' N. lat. including Blackgill Rockfish, and widow rockfish; and 2) allowance of yellowtail rockfish retention in the salmon troll fishery south of 40° 10' N. lat. The Council is scheduled to review progress on the analysis of management

measure alternatives at the March 2020 meeting and identify preliminary preferred alternatives at the April meeting.

Endangered Species Act Mitigation Measures for Salmon - Final Action

The Council adopted its final preferred alternatives (FPA) from the preliminary preferred alternatives (PPA) –as described in the draft [analytical document](#)– at this meeting. The suite of measures adopted by the Council address the Terms and Conditions of the 2017 National Marine Fisheries Service biological opinion *Reinitiation of Section 7 Consultation Regarding the Pacific Fisheries Management Council's Groundfish Fishery Management Plan* for which there is a Council-specified role.

The FPA language is paraphrased below.

Block Area Closures would be developed as a routine inseason mitigation tool for midwater trawl fisheries in the whiting and non-whiting sectors.

Extension of Block Area Closures for Groundfish Vessels using Midwater Trawl Gear to the Western Boundary of the Exclusive Economic Zone and to the 700 Fathom Curve for Vessels using Bottom Trawl Gear south of 46° 16' 00" N. latitude (WA/OR border). Selective Flatfish Trawl Net Requirement would be available for use as a routine inseason mitigation tool in bottom trawl fisheries.

Pacific Whiting Cooperative Agreements would allow each whiting sector co-op to develop salmon mitigation plans to include a requirement for annual season summary reporting to the Council and NMFS describing the use of salmon mitigation measures and an evaluation of the effectiveness of these avoidance measures.

Automatic Authority for NMFS to close Trawl Sectors and Preserve 500 Chinook Salmon for Fixed Gear and Select Recreational Fisheries at 19,500 Chinook and non-whiting trawl fisheries at 8,500 Chinook

Development of Reserve Access Rule Provision

A sector may only access the Reserve if the Council or NMFS has taken action to minimize Chinook salmon bycatch in that sector prior to it reaching its Chinook salmon bycatch guideline.

- The requirement for the at-sea whiting sectors would be satisfied upon approval by NMFS of cooperative salmon mitigation plans in each of those sectors.
- The requirement for shoreside whiting cooperative vessels would be satisfied upon approval by NMFS of a shoreside whiting cooperative salmon mitigation plan. Individual vessels are not eligible.
- If there are whiting vessels that are not members of a whiting co-op, then additional actions by the Council or NMFS will be needed to minimize Chinook salmon bycatch (e.g., BACs) prior to allowing access to the reserve by those vessels.
- Vessels fishing under an approved Salmon Management Plan (SMP) may be exempt from additional salmon mitigation measures.

- Performance of SMPs will be evaluated via the scorecard and inseason status reporting approach.

The Council will have the option of implementing additional mitigation measures (e.g. BAC) even if access to the Reserve was automatically granted through the adoption of the SMP if the SMP measures are not sufficient in mitigating salmon bycatch, as determined upon inseason review at regular Council meetings.

Inseason Adjustments Including Whiting Yield Set-Asides for 2020 - Final Action

The Council considered progress of the groundfish fisheries to date and those routine inseason adjustments needed for the fishery to attain, but not exceed, annual catch limits. The Council adopted the eleven recommendations made by the [GMT](#) for early 2020 fisheries. Additionally, the Council adopted the [yield set-asides](#) to accommodate the incidental mortality of Pacific whiting in 2020 research activities and in the pink shrimp fishery.

Highly Migratory Species Management

Recommend International Management Activities

The Council endorsed the recommendations to National Marine Fisheries Service of the [Enforcement Consultants](#) and the [Highly Migratory Species Advisory Subpanel](#). Specifically, the United States government should:

- Strengthen or seek adoption of regional fishery management organization measures to require vessels comply with a garbage plan to prevent discarding of waste at sea
- Seek adoption of RFMO measures to require vessels to carry and deploy boarding ladders that allow safe boarding during high seas inspections
- Establish a catch attribution system for Canadian North Pacific albacore catch within the U.S. Exclusive Economic Zone (EEZ) and vice versa
- Work with Canada Department of Fisheries and Oceans to harmonize paperwork requirements for EEZ and port access
- Investigate and provide information on the source of cheap albacore imported into Canada and re-exported to the U.S. under the label “Product of Canada”
- Support Permanent Advisory Committee recommendations on South Pacific albacore conservation and management by the Western and Central Pacific Fisheries Commission (WCPFC)
- Work through the WCPFC to determine if unreported North Pacific albacore catch is occurring in the Convention Area and to better understand the impact of incidental catch of North Pacific albacore, especially by Small Island Developing State) fleets, not bound by current fishing effort limits.

Scoping an Amendment Authorizing Shallow-Set Longline Gear Outside of the Exclusive Economic Zone

The Council chose not to proceed with further scoping or consideration of an amendment to establish a west coast permit to use shallow-set longline fishing gear outside the U.S. EEZ at this time. The Council directed the HMSMT to analyze the following issues in support of the [Swordfish Monitoring and Management Plan](#) and report back to the Council at the June 2020 meeting in San Diego, California:

- 1) Analyze effort, catch, and bycatch in subsets of Hawaii shallow-set longline observer data for potential action area delineations.
- 2) Document all sources of swordfish supply to the U.S. West Coast, including both foreign and domestic (west coast and Hawaii) caught.
- 3) Estimate related conservation impacts to characterize the relationship between domestic and foreign sources of swordfish supply and the potential to mitigate conservation impacts and reduce the Nation's seafood trade deficit through increased west coast production.

Administrative

Legislative Matters, Including the Modernization Recreational Fisheries Management Act Report to Congress

The Council directed staff to forward comments on the Modernization Recreational Fisheries Management Act Report to Congress to National Marine Fisheries Service, and approved the text in the Council Coordination Committee working paper consensus statement on forage fish.

Fiscal Matters

The Council approved the 2020 No-Cost Extension budget, 2018 audit results, and recommended a March 2020 Budget Committee meeting at the discretion of the Executive Director.

Membership Appointments; Statement of Organization, Practices, and Procedures; and Council Operating Procedures

Dr. Melissa Haltuch was appointed to one of the vacant at-large positions on the Scientific and Statistical Committee. The Council will solicit nominations for a remaining at-large vacancy soon with the intent of filling that position at the March 2020 meeting.

The U.S. Fish and Wildlife Service identified two new designees to the Council, Mr. David Teuscher and Mr. Tom Sinclair, and plans to discuss their appointment to the Habitat Committee at the March 2020 meeting.

The Council will also solicit nominations for two vacancies on its Advisory Subpanels, the Washington Commercial position on the Coastal Pelagic Species Advisory Subpanel formerly held by Mr. Daniel Crome, and the Open Access North of Cape Mendocino position on the

Groundfish Advisory Subpanel held by Mr. Jeffrey Miles who informed the Council of his intent to resign after the March 2020 Council meeting.

PFMC
11/25/19
2:22 PM

Marine Resources Committee (MRC) 2019/2020 Work Plan
Scheduled Topics and Timeline for
Items Referred to MRC from California Fish and Game Commission
Updated December 5, 2019

Topic	Category	2019	2020	
		NOV	MAR	JUL
		Sacramento	Monterey Area	San Clemente
Planning Documents				
MLMA Master Plan for Fisheries - Implementation Updates	Master Plan Implementation	X	X	X
Abalone FMP / ARMP Update	FMP	X	X/R	
Aquaculture Programmatic Environmental Impact Report (PEIR)	Programmatic Plan			X
Regulations				
Herring Eggs on Kelp	DFW Project/ Rulemaking	X		
Experimental Fisheries Permit Phase II	DFW Project/ Rulemaking	X	X	
Aquaculture Lease Best Management Practices (BMP) Plan Requirements	DFW-FGC Project/ Rulemaking			
Kelp & Algae Commercial Harvest	DFW Project/ Rulemaking	X	X/R	
Spiny Lobster FMP implementing regulations: review effectiveness of program (<i>added Feb 2019; timing TBD</i>)	Regulatory review			
Emerging/Developing Management Issues				
Kelp Restoration and Recovery		X	X	X
Aquaculture State Water Bottom Leases: Existing and future lease considerations	Lease Management Review		X	
Cowcod Recovery (<i>added Oct 2019</i>)			X	
Special Projects				
Fisheries Bycatch Workgroup	MRC workgroup			
California's Coastal Fishing Communities	MRC project	X	X	
Informational / External Topics of Interest				
Whale and Turtle Protections in the Management of the Dungeness Crab Fisheries		X	X	

KEY: X Discussion scheduled X/R Recommendation developed and moved to FGC

STAFF SUMMARY FOR AUGUST 16, 2017
(FOR BACKGROUND ONLY)

17. FISHERIES AUTOMATIC CONFORMANCE PROCESS

Today's Item

Information ☐

Action ☒

Adopt proposed regulation for a process to automatically conform state recreational fishing regulations to federal regulations.

Summary of Previous/Future Actions

- | | |
|-----------------------------------|---------------------------------|
| • Notice hearing | Apr 26-27, 2017; Van Nuys |
| • Discussion hearing | Jun 21-22, 2017; Smith River |
| • Today's adoption hearing | Aug 16, 2017; Sacramento |

Background

For species managed under federal fishery management plans or regulation, FGC usually takes concurrent action to conform State recreational regulations to federal regulations adopted by the National Marine Fisheries Services (NMFS); this dual process is redundant and inefficient. The proposed regulation, Section 1.95, Title 14, will establish a process through which State recreational fishing regulations for salmon and Pacific halibut will automatically conform to federal regulations, unless FGC adopts regulations for said species using the regular rulemaking process.

For annual regulations or corrections to annual regulations for salmon and Pacific halibut, the proposed regulation would require, no later than 10 days after federal regulations are published in the Federal Register, that:

- FGC submit amended State regulations to the Office of Administrative Law for publication in the California Code of Regulations, and file the amended State regulations with the Secretary of State;
- DFW issue a news release announcing the Federal Register in which the federal regulations are published and the effective date of the conformed State regulations;
- FGC mail or email the news release to interested parties;
- To the extent practicable, DFW provide information on any changes to the State regulations via public contact, electronic notification, and online and printed publications.

The proposed regulation would also require that an update on the conformed State regulations be included on the agenda of the next regularly-scheduled FGC meeting.

For in-season changes to regulations for salmon and Pacific halibut, the proposed regulation indicates that State regulations shall conform to the applicable federal regulations publicly noticed through the NMFS ocean salmon hotline and NMFS Area 2A Pacific halibut hotline, respectively.

STAFF SUMMARY FOR AUGUST 16, 2017
(FOR BACKGROUND ONLY)

Significant Public Comments

1. One oral comment in support of the proposed regulation was received at the Jun 22, 2017 FGC meeting.

Recommendation

FGC staff: Adopt the regulation as proposed.

Exhibits

1. DFW memo, received Apr 11, 2017
2. Initial statement of reasons
3. Draft notice of exemption

Motion/Direction

Moved by _____ and seconded by _____ that the Commission adopts proposed Section 1.95, related to a process to conform State recreational fishing regulations to federal regulations and that the Commission has determined, based on the record, this approval is exempt from the California Environmental Quality Act pursuant to the guidelines in Title 14 sections 15307 and 15308.



FACT SHEET: SALMON

16

SALMON SPECIES

The Council manages Chinook and coho salmon. In odd-numbered years, the Council may manage pink salmon near the Canadian border. Sockeye, chum, and steelhead are rarely caught in the Council's ocean fisheries.

Chinook salmon (*Oncorhynchus tshawytscha*) ("king" or "tyee") are the largest and most highly prized of the Pacific salmon. Like all salmon, Chinook are anadromous, which means they hatch in freshwater streams and rivers, migrate to the ocean for feeding and growth, and return to their natal waters to spawn. Chinook salmon can live up to seven years. They return to their natal waters after 1-5 years in the ocean.

Chinook from Washington, Oregon, and California

range widely throughout the Pacific Ocean and the Bering Sea, and as far south as the U.S. border with Mexico.

Some wild

Chinook populations have disappeared from areas where they once flourished, and several "evolutionarily significant units" (distinct populations) have been listed as at risk for extinction under the Endangered Species Act.

Coho or "silver" salmon (*Oncorhynchus kisutch*) are found in streams and rivers throughout much of the Pacific Rim. Coho have a life history similar to Chinook. Coho in Council-managed waters typically spend only one year in the ocean. North of central British Columbia, they tend to spend two years in the ocean.

Coho generally use smaller streams and tributaries than Chinook. They are most abundant in coastal areas from central Oregon to southeast Alaska.

MANAGEMENT

Because salmon migrate so far in the ocean, managing ocean salmon fisheries is extremely complex.

Salmon are affected by many factors in the ocean and on land, including ocean and climate conditions, dams, habitat loss, urbanization, agricultural and logging practices, water diversion, and predators (other fish, birds, marine mammals, and humans).

Several different regions and groups are involved in the salmon fishery:

Recreational fisheries take place in the ocean, Puget Sound, the Strait of Juan de Fuca, coastal bays, and in freshwater (including Columbia River Buoy 10). The Council manages recreational catches in the ocean but works closely with states on management in other areas.

Commercial fisheries include treaty Indian and non-Indian ocean troll and various treaty Indian and non-Indian net fisheries in Puget Sound, Washington coastal bays, and the lower and mid-Columbia River. The tribes manage tribal fisheries in coordination with the Council. The Council manages fisheries in Federal (ocean) waters, but works closely with states and tribes on fisheries in other areas.

Tribal Ceremonial and Subsistence fisheries occur in Puget Sound, Washington coastal rivers and bays, Columbia River and tributaries, and in the Klamath and Trinity Rivers. The tribes manage these fisheries in coordination with the Council.

COUNCIL PROCESS

The Council's Salmon Fishery Management Plan guides the management of commercial and recreational salmon fisheries



ADVISORY BODIES:

- ◆ SALMON ADVISORY SUBPANEL
- ◆ SALMON MANAGEMENT TEAM
- ◆ MODEL EVALUATION WORKGROUP
- ◆ HABITAT COMMITTEE

FACT SHEET: SALMON

off the coasts of Washington, Oregon, and California. The Council works with treaty tribes and its member states (Washington, Idaho, Oregon and California) on salmon management issues.

Management tools such as season length, quotas, and bag limits vary depending on how many salmon are present. There are two central parts of the fishery management plan: *conservation objectives*, which are annual goals for the number of spawners of the major salmon stocks (“spawner escapement goals”), and *allocation provisions* of the harvest among different groups of fishers (commercial, recreational, tribal, various ports, ocean, and inland). The Council must also

comply with laws such as the Endangered Species Act.

Every year the Council follows a preseason process to develop recommendations for management of the ocean fisheries (below).

HOW ARE SALMON COUNTED?

Correctly judging the size of salmon populations is a constant challenge. Salmon are affected by many natural and human-caused factors, so their numbers can vary widely. Estimating the effects of changes in ocean conditions, weather, and freshwater habitat on salmon is difficult. Most models rely on the age structure of a given brood (the various ages of fish

Date	Salmon management action
January	Salmon Technical Team and Council documents become available. Dates and locations of the two Council meetings, public hearings announced. Detailed schedule published. Salmon Technical Team meets to draft the review of ocean salmon fisheries for the previous year.
February through early March	Salmon Technical Team meets in February to draft preseason report with stock abundance forecasts, harvest and escapement estimates. State and Tribal management meetings take place. Salmon Technical Team reports summarizing the previous salmon season (Review), and projections of expected salmon stock abundance for the coming season (Preseason I) are posted online.
First or second full week of March	Council meeting. Typically, three alternatives are adopted for review at public hearings. These alternatives are initially developed by the Salmon Advisory Subpanel, refined by the Salmon Technical Team, then considered along with public comment by the Council. Council also considers any emergency actions needed.
Week following March Council meeting	Public hearings announcement released. Preseason Report II released, outlining Council-adopted alternatives.
Prior to April Council Meeting	Agencies, tribes, and public meet to agree on allowable ocean and inside waters harvest levels north of Cape Falcon. The Council’s ocean fishery options are refined.
Last week of March and first week of April	General time frame for formal public hearings on the proposed salmon management alternatives.
First or second full week of April	Council meeting. Final management measures recommended to National Marine Fisheries Service for adoption.
First week of May	Final notice of Commerce decision. Final management measures published in Federal Register.

FACT SHEET: SALMON

that make up the population) in combination with knowledge about environmental conditions over time.

Various methods are used to estimate salmon abundance. For adult salmon, fish trapped in weirs or passing dams are counted as they migrate upstream. Biologists count salmon carcasses and redds (nests) while doing stream surveys. Creel surveys help estimate catch in sport fisheries. As juvenile fish move downstream and migrate to the ocean, smolts are counted in rotary screw traps, snorkel surveys, and electrofishing (using electric current to temporarily stun young fish, which are then captured in a net).

Juvenile salmon may be marked with an internal tag, either a coded wire tag (CWT) or a passive integrated transponder (PIT) tag. CWTs are placed in the snout of the fish and are used mainly in hatchery fish. They are recovered from dead adult salmon. PIT tags are usually placed in the body cavity of the fish and are recovered from dead adults, but they can also be tracked electronically when a fish passes a receiver (for example at a bridge or dam) as it migrates. Both types of tags provide population and distribution data.

Research continues to explore genetic stock identification (DNA analysis) as a way to study the relationship between environmental conditions and salmon abundance to help improve population estimates and management of salmon stocks.

ADVISORY BODIES

The Salmon Technical Team (STT) helps the Council by summarizing data from the previous season, estimating the number of salmon in the coming season, and analyzing the effects of the Council's recommendations and amendments. The STT is made up of eight people drawn from state, Federal, and tribal fisheries management agencies, all of whom have technical expertise in salmon management. STT meetings, like all Council advisory body meetings, are open to the public.

The Salmon Advisory Subpanel is made up of 16 members who represent commercial, recreational, and tribal interests, as well as a conservation representative. These advisors play a large role in developing the Council's annual salmon management options in March and April.

The Model Evaluation Workgroup (MEW) reviews and modifies models used to predict the effects of harvest on conservation objectives and allocation provisions. The MEW is made up of scientists from state, tribal, and Federal management agencies.

The Habitat Committee tracks habitat issues for the Council. Many (though not all) of these issues involve salmon habitat. For example, the Habitat Committee has developed several Council comment letters on Klamath and Columbia River dam and habitat issues.

HOW TO GET INVOLVED

There are a few ways to get involved in the Federal salmon management process. First, read up on how salmon are managed and become aware of current salmon fishery issues. Listen in on the salmon agenda items during the March and April Council meetings (see our website, www.pcouncil.org, for details). Provide public comment by using our e-Portal (see the Council website for link and comment deadlines). Attend a salmon season hearing in a coastal community (usually held in March), or sit in on a Salmon Advisory Subpanel, Salmon Technical Team, or Habitat Committee meeting. If you have time, volunteer to serve on an advisory body.

CHALLENGES IN SALMON MANAGEMENT

Besides counting the fish, challenges include coordinating with international, regional, and local agencies and groups; judging the effects of regional fisheries on salmon stocks; recovering salmon under the Endangered Species Act; dividing the harvest fairly; and restoring freshwater habitat.

Farmed salmon, genetically modified salmon, bycatch, hatcheries, the differences between wild and hatchery salmon, and the role salmon play as forage for predators such as killer whales are other hot topics relating to salmon.

COUNCIL STAFF

Robin Ehlke is the Council staff officer responsible for salmon (robin.ehlke@noaa.gov, 503-820-2280 or toll free 866-806-7204)

Updated January 31, 2019



FACT SHEET: PACIFIC HALIBUT

THE FISH

Pacific halibut (*Hippoglossus stenolepis*) are large flatfish found on the continental shelf from California to the Bering Sea. Pacific halibut have flat, diamond-shaped bodies, can weigh up to 500 pounds, and can grow to eight feet long. Larvae begin life in an upright position with eyes on both sides of their head. When they are about an inch long, the left eye migrates over the snout to the right side of the head, and the color of the left side fades.

Eggs and larvae drift passively in ocean currents, generally to the north and west. To counter this drift, young Pacific halibut migrate long distances to the east and south. By the time they are large enough to be caught in the commercial fishery, much of this counter-migration has taken place, but many adult Pacific halibut continue to migrate along the continental shelf. The stock also tends to move to deeper depths in winter for spawning and to shallower waters in summer for feeding.

Female Pacific halibut mature at around 12 years, while males mature at around eight years. The oldest Pacific halibut on record, both male and female, is 55 years old.

WHERE TO FIND REGULATIONS

Commercial catch information from the International Pacific Halibut Commission (IPHC): <https://iphc.int/management/fisheries/directed-commercial-fisheries/directed-iphc-regulatory-area-2a>

Recreational catch information from IPHC: <https://iphc.int/management/fisheries/sport-recreational-fisheries/sport-iphc-regulatory-area-2a>

NMFS Area 2A Halibut Hotline (for sport fishing):
1-800-662-9825, press 5

Sport halibut fishery regulations:

regon: tinyurl.com/pkv5jzr

Washington: tinyurl.com/nc69g69

alifornia: tinyurl.com/yb2x96dm

Adult Pacific halibut are sometimes eaten by marine mammals and sharks, but are rarely preyed upon by other fish.

THE FISHERY

Pacific halibut are one of the most valuable fish species in the northern Pacific. Longlining is the main commercial gear used to target halibut, although there is some allowance for incidental catch in the commercial salmon troll and the primary sablefish fisheries. In 2018, just under 39 million pounds of Pacific halibut were removed from the population coastwide from all removals.

Pacific halibut fishing is an important part of several tribal cultures, and many tribal members participate in commercial, ceremonial and subsistence fisheries.

MANAGEMENT

Total catch is set by the International Pacific Halibut Commission (iphc.int), and the Council then allocates that total among the following sectors: treaty Indian commercial and ceremonial & subsistence, sport, commercial non-Indian, directed longline, incidental salmon troll, and incidental longline in the primary sablefish fishery, north of Point Chehalis, Washington.

Each year the IPHC conducts a stock assessment to estimate the abundance of Pacific halibut using scientific surveys and commercial fishery data.

The IPHC uses a decision table to report the results of this stock assessment, effectively separating the science from policy. The decision table presents the IPHC Commissioners with a range of coastwide harvest levels, each with estimates of risk in terms of stock and fishery trend and status metrics.

The stock assessment is performed at a coastwide scale, but IPHC sets catch limits based on regulatory areas. Area-

HOW TO GET INVOLVED

To propose or comment on a change to the Catch Sharing Plan, please submit comments to Robin Ehlke (robin.ehlke@noaa.gov), Pacific halibut staff officer, or send a letter to the address below. To comment on Council agenda items, see our e-Portal (<https://pfmc.psmfc.org/>)

FACT SHEET: HALIBUT

Date	Halibut management action
January	International Pacific Halibut Commission sets the total allowable catch.
September Council meeting	Council solicits proposed changes to the Catch Sharing Plan.
Between Sept. & Nov. meetings	Council takes comments on proposed changes to Catch Sharing Plan.
November meeting	Council makes final recommendations for changes.

specific biomass estimates are derived by dividing up the coastwide estimate using the observed survey catch rates and bottom area, and accounting for hook competition from other species, and the timing of the survey and fishery removals. The Commissioners consider this data and the current harvest policy in determining the final catch targets for each year.

The catch level set by the Commission for each IPHC Regulatory Area is expressed as “total constant exploitation yield” (TCEY). For IPHC Regulatory Area 2A (California, Oregon, and Washington), non-directed removals for commercial fishery discards and bycatch in non-target fisheries are then subtracted from the TCEY to produce the “fishery constant exploitation yield” (FCEY), which is the amount available for harvest by the directed fisheries. The

FCEY is then used by the PFMCC Catch Sharing Plan to determine allocations and specific quotas.

CATCH SHARING PLAN

The Halibut Catch Sharing Plan dictates how the IPHC and National Marine Fisheries Service will divide the total allowable catch (TAC) for Washington, Oregon, and California Pacific halibut fisheries (Area 2A). The TAC is set each January by the IPHC, noting the Catch Sharing Plan allocations set by the Council. Allocations between some recreational areas are subject to in-season and other changes. For a description of how the Pacific halibut harvest is shared, see the Pacific Halibut Catch Sharing Plan for Area 2A.

Updated January 29, 2019

HALIBUT HISTORY

Halibut have been fished for hundreds or thousands of years by native Americans on the West Coast. The U.S. commercial fishery started in 1888, when halibut were first landed in Tacoma, Washington. Many of these fishermen had fished halibut in Norway. Nova Scotians and Newfoundlanders are also found in the West Coast halibut fishery.

Because halibut can be kept for long periods of time without spoiling, they were a popular target. In the 1890s, a fleet of sailing vessels with two-man dories fished for halibut from the West Coast. Large steam-powered vessels soon entered the industry, and by the 1910s it became clear that halibut stocks were suffering from overfishing.

In 1923 the U.S. and Canada signed a convention on halibut, creating what was eventually called the International Pacific Halibut Commission. In 1924 the Commission implemented a three-month winter closure – the first management action to affect halibut.

The convention was revised several times over the years. The most recent change occurred in 1979, when each government was allowed to establish more restrictive regulations. Canada created a limited entry system in 1979 and an individual vessel quota system in 1991. Alaska created an individual fishing quota system in 1995, similar to the Canadian program, except that shares were issued to individuals instead of vessels. Also in 1995, non-tribal commercial fishers in Oregon, Washington, and California had to make a choice: participate in the sport charter industry for halibut, the commercial directed fishery, or the halibut incidental fishery in the salmon troll fishery.

STAFF SUMMARY FOR NOVEMBER 5, 2019

9. WHALE AND TURTLE PROTECTIONS – RECREATIONAL DUNGENESS CRAB FISHERY**Today's Item****Information** ☐**Action** ☒

Discuss and consider possible recommendations for management strategies to provide additional whale and turtle protections in the recreational Dungeness crab fishery.

Summary of Previous/Future Actions

- FGC discussed entanglement settlement and referral to MRC Apr 17, 2019; Santa Monica
- MRC discussed possible management measures for the recreational fishery Jul 11, 2019; MRC, San Clemente
- FGC supported considering recreational measures per MRC recommendation Aug 7-8, 2019; Sacramento
- **Today's discussion** **Nov 5, 2019; MRC, Sacramento**

Background

FGC has authority to regulate the recreational Dungeness crab fishery; however, authority over the commercial Dungeness crab fishery is held by DFW and the California State Legislature. In recent years, whale populations in California's waters have increased, leading to greater presence in Dungeness crab fishing grounds and an increased risk of entanglement in deployed fishing gear.

In 2017, the Center for Biological Diversity sued DFW, challenging DFW authorization of the commercial Dungeness crab fishery as a violation of Section 9 of the federal Endangered Species Act for take of blue and humpback whales and leatherback sea turtles. In Mar 2019 a settlement was reached that defines a series of interim measures to protect listed whales and turtles in the commercial Dungeness crab fishery while DFW pursues a habitat conservation plan (HCP) for federal government approval Exhibits 1 and 2 provide additional background.

At the Apr 2019 FGC meeting, a discussion was held to recap the provisions of the commercial fishery settlement agreement and explore its potential application to the recreational Dungeness crab fishery. After hearing differing public comment and multiple stakeholder requests, FGC referred the topic to the Jul 2019 MRC meeting for further discussion and to explore the potential need for provisions in the recreational Dungeness crab fishery.

In Jul 2019, MRC received a DFW update on management strategies and the HCP application process, and initiated a discussion on the risk of and potential response to entanglements from the recreational fishery. As a result of the discussion, MRC recommended, and in Aug 2019 FGC approved, a request that DFW explore inclusion of the recreational crab fishery in DFW's commercial crab fishery HCP application, including a suite of common-sense management measures.

At this meeting, DFW will present management strategies that provide additional whale and turtle protection in the recreational Dungeness crab fishery, including six measures for possible application to the recreational crab fishery for MRC discussion and consideration (Exhibit 3).

STAFF SUMMARY FOR NOVEMBER 5, 2019

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

Support development of a rulemaking for management measures in the recreational Dungeness crab fishery, considering recommendations provided by DFW and through public comments during the meeting.

Exhibits

1. Staff summary for July 11, 2019 MRC meeting, Agenda Item 9 (for background purpose only)
2. Staff summary for Apr 10-11, 2019 FGC meeting, Agenda Item 25 (for background purposes only)
3. DFW presentation

Motion/Direction

The Marine Resources Committee recommends that the Commission support six proposed management measures for the recreational Dungeness crab fishery as recommended by the Department to minimize the risk of whale and turtle entanglements.

OR

The Marine Resources Committee recommends that the Commission support six proposed management measures for the recreational Dungeness crab fishery as recommended by the Department to minimize the risk of whale and turtle entanglements, except _____.

MANAGEMENT STRATEGIES TO PROVIDE ADDITIONAL WHALE AND TURTLE PROTECTION IN THE RECREATIONAL DUNGENESS CRAB FISHERY

Ryan Bartling

Marine Region

California Department of Fish and Wildlife



MANAGING ENTANGLEMENT RISK IN THE RECREATIONAL DUNGENESS CRAB FISHERY

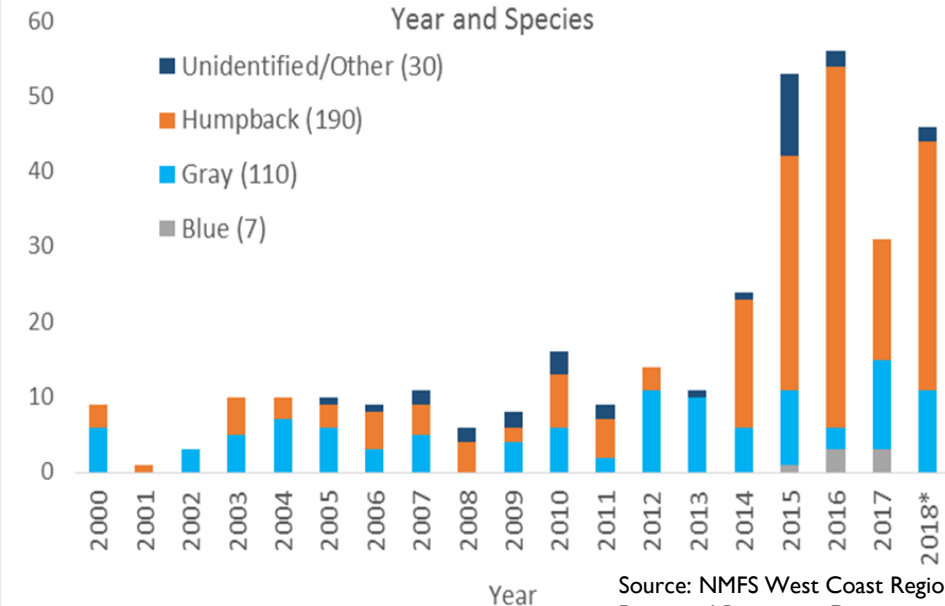
Problem statement:

Since 2014, marine life entanglements have become more frequent on the U.S. West Coast. Species of greatest concern for entanglement include ESA listed Humpback whales, Blue whales and Leatherback Sea turtles. There have been 47 confirmed whale entanglements in Dungeness crab gear which includes two recreational gear entanglements. Gear identification is key to understanding the entanglement type and helps inform disentanglement response teams. Gear marking also helps fishery managers track gear and implement appropriate management measures to minimize entanglement risk.



Credit: Scott Benson - MMHSRP Permit 18786

Confirmed Whale Entanglements on the U.S. West Coast Per
Year and Species



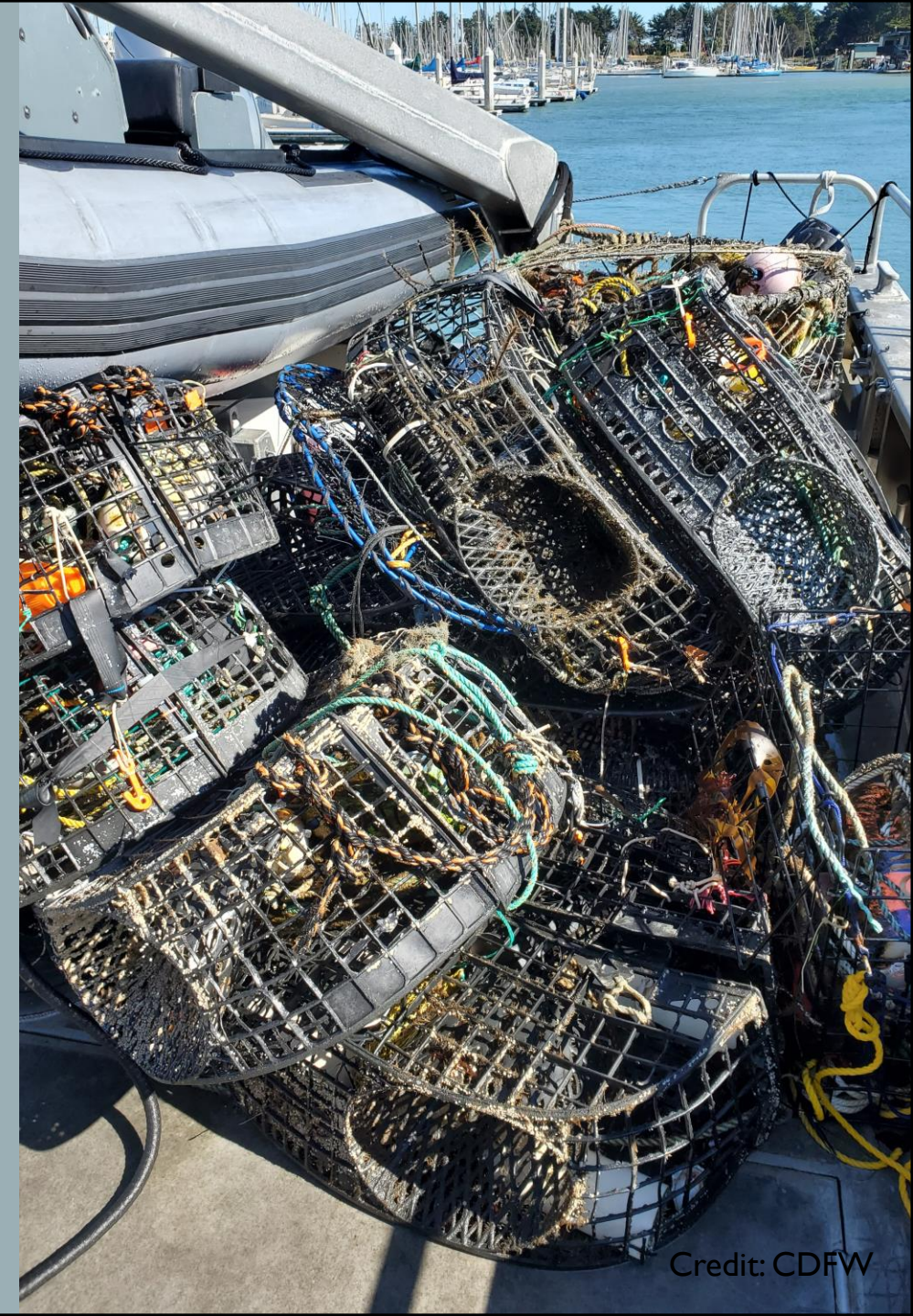
Source: NMFS West Coast Region
Protected Resources Division



EFFORTS TO MANAGE MARINE LIFE ENTANGLEMENT RISK

CDFW is working to manage the risk:

- ✓ Developing a Conservation Plan for Humpback whales, Blue whales and Leatherback sea turtles
- ✓ Applying for Incidental Take Permit (ITP) under the Endangered Species Act (ESA)
- ✓ Developing a Risk Assessment and Mitigation Program in regulation for commercial Dungeness crab
- ✓ Recently implemented a Gear Retrieval Program for the commercial Dungeness crab fishery
- ✓ Completing a rulemaking to enhance marking for all commercial trap gear fisheries
- ✓ Conducting regular Risk Assessments for the commercial Dungeness crab fishery



Credit: CDFW



UPDATING RECREATIONAL FISHERY REGULATIONS

Rational to support change :

- ✓ Protect marine life and listed species under the ESA
- ✓ Possible inclusion in Conservation Plan will allow for adaptive management
- ✓ Prevent economic harm to the commercial sector
- ✓ Recreational fishery is operated in similar locations with similar gear configurations
- ✓ Simple low-cost common-sense management strategies are available



Credit: CDFW



RECREATIONAL FISHERY PROPOSALS

Common-sense management strategies:

- ✓ Enhanced Gear Marking
- ✓ Trap Limit
- ✓ Report Card
- ✓ Service Interval Requirement
- ✓ Gear Specification/Configuration Requirement
- ✓ Director Authority for In-season Changes to Minimize Risk



Credit: CDFW



RECOMMENDED NEXT STEPS

- ☐ MRC Recommendation
- ☐ Commission Direction
- ☐ Stakeholder Engagement/Discussion
- ☐ Possible Regulatory Timeline



Credit: CDFW

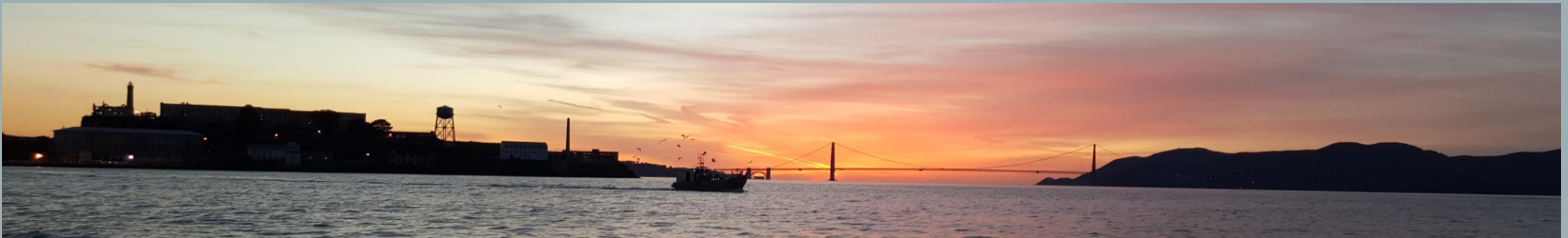


Ryan Bartling
Senior Environmental Scientist
California Department of Fish and Wildlife

Ryan.Bartling@wildlife.ca.gov
(415) 761-1843

More information:
www.wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries

www.opc.ca.gov/whale-entanglement-working-group



From: Kelly Sayce <kelly@strategicearth.com>
Sent: Tuesday, November 12, 2019 4:37 PM
To: FGC
Cc: Miller-Henson, Melissa@FGC; Ashcraft, Susan@FGC; Pope, Elizabeth@FGC; Rachelle Fisher
Subject: Dungeness Crab Fishing Gear Working Group: 2019-20 Updates & Recommendations
Attachments: CAWhaleWorkingGroup_Highlights&RecommendationsMemo_Sept&Oct2019_FINAL.pdf

Dear President Sklar,

The California Dungeness Crab Fishing Gear Working Group (Working Group) is pleased to submit the following updates and recommendations to support the state's efforts to reduce the risk of whale entanglements in California Dungeness crab fishing gear (see memo attached).

The Working Group looks forward to continuing to engage with the California Fish and Game Commission, California Department of Fish and Wildlife, Ocean Protection Council, Joint Committee on Fisheries and Aquaculture (the Legislature), Dungeness Crab Task Force, Pacific States Marine Fisheries Commission, and others to inform Working Group discussions and share Working Group outputs. The Working Group welcomes the opportunity to maintain an open line of communication with your office and continues to be committed to providing the state with recommendations to support thriving whale populations along the West Coast and a thriving and profitable Dungeness crab fishery.

Information about the Working Group and its activities, including summaries, memos, members list, background materials, and other resources are available at <http://www.opc.ca.gov/whale-entanglement-working-group>. Please do not hesitate to contact Kelly Sayce at 310-738-2665 or kelly@strategicearth.com with any questions about the Working Group and its efforts.

All our best,
Kelly Sayce and Rachelle Fisher
Working Group Administrative Team

--

Kelly Sayce, MAS
Principal
Strategic Earth Consulting

1171 Robertson Blvd., Suite 352
Los Angeles, CA 90035
c: 310.738.2665
p: 
e: kelly@strategicearth.com
www.strategicearth.com

CALIFORNIA DUNGENESS CRAB FISHING GEAR WORKING GROUP

RECOMMENDATIONS MEMO

TO: California Department of Fish and Wildlife, Charlton Bonham, Director
California Ocean Protection Council, Deborah Halberstadt, Executive Director
Joint Committee on Fisheries and Aquaculture, Mike McGuire, Chair
California Fish and Game Commission, Eric Sklar, President
Pacific States Marine Fisheries Commission, Randy Fisher, Executive Director

CC: California Ocean Protection Council, Jenn Eckerle, Deputy Director
California Department of Fish and Wildlife, Craig Shuman, Marine Region Manager
California Fish and Game Commission, Melissa Miller-Henson, Deputy Director
California Fish and Game Commission, Susan Ashcraft, Marine Advisor
National Marine Fisheries, Protected Resources Division, Penny Ruvelas, Long Beach Branch Chief
National Marine Sanctuaries, West Coast Regional Office, Lisa Wooninck, Policy Coordinator
Pacific States Marine Fisheries Commission, Dave Colpo, Senior Program Manager
California Dungeness Crab Task Force (DCTF), DCTF Administrative Team
Marine Mammal Commission, Dennis Heinemann, Senior Advisor, Fisheries and Ecosystems
Oregon Whale Entanglement Working Group, Amanda Gladics, Facilitator
Washington Whale Entanglement Working Group, Fran Recht, Facilitator

FROM: California Dungeness Crab Fishing Gear Working Group

DATE: November 12, 2019

RE: Updates and 2010-20 recommendations to advance the Risk Assessment and Mitigation Program (RAMP) and reduce whale entanglements

Since September 2015, the California Dungeness Crab Fishing Gear Working Group (Working Group) has been taking steps to actively identify and be responsive to elevated risk of entanglements. The Working Group met on September 4-5, 2019 ([meeting summary](#)) to provide input to the California Department of Fish and Wildlife (CDFW) regarding the Risk Assessment and Mitigation Program (RAMP) rulemaking and Incidental Take Permitting (ITP) process, and to discuss the 2019-20 RAMP in consideration of the recent settlement agreement. This was followed by October 15, 2019 and October 31, 2019 Preseason Risk Assessment meetings to develop recommendations for the CDFW Director in advance of the 2019-20 season. Key highlights of the Working Group's discussions, as well as next steps and recommendations from the meetings are provided below.

Preseason Risk Assessment

Based on the information available during the October 15, 2019 discussion and with consideration of each of the four RAMP factors, the Working Group developed and agreed upon the following levels of risk to be shared with the CDFW Director prior to the November 1, 2019 risk determination date as outlined in the settlement.

- Entanglement risk: low
- Marine life concentrations risk: moderate and decreasing
- Ocean conditions and forage risk: moderate/low and decreasing
- Fishing dynamics risk: low

The Working Group made the following preseason risk assessment recommendations on October 15, 2019:

- **Open 2019-20 Season:** The Working Group recommended that the Central and Northern Management Area open as scheduled without management measures (November 15 and December 1, respectively), presuming that delays are not warranted due to human health risks or low quality.
- **Voluntary Actions:** The Working Group recommended that the fleet implement voluntary actions to prevent entanglements, including implementation of the Best Fishing Practices Guide, which includes best practices for surface-gear set-up, as well as slackline reduction, and using neutral buoyancy line. The 2019-20 Best Practices Guide is available on the [Working Group's website](#).

During the follow up October 31, 2019 discussion, the Working Group evaluated new data that was available through recent aerial surveys and on the water observations. Taking into consideration this new information, a majority of Working Group participants continued to support the October 15, 2019 recommendation.

A minority (7 of 22 members) of the Working Group concurred with the risk levels specified in the October 15, 2019 recommendation. However, based on the new whale concentration data available showing that Humpback whales have not yet begun their traditional migration out of the Central Management area, they recommended a more precautionary approach of delaying the Central Management Area season opening until December 1, 2019. The concern is that opening the season on November 15 when a significant number of whales are still present, could result in an entanglement and jeopardize the rest of the 2019-20 commercial fishing season in the early months of the fishery causing broader economic impacts to the fishery than a 2-week delay.

Details of the preseason risk assessment and supporting rationale are available in the [Risk Assessment and Mitigation Program \(RAMP\) 2019-20 Management Recommendations Form](#), which was collaboratively prepared by Working Group participants and can be reviewed, along with the CDFW staff recommendation memo.

Connections: RAMP, Incidental Take Permit (ITP) Process, and Settlement Requirements

The Working Group learned about and discussed the connections across the three 'phases' of RAMP development including **Interim Management** (2019-2020), **RAMP 1** (RAMP regulation starting 2020-21 through to when RAMP 2 is available), and **RAMP 2** (starting date TBC - reflective of the National Oceanic and Atmospheric Administration (NOAA) approved Conservation Plan (CP) and ITP) ([see CDFW presentation](#)). Settlement definitions and terms were reviewed, management options were discussed, and the Working Group provided guidance where additional clarity was needed. The focus of the meeting was on the draft RAMP rulemaking and planning for the 2019-20 fishing season (interim management), which are summarized in the sections below.

Refining the RAMP

In March 2019, a settlement agreement was reached between CDFW, the Center for Biological Diversity (CBD), and the Pacific Coast Federation of Fishermen's Associations (PCFFA) as a result of a lawsuit filed by CBD in 2017. Since then, CDFW has been working to implement the terms of the agreement, by outlining the process for the 2019-20 season and continuing to refine the RAMP and integrated into regulation as mandated by Senate Bill 1309.

Interim Management (2019-20 RAMP)

Interim management of the fishery during the 2019-2020 season will be dictated by the settlement. CDFW will lead the risk assessment process per the timeline outlined in the settlement, and will work with experts to gather available data in advance of each assessment for the Working Group's review. The Working Group would be expected to develop a recommendation on options of management measures to reduce the risk of whale entanglements for the CDFW Director for consideration as he evaluates actions to reduce entanglement risk. The CDFW Director will consult with the Working Group and settlement parties and has sole authority to make decisions and implement management measures.

The Working Group developed a number of recommendations specific to the design and implementation of the 2019-20 RAMP, including:

- **Available Data:** To inform the RAMP risk assessments, timely data will be extremely important. The Working Group highlighted the importance of being able to review information in advance of making decisions and expressed concern about making recommendations with limited data. To ensure the availability of data for scheduled risk assessments, the Working Group recommends that a systematic aerial survey be conducted in mid to late-October to inform the pre-season assessment and in March to inform the mid-season assessment. Additionally, timely aerial survey and tagging information about leatherback turtle concentrations is requested. To ensure continual, proactive tracking throughout the season while being mindful of available resources and weather opportunities, the Working Group recommends the use of reconnaissance flights in addition to systematic surveys. Additionally, the Working Group recommends continuing to test electronic monitoring tools (e.g., solar loggers, etc.) to develop more robust data streams to inform risk assessments.
- **Gear Innovations:** To support the state's efforts to reduce the risk of whale entanglements in the Dungeness crab fishery, the Working Group recommends continued dialogue on exploring new gear innovations for the 2019-20 season and beyond to allow for continued fishing while whales are present. The Working Group's Gear Innovations Project Team is working to develop a comprehensive, systematic gear innovations testing project to begin in Spring 2020. The project is anticipated to include testing of Yale grip sleeves, Blue Ocean Gear technologies, Longsoaker Fishing systems, Desert Star systems, Fiomarine Buoys, SMELTs line-less rafts, and long-lining fishing gear. Additional gear innovations and set-ups may be added to the project testing design. The Project Team, in close coordination with the Working Group, will work collaboratively with others to seek funding to purchase gear innovations for testing, to pay fishermen for their participation in the project, and to fund a project coordinator to oversee and consistently implement the testing.
- **Communications:** To better prepare the fleet for the 2019-20 fishing season, the Working Group recommends the development of a newsletter to all permit holders with information about

triggers, potential management measures, and gear innovations ready for testing (e.g., the Novabraid). The Working Group also recommends the development of external communications to tell the broader public that the issue is being addressed through a collaborative process that includes fishermen, conservation organizations, researchers, and managers. The Working Group also recommends the development of a 2019-20 Best Fishing Practices Guide.

RAMP 1 (starting 2020-21): CDFW Straw Proposals, Draft RAMP Straw Proposals

As mandated by Fish and Game Code section 8276.1, CDFW, in consultation with the Working Group, is required to adopt regulations on or before November 1, 2020 to establish criteria and protocols to evaluate and respond to elevated entanglement risk (i.e., the RAMP). These regulations are expected to be in place for the 2020-21 fishing season and until NOAA issues an ITP to the state for the Dungeness crab fishery (timing TBC). During the September 4-5, 2019 meeting, CDFW presented [draft straw proposals](#) for humpback whales, blue whales, and leatherback turtles for the Working Group's review and consideration.

Some Working Group participants are concerned about the low number of marine entanglements and concentrations that would trigger management measures that could severely impact the California commercial Dungeness crab fleet. The Working Group would like managers to consider a finer-scale approach to management rather than the broad scale temporal and spatial management measures outlined in CDFW's draft straw proposals.

- **Considerations to Improve CDFW's Rulemaking Straw Proposal:** The Working Group emphasized the need to include the forage/ocean factor in the rulemaking and highlighted the importance of expeditiously identifying data and expertise to inform the factor. Improved data collection and availability as well as investigation of new data gathering tools (e.g., loggers, etc.) across all factors was also identified as a top priority to ensuring the RAMP is effective and useful. The Working Group had concerns about the quality and reliability of data being used to track whale concentrations and suggested managers look to more thorough, robust, and impartial data sources. Working Group participants requested that CDFW consider more refined spatial and temporal closures and other management measures under consideration. In parallel, the Working Group will continue engaging in exploring new gear innovations to allow for continued fishing while whales are present.

The Working Group developed a number of recommendations specific to the development of RAMP regulations, including:

- **Models:** The Southwest Fisheries Science Center and other agencies and organizations are in the processes of developing whale and forage distribution models that could have utility in the RAMP. The Working Group would like these models to be made available for consideration and testing. Once fully vetted, models should be built into the RAMP regulations to support access to real-world data availability.
- **Single-Year Buoy Tags:** Forensic analysis of marine life entanglements show that it is often difficult to know when an entanglement is the result of derelict or actively fished gear or how long the animal has been carrying the gear. Switching to single-year buoy tags for Dungeness crab gear may help inform this information gap. The Working Group recommends the state and Dungeness Crab Task Force (DCTF) explore the viability of a single-year buoy tag.

- **Funding:** To help further develop the RAMP, and specifically improved whale and sea turtle concentration data streams, the Working Group supports CDFW, in collaboration with the Ocean Protection Council (OPC) and NMFS, exploring a Section 6 funding opportunity. Although not a solution for reducing the risk of whale entanglements, the Working Group also recommends the OPC allocate \$110,000 per year for five years to provide support to the Large Whale Entanglement Response Network in support for entanglement responses, documentation, and analysis.
- **RAMP 1 Considerations:** During the course of the September 4-5, 2019 Working Group meeting, a number of details relative to the next phase of the RAMP were brainstormed (see meeting summary, link available below). The Working Group recommends memorializing and tracking these details so they may be considered for future iterations of the RAMP (i.e., RAMP 2).
- **Adaptive approach to RAMP regulations:** Members of the Working Group have expressed concern that an overly prescriptive RAMP rulemaking may bind the fishery into suboptimal decision making that is detrimental to marine life and the fishery, and would result in higher agency cost burdens to revise regulations as available information evolves and fishery and environmental dynamics continue to shift. The Working Group recommends that CDFW consider opportunities for the RAMP rulemaking to incorporate an adaptive management approach, and will provide additional guidance to support this effort.
- **Slackline Best Practices:** To help inform fishing best practices and reduce whale entanglements, the Working Group recommends the California Dungeness Crab Task Force (DCTF) help inform slackline/scope best practices when considering such variables as fishing depths, fishing at different times throughout the fishing season and along different parts of the coast, etc. Ideas generated by the DCTF will help to inform a slackline best practices guide that would be developed by the Working Group and shared with the fleet.

A more detailed summary of key themes discussed during the September meeting is also publicly available on the Working Group webpage: <http://www.opc.ca.gov/whale-entanglement-working-group/>. For more information about the Dungeness Crab Fishing Gear Working Group, please contact info@cawhalegroup.com or visit <http://www.opc.ca.gov/whale-entanglement-working-group/>.



info@cacoastcrabassociation.org

California Coast Crab Association • 900 Northcrest Drive, #130 • Crescent City, CA 95531

November 27, 2019

Melissa Miller-Henson, Executive Director
California Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090

RE: Public comment, Agenda Item #30, Whale and turtle protections in the recreational Dungeness crab fishery

Dear Executive Director Henson and Commission Members,

The California Coast Crab Association (CCCA) is a non-profit 501(c)(6) trade organization made up of commercial crab fishermen and crab buyers. We represent Dungeness crab fishermen, processors, live buyers, and receivers along the entire California coast.

As the president of the CCCA, the board of directors and I would like to take this opportunity to support the commission in its endeavor to pursue whale and turtle protections in the recreational Dungeness crab fishery. Particular concerns of our members are the disparities between the commercial and sport regulations as they pertain to season delays. We believe that it is in the best interest of the Dungeness crab fishery as a whole that the sport fishery regulations be amended to include the sport sector in regards to season delays for both domoic acid and delays recommended by the Director of CDFW via the Whale Working Group. The need for individual trap identification, such as trap tags, is necessary at this time to help better understand and mitigate potential whale entanglement issues. The CCCA stands in support of the commission addressing other issues on the agenda including catch report cards and a service interval requirement.

The CCCA appreciates the commission considering amending these laws which affect the future of the Dungeness Crab fishery.

Respectfully,

Ben Platt, President
California Coast Crab Association

Memorandum

Date: November 19, 2019

To: Melissa Miller-Henson
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: Marine Protected Areas Management Program Updates for 2019

Overview

In 2016, the California Fish and Game Commission (Commission) requested the California Department of Fish and Wildlife (Department) to prepare annual updates about the management of California's marine protected areas (MPAs). The Department, along with core partners, developed an MPA Management Program ([Management Program](#)) to manage the MPAs as a statewide network using a collaborative partnership-based approach. The Management Program is composed of four components: 1) outreach and education, 2) research and monitoring, 3) enforcement and compliance, and 4) policy and permitting. This approach is essential to inform adaptive management of the MPA network and to help meet the goals of the Marine Life Protection Act (MLPA). This memo provides information about 2019 Management Program highlights and future MPA related activities that are a result of collaboration and ongoing coordination with core partners.

Outreach and Education

Efforts continue to focus on increasing public awareness of the MPA network to improve compliance and understanding of MPAs statewide. Development and distribution of printed materials like brochures and posters and online resources such as MPA blogs, articles, and videos continues to be a priority. Notable accomplishments from 2019 include:

- Finalization and release of the [California MPA Network Outreach and Education Guide](#). The Guide is a resource for partner agencies and organizations who are interested in creating Department approved outreach materials. Created to support consistent and accurate messaging regarding California's MPA Network.
- An updated [Ocean Sport Fishing Web Map](#) provides smart phone users a resource to help visualize their location relative to fishing regulation boundaries, including where they are in relation to MPAs.

Users can also interact with the Web Map to gain regulatory information regarding each MPA to ensure compliance with take regulations.

- An *Outdoor California* article was published in November highlighting rocky intertidal research at the Southeast Farallon Island State Marine Reserve and Special Closure.

Research and Monitoring

The [MPA Monitoring Program](#) guides research and monitoring activities across California's MPA network. The [MPA Monitoring Program](#) implements a two-phase, ecosystem-based approach.

Phase 1: Regional, baseline monitoring

Concluded 2018. All Phase 1 products are available [here](#).

Phase 2: Statewide, long-term monitoring

Following the guidance outlined in the [MPA Monitoring Action Plan](#) that was approved by the Commission and the Ocean Protection Council (OPC) in October 2018, OPC awarded \$9.5 million for seven long-term MPA monitoring projects. The awards support research and analysis of marine ecosystems, oceanographic conditions, and human uses through 2021. A combined total of 24 universities, agencies, and institutions are involved in this long-term monitoring investment.

Projects as titled, include:

- *Establishing a statewide baseline and long-term MPA monitoring program for commercial and CPFV fisheries in the state of California*; summary available [here](#)
- *Monitoring and evaluation of kelp forest ecosystem in the MLPA marine protected area network*; summary available [here](#)
- *Evaluating the performance of California's MPA network through the lens of sandy beach and surf zone ecosystems*; summary available [here](#)
- *California Collaborative Fisheries Research Program – monitoring and evaluation of California marine protected areas*; summary available [here](#)
- *Assessment of rocky intertidal habitats for the California marine protected area monitoring program*; summary available [here](#)
- *Integrated ocean observing systems for assessing marine protected areas across California*; summary available [here](#)
- *Monitoring and evaluation of mid-depth rocky reef ecosystems in the MLPA marine protected areas*; summary available [here](#)

In 2019, OPC awarded \$1.5 million to improve an existing population connectivity model to better inform the spatial design of California's long-term MPA monitoring

program, and for monitoring and assessment of California's more than 500,000 acres of estuarine habitat.

The Department continues to build and maintain working relationships with many of our partner organizations involved in long-term MPA monitoring efforts. Department staff were out numerous days in the field participating in long-term MPA monitoring projects with partners including multiple academic institutions, the Partnership for Interdisciplinary Studies of Coastal Oceans, Reef Check California, the Multi-Agency Rocky Intertidal Network, the California Collaborative Fisheries Research Program, Marine Applied Research and Exploration, and the National Parks Service. Additionally, the Department's R/V *Garibaldi* and R/V *Mystinus* collectively provided approximately 55 days of vessel time in support of long-term MPA monitoring.

Enforcement and Compliance

The Department's Law Enforcement Division (LED) continues to monitor California's MPAs to enforce regulations and encourage compliance.

MPA Enforcement Efforts

LED staff frequently contact individuals in the field when in MPAs. Throughout 2017 around 33,000 contacts were made resulting in more than 1,000 warnings and over 900 citations. Throughout 2018 almost 19,000 contacts were made with around 800 warnings and 500 citations issued. From January through June 2019 11,611 related contacts were made by our LED staff, resulting in 422 warnings and 224 citations.

Legislation

On January 1, 2019 [Assembly Bill 2369](#) went into effect. This bill increases penalties for commercial fishing operations found violating MPA regulations.

Enforcement Tools

LED continues efforts to improve the enforcement and compliance of wildlife violations through a new electronic records management system. The new system went live in September and will help identify violation hot spots as well as repeat or cross county offenders.

Policy and Permitting

Scientific Collecting Permits (SCP)

From January to October, a total of 54 SCPs were issued for research within 85 MPAs, including 41 state marine reserves, 35 state marine conservation areas, 7 no-take state marine conservation areas, and 2 state marine recreational management areas.

Since the Network was implemented in 2012, a total of 749 SCPs have been issued for research within MPAs. Regionally, the MPAs with the most research and monitoring projects are: Crystal Cove SMCA – 100 projects (South Coast), Carmel

Bay SMCA – 80 projects (Central Coast), Bodega Head SMR – 49 projects (North Central Coast), and Van Damme SMCA – 22 projects (North Coast).

Although no action has been required of the Commission regarding the following items in 2019, the Department is working with partners to address the topics and will involve the Commission appropriately.

Pre-Existing Man-Made Structures Located within MPAs

At the time the Commission adopted California's MPA Network, 2007-2012, certain man-made structures such as piers, docks, cables, intake and outflow pipes, and seawalls, already existed within some of the newly designated MPAs. In many cases, these structures had been in place for years or decades prior to MPA establishment. While normal use or operation of most of these structures or facilities may not result in take of marine species, maintenance, repair, or replacement could result in take, particularly during a short-term, active construction or repair phase.

The Department is currently working with the MPA Statewide Leadership Team to determine a best approach to address limited incidental take of marine resources associated with repair and maintenance of structures that predate the MPA Network.

Restoration Project and Upper Newport Bay State Marine Conservation Area

OPC funded a feasibility study proposed by the Newport Bay Conservancy to evaluate potential routes to restore the full continuum of tidal to freshwater to upland habitat in Big Canyon. Big Canyon is the largest remaining natural canyon on the east side of Newport Bay, located in southern California. It has been informally designated as a Nature Park with the upper 45-acre parcel owned by the City of Newport Beach. The lower 15-acre portion is owned by the Department and is a part of the Upper Newport Bay State Ecological Reserve which sits adjacent to Upper Newport Bay State Marine Conservation Area (SMCA). Following this feasibility study, if restoration plans are approved by all appropriate permitting agencies, there is potential to add habitat to the existing Upper Newport Bay SMCA. A range of potential habitat options are under consideration including mud flats, marsh, and wetlands restoration resulting in approximately 2-6 acres in net gain of estuarine habitat to the SMCA.

International Recognition and Relations

California's MPA Management Program continues to receive international recognition and build relationships with international partners.

- On October 24, California received a [Blue Park Award](#) for the MPAs around the [Northern Channel Islands](#) at the 2019 Our Ocean Conference in Oslo, Norway. In recognition of their strong protection of marine ecosystems and biodiversity, the Northern Channel Islands earned Platinum level status and will join the coalition of outstanding Blue Parks around the world.

The MPAs at the Northern Channel Islands are some of the oldest in California's comprehensive statewide marine network.

- In 2018, a diverse group of Californians, known as the Expert Assessment Group for the Green List (EAGL), began working with the International Union for Conservation of Nature (IUCN) to assess how California's MPA Network aligns with the [IUCN Green List program](#). During 2019, California Native American Tribes and general public provided comments on the California [adapted Green List indicators](#) developed by the EAGL. Beginning this fall, and continuing into 2020, the EAGL will finalize their examination and responses to the comments received on the adapted indicators and will make site visits to help assess how management of California's MPA network meets IUCN's Green List criteria. The initial evaluation process is anticipated to be completed by the end of 2020.
- The Department along with core partners provided MPA management guidance to both an Indonesian delegation and a Chilean delegation in February and October 2019, respectively. Both delegations came to California seeking guidance, insight, and recommendations on how to manage and govern MPAs once implemented.

Looking Forward

The Department and its partners continue to work towards achieving the goals and requirements of the MLPA through the MPA Management Program. Significant attention is now focused on preparation for the MPA decadal management review in 2022. The Decadal Management Review will focus on reviewing each of the four components of the MPA Management Program and the progress made towards meeting the goals of the MLPA. Performance evaluation questions outlined in [Appendix B](#) of the MPA Monitoring Action Plan will guide the discourse regarding the DMR.

These highlights would not be possible without leveraging numerous cooperative partnerships at statewide, regional, and local scales. The Department will continue to provide the Commission with annual MPA highlights to facilitate conversations about the adaptive management of the network.

If you have any questions or need more information, please contact Dr. Craig Shuman, Marine Regional Manager, at (916) 445-6459.

Attachment

ec: Mark Gold, Deputy Secretary
Ocean and Coastal Policy
Natural Resources Agency
Mark.Gold@resources.ca.gov

Melissa Miller-Henson, Executive Director
Fish and Game Commission
November 19, 2019
Page 6

Valerie Termini, Chief Deputy Director
Wildlife and Fisheries Branch
Valerie.Termini@wildlife.ca.gov

Stafford Lehr, Deputy Director
Wildlife and Fisheries Branch
Stafford.Lehr@Wildlife.ca.gov

Craig Shuman, D. Env., Region Manager
Marine Region
Craig.Shuman@wildlife.ca.gov

Mike Stefanak, Assistant Chief
Law Enforcement Division
Mike.Stefanak@wildlife.ca.gov

Becky Ota, Program Manager
Marine Region
Becky.Ota@wildlife.ca.gov

Attachment 1. *Marine Protected Areas Management Program Updates for 2019 Memo*
hyperlinks in sequential order.

1. Page 1

- a. Management Program: <https://www.wildlife.ca.gov/Conservation/Marine/MPAs/Management>
- b. California MPA Network Outreach and Education Guide: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=169141&inline> (PDF)
- c. Ocean Sport Fishing Web Map: <https://www.wildlife.ca.gov/OceanSportfishMap>

2. Page 2

- a. MPA Monitoring Program: <https://wildlife.ca.gov/Conservation/Marine/MPAs/management/monitoring>
- b. All Phase 1, regional baseline monitoring products: <https://www.wildlife.ca.gov/Conservation/Marine/MPAs/management/monitoring#537132130-baseline-monitoring-reports-by-region>
- c. MPA Monitoring Action Plan: <https://www.wildlife.ca.gov/Conservation/Marine/MPAs/Management/monitoring/action-plan>
- d. Establishing a statewide baseline and long-term MPA monitoring program for commercial and CPFV fisheries in the state of California: <https://caseagrants.ucsd.edu/project/establishing-a-statewide-baseline-and-long-term-mpa-monitoring-program-for-commercial-and>
- e. Monitoring and evaluation of kelp forest ecosystem in the MLPA marine protected area network: <https://caseagrants.ucsd.edu/project/monitoring-and-evaluation-of-kelp-forest-ecosystems-in-the-mlpa-marine-protected-area>
- f. Evaluating the performance of California's MPA network through the lens of sandy beach and surf zone ecosystems: <https://caseagrants.ucsd.edu/project/evaluating-the-performance-of-californias-mpa-network-through-the-lens-of-sandy-beach-and>
- g. California Collaborative Fisheries Research Program – monitoring and evaluation of California marine protected areas: <https://caseagrants.ucsd.edu/project/california-collaborative-fisheries-research-program-monitoring-and-evaluation-of-california>
- h. Assessment of rocky intertidal habitats for the California marine protected area monitoring program: <https://caseagrants.ucsd.edu/project/assessment-of-rocky-intertidal-habitats-for-the-california-marine-protected-area-monitoring>
- i. Integrated ocean observing systems for assessing marine protected areas across California: <https://caseagrants.ucsd.edu/project/integrated-ocean-observing-systems-for-assessing-marine-protected-areas-across-california>

Attachment 1. *Marine Protected Areas Management Program Updates for 2019 Memo*
hyperlinks in sequential order.

- j. Monitoring and evaluation of mid-depth rocky reef ecosystems in the MLPA marine protected areas: <https://caseagrant.ucsd.edu/project/monitoring-and-evaluation-of-mid-depth-rocky-reef-ecosystems-in-the-mlpa-marine-protected>
- 3. Page 3
 - a. Assembly Bill 2369:
https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB2369
- 4. Page 4
 - a. Blue Park Award: <https://cdfwmarine.wordpress.com/2019/11/04/northern-channel-islands-marine-protected-areas-join-growing-network-of-global-ocean-refuges/>
 - b. Northern Channel Islands: <https://blueparks.org/parks/channel-islands/>
 - c. IUCN Green List Program: <https://www.iucn.org/theme/protected-areas/our-work/iucn-green-list-protected-and-conserved-areas>
 - d. Adapted Green List indicators:
http://www.opc.ca.gov/webmaster/media_library/2019/08/IUCN-Green-List-Standard-1.1-CA-EAGL-Adaptation-Oct-23-2018.pdf
- 5. Page 5
 - a. Appendix B: <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=161750&inline>

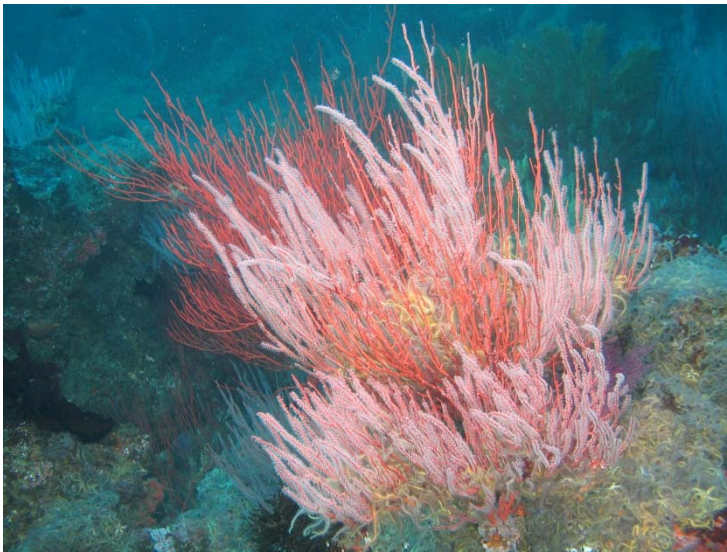


California Department of
Fish and Wildlife

[Marine Management News](#)

Northern Channel Islands Marine Protected Areas Join Growing Network of Global Ocean Refuges

[November 4, 2019](#) by [marinenews](#)



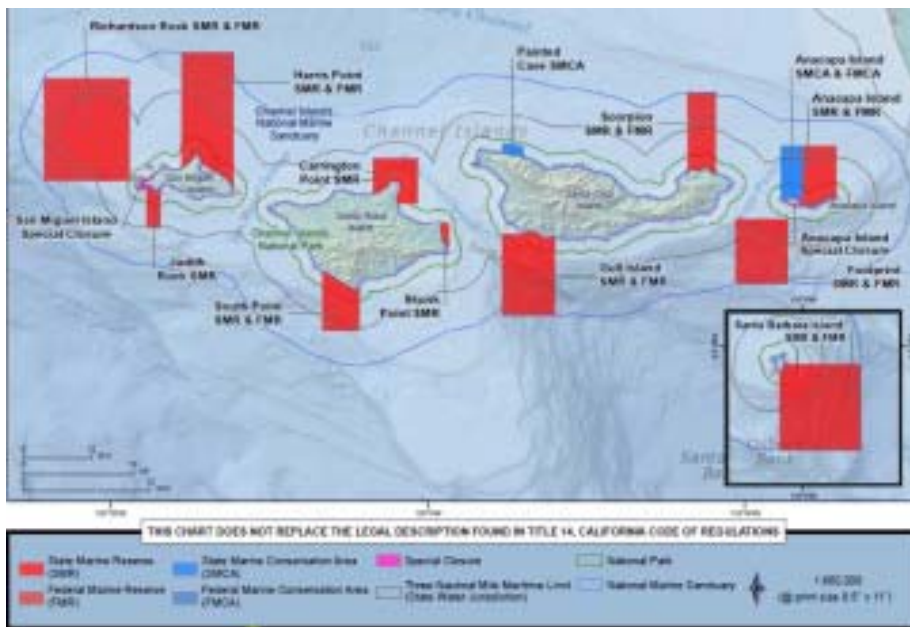
**Pink gorgonians and brittle stars,
Northern Channel Islands.**

CDFW MARE photo

The [Marine Conservation Institute](#) and its international science council has recognized the Northern Channel Islands marine protected areas (MPAs) off the coast of Santa Barbara, California as an outstanding MPA with a Blue Park designation. A total of 16 MPAs worldwide have earned the prestigious Blue Park Award, indicating they meet the highest science-based standards for marine life protection and management. The award was announced on October 24, 2019 at the Our Ocean Conference in Oslo, Norway.

This [Blue Park Award](#) recognizes the outstanding efforts by state and federal managers with the California Department of Fish and Wildlife, NOAA's Office of National Marine Sanctuaries, the National Park Service, and other partners who work together to protect the spectacular Northern Channel Islands marine ecosystem.

“The MPAs around the Northern Channel Islands are some of the oldest in California’s comprehensive statewide network,” said Becky Ota, California Department of Fish and Wildlife Marine Habitat Conservation Program Manager. “The California Department of Fish and Wildlife is proud of our collaborative conservation accomplishments both at the Channel Islands and throughout California, and we are continuing to work together with our state, federal and community partners to adaptively manage [California’s 124 MPAs](#).”



Northern Channel Islands Map.

CDFW

The Northern Channel Islands MPAs collectively cover 1,469 square miles (3,804 square kilometers). Bathed by the California Current and a regional upwelling of deep, cold, nutrient-rich water, the region hosts abundant fish assemblages of small schooling species like anchovies and sardines which in turn feed larger, open water fish and bottom fish.

“Channel Islands National Marine Sanctuary protects one of America’s most treasured marine environments for current and future generations to use and enjoy,” said Chris Mobley, Superintendent of Channel Islands National Marine Sanctuary. “We are extremely proud to receive this award in recognition of our collaboration with partners and stakeholders to promote long-term marine conservation.”

The MPAs protect several unique ecosystems, including giant kelp forests and deep coral gardens. Over 5,000 species of invertebrates, marine mammals like seals and sea lions, large, open-water fish, small schooling fish, and seabirds all live here. Many of the animals that can be found in the MPAs are also protected endangered species, such as the blue whale, orca, olive ridley sea turtle, and fur seal.

“Our goal is to recognize those MPAs like the Northern Channel Islands that deliver real results for marine life conservation and inspire others around the world to strongly protect 30 percent of the ocean’s most important places by 2030,” said Dr. Lance Morgan, President of Marine Conservation Institute. “We hope that Blue Park recognition of the Northern Channel Islands MPAs provides a shining example of regional marine conservation efforts and inspires others to follow the same path to protect our oceans for generations to come.”

For more information about the Northern Channel Islands MPAs and the other five 2019 Blue Park Award winners, please visit <https://marine-conservation.box.com/s/xfh3bs9tn0ydh2c45vkdzq5vrz367l7p>.



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November 26, 2019

California Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090
Via electronic delivery to: fgc@fgc.ca.gov

Re: Comments on FGC Agenda Item 31
Statewide Marine Protected Areas (MPAs) Program

Dear Commissioners,

The Environmental Action Committee of West Marin (EAC) is based in Point Reyes Station and has been working to protect the unique lands, waters, and biodiversity of West Marin since 1971. Since 2013, we have partnered with Point Reyes National Seashore and California Academy of Sciences to lead Marin's Marine Protected Area (MPA) Watch program.

We submit these brief comments regarding Agenda Item 31, Statewide Marine Protected Areas (MPAs) Program, to remind the Fish and Game Commission (Commission) of the valuable work of the MPA Watch citizen-science program. As you are aware, MPA Watch is a statewide network of organizations that train volunteers to observe and collect unbiased data on coastal and marine resource use within California's 124 MPAs. Citizen-science volunteers are trained to collect data on human activities (consumptive and non-consumptive). The data may be used to inform the management, enforcement, and science of California's MPAs.

EAC's Executive Director currently co-chairs the Golden Gate MPA Collaborative and directs EAC's Marin MPA Watch Program,

November 26, 2019
EAC Comments re. Agenda Item 31

which trains volunteers to monitor the beaches in Marin County in partnership with the Point Reyes National Seashore and California Academy of Sciences. Since 2013, we have trained over 250 volunteers and provided field trips to local colleges, high schools, and middle schools to learn about our unique network of MPAs. Additionally, EAC hosts and trains high school, college, and graduate interns who are interested in learning more about coastal resource conservation. Our program has collected over five years of data that is open and accessible for agencies and organizations to review upon request.

In sum, we thank the Commission for its support of our state's MPA network and appreciate this opportunity to share an update about our local program.

Respectfully,



Morgan Patton
Executive Director



Ashley Eagle-Gibbs
Conservation Director

cc: Susan Ashcraft, California Fish and Game Commission
Elizabeth Pope, California Fish and Game Commission

Chapter 2 – Prioritizing management efforts

Given the large number of fisheries under state jurisdiction and limited Department resources, prioritizing management efforts is essential. Section 7073(b) of the MLMA requires the Master Plan to include a priority list of fisheries for the preparation of FMPs. The highest priority is given to fisheries that have the greatest need for changes in management in order to comply with the objectives of the MLMA. The 2001 Master Plan included such a list, however, it proved difficult to focus work solely on priority fisheries. A variety of factors including new and competing mandates, unforeseen events, emergencies, and a changing regulatory landscape hampered the Department's ability to focus efforts exclusively on the priority species. Future prioritization efforts must be made in close coordination with the Commission, Tribes and tribal communities, and stakeholders to ensure there is a shared understanding of how priorities will be addressed and what resources will be required. It will also be important to establish a shared understanding of when it may be necessary, or desirable, to shift focus away from and/or reevaluate the existing list of priorities. Criteria for considering new priorities are provided below.

Potential approaches to prioritization vary in scope and intensity. The 2001 Master Plan used a method that focused on the **vulnerability** of specific stocks to fishing. However, the MLMA includes other objectives related to socioeconomics and the potential impacts of fisheries to habitat and bycatch species that should also be considered when identifying priorities. A prioritization approach that addresses the full range of MLMA objectives should be adopted by the Commission as part of the Master Plan before it is applied. As such, this Master Plan includes both an updated interim priority list to guide near-term Department efforts and to satisfy the requirements of Section §7073, and a framework to implement MLMA-based management to be conducted as the Master Plan is implemented.

To develop the initial priorities described below, the Department identified 36 **finfish** and invertebrate species that are the target of 45 distinct fisheries for initial prioritization. While these 36 species are only a small subset of the hundreds of species under state jurisdiction, the Department selected them for analysis because they represent the vast majority of commercial **landings** value, as well as commercial and recreational participation. These 45 fisheries include specific gear types targeting a single species. For example, the halibut trawl fishery is considered separately from the halibut **gill net** fishery. This is because different gear types are often deployed in different areas and with varying impacts. Note that to focus the initial analysis, not all gear types targeting the selected species were included. Once these initial fisheries have been addressed through the prioritization approach within the framework depicted in Figure 1, additional fisheries may be selected for analysis.

Interim priority list

The 45 fisheries were evaluated using a PSA, which identifies the relative risk fishing may pose to each fishery (Patrick et al. 2009). Relative risk was assessed first by a consultant (MRAG Americas) and then reviewed and adjusted by Department subject matter experts, using relative scaling scores ranging from 1 to 3 for two sets of attributes. The first set of attributes measures the **productivity** of the species, which is derived from life-history characteristics such as age at maturity and trophic level. The second set of attributes measures the **susceptibility** of the species, which includes, for example, overlap of a species' distribution with fishing effort. This second set is designed to assess the species' response to fishing pressure. The PSA metrics are combined to calculate the relative vulnerability of each fishery to other state-managed fisheries using a prescribed formula. The PSA also includes an index that scores the quality of information and the level of confidence in each attribute. A PSA does not provide information on the current status of a stock and does not specify harvest guidelines or management actions. Instead, the main purpose of the PSA is to identify fisheries that are likely to be more vulnerable to a particular method of fishing. It also identifies fisheries with more data gaps than others through the inclusion of a data quality factor.

The full results of the PSA and additional details on the methodology are available at http://www.oceansciencetrust.org/wp-content/uploads/2017/07/CDFW-PSA-Report-on-Select-CA-Fisheries_Final-.pdf. These relative PSA scores were used to bin the 45 fisheries into low, medium, and high priority and generate an interim list of priority fisheries (see Appendix E) that will be used to help guide Department efforts while the comprehensive prioritization approach described below is implemented.

Comprehensive prioritization approach

Prioritizing fisheries based on a fuller suite of MLMA objectives will require looking beyond an assessment of just risks to target stocks. To advance the objectives identified in the MLMA, the prioritization approach should:

- Provide a clear and systematic means of utilizing best available science and other relevant information to guide use of limited Department resources in managing the state's fisheries consistent with the MLMA.
- Identify target populations and/or ecosystem features at relatively greater risk from fishing.
- Identify where current management is inconsistent with the policies and requirements of the MLMA, and how those inconsistencies overlap with the ecological risks that have been identified.
- Advance socioeconomic and community objectives in a manner consistent with the MLMA's definition of sustainability.
- Be robust and clear enough for stakeholders to understand and for the Department to implement.
- Provide a strategic means of addressing emerging fisheries without unduly displacing existing priorities.
- Allow for re-evaluation when deemed necessary, or at least every five years.

In addition to the sustainability of the target stock, the MLMA is concerned with impacts to habitat and bycatch species. Section 7084 and 7085 are aimed at minimizing the impacts to habitat and bycatch, respectively. New tools have been developed in the years since the original Master Plan was adopted that can help to address these objectives.

Ecological Risk Assessment

A diversity of **Ecological Risk Assessment (ERA)** frameworks have been developed and used to prioritize management efforts across the globe. These frameworks consider a broader range of risks than a PSA. Specifically, they can examine the following:

- The impact from fishing activity to **target species** (similar to a PSA).
- The risk from fishing activity to bycatch species.
- The risk from fishing activity to habitats which it encounters.
- Aspects such as the potential benefits to the resource and the fishery from California's network of MPAs.

ERAs are similar to PSAs in concept but may use a broader range of attributes. The **California Ocean Science Trust (OST)** conducted a review of available ERA frameworks worldwide and considered certain approaches appropriate for California. Drawing from this experience, the Department will integrate the PSA and ERA tools into the prioritization approach in a way that capitalizes on their respective strengths. Specifically, the Department will use the PSA scores with the addition of four

attributes from the target species component of the ERA (estimated fishing **mortality** rate, population connectivity, temporal intensity of fishing, and potential benefits from MPAs) to assess potential risk to target fisheries. For habitat and bycatch, the Department will use the ERA as developed and piloted by OST, and as modified by Department and stakeholder input. The pilot ERA process scored 9 of the 45 fisheries that were previously analyzed using PSA. Once the four additional target attributes and bycatch and habitat ERAs are completed for the remaining 36 fisheries, scores will be presented as three groups (low, medium, and high relative risk). Additional details and considerations associated with the ERA can be found at <http://www.oceansciencetrust.org/projects/era/>.

Application of this approach should provide the opportunity for stakeholder input and the results should be used to categorize fisheries into low, medium, and high risk from a biological and ecological perspective. Low-risk fisheries will not require further evaluation or new conservation measures, and current management can simply be characterized through an ESR as described in Chapter 3. Medium and high-risk fisheries will be further prioritized based on socioeconomic opportunity as described below (see also Figure 1). If an FMP-managed species is identified as high risk, an FMP amendment may be necessary to address those risks.

Climate change

In California and elsewhere, efforts are underway to develop and evaluate tools that assess species' vulnerability and that incorporate risk from climate change into ERAs. Results from such assessments will provide valuable information for categorizing fisheries' level of risk. Until such results are available, the Department will consider augmenting the ERA results with information garnered through other efforts (e.g., federal climate vulnerability assessments of similar species).

Socioeconomics

Among the fisheries that are identified as high priority from an ecological and biological perspective, management efforts should first be directed towards those where ensuring sustainability has the highest economic value to the state. These will generally be fisheries with high commercial value and participation, and/or high recreational participation. However, an approach based on just value and participation could result in missed opportunities for the Department to achieve socioeconomic goals. Therefore, the Department will consider augmenting value and participation data with its own understanding of the socioeconomic goals of the fisheries. Additionally, consideration of community vulnerability indices and other human dimensions indicators such as those generated by the **National Oceanic and Atmospheric Administration (NOAA)** on the West Coast, can help identify vulnerable ports and regions and provide additional insight into where management action may have the most benefit (see: <https://swfsc.noaa.gov/publications/CR/2014/2014Breslow.pdf>).

Priority list

Provided that adequate resources and/or funding are available, the Department will apply the comprehensive prioritization approach described, generate a priority list of fisheries, and provide it to the Commission within one year of Mast Plan adoption. The priority list should be evaluated no less than every five years, and if necessary, the prioritization approach should be re-applied.

The information gathered through the PSA, ERA, and socioeconomic analyses described above can also help to inform management action for specific fisheries. Regardless of the form that management action takes, these analyses can help to provide background information, identify data gaps, and highlight aspects of a fishery that may need management attention. Therefore, as these analyses are conducted, information will be generated, structured, and retained with the additional goal of informing management action in mind.

Consideration of emerging and emergency issues when implementing priorities

The priorities that are established through the process described above will help guide implementation efforts. However, changes in fisheries may occur that require special attention and a departure from these priorities. For the priority list of fisheries to be meaningful, new or emerging issues should be considered in light of existing priorities, staffing, and other resources. Emergency issues (as defined by Government Code §11346.1(b) and Fish and Game Code §5523, §5654, and §7710) requiring immediate attention will inevitably arise. However, the Department and Commission should evaluate more discretionary efforts based on the following:

- Does the proposed new priority require immediate action in order to address sustainability or conservation concerns? If so, how?
- Does the proposed new priority require immediate action in order to address serious economic hardship to fishery **participants**? If so, how?
- Do current conditions create a unique or one-time opportunity to address the proposed new priority? If so, how?
- Does the fishery that is the subject of the proposed new priority appear on the current prioritization list? If so, where does it rank?
- Do available data allow for effective decision-making on the proposed new priority?
- How does the proposed new priority advance the goals of the MLMA?
- Are partnership opportunities available to help address the issue and reduce Department resource requirements?
- What is required to accomplish the proposed new priority (FMP, rule promulgation, research, etc.), and what are the requirements for staff, time, and other resources?
- What existing priorities on the Department's workplan would have to be eliminated or postponed in order to address the new priority?

Whether it is the Department, Commission, Tribes and tribal communities, or stakeholders that are proposing the new priority, the proposal or directive to address the new priority should be accompanied by responses to these inquiries. This will help to ensure that any deviations from the existing priority list are deliberate, strategic, and serve to advance the goals of the MLMA.

STAFF SUMMARY FOR NOVEMBER 5, 2019**5. MARINE LIFE MANAGEMENT ACT MASTER PLAN IMPLEMENTATION****Today's Item**Information ☐Direction ☒

Receive DFW update on implementing the 2018 master plan for fisheries, including a draft prioritized list of fisheries for more focused management, and consider a possible recommendation.

Summary of Previous/Future Actions

- | | |
|--|-------------------------------------|
| • FGC adopted 2018 master plan | Jun 20-21, 2018; Sacramento |
| • Implementation update | Mar 20, 2019; MRC, Sacramento |
| • Implementation update | Jul 11, 2019; MRC, San Clemente |
| • Today's update and discussion | Nov 5, 2019; MRC, Sacramento |

Background

This is a standing agenda item for MRC to receive DFW updates on and discuss steps, priorities, and opportunities related to implementing the *2018 Master Plan for Fisheries: A Guide for Implementation of the Marine Life Management Act (2018 Master Plan)*. Adopted by FGC, the 2018 Master Plan serves as a framework for Marine Life Management Act (MLMA) based management. Exhibit 1 provides additional background.

A key implementation step, consistent with the MLMA in Fish and Game Code Section 7073(b)(2) and the 2018 Master Plan, is developing a prioritized list of species for more focused management. Species prioritization is intended to focus scaled-management efforts, including fishery management plans (FMPs), on fisheries that DFW determines have the greatest need for changes in conservation and management measures, and to maximize resources and ecosystem benefits.

For the prioritization process laid out in the 2018 Master Plan, all fisheries go through two risk assessments to identify and evaluate ecological and/or biological risks posed by fishing: a productivity susceptibility analysis (PSA), which assesses the risks to a particular stock, and an ecological risk assessment (ERA), which assesses the risk a fishery poses to the ecosystem.

DFW drafted an interim priority list in 2018 for 45 state-managed fisheries based on the results of the PSA. The priority list was identified as interim until a refined ERA tool was developed and could also be applied to further prioritize management attention (Exhibit 2).

Today DFW staff will give a presentation on the prioritization process for key California fisheries, including the status of conducting ERAs, and discuss how this prioritization may inform scaled management measures, including FMP development (Exhibit 3).

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

Following public discussion, develop a recommendation for FGC related to completing ERAs for the remaining 13 species in the interim priority list, and on MLMA prioritization results.

STAFF SUMMARY FOR NOVEMBER 5, 2019

Exhibits

1. Staff summary for Agenda Item 5, Jul 11, 2019 MRC meeting (for background only)
2. 2018 Master Plan, Chapter 2 - Prioritizing Management Efforts
3. DFW presentation

Committee Direction/Recommendation

The Marine Resources Committee recommends that the Department continue efforts to complete ERA assessments for the 13 remaining species and to complete the draft prioritization list for further discussion.



Implementing the MLMA Master Plan

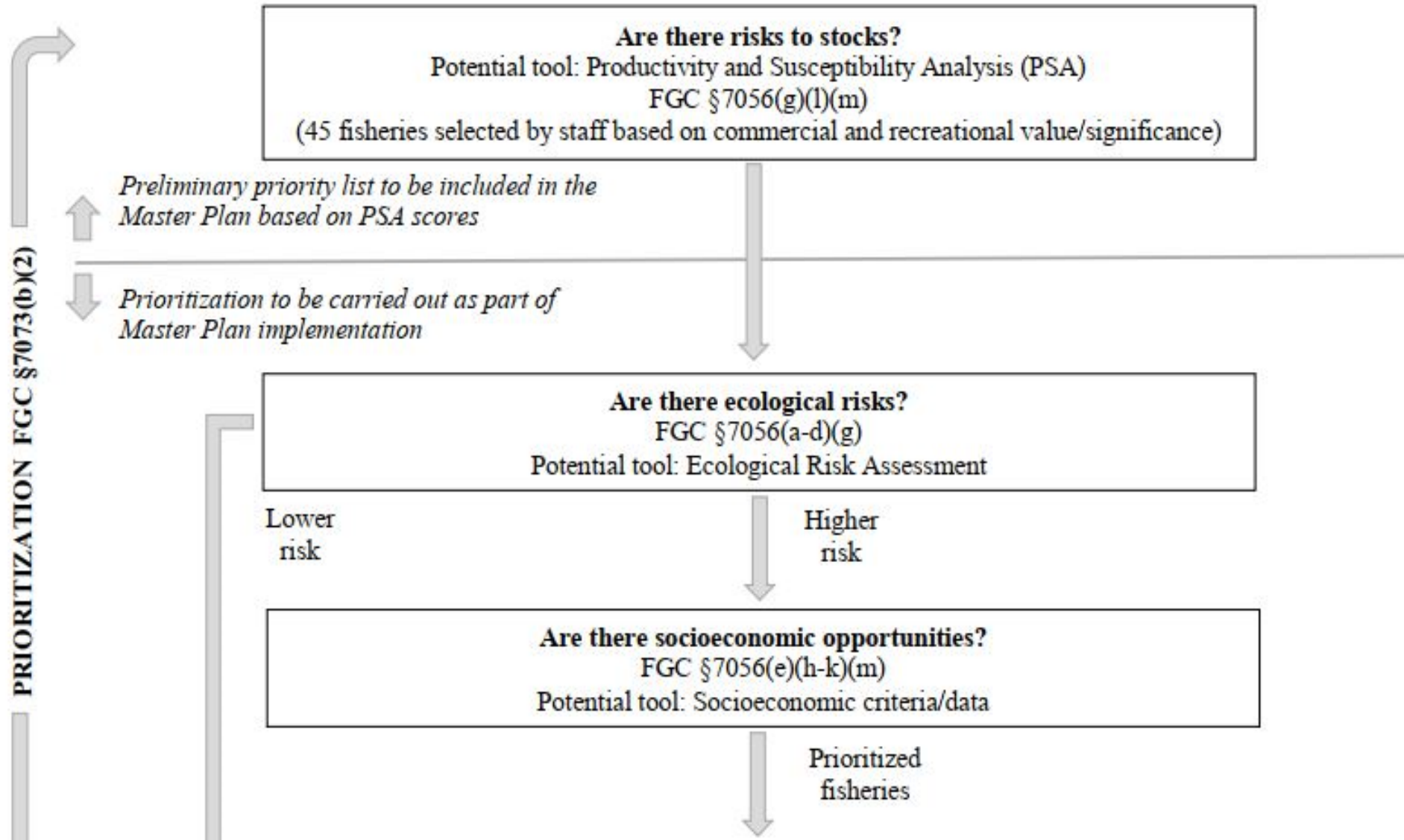
Prioritizing Key California Fisheries

Debbie Aseltine-Neilson, California Department
of Fish and Wildlife

Fish and Game Commission Meeting

Sacramento, CA • December 12, 2019

Framework for MLMA-based Management



Conducting a Productivity-Susceptibility Analysis (PSA)

- Collaboration with CDFW and partners to select and apply a PSA to state-managed fisheries with greatest catch or landings (2015-2016)
- 45 state-managed fisheries
 - 21 finfish and 17 invertebrate species
- Interim priority list in 2018 Master Plan based on PSA results only

Customizing an Ecological Risk Assessment (ERA)

- Iterative tool development, involving partners and stakeholders
 - Draft tool shared and refined during stakeholder workshops as part of Master Plan amendment process
 - Tool further refined by CDFW to be more streamlined, intuitive, and timely

Conducting ERAs

- ERA framework (21 finfish, 3 invertebrate species)
 - Target = impact from fishing activity to target species (impacts not captured in the PSA)
 - Bycatch = risk from fishing activity to bycatch species
 - Habitat = risk from fishing activity to habitats where fishing occurs

Results: Commercial Fisheries

Species	Gear	Total	PSA Rank	Bycatch Rank	Habitat Rank
Pacific Angel Shark	GN	4	1	1	2
CA Halibut	Trawl	5	2	2	1
CA Halibut	GN	5	2	1	2
White Seabass	GN	6	3	1	2
CA Bay Shrimp	Trawl	7	3	3	1
Spiny Lobster	Trap	7	2	3	2
Pacific Herring	GN	8	3	3	2
CA Sheephead	Trap	8	2	4	2
CA Barracuda	GN	10	3	2	5
Pacific Hagfish	Trap	11	4	4	3
Shiner Perch	Trap	11	4	4	3
Market Squid	PS	11	4	3	4
CA Halibut	HL	12	3	4	5
Pacific Bonito	PS	13	4	4	5
Redtail Surfperch	HL	13	4	4	5
Night Smelt	A frame	13	4	4	5
Jacksmelt	HL	13	4	4	5

Results: Recreational Fisheries

Species	Gear	Total	PSA Rank	Bycatch Rank	Habitat Rank
Brown Smoothhound	HL	9	1	4	4
CA Sheephead	HL	9	2	4	3
Kelp Bass	HL	9	2	4	3
Ocean Whitefish	HL	9	2	4	3
Spiny Lobster	Hoop net	9	3	4	2
Spotted Sand Bass	HL	10	2	4	4
Barred Sand Bass	HL	10	2	4	4
CA Halibut	HL	11	3	4	4
Barred Surfperch	HL	11	3	4	4
White Seabass	HL	12	4	4	4
CA Barracuda	HL	12	3	4	5
CA Corbina	HL	12	4	4	4
White Croaker	HL	12	4	4	4
Pacific Bonito	HL	13	4	4	5

Scaled Management

- Scaled management addresses the questions:
 - What happens next for fisheries that have been identified as higher priority?
 - What is the appropriate management action?
- Scaled management seeks to match the level of management effort with the management needs and complexity of the fishery
- During process, also will address fisheries or factors not contemplated in the prioritization process

Next Steps

- Fish and Game Commission
 - Possible support for prioritization approach
- CDFW
 - Conduct scaled management tasks
 - Include results of scaling within updated Work Plan and provide at FGC February 2020 meeting



Thank You

Questions?

Debbie Aseltine-Neilson
Senior Environmental Scientist Specialist
Debbie.Aseltine-Neilson@wildlife.ca.gov



Compiling the PSA and ERA Results

- Four Target attributes were added to those of the PSA to provide a more comprehensive risk assessment for target species
- Ranks from PSA (=PSA + Target), Bycatch, and Habitat were added to get final totals

“PSA” Ranking

Commercial		
Species	Gear	Rank
Pacific Angel Shark	GN	1
California Sheephead	Trap	2
Spiny Lobster	Trap	2
CA Halibut	GN	2
CA Halibut	Trawl	2
California Barracuda	GN	3
California Bay Shrimp	Trawl	3
White Seabass	GN	3
Pacific Herring	GN	3
CA Halibut	HL	3
Market Squid	Purse seine	4
Redtail Surfperch	HL	4
Pacific Bonito	Purse seine	4
Pacific Hagfish	Trap	4
Night Smelt	A frame	4
Jacksmelt	HL	4
Shiner Perch	Trap	4

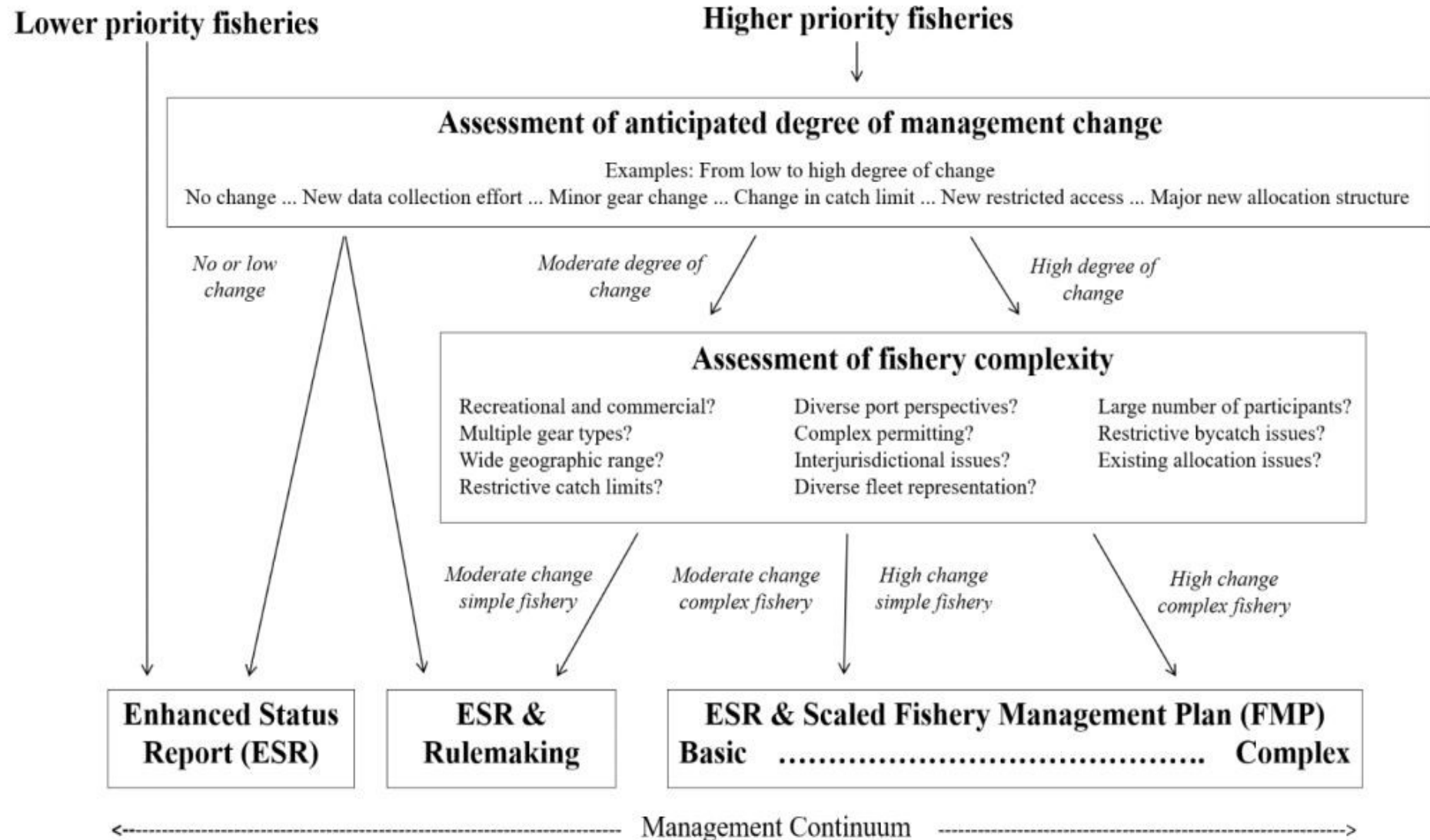
Recreational		
Species	Gear	Rank
Brown Smoothhound Shark	HL	1
Ocean Whitefish	HL	2
Kelp Bass	HL	2
Barred Sand Bass	HL	2
Spotted Sand Bass	HL	2
California Sheephead	HL	2
Spiny Lobster	Hoop Net	3
California Barracuda	HL	3
Barred Surfperch	HL	3
CA Halibut	HL	3
White Seabass	HL	4
Pacific Bonito	HL	4
California Corbina	HL	4
White Croaker	HL	4

Bycatch Ranking

Rank	Gear Type
1	Gill net - larger mesh
2	Trawl - CA Halibut
2	Gill net - smaller mesh
3	Purse seine - Market Squid
3	Beam trawl
3	Trap - CA Spiny Lobster
3	Gill net - Pacific Herring
4	Trap - CA Sheephead
4	Hook-and-line
4	Hoop Net - CA Spiny Lobster
4	Purse seine - Pacific Bonito
4	Trap - Pacific Hagfish, Shiner Perch
4	A-frame - Jacksmelt

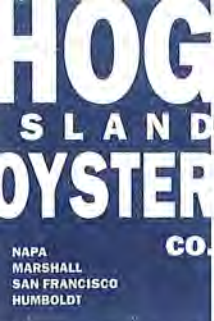
Habitat Ranking

Rank	Gear type	Habitat
1	Trawl	Nearshore soft
2	Gill Net	Nearshore soft
2	Trap	Nearshore hard, vegetation, inverts
2	Trap	Nearshore hard, vegetation
2	Hoop Net	Nearshore hard, vegetation, inverts
3	Trap	Nearshore soft, offshore soft
3	Hook-and-Line	Nearshore hard, vegetation, inverts
3	Hook-and-Line	Nearshore hard, vegetation
3	Hook-and-Line	Nearshore hard, nearshore soft, vegetation
4	Hook-and-Line	Nearshore soft, vegetation
4	Hook-and-Line	Nearshore soft
4	Purse Seine	Pelagic, Nearshore soft
5	Gill Net	Pelagic
5	Hook-and-Line	Pelagic
5	Purse Seine	Offshore pelagic
5	A Frame	Nearshore soft



2018 Master Plan

Figure 3. Identifying where a fishery falls along the management continuum.



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2019 JAN 30 AM 8:11

January 28, 2019

Melissa Miller-Henson
Acting Executive Director
California Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090

Dear Ms. Miller-Henson,

We are the current leaseholder of four state tideland parcels in Tomales Bay (M430-10, M430-11, M430-12, and M430-15). We have been operating a shellfish farm on these leased tidelands for several decades. We are currently updating our Coastal Development permits with the California Coastal Commission, combining the four existing CDPs, some which have become outdated, into one CDP. We are undergoing a similar process to update our permits with the U.S. Army Corps of Engineers. During this process, we realized that we also need to update the allowed species and culture methods on our leases with the Commission.

We would like to amend our leases to insure that they are all consistent, in terms of allowed species and culture types. We are not proposing any increases in acreage, new species, or new cultivation methods as compared to what is currently utilized on at least a portion of our leases.

We would like to amend our leases so that they each allow cultivation of the following species: Pacific oyster (*Crassostrea gigas*), Eastern oyster (*Crassostrea virginica*), Kumamoto oyster (*Crassostrea sikamea*), European flat oyster (*Ostrea edulis*), Olympia oyster (*Ostrea lurida*), Manila clam (*Venerupis philippinarum*), and Mediterranean mussel (*Mytilus galloprovincialis*). We would also like to amend all leases to allow the use of the following cultivation types: rack and bag, bag/tray on bottom, intertidal longlines (with bags/baskets), floating longlines, and rafts.

While we may not employ all techniques or species on each lease at the same time, this approach would allow us the flexibility to farm adaptively in a changing environment. We believe that our existing methods are environmentally sustainable and can be used interchangeably without a significant impact on the surrounding habitat. This flexible and adaptive management approach is also anticipated to allow Hog Island to increase productivity and efficiency, permitting modifications in the farm footprint in response to ecological conditions, environmental changes, and market conditions.

We have also attached a table showing the currently allowed species and culture types, as well as our project description submitted to the Coastal Commission.

Thank you,


John Finger

Lease Species and Gear Comparison

Lease No.	Location*	Permitted Species and Methods			Current Cultivation	
		Acres	Species	Methods	Species	Methods
M-430-10	Intertidal area halfway between Tom's Point and Miller Park	5.0	Manila clam, Pacific oyster, European flat oyster, Eastern oyster, Olympia oyster, and red abalone	Racks and stakes	Pacific oyster, European flat oyster, Atlantic oyster, Kumamoto oyster	Racks, bottom bags, intertidal longlines, and Stanway units (to be phased out)
M-430-11	Intertidal area just north of Hog Island	5.0	Manila clam, Pacific oyster, European flat oyster, Eastern oyster, Olympia oyster, Mediterranean mussel, and red abalone	Stakes, racks, and longlines	Pacific oyster, European flat oyster, Atlantic oyster, Kumamoto oyster	Racks and bottom bags
M-430-12	Intertidal area 3 miles south of Marconi Cove	30.0	Pacific oyster, Eastern oyster, European flat oyster, Quahog clams, Manila clams, native littleneck clams, and Bay mussel	Racks and rafts	Pacific oyster and Kumamoto oyster	Racks, intertidal longlines, and floating longlines
M-430-15	Intertidal and subtidal areas adjacent to Tom's Point	128.2	Pacific oyster, Manila clams, and Bay mussel	Racks and bottom bags	Pacific oyster and Manila clams	Bottom bags, intertidal longlines, racks, and clam roll (to be phased out)

**Hog Island Oyster Company: Coastal Development Permit
Amendment (CDP #s 2-81-40, 2-84-2, 2-84-10, 1-94-55)**

PROJECT DESCRIPTION

December 2017

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Appendix A: Marine Debris Management Plan

Appendix B: Tomales Bay Eelgrass Mapping

Appendix C: Submerged Aquatic Vegetation (SAV) Routes

1.0 INTRODUCTION

Hog Island Oyster Company (HIOC) grows shellfish on four different leases in Tomales Bay, California (Figure 1). The four leases used by HIOC are from the California Department of Fish and Wildlife (CDFW), and were either granted to HIOC directly or acquired from other growers. In addition, each lease has an associated coastal development permit (CDP) issued by the California Coastal Commission (Coastal Commission) that includes authorized activity (Table 1). The total acreage of the leased areas is 168.2 acres, of which HIOC currently operates on approximately 23.1 acres or 13.8% of the total lease area.

Table 1. Location and Activity Previously Reviewed by Coastal Commission for HIOC Leases

CDP No.	Lease No.	Location*	Previously Reviewed Activity		
			Acreage**	Species	Methods
2-81-40	M-430-10	Intertidal area halfway between Tom's Point and Miller Park	5.0	Pacific oyster (<i>Crassostrea gigas</i>) ¹	racks or stakes
2-84-02	M-430-11	Intertidal area just north of Hog Island	5.0	Pacific oyster	racks ²
2-84-10	M-430-12	Intertidal area 3 miles south of Marconi Cove	30.0	Pacific oyster, European flat oyster (<i>Ostrea edulis</i>), Manila clam (<i>Venerupis philippinarum</i>), native littleneck clam (<i>Protothaca staminea</i>), northern quahog (<i>Mercenaria mercenaria</i>), and bay mussel (<i>Mytilus edulis</i>)	racks, trays, floating nursery rafts, floating longlines ³
1-94-55	M-430-15	Intertidal and subtidal areas adjacent to Tom's Point	128.2	Manila clam, native littleneck clam, northern quahog, Pacific oyster, European flat oyster, Olympia oyster (<i>O. lurida</i>), bay mussel, Mediterranean mussel (<i>M. galloprovincialis</i>), and red abalone (<i>Haliotis rufescens</i>)	racks, bottom bags, longlines, and rafts ⁴
*Please refer to Figures 1 to 4 for the lease locations.					
**Acreages are based on the most recent lease information from CDFW, and will be confirmed based on GIS mapping.					

¹ CDFW Lease Renewal M-430-10 authorized the cultivation of additional species, including the European flat oyster, Atlantic oyster (*C. virginica*), Olympia oyster, Manila clam, and red abalone.

² CDFW Lease Renewal M-430-11 authorized the cultivation of additional species, including the European flat oyster, Atlantic oyster, Olympia oyster, Manila clam, Mediterranean mussel and red abalone and authorized stakes, racks, and longlines as approved cultivation methods.

³ CDFW Lease Renewal M-430-12 additionally authorized the cultivation of the Atlantic oyster and limited cultivation methods to "racks and rafts."

⁴ The original permitted species were identified via reference to CDFW Lease M-430-15. CDFW Lease M-430-15 Amendment issued to HIOC on December 9, 2015 further limited permitted cultivation to only Pacific oysters, Manila clams, and bay mussels, using "racks and bags and bottom trays."

While the above species and methods were described in the project descriptions submitted to the Coastal Commission, the CDPs associated with each lease did not limit HIOC's cultivation to these species and/or methods and did not include a requirement that HIOC amend its CDP prior to using different cultivation techniques. The CDPs, and associated staff reports, generally describe HIOC's activities as beneficial to the biological resources of Tomales Bay. For example, one staff report indicated that: "Raising shellfish enhances the foodchain in that the oysters provide a host for organisms, filter plankton and give off waste bi-products that provide sources of food for other marine species, thus enhancing the commercial fishery in Tomales Bay" (Coastal Commission, Staff Report and Recommendation, Permit Number 2-84-10, 8/1/84).

The majority of HIOC's activities currently being conducted on the leased areas are well within what was previously reviewed by the Coastal Commission and CDFW, and current activities have led to improved conditions due to advances in technology and aquaculture methods over the last 20 years. Shellfish growing and harvest methods have changed incrementally over time to both increase productivity and reduce environmental impacts. Furthermore, eelgrass has increased since HIOC's operations started in 1981, and has moved into culture areas in some locations. Figures 2 through 4 below show HIOC's current cultivated footprint for its Tomales Bay farm and its CDFW lease boundaries.⁵

On October 16, 2017, the Coastal Commission sent a violation notice (No. V-9-17-0112) asserting that HIOC may be out of compliance with their CDPs due to unauthorized activities or structures. The Coastal Commission has asked HIOC to submit an application that provides an update as to HIOC's current cultivation practices on its Tomales Bay farm. This document provides a comparison of the activities previously reviewed by the Coastal Commission and HIOC's current cultivation practices.

Overall, the acreage currently under cultivation by HIOC is significantly less than the amount of cultivation previously reviewed by the Coastal Commission. The original CDPs did not contain a limitation on the amount of cultivation that HIOC could plant within its 168.2 acres of leased area, other than certain restrictions on planting in eelgrass. As described below, the initial site plans included in the project descriptions reviewed by the Coastal Commission contemplated a total of approximately 56 acres of shellfish cultivation. Currently, HIOC cultivates only 23.1 acres. The cultivation methods, spacing (where applicable), species cultivated, and cultivation locations are substantially similar to those previously reviewed by the Coastal Commission and CDFW. As further detailed in Section 4.0 below, in limited circumstances, HIOC has developed new cultivation methods that are used in other areas of the West Coast and provide ecological benefits as compared to older practices. HIOC has also incorporated best management practices (BMPs), above and beyond those required under its CDPs and CDFW leases, to provide environmental sustainability and further reduce potential ecological impacts to Tomales Bay. These measures are described in Section 6.0 below.

⁵ The lease boundaries shown are those identified on CDFW lease maps. HIOC anticipates using GIS technology to confirm these lease boundaries in consultation with CDFW.

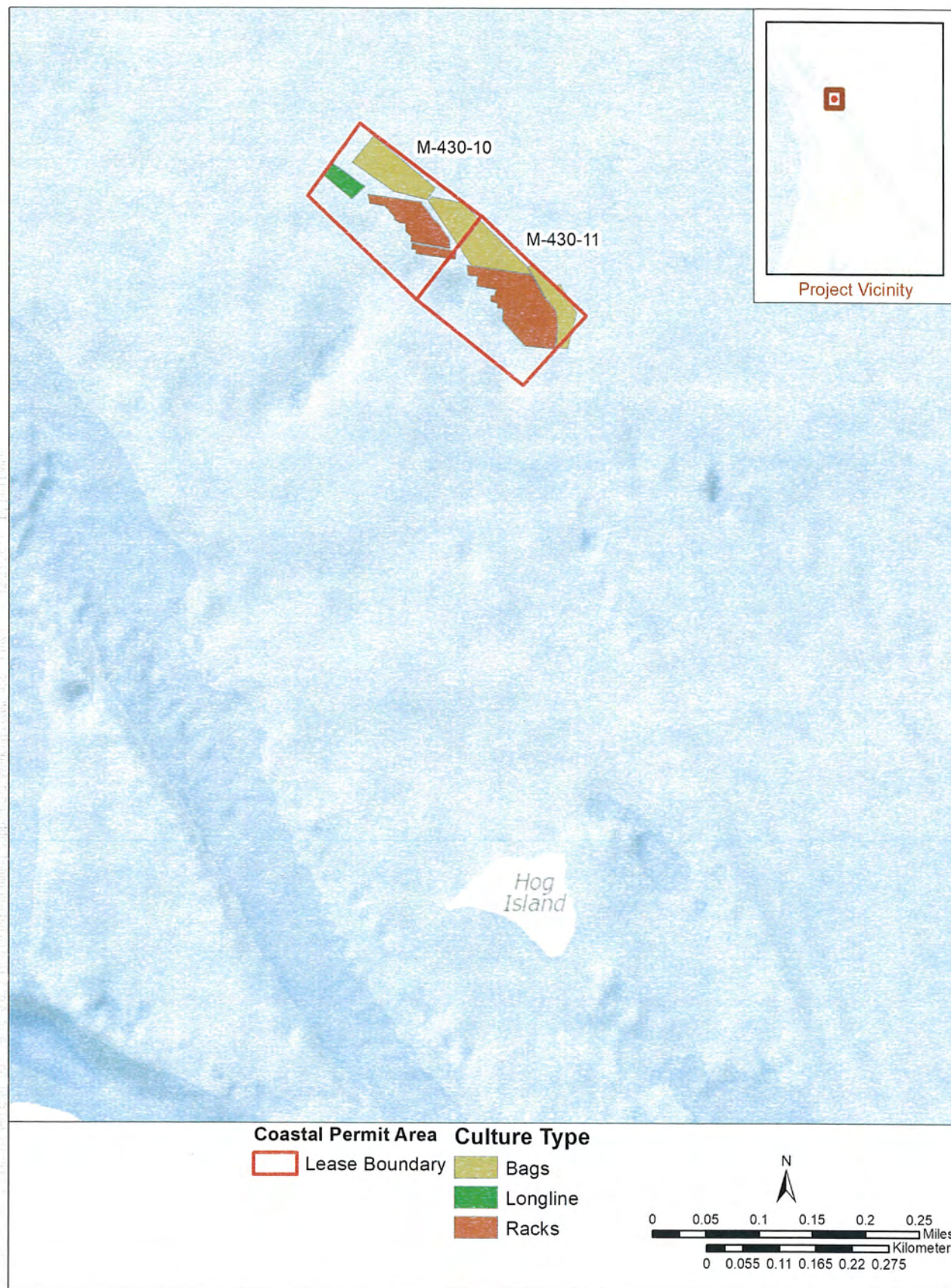


Figure 2. Lease No. M-430-10 (CDP No. 2-81-40) and Lease No. M-430-11 (CDP No. 2-84-02) in Tomales Bay, California

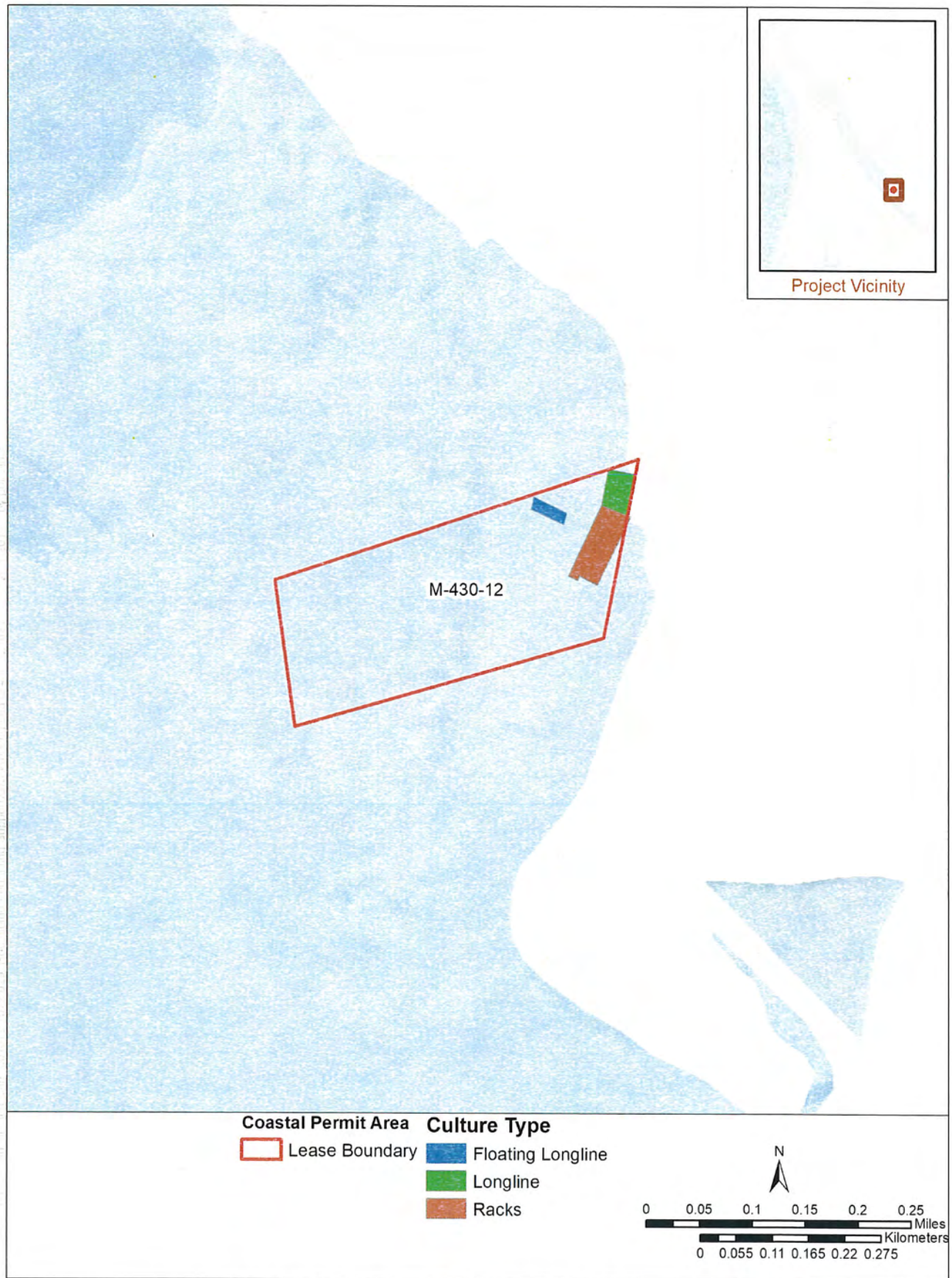


Figure 3. Lease No. M-430-12 (CDP No. 2-84-10) in Tomales Bay, California

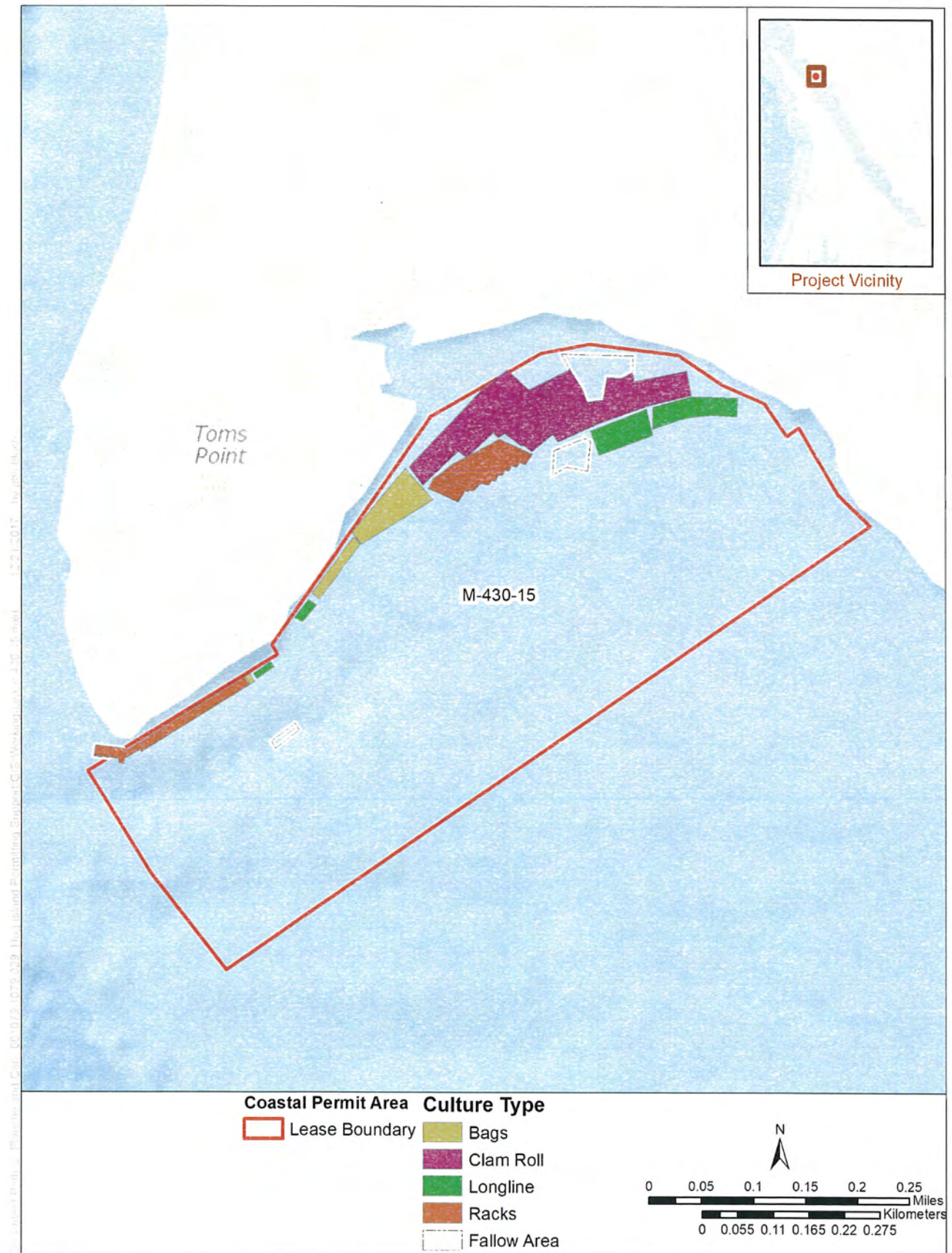


Figure 4. Lease No. M-430-15 (CDP No. 1-94-55) in Tomales Bay, California

2.0 SUMMARY OF PRACTICES PREVIOUSLY REVIEWED BY COASTAL COMMISSION AS COMPARED TO CURRENT CULTIVATION PRACTICES

HIOC's CDPs considered cultivation of 11 different shellfish species using 8 different culture methods (Table 2). Currently, HIOC is cultivating 5 different shellfish species using 5 different culture methods. Most methods currently used by HIOC are consistent with the methods previously approved by the Commission and include racks, bottom bags, longlines, and floating longlines. A description of each cultivation method, and the dimensions and spacing of the gear used, is provided in Section 3.0 below.

Table 2. Comparison of Activities Previously Reviewed and Approved by Coastal Commission and Current Cultivation Practices

Metric	Approved Activities under the CDP	Current Cultivation Practices
Cultivation Species	<ul style="list-style-type: none"> • Pacific oyster • European flat oyster • Atlantic oyster • Kumamoto oyster⁶ • Olympia oyster • Manila clam • Native littleneck clam • Northern quahog • Bay mussel • Mediterranean mussel • Red abalone 	<ul style="list-style-type: none"> • Pacific oyster • European flat oyster • Atlantic oyster • Kumamoto oyster • Manila clam
Cultivation Methods	<ul style="list-style-type: none"> • Racks: rack-on-pipe and overlapped racks • Stakes • Bottom bags and clam bags • Trays • Longlines • Floating longlines • Floating nursery rafts • Rafts 	<ul style="list-style-type: none"> • Racks rack-on-pipe and overlapped racks • Bottom bags and clam bags • Clam rolls • Longlines • Floating longlines
Acreage by Gear Type*	<ul style="list-style-type: none"> • 17.0 acres (racks) • 6.0 acres (bottom bags [oysters], stakes, and clam bags) • 28.3 acres (longlines) • 4.7 acres (floating nursery rafts, other rafts, and floating longlines) 	<ul style="list-style-type: none"> • 7.4 acres (racks) • 5.5 acres (bottom bags and clam bags) • 6.9 acres (clam rolls) • 3.0 acres (longlines) • 0.3 acres (floating longlines)
Total Acreage	56.0 acres	23.1 acres
* Note that the acreage by gear type for the approved permit conditions is based on the general lay-out of culture methods presented in the CDPs or staff reports. It is an estimate of what was reviewed in the original permit applications.		

⁶Note that at the time of the CDP approvals, Kumamoto oysters (*C. sikamea*) were viewed as a subset of Pacific oysters and were not separately identified.

3.0 CURRENT CULTIVATION PRACTICES PREVIOUSLY APPROVED BY THE COMMISSION

Both on-bottom and off-bottom cultivation practices were previously reviewed and approved by the Coastal Commission. On-bottom is defined as shellfish or gear that is placed directly to the sediment surface, and off-bottom is defined as shellfish that is grown on structures that are raised above the sediment surface. Each of the specific cultivation practices and types of gear currently used by HIOC are described below.

3.1 On-Bottom Culture Methods

There are two on-bottom culture methods currently used by HIOC that were previously approved by the Coastal Commission: (1) bottom bags, and (2) clam bags. A description of the typical gear used, planting layout, and harvest activities are described below.

3.1.1 Bottom Bags

Bottom bags are typically made from ½-inch VEXAR mesh bags measuring approximately 2 feet by 3 feet (Figures 5 to 6). The bags are stocked with oysters and then attached to parallel 3/8-inch bottom lines that are typically 100 feet to 200 feet long with the use of a stainless-steel (SS) snap hook.

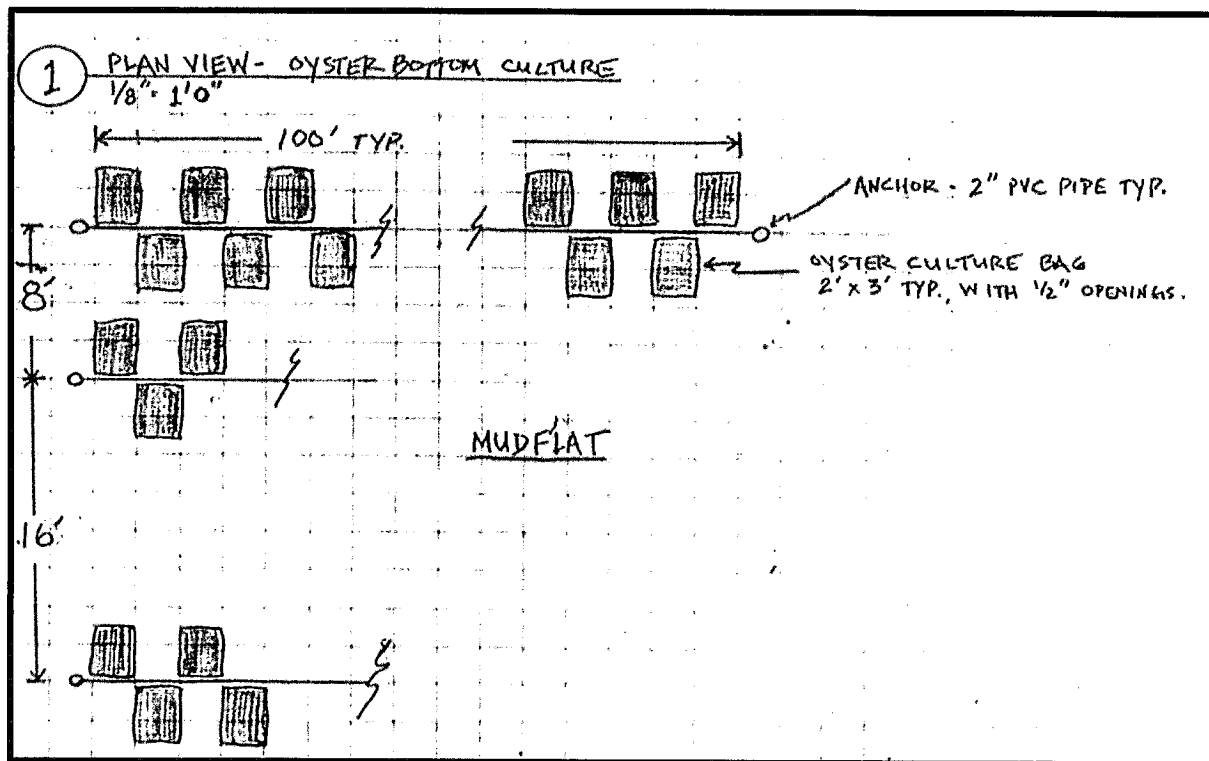


Figure 5. Typical On-Bottom Bag Culture Layout

Note: HIOC does not currently include a 16-foot space between groups of bottom bags. The plan shown is otherwise correct.

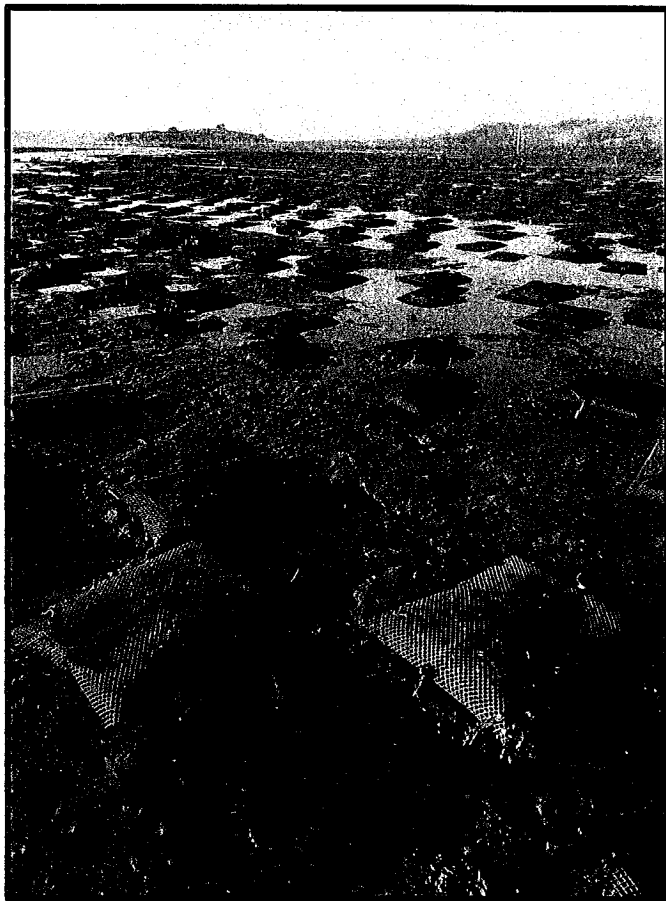


Figure 6. Photograph of On-Bottom Bag Culture with Oysters.

The line is typically anchored at either end to 2-inch polyvinyl chloride (PVC) pipe, or a similar type of post, that is driven into the ground at a sufficient depth to prevent loss. During planting, bags are distributed in secured bundles to their designated lines at a sufficient tide to bring the boat alongside the bottom lines. On the next low tide series (typically the same or following day), the bags are removed from the bundle and attached to the bottom lines. Monthly and/or quarterly maintenance is performed by flipping the bags from one side of the rope to the other by using a hook, which reduces fouling on the bag, tumbles the oysters, redistributes them in the bag, and helps to keep them from being buried. During this process, oysters are also harvested and/or removed from the line for grading and culling, after which point the remaining population remains in the bags for further grow-out. All culling and grading takes place on land at HIOC's facilities.

Harvesting oysters includes floating a boat alongside the lines, generally within a water depth of 1 foot to 3 feet, and the crew releases the SS snap hooks from the bottom line and places the bags on the boat for transport. Alternatively, oysters are harvested at a 4-foot to 6-foot tide by use of a boat mounted crane, which lifts the bags on the line individually onto the boat.

Harvests of bottom bags generally takes place between 12 to 18 months after planting. Bottom bags are used in leases M-430-10 (1.93 acres), M-430-11 (1.82 acres), and M-430-15 (1.76 acres).

3.1.2 Clam Bags

Clam bags are typically made from ¼-inch VEXAR mesh bags measuring 30 inches by 18 inches by 4 inches (Figures 7 to 8). The bags are stocked with one shovel full of 3/8-inch minus pea gravel and clams. Bags are closed using galvanized hog rings at both ends.

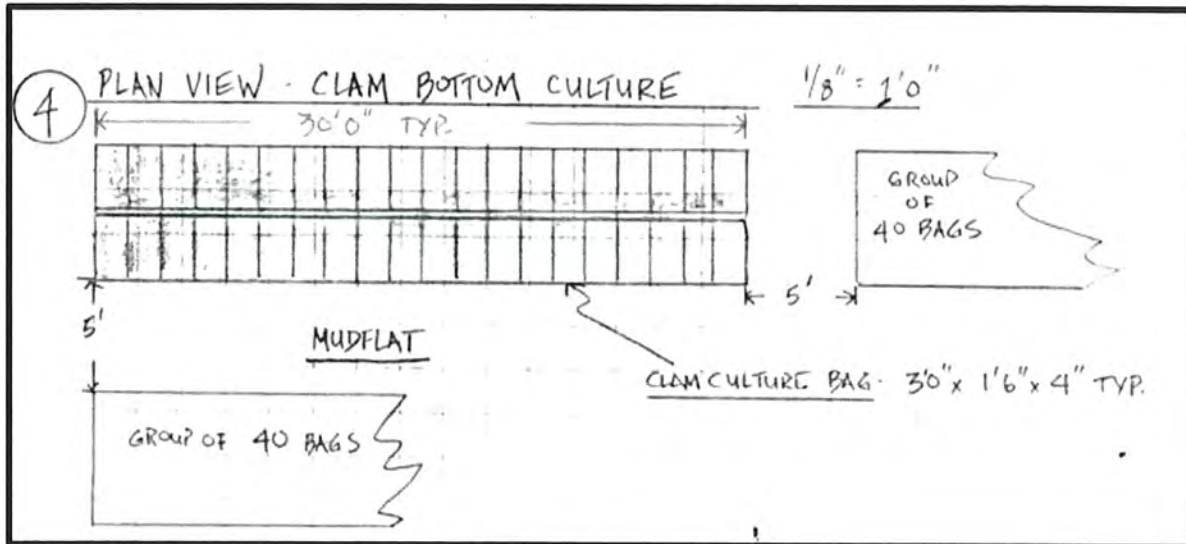


Figure 7. Typical On-Bottom Clam Bag Layout

Note: HIOC does not currently include a 5-foot space between groups of clam bags. The plan shown is otherwise correct.



Figure 8. Photograph of On-Bottom Bag Culture with Clams.

Planting clam bags is scheduled with tide availability and consists of first conveying the clam bags to the predetermined planting area during a high tide by boat, and on the subsequent low tide (typically the same or next day) a shallow trench (3 inches or less) is dug into the mud in parallel rows. After evenly distributing clams and gravel in the bag, the bags are placed into the depression alongside each other and the mud that was scraped off is put back on top the clam bags. Monthly checks are done on the clam bags to insure placement and growth. Occasional maintenance is performed on clam bags generally following storms to ensure that they are in place.

Approximately 2 to 4 years after planting, clam bags are harvested from their planting area. Harvest entails removing the bags from the mud, at which point they are shaken to remove sediment before being loaded onto a boat for transport. All culling and grading takes place on land at HIOC's facilities. The harvest generally takes place with 1 foot to 3 feet of water to allow easy access and loading of the bags onto the boat. Bottom bags are used in Lease No M-430-15 (0.03 acres).

3.2 Off-Bottom Culture Methods

There are four off-bottom culture methods currently used by HIOC that were previously approved by the Coastal Commission: (1) racks-on-pipe, (2) overlapped racks, (3) intertidal longlines, and (4) subtidal floating lines. A description of the typical gear used, planting layout, and harvest activities are described below.

3.2.1 Racks-on-Pipe

Racks-on-pipe typically consist of a 2-foot by 8.5-foot rebar frame to which 4.5-inch VEXAR mesh bags typically measuring 2 feet by 3 feet are attached (Figures 9 to 10). After racks are stocked with oysters, they are placed into the rows by boat during a high tide. On the next low tide series (usually the same or following day), the racks are organized and placed into the notch on their 4 PVC pipe legs. PVC pipe legs are typically 12 inches to 24 inches above grade. A row of racks is typically 300 feet to 600 feet long with 2.5 feet between each rack (front to back). Rows of racks run parallel to each other. There are typically two rows of racks with 3 feet of space between them (left to right) and then a 12-foot to 15-foot space until the next two rows.

Racks are monitored and tipped monthly during their grow-out period. On a quarterly basis, after initial planting, racks can be culled and graded. The harvest of racks entails the crew removing the racks from their PVC legs and placing them on a boat for transport, typically done with 2 feet to 3 feet of water to allow the boat to come up alongside the rows of racks for easier handling by the crew. Alternatively, oysters are harvested at a 4-foot to 6-foot tide by use of a boat mounted crane, which lifts the racks on the line individually onto the boat. Currently, all culling and grading takes place on land at HIOC's facilities. Final harvest of racks is typically 9 to 12 months after the initial planting date.

Racks-on-pipe are used at leases M-430-10 (1.06 acres), M-430-11 (1.69 acres), M-430-12 (0.78 acres), and M-430-15 (1.66 acres).

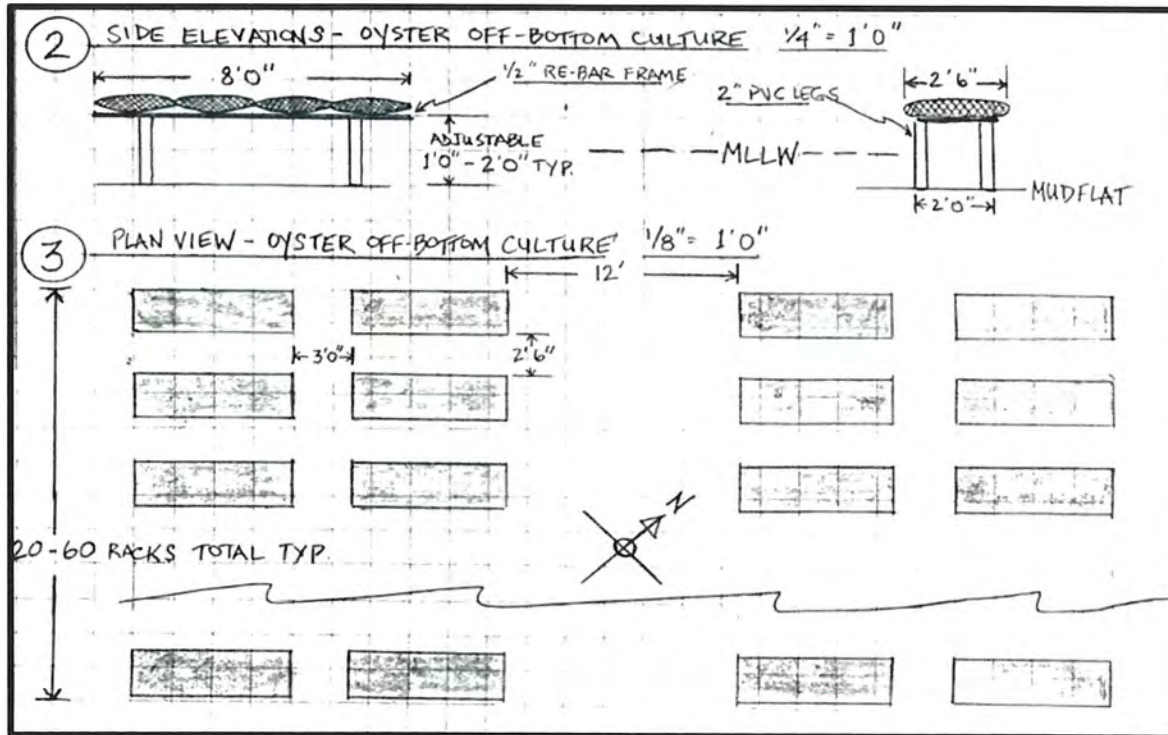


Figure 9. Typical Off-Bottom Racks-on-Pipe Layout



Figure 10. Photograph of Off-Bottom Racks-on-Pipe used by HIOC

3.2.2 Overlapped Racks

In growing areas with heavy wind and wave action, HIOC uses an overlapping rack design to help the racks absorb and deflect the energy from the waves (Figures 11 to 13), which reduces rack displacement. This method is used at all leases: M-430-10 (0.15 acres), M-430-11 (0.50 acres), M-430-12 (0.55 acres), and M-430-15 (0.97 acres). This culture method is typically used at the lower end of the rows where wave action is heaviest. The general layout includes 5 or 10 racks that are overlapped followed by a 5-foot space, except in Lease No. M-430-12, where up to 30 racks can be overlapped followed by a 5-foot space. Planting, maintenance, and harvest would take place as described in the section above for racks-on-pipe.

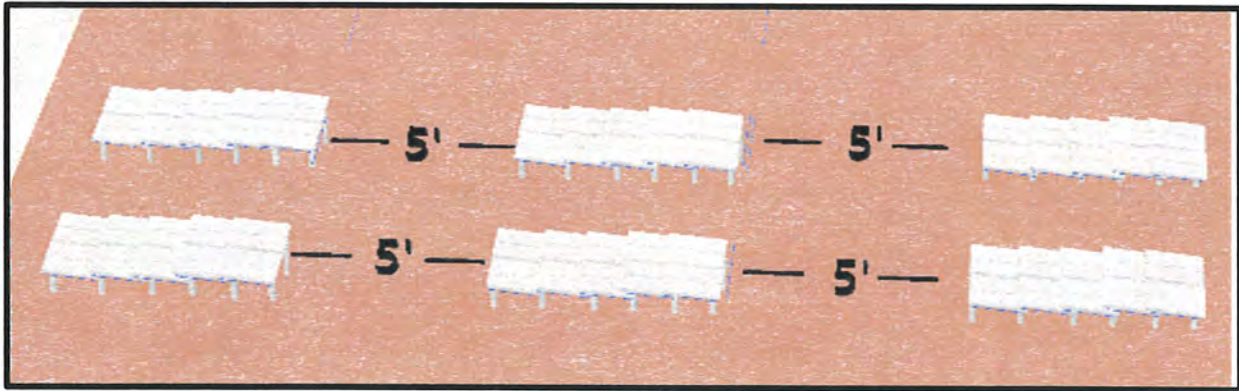


Figure 11. Typical Spacing between Sections of Overlapped Racks

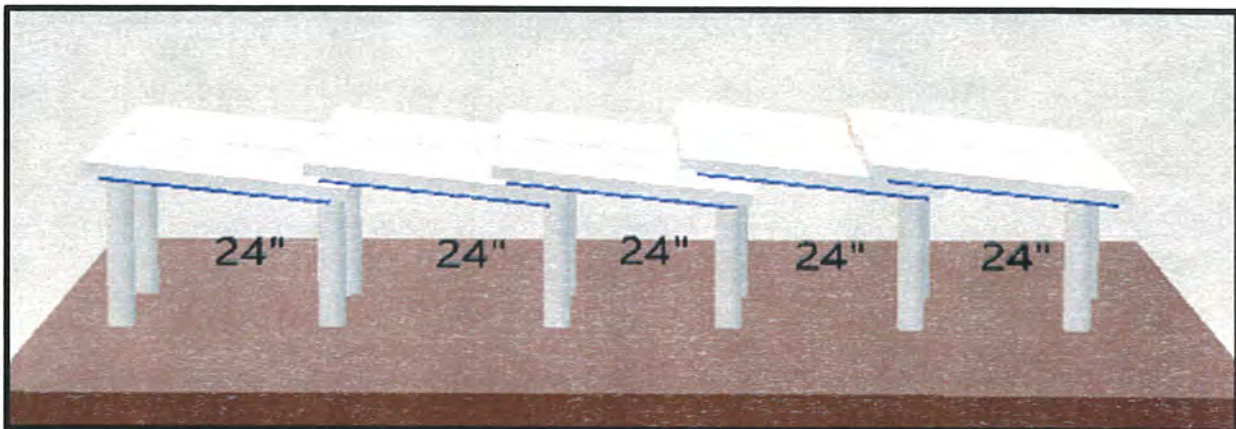


Figure 12. Typical Overlapped Racks Spacing: Side View

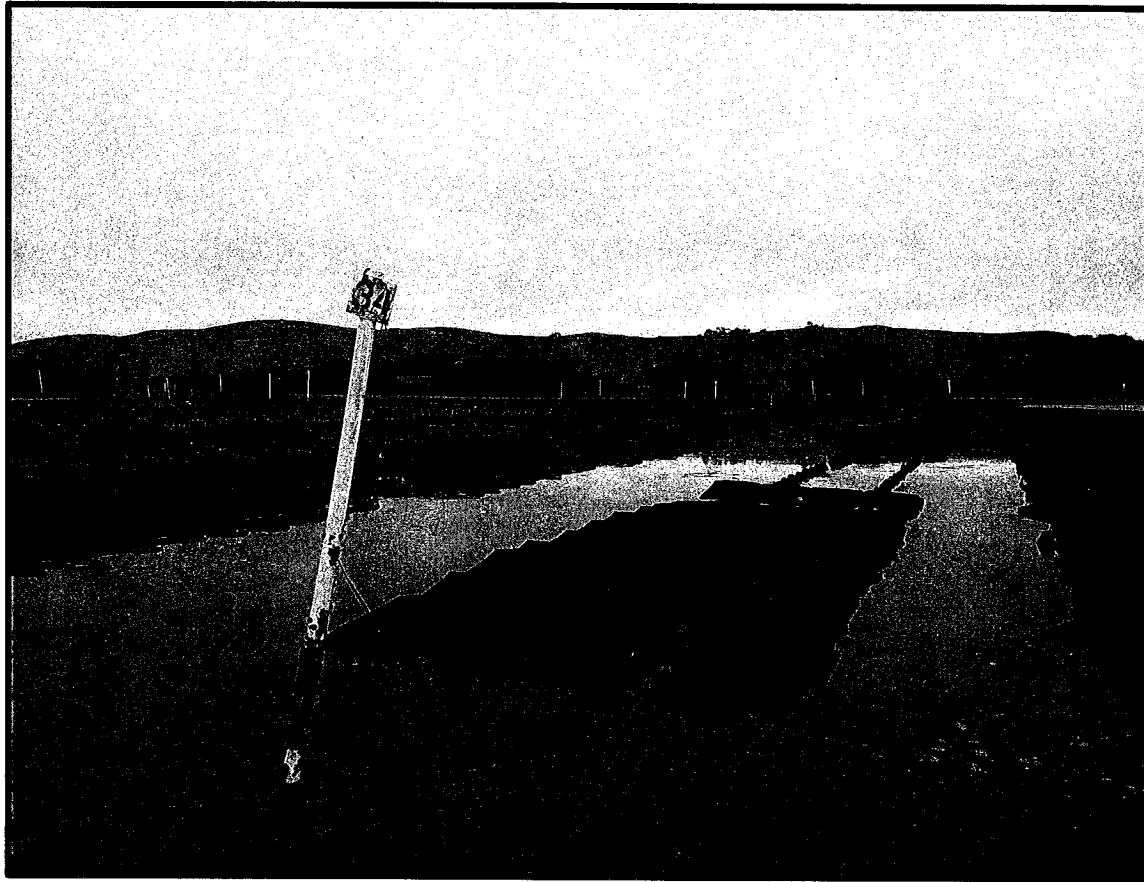


Figure 13. Photograph of Off-Bottom Overlapped Racks used by HIOC

3.2.3 Intertidal Longlines

Longlines are typically 100 feet to 300 feet long with anchor posts at either end and supporting posts typically every 8 feet (Figures 14 to 15). There are spaces of approximately 30 inches to 60 inches between lines, and an additional space of 15 feet between grouped sections of 4 lines. The anchor posts are typically galvanized steel pipe, T-stakes, or other suitable materials, and are used to maintain line tension. The supporting posts in between the lines are typically made of schedule 80, 2-inch PVC. Longlines can be 1 foot to 4 feet in elevation above the ground. Lines between the posts are plastic coated with a steel core. Covering that inner line is an outer sleeve that is added to reduce wear.

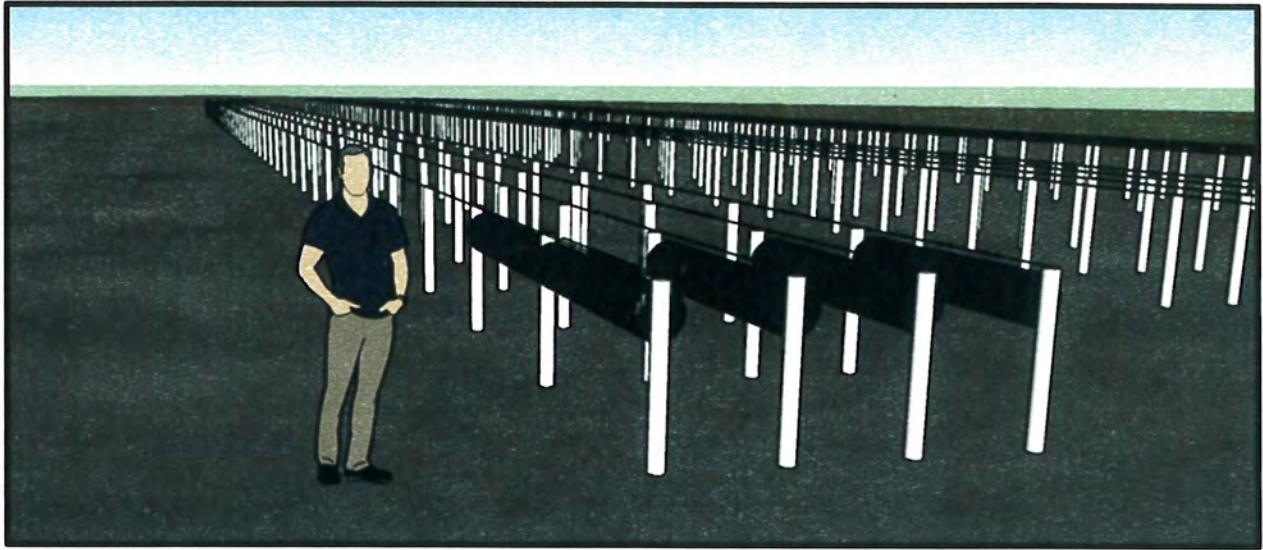


Figure 14. Diagram of Multiple Longlines with Baskets

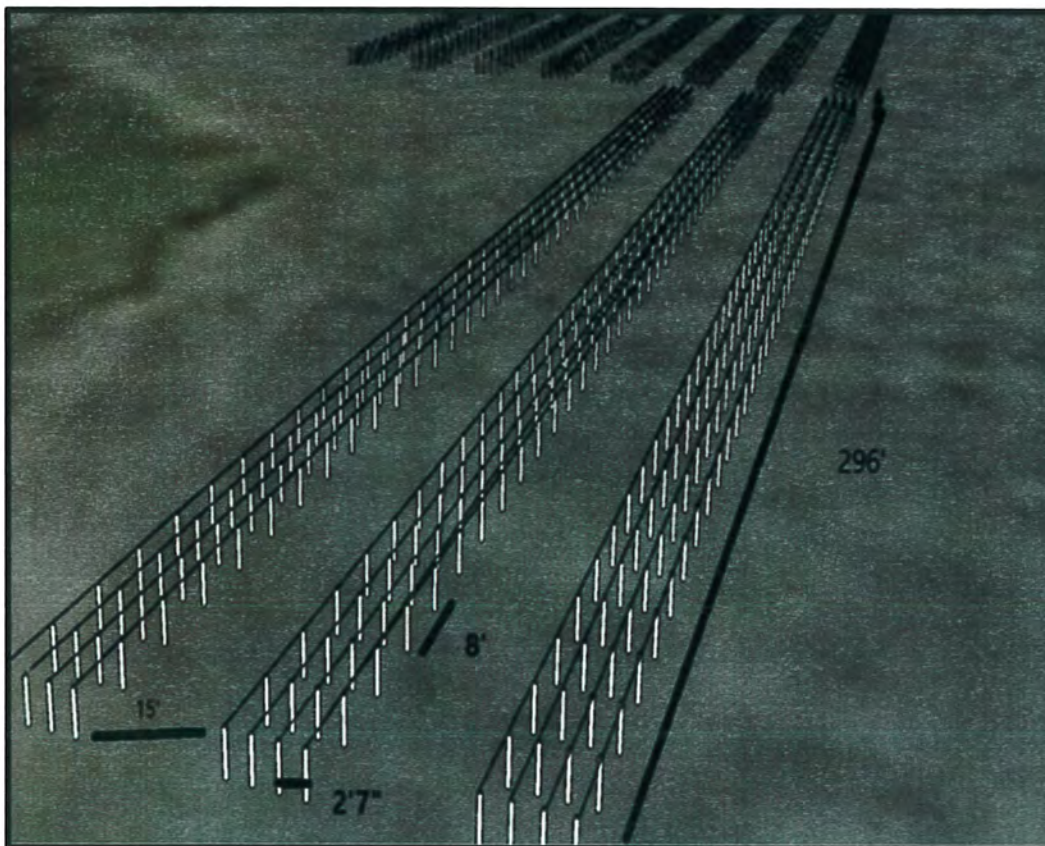


Figure 15. Digital Representation of Longlines

Longlines can hold either bags or baskets with or without floats (Figure 16 to 17). The bags that are used on the longlines are the same as those used in bottom culture, which are typically 2 feet by 3 feet with $\frac{1}{2}$ -inch mesh, and can be attached to the line using a SS snap hook or plastic clip

that connects to a plastic bearing. Bags attached to longlines have a small crab float attached to them opposite of the attachment to the longline. Floats are attached to the bag using 3/8-inch polypropylene line. Baskets attached to longlines are typically 2 feet to 4 feet long by 1.5 feet in diameter and are made of high-density polyethylene (HDPE).



Figure 16. Photograph of Tipping Bags Attached to Longlines used by HIOC



Figure 17. Photograph of Longlines with Baskets used by HIOC

After stocking the bags or baskets with oysters, they are transported to the growing areas via boat. The boat runs alongside the longlines and bags/baskets are clipped directly onto the line. Monthly and/or quarterly visits are made to check condition and/or harvest and grade. All culling and grading takes place on land at HIOC's facilities.

Longlines are used at Lease No. M-430-15 (2.07 acres) and 4 lines are located at Lease No. M-430-12 (0.60 acres). In addition, there is a culture method that is being phased out called Stanway units that is used at Lease No. M-430-10 (0.36 acres). These are modified racks that have baskets on top. These are being converted to longlines. All culture gear that has floats are currently in the process of being branded with the company name and phone number.

3.2.4 Subtidal Floating Longlines

Floating longlines are typically 100 feet to 300 feet long (Figures 18 to 20). The lines are anchored at either end with concrete, or appropriately sized Danforth anchors, and chain and/or rope. A single line extends from the mooring to the surface where it is attached to a spacing bar measuring approximately 3 feet. From this spacing bar, two lines, approximately 3 feet apart, run along the surface to the other end where the mooring and attachment system is repeated. In this way, two lines are attached to a single mooring system. There is a 15-foot space between each pair of lines. Floating longlines are used to secure baskets, which are the same type of basket used in intertidal longlines, measuring approximately 2 feet to 4 feet long and approximately 1.5 feet in diameter. There are floats threaded to the line in between each basket. Floating longlines are visited monthly and/or quarterly to check condition and/or harvest and grade. All culling and grading takes place on land at HIOC's facilities.

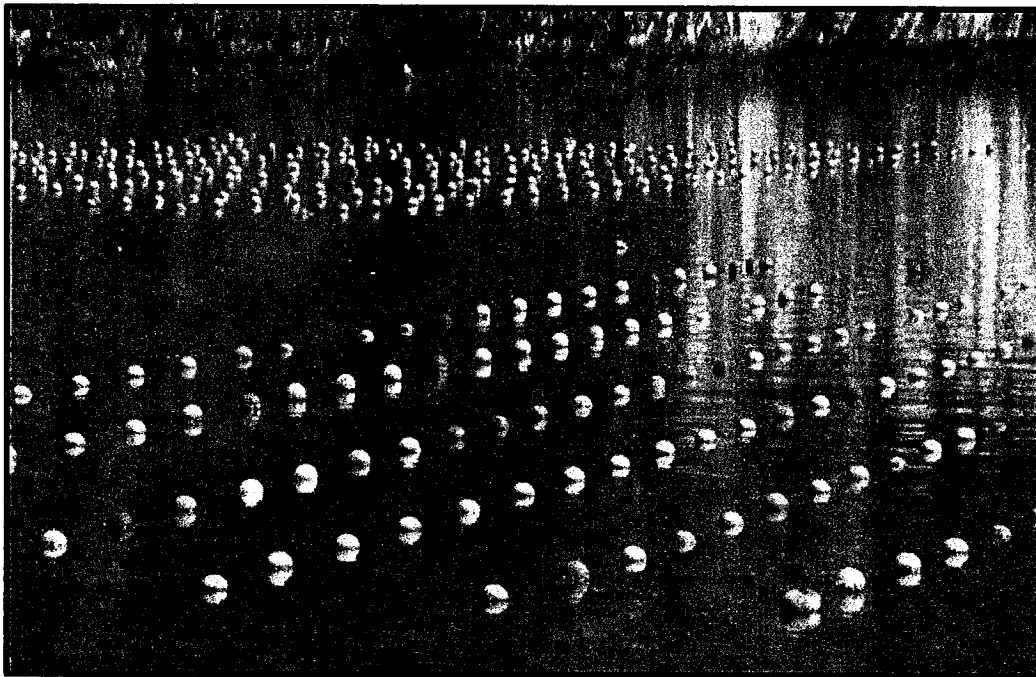


Figure 18. Photograph of What Floating Longline Look Like at the Water's Surface



Figure 19. Photograph of the Types of Baskets on Floating Longline used by HIOC

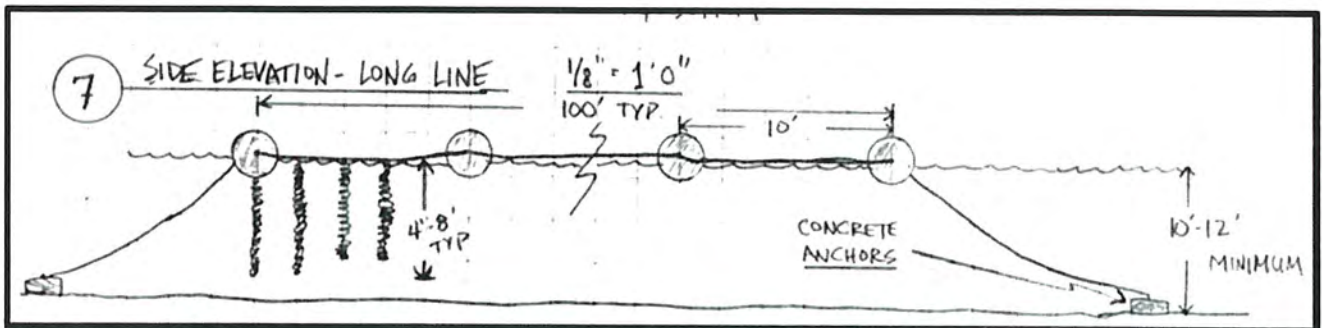


Figure 20. Diagram of Suspended Longline/Sentinel Mussel Layout

Floating longlines are used at Lease No. M-430-12 (0.24 acres), comprised of 10 floating lines. One floating line at Lease No. M-430-15 (<0.05 acres) is currently used to hold sentinel mussels for sampling by California Department of Public Health (CDPH).

4.0 CULTIVATION METHODS NOT PREVIOUSLY REVIEWED BY THE COMMISSION

There is one cultivation method that was not originally reviewed by the Commission: clam rolls used at Lease No. M-430-15 (6.91 acres). This method is based on innovations that have occurred since the CDP was issued in 1994. Clam rolls were first used by HIOC in 2010, and the methods for harvesting the clams was first used approximately three years later (following the grow-out period) in 2013. Clam rolls are similar to other methods used along the West Coast to grow Manila clams directly in the bottom substrate.

Clam rolls are made from ¼-inch VEXAR mesh, typically measuring 4 feet by 100 feet, and laid out in parallel rows (Figure 21). Before placement of the roll, the ground is tilled to allow for clams to bury themselves. This is followed by broadcast seeding within the predetermined footprint. After the mesh is laid out, it is anchored to the mudflat using ½-inch rebar staples or weighted down with rebar along the edges.

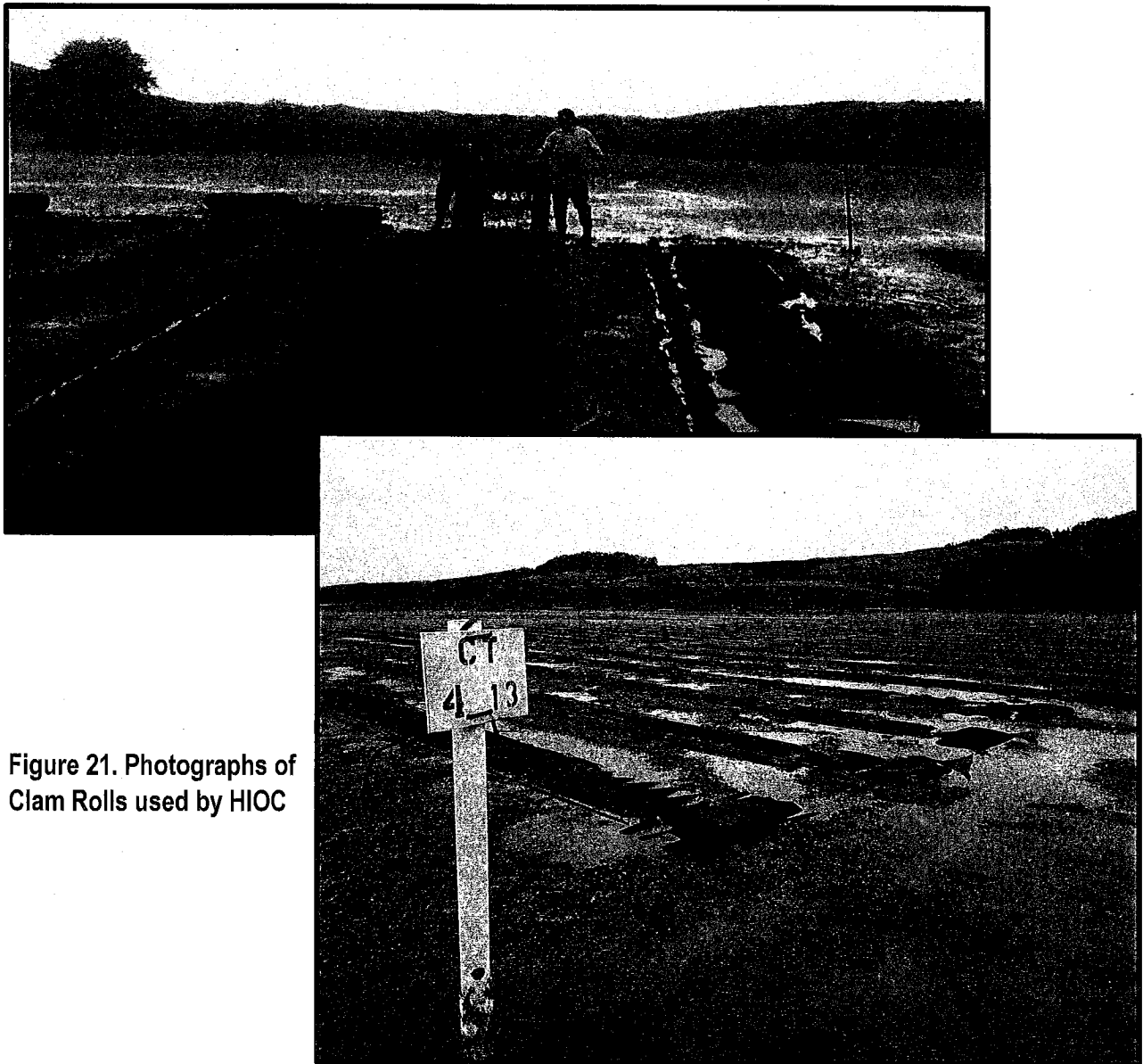


Figure 21. Photographs of Clam Rolls used by HIOC

At harvest time, approximately 2 to 4 years after planting, the mesh is removed (as needed) and a water rake is used to collect the clams (Figure 22). The rake is operated in 6 inches to 1-foot of water by a gas-powered pump that uses water to move the sediment and clams through a box with ½-inch mesh (Figure 23). The mesh retains the clams and allows for sediment to resettle. This technique reduces the total amount of substrate affected by HIOC's clam harvest as compared to historic methods, like using clam rakes. The pump itself is kept in a dingy or container to help prevent the potential of gas spilling.

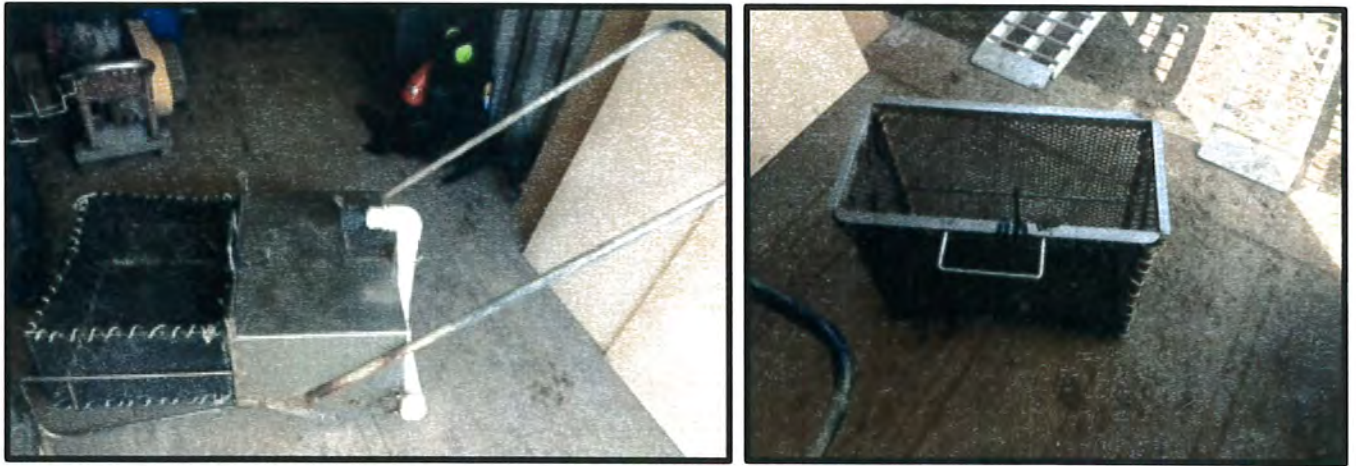


Figure 22. Photograph of Clam Rake and ½-inch Mesh Basket used with the Clam Rake



Figure 23. Pump used to Operate the Clam Rake

5.0 SUPPORT OPERATIONS

Currently, HIOC uses floating work platforms to support their cultivation practices. Because of the efficiencies gained, HIOC proposes to incorporate a work barge into their standard support operations. Both types of vessels are described below.

5.1 Floating Work Platforms

HIOC is currently using floating work platforms that typically measure 8 feet by 12 feet to 15 feet by 30 feet. The work platforms are used to stage materials (e.g., baskets, lines, bags) and tools for maintenance work on the leases. On occasion, they are also used to stage culture gear while awaiting the proper tidal height to be installed at a growing area. The floating work platforms are typically constructed with roto molded floats, wood or aluminum, and plywood decking. They are moved around on the leases (as needed), and do not have a permanent mooring. Generally, the floating work platforms do not remain in the same location longer than one month. Anchoring does not occur in eelgrass beds. Activity associated with the work platforms is limited to 10 or less occasions per month. The work platforms are operated at appropriate depths in a manner that avoids grounding or scouring.

5.2 Work Barge

HIOC is planning to construct a new work barge to support cultivation activities. The work barge would be approximately 15 feet by 30 feet, and constructed of aluminum, wood, roto molded floats, and plywood decking. The work barge would be used for the mechanical grading and culling of oysters to reduce and minimize activities and boat trips on the bay to and from the boat launches. Construction would allow for the work barge to move from lease to lease (as needed) for grading and culling activities. An intake pump would be used to wash shellfish during grading and culling activities. The pump would either be electrically or gas powered, and would be installed with National Marine Fisheries Service (NMFS)-approved intake screens to avoid entrainment of juvenile fish. Discharge from the pump would also be screened to minimize sediment going back into the bay. The work barge would not have a permanent mooring and would not be anchored in any one place longer than one month. The work barge would not be anchored in or above an eelgrass bed. It would be operated at depths necessary to prevent grounding or scouring. Activity on the barge itself would vary seasonally and range from 0 days to 12 days per month.

6.0 BEST MANAGEMENT PRACTICES

Since its CDPs were issued, HIOC has continued to implement best management practices (BMPs) to improve environmental sustainability and further minimize ecological impacts in Tomales Bay. For example, HIOC has partnered with local stakeholders to develop a Marine Debris Management Plan (Appendix A) that has reduced culture debris to approximately 100 to 150 pieces of displaced gear annually (or approximately 1.0% to 1.5% of HIOC's total gear used).

Table 3. Current BMPs used by HIOC

Topic	Best Management Practice	Additional Documentation
Marine Debris	HIOC will implement a marine debris management plan that has been developed for Tomales Bay shellfish aquaculture operations.	Appendix A – Marine Debris Management Plan
Eelgrass (<i>Zostera marina</i>) Mapping	HIOC will continue working with The Nature Conservancy and UC Santa Cruz to map eelgrass in Tomales Bay over multiple years to better understand interactions between its culture gear/operations and eelgrass.	Appendix B – Tomales Bay Eelgrass Project
Eelgrass Beds	The CDP for Lease No. 430-10 requires a 5-foot buffer from eelgrass beds (as they existed in 1981). The CDP for Lease No. 430-15 requires that HIOC “not cut or disturb any eelgrass growing on the bay bottom during the installation or use of the proposed shellfish cultivation apparatus.”	CDP No. 2-81-40 (Lease No. 430-10) CDP No. 1-94-55 (Lease No. 430-15)
Vessel Motors and Other Motors	HIOC uses highly efficient 4-stroke outboards and other motors (e.g., gas-powered motor for clam rake) that uses National Marine Fisheries Service-approved fish screens. All motors are muffled to reduce noise.	None
Vessel Maintenance and Fueling	HIOC maintains all vessels used in culture activities to limit the likelihood of release of fuels, lubricants, or other potentially toxic materials associated with vessels due to accident, upset, or other unplanned events. HIOC uses marine grade fuel cans that are refilled on land, and HIOC carries oil spill absorption pads and seals wash decks or isolates fuel areas prior to fueling to prevent contaminants from entering the water.	None
Vessel Anchors	HIOC anchors large vessels in the channel outside of eelgrass beds and uses smaller skiffs where eelgrass is present when the area is inundated.	None
Vessel Routes	HIOC has established vessel routes used to access their intertidal leases in areas with submerged aquatic vegetation (SAV) to avoid and minimize the potential to disturb SAV.	Appendix C – Vessel Routes
Pacific Herring (<i>Clupea pallasii</i>)	In any cultivation beds within or adjacent to eelgrass areas, HIOC will conduct visual surveys for Pacific herring spawn prior to conducting activities during the herring spawning season (October to April). If herring spawn is present, HIOC will suspend activities in the areas where spawning has occurred until the eggs have hatched and spawn is no longer present (typically 2 weeks).	None
Marine Mammal Haul Out Areas	HIOC maintains a 100-yard distance from identified seal or other marine mammal haul out areas on Pelican Point, Duck Island, and the east side of Hog Island.	Appendix C – Vessel Routes
Fish and Wildlife	During vessel transit, harvest, maintenance, inspection, and planting operations, HIOC avoids approaching, chasing, flushing, or directly disturbing shorebirds, waterfowl, seabirds, or marine mammals.	Appendix C – Vessel Routes

Appendix A

Marine Debris Management Plan

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APPENDIX A: MARINE DEBRIS MANAGEMENT PLAN

Hog Island Oyster Company (HIOC) worked closely with local citizens to address marine debris management. HIOC does a quarterly bay clean-up, with emphasis on the four HIOC leases (M-430-10, M-430-11, M-430-12, and M-430-15). There is an organized clean-up with all the Tomales Bay growers, and the goal is to conduct bi-weekly bay clean-ups on different sections of the bay. Figure A-1 and Figure A-2 provide the breakdown of responsibilities for clean-up events by grower. HIOC also helps organize a yearly bay clean-up event on California Coastal Clean Up Day. In addition to aquaculture debris, materials from other sources are also collected. During the 2016 to 2017 clean-up effort, waste associated with recreation (e.g., hats, cigarettes, styrofoam) and food (e.g., food wrappers, bottles) comprised the largest amount of debris collected.

The specific action items that are part of the marine debris management plan include:

- Regularly educate staff on the issues of marine debris. Ensure that all staff do not litter.
- Growers must strive to continually improve gear, so that breakage and scattering of debris is minimized.
- Avoid the use of any single-use materials. Minimize waste generation, practicing the principals of reduction, re-use, recycling and recovery. Purchase materials with a long a life span, preferably reusable but at least recyclable.
- Secure all buoys/floats properly to minimize loss.
- When tossing out loose bags or bundles of lightweight seed bags ensure that all bags are either heavy enough not to drift away or secured/anchored to prevent drifting or movement. All loose bags shall be secured within two weeks of being tossed out if not sooner.
- Avoid leaving tools, loose gear and construction materials on leases and surrounding area for longer than one week. All materials staged on leases shall be secured to prevent movement and or burial.
- If a culture method is unsuccessful, or is not in use for over a period of one year, all materials will be promptly removed.
- At a minimum, leases and surrounding areas shall be patrolled for lost and broken gear monthly. Patrols should occur as soon as possible or at least within two-weeks of any high wind or storm event.
- Growers will participate in quarterly bay clean-ups, which include walking the bay, shoreline and wetlands, to get to hard to reach areas. An itemized list of any, and all

debris (including shellfish gear), collected will be recorded and communicated to other growers. The goal is to reduce the total volume of debris that is accumulating in Tomales Bay.

- Growers will work with and collaborate with local community and other coastal clean-up people/organizations to coordinate bay wide clean-up efforts. All trash will be collected (including non-shellfish items) at all times.
- A review of lease escrow accounts shall occur on a regular basis to ensure that adequate funds are available to clean up abandoned leases. Growers shall retain the right to perform the clean-up of any abandoned leases themselves, so as to not decrease the balance in the escrow account.

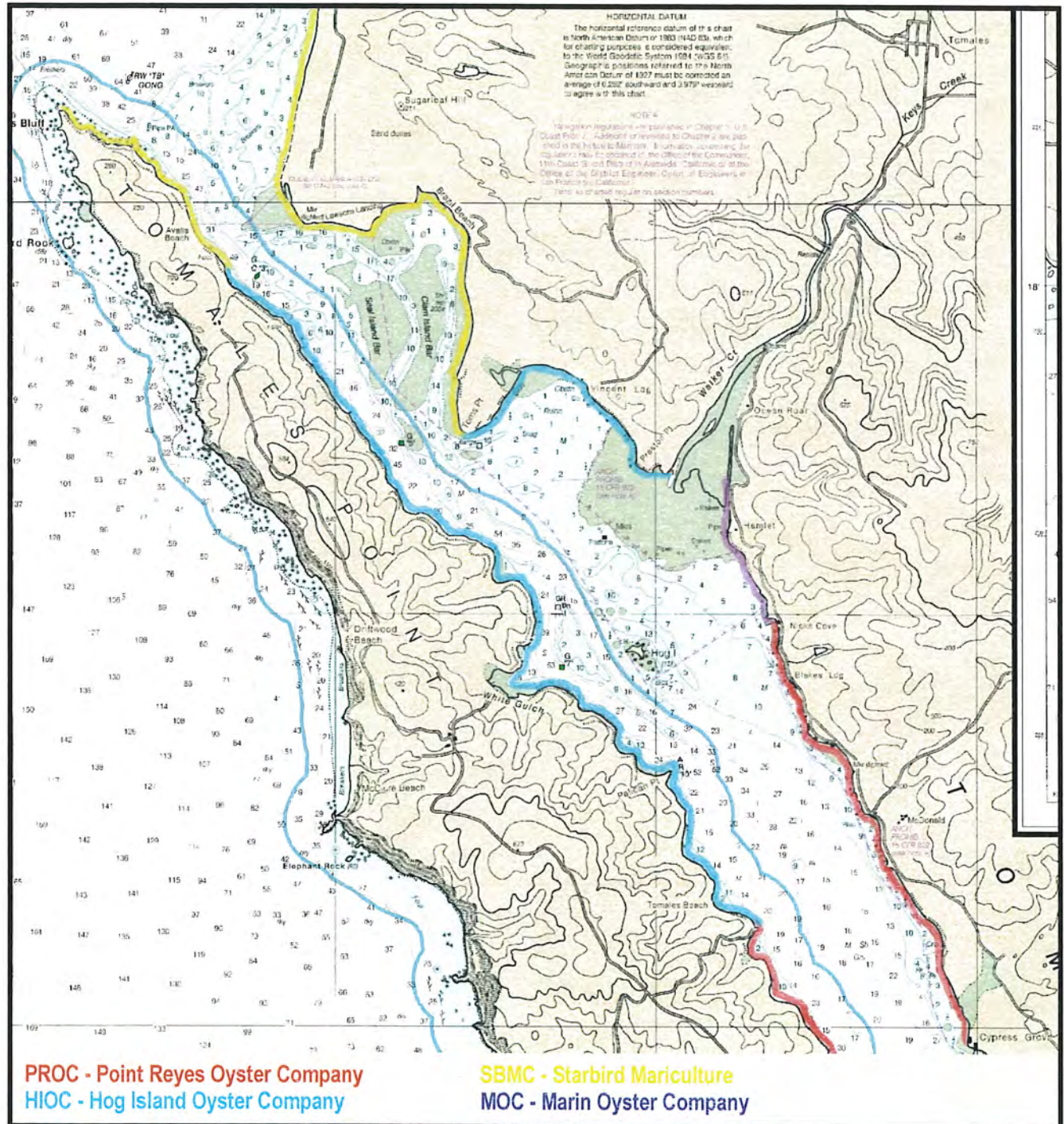


Figure A-1: Breakdown of Grower Responsible for Northern Tomales Bay Shorelines.

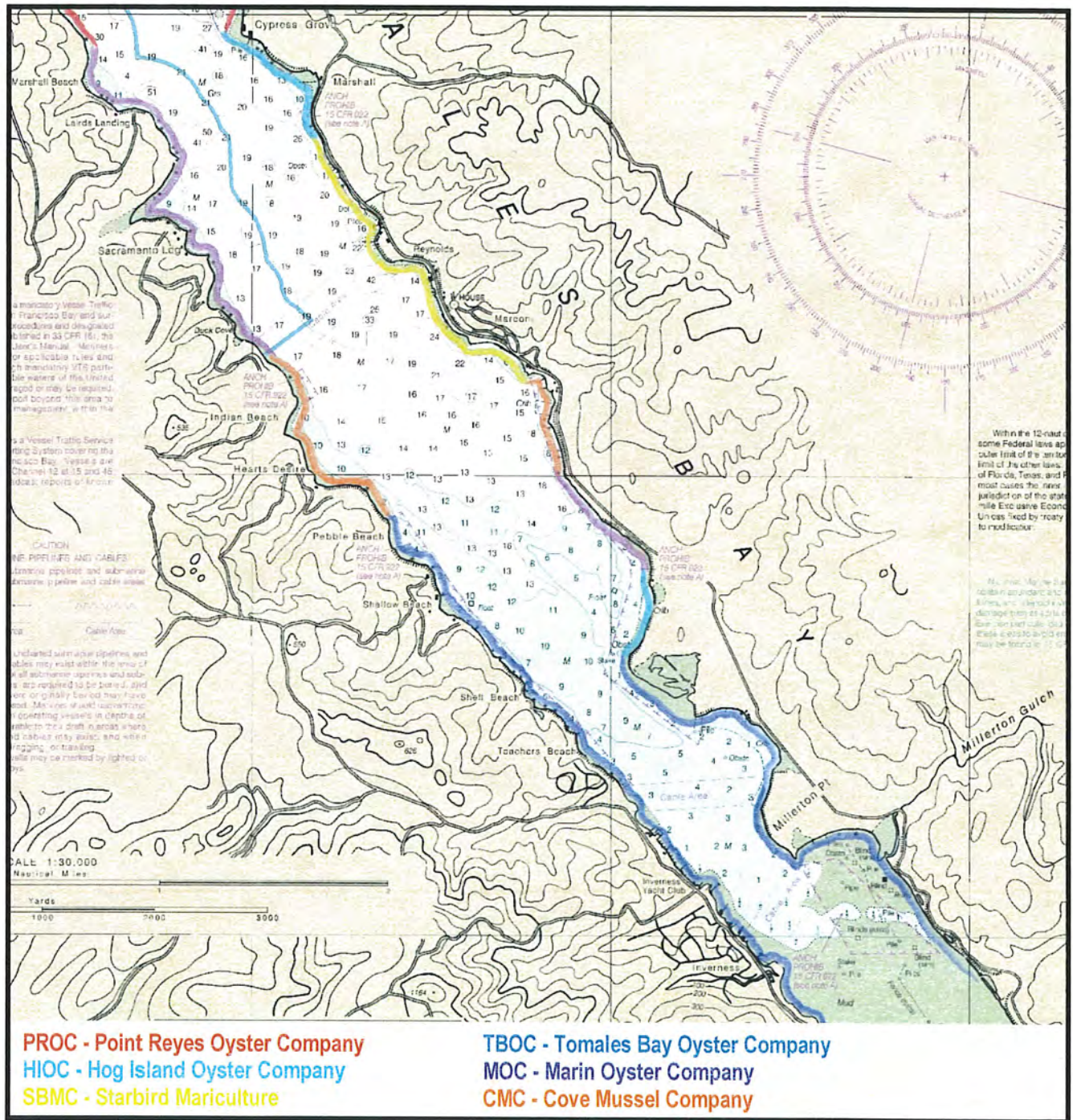


Figure A-2: Breakdown of Grower Responsible for Southern Tomales Bay Shorelines.

Appendix B

Tomales Bay Eelgrass Mapping

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APPENDIX B: TOMALES BAY EELGRASS MAPPING

The following scope of work was developed by Dr. Kristy Kroeker's lab from U.C. Santa Cruz (UCSC).

SCOPE OF WORK

In the absence of good data, state and federal regulations calling for no-net-loss of native seagrasses to protect essential fish habitat have led managers to take a precautionary approach when approving activities that may have an impact on these habitats. This has seriously constrained the expansion of shellfish aquaculture in California and elsewhere.

Both oyster aquaculture proponents and regulatory agencies need more information about the impacts of various aquaculture methods on seagrass growth and abundance. This information will improve the industry's ability to provide a high-quality, sustainable product with minimal adverse ecological impact and maximum ecological benefit. It will help the regulatory agencies develop permit conditions that are truly protective of the environment. Survey methods need to be developed that are inexpensive and easy to operationalize, produce high-quality data, and can be implemented regularly – preferably by permittees.

Unmanned aerial vehicles (UAVs or drones) are powerful new tools with myriad applications for science. Scientists are already employing UAVs in several locations to map out kelp forests and seagrass ecosystems, quickly and inexpensively generating data that can help improve our understanding of the impacts of oyster culture on seagrass and its associated marine communities.

The purpose of this project is to design a scientifically-rigorous monitoring program that can document trends in seagrass growth and abundance in the Tomales Bay and Humboldt Bay operations of the Hog Island Oyster Company using UAVs. Dr. Kroeker ("Grantee") will work closely with TNC staff to develop the methods necessary to monitor eelgrass and aquaculture interactions over time in Tomales Bay and Humboldt Bay, CA, that can be used by HIOC to establish a long-term monitoring program.

In particular, Grantee will collaborate with The Nature Conservancy ("TNC") and Hog Island Oyster Company ("HIOC") to develop a monitoring program to measure the area of eelgrass cover and seagrass ecosystem function in three locations with and without HIOC aquaculture operations. The Grantee will focus initial work on the recent (winter 2016) HIOC aquaculture deployment at Tom's Point in Tomales Bay to develop methods. In addition, the Grantee will replicate the methods developed at Tom's Point for the two new HIOC leases in Humboldt Bay.

Grantee will design the sampling scheme, including both in-situ monitoring and drone surveys - and participate in initial unmanned aerial vehicles ("UAV") surveys that will be piloted by TNC or HIOC staff. The sampling will follow a BACI (before-after-control-impact) design, with unmanned aerial and subtidal sampling occurring before and after the aquaculture deployment in control and impact (i.e., aquaculture deployment) locations. For the Tom's Point deployment, the Grantee will rely on a modified BACI design using aerial surveys collected in 2013 by other investigators to provide the "before" data. In addition, the Grantee will sample three control sites of similar area to the aquaculture deployment with increasing distance from the aquaculture lease. This will increase power and provide an opportunity to test what attributes are preferable (e.g., distance from impact site) for future control sites. Each "site" (e.g., aquaculture lease plus three controls) will include ~5 onshore-to-offshore aerial and subtidal transects, that cross the seagrass to mud transition zone, with those in the aquaculture lease occurring between the rows of the rack and bag aquaculture deployments. This design will allow the Grantee to monitor onshore encroachment or offshore retreat of seagrass with the aquaculture. These methods will be modified as is pertinent for sampling of the two Humboldt Bay leases, with at least one control and one "impact" site for each lease.

Grantee will perform SCUBA surveys to quantify the relationship between measures of eelgrass cover from UAV surveys and important seagrass attributes used to determine eelgrass and ecosystem status by state and federal agencies and other scientists (e.g., seagrass density, algal and invertebrate abundance, and community structure).

Grantee will perform in situ environmental monitoring at one control and the impact site for each aquaculture lease to better understand the potential drivers of eelgrass-aquaculture interactions (e.g., turbidity and PAR). This will include multi-day deployments of PAR sensors (and other sensors provided by the Kroeker Lab at no cost). In addition, the Grantee will collect discrete water samples at all control and impact sites in Tomales Bay for carbonate chemistry and nutrients characterization, which will be processed in the Kroeker Lab at UCSC.

Last, Grantee will analyze the seasonal patterns in eelgrass and aquaculture interactions for the 2017 eelgrass growing season (spring-fall) to produce a peer-reviewed publication, to be co-authored with TNC science staff.

DELIVERABLES

1. Long-term monitoring design for aquaculture leases, based off of the work performed under this grant.

2. Final report on seagrass and aquaculture interactions at Tom's Point aquaculture lease, plus other leases if access is granted by HIOC with adequate time to undertake surveys during the grant period.
3. Peer-reviewed publication on aquaculture-seagrass interactions, and mechanisms underlying the outcomes using this case study.

BUDGET

The grant will be used to support PhD student Sarah Lummis to lead monitoring design (1), final report (2), and the peer-reviewed publication (3).

In addition, the grant will be used to support 1 month of summer salary for PI Kristy Kroeker, to mentor the graduate student, oversee project, and contribute to writing of final report and peer-reviewed publication.

Last, the grant will be used to purchase 2 PAR sensors, which will allow us to test the mechanisms underlying changes in seagrass cover associated with aquaculture (e.g., light availability). All other water samples will be processed at UCSC in the Kroeker Lab at no cost.

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Appendix C

Vessel Routes

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APPENDIX C: VESSEL ROUTES

Hog Island Oyster Company (HIOC) has developed vessel routes in and around SAV or near marine mammal haul-out locations and areas where marine birds congregate. The following information is based on current best management practices associated with typical operations.

Vessel Routes in SAV

At low tides (≤ 3 feet), HIOC will avoid navigating over native eelgrass (*Zostera marina*) beds by staying in deeper channels, as much as possible, using the routes established on the route map (Figure C-1). Lease M-430-12 in the south end of the bay has deep water access to the lease area and therefore does not have a specified route. Larger work barges and work platforms are anchored outside of eelgrass and smaller skiffs are used to access any areas where eelgrass is present. All boats have an onboard global positioning system (GPS), and HIOC deploys floating markers, where appropriate, on the leases. Using these routes will help minimize impacts to eelgrass beds. In periods of darkness or inclement weather, HIOC staff use lights and onboard GPS units to aid navigation.

Vessel Routes Near Marine Mammal Haul-out Locations or Marine Birds

HIOC will maintain a distance of at least 100 yards from any identified seal haul-out site and will not intentionally approach any observed marine mammal in the water. Identified seal haul-out locations in Tomales Bay include Pelican Point, Duck Island, and the east side of Hog Island (Figure C-1). HIOC will report any injured or dead seals to the Marine Mammal Center, 415-289-SEAL. In addition, HIOC will avoid disrupting or hurting birds that are in the bay, especially during feeding events.

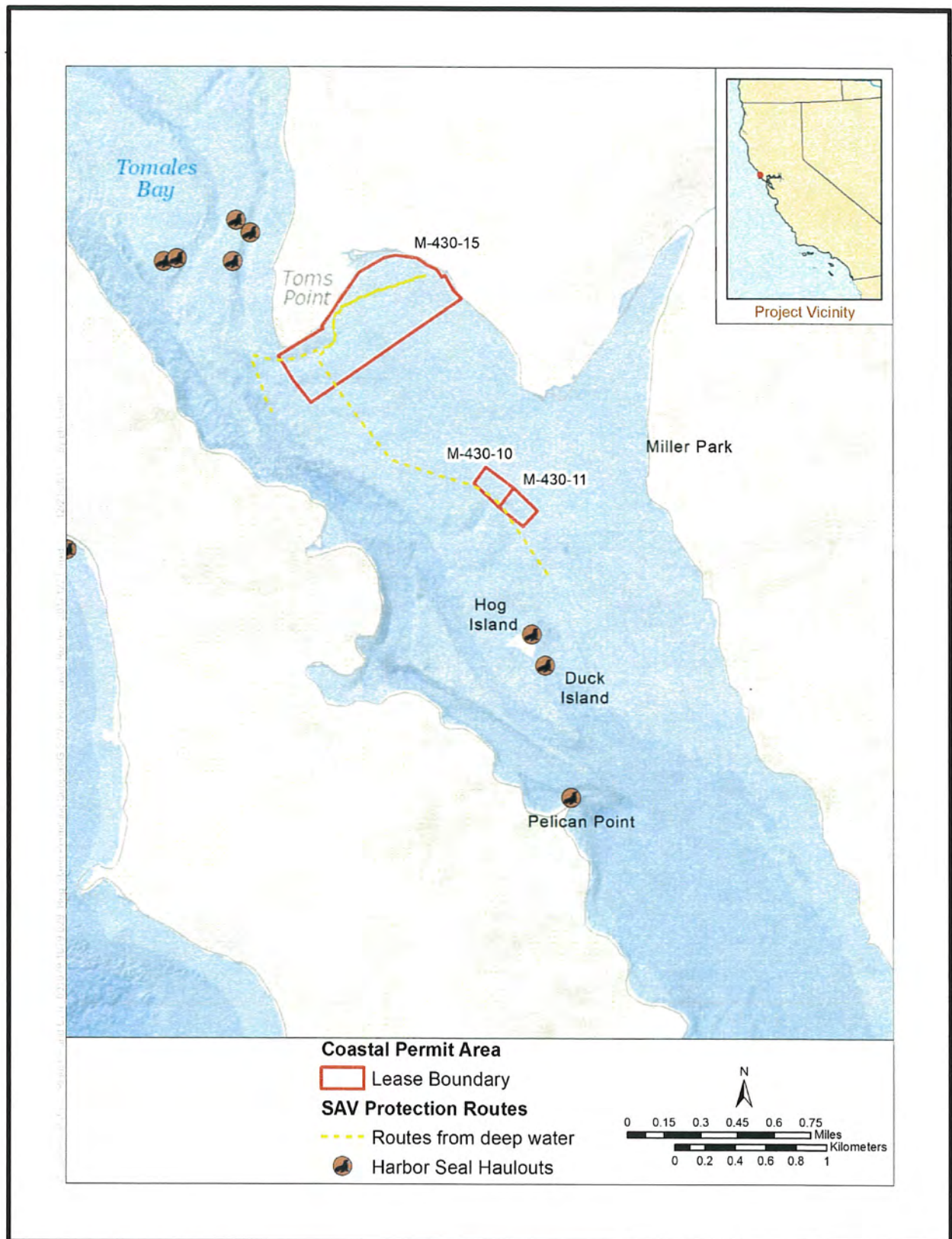


Figure C-1: Vessel Route to access Leases No. M-430-10, M-430-11, and M-430-15 from East Channel or West Shore in Tomales Bay, California.

Hog Island Oyster Company
(PERMIT NOS. 14381N63, 15340N63, 15588N63, AND 20842N63)
PROJECT DESCRIPTION

August 2018

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APPENDICES

Appendix A: Marine Debris Management Plan

Appendix B: Tomales Bay Eelgrass Mapping

1.0 INTRODUCTION

Hog Island Oyster Company (HIOC) grows shellfish on four different leases in Tomales Bay, California (Figures 1 to 4). The four leases used by HIOC are from the California Fish and Game Commission (CFGC) and were either granted to HIOC directly or acquired from other growers. In addition, each lease has an associated permit issued by the U.S. Army Corps of Engineers (Corps) that includes authorized activity (Table 1). The total acreage of the leased areas is 168.2 acres, of which HIOC currently operates on approximately 25.23 acres or 15% of the total lease area.

Table 1. Location and Activity Previously Reviewed by Corps for HIOC Leases

Permit No.	Lease No.	Location*	Previously Reviewed Activity	
			Acres	Methods
14381N63	M-430-10	Intertidal area halfway between Tom's Point and Miller Park	5.0	racks or stakes
15340N63	M-430-11	Intertidal area just north of Hog Island	5.0	racks, longlines ¹
15588N63	M-430-12	Intertidal area 3 miles south of Marconi Cove	30.0	racks, trays, floating nursery rafts, floating longlines ²
20842N63	M-430-15	Intertidal and subtidal areas adjacent to Tom's Point	128.2	racks, bottom bags, longlines, and rafts ³
*Please refer to Figures 1 to 4 for the lease locations.				

While the above species and methods were described in the project descriptions submitted to the Corps, the permits associated with each lease did not limit HIOC's cultivation to these species and/or methods and did not include a requirement that HIOC amend its permit prior to using different cultivation techniques. HIOC's activities currently being conducted on the leased areas are well within what was previously reviewed by the Corps and have led to improved conditions due to advances in technology and aquaculture methods over the last 30 years. The growing and harvest methods have changed incrementally over time to both increase productivity and reduce environmental impacts. Furthermore, eelgrass has increased since HIOC's operations started in 1981, and has moved into culture areas in some locations. Table 2 shows HIOC's total existing cultivation. Table 3 describes the total amount of existing gear.

¹ CFGC Lease Renewal M-430-11 authorized stakes, racks, and longlines as approved cultivation methods.

² CFGC Lease Renewal M-430-12 limited cultivation methods to "racks and rafts."

³ CFGC Lease M-430-15 Amendment issued to HIOC on December 9, 2015 limited permitted cultivation to only "racks and bags and bottom trays."

Table 2. Total Existing Cultivation (Acreage)

Culture Type	Acres Per Lease Area				Total
	M-430-10	M-430-11	M-430-12	M-430-15	
Overlapped Racks	0.6	0.48	1.34	0.97	3.39
Regular Racks	1.78	1.35	0	1.66	4.79
Bottom Bags	1.83	2	0	1.77	5.6
Clam Bags	0	0	0	0.03	0.03
Clam Rolls ⁴	0	0	0	6.89	6.89
Floating Culture	0	0	1.07	0	1.07
Seapa/Tipping Bags	0	0.36	0	3.1	3.46
Total	4.21	4.19	2.41	14.42	25.23

Table 3. Total Existing Cultivation (Estimated Number of Gear)

Culture Type	Number of Gear Per Lease Area			Total
	M-430-10/430-11 ⁵	M-430-12	M-430-15	
Overlapped Racks	1000 racks	1200	1140	3,340
Regular Racks	1500 racks	0	900	2,400
Bottom Bags	8750 bags	0	3500	12,250
Clam Bags	0 bags	0	270	270
Clam Rolls	0 rolls	0	292	292
Floating Culture	3 Tray Barges	10 lines	0	3 Tray Barges 10 Floating Lines
Seapa/Tipping Bags	510 (Stanways) ⁶	0	83 longlines	510 Stanways 83 longlines

Figures 1 through 4 below show HIOC's current cultivated footprint and CFGC lease boundaries.⁷

⁴ In response to a request by the Coastal Commission, HIOC has agreed to discontinue planting clams in rolls. HIOC will harvest any clams previously planted in clam rolls as the existing clam populations become market size. Harvest of existing clam rolls will take approximately three years to complete.

⁵ Leases M-430-10 and 430-11 are managed as a single farm area; therefore, they are treated as a single cultivated farm for the purposes of this table.

⁶ HIOC plans to discontinue the use of Stanway units, which are a type of longline culture located within approximately 0.4 acres of Lease 430-11. Removal of the Stanway units will begin with all product being harvested and/or transferred. A crew will then unbolt and disassemble the Stanway units at low tide. 2x6 timbers will be bundled and picked up at high tide by boat. Any Helix anchors will be unscrewed at low tide and removed. Buys will be attached with rope to any remaining concrete. The units will then be pulled out by a boat mounted crane. Once HIOC obtains approval for longlines from all required governmental agencies, the units would be removed within 12-18 months.

⁷ Note that the lease boundaries depicted on Figures 2 through 4 and Figures 24 through 26 are approximate and must be confirmed with CFGC. In the event that any existing cultivation is confirmed to be outside of HIOC's lease boundaries, HIOC will either relocate the cultivated product to within its lease boundaries or request an amendment to the lease boundaries from CFGC.

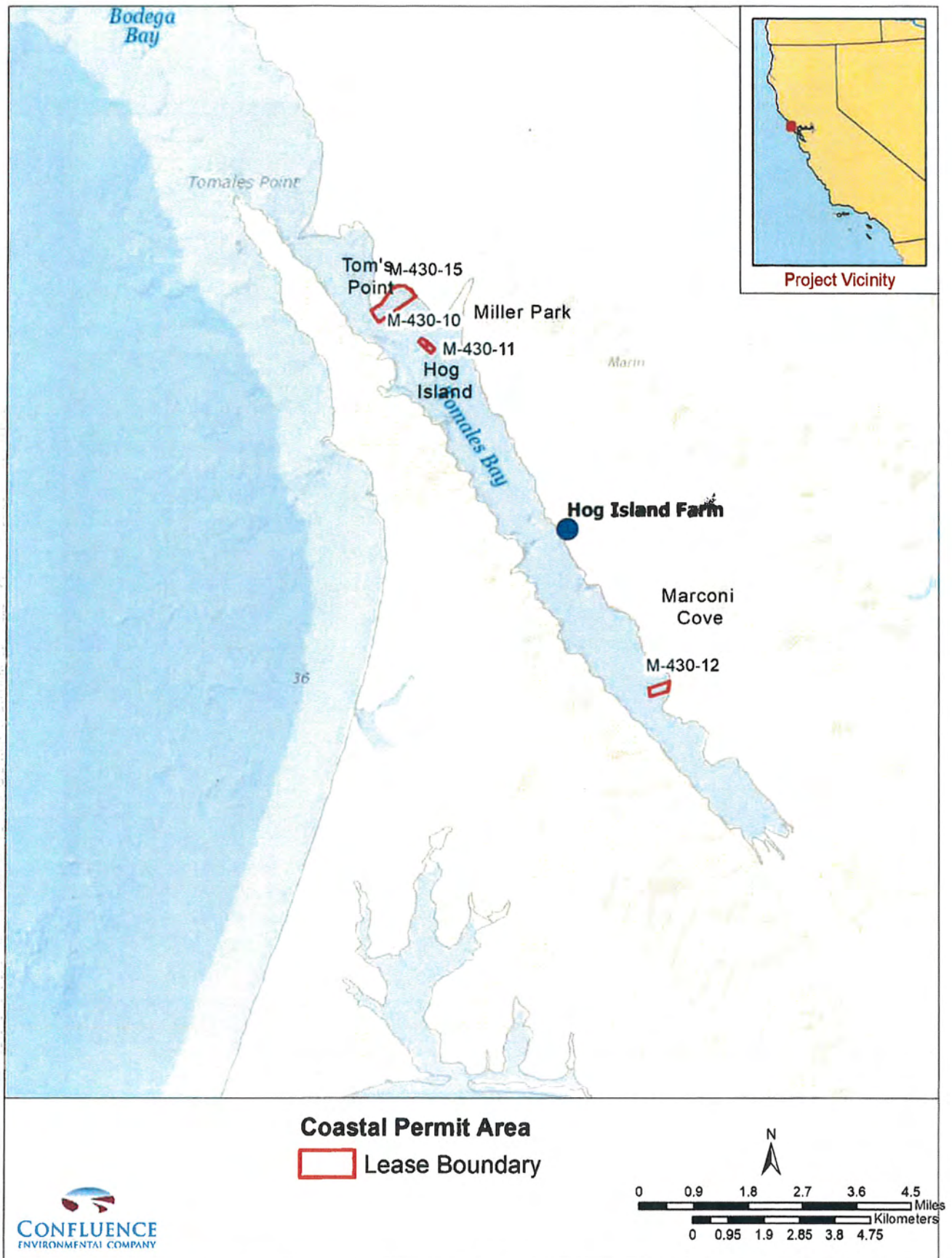


Figure 1. Location of HIOC Operations in Tomales Bay, California

Existing Culture Activity



Figure 2. Existing Cultivation Activity – CFGC Lease M-430-15

Existing Culture Activity

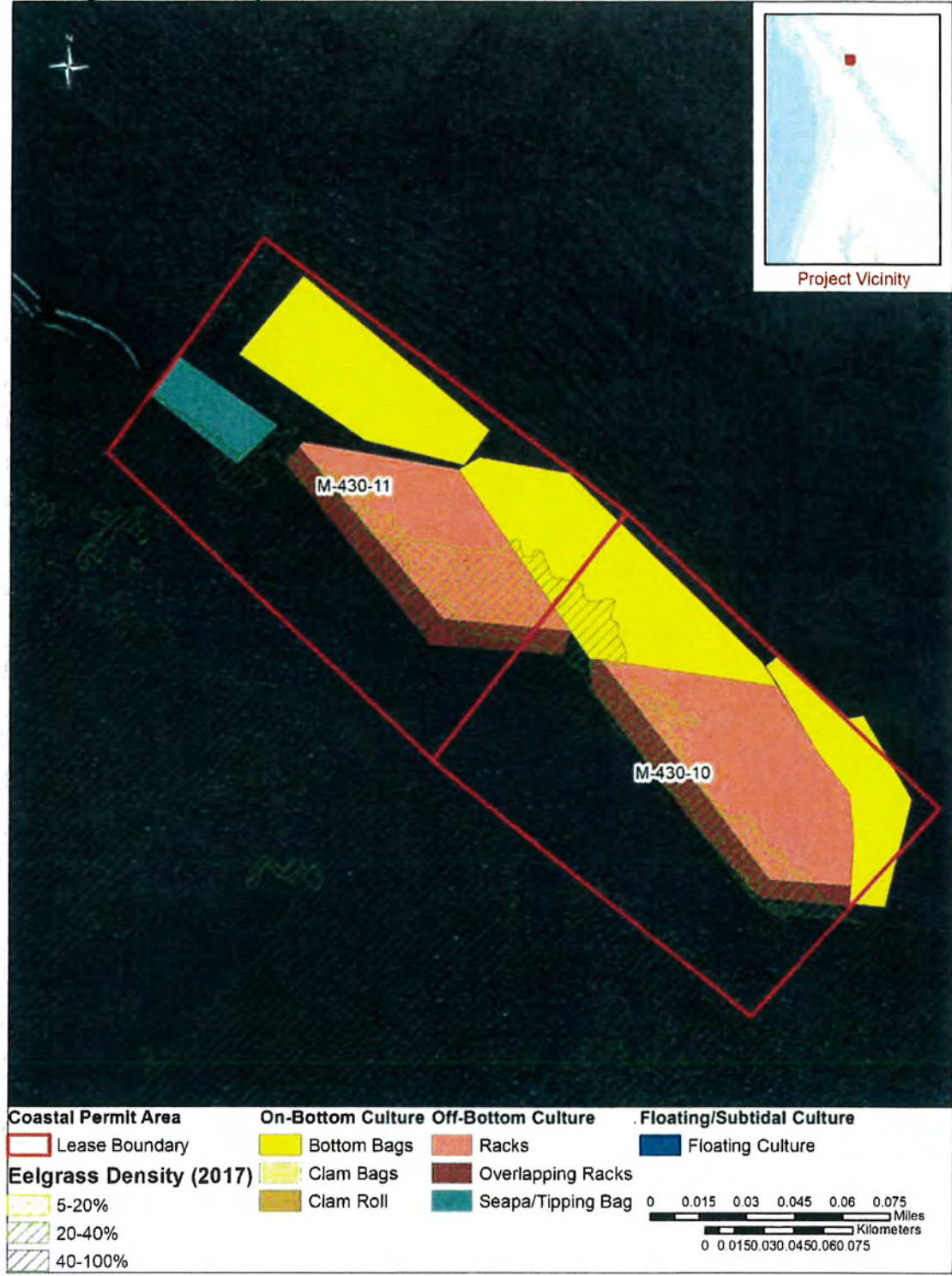


Figure 3. Existing Cultivation Activity – CFGC Leases M-430-10 and M-410-11

Existing Culture Activity



Figure 4. Existing Cultivation Activity – CFGC Lease M-430-12

Overall, the acreage currently under cultivation by HIOC is significantly less than the amount of cultivation previously reviewed by the Corps. The original CDPs did not contain any limitation on the amount of cultivation that HIOC could plant within its 168.2 acres of leased area, other than certain restrictions on planting in eelgrass. As described below, the initial site plans included in the project descriptions reviewed by the Corps contemplated a total of approximately 65.7 acres of shellfish cultivation. The cultivation methods, spacing (where applicable), species cultivated, and cultivation locations are substantially similar to those previously reviewed by the Corps. HIOC has also incorporated best management practices, above and beyond those required under its Corps permits, to provide environmental sustainability and further reduce any ecological impacts to Tomales Bay. These measures are described in Section 6.

2.0 SUMMARY OF PRACTICES PREVIOUSLY REVIEWED BY CORPS AS COMPARED TO CURRENT CULTIVATION PRACTICES

HIOC's permits considered cultivation using 8 different culture methods (Table 2). Currently, HIOC is using 5 different culture methods. Most methods currently used by HIOC are consistent with the methods previously approved by the Corps and include racks, bottom bags, longlines, and floating longlines. A description of each cultivation method, and the dimensions and spacing of the gear used, is provided in Section 3.0 below.

Table 4. Comparison of Cultivation Methods Previously Reviewed and Approved by Corps and Current Cultivation Practices

	Approved Activities under Corps Permits	Current Cultivation Practices
Cultivation Methods	<ul style="list-style-type: none"> • Racks: rack-on-pipe and overlapped racks • Stakes • Bottom bags and clam bags • Trays • Longlines • Floating longlines • Floating nursery rafts • Rafts 	<ul style="list-style-type: none"> • Racks rack-on-pipe and overlapped racks • Bottom bags and clam bags • Longlines • Floating longlines • Clam rolls (to be discontinued)

We determined the cultivated acreage previously reviewed by the Corps as follows:

- Permit 14381N63, which approved cultivation on Lease M-430-10, considered 5 acres of cultivation. Cultivation was shown on site plans in all areas of the CFGC lease.
- Permit 15340N63, which approved cultivation on Lease M-430-11, considered 5 acres of cultivation with no further limitations on acreage or cultivated areas.
- Permit 15588N63, which approved cultivation on Lease M-430-12, considered 25 acres of cultivation. Cultivation was shown on site plans in all areas of the CFGC lease, with appropriate spacing between gear and navigational access lanes. No restrictions were placed on planted acreage or cultivated areas.
- Permit 20842N63, which approved cultivation on Lease M-430-15, considered a total of 30.7 acres of intertidal (on-bottom and off-bottom) culture and floating aquaculture, which includes spacing between gear and navigational access lanes. The proposed cultivation was shown on site plans attached to the application.

Therefore, it appears that the Corps previously reviewed a total of 65.7 acres of cultivation within HIOC's leased footprint, which totals 168.2 acres. As shown in Section 4 below, HIOC's proposed cultivated acreage is approximately 10 acres less than that previously reviewed by Corps as part of its original permit approvals.

3.0 CURRENT CULTIVATION PRACTICES PREVIOUSLY APPROVED BY THE CORPS

Both on-bottom and off-bottom cultivation practices were previously reviewed and approved by the Corps. On-bottom is defined as shellfish or gear that is placed directly to the sediment surface, and off-bottom is defined as shellfish that is grown on structures that are raised above the sediment surface. Each of the specific cultivation practices and types of gear currently used by HIOC are described below.

3.1 On-Bottom Culture Methods

There are two on-bottom culture methods currently used by HIOC that were previously approved by the Corps: (1) bottom bags, and (2) clam bags. A description of the typical gear used, planting layout, and harvest activities are described below.

3.1.1 Bottom Bags

Bottom bags are typically made from ½-inch VEXAR mesh bags measuring approximately 2 feet by 3 feet (Figures 5 to 6). The bags are stocked with oysters and then attached to parallel 3/8-inch bottom lines that are typically 100 feet to 200 feet long with the use of a stainless-steel (SS) snap hook.

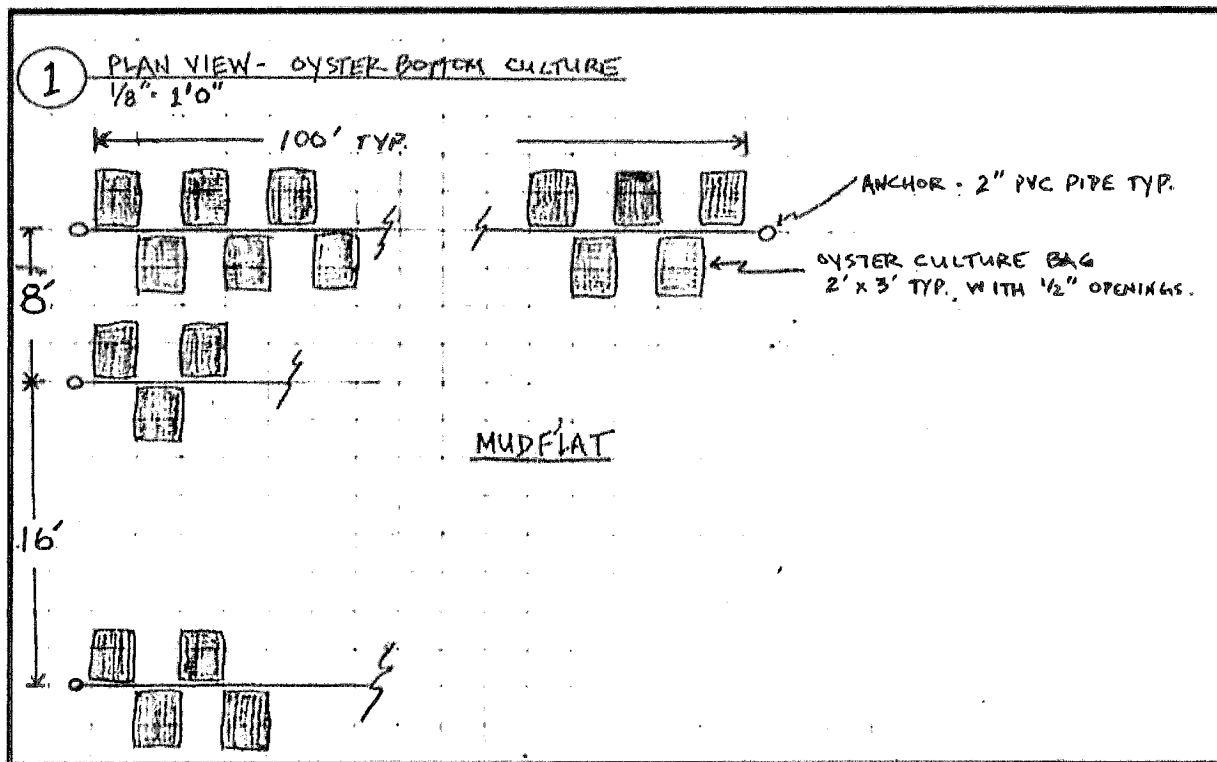


Figure 5. Typical On-Bottom Bag Culture Layout (Note: HIOC does not currently include a 16' space between groups of bags. The plan shown is otherwise correct)



Figure 6. Photograph of On-Bottom Bag Culture with Oysters.

The line is typically anchored at either end to 2-inch polyvinyl chloride (PVC) pipe, or a similar type of post, that is driven into the ground at a sufficient depth to prevent loss. During planting, bags are distributed in secured bundles to their designated lines at a sufficient tide to bring the boat alongside the bottom lines. On the next low tide series (typically the same or following day), the bags are removed from the bundle and attached to the bottom lines. Monthly and/or quarterly maintenance is performed by flipping the bags from one side of the rope to the other by using a hook, which reduces fouling on the bag, tumbles the oysters, redistributes them in the bag, and helps to keep them from being buried. During this process, oysters are also harvested and/or removed from the line for grading and culling, after which point the remaining population remains in the bags for further grow-out. All culling and grading takes place on land at HIOC's facilities.

Harvesting oysters includes floating a boat alongside the lines, generally within a water depth of 1 foot to 3 feet, and the crew releases the SS snap hooks from the bottom line and places the bags on the boat for transport. Alternatively, oysters are harvested at a 4-foot to 6-foot tide by use of a boat mounted crane, which lifts the bags on the line individually onto the boat. Harvests of bottom bags generally takes place between 12 to 18 months after planting. Bottom bags are used in leases M-430-10 (1.83 acres), M-430-11 (2 acres), and M-430-15 (1.77 acres).

3.1.2 Clam Bags

Clam bags are typically made from ¼-inch VEXAR mesh bags measuring 30 inches by 18 inches by 4 inches (Figures 7 to 8). The bags are stocked with one shovel full of 3/8-inch minus pea gravel and clams. Bags are closed using galvanized hog rings at both ends.

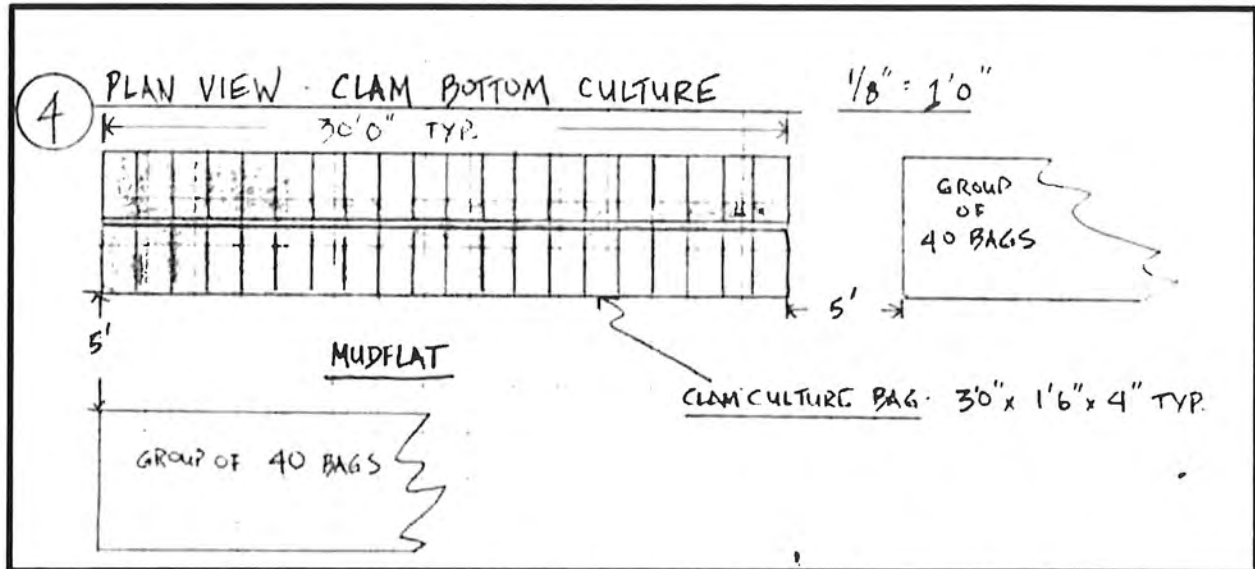


Figure 7. Typical On-Bottom Clam Bag Layout (Note: HIOC does not currently include a 5' space between groups of bags. The plan shown is otherwise correct)



Figure 8. Photograph of On-Bottom Bag Culture with Clams.

Planting clam bags is scheduled with tide availability and consists of first conveying the clam bags to the predetermined planting area during a high tide by boat, and on the subsequent low tide (typically the same or next day) a shallow trench (3 inches or less) is dug into the mud in parallel rows. After evenly distributing clams and gravel in the bag, the bags are placed into the depression alongside each other and the mud that was scraped off is put back on top of the clam bags. Monthly checks are done on the clam bags to insure placement and growth. Occasional maintenance is performed on clam bags generally following storms to ensure that they are in place.

Approximately 2 to 4 years after planting, clam bags are harvested from their planting area. Harvest entails removing the bags from the mud, at which point they are shaken to remove sediment before being loaded onto a boat for transport. All culling and grading takes place on land at HIOC's facilities. The harvest generally takes place within 1 foot to 3 feet of water to allow easy access and loading of the bags onto the boat.

Bottom bags are used in Lease No M-430-15 (0.03 acres).

3.2 Off-Bottom Culture Methods

There are four off-bottom culture methods currently used by HIOC that were previously approved by the Corps: (1) racks-on-pipe, (2) overlapped racks, (3) intertidal longlines, and (4) subtidal floating lines. A description of the typical gear used, planting layout, and harvest activities are described below.

3.2.1 Racks-on-Pipe

Racks-on-pipe typically consist of a 2-foot by 8.5-foot rebar frame to which 4.5-inch VEXAR mesh bags typically measuring 2 feet by 3 feet are attached (Figures 9 to 10). After racks are stocked with oysters, they are placed into the rows by boat during a high tide. On the next low tide series (usually the same or following day), the racks are organized and placed into the notch on their 4 PVC pipe legs. PVC pipe legs are typically 12 inches to 24 inches above grade. A row of racks is typically 300 feet to 600 feet long with 2.5 feet between each rack (front to back). Rows of racks run parallel to each other. There are typically two rows of racks with 3 feet of space between them (left to right) and then a 12-foot to 15-foot space until the next two rows.

Racks are monitored and tipped monthly during their grow-out period. On a quarterly basis, after initial planting, racks can be culled and graded. The harvest of racks entails the crew removing the racks from their PVC legs and placing them on a boat for transport, typically done with 2 feet to 3 feet of water to allow the boat to come up alongside the rows of racks for easier handling by the crew. Alternatively, oysters are harvested at a 4-foot to 6-foot tide by use of a boat mounted crane, which lifts the racks on the line individually onto the boat. Currently, all culling and grading takes place on land at HIOC's facilities. Final harvest of racks is typically 9 to 12 months after the initial planting date.

Racks-on-pipe are used at leases M-430-10 (1.78 acres), M-430-11 (1.35 acres), and M-430-15 (1.66 acres).

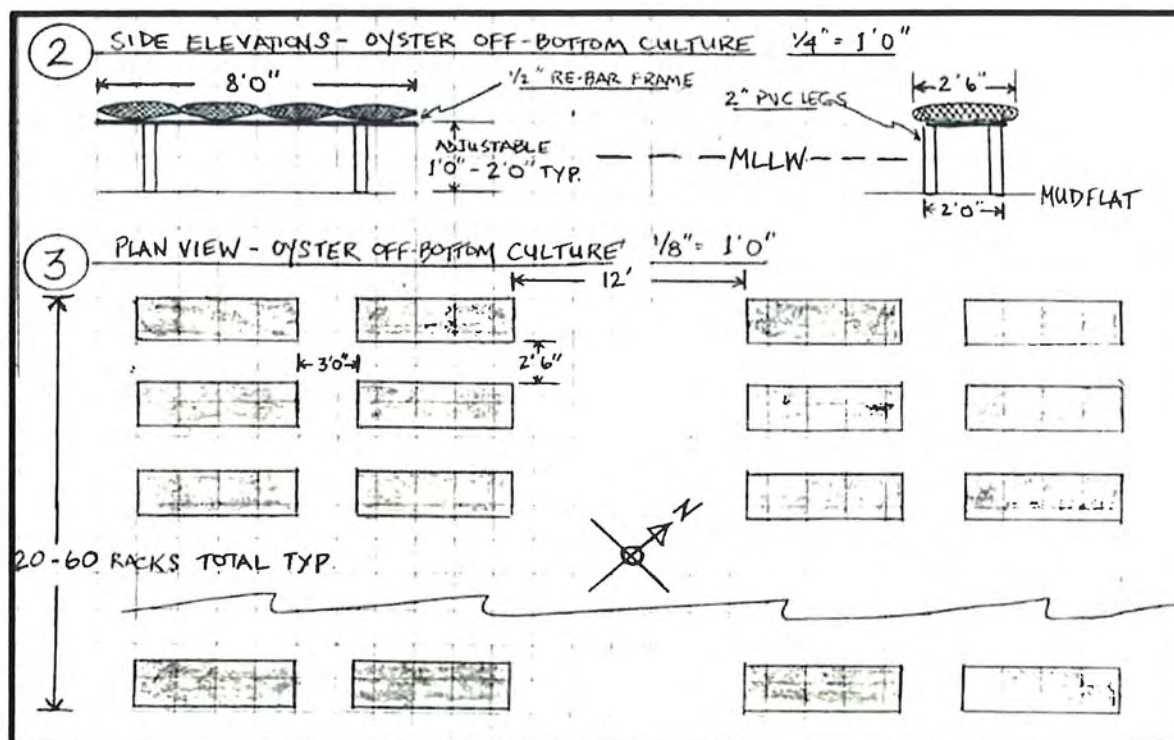


Figure 9. Typical Off-Bottom Racks-on-Pipe Layout



Figure 10. Photograph of Off-Bottom Racks-on-Pipe used by HIOC

3.2.2 Overlapped Racks

In growing areas with heavy wind and wave action, HIOC uses an overlapping rack design to help the racks absorb and deflect the energy from the waves (Figures 11 to 13), which reduces rack displacement. This method is used at all leases: M-430-10 (0.6 acres), M-430-11 (0.48 acres), M-430-12 (1.34 acres), and M-430-15 (0.97 acres). This culture method is typically used at the lower end of the rows where wave action is heaviest. The general layout includes 5 or 10 racks that are overlapped followed by a 5-foot space, except in Lease No. M-430-12, where up to 30 racks can be overlapped followed by a 5-foot space. Planting, maintenance, and harvest would take place as described in the section above for racks-on-pipe.

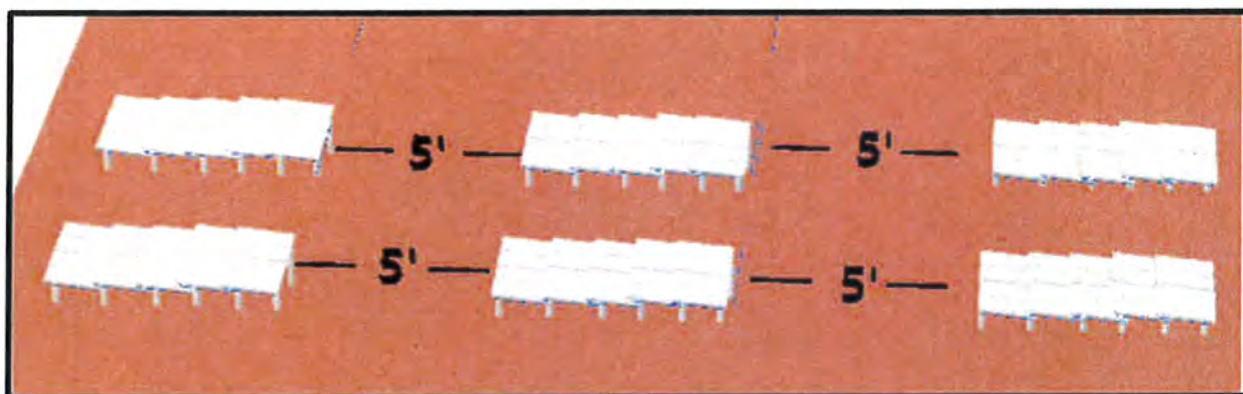


Figure 11. Typical Spacing between Sections of Overlapped Racks

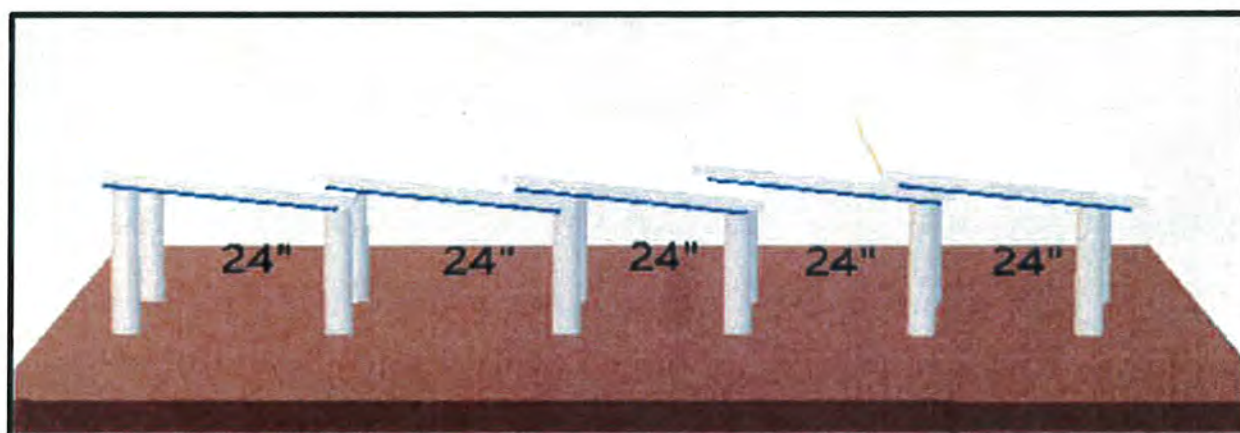


Figure 12. Typical Overlapped Racks Spacing: Side View



Figure 13. Photograph of Off-Bottom Overlapped Racks used by HIOC

3.2.3 Intertidal Longlines

Longlines are typically 100 feet to 300 feet long with anchor posts at either end and supporting posts typically every 8 feet (Figures 14 to 15). There are spaces of approximately 30 inches to 60 inches between lines, and an additional space of 15 feet between grouped sections of 4 lines. The anchor posts are typically galvanized steel pipe, T-stakes, or other suitable materials, and are used to maintain line tension. The supporting posts in between the lines are typically made of schedule 80, 2-inch PVC. Longlines can be 1 foot to 4 feet in elevation above the ground. Lines between the posts are plastic coated with a steel core. Covering that inner line is an outer sleeve that is added to reduce wear.

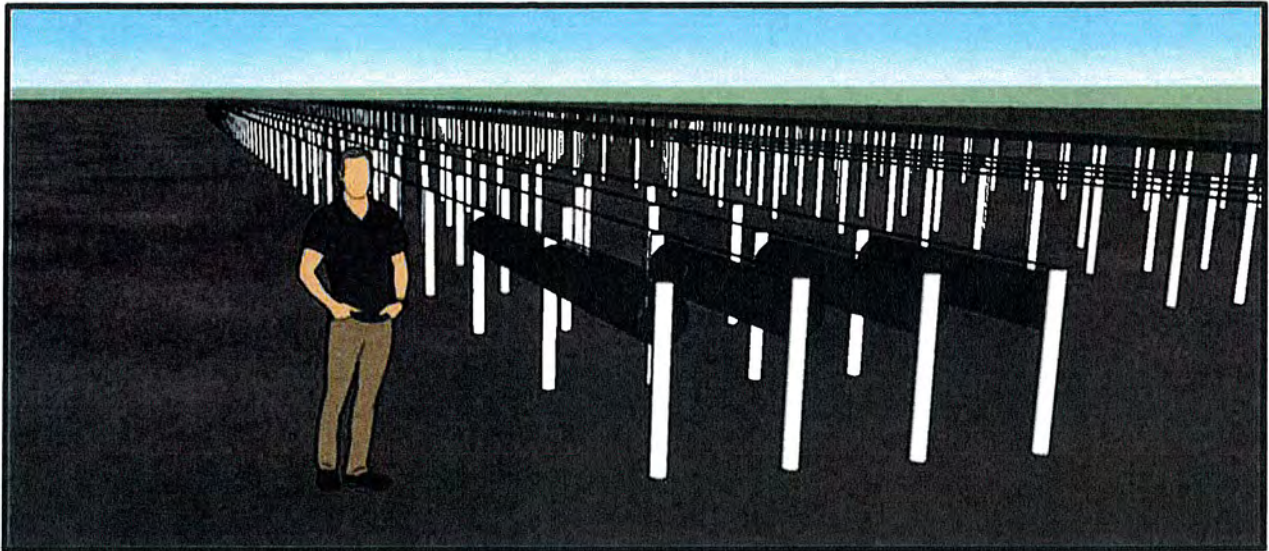


Figure 14. Diagram of Multiple Longlines with Baskets

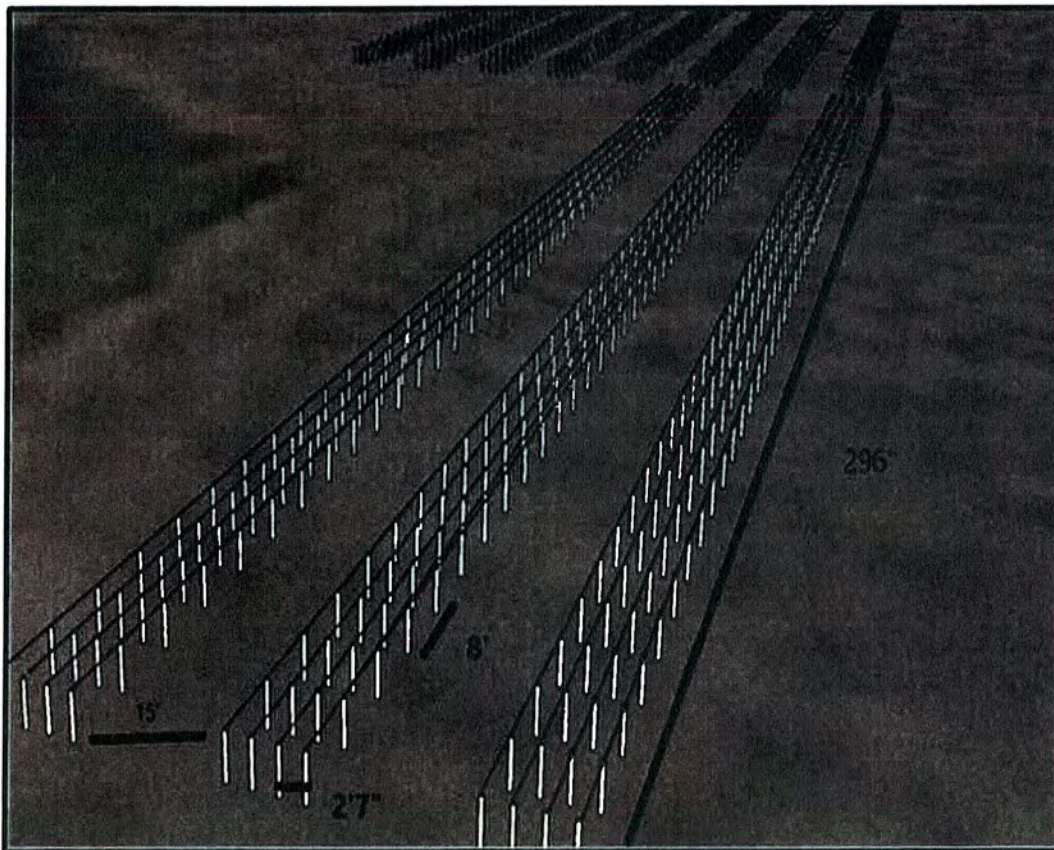


Figure 15. Digital Representation of Longlines

Longlines can hold either bags or baskets with or without floats (Figure 16 to 17). The bags that are used on the longlines are the same as those used in bottom culture, which are typically 2 feet by 3 feet with $\frac{1}{2}$ -inch mesh and can be attached to the line using a SS snap hook or plastic clip

that connects to a plastic bearing. Bags attached to longlines have a small crab float attached to them opposite of the attachment to the longline. Floats are attached to the bag using 3/8-inch polypropylene line. Baskets attached to longlines are typically 2 feet to 4 feet long by 1.5 feet in diameter and are made of high-density polyethylene (HDPE).



Figure 16. Photograph of Tipping Bags Attached to Longlines used by HIOC



Figure 17. Photograph of Longlines with Baskets used by HIOC

After stocking the bags or baskets with oysters, they are transported to the growing areas via boat. The boat runs alongside the longlines and bags/baskets are clipped directly onto the line. Monthly and/or quarterly visits are made to check condition and/or harvest and grade. All culling and grading takes place on land at HIOC's facilities.

Longlines are used at Lease No. M-430-15 (3.1 acres) and Lease No. M-430-11 (0.36 acres). All culture gear that has floats are currently in the process of being branded with the company name and phone number.

3.2.4 Subtidal Floating Longlines

Floating longlines are typically 100 feet to 300 feet long (Figures 18 to 20). The lines are anchored at either end with concrete, or appropriately sized Danforth anchors, and chain and/or rope. A single line extends from the mooring to the surface where it is attached to a spacing bar measuring approximately 3 feet. From this spacing bar, two lines, approximately 3 feet apart, run along the surface to the other end where the mooring and attachment system is repeated. In this way, two lines are attached to a single mooring system. There is a 15-foot space between each pair of lines. Floating longlines are used to secure baskets, which are the same type of basket used in intertidal longlines, measuring approximately 2 feet to 4 feet long and approximately 1.5 feet in diameter. There are floats threaded to the line in between each basket. Floating longlines are visited monthly and/or quarterly to check condition and/or harvest and grade. All culling and grading takes place on land at HIOC's facilities.



Figure 18. Photograph of What Floating Longline Look Like at the Water's Surface



Figure 19. Photograph of the Types of Baskets on Floating Longline used by HIOC

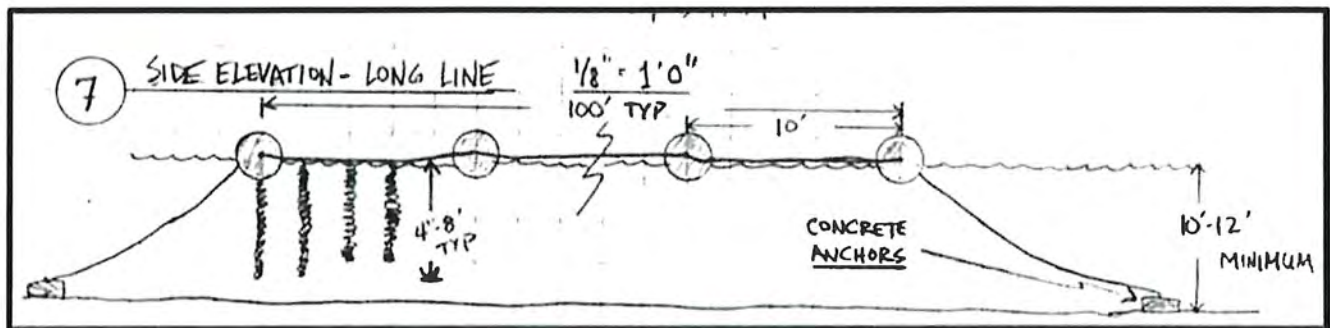


Figure 20. Diagram of Suspended Longline/Sentinel Mussel Layout

All floating bags and baskets will be marked or branded with Hog Island's name and phone number. Hog Island plans on having all floating gear marked by the end of 2019. Floating longlines are used at Lease No. M-430-12 (1.07 acres), comprised of 10 floating lines. One floating line at Lease No. M-430-15 is currently used to hold sentinel mussels for sampling by California Department of Public Health (CDPH).

3.2.5 Tray Barges

Tray barges (defined in Table 1 as floating culture) were previously permitted by the Corps pursuant to Permit Nos. 15588N63 and 20842N63 and are currently located on Lease 430-10. Tray barges have hanging Seapa baskets that hang below the floating barge. The barges are 25'x8' with a 4'x8' plywood deck directly over the floats at either end. The middle of the tray barge has 7 2" diameter aluminum poles with rope approximately 15' between each. This

minimizes the need for multiple anchors. If multiple tray barge chains were used, they would be spaced approximately 20' apart. Tray barge anchors are located at 38° 12.271'N, 122° 56.158'W and 38° 12.261'N, 122° 56.165'W. Pictures of the existing tray barges are shown in Figures 21 and 22. A diagram of the tray barge design is included as Figure 23. The current locations of the tray barges are shown in Figure 27.



Figure 21. Existing Tray Barge Located in Lease 430-10.



Figure 22. Picture of Existing Tray Barge Used for Seapa Baskets

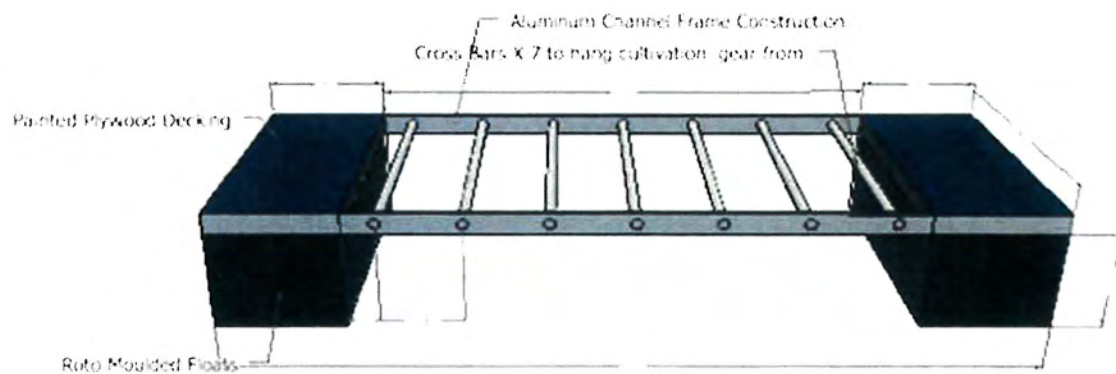


Figure 23. Diagram of Tray Barge Design

4.0 PROPOSED CULTIVATION PLAN

In discussions with the Coastal Commission, CFGC, and the California Department of Fish and Wildlife, and in response to a request from the Coastal Commission regarding HIOC's future cultivation plans for its leased area, HIOC submitted the following proposed cultivation plan, which includes both existing and proposed cultivation.

Table 4. Total Proposed Cultivation

Culture Type	Acres Per Lease Area				Total
	M-430-10	M-430-11	M-430-12	M-430-15	
Overlapped Racks	0.61	0.48	0	0	1.09
Regular Racks	2.5	1.35	0.82	2.62	7.29
Bottom Bags	1.14	1.69	0.29	0	3.12
Clam Bags	0	0	0	4.61	4.61
Floating Culture	1.53	0.85	4.72	3.58	10.68
Seapa/Tipping Bags	0	1.65	2.22	25.34	29.21
Total	5.78	6.02	8.05	36.15	56

The proposed culture activity for each lease area is shown in Figures 21 through 23 below. HIOC is seeking authorization to use all of the techniques and cultivate all of the species described in this project description on each of our leases to allow us the flexibility to farm adaptively in a changing farm environment. We believe that our existing methods are environmentally sustainable, in many ways are less impactful as compared to those previously reviewed by the Corps in our existing permits and can be used interchangeably without a significant impact to the surrounding environment. HIOC also requests the flexibility to modify its planted footprint within its leased area without additional approval from the Corps provided that (1) all cultivation takes place within its existing leased boundaries, (2) HIOC does not exceed the overall proposed 56 acres of total cultivation, (3) any relocated cultivation does not take place in eelgrass beds (except to the extent that such areas have been previously reviewed and approved for cultivation by the Corps in previous permits), and (4) the total proposed cultivation is not more dense than that approved by the Corps based upon the estimated densities described in Table 5 below.

Proposed Culture Activity

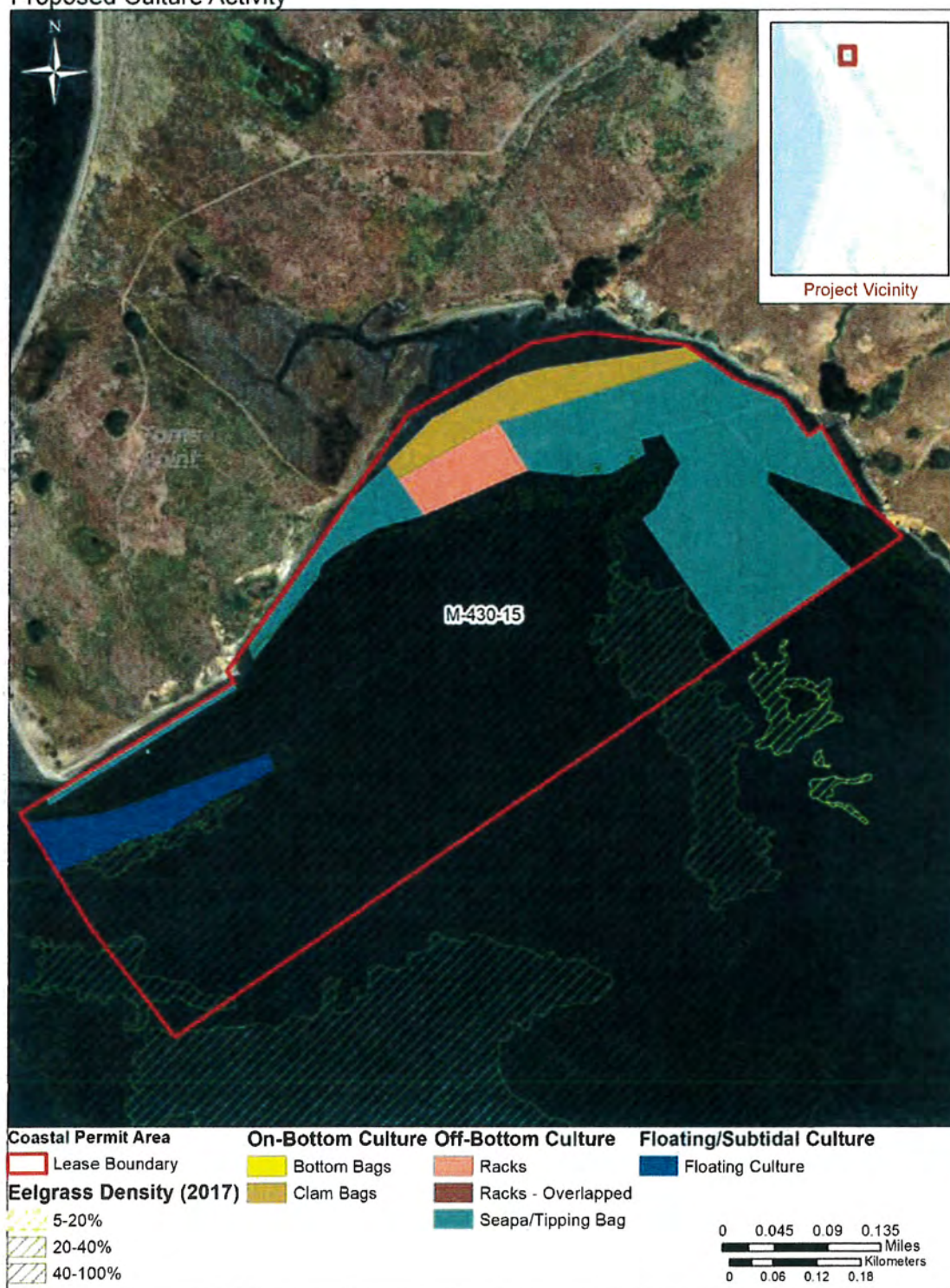


Figure 24. Proposed Cultivation Activity – CFGC Lease M-430-15

Proposed Culture Activity



Figure 25. Proposed Cultivation Activity – CFGC Leases M-430-10 and M-410-11



Figure 26. Proposed Cultivation Activity – CFGC Lease M-430-12

Table 5. Proposed Total Amount of Each Cultivation Type and Density

Culture Type	#/Acre	% Coverage/Acre	% Uncovered/Acre	Total Gear Proposed ⁸
Overlapped Racks (5 Overlap)	1190 racks	45%	55%	1,297
Regular Racks	622 racks	29%	71%	4,534
Bottom Bags	3111 bags	42%	58%	9,706
Clam Bags	3872 bags	33%	67%	17,850
Floating Culture	10 lines	17%	83%	107
Seapa/Tipping Bags	36 lines	32%	68%	1,052

HIOC is not seeking approval for any species other than those previously approved by regulatory agencies. The previously approved species are: Pacific oyster (*Crassostrea gigas*), European flat oyster (*Ostrea edulis*), Atlantic oyster (*Crassostrea virginica*), Kumamoto oyster (*Crassostrea sikamea*), Manila clam (*Venerupis philippinarum*), native littleneck clam (*Protothaca staminea*), northern quahog (*Mercenaria mercenaria*), bay mussel (*Mytilus edulis*), Olympia oyster (*Ostrea lurida*), Mediterranean mussel (*Mytilus galloprovincialis*), and red abalone (*Haliotis rufescens*). HIOC seeks approval to cultivate these species on all of its leases, consistent with the cultivation methods described above. While HIOC retains the right to cultivate each of the previously approved species, the species that HIOC currently cultivates are Pacific oysters, Manila clams, European flat oysters, Atlantic oysters, Kumamoto oysters, and Manila clams. Oysters would be planted on all of HIOC's leases. HIOC is only currently planning to cultivate Manila clams on Lease 430-15 but, as noted above, seeks approval to cultivate Manila clams on any of its leases in the future.

The eelgrass beds shown in Figures 2 through 4 and 24 through 26 are based upon eelgrass surveys conducted by Merkel and Associates in August 2017 on behalf of the National Marine Fisheries Service. The survey complies with the California Eelgrass Mitigation Policy guidelines for eelgrass surveys.

Based upon these survey results, below in Tables 6 and 7 is a summary of the overlap between HIOC's existing culture and eelgrass. As noted in the authorizations associated with Hog Island's permits, no existing culture was planted in eelgrass; the existing overlap is associated with eelgrass moving into Hog Island's cultivated area. The permits associated with Leases 430-10, 430-11, and 430-15 also contemplated a 5 ft. buffer from existing eelgrass beds. HIOC has incorporated these conditions in its BMPs listed below.

⁸ Total Gear Proposed is approximate based on the estimated maximum amount per acre. Planting limitations and operational considerations will govern the total number of each cultivation type planted, which will be less than the maximum represented in this column.

There are a number of documented instances where, similar to HIOC's farm, eelgrass has moved into cultivated aquaculture areas. Eelgrass beds frequently migrate into areas where suitable habitat is present in response to environmental stressors. As long the eelgrass bed persists over time it contains the potential to spread or move into unoccupied habitats when conditions are suitable. Environmental stressors that may affect an eelgrass bed's boundaries include desiccation, wind and wave stresses, and water clarity which controls the photosynthetic activity of eelgrass and often limits the lower distribution of eelgrass beds. Off-bottom aquaculture gear may alter shading, reduce wind-wave energy, and create small depressions near installed gear. These features may limit desiccation stress and reduce disturbance from storms allowing eelgrass to persist or expand into higher elevations than might otherwise be occupied.

Further, some stressors are affected by long-term climactic and tidal cycles which may affect average tide elevation, rainfall, and temperature conditions. These conditions tend to drive responses of eelgrass at larger scales and may affect eelgrass distribution throughout Tomales Bay. For these reasons, eelgrass may have moved into areas currently occupied by HIOC aquaculture activity despite the absence of eelgrass when aquaculture gear was installed. The presence of eelgrass in areas where aquaculture gear is present may suggest a positive relationship between aquaculture activities and eelgrass at the upper margin of eelgrass distribution where shading and other characteristics of shellfish growing may improve conditions for eelgrass.

HIOC is in compliance with its Corps permit conditions associated with eelgrass. In fact, as shown in Tables 6 and 7, even though HIOC is proposing additional acreage as compared to its existing footprint, it would reduce its overall footprint in eelgrass by approximately 0.55 acres. HIOC still seeks the ability to move its cultivated plots to other areas within its leased boundaries, including both areas where there is no eelgrass and areas previously approved by the Corps (i.e. areas where there was no eelgrass when the original permits were approved but where eelgrass has moved into HIOC's cultivated plots). HIOC would continue to avoid areas that have not previously been planted and contain eelgrass.

Table 6. Existing Culture Overlap with Eelgrass (Acres)

Culture Type	Lease Area									
	M 430-10		M430-11		M430-12		M430-15		Total	
	No Eelgrass	Eelgrass	No Eelgrass	Eelgrass	No Eelgrass	Eelgrass	No Eelgrass	Eelgrass	No Eelgrass	Eelgrass
Overlapped Racks	0.07	0.53	0.06	0.42	1	0.34	0.94	0.03	2.07	1.32
Regular Racks	1.53	0.25	0.67	0.68	0	0	1.66	0	3.86	0.93
Bottom Bags	1.63	0.2	1.92	0.08	0	0	1.76	0.01	5.31	0.29
Clam Bags	0	0	0	0	0	0	0.03	0	0.03	0
Clam Rolls	0	0	0	0	0	0	6.89	0	6.89	0
Floating Culture	0	0	0	0	0.51	0.56	0	0	0.51	0.56
Seapa/Tipping Bags	0	0	0.32	0.04	0	0	3.06	0.04	3.38	0.08
Total	3.23	0.98	2.97	1.22	1.51	0.9	14.34	0.08	22.05	3.18

Table 7 – Proposed Culture Overlap with Eelgrass (Acres)

Culture Type	Lease Area									
	M 430-10		M430-11		M430-12		M430-15		Total	
	No Eelgrass	Eelgrass	No Eelgrass	Eelgrass	No Eelgrass	Eelgrass	No Eelgrass	Eelgrass	No Eelgrass	Eelgrass
Overlapped Racks	0.07	0.54	0.06	0.42	0	0	0	0	0.13	0.96
Regular Racks	2.25	0.25	0.67	0.68	0.82	0	2.62	0	6.36	0.93
Bottom Bags	0.94	0.2	1.61	0.08	0.29	0	0	0	2.84	0.28
Clam Bags	0	0	0	0	0	0	4.61	0	4.61	0
Floating Culture	1.53	0	0.85	0	4.72	0	3.58	0	10.68	0
Seapa/Tipping Bags	0	0	1.62	0.03	1.94	0.28	25.19	0.15	28.75	0.46
Total	4.79	0.99	4.81	1.21	7.77	0.28	36	0.15	53.37	2.63

5.0 ASSOCIATED OPERATIONS

While the operations listed below are not “structures” subject to Corps permitting, a description of these operations is provided to give the Corps a more complete understanding of HIOC’s operations. Currently, HIOC uses floating work platforms to support their cultivation practices.

5.1 Floating Work Platforms

Currently, HIOC uses two floating work platforms to support their cultivation practices on Leas 430-15. Work platforms typically measure 8 feet by 12 feet to 15 feet by 30 feet. The work platforms are used to stage materials (e.g., baskets, lines, bags) and tools for maintenance work on the leases. On occasion, they are also used to stage culture gear while awaiting the proper tidal height to be installed at a growing area. The floating work platforms are typically constructed with roto molded floats, wood or aluminum, and plywood decking. They are moved around on the leases (as needed), and do not have a permanent mooring. Generally, the floating work platforms do not remain in the same location longer than one month. Anchoring does not occur in eelgrass beds. Activity associated with the work platforms is limited to 10 or less occasions per month. The work platforms are operated at appropriate depths in a manner that avoids grounding or scouring. Work platforms will not be anchored or moored in eelgrass areas and moorage lines will be set far enough away as to not allow the platforms to go in to eelgrass areas.

5.2 Associated Vehicle Use

HIOC is not currently using any vehicles on its leases but has used them in the recent past (only 2017) in clam planting operations as well as beach cleans and general lease maintenance. HIOC has designated specific tracks, depicted in Figure 27, that avoid eelgrass and other marine vegetation. Hog Island plans to use 1 to 4 passenger ATV and/or UTV’s with either 4 or 6 wheels or tracks to occasionally transport personnel and/or gear into and around leases. These vehicles would also be used to perform general lease maintenance and clean up. Vehicle access is provided by boat for Lease 430-15. Vehicle access to Lease 430-12 will be provided either by land or by boat. Fueling of these vehicles would take place at Hog Island’s upland operations. Fuel consumption while in the growing areas would not exceed the available fuel in the tank and therefore refueling would not be needed while in the growing area. Vehicle use is not expected to increase. It should be noted that there is historical ATV use on the high tide line of Lease 430-15 from neighboring ranchers and Audubon.

Hog island currently has 3 vessels that are directly involved in farm operations, including one 40’ custom aluminum shellfish tender and two 24’ Carolina skiffs. Collective vessel activity of all leases includes 0 to 4 trips daily, 10 to 20 trips weekly, and 500 to 1,000 trips annually. Vessel routes are shown on Figures 27 and 28. Hog Island utilizes Miller Point Boat Launch and Marconi Cove for vessel launches. These locations are shown on Figure 28. The high tide route permits vessels to pass over eelgrass at tidal elevations that prevent damage or scour. The low

tide route avoids eelgrass to the maximum extent possible at all other times. These routes are physically marked, recorded in our boats' GPS devices, and included in our internal boat captain curriculum. These routes are marked with 10' long 2" white PVC pipe with reflective tape in shallow areas and with white crab buoys and black and white polyform buoys with reflective tape in deeper areas. These buoys are attached to small concrete anchors with polypropylene rope.

Vessel and Vehicle Routes

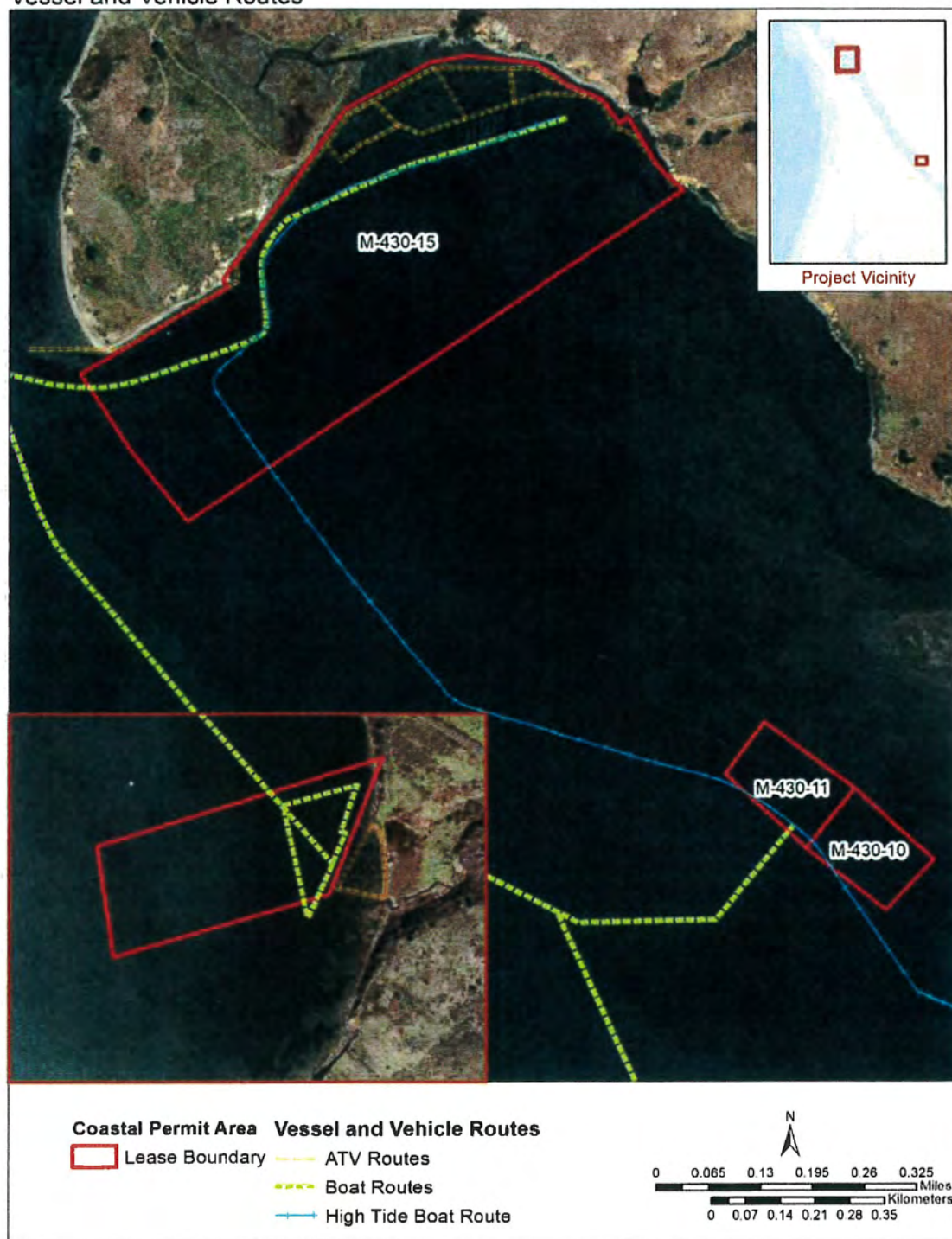


Figure 27: ATV and Vessel Routes



Figure 28: Vessel Routes and Boat Launches

5.3 Associated Support Posts, Anchors, and Marker Stakes

5.3.1 Support Posts

Longline support post and anchors (end post) are driven using sledge hammers, hand-held post pounders, and/or a gas or pneumatic hand-held post pounder. Posts are removed by first loosening them by twisting with a pipe wrench and then tying a clove hitch around pipes and pulling them out using a boat mounted crane. Material used in end posts has a serviceable life of at least 15 years. On the rare occasion that pipes are broken or damaged and cannot be repaired, they are replaced. Hog Island has had to replace three pipes within the last three years.

5.3.2 Anchors

Floating longline anchors consist of either 250 or 500 lb. Danforth anchors or concrete anchors. 250 lb. anchors are normally used for longlines and 500 lb. anchors are used for tray barges. Concrete anchors will vary from 150 to 500 lbs. They will be cylindrically shaped and measure between 12" D x 36" H to 24" D x 36" H. Most anchors will have a short length of 3/8" to 1" chain between 4' and 10' in length connected directly to the mooring. The chain will be followed up by a polypropylene or similar material rope in between the length of 4' to 25', depending on depth of water. The location of the existing and proposed anchor locations is shown in Figure 27. The existing anchor locations are as follows:

Lease 430-15: Anchors for floating line (sentinel mussels): 38° 12.852'N, 122° 57.055'W and 38° 12.841'N, 122° 57.081'W.

Lease 430-12: Anchors for each floating line:

38° 7.397'N, 122° 52.043'W and 38° 7.410'N, 122° 52.070'W
38° 7.408'N, 122° 52.033'W and 38° 7.423'N, 122° 52.060'W
38° 7.416'N, 122° 52.021'W and 38° 7.428'N, 122° 52.050'W
38° 7.427'N, 122° 52.011'W and 38° 7.439'N, 122° 52.041'W
38° 7.433'N, 122° 52.000'W and 38° 7.448'N, 122° 52.032'W

Lease 430-10: Anchors for the tray barges:

38° 12.279'N, 122° 56.133'W and 38° 12.291'N, 122° 56.149'W

Two anchors are required for each pair of floating longlines and two larger anchors are required for each tray barge group. If Hog Island planted the maximum amount of floating longlines, it would need to install approximately 108 additional anchors. These anchors will be located within the area proposed for floating culture, as shown in Figures 23 through 26. Work platforms are anchored with 25 lb. Danforth anchors with 3/8" polypropylene or similar material rope.

Anchors, Moorage and Markers



Figure 29: Location of Anchors, Bed Markers, and Tray Barges

5.3.3 Markers

Cultivation areas are marked with 10' long 2" white PVC pipe with a horizontal strip of reflective tape and marked with an approximately 5" x 6" white PVC sheet with a number that identifies the row (for racks) or line (for bottom and tipping bags), as well as the area for clam rolls. Rows and lines are marked at the bottom and top of every 5th row or line. Clam areas are marked on four corners (two with square sheets and two without) by planting group.

6.0 BEST MANAGEMENT PRACTICES

Since its permits were issued, HIOC has continued to implement best management practices (BMPs) to improve environmental sustainability and further minimize ecological impacts in Tomales Bay. For example, HIOC has partnered with local stakeholders to develop a Marine Debris Management Plan (Appendix A) that has taken reduced culture debris to approximately 100 to 150 pieces of displaced gear annually (or approximately 1.0 to 1.5% of HIOC's total gear used).

Table 8. Current BMPs used by HIOC

Topic	Best Management Practice	Additional Documentation
Marine Debris	HIOC will implement a marine debris management plan that has been developed for Tomales Bay shellfish aquaculture operations.	Appendix A – Marine Debris Management Plan
Eelgrass (<i>Zostera marina</i>) Mapping	HIOC will continue working with The Nature Conservancy and UC Santa Cruz to map eelgrass in Tomales Bay over multiple years to better understand interactions between its culture gear/operations and eelgrass.	Appendix B – Tomales Bay Eelgrass Project
Eelgrass Beds	The permits for Lease Nos. 430-10, 430-11, and 430-15 require a 5-foot buffer from eelgrass beds (as they existed at the time the permits were issued).	Permits 14381N63, 15340N63, and 20842N63
Vessel Motors and Other Motors	HIOC uses highly efficient 4-stroke outboards and other motors (e.g., gas-powered motor for clam rake) that use National Marine Fisheries Service-approved fish screens. All motors are muffled to reduce noise.	None
Vessel Maintenance and Fueling	HIOC maintains all vessels used in culture activities to limit the likelihood of release of fuels, lubricants, or other potentially toxic materials associated with vessels due to accident, upset, or other unplanned events. HIOC uses marine grade fuel cans that are refilled on land, and HIOC carries oil spill absorption pads and seals wash decks or isolates fuel areas prior to fueling to prevent contaminants from entering the water.	None
Vessel Anchors	HIOC anchors large vessels in the channel outside of eelgrass beds and uses smaller skiffs where eelgrass is present when the area is inundated.	None
Vessel Routes	HIOC has established vessel routes used to access their intertidal leases in areas with submerged aquatic vegetation (SAV) to avoid and minimize the potential to disturb SAV.	See Figures 28 and 29
Pacific Herring (<i>Clupea pallasii</i>)	In any cultivation beds within or adjacent to eelgrass areas, HIOC will conduct visual surveys for Pacific herring spawn prior to conducting activities during the herring spawning season (October to April). If herring spawn is present, HIOC will suspend activities in the areas where spawning has occurred until the eggs have hatched and spawn is no longer present (typically 2 weeks).	None
Marine Mammal Haul Out Areas	HIOC maintains a 100-yard distance from identified seal or other marine mammal haul out areas on Pelican Point, Duck Island, and the east side of Hog Island.	See Figures 28 and 29
Fish and Wildlife	During vessel transit, harvest, maintenance, inspection, and planting operations, HIOC avoids approaching, chasing, flushing, or directly disturbing shorebirds, waterfowl, seabirds, or marine mammals.	See Figures 28 and 29

Appendix A

Marine Debris Management Plan

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APPENDIX A: MARINE DEBRIS MANAGEMENT PLAN

Hog Island Oyster Company (HIOC) worked closely with local citizens to address marine debris management. HIOC does a quarterly bay clean-up, with emphasis on the four HIOC leases (M-430-10, M-430-11, M-430-12, and M-430-15). There is an organized clean-up with all the Tomales Bay growers, and the goal is to conduct bi-weekly bay clean-ups on different sections of the bay. Figure A-1 and Figure A-2 provide the breakdown of responsibilities for clean-up events by grower. HIOC also helps organize a yearly bay clean-up event on California Coastal Clean Up Day. In addition to aquaculture debris, materials from other sources are also collected. During the 2016 to 2017 clean-up effort, waste associated with recreation (e.g., hats, cigarettes, styrofoam) and food (e.g., food wrappers, bottles) comprised the largest amount of debris collected.

The specific action items that are part of the marine debris management plan include:

- Regularly educate staff on the issues of marine debris. Ensure that all staff do not litter.
- Growers must strive to continually improve gear, so that breakage and scattering of debris is minimized.
- Avoid the use of any single-use materials. Minimize waste generation, practicing the principals of reduction, re-use, recycling and recovery. Purchase materials with a long a life span, preferably reusable but at least recyclable.
- Secure all buoys/floats properly to minimize loss.
- When tossing out loose bags or bundles of lightweight seed bags ensure that all bags are either heavy enough not to drift away or secured/anchored to prevent drifting or movement. All loose bags shall be secured within two weeks of being tossed out if not sooner.
- Avoid leaving tools, loose gear and construction materials on leases and surrounding area for longer than one week. All materials staged on leases shall be secured to prevent movement and or burial.
- If a culture method is unsuccessful, or is not in use for over a period of one year, all materials will be promptly removed.
- At a minimum, leases and surrounding areas shall be patrolled for lost and broken gear monthly. Patrols should occur as soon as possible or at least within two-weeks of any high wind or storm event.
- Growers will participate in quarterly bay clean-ups, which include walking the bay, shoreline and wetlands, to get to hard to reach areas. An itemized list of any, and all

debris (including shellfish gear), collected will be recorded and communicated to other growers. The goal is to reduce the total volume of debris that is accumulating in Tomales Bay.

- Growers will work with and collaborate with local community and other coastal clean-up people/organizations to coordinate bay wide clean-up efforts. All trash will be collected (including non-shellfish items) at all times.
- A review of lease escrow accounts shall occur on a regular basis to ensure that adequate funds are available to clean up abandoned leases. Growers shall retain the right to perform the clean-up of any abandoned leases themselves, so as to not decrease the balance in the escrow account.

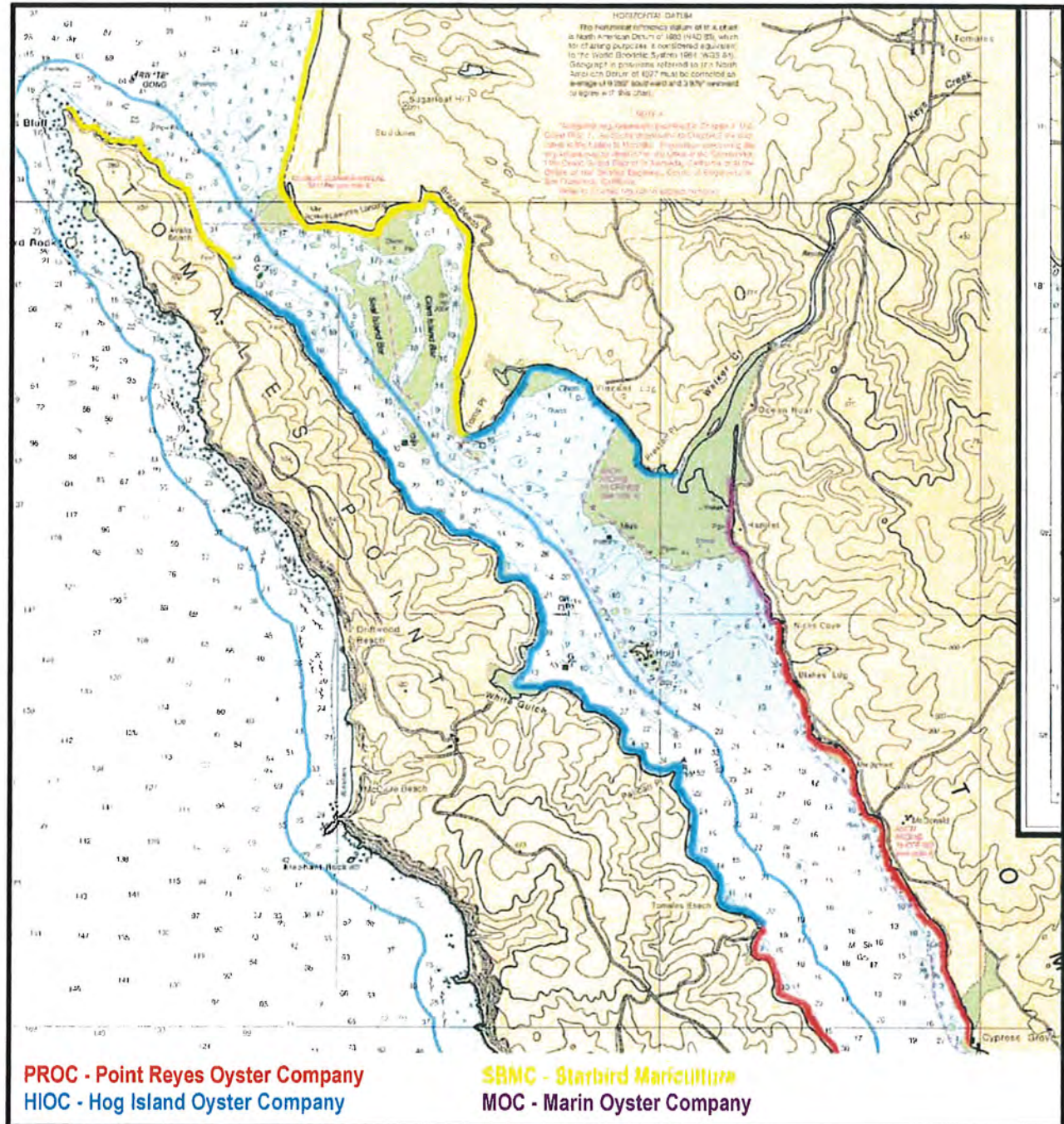


Figure A-1: Breakdown of Grower Responsible for Northern Tomales Bay Shorelines.

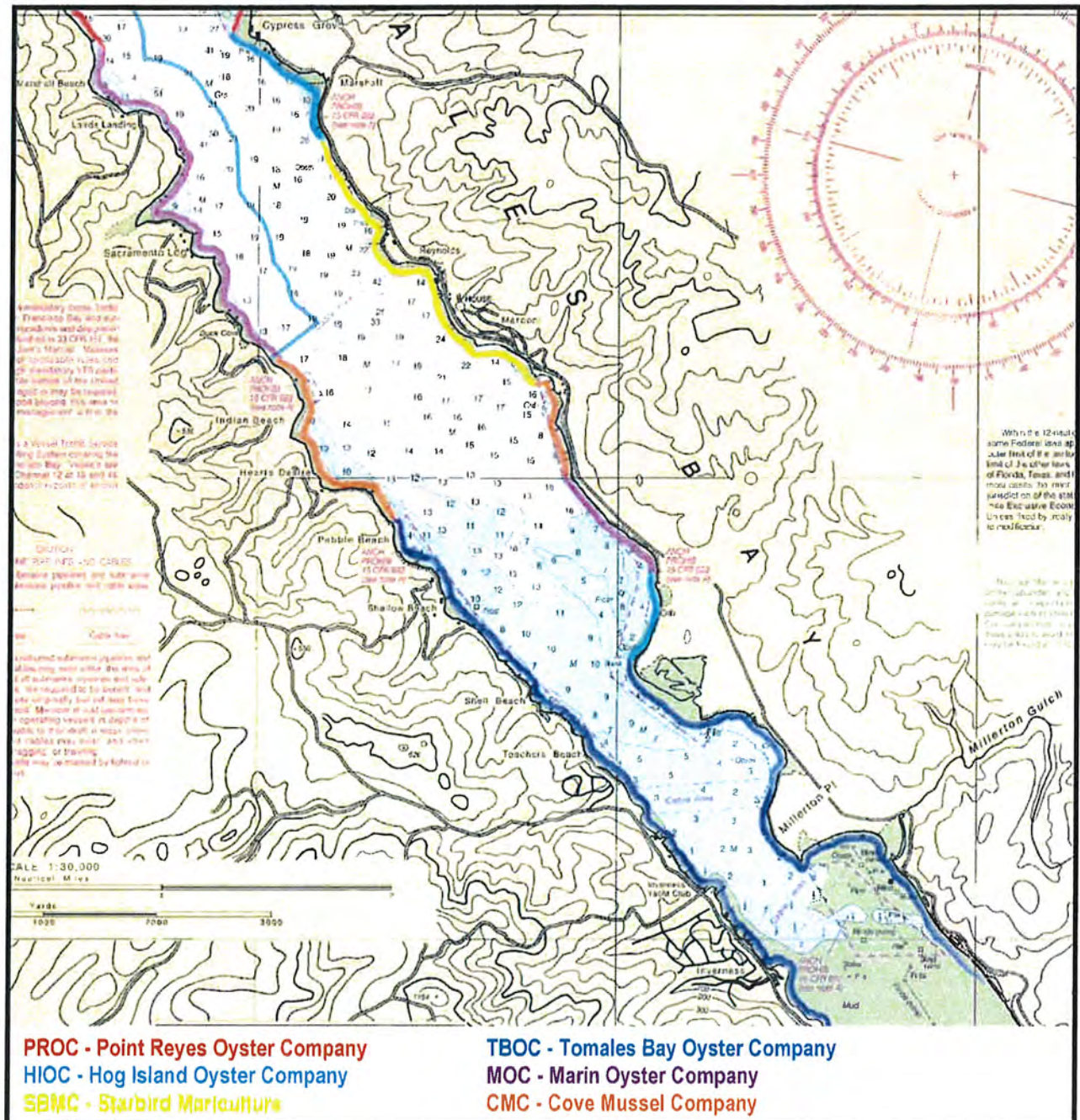


Figure A-2: Breakdown of Grower Responsible for Southern Tomales Bay Shorelines.

Appendix B

Tomales Bay Eelgrass Mapping

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APPENDIX B: TOMALES BAY EELGRASS MAPPING

The following scope of work was developed by Dr. Kristy Kroeker's lab from U.C. Santa Cruz (UCSC).

SCOPE OF WORK

In the absence of good data, state and federal regulations calling for no-net-loss of native seagrasses to protect essential fish habitat have led managers to take a precautionary approach when approving activities that may have an impact on these habitats. This has seriously constrained the expansion of shellfish aquaculture in California and elsewhere.

Both oyster aquaculture proponents and regulatory agencies need more information about the impacts of various aquaculture methods on seagrass growth and abundance. This information will improve the industry's ability to provide a high-quality, sustainable product with minimal adverse ecological impact and maximum ecological benefit. It will help the regulatory agencies develop permit conditions that are truly protective of the environment. Survey methods need to be developed that are inexpensive and easy to operationalize, produce high-quality data, and can be implemented regularly – preferably by permittees.

Unmanned aerial vehicles (UAVs or drones) are powerful new tools with myriad applications for science. Scientists are already employing UAVs in several locations to map out kelp forests and seagrass ecosystems, quickly and inexpensively generating data that can help improve our understanding of the impacts of oyster culture on seagrass and its associated marine communities.

The purpose of this project is to design a scientifically-rigorous monitoring program that can document trends in seagrass growth and abundance in the Tomales Bay and Humboldt Bay operations of the Hog Island Oyster Company using UAVs. Dr. Kroeker ("Grantee") will work closely with TNC staff to develop the methods necessary to monitor eelgrass and aquaculture interactions over time in Tomales Bay and Humboldt Bay, CA, that can be used by HIOC to establish a long-term monitoring program.

In particular, Grantee will collaborate with The Nature Conservancy ("TNC") and Hog Island Oyster Company ("HIOC") to develop a monitoring program to measure the area of eelgrass cover and seagrass ecosystem function in three locations with and without HIOC aquaculture operations. The Grantee will focus initial work on the recent (winter 2016) HIOC aquaculture deployment at Tom's Point in Tomales Bay to develop methods. In addition, the Grantee will replicate the methods developed at Tom's Point for the two new HIOC leases in Humboldt Bay.

Grantee will design the sampling scheme, including both in-situ monitoring and drone surveys - and participate in initial unmanned aerial vehicles ("UAV") surveys that will be piloted by TNC or HIOC staff. The sampling will follow a BACI (before-after-control-impact) design, with unmanned aerial and subtidal sampling occurring before and after the aquaculture deployment in control and impact (i.e., aquaculture deployment) locations. For the Tom's Point deployment, the Grantee will rely on a modified BACI design using aerial surveys collected in 2013 by other investigators to provide the "before" data. In addition, the Grantee will sample three control sites of similar area to the aquaculture deployment with increasing distance from the aquaculture lease. This will increase power and provide an opportunity to test what attributes are preferable (e.g., distance from impact site) for future control sites. Each "site" (e.g., aquaculture lease plus three controls) will include ~5 onshore-to-offshore aerial and subtidal transects, that cross the seagrass to mud transition zone, with those in the aquaculture lease occurring between the rows of the rack and bag aquaculture deployments. This design will allow the Grantee to monitor onshore encroachment or offshore retreat of seagrass with the aquaculture. These methods will be modified as is pertinent for sampling of the two Humboldt Bay leases, with at least one control and one "impact" site for each lease.

Grantee will perform SCUBA surveys to quantify the relationship between measures of eelgrass cover from UAV surveys and important seagrass attributes used to determine eelgrass and ecosystem status by state and federal agencies and other scientists (e.g., seagrass density, algal and invertebrate abundance, and community structure).

Grantee will perform in situ environmental monitoring at one control and the impact site for each aquaculture lease to better understand the potential drivers of eelgrass-aquaculture interactions (e.g., turbidity and PAR). This will include multi-day deployments of PAR sensors (and other sensors provided by the Kroeker Lab at no cost). In addition, the Grantee will collect discrete water samples at all control and impact sites in Tomales Bay for carbonate chemistry and nutrients characterization, which will be processed in the Kroeker Lab at UCSC.

Last, Grantee will analyze the seasonal patterns in eelgrass and aquaculture interactions for the 2017 eelgrass growing season (spring-fall) to produce a peer-reviewed publication, to be co-authored with TNC science staff.

DELIVERABLES

1. Long-term monitoring design for aquaculture leases, based off of the work performed under this grant.

2. Final report on seagrass and aquaculture interactions at Tom's Point aquaculture lease, plus other leases if access is granted by HIOC with adequate time to undertake surveys during the grant period.
3. Peer-reviewed publication on aquaculture-seagrass interactions, and mechanisms underlying the outcomes using this case study.

BUDGET

The grant will be used to support PhD student Sarah Lummis to lead monitoring design (1), final report (2), and the peer-reviewed publication (3).

In addition, the grant will be used to support 1 month of summer salary for PI Kristy Kroeker, to mentor the graduate student, oversee project, and contribute to writing of final report and peer-reviewed publication.

Last, the grant will be used to purchase 2 PAR sensors, which will allow us to test the mechanisms underlying changes in seagrass cover associated with aquaculture (e.g., light availability). All other water samples will be processed at UCSC in the Kroeker Lab at no cost.

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Proposed Species and Culture Methods for Hog Island Oyster Company Lease Amendments

List of species and culture methods currently authorized in each of four state water bottom lease areas held by Hog Island Oyster Company and proposed species and culture methods as requested in lease amendment application dated January 13, 2019. An "x" indicates either proposed in the lease amendment application or authorized under terms and conditions for the current lease.

Table 1: Authorized and Proposed Species

Species Name	Proposed	M-430-10 Authorized	M-430-11 Authorized	M-430-12 Authorized	M-430-15 Authorized
Manilla clam	x	x	x	x	x
Pacific oyster	x	x	x	x	x
Eastern oyster	x	x	x	x	
Kumamoto oyster	x				
European flat oyster	x	x	x	x	
Olympia oyster	x	x	x		
Mediterranean mussel	x		x		
Native oysters		x	x		
Red abalone		x	x		
Quahog clam				x	
Native littleneck clams				x	
Bay mussels				x	x

Table 2: Authorized and Proposed Culture Methods

Culture Method	Proposed	M-430-10 Authorized	M-430-11 Authorized	M-430-12 Authorized	M-430-15 Authorized
Rack and Bag	x	x	x	x	x
Bottom Bags	x				x
Intertidal longlines (with bags/baskets)	x				
Floating longlines	x		x		
Rafts	x			x	
Stakes and/or modified stakes		x	x		

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Fish and Game Commission



Wildlife Heritage and Conservation
Since 1870

Melissa Miller-Henson
Acting Executive Director
P.O. Box 944209
Sacramento, CA 94244-2090
(916) 653-4899
fgc@fgc.ca.gov
www.fgc.ca.gov

May 30, 2019

John Finger, Co-founder and CEO
Hog Island Oyster Co.
20215 Shoreline Highway
Marshall, CA 94940

Sent via email to john@hogislandoysters.com

Dear Mr. Finger:

This letter is in response to your January 28, 2019 request to amend Hog Island Oyster Company's state water bottom leases for four state tideland parcels in Tomales Bay (leases M-430-10, M-430-11, M-430-12, and M-430-15). Your request was received by the California Fish and Game Commission (Commission) at its February 6, 2019 meeting and, subsequently, the Commission forwarded your request to the California Department of Fish and Wildlife (Department) for review. Final action by the Commission will be scheduled once the environmental review pursuant to the California Environmental Quality Act (CEQA) is completed, and the Department has submitted its review and recommendations to the Commission.

As stated in your letter, you are requesting to amend the list of culture methods and species currently authorized in each lease, to create a consistent set of culture methods and species authorized for the four lease areas; in essence, you are requesting to receive after-the-fact authorization for currently unauthorized species and culture practices. The Commission appreciates that you are seeking to rectify inconsistencies between the current culture methods and species you employ and those authorized in each lease.

The Commission's expectation is that once the lease amendment process is completed, that Hog Island Oyster Company will remain in compliance with the terms and conditions for each lease, including adhering to authorized culture species, culture methods, and lease boundaries. While the review and amendment process is underway, Hog Island Oyster Company may continue current aquaculture operations within the legally-defined boundaries of parcels M430-10, M430-11, M430-12 and M430-15 for up to one year from the date of this letter. The Commission is scheduled to

John Finger
May 30, 2019
Page 2 of 2

affirm this provision for continued operations at its June 12-13, 2019 meeting in Redding.

If you have any questions, please contact Elizabeth Pope, the Commission's Acting Marine Advisor, at Elizabeth.Pope@fgc.ca.gov, or fgc.ca.gov.

Sincerely,
Original signature on file

Melissa Miller-Henson
Acting Executive Director

cc: Craig Shuman, Regional Manager, Marine Region, California Department of Fish and Wildlife, Craig.Shuman@wildlife.ca.gov
Kirsten Ramey, Program Manager, Marine Region, California Department of Fish and Wildlife, Kirsten.Ramey@wildlife.ca.gov
Randy Lovell, Statewide Aquaculture Coordinator, California Department of Fish and Wildlife, Randy.Lovell@wildlife.ca.gov
John Ainsworth, Executive Director, California Coastal Commission, John.Ainsworth@coastal.ca.gov
Cassidy Teufel, Senior Environmental Scientist, California Coastal Commission, Cassidy.Teufel@coastal.ca.gov
Bryan Matsumoto, Senior Project Manager, U.S. Army Corps of Engineers, bryan.t.matsumoto@usace.army.mil

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



F14a-d

Filed: 9/19/2018
180th Day: 3/18/2019
270th Day: 6/16/2019
Staff: C. Teufel-SF
Staff Report: 1/24/2019
Hearing Date: 2/8/2019

ADOPTED FINDINGS

Application Nos.:	2-81-40-A1; 2-84-2-A1; 2-84-10-A1; 1-94-55-A1
Applicant:	Hog Island Oyster Company, Inc.
Location:	Tomales Bay, Marin County.
Project Description:	Request for after-the-fact approval for installation and use of on-bottom and off-bottom oyster and clam cultivation equipment and proposed expansion of shellfish cultivation through the use of new equipment and species within four State water bottom leases in Tomales Bay, Marin Co.
Commission Action:	Approval with conditions.

SUMMARY

Hog Island Oyster Company, Inc. (HIOC) has carried out shellfish aquaculture operations in Tomales Bay since the early 1980s. Over this time, HIOC's operations have expanded from a

single five acre lease to include four separate State water bottom leases covering a total of approximately 168 acres. HIOC's current operations are carried out within nearly 26 of these 168 acres. In the early 1980s and 1990s, CDPs were issued for each of the leases now included in HIOC's operation. Two of these CDPs were issued to the prior holder of HIOC's leases and the other two were issued to earlier iterations of HIOC's company. These four CDPs specify the types of shellfish that can be grown on the leases and the equipment and areas that are to be used for this cultivation. However, as HIOC's operation grew and evolved to incorporate new methods and areas, the CDPs for its leases were not amended to keep pace. HIOC began to use shellfish species, equipment, structures and areas beyond those authorized in its CDPs.

Due to HIOC's failure to obtain the necessary authorizations prior to carrying out development activities, violations of the Coastal Act exist within the areas of its operations. These include, but are not limited to, installation and use of on- and off-bottom shellfish cultivation structures and equipment for many years across roughly 17 acres in Tomales Bay; operation of all-terrain vehicles (ATVs) within intertidal mudflats; disturbance and damage to sensitive eelgrass habitat; and operation of mechanical shellfish harvesting equipment.

HIOC refutes the allegation that its use of cultivation methods, shellfish species, and equipment not described in the CDPs for its leases constitutes unpermitted development. Commission staff disagrees with this position and has informed HIOC of its belief that only those structures, species, and activities described in HIOC's CDPs make up the Commission-approved development for each lease. Despite its disagreement with Commission staff regarding the scope of the CDPs for its leases, HIOC has agreed with the approach Commission staff suggested for addressing it. That approach involves HIOC amending the four permits for its leases so that they accurately reflect the type and amount of shellfish cultivation activities that HIOC currently practices within them.

Therefore, in response to notification by Commission permitting and enforcement staff about its alleged Coastal Act violations – as well as its desire to expand its aquaculture operations - HIOC prepared and submitted amendment applications for each of its four CDPs. These amendments request after-the-fact approval for development activities HIOC has carried out without benefit of Coastal Act review. Approval of these applications pursuant to the staff recommendations, issuance of the amended permits, and the applicant's subsequent compliance with all terms and conditions of the amended permits, will result in resolution of the above described violations.

In addition to requesting after-the-fact permit amendments in order to resolve its Coastal Act violations, HIOC also proposes to expand its operations. Specifically, HIOC seeks to increase its operation to include a total of seven species and seven types of cultivation structures in different areas across approximately 54.37 acres. Approximately 15.75 acres of this roughly 54 acre expanded operation would be focused on cultivation methods already authorized in the CDPs for those leases. Assuming these acres would be used consistent with all aspects of those permits in their current form (i.e. eelgrass would be avoided and the shellfish species grown limited to those currently approved in the CDP for that area), HIOC could pursue this expansion without additional Commission review. The remaining acres of its proposed expansion would be new proposed development for which HIOC seeks the Commission's approval through amendments

to its four permits. For efficiency, all four of HIOC's proposed CDP amendments are being considered in this single report and recommendation.

For HIOC, an important aspect of its proposed project is the establishment of an efficient and expeditious process for obtaining regulatory authorization for future changes to its operations. For example, HIOC anticipates that in the future, it may want to substitute one type of shellfish growing method for another within the proposed cultivation areas shown on **Exhibit 3**. If it does so, HIOC would like the flexibility to be able to carry out such substitutions without a lengthy regulatory review. The Commission shares HIOC's interest in using the most efficient and effective regulatory process for considering future changes to its operations. As such, whenever the Executive Director determines that such changes can be accomplished consistent with all relevant Special Conditions and without potential adverse impacts to coastal resources or public access, they would be processed as immaterial permit amendments.

Potential Coastal Act issues raised by HIOC's proposed project primarily involve marine biological resources. Tomales Bay supports a wide range of ecologically important and sensitive marine habitats and wildlife, and many of these habitats and species can be found in and around HIOC's current and proposed operations. For example, all four of HIOC's lease areas support extensive beds of eelgrass and foraging habitat for a wide variety of shorebirds and marine wildlife.

In order to ensure that these coastal resources are appropriately protected, Commission staff is recommending several Special Conditions be added to HIOC's permits. These would: establish a permit term that is consistent with the current term of HIOC's State leases (**Special Condition 1**); protect eelgrass by requiring HIOC to carry out surveys of proposed cultivation areas prior to installing new cultivation structures and to adjust the location of these structures if eelgrass is found (**Special Condition 2**); protect marine habitat, wildlife and water quality by requiring HIOC to phase out its use of two cultivation methods and fully remove their associated structures (**Special Conditions 6 and 7**); reduce marine debris in Tomales Bay by requiring HIOC to implement a series of debris prevention and recovery practices (**Special Condition 11**); and memorialize HIOC's commitment to implement a variety of mitigation measures it has proposed to benefit the marine biological resources of Tomales Bay (**Special Conditions 5 and 8**). Commission staff believes that the implementation of **Special Conditions 1 through 13** will reduce impacts to marine resources such that the projects can be found consistent with the marine resources policies of the Coastal Act.

The Commission staff therefore recommends that the Commission **APPROVE** coastal development permit amendment applications 2-81-40-A1, 2-84-2-A1, 2-84-10-A1 and 1-94-55-A1, as conditioned. The motions to carry out this recommendation are on page 5. The standard of review is Chapter 3 of the Coastal Act.

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APPENDICES

[Appendix A – Substantive File Documents](#)

[Appendix B – Shellfish Cultivation Methods](#)

[Appendix C – Relevant Documents from Existing CDPs](#)

EXHIBITS

[Exhibit 1 – Project Area and Location of State Water Bottom Leases](#)

[Exhibit 2 - Maps of Existing Operations in State Water Bottom Leases](#)

[Exhibit 3 - Maps of Proposed Expanded Operations in State Water Bottom Leases](#)

[Exhibit 4 - Vessel Access Routes and Management Measures](#)

[Exhibit 5 - Marine Debris Management Plan](#)

I. MOTIONS AND RESOLUTION

Motion 1:

*I move that the Commission **approve** Coastal Development Permit Amendment 2-81-40-A1 subject to the conditions set forth in the staff recommendation specified below.*

Motion 2:

*I move that the Commission **approve** Coastal Development Permit Amendment 2-84-2-A1 subject to the conditions set forth in the staff recommendation specified below.*

Motion 3:

*I move that the Commission **approve** Coastal Development Permit Amendment 2-84-10-A1 subject to the conditions set forth in the staff recommendation specified below.*

Motion 4:

*I move that the Commission **approve** Coastal Development Permit Amendment 2-94-55-A1 subject to the conditions set forth in the staff recommendation specified below.*

Staff recommends a **YES** vote on the foregoing motions. Passage of these motions will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of Commissioners present.

Resolution:

The Commission hereby approves the Coastal Development Permit Amendments for the proposed project and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit amendments complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

- 1. Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the applicant or authorized agent,

acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the applicant to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

Existing Special Conditions of CDP No. 2-84-10:

1. All work shall be carried out in conformance with restrictions established by the Department of Fish and Game. (See Exhibit C).

Excerpt of relevant section from "Exhibit C" of CDP No. 2-84-10:

1. Rack culture will not be used in waters less than 3 feet deep at MLW (0.0 tidal datum). Racks employed will not extend higher than two feet above the water surface at MLW.
2. Rack modules will be spaced a minimum of 16 feet apart to allow for boat passage at median water levels.
3. Submerged racks will be buoyed in a manner that will allow for the free passage of boats at all stages of the tide.
4. Rafts will be placed offshore of rack modules in a manner that will not prevent passage between the racks and will be suitably marked to prevent hazards to navigation.

Existing Special Conditions of CDP No. 1-94-55:

1. **U.S. Army Corps of Engineers Review.** Prior to the commencement of construction, the application shall provide to the Executive Director a copy of a U.S. Army Corps of Engineers permit, letter of permission, or nationwide permit for the project.
2. **Protection of Eelgrass.** The applicant shall not cut or disturb any eel grass growing on the bay bottom during the installation or use of the proposed shellfish cultivation apparatus.
3. **Removal of Cultivation Apparatus when Lease Terminates.** Within 90 days of termination or abandonment of the subject lease by the applicant or any assignees to this permit, the applicant or assignees shall remove all aquaculture apparatus from the affected lease area.

CDP Nos. 2-81-40 and 2-84-2 do not currently include Special Conditions.

Except for Special Condition 7, which applies only to Coastal Development Permit Amendment 2-84-2-A1, the following Special Conditions will be included on CDP Amendment numbers 2-81-40-A1, 2-84-2-A1, 2-84-10-A1 and 1-94-55-A1 and will supersede and replace all special conditions (which are listed above) from CDP Nos. 2-84-10 and 1-94-55:

- 1. Permit Term Limit and Scope.** Authorization for development activities on the State Water Bottom Lease associated with this permit shall expire on the current date of that lease's expiration (for example, November 2, 2030, February 7, 2033, July 1, 2027, and April 28, 2032, for leases M-430-10, M-430-11, M-430-12, and M-430-15, respectively). If the terms of the lease(s) are amended or a new lease issued by the California Fish and Game Commission, HIOC may submit an application for a permit amendment requesting an extension of the permit term. HIOC shall, no less than 60 days prior to permit expiration or the cessation of its operations on the State Water Bottom Lease associated with this permit, submit a complete application to amend this permit to remove all cultivation equipment and accumulations of oyster shell and return the lease areas to a natural condition.

Unless further limited by implementation of the Special Conditions, the scope of this permit shall be limited to those cultivation structures, gear types, configurations and activities described in [Appendix B](#) that correspond with those included on that lease in the relevant figure in [Exhibit 3](#). All bottom bags and floating bags used for oyster cultivation shall be affixed to anchored lines or racks.

- 2. Eelgrass Habitat and New Cultivation Areas.** No shellfish cultivation equipment, anchors, or other structures, gear or equipment shall be installed or placed on, in, or over eelgrass habitat, as determined by the Executive Director using the definition of eelgrass habitat in the National Marine Fisheries Service's October 2014 California Eelgrass Mitigation Policy (CEMP). Prior to placing or installing structures or equipment on any shellfish cultivation area not shown on [Exhibit 2](#) ("existing cultivation areas") HIOC shall submit, for Executive Director review and approval, information collected within the most recent eelgrass growing season (May through September) demonstrating that no eelgrass is present within the area in which installation or placement is proposed. If eelgrass is present or the Executive Director does not approve the information (for example, because it is inconclusive, out of date, of inadequate resolution, or improperly collected), HIOC shall retain the services of a qualified, independent third party to carry out an eelgrass survey of that area. The survey shall be carried out consistent with the methodology and protocols established in the CEMP and shall be carried out during the eelgrass growing season in which installation activities will occur (or the previous growing season if installation will occur after the completion of one growing season and prior to the start of the next). Within 30 days of survey completion, the results of the eelgrass survey shall be provided to the Executive Director for review and approval along with a map or diagram showing the footprint and location of proposed cultivation structures and equipment relative to nearby eelgrass habitat and demonstrating that installation within eelgrass habitat, as defined in the CEMP, will not occur. While installation of shellfish cultivation structures and equipment shall be prohibited within eelgrass habitat, as defined in the CEMP, if such eelgrass habitat

moves or expands into areas with existing cultivation structures and/or equipment, HIOC may continue to maintain and use these areas for shellfish cultivation.

3. **Pre-installation Lease Line Survey.** Within 120 days of permit issuance, and prior to installation of any new shellfish cultivation structures or equipment, HIOC shall coordinate with staff of the California Department of Fish and Wildlife (CDFW) to retain the services of a qualified, independent third party surveyor or pursue other similar methods preferred by CDFW to determine the location and configuration of HIOC's State water bottom leases by December 31, 2019. These deadlines may be extended by the Executive Director upon request from HIOC and CDFW. The results of the lease delineation efforts and discussions with CDFW staff shall be provided to the Executive Director and used to determine the GPS coordinates for the corners of HIOC's leases. HIOC shall mark these locations using PVC stakes or buoys within 30 days of completion of lease delineation efforts. If the results indicate that any of HIOC's existing cultivation areas, structures or equipment are located outside of its leases, HIOC shall relocate or remove these cultivation areas within 90 days of completion of lease delineation efforts. Placement or use of cultivation structures or equipment outside of designated lease areas shall be prohibited.
4. **Amendment of State Water Bottom Lease.** Prior to installation or expanded use of any cultivation method and/or species not already included in the State Water Bottom Lease associated with this permit, HIOC shall submit to the Executive Director evidence that this lease has been amended by the California Fish and Game Commission (FGC) to allow these species and/or method(s) to be used. Without such evidence, HIOC's operations on the lease associated with this permit shall be limited to the species and methods that the Fish and Game Commission specifically allows on that lease. Any cultivation methods or species currently being used on the lease associated with this permit that have not been approved for that lease by the FGC shall be removed unless or until such approval is granted by the FGC. Such removal shall begin within 60 days and be completed within 120 days of permit issuance. If HIOC or FGC staff provides the Executive Director with evidence that the FGC allows certain methods or species to continue to be used pending a lease amendment review, HIOC may continue to use those methods and/or species on that lease.
5. **Removal and Disposal of Abandoned Structures.** Within 24 months of permit issuance, HIOC shall collect and remove all abandoned shellfish cultivation structures (including wooden posts and remnants of cultivation racks) in the immediate vicinity of State Water Bottom Lease No. M-430-15. All collected materials shall be properly disposed of at a certified onshore landfill or waste receiving facility. Upon completion of removal activities, HIOC shall provide, for Executive Director review and approval, a report documenting the estimated amount of material removed, the areas from which it was removed, and before/after photographs of the removal areas.
6. **Clam Cultivation and Harvest.** All future plantings of Manila clams shall be carried out using confined cultivation gear such as trays or "clam bags" (as described in [Appendix B](#)). To prevent escape of Manila clams from cultivation areas and to minimize excavation and disturbance of benthic habitat during harvest, direct planting of Manila clams into mudflat areas shall be prohibited. Removal of clams and equipment from existing unconfined clam

cultivation areas (also known as “clam rolls”) shall begin within 30 days of permit issuance and shall be fully completed within 18 months of permit issuance. Within 14 days of completion, HIOC shall provide, for Executive Director review and approval, a report documenting that complete removal has occurred. This report shall be developed by an independent third-party approved by the Executive Director. Any remaining “clam roll” equipment, associated materials, and debris documented in this report shall be removed by HIOC within 30 days of providing the report to the Executive Director. Any such supplemental removal activity shall be documented by the same approved independent third-party in a supplemental report submitted to the Executive Director for review and approval within 14 days of the completion of the supplemental removal activity.

To limit turbidity and dispersal of disturbed sediments during harvest or collection of existing unconfined Manila clams removed pursuant to this condition, harvest/collection shall be carried out using non-motorized hand tools at tidal heights when the cultivation areas are fully exposed out of the water and all harvest/collection areas shall be fully encircled with a perimeter turbidity curtain. The turbidity curtain shall be maintained in place for two tidal cycles or until the water within the harvest area is visually similar to surrounding waters, whichever is longer. If turbidity curtains cannot be adequately maintained in place for this duration (due to currents, wind, etc.), they may be removed early with the approval of the Executive Director. Collected Manila clams that are not mature enough for harvest or cannot be harvested due to California Department of Public Health closures may be re-planted in approved areas using clam bags or cultivation trays.

7. **Removal of Stanway Structures.** Within 30 days of permit issuance, HIOC shall begin removing all its existing Stanway cultivation structures (including footings, support posts, support frames and Stanway cylinders) and associated equipment from State Water Bottom Lease No. M-430-11. All Stanway cultivation structures and associated equipment shall be completely removed within 12 months. All collected materials that cannot be recycled or reused onshore, shall be properly disposed of at a certified onshore landfill or waste receiving facility. Within 14 days of completion, HIOC shall provide, for Executive Director review and approval, a report documenting that complete removal has occurred. This report shall be developed by an independent third-party approved by the Executive Director. Any remaining Stanway cultivation structures or associated equipment, materials or debris documented in this report shall be removed by HIOC within 30 days. Within 14 days of the completion of this supplemental removal activity, it shall be documented by the same approved independent third-party in a supplemental report submitted to the Executive Director for review and approval.
8. **Eelgrass Habitat and Existing Cultivation Areas.** Those areas in which cultivation structures or equipment are present within eelgrass shown on the Greater Farallones National Marine Sanctuary’s 2017 eelgrass map (as shown in **Exhibit 2 and Exhibit 6**) shall be cleared of all existing cultivation structures, gear, and/or equipment by May 1, 2019. Existing cultivation gear on lease M-430-15 and cultivation racks on leases M-430-10 and M-430-11 shall be exempt from this removal requirement.
9. **Cultivation Site Access and Vessel Use.** During vessel transit, harvest, maintenance,

inspection, and planting operations, HIOC shall avoid approaching, chasing, flushing, or directly disturbing shorebirds, waterfowl, seabirds, or marine mammals. In addition, typical in-water operations involving boat use shall be carried out consistent with the vessel routes and vessel management measures included in [Exhibit 4](#). The use of cars, trucks, all-terrain vehicles or other wheeled or tracked motorized vehicles shall be prohibited on the intertidal lease areas associated with this permit.

- 10. Annual Report.** By December 31 of each year, HIOC shall submit to the Executive Director an annual report with information regarding the results of quarterly cleanup events carried out as described in **Special Condition 11(D)** and the date of training, training materials, meeting minutes, and list of attendees from the Marine Debris Reduction Training described in **Special Condition 11(C)**. In addition, the annual report shall include information on the estimated number of cultivation bags and/or baskets lost, replaced, and recovered throughout the course of the year, as well as any design, management, or operational changes implemented to address issues that have arisen with the expanded use of elevated cultivation bags and/or baskets. The annual report shall also include a description of any significant changes to the type, quantity and configuration of cultivation equipment that are being considered and any resource or operational challenges that are emerging.
- 11. Marine Debris Reduction and Management.** HIOC shall carry out operations consistent with the following marine debris reduction and management practices:

 - A. Storm Damage and Debris.** In the event that its shellfish culture gear or equipment becomes displaced or dislodged from culture beds, it shall be HIOC's responsibility to retrieve the material from the shoreline, open water, eelgrass beds, mudflat, or submerged bottom with minimal damage to the resources affected. Once located, such material shall be removed as soon as feasible and properly disposed of, recycled, or returned to use. As soon as safely and reasonably possible following storm or severe wind or weather events, HIOC shall patrol all of its active cultivation areas for escaped or damaged aquaculture equipment. All equipment that cannot be repaired and placed back into service shall be properly recycled or properly disposed of at a certified onshore waste disposal facility. In addition, HIOC shall retrieve or repair any escaped or damaged aquaculture equipment that it encounters while conducting routine daily and/or monthly maintenance activities associated with shellfish culture (e.g. bed inspections, shellfish harvest and planting). If the escaped gear cannot be repaired and replaced on the shellfish bed, it shall be properly recycled or disposed of at a certified onshore waste disposal facility.
 - B. Gear Marking.** HIOC shall mark shellfish culture bags (clam bags, oyster bottom bags, tipping bags and floating bags), cultivation baskets, trays and floats in an easily identifiable manner with identification information including its company name. Markings shall be securely attached and robust enough to remain attached and legible after an extended period in the marine environment (e.g. heat transfer, hot stamp, etching, etc.). Existing clam bags, cultivation baskets, bottom bags, tipping bags/floating bags and floats currently in use shall be marked or replaced with

marked versions when replanted, and all unmarked gear shall be marked in this way within 24 months of the Commission's approval of this permit amendment.

As an alternative to marking each individual non-floating cultivation bag (bottom bags and clam bags), HIOC may, within 90 days, submit an Alternative Gear Identification Plan (AGIP). This AGIP shall be submitted for Executive Director review and approval and shall describe (1) how identification of gear ownership (i.e. the entity responsible for proper gear placement, use, and recovery) would be achieved without markings on individual pieces of cultivation gear; (2) how this alternative identification method would be implemented and maintained; and (3) the proposed timeline for implementation. If the Executive Director approves the AGIP, HIOC shall implement it according to the proposed timeline. If HIOC fails to submit the AGIP by the specified deadline or the Executive Director determines that the alternative method would not provide at least an equivalent level of ownership identification as the use of markings on individual pieces of gear, HIOC shall proceed with the marking of all non-floating shellfish cultivation bags (bottom bags and clam bags) as described in the preceding paragraph. Regardless of the Executive Director's approval of the AGIP, HIOC shall mark all cultivation baskets and floating cultivation equipment (including cultivation baskets with floats, tipping bags, floating bags, and floats) as described in the preceding paragraph.

C. Marine Debris Reduction Training. WITHIN 30 DAYS OF ISSUANCE OF THIS PERMIT, HIOC shall conduct an employee training regarding marine debris issues, including covering how to identify culture gear or associated materials (marking stakes, support posts, longlines, label tags, clasps, etc.) that are loose or at risk of becoming loose, proper gear repair methods, and how to completely remove gear from out-of-production areas. Particular focus shall be placed on management and maintenance practices to reduce the loss of any gear type that is frequently lost or consistently found during bay cleanup and inspection activities. This training shall be repeated on an annual basis throughout the term of the permit. During trainings, HIOC's employees shall be encouraged to consider and implement field and management practices that reduce the amount of small plastic gear (such as zip-ties, tags and fasteners) and non-biodegradable material (such as PVC stakes and nylon or polypropylene rope) used in its operations.

D. Cleanup Events. HIOC shall continue to carry out quarterly cleanup events in Tomales Bay in coordination with other interested parties or organizations. Cleanup events shall include walking different portions of the bay and shorelines to pick up escaped shellfish gear and other trash (regardless of whether it is generated by the project). The volume and type of shellfish gear collected and the cleanup location (marked on a map) and duration of cleanup activity shall be recorded and documented in the annual report submitted to the Executive Director of the Commission. If persistent discoveries of certain gear types are made, HIOC shall evaluate (and if feasible, implement use of) alternative gear types or practices that would reduce these persistent sources of debris.

E. Ongoing Operations. With the exception of materials temporarily and securely stored on its three floating work platforms, HIOC shall not leave or temporarily store tools, loose gear, or construction materials on its leased tidelands or surrounding areas. Work platforms shall not be used for long-term (months to years) storage or stockpiling of shellfish cultivation gear, and temporarily (days to weeks) stored or stockpiled gear shall be minimized and secured or maintained in covered containers whenever feasible. All aquaculture gear installed on and in use in active cultivation sites shall be kept neat and secure and maintained in functional condition. HIOC shall carry out regular bed inspections and maintenance activities to help ensure that broken, collapsed, fallen, or buried gear is fixed or removed in a timely manner. In addition, all mesh cultivation bags in use by HIOC for oyster cultivation shall be placed within designated areas and tethered to anchor lines, elevated tipping lines, racks or tray barges.

F. Bed Cleaning at Harvest. At the time of harvest of each cultivation area, HIOC shall carry out a thorough inspection to locate and remove loose, abandoned or out of use equipment, tools, and accumulations of oysters from the surrounding substrate. Oyster shell shall not be intentionally placed or deposited within the lease outside of cultivation gear, and oysters or oyster shell accidentally spilled during harvest shall be immediately collected and removed.

G. Excessive Gear Loss or Maintenance Failures. If the Executive Director determines that HIOC is responsible for excessive loss of aquaculture equipment (including bottom bags, tipping bags or cultivation baskets) into the marine environment or is consistently failing to maintain its equipment in an intact and serviceable condition, HIOC shall, within 60 days of the Executive Director's written notification, submit a complete permit amendment application to modify its cultivation equipment and/or operational practices to address the issue, unless the Executive Director determines that no such amendment is necessary to implement the necessary changes.

12. Hazardous Material Spill Prevention and Response Plan. WITHIN 60 DAYS OF PERMIT ISSUANCE, HIOC shall submit for Executive Director review and written approval, a project-specific Spill Prevention and Response Plan (SPRP) for work vessels, barges, and gasoline powered machinery that will be used during project construction and operational activities. HIOC and its personnel shall be trained in, and adhere to, the emergency procedures and spill prevention and response measures specified in the SPRP during all project installation and operations. The SPRP shall provide for emergency response and spill control procedures to be taken to stop or control the source of the spill and to contain and clean up the spill. The SPRP shall include, at a minimum: (a) identification of potential spill sources and quantity estimates of a project specific reasonable worst case spill; (b) identification of prevention and response equipment and measures/procedures that will be taken to prevent potential spills and to protect marine and shoreline resources in the event of a spill. Spill prevention and response equipment shall be kept onboard project vessels and barges at all times; (c) a prohibition on vessel fueling/refueling activities outside of designated fueling stations, carried out with spill

prevention and response protocols in place; and (d) emergency response and notification procedures, including a list of contacts to call in the event of a spill.

- 13. Other Agency Review and Approval.** PRIOR TO COMMENCEMENT OF PROPOSED CONSTRUCTION AND/OR INSTALLATION ACTIVITIES, HIOC shall submit to the Executive Director written evidence that all necessary permits, permissions, approvals, and/or authorizations for the approved project have been granted, including those from the Regional Water Quality Control Board, California Fish and Game Commission and U.S. Army Corps of Engineers. Any changes to the approved project required by these agencies shall be reported to the Executive Director. No changes to the approved project shall occur without an amendment to this permit unless the Executive Director determines that no amendment is legally necessary.

IV. FINDINGS AND DECLARATIONS

A. BACKGROUND AND PROJECT DESCRIPTION

Hog Island Oyster Company (HIOC) has been carrying out shellfish aquaculture in Tomales Bay since approximately 1984. Since that time it has grown into the second largest shellfish aquaculture company in California, with farming operations in Tomales Bay and Humboldt Bay as well as a series of restaurants in Marin County and San Francisco and onshore shellfish nursery and processing facilities. Although not included in the proposed project or CDPs discussed below, HIOC's onshore processing facility for Tomales Bay, located in the town of Marshall along the eastern shoreline of the bay, is in integral part of its shellfish cultivation efforts in Tomales Bay and serves as its base of operations. This site (referred to as "Hog Island Farm" in the figure below) is used for receiving, cleaning, processing, packaging, shipping and direct sales of the shellfish HIOC grows on its four leases in Tomales Bay (those leases are spread across the bay and are identified as M-430-10, M-430-11, M-430-12 and M-430-15 in the figure below).



Permit History

CDP No. 2-84-2

Based on the Commission's permit records, HIOC's shellfish aquaculture operations in Tomales Bay began on the five acre State Water Bottom Lease No. M-430-11 around March 1984. This is when the Commission issued CDP No. 2-84-2 for the placement and use of racks for oyster¹ cultivation on the lease. This lease is located in the northern part of Tomales Bay near the mouth of Walker Creek and is adjacent to dozens of acres included in other shellfish aquaculture leases currently being used by Marin Oyster Company, Point Reyes Oyster Company and Tomales Bay Oyster Company.

CDP No. 2-81-40

HIOC's operations expanded in September 1992 when it began operating on another five acre lease in the northern part of Tomales Bay. This lease, State Water Bottom Lease No. M-430-10, is located directly south of HIOC's first lease (as shown in [Exhibit 1](#)). Approximately ten years earlier, in May 1981, this lease was allotted to the Great American Oyster Co., and several months after that, the Commission authorized use of its five acres for cultivation of Pacific oysters (*Crassostrea gigas*²) using racks and stakes through CDP No. 2-81-40. Although HIOC took over operation of this lease area in 1992, the CDP was not formally transferred and remains in the name of Great American Oyster Company (a business that no longer exists).

CDP No. 1-94-55

Also in September 1992, HIOC – in joint venture with another company - gained a third lease area, the approximately 128 acre State Water Bottom Lease No. M-430-15. This lease is one of the largest in Tomales Bay and is located the farthest north, surrounding an onshore area owned by Audubon Canyon Ranch and known as Tom's Point. Two years later, in response to concerns raised by Commission staff and other aquaculture operators about HIOC's use of this second lease area for shellfish cultivation without benefit of a coastal development permit, HIOC and its partner applied for a CDP. This permit (CDP No. 1-94-055) was approved by the Commission in September of 1994 and granted to Tom's Point Shellfish. The CDP authorizes the use of a mapped portion of the lease for cultivation of unspecified types of oysters, clams, mussels, and abalone. Oysters were approved to be grown using plastic mesh "bottom bags" (either secured to an anchored rope and placed in rows on the mudflat directly or supported on metal re-bar racks); clams using partially buried plastic mesh bottom bags arranged in rows; and mussels and abalone in deeper water using wooden rafts and/or longlines held in place with anchors and supported by buoys. The CDP includes conditions requiring evidence of authorization from the U.S. Army Corps of Engineers; protection of eelgrass from damage or disturbance; and complete removal of cultivation equipment upon lease termination. In June 1995, HIOC's partnership venture ceased

¹ The species of oyster to be cultivated on these racks was not specified in the permit but the associated Lease of State Water Bottoms from the time mentions three oyster species: Pacific oysters (*Crassostrea gigas*), Eastern oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*).

² As a result of recent genetic analysis, the Pacific oyster has been re-classified under a new genus and is now referred to as *Magallana gigas* (Salvi et al. 2014 and Salvi and Mariottini 2017). However, because this change is so recent and was not done with consensus from the scientific community (for example, see Bayne et al. 2017), the formerly common scientific name for the species, *Crassostrea gigas*, is used in this report.

2-81-40-A1; 2-84-2-A1; 2-84-10-A1 and 1-94-55-A1 (Hog Island Oyster Company, Inc.)

(Tom's Point Shellfish) and HIOC assumed the full rights and responsibilities of the lease. CDP No. 1-94-055 was not formally transferred and remains in the name of Tom's Point Shellfish.

CDP No. 2-84-10

Similarly, HIOC has also been operating its fourth and final lease (the 25 acre State Water Bottom Lease No. M-430-12) under a CDP initially issued to another entity. This is one of the southern-most aquaculture leases in Tomales Bay and is located directly offshore of a portion of Tomales Bay State Park known as Tomasini Point. The lease is between two other leases currently operated by Tomales Bay Oyster Company and Point Reyes Oyster Company, respectively. The permit for this lease, CDP No. 2-84-10, was issued to Intertidal Aquafarms in 1984 and authorizes the installation and use up to five acres for ten 160-square foot floating rafts and 1,000 18-square foot wooden racks. These racks and rafts are to be used for the cultivation of bay mussels (*Mytilus edulis*), Pacific and European flat oysters, and three species of clams – Japanese littleneck/Manila clam, common littleneck, and northern quahog (*Venerupis japonica/Venerupis philippinarum*, *Venerupis staminea* and *Mercenaria mercenaria*, respectively). The CDP also includes conditions requiring all the cultivation racks to be installed in waters with a depth of at least three feet at mean low water and to be configured and marked so they would avoid impeding or limiting boat passage and navigation. HIOC's use of this lease area began in 1998 and continues today. The CDP remains in the name of Intertidal Aquafarms.

Current Operations

In total, HIOC's four current leases include roughly 163 acres of subtidal and intertidal land within Tomales Bay ([Exhibit 1](#)). Within these 163 acres, HIOC's current operations are made up of over a dozen separate plots or cultivation beds that cover approximately 25 total acres. The figures in [Exhibit 2](#) show the location of these cultivation beds and note the types of structures and equipment that have been installed within them. [Appendix B](#) provides a more detailed description of each of the methods HIOC currently uses. The remaining approximately 138 acres of HIOC's leases are not currently used for shellfish aquaculture. Some of these areas are not in use because they support eelgrass beds that are required to be protected from damage and disturbance. Other areas have yet to be brought into use or may have physical features such as deep water channels or tidal sloughs that limit their use for the type of shellfish farming HIOC has historically practiced.

While each of the CDPs for HIOC's leases describe specific areas and cultivation methods that are approved for use, over time, HIOC's operations changed to include other areas and methods not described or evaluated in its permits. In some cases, these new methods were pursued on a short-term trial basis and discontinued, in other cases, new methods were installed across several acres and have been in use for many years. Despite these ongoing changes to its operations, HIOC did not seek to amend or modify any of the CDPs for its leases to ensure that they continued to reflect the species, areas, equipment and methods it was using. As a result, HIOC's current operations deviate in many respects from those described and authorized in its permits. Of HIOC's approximately 25 acre existing operation, at least 17 acres of it are focused on shellfish species and/or the use of cultivation methods, structures, and equipment that were not considered or approved in its CDPs.

Many of these cultivation methods have also not been approved for use within HIOC's leases by the Fish and Game Commission. For example, since 2010, nearly seven acres of lease M-430-15 have been used for a method referred to by HIOC as "clam rolls." This method is further described in [Appendix B](#) but generally involves the tilling of large mudflat areas so they can then be directly planted with tens of thousands of young, non-native Manila clams.

Approximately 400 square foot sheets of fine plastic mesh are then affixed to the surface of the mudflats over the seeded clams to limit predation. This method was not considered, discussed or authorized in the CDP for this lease area, and the lease itself includes a special condition that states: "Shellfish cultivation methods on this lease shall be confined to racks and bags and bottom trays. No other mode of operation or culture method is authorized."

In its recent approval of CDP No. 9-18-0278 for Grassy Bar Oyster Company in Morro Bay, the Commission prohibited use of this cultivation method due to concerns about potential adverse impacts to marine biological resources and water quality. As part of its project, HIOC is proposing to continue its use of this method for up to two years – until its current crop of clams is ready for harvest. At that point, as detailed further in [Appendix B](#), the clams are proposed to be harvested using a gasoline powered hydraulic excavation and filtration system called a "water rake," and the plastic mesh currently in place within the approximately 6.9 acre area of lease M-430-15 would be removed. This method of cultivation is more intensive and has a greater potential to result in adverse impacts to marine biological resources and water quality compared to those approved by the Commission in the CDP for lease M-430-15.

Some of the other methods HIOC currently uses, however, appear to be less intensive and make use of less permanent and smaller, less substantial structures than those approved by the Commission several decades ago. For example, CDP Nos. 2-81-40 and 2-84-10 authorize the installation and use of large timber framed support racks that would extend six feet above the mudflats and require significant effort and seafloor disturbance to construct, install, and eventually remove. The removal of dozens of acres of such structures from Drakes Estero has cost the National Park Service several million dollars and required the use of mechanized equipment. Instead of using such structures, HIOC uses smaller, lighter, and shorter rack structures comprised of PVC and rebar that can be much more easily installed, relocated, and removed using only hand labor.

Along the same lines, another of the cultivation methods that HIOC uses involves the placement of plastic mesh bottom bags directly on the mudflats. Despite its inclusion in only one of HIOC's CDPs, this method is currently in use or has been used on all four of HIOC's leases. It is also the most commonly used method of shellfish cultivation in California and has been approved by the Commission in many CDPs over the years (including the CDP issued in 1994 for HIOC's lease M-430-15). However, at the time HIOC's other three CDPs were issued - the early 1980s - use of this method was less common and successful and it was not proposed by the applicants for those CDPs or considered by the Commission at that time. Several of the other cultivation methods that are in use on HIOC's leases but not included in its CDPs – such as floating longlines and elevated basket lines – are also commonly used methods that the Commission has authorized in Tomales Bay and elsewhere over the years.

Despite some of these methods being common in California and more advanced than several of those approved for use in HIOC's original CDPs, it is nevertheless important for their use to be evaluated on a site- and project-specific basis before such use begins. For areas like Tomales Bay that support a wealth of ecological resources, this helps ensure that appropriate protection measures and practices are in place and a means of regulatory oversight is in place to provide a greater assurance that such measures and practices are followed.

Table 1 below provides a comparison between the shellfish cultivation methods approved in HIOC's CDPs and those currently in use on each of its leases. More specific descriptions of each of the methods currently in use are provided in [Appendix B](#). [Appendix C](#) provides descriptions of each of the permitted methods, excerpted from the Commission's original findings for each CDP and their associated exhibits. Table 2 below provides the acreage of each different cultivation method in each lease. In these two tables, the methods and acres not approved in each CDP are shown in bold.

Table 1: Comparison of Permitted and Existing Cultivation Methods

Lease No.	CDP No.	CDP Approved Methods	Methods Currently in Use
M-430-10	2-81-40	racks; stakes	racks; bottom bags; rafts
M-430-11	2-84-2	racks	racks; bottom bags; Stanway units
M-430-12	2-84-10	wooden racks; rafts	floating longlines; rebar/PVC racks; basket lines, bottom bags
M-430-15	1-94-55	bottom bags; racks; rafts; mussel lines	clam rolls; bottom bags; racks; tipping lines; basket lines; rafts

Table 2: Acreage of Existing Operations

Culture Type	Acres per Lease/CDP				Total
	M-430-10	M-430-11	M-430-12	M-430-15	
	2-81-40	2-84-2	2-84-10	1-94-55	
Overlapped racks	0.6	0.48	1.34	0.97	3.39
Regular racks	1.78	1.35	0	1.66	4.79
Stanway units	0	0.36	0	0	0.36
Bottom bags	1.83	2	0	1.77	5.6
Clam bags	0	0	0	0.03	0.03
Clam rolls	0	0	0	6.89	6.89
Floating culture	~0.5	0	1.07	0	1.57
Basket/tipping lines	0	0	0	3.1	3.1
TOTAL	4.71	4.19	2.41	14.42	25.23

As shown in [Appendix C](#), several of the CDPs for HIOC's leases include detailed descriptions, schematic diagrams, and narrative descriptions of the cultivation methods and equipment that are approved for use on that lease. These materials clarify the meaning of the more general terms such as "racks," "stakes," and "mussel lines" used in the table above and provide a more complete understanding of the type of activities that were considered and authorized by the Commission in these permits.

It should be noted, however, that HIOC refutes the allegation that its use of cultivation methods, shellfish species and equipment not described in the CDPs for its leases constitutes unpermitted development. In its permit amendment application materials, HIOC summarizes its position by stating that “While the above species and methods [those included in the table above as “CDP approved”] were described in the project descriptions submitted to the Commission, the CDPs associated with each lease did not limit HIOC’s cultivation to these species and/or methods and did not include a requirement that HIOC amend its CDP prior to using different cultivation techniques.” Commission staff disagrees with this position and has informed HIOC of its belief that only those structures and activities described in the CDPs make up the Commission-approved development for each lease.

Requests for After-the-Fact Approval

Despite its disagreement with Commission staff regarding the scope of the CDPs for its leases, HIOC has agreed with the approach Commission staff suggested for addressing it. That approach involves HIOC amending the four permits for its leases so that they accurately reflect the type and amount of shellfish cultivation activities that HIOC currently practices within them. Because these activities occurred in the past or are ongoing, the permit amendments would need to be considered after-the-fact. HIOC has therefore submitted an application to amend its four permits and request after-the-fact authorization for its installation and use of those cultivation structures and methods that are not currently described or considered in its CDPs. Specifically, HIOC is requesting after-the-fact approval for its cultivation of the following species and installation and use of the following types and approximate quantities of cultivation structures on its leases:

Table 3: Species and Activities Considered for After-the-fact Authorization

Lease M-430-10/CDP No. 2-81-40
<i>Species:</i> Atlantic/Eastern oysters, European oysters, Kumamoto oysters; <i>Methods:</i> approximately 1.83 acres of bottom bags (~4,180 bags) and up to six floating barges/rafts
Lease M-430-11/CDP No. 2-84-2
<i>Methods:</i> approximately two acres of bottom bags (~4,570 bags) and 0.36 acres of Stanways (up to 51 structures with ten units each)
Lease M-430-12/CDP No. 2-84-10
<i>Species:</i> Atlantic/Eastern oysters, Kumamoto oysters; <i>Methods:</i> approximately 1.34 acres of rebar and PVC racks (1200 racks); 1.07 acres of floating longlines (10 lines); 0.76 acres of bottom bags (~2,364 bags); and 0.6 acres of basket lines (four lines)*
Lease M-430-15/CDP No. 1-94-55
<i>Methods:</i> approximately 6.9 acres of clam rolls (292 400-square foot rolls); 3.1 acres of basket lines and tipping lines (83 lines); and up to three floating work platforms

*Both the bottom bags and basket lines were installed in recent years but have since been removed.

Activities involved with the initial installation and subsequent use of these methods for shellfish cultivation are further described in [Appendix B](#). Most of these activities have been carried out on an ongoing basis for many years, some likely since the early days of HIOC’s operations in the 1980s and 90s. Others - including the 2010 installation and use of clam rolls in lease M-430-15 and the 2015-2018 installation of floating longlines, basket lines, and bottom bags within lease M-430-12 – have occurred more recently.

HIOC also requests after-the-fact approval for its installation and continuing use of roughly 1,200 individual rebar and PVC cultivation racks across 1.34 acres of shallow intertidal habitat on lease M-430-12. The CDP for this lease (CDP No. 2-84-10) authorized a different type, construction and configuration of racks in this lease and its Special Condition 1 required those racks to be installed below a minimum water depth and to include certain navigational markings and lanes. The racks that HIOC installed and continues to use on lease M-430-12 do not appear to meet the requirements of Special Condition 1 and deviate from the description included in the permit. As part of its request, HIOC would eliminate Special Condition 1 of CDP No. 2-84-10 and continue its use of the racks currently in place on lease M-430-12 for another several years.

Finally, HIOC's request for after-the-fact approval also includes several additional structures and activities it has installed or carried out on its leases. These include the temporary mooring and use of several floating work platforms and the use of an all-terrain vehicle (ATV) on the mudflats of leases M-430-12 and M-430-15 to support operations in those areas. HIOC describes its use of the work platforms as follows:

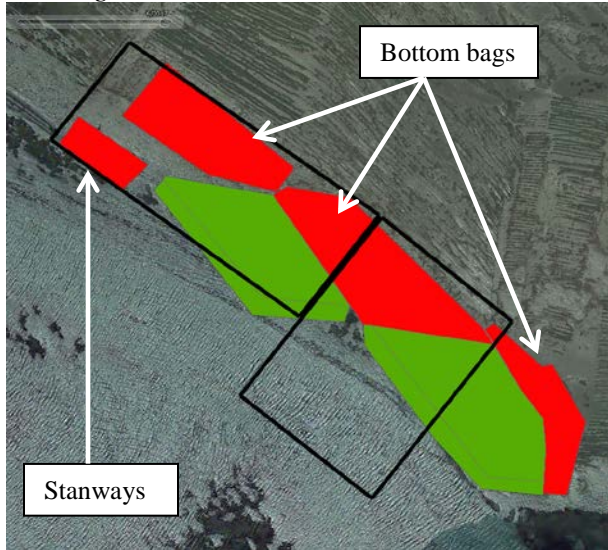
HIOC is currently using floating work platforms that typically measure 8 feet by 12 feet to 15 feet by 30 feet. The work platforms are used to stage materials (e.g., baskets, lines, bags) and tools for maintenance work on the leases. On occasion, they are also used to stage culture gear while awaiting the proper tidal height to be installed at a growing area. The floating work platforms are typically constructed with roto molded floats, wood or aluminum, and plywood decking. They are moved around on the leases (as needed), and do not have a permanent mooring. Generally, the floating work platforms do not remain in the same location longer than one month. Anchoring does not occur in eelgrass beds. Activity associated with the work platforms is limited to 10 or less occasions per month. The work platforms are operated at appropriate depths in a manner that avoids grounding or scouring.

The following series of figures shows graphically the portions of HIOC's existing operations that are authorized in its current CDPs (in green) and those cultivation areas that were installed and operated without benefit of CDP amendments and for which it is seeking after-the-fact approval (in red). The black outlines show a rough approximation of the lease sizes and dimensions that are described in HIOC's existing CDPs. Also shown alongside each figure are graphical representations of the expansion activities proposed for each lease. For reference, the existing cultivation areas are outlined in white. The various colors used for the cultivation areas represent different types of cultivation structures (key provided below).

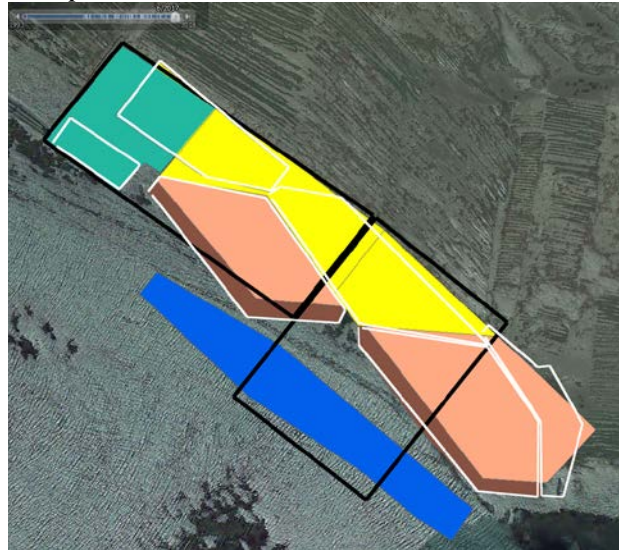
Existing Culture	On-Bottom Culture	Off-Bottom Culture	Floating/Subtidal Culture
 Permitted	 Bottom Bags	 Racks	 Floating Culture
 Unpermitted	 Clam Bags	 Racks - Overlapped	
		 Seapa/Tipping Bag	

Leases M-430-10 and M-430-11 (CDP Nos. 2-81-40 and 2-84-2)

Existing

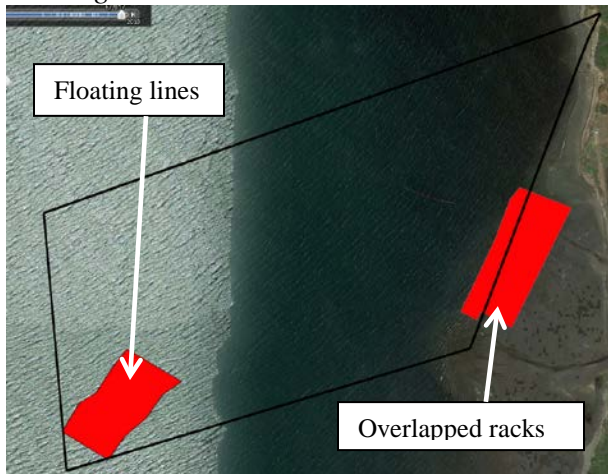


Proposed

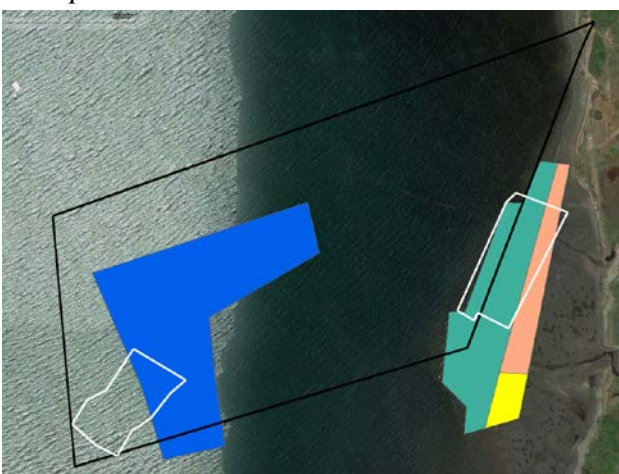


Lease M-430-12 (CDP No. 2-84-10)

Existing

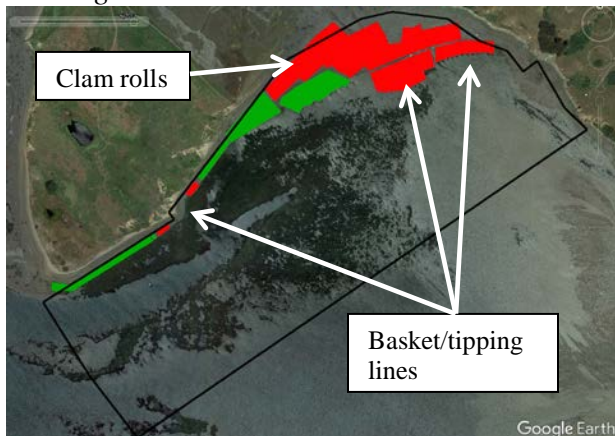


Proposed



Lease M-430-15 (CDP No. 1-94-55)

Existing



Proposed



Proposed New Development

HIOC's application for permit amendments additionally includes a proposal to expand its existing operations to include the use of additional acreage, cultivation methods, and shellfish species on each of its leases. Table 4 below lists the methods HIOC proposes to use on each lease, and [Exhibit 3](#) shows the location and size of the area on each lease in which the proposed methods would be used. The acreages highlighted in bold in the table represent cultivation methods not included or authorized in HIOC's existing CDP for that particular lease. HIOC proposes to add these methods, described in greater detail in [Appendix B](#), to those currently included in its CDPs and to expand (or reduce from current levels) its use of them, as reflected in Table 4.

The use, installation, maintenance, and/or removal of these cultivation methods and associated equipment make up the scope of the new proposed development under review by the Commission in the permit amendments HIOC is requesting. As indicated on Table 4 below, a portion of HIOC's proposed expansion appears to already be authorized in its existing CDPs. Specifically, as long as it is carried out in a manner that does not disturb or damage eelgrass, HIOC's increased use of racks on lease M-430-10 and increased use of floating culture, clam bags, and racks on lease M-430-15 are allowed by the CDPs for those leases. These areas combined with other approved methods that would continue to be used at existing levels make up approximately 15 of the 54 acre expanded operation.

However, the majority of HIOC's proposed expansion – a total of nearly 5.5 acres of floating culture in leases M-430-10 and M-430-12 and the 29.21 acres proposed to be used for basket and/or tipping bag longlines across leases M-430-11, M-430-12 and M-430-15 – would be new development for which HIOC is seeking authorization from the Commission. Additionally, HIOC's continued or expanded use of bottom bags in leases M-430-10 (1.14 acres), M-430-11 (1.69 acres) and M-430-12 (0.29 acres), as well as its installation and use of PVC/rebar regular racks in 0.82 acres of the shallow intertidal portion of lease M-430-12, are also not authorized in HIOC's existing CDPs and would be considered new development as well.

Although this table indicates that HIOC's use of 1.34 acres of overlapped racks on lease M-430-12, 0.36 acres of Stanways on lease M-430-11, and 6.89 acres of clam rolls on lease M-430-15 would cease, these methods are proposed to be phased out over the next two or more years and HIOC would continue using them at their present levels until then. This limited term continued use would also be considered new development.

The location of HIOC's proposed new development activities for each lease are shown in the figures in [Exhibit 3](#). Table 5 below shows the total proposed quantity of cultivation gear of each type that would be installed throughout its four leases to achieve the 54.37 acre expanded operation as well as the proposed density of this gear, based on the configurations described in [Appendix B](#).

The term "floating culture" in the tables above refers to the use of floating longlines and/or tray barges, as described in [Appendix B](#). These lines and barges would be used to hold up cultivation baskets and/or stacks of plastic mesh trays used to grow oysters as well as hanging ropes used to grow mussels.

Table 4: Proposed and Existing Cultivation Methods and Acreages

Culture Type	Acres per Lease/CDP*				Total
	M-430-10	M-430-11	M-430-12	M-430-15	Proposed (existing)
	2-81-40	2-84-2	2-84-10	1-94-55	
Overlapped racks	0.61 (0.6)	0.48 (0.48)	0 (1.34)	0 (0.97)	1.09 (3.39)
Regular racks	2.5 (1.78)	1.35 (1.35)	0.82 (0)	2.62 (1.66)	7.29 (4.79)
Stanway units	0 (0)	0 (0.36)	0 (0)	0 (0)	0 (0.36)
Bottom bags	1.14 (1.83)	1.69 (2)	0.29 (0)	0 (1.77)	3.12 (5.6)
Clam bags	0 (0)	0 (0)	0 (0)	4.61 (0.03)	4.61 (0.03)
Clam rolls	0 (0)	0 (0)	0 (0)	0 (6.89)	0 (6.89)
Floating culture	0.75 (0.5)	0 (0)	4.72 (1.07)	3.58 (0)	9.05 (1.57)
Basket/tipping lines	0 (0)	1.65 (0)	2.22 (0)	25.34 (3.1)	29.21 (3.1)
TOTAL	5 (4.71)	5.17** (4.19)	8.05 (2.41)	36.15 (14.42)	54.37 (25.73)

*Numbers in parentheses show the amount of acreage used for each method in HIOC's existing operation; numbers in bold denote cultivation methods not already approved in the existing CDP for that lease.

This proposed acreage exceeds the five acre size of lease M-430-11. However, once the results of lease surveys are available and HIOC has coordinated with CDFW regarding the approved legal dimensions of the leases, HIOC would adjust the size and location of proposed cultivation areas to remain within its delineated lease and at or below the maximum lease size. **Special Condition 3 would memorialize this process and prohibit HIOC from installing or using cultivation equipment outside the boundaries of its leases.

Table 5: Proposed Density and Quantity of Cultivation Equipment per Acre of Cultivation Bed

Culture Type	# per acre of cultivation bed	% of bed with gear	% of bed without gear	Total Quantity of Gear (lease 430-10/-11/-12/-15)
Overlapped racks	1190 racks	45%	55%	1,297 racks (725/571/0/0)
Regular racks	622 racks	29%	71%	4,534 racks (1555/839/510/1629)
Bottom bags	3111 bags	42%	58%	9,706 bags (3546/5257/902/0)
Clam bags	3872 bags	33%	67%	17,850 bags (0/0/0/17,850)
Floating culture	10 lines	17%	83%	90 lines (7/0/48/35)
Basket/tipping lines	36 lines	32%	68%	1,052 lines (0/59/80/912)

As shown in Table 4 above and [Exhibit 3](#), in addition to proposing to make use of new or different cultivation methods and species than those currently included in the CDPs for its leases, HIOC is also proposing to expand its operations. This expansion, from the roughly 25 acres currently in use to a proposed 54 acres, would be spread throughout HIOC's four leases but would be concentrated primarily within leases M-430-12 and M-430-15. The area of use within those leases would grow from an existing 2.41 acres in M-430-12 and 14.42 acres in M-430-15 to approximately 8.05 acres and 36.15 acres, respectively. While operations on leases M-430-10 and M-430-11 are also proposed to increase, the amount of increase on these smaller five acre

2-81-40-A1; 2-84-2-A1; 2-84-10-A1 and 1-94-55-A1 (Hog Island Oyster Company, Inc.)

leases would be more limited – from 4.21 acres to 5.0 acres on M-430-10 and from 4.19 acres to 5.0 acres on M-430-11.

Several aspects of this proposed expansion should be noted: (1) the expansion acreage described above and in Table 3 is proposed contingent on an absence of eelgrass within the new proposed cultivation areas; (2) the area estimates for HIOC’s cultivation beds do not assume that cultivation gear would be placed on every square inch of the cultivation beds shown in [Exhibit 3](#) - they include in the estimate access lanes and open spaces between individual cultivation structures and groups of structures based on the configurations and densities described in [Appendix B](#) and shown in Table 4 above; and (3) although HIOC’s current operations include only 25 of the 168 total acres in its leases, the existing CDPs for those leases authorize HIOC to use more acreage – as long as that additional acreage is used for the cultivation methods authorized for that lease in its associated CDP and is used without disturbance or damage to eelgrass (as discussed in each of those CDPs).

On the final point above – the acreage approved in HIOC’s existing CDPs – HIOC’s application includes information indicating its belief that the CDPs for its leases currently authorize it to carry out shellfish cultivation on roughly 65 acres across its four leases (5 acres each in leases M-430-10 and -11, 25 acres in lease M-430-12, and 30 acres in lease M-430-15).

However, Commission staff’s review of the existing CDPs indicates that HIOC’s estimate of 65 “permitted acres” is likely high. For example, for the 25 acre lease M-430-12, HIOC’s estimate assumes that the Commission authorized the installation and use of cultivation gear throughout the entirety of the leases (a total of 25 acres). The Special Conditions, Commission findings, project description, and exhibits included with this CDP, however, describe limitations on both total acreage and areas available for use. For example, the Commission’s findings in support of its approval for the CDP on lease M-430-12 discuss how no more than five of the lease’s 25 acres would be in use for shellfish cultivation, stating that “Only 20% (5 acres) of the site proposed would be developed pursuant to Department of Fish and Game restrictions.” Further, Special Condition 1 of this lease’s CDP establishes restrictions on the use of the shallower portions of the lease.

Additionally, HIOC’s operations on all four of its leases are required (through its leases and/or permits) to be carried out in a manner that protects eelgrass from damage and disturbance. The presence of eelgrass within the lease areas therefore limits the acreage in them that is available for use. Because the size and location of eelgrass beds fluctuate over time and HIOC’s CDPs do not limit their protection of eelgrass beds to only those found in certain areas, the area within each lease that can be used without disturbing or damaging eelgrass may change from year to year. This issue is further discussed in the section of this report focused on Marine Resources.

Shellfish Species

Using these methods, HIOC proposes to plant and grow the following seven shellfish species on each of its four leases: Pacific oyster (*Crassostrea gigas*), Atlantic/Eastern oyster (*C. virginica*), Kumamoto oyster (*C. sikamea*), European flat oyster (*Ostrea edulis*), Olympia oyster (*Ostrea lurida*), Manila clam (*Venerupis philippinarum*), and Mediterranean mussels (*Mytilus galloprovincialis*). This list of species would replace the list of species currently included in

each of the CDPs for HIOC's leases. Rather than continuing the current situation where each of HIOC's CDPs authorizes a different number and suite of shellfish species, this proposed change would standardize the CDPs by amending each of them to include the same seven species. In order to accomplish this, the approved species in each CDP would be revised or clarified to include only the seven listed above, as described in Table 6, below.

Table 6: CDP Approved and Proposed Shellfish Species

CDP/Lease	2-81-40/430-10	2-84-2/430-11	2-84-10/430-12	1-94-55/430-15
CDP Approved Spp.	Pacific oysters	"oysters"	Pacific and European flat oysters, Manila clam, common littleneck clam, northern quahog, bay mussels	"oysters, clams, mussels, abalone"
Proposed Spp.	Pacific oyster, Eastern oyster, Kumamoto oyster, European oyster, Olympia oyster, Manila clam, Mediterranean mussels.	Pacific oyster, Eastern oyster, Kumamoto oyster, European oyster, Olympia oyster, Manila clam, Mediterranean mussels.	Pacific oyster, Eastern oyster, Kumamoto oyster, European oyster, Olympia oyster, Manila clam, Mediterranean mussels.	Pacific oyster, Eastern oyster, Kumamoto oyster, European oyster, Olympia oyster, Manila clam, Mediterranean mussels.

State Water Bottom Leases

Several of the species (including the Kumamoto oysters and California mussels discussed above) and cultivation methods in the existing and proposed operations on HIOC's leases have also not yet been approved for use within those leases by the California Fish and Game Commission – the agency responsible for the issuance and management of aquaculture leases on state lands.

Similar to the situation with its CDPs, although each of HIOC's leases authorizes only a specific list of cultivation methods and species, its current operations include additional species and methods not included in those lists. For reference, the approved methods and species for each lease are provided in the table below:

Table 7: Lease Approved Cultivation Methods and Species

Lease No.	M-430-10	M-430-11	M-430-12	M-430-15
Species	Pacific, European, Eastern and Olympia oysters; Manila clams; red abalone	Pacific, European, Eastern and Olympia oysters; Manila clams; Mediterranean mussel; red abalone	Pacific, European and Eastern oysters; quahog clams; Manila clams; native littleneck clams; bay mussels	Pacific oysters; Manila clams; bay mussels
Methods	"racks and stakes"	"stakes, modified stakes, racks, and longline"	"racks and rafts"	"racks and bags and bottom trays"

Because some of the species and cultivation methods in HIOC's existing and proposed operations have not been authorized on its leases by the California Fish and Game Commission (FGC), **Special Condition 4** would require HIOC to submit evidence to the Commission's Executive Director that its leases have been amended by the FGC to allow these species and/or methods to be used. This evidence would be required to be submitted prior to installation or expanded use of any cultivation method and/or species not already included in a lease. Without such evidence, HIOC's operations on a particular lease would be limited to the species and methods that the Fish and Game Commission already specifically allows on that lease. **Special Condition 4** would also require that any cultivation methods or species currently being used on a lease that have not been approved for that lease by the FGC be removed until such approval is granted. If HIOC provides the Executive Director with evidence from FGC that it will allow certain methods or species to continue to be used pending lease amendment review, those methods or species may remain in use until that lease amendment review is concluded.

Timing of Expansion

HIOC anticipates installing cultivation structures and equipment within its proposed 28.6 acres of expansion areas incrementally over approximately the next seven years.

The first areas of new cultivation gear to be installed would be in lease M-430-12, where HIOC anticipates spending the next one to two years removing 1.34 acres of existing overlapping racks from the intertidal zone and replacing them with 0.82 acres of its "regular racks" (described in [Appendix B](#)), 0.29 acres of bottom bags, and 2.22 acres of elevated basket and/or tipping bag longlines. As shown in [Exhibit 3](#), the elevated longlines would be installed at the outer edge of the intertidal mudflat with the racks and bottom bags placed on the landward side. As a result of this proposed expansion and conversion, HIOC's intertidal cultivation activities on lease M-430-12 would increase by roughly two acres. Concurrently, HIOC would also begin to install roughly 4.72 acres of floating longlines in the subtidal portion of lease M-430-12 as well. These buoyed lines would be used to support submerged cultivation baskets or groups of plastic mesh trays. The ten floating longlines that are currently spread across roughly one acre of this lease's subtidal area would be relocated as part of this effort and brought into the new area of lease M-430-12 proposed to be used for floating culture (as shown in [Exhibits 2 and 3](#)).

Once the expansion of operations on lease M-430-12 is completed, HIOC expects to begin working on lease M-430-11. Proposed expansion activities on lease M-430-11 would include removal of the 49 Stanway units currently in place and installation of 2.22 acres of elevated basket and/or tipping bag longlines in that location and the area immediately surrounding it. HIOC anticipates this removal and installation activity taking up to one year to complete. It would be carried out roughly concurrent to the installation of tray barges within an approximately 0.75 acre subtidal area of lease M-430-10 and the conversion of an approximately 0.69 acre intertidal area of that lease from bottom bags to racks.

In the final phase of its expansion, HIOC would spend an estimated three to five years expanding and modifying its operations on lease M-430-15. On this lease, HIOC would begin by removing its clam roll equipment from the entire 6.89 acre intertidal area dedicated to this use and converting all but the most shoreward 0.5 acres to use for clam bags, elevated basket and/or tipping bag longlines, and racks. HIOC also proposes to remove existing cultivation equipment

from the 1.77 acres used for bottom bags and the roughly one acre used for overlapping racks on lease M-430-15 and installing elevated basket and/or tipping bag longlines within these areas. In addition to these conversions, HIOC's use of elevated longlines would also expand through their installation in new areas – particularly in the north-eastern part of the lease as shown in [Exhibit 3](#). Ultimately, HIOC anticipates installing an additional 22.24 acres of elevated basket and/or tipping bag longlines within lease M-430-15 by the year 2025. During this time, its 1.66 acre area currently in use for racks would also be expanded to cover up to 2.62 acres and it would additionally install up to 3.58 acres of floating culture (tray barges and floating longlines).

Installation/Removal Activities

To install the new proposed floating cultivation equipment – tray barges and floating longlines - in subtidal areas, HIOC proposes to make on-site observations and check the latest available eelgrass survey data to help ensure that equipment would not be placed within eelgrass habitat. If eelgrass is not found, HIOC would start with the installation of mooring blocks or Danforth-type anchors. Each pair of floating longlines or group of tray barges would involve the placement of two anchoring devices – one at each end. These anchors would typically be 250 pound Danforth anchors for longlines and 500 pound Danforth anchors for tray barges. The anchors are affixed to the cultivation equipment with a combination of chain and nylon rope. To install floating cultivation equipment within the total of 9 acres across its four leases, HIOC anticipates placing a total of 90 anchors. Once the anchors are in place, HIOC would use its vessels to carry or tow the cultivation equipment into place and arrange it for use.

Installation of elevated basket or tipping bag longlines would involve the placement of anchoring posts at either end of each line as well as support posts along the length of each line. These posts are typically two inch diameter PVC sections that are driven into the ground using hand-held non-mechanized sledge hammers and post-pounders and/or gas powered or pneumatic post-pounders. Lines are typically 100 to 300 feet long, one to four feet high with posts installed every eight feet. Once the lines are installed, groups of tipping bags (plastic mesh bottom bags with floats attached) or cultivation baskets are transported to the site on one of HIOC's vessels and/or ATVs and affixed to the lines by hand.

HIOC would use similar methods to install overlapped racks and regular racks – first using hand tools to install the rack's PVC pipe legs in the ground and then affixing the metal frame rack above the legs. The rack legs typically extend one to two feet above the ground and support two foot wide by eight foot long rebar racks with up to four plastic mesh bottom bags affixed to it. Materials are transported to installation sites using vessels at higher tides or ATVs at lower tides. Because of the depth, substrate type and location of leases M-430-12 and M-430-15, HIOC only proposes to use its ATV on those sites.

Installation of bottom bags involves the placement of two inch diameter anchor posts at either end of a 100 to 200 foot long nylon rope. This rope rests directly on the mudflat and each plastic mesh bottom bag is affixed to it using stainless steel snap hooks. Clam bags are installed in a similar manner, but because the bags are stocked with gravel to facilitate growth and survival of the planted clams, these bags are typically placed in rows or partially buried in the mudflats without anchoring lines.

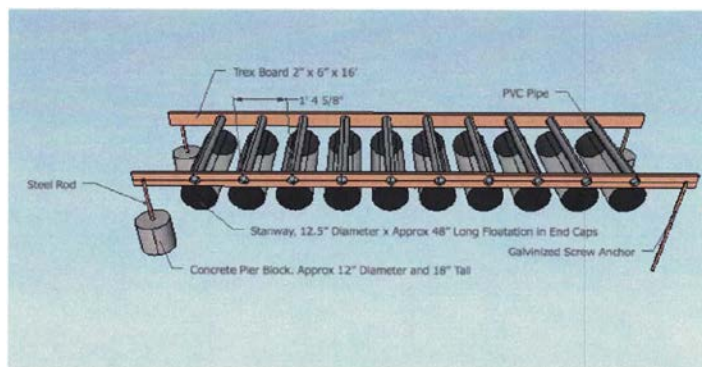
In addition to proposing to install new cultivation equipment, HIOC also proposes to remove existing equipment from several areas. Equipment would be removed from these areas to allow them to be converted from one growing method to another or because their use is being discontinued. Removal activities would be focused on clam rolls, overlapped racks and bottom bags in lease M-430-15; overlapped racks and floating longlines in lease M-430-12; and Stanway units in lease M-430-11.

To remove the clam rolls, HIOC would roll up each 400 square foot mesh sheet during harvest, tie it closed with rope and then load it onto a vessel for transport to HIOC's onshore processing facility in the town of Marshall. The clams buried below each clam roll would then be harvested using the gas-powered hydraulic "clam rake" described in [Appendix B](#).

In its application, HIOC describes its proposed removal of its 49 Stanway units as follows,

Removal of the Stanway units will begin with all product being harvested and/or transferred. A crew will then unbolt and disassemble Stanway units at low tide. 2x6 Trex-timbers will be bundled and picked up at high tide by boat. Any Helix anchors will be unscrewed at low tide and removed. Buoys will be attached to any remaining concrete. The units will then be pulled out by a boat mounted crane. The schedule for removal is dependent on Hog Island's ability to obtain Commission approval to reinstall intertidal longlines that can be used to contain transferred product. Once the Commission approves the proposed longlines, removal of the existing Stanway units would take approximately 12 to 18 months.

HIOC's application also includes the following diagram and representative photograph of the Stanway units.



Removal of racks and bottom bags would be simpler and would be accomplished through the extraction and collection of PVC anchoring posts, nylon ropes, and support legs once the mesh bags are removed as part of harvest activities. HIOC expects to be able to extract these posts using hand labor at low tide or through the use of its boat mounted crane at higher tide when vessel access to the work sites would be available. Removed equipment would be transferred to one of HIOC's vessels for transport to its onshore processing facility.

Removal of the floating longlines on the subtidal portion of lease M-430-12 would be carried out through the use of a vessel capable of lifting each of the ten 200 pound anchors used to maintain these lines in place. Once removed, these longlines are proposed to be relocated to an adjacent subtidal area of lease M-430-12, outside of the area of eelgrass habitat that was mapped in 2017.

Lease Sizes and Configurations

During its review of HIOC's application and the proposed project, Commission staff identified a variety of outstanding questions and discrepancies regarding the size and configuration of HIOC's state water bottom leases. These issues include inconsistencies between the sizes, configurations and legal descriptions of the original lease allotments included with HIOC's initial CDPs (issued in the early 1980s and 1990s) and those included in maps and materials produced by the California Department of Fish and Wildlife (CDFW), including those included with HIOC's 2012 renewal of leases M-430-10 and M-430-11 and M-430-12. In some cases, the more recently described lease lines and configurations (which also appear to be reflected in [Exhibits 2 and 3](#)) deviate significantly from the originals and alter the type, location, and amount of habitat included within the leases. Discussions of these issues between Commission staff, HIOC and CDFW indicate that these changes may not have been intentional or made as part of formal lease amendments. Additionally, because these changes appeared fairly recently and were not made at the request of HIOC, it appears that most of HIOC's existing operations continue to be located and configured in alignment with the original and historic lease sizes and shapes rather than the new ones. In some cases, this may result in the siting of some of HIOC's cultivation equipment outside of the lease areas most recently described in CDFW materials. However, for its proposed expansion, HIOC appears to be using the new lease configurations – which would result in its placement and use of cultivation equipment outside of the areas described in the original lease allotments and CDP materials. For example, the configuration and location of lease M-430-11 described in the original lease allotment materials shows that it includes only intertidal habitats. The more recent size and configuration of the lease in some CDFW materials, however, indicates that it now includes subtidal habitats as well. Because HIOC's proposed expansion includes placement and use of floating cultivation equipment (floating longlines and/or rafts) in this subtidal area, it is unclear whether the location of this new proposed cultivation area is within or outside HIOC's lease.

To address this confusion, **Special Condition 3** would require HIOC to coordinate with CDFW staff to have an independent survey of the boundaries of its four leases carried out by a professional surveyor within 120 days of permit issuance and prior to installation or use of shellfish cultivation equipment within any Commission approved expansion areas (those areas not currently in use for shellfish cultivation that HIOC proposes to use). The results of the lease surveys and discussions with CDFW staff would be used to determine the GPS coordinates for the corners of HIOC's leases and to mark them in the field using PVC stakes or buoys. If the results indicate that any of HIOC's existing cultivation areas are located outside of its leases, HIOC would relocate or remove these cultivation areas within 90 days. **Special Condition 3** would also prohibit the installation or use of cultivation equipment on any portion of expansion areas located outside of HIOC's leases.

Planting, Harvest and Maintenance Activities

HIOC's planting, harvest and maintenance activities are further described in [Appendix B](#) and would primarily be carried out on its intertidal lease areas during low tides when the cultivation equipment is exposed and its personnel can walk among it. To move personnel, shellfish and equipment between its cultivation areas and onshore processing facility, HIOC would make use of a variety of different outboard motor powered flat bottomed vessels. Maintenance activities on HIOC's lease areas include periodically flipping, shaking, inspecting and collecting cultivation equipment (bottom bags, cultivation baskets, racks) for sorting. This activity is carried out primarily using hand labor at low tides for intertidal equipment, and with the use of support vessels at higher tides for subtidal equipment such as floating longlines and tray barges.

As HIOC's operations increase along with its proposed expansion, the frequency and duration of these planting, harvest and maintenance activities is expected to increase, resulting in additional vessel traffic and personnel on HIOC's leases and Tomales Bay.

Vessel Use and Transit Route

HIOC's current operations make use of three vessels – two 24 foot skiffs and a custom 40 foot vessel equipped with a hydraulic crane for assisting in planting and harvest operations. [Exhibit 4](#) shows the access routes and landing sites most typically used by these vessels as they move between the Miller Point Boat Launch, Marconi Cove and the four lease areas.

With its 25 acres of existing operations, HIOC estimates that these vessels make up to four daily trips between all of its leases and between 10 and 20 trips per week. As HIOC's operations expand across the 54 proposed acres, it estimates that the level of activity would increase by approximately 50%, resulting in two to six vessel trips per day and 15 to 30 per week on Tomales Bay. Additionally, during the roughly seven years that HIOC anticipates would be needed to complete its proposed installation of new cultivation equipment and structures, it is likely that activity levels within the lease being focused on at that time may increase further.

B. OTHER AGENCY APPROVALS

U.S. Army Corps of Engineers

Shortly after the four original CDPs were issued for shellfish cultivation operations on Hog Island Oyster Company's (HIOC) lease areas, the U.S. Army Corps of Engineers (ACOE) also issued permits for these operations under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. However, similar to the deviation that exists between HIOC's current operations and those authorized in its CDPs, a similar deviation also exists between HIOC's current operations and those authorized by the ACOE. HIOC is currently working with the ACOE to address this situation and has provided ACOE staff with a description of its operations and background information. In addition, HIOC's proposed expansion also triggers regulatory review by the ACOE. HIOC has indicated to Commission staff that it is in the process of preparing and submitting permit applications to the ACOE. Commission staff has provided opportunities for input and regular updates to ACOE staff throughout its review of this CDP application.

National Marine Fisheries Service

As part of the ACOE permit review process, it would consult with the National Marine Fisheries Service (NMFS) to evaluate potential issues associated with Essential Fish Habitat and Protected Species. Commission staff also reached out to NMFS during the review of this application for permit amendments, specifically, regarding the project's potential to adversely affect eelgrass habitat and the application of appropriate protection measures.

Greater Farallones National Marine Sanctuary

Tomales Bay is within the Greater Farallones National Marine Sanctuary and under management by the Office of National Marine Sanctuaries (ONMS). Commission staff coordinated its review of the proposed project with ONMS staff and solicited early input from them, consistent with the state and federal agency coordination process established for shellfish aquaculture projects in Tomales Bay through a Memorandum of Agreement signed in 2016. In addition, ONMS staff provided information to Commission staff about the presence and location of sensitive marine resources in the project area, including the results of eelgrass mapping and survey efforts carried out on behalf of ONMS in 2017.

San Francisco Bay Regional Water Quality Control Board

Projects involving discharges of dredged or fill material to waters of the United States that require permits from the U.S. Army Corps of Engineers under Clean Water Act Section 404 are often also required to obtain authorization from the Regional Water Quality Control Board (RWQCB) under Clean Water Act Section 401. Commission staff provided opportunities for input and updates to RWQCB staff during its review of this CDP application. As its application to the ACOE is processed, HIOC anticipates reaching out to staff of the San Francisco Bay RWQCB regarding its permitting process and requirements.

California Fish and Game Commission

HIOC's operation is carried out within State Water Bottom Lease Nos. M-430-10, M-430-11, M-430-12, and M-430-15. These leases were renewed in recent years for a period of 15-years by the Fish and Game Commission, and unless renewed, will terminate between July of 2027 and February of 2033. These leases establish the shellfish species and cultivation methods to be used by HIOC and require HIOC to obtain and adhere to permits and authorizations from all other relevant agencies. During the course of this permit review, Commission staff reached out to and solicited input from California Department of Fish and Wildlife staff regarding the consistency of HIOC's current and proposed operations with its leases and the steps necessary to address existing discrepancies. These discussions helped inform the development of **Special Condition 4** which would require HIOC to provide evidence that its leases have been appropriately amended prior to installing or continuing to use shellfish cultivation methods and/or species that are not authorized in its leases.

California Department of Fish and Wildlife

HIOC's aquaculture operations are required to be registered annually with the California Department of Fish and Wildlife (CDFW) and to adhere to a variety of protocols related to introduced species and the importation of oyster seed. HIOC has a consistent compliance record with these regulations and has a valid registration for 2018.

Tribal Outreach and Consultations

During the process of reviewing HIOC's CDP application for this project and developing this recommendation, Commission staff reached out to representatives from Native American Tribes understood to have current and/or historic connections to the project area. These Tribes include the Federated Indians of Graton Rancheria and the Kashia Band of Pomo Indians of the Stewarts Point Rancheria. Contact information for these Tribal Representatives was gathered from the Native American Heritage Commission's Native American Contact Lists dated July 23, 2018. No Tribe responded with feedback or concerns.

C. FILL OF OPEN COASTAL WATERS

Section 30233(a) of the Coastal Act states, in part:

The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

- (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
- (2) Maintaining existing, or restoring previously dredged depths on existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
- (3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*
- (4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*
- (5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*
- (6) Restoration purposes.*
- (7) Nature study, aquaculture, or similar resource dependent activities.*

The installation and maintenance of shellfish cultivation equipment (including bottom bags, floating longline anchors, anchoring and support posts, rack supports, Stanway anchors, and "clam roll" nets) on intertidal and subtidal portions of Tomales Bay associated with HIOC's proposed expansion and the activities for which it is requesting after-the-fact approval, constitute "fill" as defined by the Coastal Act. Section 30108.2 of the Coastal Act states:

"Fill" means earth or any other substance or material, including pilings placed for the purpose of erecting structures thereon, placed in a submerged area.

Coastal Act Section 30233(a) permits fill in coastal waters if three tests are met: (1) the fill constitutes an allowable use under 30233(a); (2) there is no feasible less environmentally damaging alternative; and (3) feasible mitigation measures have been provided to minimize any adverse effects.

Although each of HIOC's four CDPs already authorize the placement of fill within the coastal waters associated with that CDP, the authorized fill is limited to that associated with the cultivation methods approved by that permit. Because HIOC is requesting after-the-fact approval for its use of cultivation methods that were not approved in those CDPs – and is proposing to expand their use (as shown in Table 4 above) – the fill associated with these “non-approved” cultivation methods must also be authorized. With the exception of clam bags – which are approved in the CDP for lease M-430-15 and only proposed to be used on that lease (and therefore not discussed further) – at least one of HIOC's CDPs does not include each of the cultivation methods in its existing and proposed operation. Therefore, the discussion below considers the fill associated with each of these methods (bottom bags, regular racks, overlapping racks, basket lines, tipping bag lines, floating longlines, tray barges, clam rolls, and Stanway units). Rather than divide the discussion into four parts – one for each permit and associated suite of cultivation methods being considered for that permit – for the sake of efficiency and simplicity, the evaluation of the fill associated with each cultivation method is combined into a single discussion.

Allowable use

HIOC proposes to place – and seeks after-the-fact authorization for – fill in coastal waters for the purpose of cultivating oysters and clams. As discussed above, HIOC's proposed project is an aquaculture project, and as such qualifies as an “allowable use” under 30233(a)(7). The project is therefore consistent with the first test of Section 30233(a).

Alternatives

The Commission investigated project alternatives that would reduce or eliminate the need for fill. Due to the force of tides and currents within HIOC's leases, the presence of shellfish predators, as well as the design of the structures and gear associated with the cultivation methods and activities employed by HIOC, a system of anchoring and support posts, anchors, bottom bags and other cultivation gear is an essential element. For on-bottom cultivation, use of mesh bags allows the shellfish being grown to remain contained and consolidated during grow-out so they may be fully recovered at harvest with minimal habitat disturbance (particularly in comparison to unconsolidated placement of oysters or clams directly on the substrate, which can significantly alter the substrate and require mechanical or hydraulic dredging techniques to harvest). Therefore, eliminating fill is not a feasible alternative for this type of shellfish culture operation.

The Commission considered several alternative anchoring and post systems to those proposed by HIOC for its elevated basket and tipping bay longlines and bottom bag longlines, including different types of posts and stakes and different post spacing configurations. While a wider spacing of support posts would be possible, to maintain the oyster cultivation equipment above the substrate and within the target area of tidal influence would result in high levels of tension and weight on the horizontal lines and would therefore require larger posts, more substantial support cables, and/or anchoring systems on each end of the lines. These larger, more permanent

structures would require more substantial installation methods, including the possible need for mechanized equipment (such as powered augers, water jets, or pile drivers). This would likely result in the installation of fewer larger structures rather than more numerous smaller structures, thereby not likely reducing the overall amount of fill required. Further, the larger structures would be more difficult to remove or adjust in the future and may require more intensive extraction methods, thus increasing the amount and severity of habitat disturbance that would occur during these activities.

Alternative anchoring methods for HIOC's floating longlines, and tray barges were also considered. HIOC's proposed method of mooring these structures in place relies on the use of Danforth-type anchors or concrete blocks deployed at either end of the structures or lines. Danforth anchors are commonly used marine moorings that rely on both a weighted section and a section that digs into or self-buries in the substrate when pulled laterally. Accordingly, these types of anchors can remain small while being just as effective as much larger moorings that rely on mass alone. This smaller size helps reduce the disturbance footprint associated with each individual anchor. While other anchoring options – such as helical screw-type anchors – are also available that would have an even smaller disturbance footprint, because such anchors need to be drilled into the substrate, they function as more permanent moorings and are more difficult to install and remove. Because HIOC periodically relocates its floating longlines, tray barges and their associated anchors, use of helical screw anchors would be impractical.

Alternatives to the use of bottom bags were also considered, including the elimination of the bags and the use of support posts or racks to elevate a greater number of them above the mudflats. As noted above, elimination of the bags entirely would not reduce the total amount of proposed fill and would result in the placement of loose oysters and shell directly on the mudflats, increasing the loss and dispersal of shell, altering the physical makeup of the mudflats themselves, and requiring the use of harvest techniques that result in substantial disturbance and displacement of benthic habitat. As such, this alternative would not be less environmentally damaging than the proposed use of bottom bags.

While the use of posts or racks to elevate more of the bottom bags off of the mudflats would reduce the amount of direct fill, the environmental benefits of such efforts are not clear. These types of elevated alternatives may facilitate access to the mudflats for foraging wildlife such as fish, bat rays, and shorebirds when compared to the use and placement of mesh bottom bags directly on the substrate, but even this is not certain. Some species of birds have been shown to largely avoid elevated structures, and the interaction of other species of birds and marine animals with them has yet to be carefully evaluated. As such, it cannot be stated with confidence that the use of elevated gear in place of on-bottom gear would significantly increase foraging activity or opportunities. Additionally, a greater number of more robust, elevated structures may have shading effects and affect currents, hydrology, and sediment transport/deposition in ways that bottom bags do not. Other effects are likely to be similar between the two alternatives. For example, oyster feeding and the deposition of organic material onto the underlying substrate is likely to occur at similar rates between the two cultivation methods. While elevated gear in some locations may facilitate flushing, water movement, and dilution of organic materials, in other locations, the more substantial and robust gear in the water column associated with

elevated gear may alter current speeds and directions in ways that would concentrate organic wastes.

Based on current scientific understanding, it appears that the use of bottom bags versus elevated gear at similar densities simply results in trading some effects for others with no clear overall advantages in impact potential or magnitude. The critical considerations appear to be with the density of cultivated oysters and installed equipment (lower densities have lower potential for adverse effects), as well as maintenance and operational practices. Assuming similar densities and practices, it does not appear to be less environmentally damaging to replace bottom culture gear with elevated culture gear or vice versa. Because HIOC is proposing – and requesting after-the-fact approval for – the use of a range of on-bottom and elevated oyster cultivation equipment (including two types of racks, elevated basket and tipping bag lines, and bottom bags), it appears that the slight environmental tradeoffs associated with each different method would be balanced within and across its lease areas.

However, some exceptions to this exist - two of the cultivation methods HIOC is using appear to have superior alternatives.

For example, alternatives to HIOC's use of plastic mesh clam nets were also considered due to the potential for the use of these nets to result in adverse environmental effects. HIOC proposes to continue using a total of nearly 117,000 square feet of plastic mesh netting placed as a cover over approximately 292 400-square foot areas of mudflats seeded with Manila clams. While light and thin, these nets cover large contiguous areas of benthic habitat, limiting or precluding foraging by marine species ranging from shorebirds to fish, rays, skates and small sharks. Additionally, the nets pose a potential entanglement risk for small fish and invertebrates that may become trapped while trying to swim or burrow through the nets or entangled when the nets are occasionally swept away during storms or high winds. While some of these potential adverse impacts may also be associated with other types of cultivation gear such as bottom bags, bottom bags are intentionally shifted, moved and collected on a frequent and regular basis by HIOC personnel as part of the cultivation process and as such, do not affect any particular area of benthic habitat for more than two or three weeks. In contrast, the clam netting would be in place and static for a year or more. This would result in long-term lost or limited foraging opportunities and entanglement risk over a locally significant area – nearly 6.9 acres - of mudflats near Tom's Point. These large contiguous areas are distinct from the much smaller (six square foot) areas covered by individual bottom bags or clam bags and would therefore result in a more significant suite of effects.

In addition, HIOC's method of using clam rolls also involves the use a gasoline powered "clam rake" device that uses jets of water to burrow into the mudflats and push sediment through a coarse filter or screen designed to capture and collect the clams being harvested. In addition to disturbing and churning up the sediment in the mudflats, unearthing and exposing a variety of native invertebrate and shellfish species to possible predation, the clam rake also increases turbidity and decreases water quality in the surrounding area during its use.

As a result, alternative cultivation methods for Manila clams were considered that would not require the long-term placement of large contiguous netting on mudflat areas and the shallow

excavation and sifting of those same mudflats during harvest. These methods include confining the clams within mesh bottom bags or trays in place of their unconfined placement directly into mudflats that must then be covered by netting. One of these methods, placement of clams in mesh bottom bags, is already carried out by HIOC on lease M-430-15 and was approved for that lease in CDP No. 1-94-55.

In addition to limiting entanglement risk and loss of foraging opportunities for marine wildlife, the use of confined cultivation gear for clams would also significantly reduce the chance of non-native clams escaping from cultivation and establishing wild populations (it would be nearly impossible to collect and remove all of the seeded clams once they are allowed to burrow freely into mudflats, but if they are contained within trays or bags, their complete removal can be better assured). Additionally, growing clams in confined gear would eliminate the need for excavating and digging up benthic habitat during harvest. As the Commission also found in its recent approval of CDP No. 9-18-0278 (Grassy Bar Oyster Company), cultivation of clams using confined gear is a less environmentally damaging alternative to the method that has been carried out by HIOC on approximately 6.9 acres of lease M-430-15 since 2010.

Although HIOC is voluntarily ceasing its use of this method, it nevertheless proposes to continue to use it for up to two additional years as it waits for its most recently planted crops of clams to mature and grow to harvest size. To memorialize HIOC's commitment to discontinue its use of clam rolls, **Special Condition 6** would therefore require the use of confined gear such as bags or trays for future Manila clam cultivation. In addition, **Special Condition 6** would also require HIOC to expedite its phase out of this method by initiating removal within 30 days of permit issuance and setting a deadline of 18 months for all of its remaining clam rolls to be removed. If clams collected during this removal effort have not yet achieved marketable size – or if they are collected during a period when the lease is closed to harvest by the California Department of Public Health due to water quality precautions – those clams may be re-planted in clam bags within the same area of lease M-430-15 until they are suitable for harvest. Further, **Special Condition 6** would also establish a variety of water quality protection measures to be implemented during the collection or harvest of clams currently planted in the clam rows. Based on the results of its most recent clam growth and status survey on January 17th, HIOC anticipates that it would be able to remove up to 150 of its approximately 270 remaining clam rolls within the next three to four months.

The other cultivation method for which environmentally superior alternatives exist is HIOC's Stanway units. As shown in the photograph and schematic diagram of these units, they are much more substantial than the other cultivation structures that HIOC uses and each one includes up to four concrete footings to hold the unit's vertical support posts in place as well as a horizontal pair of 16 foot long support boards made from composite lumber. Held between the horizontal supports on each unit and elevated above the mudflats are ten cylindrical mesh tubes called Stanways into which oysters are planted. When the contained oysters are ready for harvesting or sorting, the entire Stanway cylinder is removed. Although an effective means of growing oysters, HIOC's use of these Stanway units has been problematic for several reasons.

Foremost, because the Stanway cylinders provide structural stability to the support structures, when they are removed during harvest, the support structures often warp, collapse and

periodically break apart. When this occurs, any remaining Stanway cylinders can be released and the lumber on the Stanway unit can break free. This marine debris can be transported into sensitive habitat areas such as eelgrass beds where it can smother and damage the plants within. Over the past several years, loose lumber from HIOC's Stanway structures and cylindrical Stanways has been found throughout the northern part of Tomales Bay, both in intertidal habitat and shoreline areas. Additionally, large amounts of loose lumber have also periodically been found within the area in which the Stanways are currently installed. The proximity of eelgrass beds to this area raises particular concerns about the loss of material and debris from use of the Stanway cultivation method.

Secondarily, because the support structures used in Stanway units are so large and heavy – and are held in place with concrete footings – their installation, replacement and removal requires extensive effort, including excavation and the use of a small boat-mounted crane. These activities can result in locally significant disturbance of the seafloor and can negatively affect water quality and nearby habitat through the release of turbidity clouds. Further, the aspects of installation and removal that rely on hand-labor can also be extensive and can require frequent visits by several workers, resulting in trampling and disturbance of the surrounding mudflats. Although only 49 Stanway units are currently in place in lease M-430-11, the level of activity associated with their removal is high enough for HIOC to estimate that it will take 12 to 18 months to remove them.

Due to the adverse impacts associated with its use, Commission staff compared the Stanway cultivation method to alternative methods of shellfish cultivation also practiced by HIOC in Tomales Bay, including racks, basket lines, tipping bags, and bottom bags. Although each of these methods have also been known to release marine debris into the bay, because they are much more commonly and extensively used – when compared to Stanways which are used only by HIOC on a small part of its lease M-430-11 – management and maintenance practices have been developed to limit and address this issue. Additionally, all of these alternative methods rely on the use of gear and structures that are smaller, lighter, and can more easily be installed, repaired and removed. As a result, these methods have clear advantages over the more cumbersome and permanent Stanway units in that they can be installed, relocated, and removed in days rather than months and without the locally significant disturbance to substrate habitat and mudflats.

While HIOC is also proposing to phase-out its use of this cultivation method, that phase-out is not proposed to occur until 2021. In order to expedite the discontinuation of this method and the adoption of environmentally superior alternatives, **Special Condition 7** would require HIOC to begin removal operations within 30 days of permit issuance and complete them within 12 months. In order to ensure that the Stanway structures and associated materials are fully and completely removed, **Special Condition 7** would also require a third-party, independent inspection to be carried out of the Stanway cultivation area at the completion of removal activities. This report would be submitted for the Executive Director's review and approval and would document the condition of the area. Any cultivation equipment or associated material documented in the report would be required to be removed by HIOC within 30 days.

The remainder of the proposed project includes a mix of contained bottom culture (mesh bottom bags and clam bags) as well as off-bottom culture techniques (overlapped racks and regular racks), using a support system with a minimal footprint that does not include the permanent placement or pile driving of anchors or supports. These project elements reduce the amount of fill compared to the alternative types and configurations of posts and stakes that the Commission considered. In addition, other than the clam cultivation and Stanway alternatives discussed above, there do not appear to be other alternative cultivation methods that would be less environmentally damaging. The Commission therefore finds that with the implementation of **Special Conditions 6 and 7**, the proposed project minimizes the amount of fill to the maximum extent feasible, so that the project is the least environmentally damaging feasible alternative and is therefore consistent with the second test of Section 30233(a).

Mitigation Measures

The final test of Coastal Act Section 30233(a) requires that feasible mitigation measures have been provided to minimize any adverse effects of the fill.

After-the-fact Development

As discussed above regarding HIOC's past and proposed use of clam rolls in lease M-430-15 and Stanway units in lease M-430-11, the placement of this fill has and is likely to continue to result in adverse environmental effects.

Additionally, as discussed in the Marine Resources section below, the placement of several hundred individual PVC support posts and anchoring stakes on bay sediment (as part of its unpermitted installation of overlapped racks in the shallow intertidal area of lease M-430-12 and basket lines and tipping lines on lease M-430-15) is expected to result in loss of benthic habitat and mortality and disturbance to associated organisms. However, given the small total amount of this fill and its dispersion over a large number of very small individual sites (less than four square inches each), as well as the abundance of benthic habitat in Tomales Bay similar to that which would be filled, adverse impacts associated with the installation and presence of these oyster cultivation support and anchoring systems would be minimal. The exception to this is that a portion of the area used for overlapped racks in lease M-430-12 also supports eelgrass habitat. This habitat is adversely affected by the displacement and disturbance associated with the presence and use of those racks. Due to the complexity of this issue, it is discussed separately in the Marine Resources section of this report.

However, HIOC's request for after-the-fact approvals also include a more substantial amount of fill, that associated with the placement onto the substrate of six square foot oyster bottom bags. HIOC is requesting after-the-fact approval for unpermitted placement of approximately 4,200 bottom bags in lease M-430-10; 4,600 in lease M-430-11; and 2,300 in lease M-430-12 (although this group of bottom bags has been removed). These bottom bags have been spread across 1.83 acres, 2.00 acres, and 0.76 acres in leases M-430-10, -11, and -12, respectively. Within these areas, the bottom bags have directly occupied roughly 0.58 acres, 0.63 acres, and 0.32 acres, respectively.

These bottom bags are typically in place, lying on the intertidal mudflats, for 12 to 24 months at a time as the oysters within them grow to harvestable size. While the placement of these mesh

bags on top of the substrate would not result in the loss or removal of this substrate from the bay, the presence of the oyster shell filled mesh bags and the biological processes of the living oysters themselves may have localized effects on the underlying and adjacent benthic habitat and influence the type and abundance of organisms that it supports. These effects are associated with physical smothering or displacement from the bags and shells, as well as organic enrichment due to the deposition of biological waste from oyster filtration and feeding. By affecting benthic ecology (species composition, richness, abundance and dominance) in these ways, this fill may also affect other larger species such as fish, rays, sharks and shorebirds that forage on intertidal mudflats. In addition to effects on foraging associated with changes in the type and abundance of species present within the habitat below and adjacent to the bottom bag cultivation areas, foraging would also be affected by the presence of the plastic mesh bags themselves which in some cases may block access to prey.

Additionally, information included with HIOC's application indicates that some of the areas used by HIOC for bottom bags on leases M-430-10 and M-430-11 overlap with eelgrass habitat. The presence of bottom bags in these areas and their associated maintenance, harvest, and planting activities are likely to disturb, damage, and displace this eelgrass habitat. Due to the complexity of this issue, it is discussed separately in the Marine Resources section of this report.

In addition to its proposed phase-out of the clam roll and Stanway cultivation methods – which would be expedited and inspected for completeness through **Special Conditions 6 and 7** – HIOC has also included information in its application for permit amendments demonstrating the work it has and would continue to do to make up for the adverse environmental effects associated with the placement of fill for which it is seeking after-the-fact approval. Specifically, HIOC identifies the efforts its staff has made over the past several years and will continue to make over the course of its permit terms to benefit the coastal and marine biological resources of Tomales Bay.

These efforts include participation (staff and boat support) for roughly two decades in the annual Bay Clean Up event with staff from the Environmental Action Coalition of West Marin, Tomales Bay State Park, and the Tomales Bay Association. As noted by HIOC, "During that time, we have removed hundreds of tires, many pieces of creosote treated lumber, and even a few engine blocks (as well as lots of miscellaneous plastic debris)." HIOC commits to continuing to participate in these events for the remaining term of its permits.

Additionally, starting three years ago, HIOC initiated an effort involving its staff and staff from the other five shellfish aquaculture companies operating in Tomales Bay to carry out quarterly clean-ups along the bay's shoreline. These efforts were coordinated to include the entire 30+ mile long shoreline of Tomales Bay and from 2016 through 2018, resulted in the collection and disposal of close to 12,000 individual pieces of debris, much of it plastic. Although some of this debris (about 1,000 pieces) likely originated from the bay's aquaculture operations, the vast majority did not. In 2018, HIOC staff carried out at least 49 clean-up events in Tomales Bay, from a few minutes to several hours. Most recently, HIOC staff spent nearly seven hours in December 2018 carrying out shoreline clean-up work and collected 78 items, most of which were not aquaculture related. HIOC has also committed to continuing these clean-up efforts throughout the term of its permits.

In addition to this work to remove general waste from the bay and shoreline, HIOC has also carried out and committed to more focused efforts to collect and remove more substantial materials from Tomales Bay. Several years ago, HIOC's staff removed roughly 500 feet of fencing that had been illegally installed within lease M-430-15, and over the next several years HIOC has also committed to collecting and fully removing all of the abandoned wooden cultivation structures that pre-date HIOC's operations in lease M-430-15 and are still present in the area, including approximately 150 vertical wooden posts that have been in place for at least 25 years. The removal of these posts from Tomales Bay would open an area of intertidal and subtidal habitat that has been occupied by fill for at least 25 years and would help prevent additional habitat disturbance and displacement in the future as these timbers inevitably break apart and disperse. Additionally, because these posts may be constructed from treated lumber that could be leaching or dispersing copper and arsenic based compounds into the surrounding water and sediment, their removal would provide additional water quality benefits. **Special Conditions 5 and 11** would memorialize several of these ongoing commitments by requiring HIOC to complete its removal of abandoned aquaculture structures within 24 months of permit issuance and continue its quarterly clean-up efforts.

To help further reduce the potential for adverse environmental impacts associated with HIOC's placement and maintenance of fill, the Commission is requiring in **Special Condition 3** that HIOC coordinate with CDFW and retain the services of a professional surveyor to accurately and conclusively establish the configuration and location of its lease boundaries. With the addition of this mitigation measure, existing confusion about the size and location of HIOC's leases would be addressed, therefore allowing HIOC to better concentrate and more effectively contain its cultivation activities within its leases. Further, **Special Condition 11** would also limit the potential loss and dispersal of cultivation gear by requiring that all bottom bags in use by HIOC be placed within designated areas and tethered to anchor lines, elevated lines or racks. **Special Condition 9** would require HIOC to adhere to the cultivation site access plan included with its amendment application that includes wildlife disturbance measures and mapped transit corridors that would limit the loss and disturbance of eelgrass habitat due to prop-cutting or interactions with outboard motors. Finally, **Special Condition 11** would create a variety of marine debris prevention and response protocols that would reduce the likelihood of debris loss and increase opportunities for its recovery.

Proposed New Development

HIOC is also proposing to place and maintain fill in coastal waters as part of its proposed expansion. As discussed previously, some of the proposed expansion would be allowed by HIOC's CDPs even without amendment. However, the majority of the proposed expansion would be subject to the Commission's review.

Specifically, HIOC proposes to amend its four CDPs to permanently retain most of the development for which it is seeking after-the-fact approval and to also install and operate an additional 22.14 acres of basket lines/tipping lines in lease M-430-15; an additional 3.68 acres of floating culture, 0.29 acres of bottom bags, and 0.82 acres of regular racks in lease M-430-12; an additional 1.65 acres of basket lines/tipping lines in lease M-430-11; and an additional 0.25 acres of floating culture in lease M-430-10.

Because the expanded use of these cultivation methods within these leases raise similar considerations and would result in similar potential environmental effects as those previously discussed above, rather than duplicate that analysis, the following discussion will focus on those issues unique to the proposed expansion. For example, HIOC's installation of cultivation structures in new areas and expansion of existing cultivation areas into surrounding areas that are not currently used for cultivation raises the possibility for adverse interactions with sensitive habitat such as eelgrass. To address this issue, **Special Condition 2** would require HIOC to carry out a survey of each new cultivation area and to provide the results to the Executive Director for review and approval prior to initiating installation activities. This Special Condition would further prohibit HIOC from installing new cultivation equipment within or adjacent to eelgrass habitat, thus providing an additional assurance that such habitat would be protected from the new proposed cultivation activities.

Another unique issue raised by the proposed expansion concerns the volume of additional cultivation gear that HIOC would bring into use on the new cultivation beds. HIOC proposes to install up to 1,052 basket/tipping lines across its four leases (approximately 59 on lease M-430-11; 80 on lease M-430-12 and an additional 800 on lease M-430-15). Each of these lines would support 108 plastic mesh cultivation baskets or 144 hanging plastic mesh bottom bags, for a combined total of over new 113,000 baskets or over 151,000 new bottom/tipping bags across all 1,052 lines. This would be in addition to the tens of thousands of bottom bags, clam bags, and mesh bags on racks that would be used on the other cultivation beds that HIOC is proposing to retain or expand.

Although HIOC has committed to continue to implement the marine debris prevention and response measures that it has voluntarily implemented in recent years – its quarterly and annual clean-up efforts as well as those additional measures described in [Exhibit 5](#) – and it anticipates being able to reduce its gear loss to approximately 1%, given the number of individual pieces of cultivation equipment that it would be introducing to Tomales Bay and the amount of plastic in each piece of gear, even 1% would equate to a large volume of plastic debris. This is an issue that the Commission has consistently considered and addressed in all of the shellfish aquaculture operations it has authorized over the past six years years – as global understanding has grown about the scope and consequences of marine debris and the use of plastic materials and equipment has increased in shellfish cultivation operations. These permits, CDP Nos. E-12-012-A1, 9-17-0646, 9-18-0002-A1, 9-18-0278 and Consistency Certification No. CC-035-12, all include similar requirements to those in **Special Condition 11**, which focuses both on the minimization of initial gear loss and maximization of recovery efforts for the loss that still occurs. Given the nature of shellfish cultivation in the marine environment, complete loss prevention would likely be unattainable. However, loss prevention measures combined with implementation of consistent recovery efforts that also include collection of non-aquaculture debris would help ensure that unavoidable loss of aquaculture material is made up for through recovery of a commensurate amount of marine debris from Tomales Bay (both aquaculture and general debris).

The final unique issue raised by HIOC's proposed expansion is that it includes the continued use of aquaculture equipment and structures within areas of eelgrass habitat. This issue is further discussed in the section on Marine Resources below but it should be noted that as part of its

expansion, HIOC has committed to removing existing gear from three areas (an estimated maximum of 1.26 acres across lease M-430-11 and M-430-12) that overlap with eelgrass habitat. Although HIOC maintains that no eelgrass was present at the time these structures and equipment were installed and that the eelgrass habitat moved into the area subsequently, it would nevertheless remove equipment from these areas and install new equipment outside of the current extent of the eelgrass beds. These eelgrass beds are anticipated to expand into the areas from which the gear would be removed. **Special Condition 8** would memorialize this commitment and help ensure that the opportunity for eelgrass expansion into the removal areas is maximized by having HIOC carry out the removal work outside the eelgrass growing season when it is less likely to be damaged or disturbed, submit a report to the Executive Director documenting that complete removal has occurred, and to carry out installation of replacement gear consistent with the requirements of **Special Condition 2**. This condition prohibits installation of new cultivation gear or structures within eelgrass, and requires eelgrass surveys of new installation areas to be completed and provided to the Executive Director for review and approval prior to the initiation of installation activities.

The Commission finds that with the addition of **Special Conditions 2, 3, 5, 8, 9 and 11**, feasible mitigation measures have been provided to minimize any adverse effects of fill, and, therefore, that the third and final test of Coastal Act Section 30233(a) has been met.

Conclusion

Because the three tests have been met, the Commission finds the proposed project, as conditioned, is consistent with Section 30233(a) of the Coastal Act.

D. MARINE RESOURCES

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The proposed project is located on four separate areas of intertidal mudflats and subtidal land within the northern and southern portions of Tomales Bay ([Exhibit 1](#)). These four areas are within leases of state tidelands issued to HIOC (lease nos. M-430-10, M-430-11, M-430-12, and M-430-15) by the Fish and Game Commission and combined, they cover roughly 128 acres.

The portion of HIOC's existing shellfish aquaculture operation for which it is seeking after-the-fact authorization includes the installation and use of shellfish cultivation structures and equipment on approximately 2.33 total acres in lease M-430-10; 2.36 acres in lease M-430-11; 2.41 acres in lease M-430-12; and 9.99 acres in lease M-430-15 – as shown in Table 8, below.

Additionally, HIOC also proposes to expand its operations within all four of its leases. Specifically, it is seeking the Commission's approval to retain and operate most of the acres of cultivation beds listed above and to install and operate new shellfish cultivation structures and equipment on 0.75 acres in lease M-430-10; 1.65 acres in lease M-430-11; 8.05 acres in lease M-430-12; and 22.24 acres in lease M-430-15. The activities proposed within these areas are shown below in Table 8 and described in [Appendix B](#). Rather than refer to specific acreage estimates for each cultivation method and lease throughout the remainder of this section, references will instead be made to the estimates included in Table 8.

As described in the initial section of this report, in its total existing and expanded operations (shown in [Exhibits 2 and 3](#)), these “after-the-fact activities” and proposed activities are combined with those for which HIOC's CDPs already provide authorization.

Table 8: After-the-fact (ATF) and Proposed (New) Development

Culture Type	Acres per Lease/CDP							
	M-430-10		M-430-11		M-430-12		M-430-15	
	2-81-40		2-84-2		2-84-10		1-94-55	
	ATF	New	ATF	New	ATF	New	ATF	New
Overlapped racks	-	-	-	-	1.34	0	-	-
Regular racks	-	-	-	-	0	0.82	-	-
Stanway units	-	-	0.36	0**	-	-	-	-
Bottom bags	1.83	1.14	2	1.69	0.76*	0.29	-	-
Clam bags	-	-	-	-	-	-	-	-
Clam rolls	-	-	-	-	-	-	6.89	0**
Floating culture	0.5	0.75	-	-	1.07	4.72	-	-
Basket/tipping lines	-	-	-	1.65	0.6*	2.22	3.1	22.14
TOTAL^	2.33	1.89	2.36	2.34	2.41	8.05	9.99	25.34

*The four basket lines and 0.76 acres of bottom bags that were in place in lease M-430-12 have since been removed.

**The 0.36 acres of Stanways in lease M-430-11 and 6.89 acres of clam rolls in lease M-430-15 are proposed to be phased-out but would continue to be in place for approximately two additional years.

^The estimates in this row reflect the acreage of new cultivation structures that would be installed on each lease combined with the acres of ATF development that HIOC proposes to retain in place.

The on- and off-bottom intertidal and off-bottom subtidal shellfish cultivation activities HIOC is proposing and those for which it is seeking after-the-fact approval have the potential to cause

adverse impacts to shorebirds, marine wildlife, and benthic and water column habitats and species.

Benthic Habitat and Eelgrass

Tomales Bay provides extensive eelgrass habitat with nearly a thousand acres spread throughout the bay - mostly within depths of about six feet of average daily low tides. Based on the most recent baywide survey data, collected in 2017 on behalf of the Greater Farallones National Marine Sanctuary (Sanctuary), eelgrass beds extend into all four of HIOC's leases (as shown in [Exhibits 2 and 3](#)).

In addition to eelgrass, HIOC's leases include intertidal and subtidal areas comprised of various types of mud- and sand-flats, channels, and areas of exposed gravel or cobblestones.

Potential adverse impacts to benthic habitats from the proposed project include: (1) loss of eelgrass habitat due to shading and displacement from the installation and presence of cultivation structures and/or disturbance and damage due to their use; (2) smothering of organisms and loss or disturbance of mudflat habitat due to the presence of bottom bags, racks, anchors, support posts, and mesh nets; and (3) disturbance to sediments and organisms from installation of anchoring and support posts associated with racks, elevated cultivation basket or tipping bag lines or racks; removal activities; and ongoing operations (planting and harvest of oysters and clams and equipment maintenance), including operation of all-terrain vehicles on intertidal areas.

Eelgrass

Eelgrass (*Zostera marina*) provides a variety of essential ecosystem functions, including primary production, predation refuge, nursery functions, physical structure, nutrient cycling, and forage. Eelgrass is a species of special biological significance under the meaning of Section 30230 of the Coastal Act, and the Commission has consistently determined it warrants special protection under this policy.

Based on the results of the Sanctuary's 2017 eelgrass survey, eelgrass beds cover a substantial portion of all four of HIOC's leases, ranging from roughly 25% to 60% of each lease. Although more recent comprehensive surveys of HIOC's leases have not been carried out, aerial imagery and site visits carried out by Commission staff in 2018 confirm that eelgrass continued to be present within many of these areas during the most recent eelgrass growing season.

Proposed New Development

In order to avoid adverse impacts to eelgrass habitat associated within its proposed expansion, HIOC has located and configured its new cultivation beds to avoid all eelgrass habitat shown in the Sanctuary's 2017 eelgrass surveys (as shown in [Exhibit 3](#)). Despite its intention, however, this effort may not be sufficient to ensure that the eelgrass beds within HIOC's leases are protected. Because the location and size of eelgrass beds in Tomales Bay are known to shift and move throughout the year and between seasons, by the time HIOC begins installation activities on a new cultivation beds within a particular lease – which may be several years from now, the results of the 2017 surveys may no longer accurately reflect the location and extent of eelgrass within HIOC's leases. Further, while the Sanctuary's 2017 eelgrass surveys may be helpful as an initial planning tool for HIOC's project, these surveys were carried out to assist the Sanctuary

in its identification of appropriate vessel mooring areas throughout Tomales Bay and may therefore not have the appropriate resolution and accuracy needed for fine-scale cultivation bed siting and impact assessment efforts within each of HIOC's leases.

As such, more focused and updated surveys would be necessary to help ensure that the new cultivation beds HIOC proposes – including the floating culture in lease M-430-10; the basket/tipping lines in M-430-11; the racks, bottom bags, floating culture, and basket/tipping lines in lease M-430-12; and the basket tipping lines in lease M-430-15 (as shown in Table 8) – would not be installed in areas with eelgrass habitat. Therefore, prior to the initiation of installation activities for each new cultivation bed to be installed that growing season, **Special Condition 2** would require HIOC to provide, for Executive Director review and approval, the results of eelgrass surveys of those areas. Additionally, **Special Condition 2** would also require that HIOC also provide the Executive Director with a map showing the footprint and location of proposed cultivation structures and equipment relative to nearby eelgrass beds and demonstrating that installation within or adjacent to eelgrass would not occur.

HIOC has conveyed to Commission staff its strong belief that some aspects of its cultivation operations may benefit eelgrass habitat and promote the establishment or expansion of eelgrass beds into cultivation areas. Although these effects have not been well established scientifically, the interaction between shellfish cultivation and eelgrass can often be complex and site specific and include both positive and negative components. Therefore, if some of HIOC's cultivation activities in some areas are indeed able to contribute to the establishment or expansion of eelgrass habitat in those areas, it may be prudent to allow those activities to continue. Accordingly, **Special Condition 2** would also establish that once new cultivation beds are installed in areas that have been documented as not supporting eelgrass habitat, they may continue to be used even if the location and/or size of nearby eelgrass beds shift in the future to encompass some or all of them.

This approach would protect eelgrass habitat from the potential adverse impacts associated with the installation and use of cultivation beds in portions of HIOC's leases that do not currently support shellfish aquaculture structures and equipment. However, HIOC's expansion project also includes a proposal to retain much of the existing unpermitted development it is requesting the Commission to authorize after-the-fact (such as the bottom bags areas on leases M-430-10 and M-430-11), as well as a proposal to remove and replace some of this existing unpermitted development with different types of cultivation structures. For example, after phasing out the use of the Stanway system on lease M-430-11, HIOC proposes to fully remove the approximately 49 existing structures and install basket lines/tipping lines in their place. Similarly, HIOC also proposes to remove the overlapped racks from lease M-430-12 and install basket lines/tipping lines and racks in their place. As shown on [Exhibit 2](#), some of these areas of existing unpermitted development that are proposed to be retained or modified also support eelgrass habitat. Based on information included in HIOC's application for permit amendments – derived from calculations of the eelgrass areas shown in [Exhibit 2](#) – approximately 1.26 acres of eelgrass habitat is present within the existing unpermitted cultivation beds that HIOC is proposing to retain or modify as part of its expansion project. Although this approximate

acreage may be a significant overestimation³, 2018 site visits by Commission staff to some of these areas confirm that a modest amount of eelgrass habitat is indeed present between cultivation structures and equipment in at least some of them.

However, as discussed further below regarding HIOC's request for after-the-fact approval for the installation and use of cultivation structures and equipment within these areas, HIOC has repeatedly stated to Commission staff that no eelgrass beds were present within these areas at the time the aquaculture equipment was installed and that only after it had been in place and in use for a period of time did the eelgrass begin to appear. Nevertheless, to help ensure that its operations continue to be carried out in a manner that minimizes the loss, damage or disturbance of eelgrass habitat, during its proposed modification of existing cultivation beds within eelgrass, HIOC has committed to installing the new cultivation gear outside of eelgrass habitat. Specifically, when HIOC removes the Stanway systems from lease M-430-11, it would only install the proposed basket/tipping lines in that portion of the Stanway area that does not support eelgrass habitat. A similar approach would be taken with the overlapped racks on lease M-430-12 - once the racks are removed, the new gear would be installed outside of the existing eelgrass beds. **Special Condition 8** would memorialize and build on this approach by requiring the same process used for new cultivation beds in these areas - "prior to installation" eelgrass surveys, reporting of results for Executive Director review and approval, and maps showing the location of proposed gear relative to nearby eelgrass beds. Combined with its proposal to relocate the ten existing floating longlines in lease M-430-12 - several of which are located within an area identified as eelgrass habitat in the Sanctuary's 2017 baywide survey - Special Condition 8 would result in the removal of existing cultivation gear from within up to 0.94 acres of eelgrass habitat.

HIOC proposes to retain the remaining area of its unpermitted cultivation beds within eelgrass habitat (an estimated maximum of 0.32 acres). These areas would be primarily made up of 0.2 acres and 0.08 acres of bottom bags in leases M-430-10 and M-430-11 and 0.04 acres of basket lines/tipping lines in lease M-430-15. However, as discussed below, after an extensive review of available information, Commission staff has found no evidence that contradicts HIOC's statements that eelgrass beds appeared in these areas only after the cultivation structures and equipment had been installed and in use for a sustained period of time.

³ HIOC's acreage estimate is based on an assumption that (1) the 2017 survey results are completely accurate at the scale of HIOC's cultivation beds and are appropriate to use to develop these estimates; and (2) the entirety of these "overlap" areas shown on **Exhibit 2** (areas where mapped eelgrass habitat overlaps a portion of a cultivation bed) should indeed be considered eelgrass habitat. However, the 2017 surveys were not carried out for this purpose and are likely not accurate at this scale and in these areas due to the methodology used. Further, it may not be appropriate to assume that 100% of these areas would be eelgrass habitat but for the presence of the cultivation structures. Due to the configuration of HIOC's gear and presence of access lanes and open areas between structures, typically over 50% of a cultivation bed is *not* occupied or covered by gear. It is often this open area that is occupied with eelgrass when it occurs within a cultivation bed. HIOC's acreage estimate assumes that the remaining area that is covered with cultivation equipment would also be eelgrass habitat. However, even if the cultivation equipment was not present in these areas, their physical and environmental conditions may not be appropriate to support eelgrass.

After-the-fact Development

Included among those cultivation areas for which HIOC is requesting after-the-fact approval are portions of several that overlap with areas identified as eelgrass habitat in the mapping of Tomales Bay carried out on behalf of the Greater Farallones National Marine Sanctuary in 2017. The results of this mapping effort are included on the figures of HIOC's existing and proposed cultivation areas provided in [Exhibits 2 and 3](#). As shown in [Exhibit 2](#), the areas identified as eelgrass habitat include portions of: the bottom bag cultivation area (0.2 acres) in lease M-430-10; the bottom bag cultivation area (0.08 acres) and Stanway area (0.04) in lease M-430-11; the overlapped racks (0.34 acres) and floating longlines (0.56 acres) in lease M-430-12; and the cultivation basket/tipping lines (0.04 acres) in lease M-430-15. Although HIOC is proposing to discontinue its use of and remove equipment from the largest of these areas – those associated with the racks and floating longlines in lease M-430-12 – and the small area of Stanway structures in lease M-430-11, its request for after-the-fact approval for the past and current unpermitted use of these areas must still be considered.

In making this request, HIOC has repeatedly stressed to Commission staff that while eelgrass is present among its existing cultivation structures and equipment in these portions of its four leases, at the time the structures were installed – which in some cases was 10 to 20 years ago – the areas did not support eelgrass. In support of this position, HIOC has noted that each of its CDPs establishes that eelgrass is to be avoided during the placement and use of cultivation equipment and that it has consistently adhered to this requirement and tried to manage its operations in as ecologically sensitive a manner as possible. HIOC has further expressed its belief that some aspects of its operations may have served to promote the establishment or expansion of eelgrass beds in and around its cultivation areas, including those for which it is seeking after-the-fact approval.

Because the question of whether or not HIOC's cultivation beds were installed in eelgrass habitat has critical bearing on the consistency of its after-the-fact requests with the Coastal Act's marine resource policies (which require special protection to be provided for areas of special biological significance, such as eelgrass beds), it is one that Commission staff has spent a significant amount of time evaluating. That evaluation has included an extensive review of the available files associated with HIOC's original CDPs, as well as the results of eelgrass mapping of Tomales Bay carried out by CDFW over the past several decades, archives of historic aerial photographs, and relevant historic reports and discussions of eelgrass health and abundance in the bay.

Based on this information, there is no evidence to contradict HIOC's statements that eelgrass habitat was not present when it initially installed cultivation structures within those portions of its leases that are shown in [Exhibit 2](#) as containing both cultivation beds and eelgrass. Additionally, a comparison of historic eelgrass maps from the early 1990s (close to the time much of HIOC's cultivation areas were installed) with those developed more recently, suggests that in some areas of the bay, the size and extent of eelgrass beds appear to have increased. Included in these areas are the three leases that include the majority of HIOC's cultivation areas within eelgrass habitat – leases M-430-10, M-430-11 and M-430-12. This information appears to support HIOC's statements and indicates that eelgrass around these leases may have

undergone a larger scale expansion that has brought it into portions of those areas in which HIOC had installed cultivation structures and equipment.

Although it could be argued that the requirements and commitments included in HIOC's CDPs for it to avoid disturbance or damage to eelgrass (or placement of cultivation structures within or adjacent to it) should have caused HIOC to remove those portions of its cultivation beds that eelgrass may have appeared in, this does not appear to have been the Commission's intent in approving those CDPs. The CDPs instead appear to have been focused on protecting the eelgrass that was present within and around the leases when they were first brought into use for shellfish cultivation and the initial build-out and installation of cultivation equipment occurred. The current situation - eelgrass beds apparently moving into areas with cultivation equipment already installed - does not appear to be one that the Commission previously considered.

Considering it now suggests that it would be unreasonable to require HIOC to establish an operation under one set of conditions (the location of eelgrass beds at the time cultivation structures are installed in a lease) and then to continually adjust it as those conditions change (the eelgrass beds in that lease expand or move). While the type of cultivation equipment it uses would technically make it possible for HIOC to relocate and shift operations within its leases in response to the ebb and flow of the eelgrass beds they support, the effort that would be involved to manage an expanding and contracting operation like this would make such an approach infeasible. Adding to this infeasibility is the multi-year growth cycle for oysters and clams that requires cultivation gear to remain in place for between one and three years after initial planting has occurred. Further, some of the cultivation equipment authorized in HIOC's CDPs (but never installed) requires larger, more substantial construction and installation activities and cannot be so easily removed and relocated on a continuing basis. If it was the Commission's intent for HIOC to adjust the location of its established gear based on the appearance of eelgrass, it is unlikely some of these types of gear (for example, large wooden racks) would have been included in the CDPs. Finally, a situation where some or all of its established cultivation areas could be lost each year based on the appearance of eelgrass within them would be one that would strongly discourage HIOC from positively valuing and promoting the presence and growth of eelgrass within its leases. Accordingly, it is reasonable to assume that HIOC's CDPs allow it to continue using cultivation areas within eelgrass habitat as long as (1) that habitat was not present at the time the cultivation areas were initially installed; and (2) to the extent feasible, the continuing use of those cultivation areas is carried out in a manner that minimizes damage and disturbance of eelgrass. However, HIOC was not permitted to install new types of equipment in particular areas, and after-the-fact authorization for that equipment should account for the fact that, even if no eelgrass was present when the unpermitted equipment was first installed, eelgrass is present now.

Accordingly, **Special Conditions 7 and 8** require HIOC to discontinue its use of cultivation methods and areas with some of the highest potential to result in eelgrass disturbance and/or damage, and to remove equipment that was installed without authorization in areas that now contain eelgrass habitat. Specifically, Special Condition 8 requires floating lines and overlapped racks to be removed from within approximately 0.56 acre and 0.34 acre areas of mapped eelgrass, respectively. Additionally, on leases M-430-10 and M-430-11, Special Condition 8 requires mesh bottom bags to be removed from a total of approximately 0.28 acres of mapped

eelgrass. Each of these areas are shown in **Exhibit 6**. HIOC's appears to have carried out its operation in a manner that minimizes damage and disturbance to eelgrass and to be dedicated to continuing to do so.

Smothering and Disturbance

The three elements of HIOC's proposed expansion and after-the-fact development that would primarily result in smothering and disturbance of benthic habitat are (1) the presence of the PVC anchoring stakes and support posts for oyster cultivation equipment (racks, bottom bag longlines and elevated basket lines/tipping bag lines); (2) the presence of bottom bag cultivation gear; and (3) the presence and maintenance of mesh netting over mudflat areas planted with Manila clams and the subsequent excavation of those clams during harvest.

After-the-fact Development

HIOC's application includes a request for after-the-fact authorization for placement of PVC post supports and anchoring systems for bottom bag lines on lease M-430-10; bottom bag lines and Stanway structures on lease M-430-11; bottom bag lines, basket lines and overlapped racks on lease M-430-12; and basket lines/tipping lines on lease M-430-15. The placement and maintenance of several hundred small-diameter PVC stakes and posts associated with HIOC's use of these cultivation methods on each lease is expected to result in the long-term displacement and loss of up to 20-square feet of benthic habitat known to support marine invertebrate communities and foraging habitat for shorebirds and marine wildlife. In addition, this activity would result in the short-term disturbance of mudflat areas adjacent to stake due to the foot traffic and trampling associated with its installation.

However, the lost and displaced habitat would be spread across hundreds of individual sites – each with an area of between one and three square inches – and would therefore be insignificant. Additionally, in the context of each lease area and Tomales Bay as a whole, the loss of less than up to 20-square feet of mudflat habitat and short-term disturbance of adjacent areas due to foot traffic and trampling is not anticipated to adversely affect the biological productivity of the bay or measurably reduce populations of the marine organisms that inhabit and rely on this habitat. Habitat mapping and aerial surveys of Tomales Bay have shown that benthic habitat comprised of fine sand and silt sediment similar to the habitat present at the project sites is extensive (covering hundreds of acres) and many of these areas support similar species and populations of marine life. Given the small size of the benthic footprint and associated disturbance areas relative to the abundance of similar benthic habitat in Tomales Bay, as well as the dispersion of this footprint over several hundred very small individual sites, adverse impacts associated with the installation and presence of the system of PVC support and anchoring posts and stakes associated with the shellfish cultivation gear for which HIOC is requesting after-the-fact approval would be minimal.

Other elements of the unpermitted cultivation gear HIOC has installed would also involve the placement of fill on benthic habitat. For example, the placement and use for oyster culture of over 4,000 six-square foot bottom bags on leases M-430-10 and M-430-11 and over 2,000 bottom bags on lease M-430-12 (although these bags have since been removed) also resulted in the smothering and disturbance of benthic habitat. The total area be covered by these bags would be between roughly a quarter- and a half-acre on each of these three leases, spread across

several dozen rows of bags, each between 100 and 200 feet long and three-feet wide. As discussed in a variety of studies, use of mudflats in this way may affect it in several ways, including by altering the chemical condition of the sediment and influencing the type, abundance, and diversity of species it supports. These effects result from sedimentation and organic enrichment caused by the oysters, as well as predator exclusion and current dampening from the presence of the aquaculture equipment on the surface of the mudflats.

Because the feeding activity of bivalve filter-feeders such as oysters results in the packaging of fine suspended material into larger feces that can rapidly settle to the seabed (especially under conditions with slow or poor water flushing and exchange) in areas of intensive shellfish cultivation, primary production and energy flow can be diverted from planktonic to benthic food webs. While the dynamics of bivalve feces deposition (settling velocity, disaggregation rate and resuspension) are poorly understood, enhanced sedimentation under areas of cultured shellfish is well documented (Castel et al. 1989; Mojica and Nelson 1993; Nugues et al. 1996; Spencer et al. 1996; Drake and Arias 1997; Spencer et al. 1997; Spencer et al. 1998; De Grave et al. 2001; Kaiser 2001; Crawford et al. 2003; Forrest and Creese 2006; Mitchell 2006; Bouchet and Sauriau 2008). As is the case for fin fish aquaculture, the accumulation of organic material beneath shellfish aquaculture facilities may result in the generation of an anaerobic environment that promotes ammonification and sulfate reduction, increased sediment bacterial abundance, and changes in benthic community structure and biomass.

The magnitude and extent of these effects is strongly influenced by several factors, including stocking density (the number of oysters within the cultivation gear), current speed, coverage area (the total amount of contiguous area occupied by cultivation gear), coverage duration (length of time cultivation gear is in place before being moved) and fallowing frequency. In general, studies suggest that cultivation at low densities in areas with strong currents and with more separation between cultivation equipment, more frequent shifting of equipment and use of fallowing (rest periods between uses of an area) is likely to result in less substantial and more localized effects. In contrast, high density, long-term, extensive, fixed cultivation in more enclosed areas is likely to exacerbate environmental effects and lead to more severe disturbance to benthic habitat and communities. However, as a series of studies by Spencer et al. (1996, 1997, 1998) demonstrate, some benthic communities can be resilient to these types of disturbances and can return to reference conditions within months of an aquaculture harvest and removal of aquaculture equipment, even after significant changes have taken place.

Although the total area that has been used for oyster bottom cultivation by HIOC within leases M-430-10, M-430-11 and M-430-12 is not insignificant, the location of the bottom bag areas on each lease in exposed areas near the edge of Tomales Bay's deep water channels and subtidal habitats, the modest stocking density used for its cultivation bags (typically less than 200 oysters per bag), and the configuration of its longlines in rows with gaps of four to five feet between them would limit the amount and extent of disturbance to benthic habitat that would result from the proposed operation.

In addition, HIOC's operational practices provide opportunities for periodic recovery to occur within the benthic habitat of its cultivation areas. For example, as oysters grow, HIOC staff routinely shift, flip, and relocate cultivation bottom bags - thus exposing previously covered

areas of substrate. This is done every two months on average. Also, because the longlines are anchored in place only at the two ends (between 100 and 200-feet apart), current and wave action during the intervening period is also responsible for moving and shifting the bags along the longline rows. This movement of bags, both natural and intentional, should minimize the magnitude of any effects that the cultivation gear and oysters may be having on the benthic habitat and its associated species by distributing those effects across the cultivation area.

Although specific testing and detailed analysis of the benthic habitat has not been carried out within the portions of leases M-430-10, M-430-11 and M-430-12 that are (or have) been used for bottom bags, available information from research carried out in other areas suggests that the effects to benthic habitat from this aspect of HIOC's oyster cultivation operation would be - at most - modest, localized and not likely to persist once the area is left fallow or returned to a natural condition.

HIOC's use of large areas of mesh netting for clam cultivation ("clam rolls") on lease M-430-15 and the subsequent excavation of benthic habitat to harvest those clams has the potential to result in more significant adverse impacts to benthic habitats than its use of bottom bags. Since 2010, HIOC has installed and used up to 400-square foot nets with ¼ inch mesh to cover the surface of mudflats over a total area of approximately 2.7 acres. This total area has been spread between up to 292 individual sites within a larger 6.9 acre area (as shown in [Exhibit 2](#)) and each of the individual nets measures 4 feet wide by 100 feet long. Before the nets are rolled and staked in place, the mudflat that is to be covered is tilled (mechanically disturbed) and tens of thousands of young Manila clams are spread across it and allowed to burrow below the surface. Unlike the bottom bags used for growing oysters that would be lifted and moved every two weeks, these mesh sheets or nets are typically maintained in place for three years or more as the clams planted into the mudflat below them grow to harvest size.

The purpose of the netting is to protect the growing clams by keeping away all fish, birds, large invertebrates and marine mammals such as sea otters that may feed on them. Due to the small size of the mesh in the netting, however, and its coverage of large areas of mudflats, the nets would also prevent a wide range of biological uses and activities that would typically occur in mudflats. For example, in addition to preventing foraging on clams, the nets would also prevent foraging on most of the native shellfish and invertebrates that live within mudflats. In addition, the nets would also limit or prevent many species from burrowing into or gaining access to the habitat within the covered mudflat areas. Those animals that try to burrow or forage through the netting may risk injury or entanglement due to contact with the netting and those that are able to gain access may face competition for food and habitat from the large number of planted clams. As a result of this exclusion, competition and limitation on foraging activity, the covered mudflats would likely support a reduced or significantly altered community of species and would not maintain the biological productivity typical of mudflat habitats within Tomales Bay.

Further, when the Manila clams buried within these mudflat areas are ready to be harvested, HIOC uses a gasoline powered device to excavate and pump water through the sediments in order to sift through them and collect and remove the cultivated clams. This harvest activity would result in significant additional disturbance to the mudflat habitats - churning them up, injuring, displacing or exposing to predation the other species living within them, and leaving

large areas with disturbed and altered sediments that would be prone to dispersing into surrounding areas and releasing clouds of turbidity as the bay's tides enter and withdraw. Although HIOC typically staggers its planting activities so that the entire clam roll area is not ready for harvest at the same time, the movement of sediment and turbidity away from even limited harvest activities has the potential to adversely affect a much larger area of surrounding habitat as well, including sites that support eelgrass habitat.

While it is no longer possible to prevent the adverse impacts to mudflat habitats and their biological productivity by prohibiting HIOC's past use of the clam roll cultivation method on lease M-430-15 (these activities have been carried out since 2010), because the sites that are currently planted have yet to be harvested or replanted, additional future impacts may still be avoided and minimized. Therefore, **Special Condition 6** would require HIOC to implement several measures to reduce habitat loss and disturbance during future Manila clam harvesting and cultivation efforts. These measures would include a prohibition on cultivating Manila clams outside of confined equipment, a requirement that harvest activities be carried out exclusively during low tides and within a perimeter of turbidity curtains to prevent the dispersal of sediment and turbid water away from the cultivation sites and into surrounding habitat areas. **Special Condition 6** would also require that clam harvest be carried out exclusively with non-motorized hand tools in order to minimize habitat disturbance.

Because HIOC has proposed to discontinue its use of this cultivation method, **Special Condition 6** would also establish a timeline of 18 months for the existing clam rolls to be collected and removed. While HIOC anticipates being able to remove over half (up to 150) of the approximately 270 clams rolls currently in place within the next three to four months, because the clams in the remaining rolls are still well below market size, they would need to remain in place for up to 18 more months in order for HIOC to increase its chance of salvaging and harvesting viable product from them.

In order to help compensate for the adverse impacts to marine resources associated with HIOC's past and limited continuing use of this cultivation method, HIOC included information in its application for permit amendments demonstrating the efforts its staff has made over the past several years and will continue to make over the course of its permit term to benefit the coastal and marine biological resources of Tomales Bay.

As described in the previous section of this report on Fill of Open Coastal Waters, these efforts include two decades of participation in annual Bay Clean Up events; three years of participation in quarterly clean-up events with the other five shellfish aquaculture companies operating in Tomales Bay; as well as more focused efforts to collect and remove roughly 500 feet of fencing that had been illegally installed within lease M-430-15 and commitments to collecting and fully removing all of the abandoned wooden cultivation structures that pre-date HIOC's operations in lease M-430-15 and are still present in the area, including approximately 150 vertical wooden posts that have been in place for at least 25 years.

The removal of these posts from Tomales Bay would open an area of intertidal and subtidal habitat that has been occupied by fill for at least 25 years and would help prevent additional habitat disturbance and displacement in the future as these timbers inevitably break apart and

disperse. Additionally, because these posts may be constructed from treated lumber that could be leaching or dispersing copper and arsenic based compounds into the surrounding water and sediment, their removal would provide additional water quality benefits. **Special Conditions 5 and 11** would memorialize several of these ongoing commitments by requiring HIOC to complete its removal of abandoned aquaculture structures within 24 months of permit issuance and continue its quarterly clean-up efforts.

Proposed Development

In addition to that resulting from the activities described above, smothering and disturbance of benthic habitat would also occur as part of several aspects of HIOC's proposed expansion activities on its four leases. However, the majority of these effects would be associated with the significant proposed expansion of HIOC's basket line/tipping line cultivation areas. Roughly two acres of basket line/tipping line cultivation structures would be installed on leases M-430-11 and M-430-12 but lease M-430-15 is proposed to support significantly more – up to 22.24 acres beyond the 3.1 acres currently in place on that lease. In total, HIOC proposes to install up to 1,000 additional basket lines/tipping lines across these three leases. As detailed in [Appendix B](#), each line would include a total of approximately 38 support posts and anchoring posts, each with a diameter of roughly three square inches. The combined total area that would be occupied by these posts would be nearly 800 square feet, most of which would be located within lease M-430-15.

Although this is a modest area of benthic habitat that would be disturbed and displaced by the installation of PVC posts, it would be dispersed across roughly 38,000 individual sites on the three leases and would therefore be insignificant. In the context of each lease area and Tomales Bay as a whole, the loss of this amount of mudflat habitat and short-term disturbance of adjacent areas due to foot traffic and trampling is not anticipated to adversely affect the biological productivity of the bay or measurably reduce populations of the marine organisms that inhabit and rely on this habitat.

The remaining elements of HIOC's proposed expansion project - including the removal of Stanway cultivation equipment from lease M-430-11 and overlapped racks from lease M-430-12 and the installation of floating culture and racks on lease M-430-12 – would result in a more limited amount of loss and short term disturbance of benthic habitat and would also not lead to significant adverse effects on the biological productivity of coastal waters in HIOC's leases or Tomales Bay.

Benthic Disturbance from Operations

Movement of personnel and equipment to the project sites, as well as maintenance and use of the aquaculture structures, also have the potential to result in disturbance of benthic habitats and eelgrass. This disturbance would be most likely to occur during the transit of project vessels and personnel to and from the cultivation sites, the staging of equipment and supplies for periodic repair and replacement of cultivation structures, and operations on the mudflats such as planting, harvest, and maintenance activities. The activities associated with the development HIOC is proposing and that for which it is requesting after-the-fact approval are similar and will be discussed in combination below. These activities would be carried out during a range of high and low tides and would involve the landing of one or more small project vessels on the mudflats

near the cultivation areas, the loading or offloading of equipment and shellfish, and the movement of project personnel by foot and vehicle among the bottom bags, racks, clam bags, clam rows, basket/tipping lines, or other aquaculture sites.

As detailed in [Appendix B](#), each of HIOC's cultivation areas is configured to include open areas between cultivation structures in order to provide access. The minimum amount of open area per acre ranges from roughly 55% to 83% based on the cultivation method in use, and each line or row of tethered bottom bags, basket/tipping lines, racks, clam rolls, and Stanway units would be separated from adjacent lines by at least several feet to allow access along its length. Mooring of project vessels, offloading of equipment, and movement of HIOC's employees among these access corridors on foot or by vehicle would result in the disturbance, crushing, and damage to benthic habitats and species. Assuming that the majority of planting, harvest, and maintenance activities would be focused within these corridors along each line or row of cultivation equipment, the acreage amounts in Table 8 above reflect the estimated overall activity footprint of HIOC's proposed and "after-the-fact" operations on each lease (rather than simply the area that would be occupied by the gear itself). These areas would be adversely affected during the initial installation of the cultivation structures, and periodically disturbed as a result of their ongoing maintenance and use. Additional areas would also be disturbed during the transit of project vessels to and from the lease, their mooring on tidelands, and the loading and offloading of equipment associated with the installation of the cultivation equipment. Additionally, HIOC's proposed twice monthly use of all-terrain vehicles to support installation, maintenance, harvest and planting operations on leases M-430-12 and M-430-15 would also result in expanded areas of disturbance on these leases.

To address the potential adverse impacts to marine biological resources and species of special biological significance, such as eelgrass, associated with this amount of disturbance to benthic habitats, HIOC has integrated several resource protection measures into its operations. For example, HIOC typically uses consistent vessel access routes when coming and going from its cultivation areas (as shown in [Exhibit 4](#)) and makes use of floating work platforms to temporarily stage equipment in consolidated, secure areas away from benthic habitats. Because eelgrass habitat is present within and adjacent to all four of HIOC's leases, its use of a consistent route limits the amount of eelgrass habitat that its vessels pass through. Because the use of outboard motors through eelgrass habitat at some tidal heights can cause the eelgrass to be cut or uprooted, limiting vessel transit to a single area would protect eelgrass in other surrounding areas.

To memorialize this aspect of HIOC's operations to establish consistent vessel and personnel transit routes that avoid sensitive habitat areas such as eelgrass beds and marine mammal haul-outs, the Commission is requiring in **Special Condition 9** that HIOC continue to implement and adhere to the vessel routes and best management practices included in its application (provided in [Exhibit 4](#)). **Special Condition 9** would also prohibit HIOC's future use of all-terrain vehicles (ATVs) or other wheeled or tracked vehicles on its leases that result in higher levels of benthic disturbance compared to vessel and foot traffic. Although HIOC only proposes to use ATVs on its leases on a twice per month basis, even this limited use would lead to the compaction and alteration of mudflat areas.

Additionally, to prevent benthic disturbance associated with the onsite storage/staging of materials on the lease area – and the potential loss or displacement of equipment into surrounding habitat areas due to current and tidal action - **Special Condition 11** would prohibit the staging and storage of equipment, tools, and materials on HIOC’s cultivation sites (with the exception of materials securely stored on floating work platforms) and require that HIOC implement a variety of measures to avoid and address the accidental loss and displacement of cultivation gear and equipment. Such measures would include regular maintenance inspections during harvest to identify and correct worn or weathered gear at risk of breaking or escaping; clean-up events to recover materials that are accidentally lost; staff training to ensure best management practices are understood and used; and gear marking to help prevent loss and facilitate recovery. Further, **Special Condition 2** also requires that HIOC avoid placement of gear, structures, or equipment on or directly adjacent to areas occupied with eelgrass and make use of only new cultivation areas once eelgrass surveys have been carried out and no eelgrass has been observed. The installation and use of cultivation equipment within such sites would concentrate HIOC’s activities within those portions of its lease areas that are already periodically disturbed by ongoing aquaculture activities and that have historically supported limited eelgrass habitat.

Wildlife Disturbance

Tomales Bay is protected as part of the Greater Farallones National Marine Sanctuary and recognized by the intergovernmental Ramsar Convention as a “Wetland of International Importance.” In addition to supporting a range of rare and sensitive habitat types, it is also home to an abundance of large and small wildlife from harbor seals and sea lions to well over 100 species of resident and migratory birds. HIOC’s proposed operation has the potential to negatively affect a number of these species through disturbance and interference with natural behavior such as foraging and resting.

Marine Mammals

Several of the intertidal mudflat and shoreline areas of Tomales Bay are used as haul-out and resting sites by the bay’s resident population of harbor seals. While none of these areas are located within HIOC’s leases, several can be found along the vessel routes it uses to move between those leases and vessel launch sites as Millerton Point and Marconi Cove (as shown in [Exhibit 4](#)). While HIOC’s vessel routes near Hog Island and Duck Island are located approximately 1,000 feet from the marine mammal use areas on those islands - much farther than the 150 foot minimum buffer distance recommended by the National Marine Fisheries Service - both harbor seals and California sea lions have been observed throughout the waters of Tomales Bay and may be encountered there at any time. Additionally, whale species including the California gray whale may be occasionally present within Tomales Bay’s northern area.

To ensure these species and their critical use areas are appropriately protected, **Special Conditions 3 and 9** would restrict HIOC from installing and using cultivation equipment outside its state water bottom leases and would memorialize HIOC’s commitment (as reflected in its Vessel Management Plan included as [Exhibit 4](#)) to avoid chasing, flushing, or directly disturbing marine mammals during vessel transit, harvest, maintenance or inspection activities. Additionally, **Special Condition 11** would help minimize the loss of aquaculture materials from

HIOC's operations and contribute to the removal of plastic debris materials from the bay that may present an injury risk to marine mammals from entanglement or ingestion.

Shorebirds, Seabirds and Waterfowl

The mudflats and intertidal areas of Tomales Bay – including those within and around HIOC's four lease areas – are widely regarded as critically important foraging habitat for a wide range of resident and migratory seabirds, shorebirds, and waterfowl such as black brant, least tern, dunlin, and several species of plover and sandpiper. Although Tomales Bay also contains extensive mudflat areas outside of HIOC's leases, the intertidal habitat within these leases – particularly lease M-430-15 - is known to support shorebird foraging. To help ensure that this foraging activity continues in these areas and disturbance from HIOC's operations are minimized, **Special Condition 9** would memorialize HIOC's commitment (as reflected in its Vessel Management Plan included as [Exhibit 4](#)) to avoid approaching, chasing, flushing, or directly disturbing shorebirds, waterfowl, seabirds during vessel transit, harvest, maintenance, inspection, and planting operations. In addition, the requirements in **Special Condition 6** would also benefit shorebird and waterfowl foraging within lease M-430-15, specifically, by expediting the phase-out and removal of the approximately 117,000 square feet of mesh netting currently in place on the mudflats as part of HIOC's clam rolls. Once this material is fully removed, access to foraging within these mudflat areas will be improved.

Marine Debris

The shellfish cultivation operations for which HIOC requests after-the-fact authorization and those included within its proposed expanded aquaculture operation include the placement and maintenance of several hundred thousand individual pieces of plastic and PVC in Tomales Bay. This material is associated with the several thousand linear feet of nylon rope that would be used for bottom bag longlines; the tens of thousands of PVC posts that would be used to support the racks and elevated basket lines/tipping lines and to anchor the bottom bag lines; the approximately 270, 400 square foot mesh clam rolls; the approximately 200,000 two-foot wide by three-foot long plastic mesh bottom bags; and up to 115,000 two-foot long by one-foot wide plastic mesh cultivation baskets. As has been well documented in parts of Tomales Bay and Humboldt Bay near shellfish aquaculture operations, some of this material can disperse into the environment as debris – either due to inadequate maintenance and inspection operations or challenging oceanographic conditions (currents, tides, and wave action).

While HIOC has a strong record of careful maintenance and marine debris prevention (as reflected in the Marine Debris Plan included with its application and the results of its baywide clean-up efforts), information submitted to Commission staff over the past several years indicates that loss of cultivation gear and marine debris remains an unresolved issue in Tomales Bay. The use of common gear types, such as similarly designed bottom bags, and the lack of identifying marks or tags on this gear also makes it difficult to determine which operations within Tomales Bay contribute the most and least to this issue. Cultivation equipment, bottom bags and cultivation baskets in particular, have been recovered throughout Tomales Bay and from open coastal beaches in the surrounding region. This equipment has been found smothering eelgrass habitat, buried in mudflats, and dispersed among tidal salt marshes. The durability of the HDPE plastics used for much of the common cultivation equipment means that if it escapes, it can persist in the environment for many decades.

Even once it degrades, plastic in the ocean is increasingly understood to pose a threat to a wide range of marine organisms as it slowly breaks into smaller and smaller pieces over time. At each step in this process, plastic debris can be ingested by, entrap, or entangle marine wildlife, from whales, dolphins, and seals down to sea turtles, seabirds, and fish.

To address the potential ongoing and future release and distribution of marine debris resulting from HIOC's shellfish cultivation operations, the Commission is requiring in **Special Condition 11** that HIOC implement or continue a variety of best practices, including those focused on inspections following storm events; debris reduction trainings for field employees; quarterly cleanup events; gear marking; field storage of tools and construction materials; and comprehensive debris cleaning and removal activities carried out on each bed at the time of its harvest. Although HIOC currently carries out a number of these practices voluntarily – including recently committing to mark all floating cultivation gear (cultivation baskets and tipping bags) – memorializing these practices through operational requirements would help further ensure that they continue in the future. These requirements would reduce the long-term accumulation of debris within cultivation beds, prevent debris generation and loss, and promote recovery of materials lost due to storm action or other unavoidable causes. To further limit potential loss of the most common type of aquaculture debris found in Tomales Bay – bottom bags – **Special Condition 11** would require all bottom bags within HIOC's operation to be affixed to anchoring lines, racks, elevated longlines, or floating longlines when in use. HIOC currently operates consistent with this requirement.

An additional source of aquaculture related marine debris in Tomales Bay and several other areas with long histories of shellfish cultivation has been associated with businesses that have ceased operations and left behind large quantities of equipment, cultivation structures, and gear within intertidal or subtidal lease areas. To address this issue and help ensure that funding is available to carry out clean-up of abandoned operations, the California Fish and Game Commission requires – as part of its leasing of state tidelands – that the lessees deposit funds into escrow accounts so that funding is available to be used in the event that an operation ceases prior to recovering and fully removing its equipment. HIOC has contributed funding to the escrow accounts consistent with this requirement. However, the funds deposited into these accounts have often been based on only rough approximations of clean-up, removal, and disposal costs that do not include an accurate or transparent accounting showing how they were estimated. As such, the funds in the escrow accounts for many aquaculture leases do not appear sufficient to cover actual clean-up costs. While staff of the California Fish and Game Commission and California Department of Fish and Game are working to address this issue, some lessees in Tomales Bay have taken steps to proactively develop and document more accurate clean-up cost estimates or simply to augment the funds in the escrow accounts for their leases. The availability of these funds - in combination with the requirement in **Special Condition 1** that HIOC seek a permit amendment to remove its cultivation equipment from the bay prior to the expiration of its permit and cessation of its operations – would help ensure that HIOC's existing and proposed cultivation equipment is ultimately removed from the bay and does not become marine debris. In other words, these measures would help prevent any subsequent holder of HIOC's lease areas from encountering the same type of debris nuisance that HIOC inherited on its lease M-430-15 and has committed to address (as memorialized through **Special Condition 5**).

Shellfish Species

Some of the most significant marine resource issues associated with the introduction of new shellfish species to aquaculture operations within an area relate to the potential for new invasive marine species to become established or introduced. Because shellfish propagate through the release of reproductive material into the water column and the development of microscopic larvae which drift with the currents and swim for days to weeks before settling, the first introduction or approval of a new species of shellfish to a bay is typically more consequential than subsequent introductions or approvals at new sites within that bay. In other words, once a sufficient number of reproductive shellfish are present within a single site in a bay, they can settle and establish nearly anywhere within that bay. Accordingly, a key factor in evaluating the seven shellfish species proposed by HIOC to be grown on each of its leases is whether or not they are already approved for cultivation and used elsewhere within Tomales Bay. Of the seven shellfish species HIOC proposes to cultivate on each of its four leases, three of them – Pacific oysters, European oysters, and Manila clams – are already specifically included in at least one of HIOC's CDPs. Of the other four species, one is native to California waters – the Olympia oyster – and therefore raises no concern about invasion or establishment. The other three species – Mediterranean mussel, Atlantic/Eastern oyster and Kumamoto oyster - include species of oysters that may have been considered by the Commission in the two of HIOC's CDPs that authorize the cultivation of unspecified types of oysters (CDP Nos. 2-84-2 and 1-94-55). It is difficult to know for certain because both of these CDPs simply refer generally to the cultivation of “oysters” without describing the particular species of oyster.

However, the lease documents submitted with the original applications appear to provide some clarity as to which species of oysters were being considered. The original lease documents for M-430-11 included in the application for CDP No. 2-84-2 notes that “the applicant proposes to cultivate Pacific oysters (*Crassostrea gigas*), Eastern oysters (*C. virginica*), European oysters (*Ostrea edulis*)...” thus suggesting that the unspecified “oysters” approved by the Commission in CDP No. 2-84-2 may have been limited to these three species. If this was the case, Eastern oysters would be a species that the Commission also considered and approved and the only species currently proposed that are not already authorized for use by at least one of HIOC's CDPs would be the non-native Kumamoto oyster and the native Olympia oyster and California mussel.

The lease document submitted with the original application for CDP No. 1-94-55 does not include or discuss any of these three species, noting that the lease is “for the sole purpose of cultivating Pacific oyster (*Crassostrea gigas*), Manila clam (*Tapes japonica*), and bay mussel (*Mytilus edulis*).”

Assuming that these CDPs authorized the same oyster species described in the original lease documents, the only types of shellfish HIOC is proposing to cultivate that are not already authorized for use by at least one of its CDPs are the non-native Kumamoto oyster and Mediterranean mussel and the native Olympia oyster. As previously noted, the Olympia oyster is a species native to and present within many of California's marine ecosystems are will therefore not be discussed further. Potential adverse impacts to coastal resources associated with cultivation of the Kumamoto oyster and Mediterranean mussel are further discussed below.

Mediterranean mussels

Similar to the Pacific oyster, this is a species that is not native to California that has been brought here and many other places throughout the world for aquaculture. In California, the Mediterranean mussel has already become well established and extremely abundant in the wild. Surveys by Suchanek et al. (1997) demonstrate that it is now among the most abundant mussel species between Marin County and San Diego, and research by Geller (1999) suggests that since the 1900s, the Mediterranean mussel may have completely replaced and/or hybridized with the native blue mussel (*Mytilus trossulus*) between Monterey Bay and San Diego.

Given the existing abundance of this species throughout both the project area and the wider California coastline, the proposed cultivation efforts by HIOC would have an insignificant contribution to the continued presence of the species in the area. The proposed location of HIOC's mussel cultivation areas (subtidal portions of leases M-430-10, M-430-12, and M-430-15) does not introduce a source of reproductive material to current systems and larval transport pathways that are not currently available to the species. Several existing aquaculture leases in Tomales Bay already include Mediterranean mussels as an approved species (including HIOC's lease M-430-11). The water column at the project site is therefore likely to already contain Mediterranean mussel larvae from both wild and cultivated populations and the proposed project is therefore unlikely to result in the release of reproductive material for this species in an area in which none currently exists.

Kumamoto Oyster

Based on information available on the California Non-native Estuarine and Marine Organisms (Cal-NEMO) database, a joint effort by the California Department of Fish and Wildlife and the Smithsonian Environmental Research Center, the Kumamoto poses little or no risk of escaping cultivation or becoming established in California's marine waters:

This species has been spawned in hatcheries and cultivated on the West Coast of the US and Mexico without any documented natural reproduction (Hedgecock et al. 1993; Coan et al. 2000; Washington Sea Grant 2002; Caceres-Martinez et al. 2012). Plantings of this oyster in Atlantic France, Brazil, and Tasmania have not resulted in reproduction or in successful commercial culture (Simoes Ramos et al. 1986; English et al. 2000; Goulletquer et al. 2002).

...

*Dates of the introduction of *Crassostrea sikamea* to the West Coast of the US are uncertain, because this oyster was long regarded as a variety or subspecies of the Pacific Oyster (*C. gigas*). Websites of some oyster farms state that culture started in the 1940s, but Hedgecock et al. (1993) trace the two major cultured stocks to two separate importations in the 1970s. One was by the Oregon Oyster Company, which reared the oysters at the Hatfield Marine Science Center in Newport, Oregon (OR). Some oysters from this importation were later reared by Taylor Shellfish Inc. in Puget Sound, Washington (WA). This stock included oysters with *C. sikamea* morphology and genotypes, but also many hybrids with *C. gigas* morphology. A second stock was imported around the same time by the Coast Oyster Co. and initially reared in Humboldt Bay, California (CA). Of the 29 individuals examined, one was *C. gigas* by morphology and genotype. Reproduction of both stocks was/is dependent on hatcheries and apparently limited by low water temperature (Washington Sea Grant*

2013). However, natural reproduction is not known even in the warm waters of Pacific Mexico, where C. sikamea is cultured (Cáceres-Martinez et al. 2012). Currently, the Kumamoto Oyster is less widely cultured on the West coast than C. gigas, but it is highly regarded for good flavor and a good quantity of meat despite its small size. It also benefits from the absence of spawning during the summer months, when other oysters are spawning and less desirable (Washington Sea Grant 2013). In the USA, the Kumamoto Oyster is currently cultured in Puget Sound, WA; Yaquina Bay, OR; Humboldt Bay, CA; Tomales Bay, CA; and Morro Bay, CA (Hedgecock 1993; Moore et al. 2014). It is also reared in Bahia San Quintin, Mexico (Cáceres-Martinez et al. 2012). There is no reported evidence for reproduction of C. sikamea in North American waters.

In addition, HIOC has informed Commission staff that it has been cultivating Kumamoto oysters in Tomales Bay for many years. During this time, there have been no records or reports from Tomales Bay of Kumamoto oysters establishing in the wild.

Conclusion

Although the Commission finds that the project (comprised of both the proposed development and that for which HIOC is requesting after-the-fact approval) has the potential to adversely impact marine resources and the biological productivity of coastal waters, with implementation of **Special Conditions 1** through **13**, the project would be carried out in a manner in which marine resources are maintained, species of special biological significance are given special protection, the biological productivity of coastal waters is sustained, and healthy populations of all species of marine organisms will be maintained. In addition, the proposed project, as conditioned, is expected to maintain the biological productivity of coastal waters appropriate to maintain optimum populations of marine organisms. The Commission therefore finds that the proposed project, as conditioned, is consistent with the marine resource sections (Sections 30230 and 30231) of the Coastal Act.

E. ALLEGED VIOLATION

As noted above in the Summary, violations of the Coastal Act exist on the subject property, including, but not limited to, installation and use of on- and off-bottom shellfish cultivation structures and equipment for many years across roughly 17 acres in Tomales Bay; operation of all-terrain vehicles (ATVs) within intertidal mudflats; disturbance and damage to sensitive eelgrass habitat; and operation of mechanical shellfish harvesting equipment. In response to notification by Commission permitting and enforcement staff about these Coastal Act violations, as well as its desire to carry out additional proposed development, HIOC submitted this application to amend its four CDPs. Approval of this application pursuant to the staff recommendation, issuance of the amended permits, and the applicant's subsequent compliance with all terms and conditions of those permits would result in resolution of the above described violations.

Although development has taken place prior to the submission of these Coastal Development Permit amendment applications, consideration of the applications by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Commission review and action on these permit amendments does not constitute a waiver of any legal action with regard to the alleged violations, nor does it constitute an implied statement of the Commission's position

regarding the legality of development, other than the development addressed herein, undertaken on the subject sites without coastal permits or permit amendments. In fact, approval of these permit amendments is possible only because of the conditions included herein, and failure to comply with these conditions would also constitute a violation of these permits and of the Coastal Act. Accordingly, the applicant remains subject to enforcement action just as it was prior to these permit amendment approvals for engaging in unpermitted development, unless and until the conditions of approval included in these amended permits are satisfied.

Failure to comply with the terms and conditions of these amended permits may result in the institution of enforcement action under the provisions of Chapter 9 of the Coastal Act. Only as conditioned is the proposed development consistent with the Coastal Act.

F. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the Commission's administrative regulations requires Commission approval of coastal development permit or amendment applications to be supported by a finding showing the applications, as modified by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act ("CEQA"). Section 21080.5(d)(2)(A) of CEQA prohibits approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant impacts that the activity may have on the environment. As described above, the project as conditioned herein incorporates measures necessary to avoid any significant environmental effects under the Coastal Act, and there are no less environmentally damaging feasible alternatives, nor additional feasible mitigation measures. Therefore, the proposed project is consistent with CEQA.

2-81-40-A1; 2-84-2-A1; 2-84-10-A1 and 1-94-55-A1 (Hog Island Oyster Company, Inc.)

Appendix A: Substantive File Documents

Coastal Development Permits and Application Materials:

Coastal Development Permit Application Nos. 2-81-40-A1, 2-84-2-A1, 2-84-10-A1 and 1-94-55-A1 associated files.

Coastal Development Permit Nos. 2-81-40, 2-84-2, 2-84-10, 1-94-55, E-11-029; E-12-012-A1; 9-17-0646; 9-18-0002-A1; 9-18-0278

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CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



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**2-81-40-A1; 2-84-2-A1; 2-84-10-A1; 1-94-55-A1
(HOG ISLAND OYSTER COMPANY)**

FEBRUARY 8, 2019

APPENDIX B

3.1.1 Bottom Bags

Bottom bags are typically made from ½-inch VEXAR mesh bags measuring approximately 2 feet by 3 feet (Figures 5 to 6). The bags are stocked with oysters and then attached to parallel 3/8-inch bottom lines that are typically 100 feet to 200 feet long with the use of a stainless-steel (SS) snap hook.

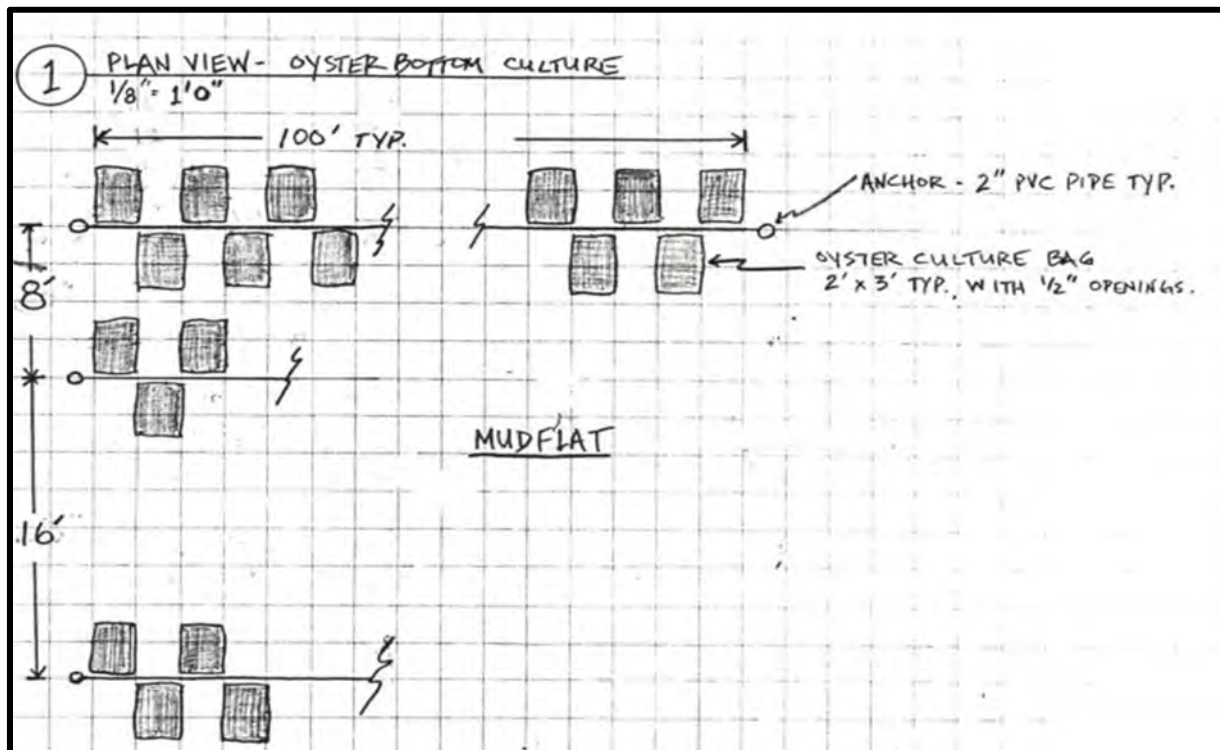


Figure 5. Typical On-Bottom Bag Culture Layout

Note: HIOC does not currently include a 16-foot space between groups of bottom bags. The plan shown is otherwise correct.



Figure 6. Photograph of On-Bottom Bag Culture with Oysters.

The line is typically anchored at either end to 2-inch polyvinyl chloride (PVC) pipe, or a similar type of post, that is driven into the ground at a sufficient depth to prevent loss. During planting, bags are distributed in secured bundles to their designated lines at a sufficient tide to bring the boat alongside the bottom lines. On the next low tide series (typically the same or following day), the bags are removed from the bundle and attached to the bottom lines. Monthly and/or quarterly maintenance is performed by flipping the bags from one side of the rope to the other by using a hook, which reduces fouling on the bag, tumbles the oysters, redistributes them in the bag, and helps to keep them from being buried. During this process, oysters are also harvested and/or removed from the line for grading and culling, after which point the remaining population remains in the bags for further grow-out. All culling and grading takes place on land at HIOC's facilities.

Harvesting oysters includes floating a boat alongside the lines, generally within a water depth of 1 foot to 3 feet, and the crew releases the SS snap hooks from the bottom line and places the bags on the boat for transport. Alternatively, oysters are harvested at a 4-foot to 6-foot tide by use of a boat mounted crane, which lifts the bags on the line individually onto the boat. Harvests of bottom bags generally takes place between 12 to 18 months after planting. Bottom bags are used in leases M-430-10 (1.93 acres), M-430-11 (1.82 acres), and M-430-15 (1.76 acres).

3.1.2 Clam Bags

Clam bags are typically made from ¼-inch VEXAR mesh bags measuring 30 inches by 18 inches by 4 inches (Figures 7 to 8). The bags are stocked with one shovel full of 3/8-inch minus pea gravel and clams. Bags are closed using galvanized hog rings at both ends.

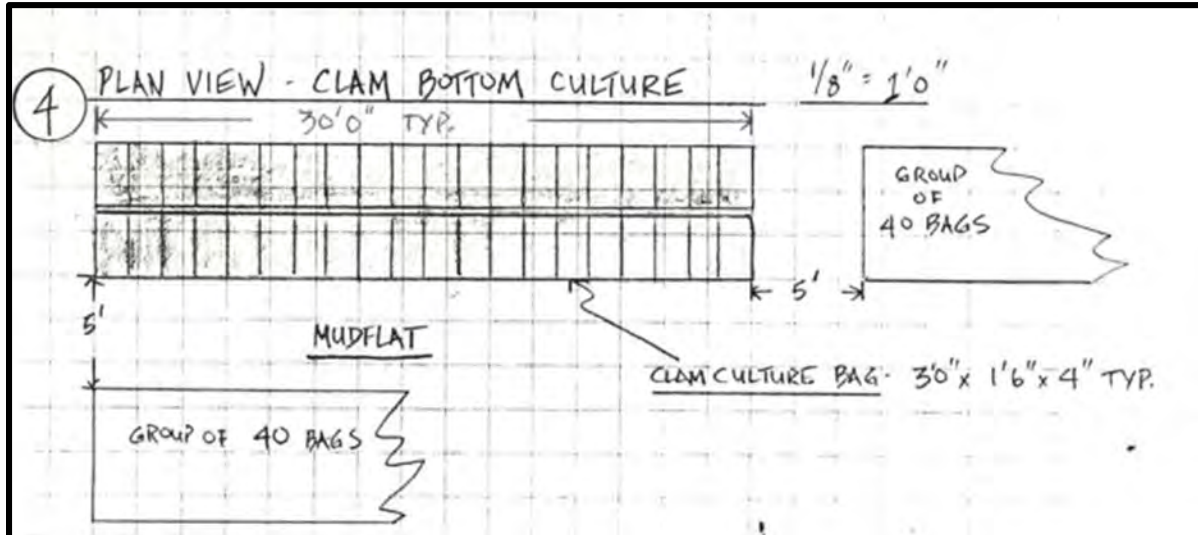


Figure 7. Typical On-Bottom Clam Bag Layout

Note: HIOC does not currently include a 5-foot space between groups of clam bags. The plan shown is otherwise correct.



Figure 8. Photograph of On-Bottom Bag Culture with Clams.

Planting clam bags is scheduled with tide availability and consists of first conveying the clam bags to the predetermined planting area during a high tide by boat, and on the subsequent low tide (typically the same or next day) a shallow trench (3 inches or less) is dug into the mud in parallel rows. After evenly distributing clams and gravel in the bag, the bags are placed into the depression alongside each other and the mud that was scraped off is put back on top the clam bags. Monthly checks are done on the clam bags to insure placement and growth. Occasional maintenance is performed on clam bags generally following storms to ensure that they are in place.

Approximately 2 to 4 years after planting, clam bags are harvested from their planting area. Harvest entails removing the bags from the mud, at which point they are shaken to remove sediment before being loaded onto a boat for transport. All culling and grading takes place on land at HIOC's facilities. The harvest generally takes place with 1 foot to 3 feet of water to allow easy access and loading of the bags onto the boat. Bottom bags are used in Lease No M-430-15 (0.03 acres).

3.2 Off-Bottom Culture Methods

3.2.1 Racks-on-Pipe

Racks-on-pipe typically consist of a 2-foot by 8.5-foot rebar frame to which 4.5-inch VEXAR mesh bags typically measuring 2 feet by 3 feet are attached (Figures 9 to 10). After racks are stocked with oysters, they are placed into the rows by boat during a high tide. On the next low tide series (usually the same or following day), the racks are organized and placed into the notch on their 4 PVC pipe legs. PVC pipe legs are typically 12 inches to 24 inches above grade. A row of racks is typically 300 feet to 600 feet long with 2.5 feet between each rack (front to back). Rows of racks run parallel to each other. There are typically two rows of racks with 3 feet of space between them (left to right) and then a 12-foot to 15-foot space until the next two rows.

Racks are monitored and tipped monthly during their grow-out period. On a quarterly basis, after initial planting, racks can be culled and graded. The harvest of racks entails the crew removing the racks from their PVC legs and placing them on a boat for transport, typically done with 2 feet to 3 feet of water to allow the boat to come up alongside the rows of racks for easier handling by the crew. Alternatively, oysters are harvested at a 4-foot to 6-foot tide by use of a boat mounted crane, which lifts the racks on the line individually onto the boat. Currently, all culling and grading takes place on land at HIOC's facilities. Final harvest of racks is typically 9 to 12 months after the initial planting date.

Racks-on-pipe are used at leases M-430-10 (1.06 acres), M-430-11 (1.69 acres), M-430-12 (0.78 acres), and M-430-15 (1.66 acres).

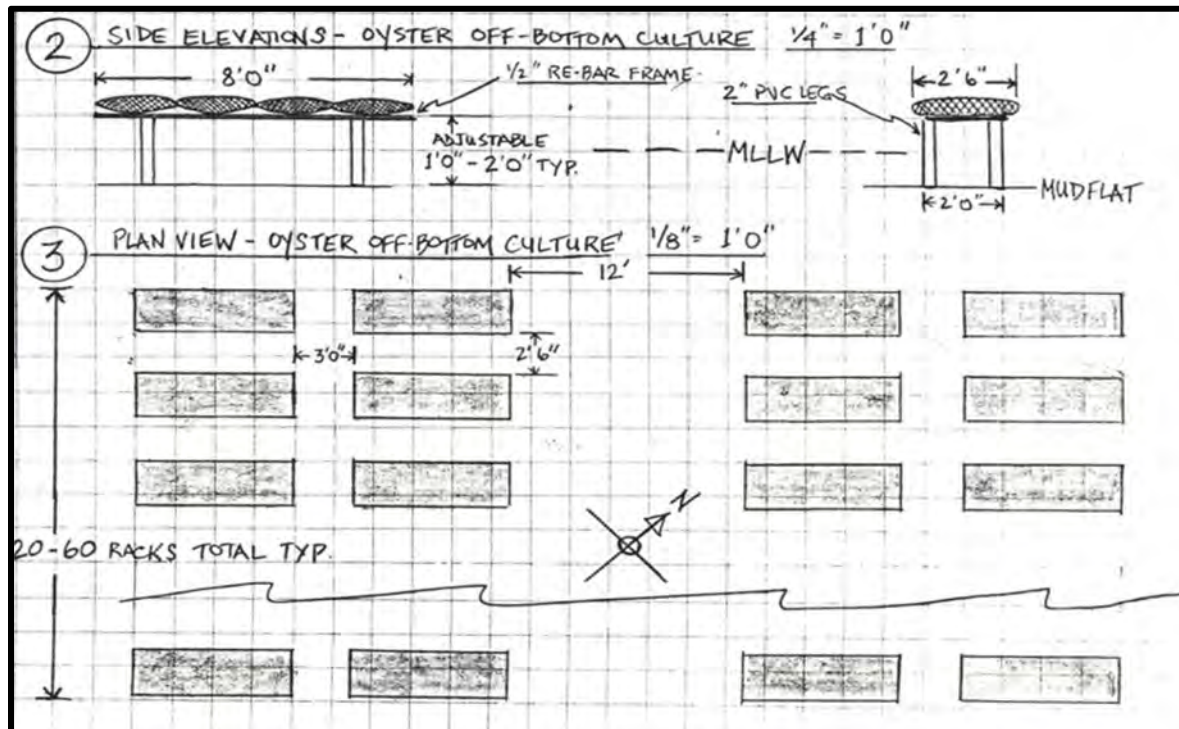


Figure 9. Typical Off-Bottom Racks-on-Pipe Layout



Figure 10. Photograph of Off-Bottom Racks-on-Pipe used by HIOC

3.2.2 *Overlapped Racks*

In growing areas with heavy wind and wave action, HIOC uses an overlapping rack design to help the racks absorb and deflect the energy from the waves (Figures 11 to 13), which reduces rack displacement. This method is used at all leases: M-430-10 (0.15 acres), M-430-11 (0.50 acres), M-430-12 (0.55 acres), and M-430-15 (0.97 acres). This culture method is typically used at the lower end of the rows where wave action is heaviest. The general layout includes 5 or 10 racks that are overlapped followed by a 5-foot space, except in Lease No. M-430-12, where up to 30 racks can be overlapped followed by a 5-foot space. Planting, maintenance, and harvest would take place as described in the section above for racks-on-pipe.

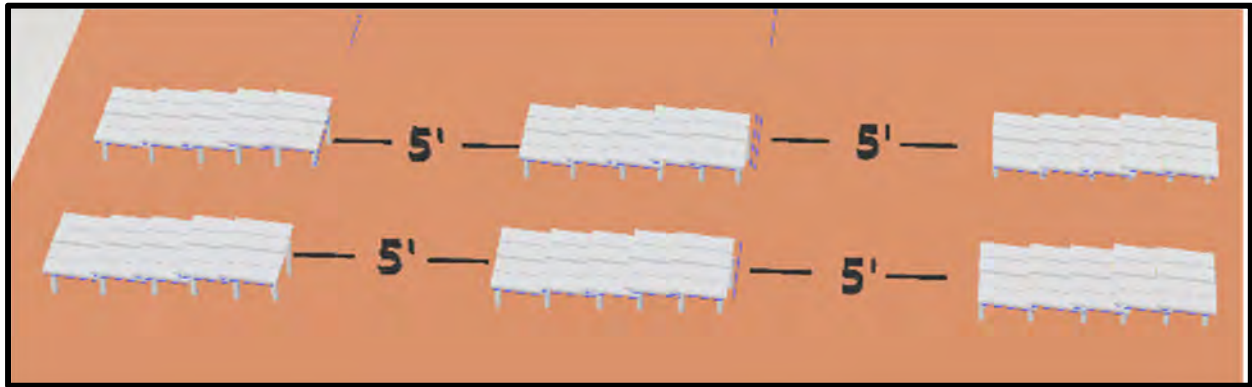


Figure 11. Typical Spacing between Sections of Overlapped Racks

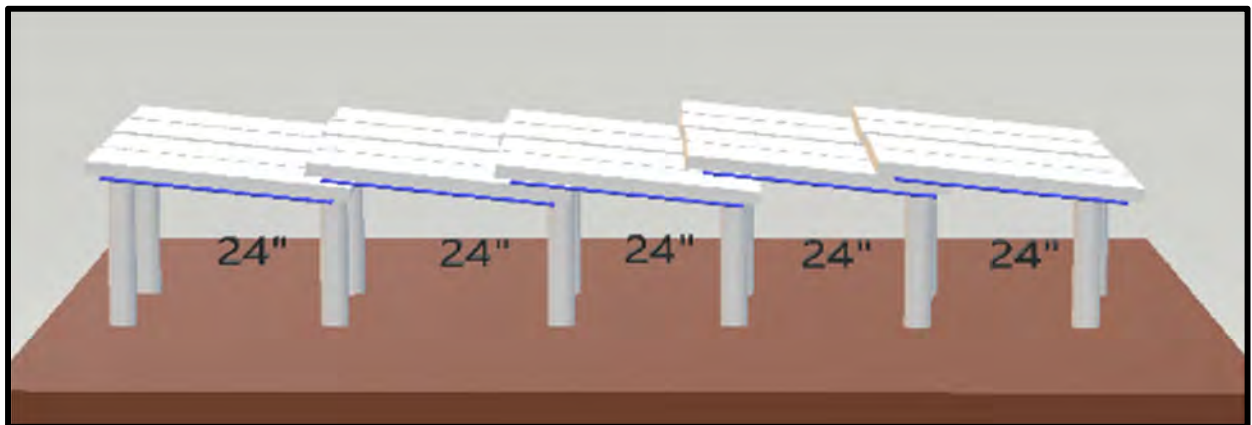


Figure 12. Typical Overlapped Racks Spacing: Side View



Figure 13. Photograph of Off-Bottom Overlapped Racks used by HIOC

3.2.3 Intertidal Longlines

Longlines are typically 100 feet to 300 feet long with anchor posts at either end and supporting posts typically every 8 feet (Figures 14 to 15). There are spaces of approximately 30 inches to 60 inches between lines, and an additional space of 15 feet between grouped sections of 4 lines. The anchor posts are typically galvanized steel pipe, T-stakes, or other suitable materials, and are used to maintain line tension. The supporting posts in between the lines are typically made of schedule 80, 2-inch PVC. Longlines can be 1 foot to 4 feet in elevation above the ground. Lines between the posts are plastic coated with a steel core. Covering that inner line is an outer sleeve that is added to reduce wear.

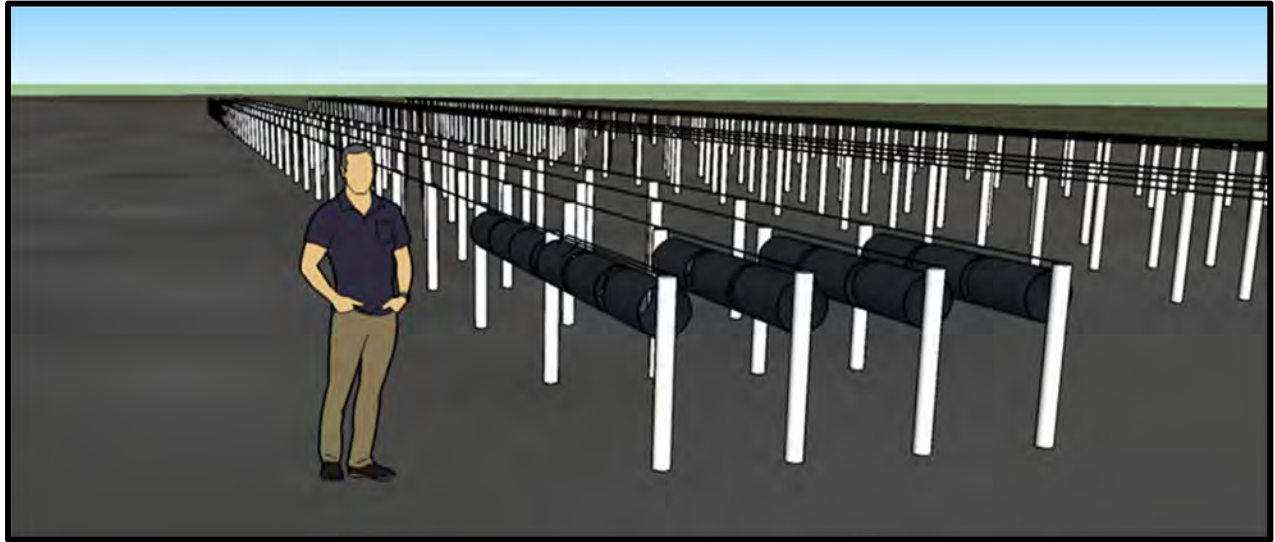


Figure 14. Diagram of Multiple Longlines with Baskets

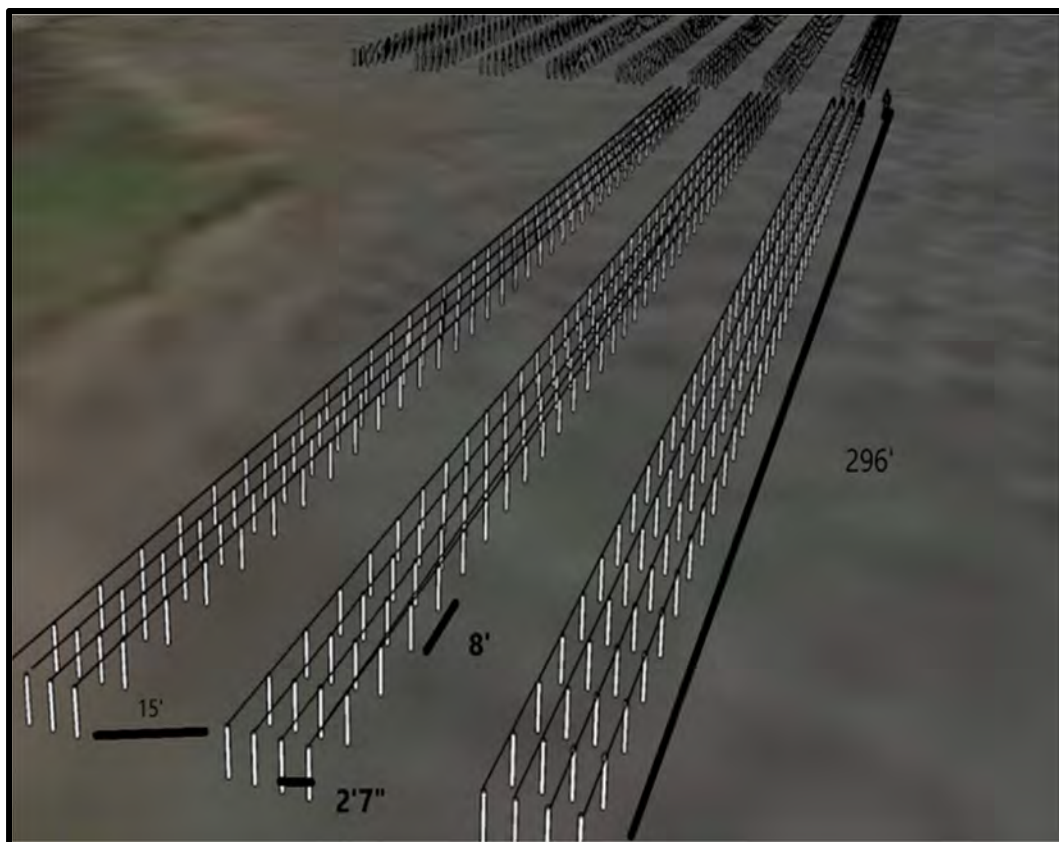


Figure 15. Digital Representation of Longlines

Longlines can hold either bags or baskets with or without floats (Figure 16 to 17). The bags that are used on the longlines are the same as those used in bottom culture, which are typically 2 feet by 3 feet with $\frac{1}{2}$ -inch mesh, and can be attached to the line using a SS snap hook or plastic clip

that connects to a plastic bearing. Bags attached to longlines have a small crab float attached to them opposite of the attachment to the longline. Floats are attached to the bag using 3/8-inch polypropylene line. Baskets attached to longlines are typically 2 feet to 4 feet long by 1.5 feet in diameter and are made of high-density polyethylene (HDPE).



Figure 16. Photograph of Tipping Bags Attached to Longlines used by HIOC

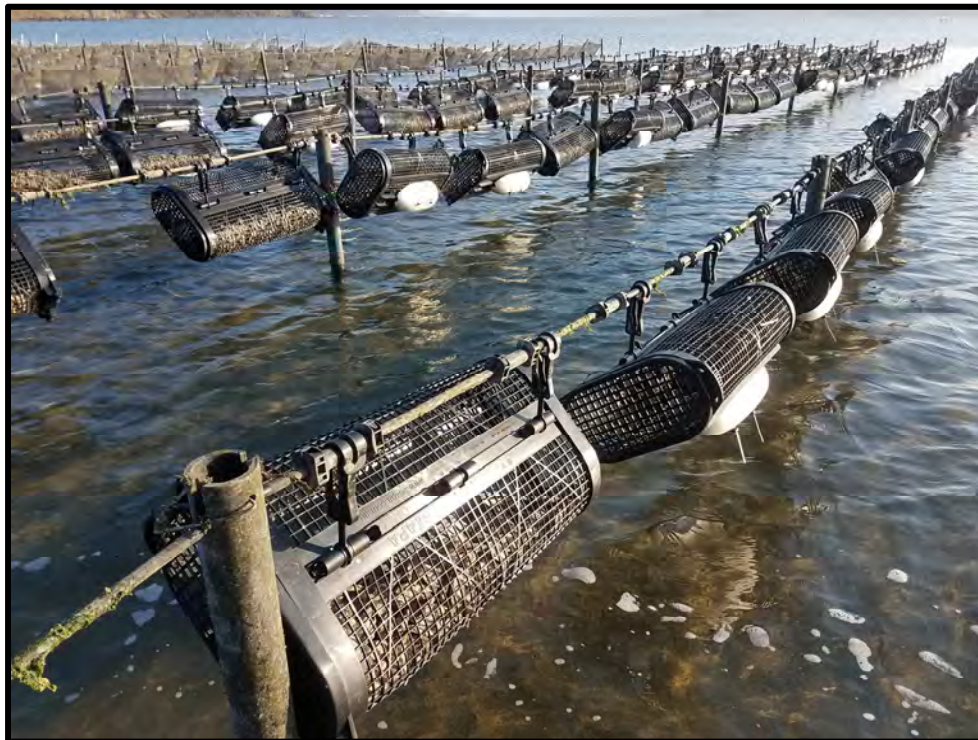


Figure 17. Photograph of Longlines with Baskets used by HIOC

After stocking the bags or baskets with oysters, they are transported to the growing areas via boat. The boat runs alongside the longlines and bags/baskets are clipped directly onto the line. Monthly and/or quarterly visits are made to check condition and/or harvest and grade. All culling and grading takes place on land at HIOC's facilities.

Longlines are used at Lease No. M-430-15 (2.07 acres) and 4 lines are located at Lease No. M-430-12 (0.60 acres). In addition, there is a culture method that is being phased out called Stanway units that is used at Lease No. M-430-10 (0.36 acres). These are modified racks that have baskets on top. These are being converted to longlines. All culture gear that has floats are currently in the process of being branded with the company name and phone number.

3.2.4 Subtidal Floating Longlines

Floating longlines are typically 100 feet to 300 feet long (Figures 18 to 20). The lines are anchored at either end with concrete, or appropriately sized Danforth anchors, and chain and/or rope. A single line extends from the mooring to the surface where it is attached to a spacing bar measuring approximately 3 feet. From this spacing bar, two lines, approximately 3 feet apart, run along the surface to the other end where the mooring and attachment system is repeated. In this way, two lines are attached to a single mooring system. There is a 15-foot space between each pair of lines. Floating longlines are used to secure baskets, which are the same type of basket used in intertidal longlines, measuring approximately 2 feet to 4 feet long and approximately 1.5 feet in diameter. There are floats threaded to the line in between each basket. Floating longlines are visited monthly and/or quarterly to check condition and/or harvest and grade. All culling and grading takes place on land at HIOC's facilities.



Figure 18. Photograph of What Floating Longline Look Like at the Water's Surface



Figure 19. Photograph of the Types of Baskets on Floating Longline used by HIOC

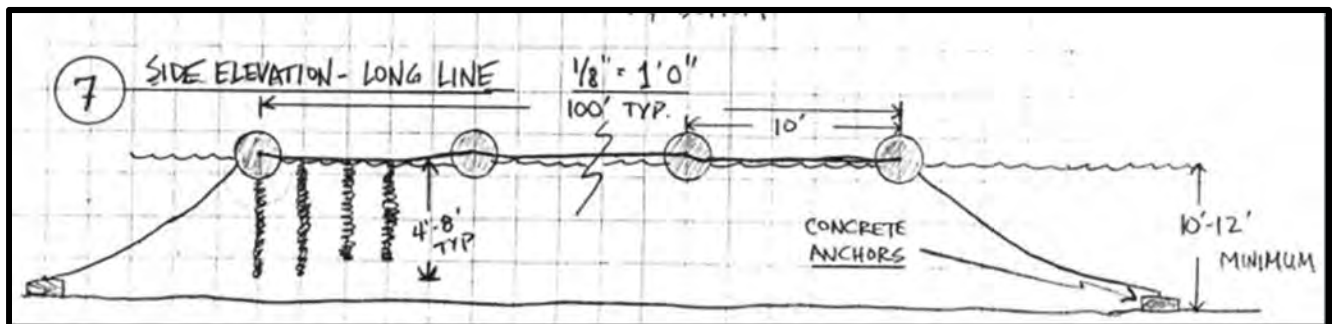


Figure 20. Diagram of Suspended Longline/Sentinel Mussel Layout

Floating longlines are used at Lease No. M-430-12 (0.24 acres), comprised of 10 floating lines. One floating line at Lease No. M-430-15 (<0.05 acres) is currently used to hold sentinel mussels for sampling by California Department of Public Health (CDPH).

Clam Rolls

Clam rolls are made from $\frac{1}{4}$ -inch VEXAR mesh, typically measuring 4 feet by 100 feet, and laid out in parallel rows (Figure 21). Before placement of the roll, the ground is tilled to allow for clams to bury themselves. This is followed by broadcast seeding within the predetermined footprint. After the mesh is laid out, it is anchored to the mudflat using $\frac{1}{2}$ -inch rebar staples or weighted down with rebar along the edges.



Figure 21. Photographs of Clam Rolls used by HIOC

At harvest time, approximately 2 to 4 years after planting, the mesh is removed (as needed) and a water rake is used to collect the clams (Figure 22). The rake is operated in 6 inches to 1-foot of water by a gas-powered pump that uses water to move the sediment and clams through a box with ½-inch mesh (Figure 23). The mesh retains the clams and allows for sediment to resettle. This technique reduces the total amount of substrate affected by HIOC's clam harvest as compared to historic methods, like using clam rakes. The pump itself is kept in a dingy or container to help prevent the potential of gas spilling.



Figure 22. Photograph of Clam Rake and ½-inch Mesh Basket used with the Clam Rake



Figure 23. Pump used to Operate the Clam Rake

Tray Barges

Tray barges have hanging Seapa baskets that hang below the floating barge. The barges are 25'x8' with a 4'x8' plywood deck directly over the floats at either end. The middle of the tray barge has 7 2" diameter aluminum poles with rope approximately 15' between each. This minimizes the need for multiple anchors. If multiple tray barge chains were used, they would be spaced approximately 20' apart. Tray barge anchors are located at 38° 12.271'N, 122° 56.158'W and 38° 12.261'N, 122° 56.165'W. Pictures of the existing tray barges are shown in Figures 4 and 5. A diagram of the tray barge design is included as Figure 6. The current locations of the tray barges are shown in Figure 14.



Figure 5: Picture of Existing Tray Barge Used for Seapa Baskets

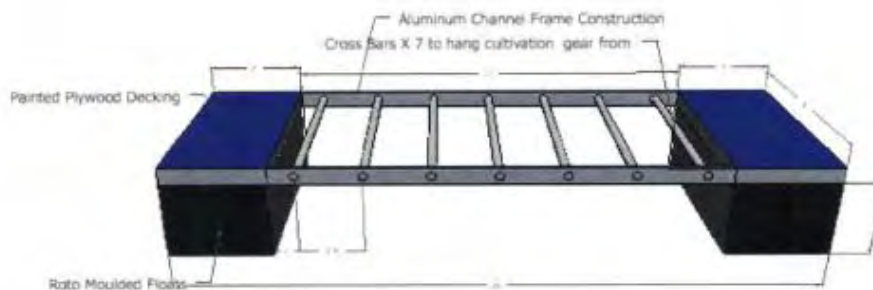


Figure 6: Diagram of Tray Barge Design

Table 2 – Proposed Total Amount of Each Cultivation Type and Density

Culture Type	#/Acre	% Coverage/Acre	% Uncovered/Acre	Total Gear Proposed¹
Overlapped Racks (5 Overlap)	1190 racks	45%	55%	1,297
Regular Racks	622 racks	29%	71%	4,534
Bottom Bags	3111 bags	42%	58%	9,706
Clam Bags	3872 bags	33%	67%	17,850
Floating Culture	10 lines	17%	83%	107
Seapa/Tipping Bags	36 lines	32%	68%	1,052

¹Total Gear Proposed is approximate based on the estimated maximum amount per acre. Planting limitations and operational considerations will govern the total number of each cultivation type planted, which will be less than the maximum represented in this column.

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



F14a-d

**2-81-40-A1; 2-84-2-A1; 2-84-10-A1; 1-94-55-A1
(HOG ISLAND OYSTER COMPANY)**

FEBRUARY 8, 2019

APPENDIX C

Documents from CDP No. 2-81-40 for Lease No. M-430-10

631 Howard Street, 4th floor
San Francisco, California 94105
(415) 543-8555 Ext. 252

FILED: 10/9/81
49th DAY: 11/27/81
ETING OF: 11/3-5/81
STAFF: Edward F. Biels

STAFF REPORT - CONSENT CALENDAR

APPLICANT: James T. Hollibaugh/Great American Oyster Company

PERMIT NUMBER: 2-81-40

PROJECT LOCATION: Leased tidelands in Tomales Bay, approximately half way between Tom's Point and Miller Park, Marin County

PROJECT DESCRIPTION: Placement of racks and stakes for cultivation of giant Pacific oysters on no more than 5 acres of submerged tidelands.

STAFF RECOMMENDATION:

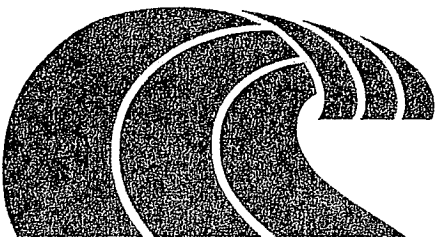
The staff recommends that the Commission adopt the following resolution:

I. APPROVAL WITH CONDITIONS.

The Commission hereby grants a permit for the proposed development subject to the conditions below, on the grounds that as conditioned, the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. CONDITIONS

1. Notice of Receipt and Acknowledgement. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.



3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. FINDINGS AND DECLARATIONS

1. Site Description. The site of this project is a 5 acre area of tidelands which has been leased by the California Department of Fish and Game to the applicant for mariculture purposes. The lease area has been designated as Lease No. 430-10, which expires in 2006.

2. Project Description.

This project proposes to rear giant Pacific oysters (Crassostrea gigas) from seeded cultch, which will be grown either on racks or stakes, depending on water depth. Visible structures would be poles supporting reflectors which would be 4 feet above the water surface at highest high water. These structures would be on racks at the west corners of the lease. According to the State Department of Fish and Game, the area proposed for culture is not highly visible, it is sheltered from wave and wind action and herring fishing is not pursued in the area. In addition the area in the vicinity of the allotment receives minimal use from fisher men and recreational boaters because of shallow water and dense growth of eel grass.

3. Relationship of the Project to Coastal Act Policies. The County of Marin has prepared a Land Use Plan for the Tomales Bay area (Local Coastal Program, Northern Marin County, Unit II). The Coastal Commission has conditionally certified the plan. The County is now preparing the necessary zoning ordinances and other materials to implement the Land Use Plan.

The approved Land Use Plan devotes considerable attention to the issue of mariculture in Tomales Bay. The Plan generally supports and encourages mariculture in the coastal zone, while recognizing that mariculture uses must be balanced with the need to provide for other uses, such as commercial fishing, recreational clamming and boating, and the need to protect coastal wildlife, water, and visual resources.

The Land Use Plan includes specific policies which seek, among other things, to:

- Limit the total acreage of Tomales Bay which is devoted to mariculture to 900 acres during the next 5 years (819 acres are currently allotted or leased by the Department of Fish and Game, of which only a small portion is presently in use).
- Enhance flexibility in mariculture operations by reducing the size of and tenure of new allotments and leases. (Existing allotments and leases would be unaffected).
- Protect eelgrass beds in the bay which are a very significant resource to fisheries and wildlife.
- Avoid the importation of exotic fish, shellfish or other species into Tomales Bay.
- Provide sufficient on-shore support facilities to accommodate the mariculture operations.
- Maintain public access to and along the shoreline of the bay and boating access within the bay.

The project is consistent with the Land Use Plan in that:

- a) It will occur in an area allotted by the State Department of Fish and Game for mariculture purposed;
- b) It will be sited in such a way as to avoid placement of structures in areas with eelgrass growth;
- c) No exotic fish, shellfish or other species will be imported into Tomales Bay,
- d) Existing facilities exist (Johnson Oyster Co.) for processing shellfish; an existing marina will be utilized for transfer; and
- e) Public access and boating will not be affected by the project.

Therefore, for all of the reasons stated above this project is consistent with the public access and public recreation policies of Chapter 3 of the Coastal Act of 1976.

[illegible]

State of California, Edmund G. Brown Jr., Governor
North Central District
California Coastal Commission
631 Howard Street, 4th floor
San Francisco, California 94105
(415) 543-8555 Ext. 252

COASTAL DEVELOPMENT PERMIT NO: 2-81-40

Page 1 of 2

File
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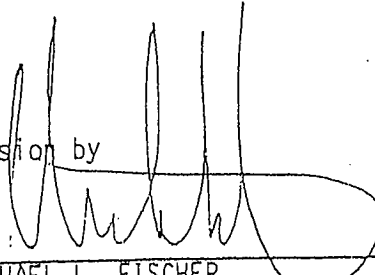
CALIFORNIA
COASTAL COMMISSION

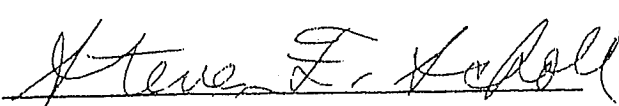
On November 4, 1981, The California Coastal Commission granted to
James T. Hollibaugh/Great American Oyster Company
this permit for the development described below, subject to the attached
Standard and Special conditions.

Project Location: Leased tidelands in Tomales Bay, approximately half way
between Tom's Point and Miller Park, Marin County

Project Description: Placement of racks and stakes for cultivation of giant
Pacific oysters on no more than 5 acres of submerged
tidelands. (Mariculture Lease No. 430-10)

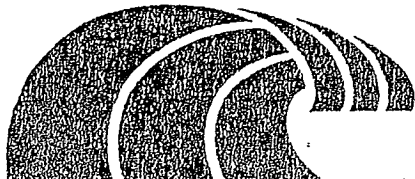

Issued on behalf of the California Coastal Commission by


MICHAEL L. FISCHER
Executive Director
and


North Central District Manager

ACKNOWLEDGEMENT

The undersigned permittee acknowledges receipt of
this permit and agrees to abide by all terms and
conditions thereof.


Nov 13 1981 
Date Signature of Permittee

RECEIVED

NOV 11 1981

CALIFORNIA
COASTAL COMMISSION

STANDARD CONDITIONS:

1. Notice of Receipt and Acknowledgement. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
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3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

File # 2-81-70
MARIN COUNTY
ENVIRONMENTAL PROTECTION COMMITTEE

MINUTES

February 25, 1982

RECEIVED
MAR 25 1982
CALIFORNIA
COASTAL COMMISSION

PRESENT: Pierre Joske, Director of Parks & Recreation (Chairman)
Marge Macris, Planning Director
Ray Thomson, Director of Public Works
Mehdi Sadjadi, Secretary
James T. Hollibaugh, Applicant for Tidelands Permit No. T-81-08

1. T-81-08, Great American Oyster Co., State Water Bottom Allotment 430-10

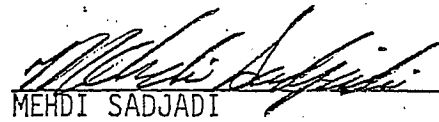
Tidelands Permit to construct shellfish cultivation structures in Tomales Bay to be used to grow shellfish to marketable size. After harvesting, the process of growing shellfish would be repeated.

This permit was continued from the February 11, 1982, meeting at which time the Negative Declaration was granted. After viewing the site and questioning the applicant in detail about his operation; the size, shape and location of the allotment; and the effect of this operation on recreational boating activities, the Committee was able to make all of the required findings in order to grant the permit, subject to the following conditions:

1. No oyster racks shall be installed within area of the leasehold where eelgrass is identified and located.
2. The racks shall be removed and the area returned to its original conditions if the lease is abandoned for any reason.

The Committee stated for the record that future requests for facilities will be reviewed for possible adverse affect on boating in Tomales Bay.

APPROVED WITH CONDITIONS


MEHDI SADJADI
Secretary



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
211 MAIN STREET
SAN FRANCISCO, CALIFORNIA 94105

SPNCO-RN
No. 14381N63

17 November 1981

CALIFORNIA COASTAL COMMISSION
NORTH CENTRAL REGION
1050 NORTHGATE DRIVE, SUITE 130
SAN RAFAEL, CA 94903

RECEIVED
NOV 7 1981
CALIFORNIA
COASTAL COMMISSION

Gentlemen:

Mr. James Hollibaugh of Great American Oyster Company, 3282 Hagen Road, Napa, California 94558, has applied for a Department of the Army permit to place shellfish cultivation structures in a 5-acre State Lease area of Tomales Bay, between Hog Island and Preston Point. The attached drawings show layout detail of the structures. The structures would be used to grow juvenile shellfish to marketable size. After harvesting, new juvenile shellfish would be placed in the lease area and the grow-out process repeated.

Please expedite your comments to this office and, if your agency has permitting authority over the above-described work, please indicate whether you have received an application and, if so, the status of that application. If you have any questions concerning this matter, please call or write Mr. Paul Portch of our Regulatory Functions Branch (telephone 415-556-5426). Please address correspondence to the District Engineer, and refer to the file number at the head of this letter.

Sincerely,

CALVIN C. FONG
Chief, Regulatory
Functions Branch

1 Inclosure
As stated

#14381N63

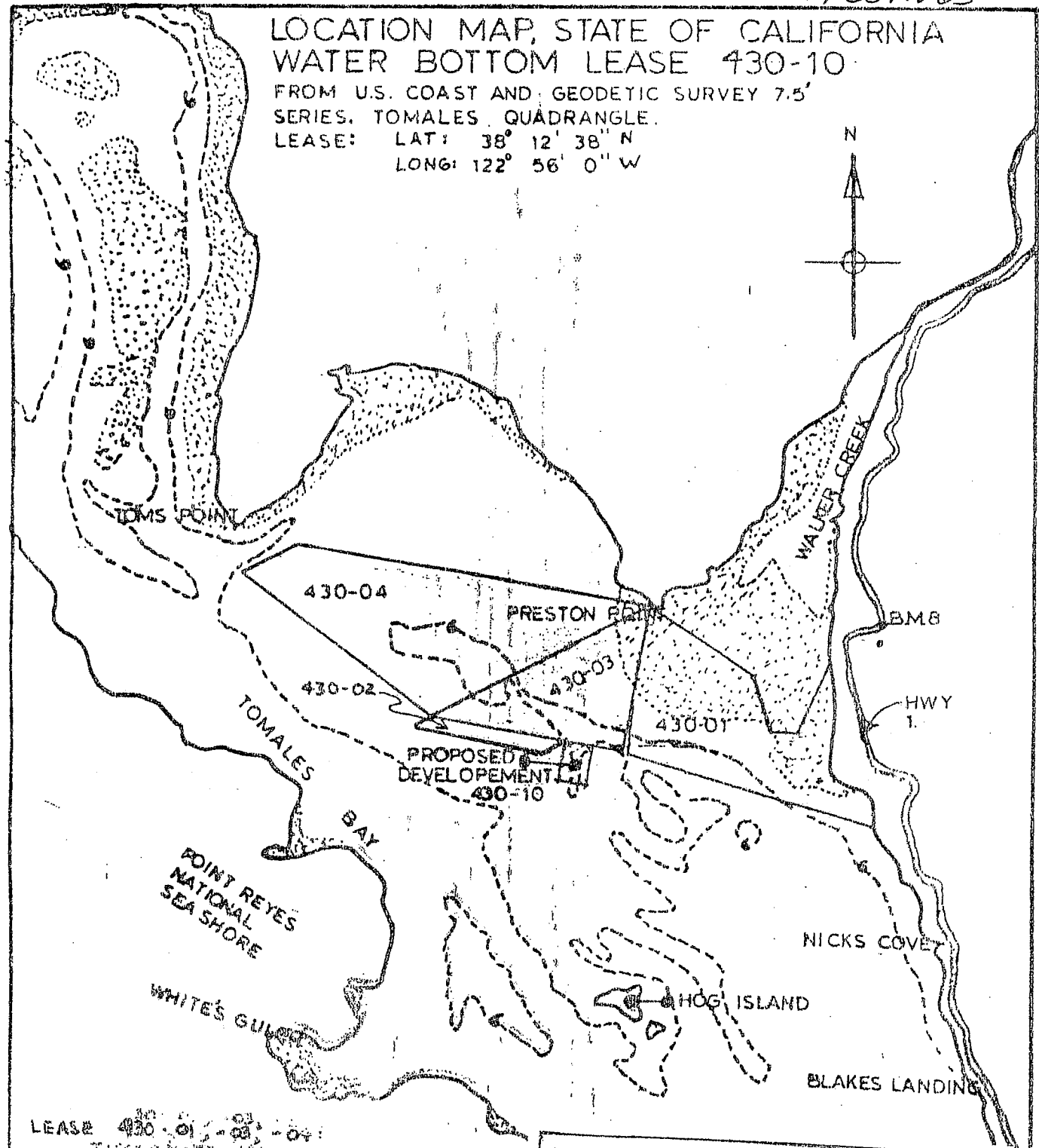
LOCATION MAP, STATE OF CALIFORNIA
WATER BOTTOM LEASE 430-10

FROM U.S. COAST AND GEODETIC SURVEY 7.5'

SERIES. TOMALES QUADRANGLE.

LEASE: LAT: 38° 12' 38" N

LONG: 122° 56' 0" W



LEASE 430-01, 430-02, 430-03, 430-04

INTERNATIONAL SHELLFISH FARM LTD
P.O. BOX 100
MILL LANDING CA 92038

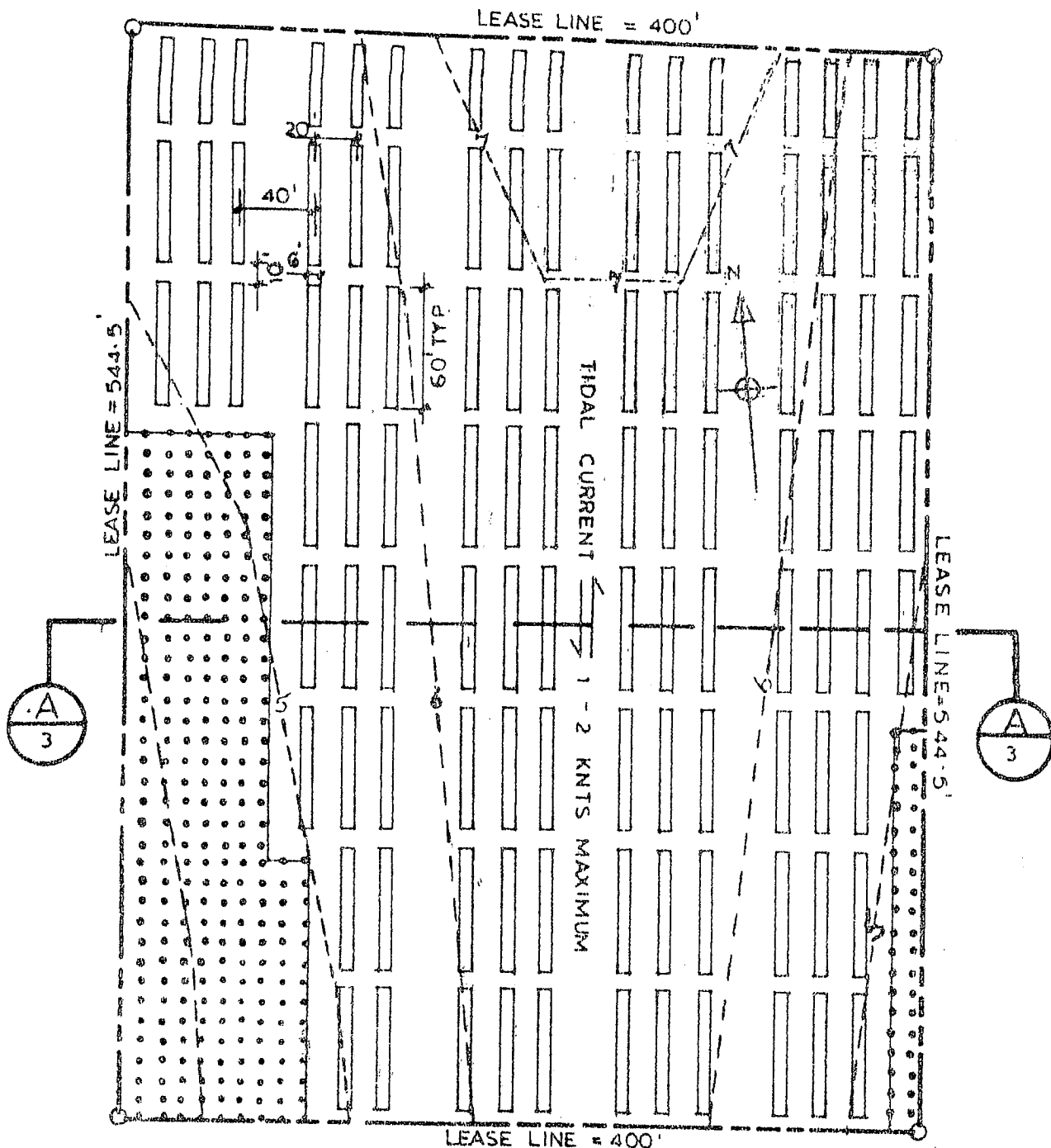
LEASE 430-05

AND AREILA P.H.A.
1986 PASO CEVERA
SAN DIEGO CA 92129

PROPOSED SHELLFISH CULTIVATION
IN TOMALES BAY, MARIN COUNTY,
CALIFORNIA
APPLICATION BY: Great American
Oyster Company
Sheet 1 of 4

2 Nov 81

#14381N63



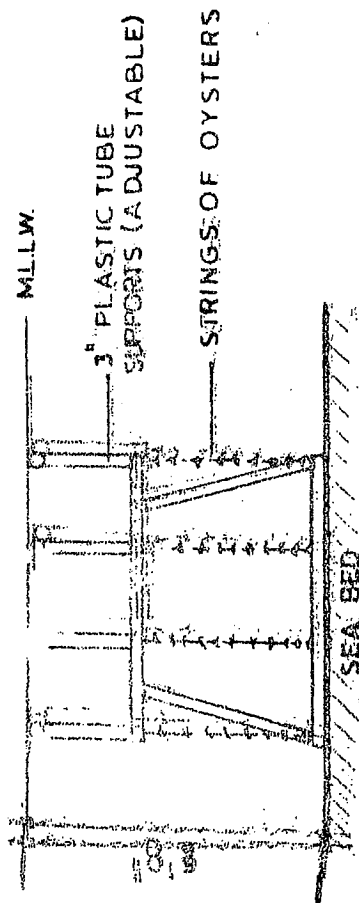
Plan at maximum development proposed for oyster culture on California State Waterbottom Lease Number 430-10 showing approximate position of racks and stakes (oblongs and dots, respectively) used to ~~grow~~ growing oysters. Racks or stakes will not be placed in or within five feet of Zostera (eelgrass) beds. Spacing on stakes variable North/South direction 2-10 feet. Contours give depth below Mean Lower Low Water. SCALE 1"=80' 10"

PROPOSED SHELLFISH CULTIVATION
IN TOMALES BAY, MARIN COUNTY,
CALIFORNIA
APPLICATION BY: Great American
Oyster Company
Sheet 2 c

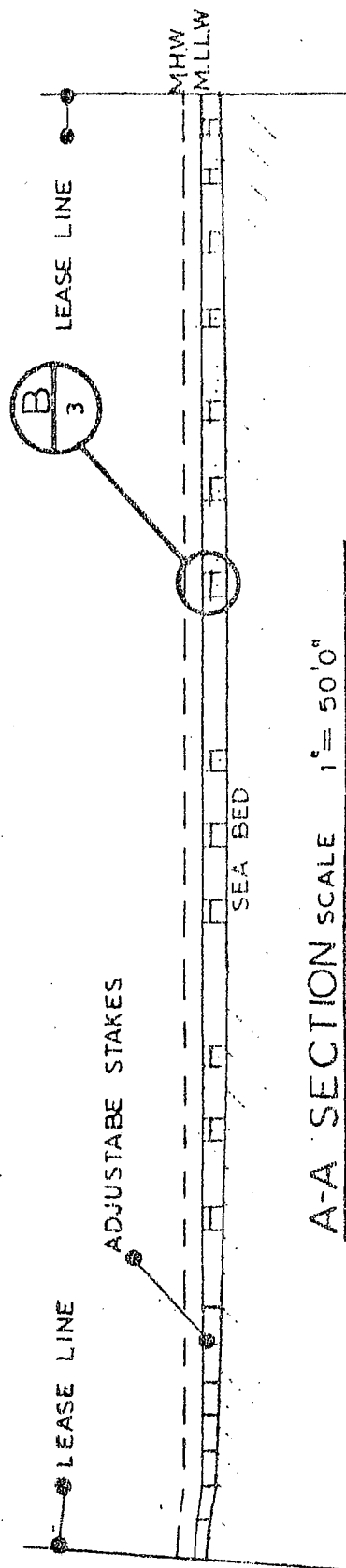
2 Nov 81

#14381N63

CROSS SECTION AND END
ELEVATION OF SUPPORT RACKS.
TO BE CONSTRUCTED OF
1.2" OR 3" DIA P.V.C PIPE OR
SIMILAR MATERIAL



END ELEVATION SCALE $\frac{1}{4}'' = 1'0''$

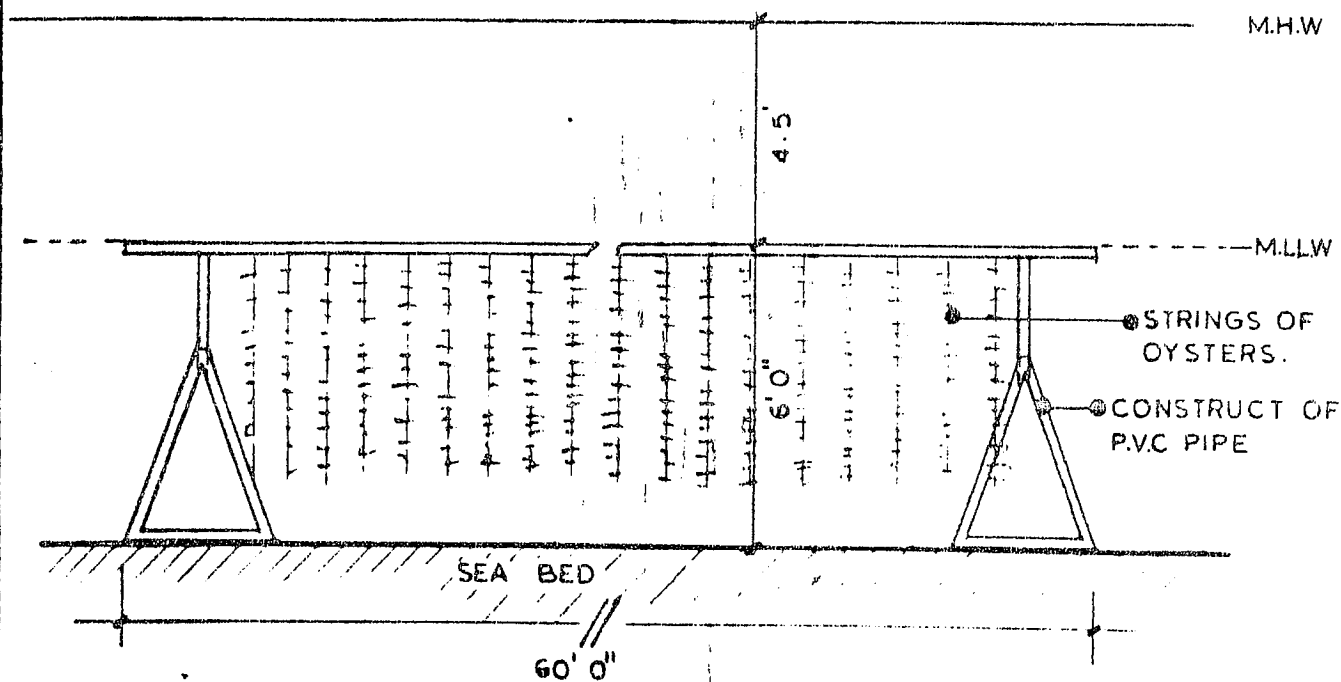


A-A SECTION SCALE $1'' = 50'0''$

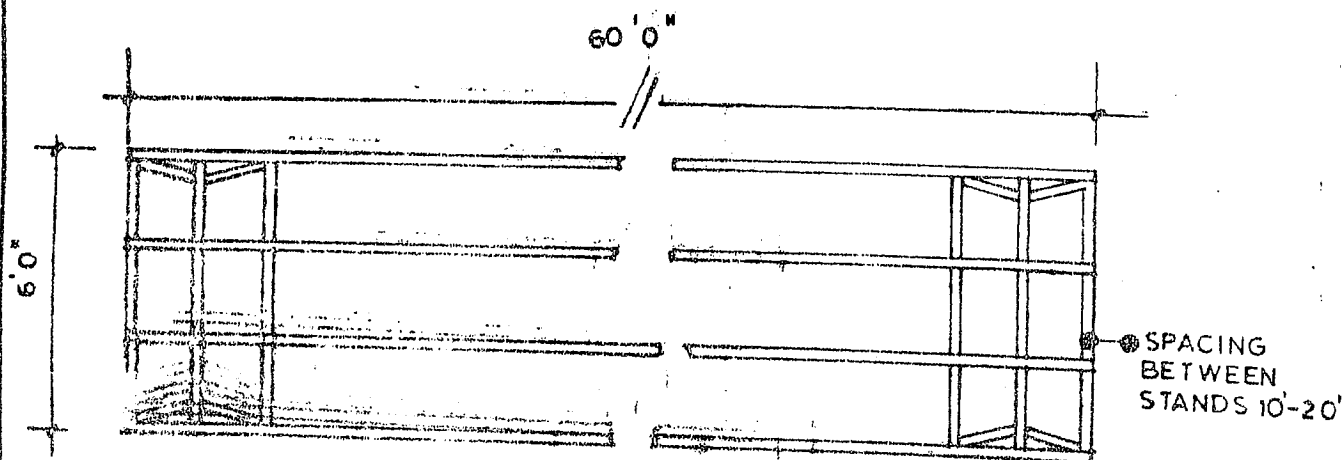
PROPOSED SHELLFISH CULTIVATION
IN TOMALES BAY, MARIN COUNTY,
CALIFORNIA
APPLICATION BY: Great American
Oyster Company
Sheet 3 of 4
2 Nov 81

14381N63

PLAN VIEW AND SIDE ELEVATION OF
OYSTER RACKS. TO BE CONSTRUCTED OF
1, 2" AND 3" DIA P.V.C PIPE OR SIMILAR
MATERIAL



SIDE ELEVATION OYSTER RACKS SCALE $\frac{1}{4}'' = 10''$



PLAN VIEW OYSTER RACKS SCALE $\frac{1}{4}'' = 10''$

PROPOSED SHELLFISH CULTIVATION
IN TOMALES BAY, MARIN COUNTY,
CALIFORNIA
APPLICATION BY: Great American
Oyster Company
Sheet 4 of 4
2 Nov 81

California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, California 94105
(415) 543-8555

Permit Application No. 2-84-2

3-1-84

ADMINISTRATIVE PERMIT

APPLICANT: Hog Island Shellfish Farms

PROJECT DESCRIPTION: State Water Bottom Lease #430-11 for oyster culture.

PROJECT LOCATION: State Water Bottom Lease #430-11, Tomales Bay, Marin County

EXECUTIVE DIRECTOR'S DETERMINATION:

Pursuant to PRC Section 30624, the Executive Director hereby determines that the proposed development, subject to Standard and Special Conditions as attached, is in conformity with the provisions of Chapter 3 of the Coastal Act of 1976, will not prejudice the ability of the local government to prepare a Local Coastal Program that is in conformity with the provisions of Chapter 3, and will not have any significant impacts on the environment within the meaning of the California Environmental Quality Act. Any development located between the nearest public road and the sea is in conformity with the public access and public recreation policies of Chapter 3.

Additional reasons for this determination, and for any special conditions, may be discussed on the reverse (Page 2).

NOTE: The Commission's Regulations provide that this permit shall be reported to the Commission at its next meeting. If one-third or more of the appointed membership of the Commission so request, a permit will not be issued for this permit application. Instead, the application will be removed from the administrative calendar and set for public hearing at a subsequent Commission meeting. Our office will notify you if such removal occurs.

This permit will be reported to the Commission at the following time and place:

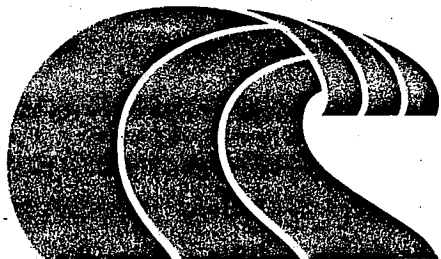
Date: Wednesday, March 14, 1984

PLACE: Grosvenor Airport Inn
380 South Airport Boulevard
South San Francisco, California
(415) 873-3200

TIME: 10:00 A.M.

IMPORTANT - Before you may proceed with development the following must occur:

For this permit to become effective you must sign Page 2 of the enclosed duplicate acknowledging the permit's receipt and accepting its contents, including all conditions, and return it to our office. Following the Commission's meeting, and once we have received the signed acknowledgment and evidence of compliance with all special conditions, we will send you an authorization to proceed with development.



MICHAEL L. FISCHER
Executive Director

by:

Edward F. Bielski

EDWARD F. BIELSKI

Permit Analyst

STANDARD CONDITIONS:

1. Notice of Receipt and Acknowledgement. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
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4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

EXECUTIVE DIRECTOR'S DETERMINATION (continued):

See Page 3

SPECIAL CONDITIONS: NONEACKNOWLEDGEMENT OF PERMIT RECEIPT/ACCEPTANCE OF CONTENTS:

I/We acknowledge that I/we have received a copy of this permit and have accepted its contents including all conditions.

Applicant's Signature_____
Date of Signing

EXECUTIVE DIRECTOR'S DETERMINATION (Continued):

Section 30233 of the Coastal Act provides in part, that the filling of open coastal waters shall be limited to (among others) aquaculture. A very small amount of fill in the form of oyster racks will be placed on State Water Bottom Lease #M430-11. The State Department of Fish and Game has found that no irreversible modification of the environment will result from the proposed action and that no mitigation measures are required. The Department found that "the benefits accrued through the production of high quality protein oysters would more than compensate for any minor infringement that may occur on public use of the Bay. Support frames used for holding oysters will also provide an attachment surface for marine organisms and additional habitat and attraction for species of fish used by sportsmen. The cultivation of oysters in the area considered would have no detrimental effect on the marine, bird, or animal populations utilizing the Bay. Minimum restrictions on recreational or commercial boating activities are expected because deepwater areas of the Bay were purposely avoided."

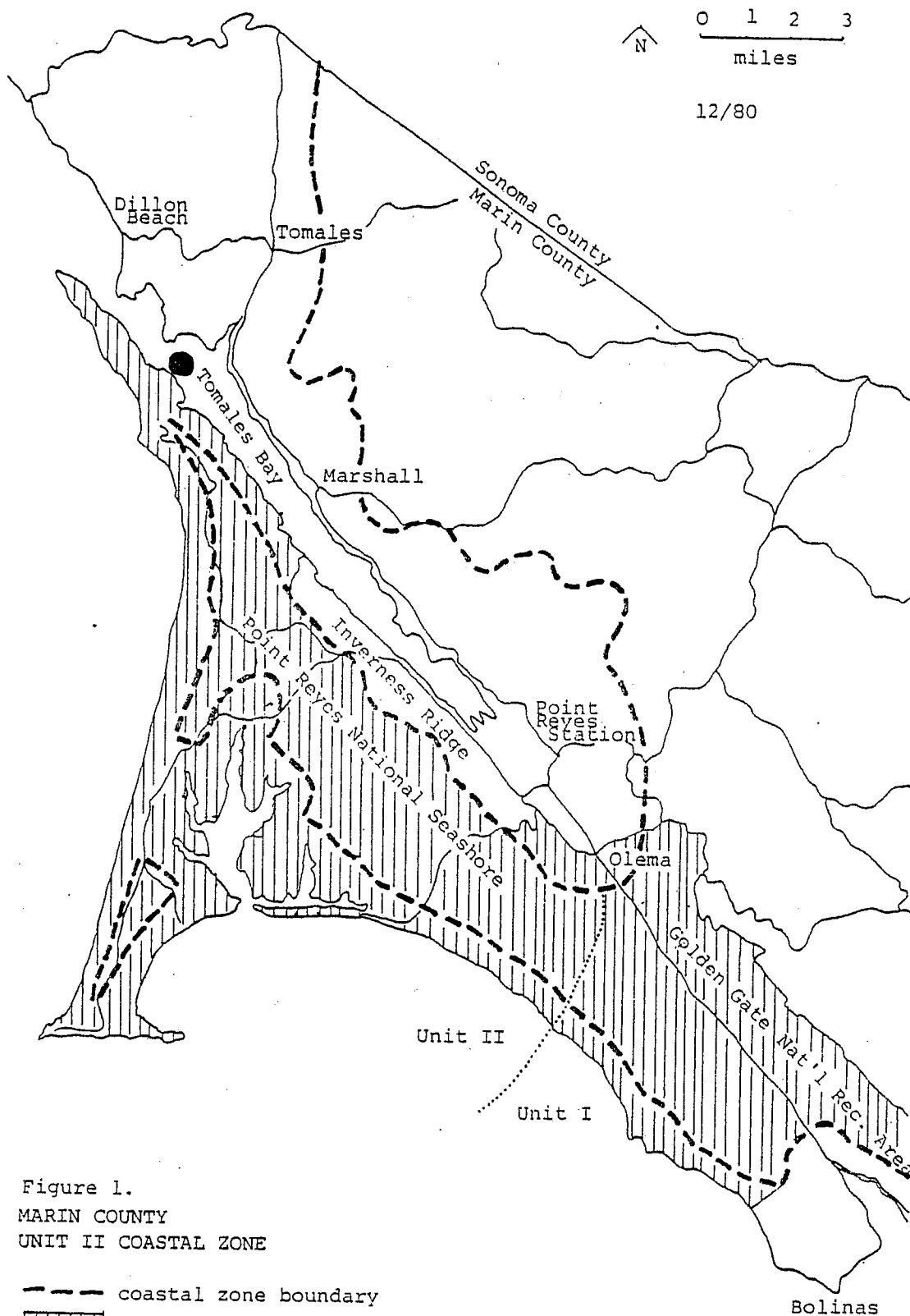


Figure 1.
MARIN COUNTY
UNIT II COASTAL ZONE

--- coastal zone boundary
 [hatched box] federal parklands

EXHIBIT A

PROJECT LOCATION

2-842

HOG ISLAND SHELLFISH
FARMS

LOCATION MAP, STATE OF CALIFORNIA WATER BOTTOM LEASE 430-11

FROM U.S. COAST AND GEODETIC SURVEY 7.5'
SERIES. TOMALES QUADRANGLE.

LEASE: LAT: 38° 12' 38" N
LONG: 122° 56' 0" W

SCALE: 1:24000

0 1000 2000 3000 4000 5000 FEET

0 1 MILE

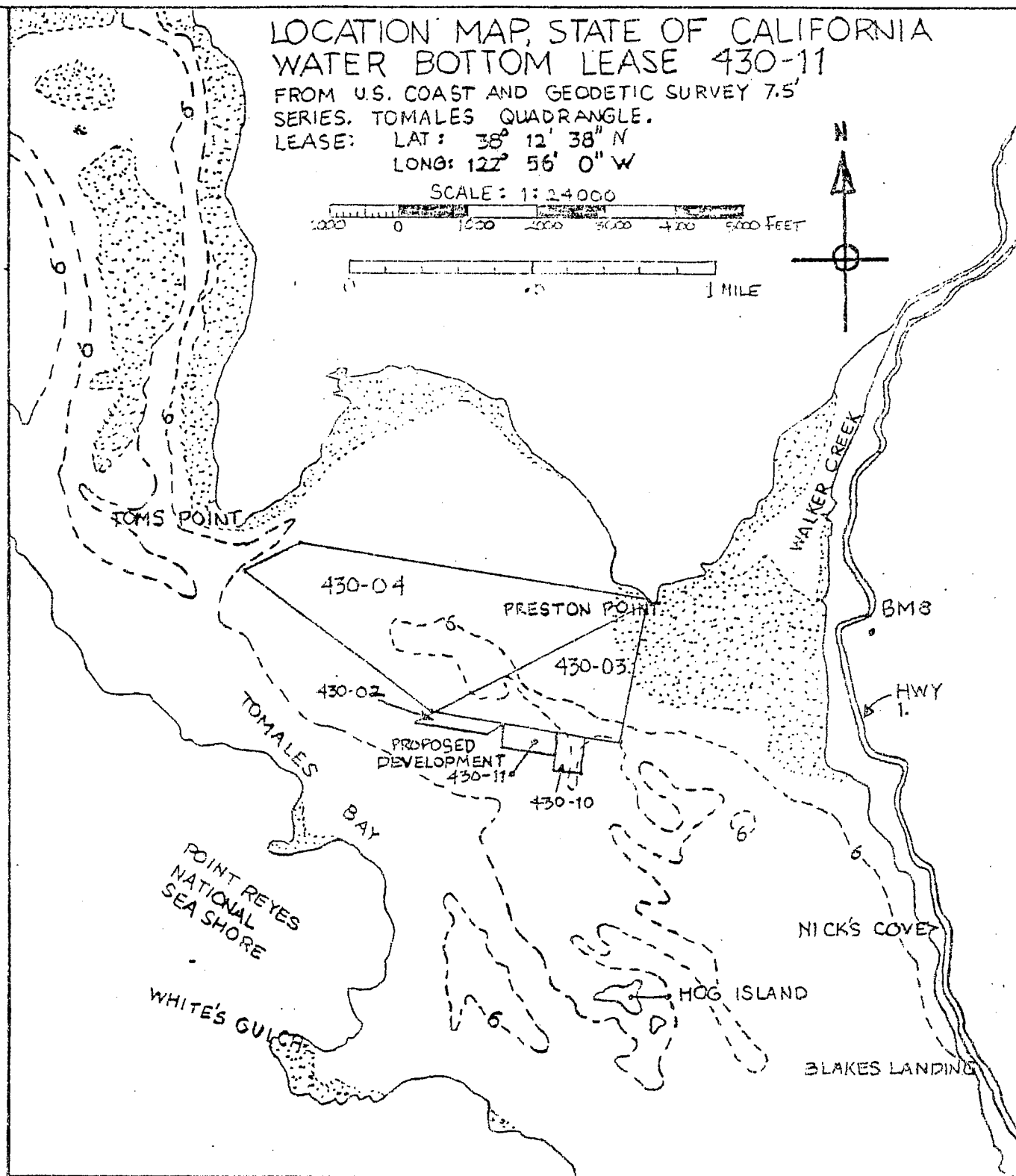
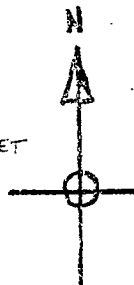


EXHIBIT B

2-84-2

HOG ISLAND SHELLFISH PROPOSED SHELLFISH OPERATION

PURPOSE: COMMERCIAL SHELLFISH CULTIVATION

DATUM MEAN LOWER LOW WATER, U.S.G.S.

ADJACENT PROPERTY OWNERS:

- ① LEASE 430-02: BAY BOTTOM BEDS CO.
260 SUNSET WY. BOX 262
STAR RTE. MUIR BEACH, CA.
- ② LEASE 430-10: GREAT AMERICAN OYSTER CO.
2001 LARSEN RD.

IN TOMALES BAY
NEAR MARSHALL
COUNTY OF MARIN STATE CALIFORNIA
APPLICATION BY JOHN FINGER

DEVELOPMENT PLAN FOR STATE OF CALIFORNIA

WATERBOTTOM LEASE 430-11

The objective of this project is to provide structures for the off-bottom culture of shellfish (i.e. oysters, mussels, clams). Seed purchased from commercial sources would be grown to market size using several different methods: Seed attached to substrates such as oyster shell or rope would be supported by stakes, or suspended by racks; single seed would be enclosed in trays and plastic mesh bags and supported by racks.

The depth over most of the lease is less than 5' below Mean Lower Low Water. All structures placed on the lease would not exceed a maximum height of 1' above MLLW. In addition, no structures would be placed in or within 5' of any Zostera marina (Eelgrass) existing on the lease.

A stake and rope unit (hereafter called long-lines) would consist of a 100' length of rope supported at 4' to 6' intervals by stakes. (Fig. C) Stakes would be constructed of a suitable material, probably 1" ID PVC, or metal bar or wood; and would be driven 1' to 2' into the substrate. Seed-bearing substrate would be attached to the rope at 12" to 16" intervals. Long-lines would be placed with their long axes roughly parallel to the tidal current vectors, and would be arranged side by side in groups of four, with 3' to 5' spacing between each line. Groups would be spaced 20' apart in

the long dimension and 20' apart in the short dimension.

(Sheet 4, PLAN)

Racks with trays or bags would be placed on some of the deeper areas of the lease. (Sheet 4, PLAN) Racks would be constructed of a suitable material (reinforcing metal bar, plastic pipe, or wood) and would be approximately 12' long by 4' wide. (Fig. A&B) Up to 8 trays or bags would be attached per rack. These would be made using a dark-colored plastic mesh, so as to reduce the visual impact from Highway 1.

Racks would probably be placed with their long axes parallel to the tidal current vectors and would be spaced 6' apart in the short dimension and 8' apart in the long dimension. (Sheet 4, PLAN) There would be up to 10 racks across (in the short dimension). Also, two 20' channels would exist to allow access into the other areas of the lease, and a minimal 40' separation zone would exist between any rack areas and long-line areas. (Sheet 4, PLAN)

Before any structures were placed on the lease, the lease area would be delineated by corner posts extending to a height of approximately 10' above Mean Lower Low Water. These posts would bear signs and radar reflecting material. As shown on the PLAN view at maximum development, there would be approximately 320 racks and 18 long-line groups. If possible, a few (3-5) long-line groups would be placed on the lease in the Fall of 1983, along with about 50-100 racks. Maximum development of the lease area should be reached during the following (1984) summer season. No structures would be permanently fastened to the seafloor and would be removed if the lease is abandoned for any reason.

August 1, 1984

CONSENT CALENDAR

STAFF REPORT AND RECOMMENDATION

(For Commission Consideration August 21-24, 1984)

APPLICANT: William C. Callahan, Intertidal Aquafarms

PERMIT
NUMBER: 2-84-10

PROJECT
LOCATION: State Water Bottom lease M430-12, east Tomales Bay, approximately three miles south of Marconi Cove, Marin County. (See Exhibits A and B).

PROJECT
DESCRIPTION: Propagation of shellfish using rack and raft methods for cultivation on 25 acre allotment in Tomales Bay.

SUBSTANTIVE FILE DOCUMENTS:

1. Permit 2-81-19 (Morgan Oyster Co.)
2. Permit 2-81-40 (Great American Oyster Co.)
3. Permit 2-82-38 (Golden Gate Oyster Co.)
4. Permit 2-83-22 (Bay Bottom Beds, Inc.)
5. Permit 2-84-2 (Hog Island Shellfish Farms)
6. Permit 2-84-6 (Half-Shell Ventures, Inc.)
7. Marin County Local Coastal Program (12-1-80)
8. State Water Bottom Lease M430-12

STAFF NOTE: Marin County has assumed coastal permit jurisdiction in most of its coastal zone, but the project site is located in an area of Coastal Commission original permit jurisdiction.

STAFF RECOMMENDATION

The staff recommends that the Commission adopt the following resolution:

I. Approval with conditions.

The commission hereby grants, subject to the conditions below, a permit for the proposed development on the grounds that the development, as conditioned, will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, and will not prejudice the ability of the County of Marin to implement the Local Coastal Program (LCP) in conformity with the provisions of Chapter 3 of the Coastal Act, and will not have any significant

adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions See Attachment X.

III. SPECIAL CONDITIONS

1. All rack culture shall be conducted in water depth of no less than three feet mean low water (MLW). Racks shall not extend higher than two feet above mean low water.
2. Rack modules shall be placed at a minimum of 16 feet apart to allow for boat passage.
3. Buoys to mark submerged rafts shall be placed to allow passage of boats at all stages of the tide as determined by the Department of Fish and Game.
4. Rafts shall be located in a manner not to prevent passage between racks and marked to prevent hazards to navigation as determined by the Department of Fish and Game.

IV. Findings and Declarations. The Commission hereby finds and declares as follows:

- A. Site Description. The project site is located on the east side of Tomales Bay, Marin County, three miles south of Marconi Cove; State Water Bottom lease M430-12. (See Exhibit B).
- B. Project Description. The company proposes to propagate Pacific oysters (*Crassostrea gigas*) and European flat oysters (*Ostrea edulis*), Japanese littleneck clams (*Venerupis japonica*), common littleneck clams (*V. staminea*), northern quahog clam (*Mercenaria mercenaria*) and bay mussel (*Mytilus edulis*), using rack, tray and floating nursery rafts for cultivation. Access to the culture area will be from the Marconi Cove Marina, one mile (by water) to the north. Boats used for tending the lease will be launched at the marina ramp. Shellfish produced on the lease will be transported from the marina by truck for distribution. Ten floating nursery rafts will be used to culture small seed before they are planted on the racks. The rafts will be 20' x 8' feet in size (160 square feet) and visible during all stages of the tide (See Exhibit D). The rafts will be anchored to the bottom, will be visible to boaters using the area and will be marked and placed so that they will not block boat passage to the shoreline, or impede navigation. Public access along the shoreline and by boat at high tide will be maintained.

Ten racks would be initially placed on the allotment for experimental purposes. Ultimately 1,000 racks would be placed on the allotment. The racks would be 6 feet long, 3 feet wide, and 3 feet high. The racks would be placed ten feet apart in rows of 10 in 100 x 100 foot squares with 20' between each square. (See Exhibit E). The spacing will allow adequate room for boat passage

at median tide levels and exceeds Department of Fish & Game standards.

C. Relationship of the Project to the Local Coastal Program.

Although the Coastal Act is the standard for granting permits in the Commission's original permit jurisdiction area, the Commission may use the Local Coastal Program for guidance. The certified Local Coastal Program for Marin County provides, in part, that

"the County of Marin supports and encourages mariculture in its coastal zone for the purposes of producing food, enhancing and restoring fisheries stocks, and contributing to the State's economy... The need for mariculture sites in coastal waters must be balanced with the need to provide for other uses, such as commercial fishing, recreational clamming and boating, and the need to protect coastal wildlife, water and visual resources."

The LCP policies set forth general standards and procedures for all mariculture operations which apply to the total acreage that may be allotted or leased in Tomales Bay, the size of allotments or leases, the protection of eelgrass beds, prohibition of importation of exotic species, public access, boating access, marking of structures, on-shore support facilities and visual impacts. Although the LCP proposes permit procedures for mariculture permits to be issued by the County, the County has chosen to process permit applications under its procedures for Tidelands Permits pursuant to Chapter 22.77 of the Marin County Code, which parallel the suggested procedures in the LCP.

With regard to the standards set forth in the LCP, the total acreage designated for mariculture operations is limited to 900 acres which includes 819 acres of existing allotments and leases and a maximum of 81 acres of new allotments and leases. These allotments and leases are equivalent to approximately 10.5 % of the Bay's 7,760 acres and are grouped at the northern and southern ends of the Bay, with a few small areas scattered in between. Despite the size of the allotments, only about 120 acres are under active cultivation, due to Fish and Game restrictions. Since the preparation of the LCP in December 1980, one large leaseholder, International Shellfish (total acreage 419) has ceased operations. The Commission has approved mariculture permits with a total acreage of 175. Of that amount 147 acres were reassigned. Approximately 352 acres of existing allotments are available, and 53 acres of new allotments. The total number of acreage currently allotted in Tomales Bay (625) is far below the limit set in the LCP. As the lease for the subject application is 25 acres and is also reassigned it is consistent with the LCP policy.

The LCP provides that new allotment sizes are limited to 5 acres. Applicants must demonstrate (per LCP policy) that the production requirements of the Department of Fish & Game for each five acre

parcel are met before being granted a permit to develop additional acreage. As this acreage allocation would not encumber new water bottoms, but would be comprised of a portion of an oyster allotment declared abandoned by the Department of Fish and Game, the five acre limitation imposed on new oyster allotments would not apply. The LCP policy encourages the Department of Fish & Game to limit new allotments and leases in Tomales Bay to 10 years subject to renewal up to 25 years. The applicants lease is consistent with LCP policy. No exotic species will be used. The applicant does not propose any structures or facilities that would interfere with public access to and along the shoreline. The siting of the rafts and racks would not interfere with recreational boating.

D. Relevant Coastal Act Policies

1. Water and Marine Resources. Section 30230 of the Coastal Act provides, in part, that "Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long term commercial (among others) purposes."

Oyster culture has been conducted in Tomales Bay since the late nineteenth century. Raising shellfish enhances the foodchain in that the oysters provide a host for organisms, filter plankton and give off waste bi-products that provide sources of food for other marine species, thus enhancing the commercial fishery in Tomales Bay.

The State Department of Fish and Game is the responsible agency for allocating oyster allotments in Tomales Bay. That agency places restrictions on how oysters and shellfish may be cultivated. The State Department of Health Services reviews and recommends each mariculture allotment application to the Department of Fish and Game. Based on the recommendation of the Department of Health Services, the Department of Fish and Game then certifies the application. Both Departments have acted upon and approved this application. Each agency placed restrictions on the manner in which shellfish will be harvested. Those restrictions have been incorporated into the special conditions for this permit.

The Commission finds that the biological productivity and healthy populations of marine organisms will be maintained consistent with Section 30230 of the Coastal Act.

2. Section 30233 of the Coastal Act provides in part, that the filling of open coastal waters shall be limited to (among others) aquaculture. A very small amount of fill (less than three-quarters of an acre) in the form of oyster racks will be placed on State Water Bottom Lease #M430-12.

The racks are placed in such a way to utilize the least amount of Bay bottom and will be located out of the intertidal zone so as not to interfere with clam and other shellfish habitats.

No stands of eel-grass would be affected by placement of the structures. As the fill proposed is for aquaculture and is the minimum amount necessary, it is consistent with Section 30233 of the Act.

3. Recreational Boating. Section 30221 of the Act provides, in part, that "Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by... limiting non-water-dependent land uses..." Aquaculture, as defined in the Act is a coastal dependent use. No non water dependent land uses are proposed. Section 30234 of the Act further provides for the protection and enhancement of facilities for recreational boating, and protects against the reduction of recreational harbor space. This project will be served by a small boat launched from the Marconi Cove marina, a commercial and recreational facility. When not in use the boat will be in dry storage. No recreational space or use of the facility will be adversely impacted by this project. The racks and rafts are situated in such a way to provide minimal use of the allotment and yet to provide for maximum boat access through the allotment area for fishing, recreational boating and access to the shoreline. Furthermore the rafts & racks will be marked for the safety of recreational boaters. The Commission finds that the project is consistent with Sections 30221 and 30234 of the Coastal Act.

4. Visual Resources. Section 30251 of the Coastal Act provides, in part, that, "The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas... (and) to be visually compatible with the character of surrounding areas." Tomales Bay has a scenic shoreline. Existing oyster culture facilities using buoys are visible from Highway One. Weathered oyster fences and old stakes and pilings from previous oyster operations are also visible. The project as proposed utilizes both raft and rack culture. As the racks are placed on the Bay bottom, they would only be visible at lowest tides. The rafts would be visible at all times. However most of the allotment area is obscured from view from Highway One by Tomasini Point. The small area that is visible is a considerable distance from the roadway. Because such a small area of the Bay is utilized for mariculture, the project will have minimal impact on visual resources and thus is consistent with Section 30251 of the Coastal Act.

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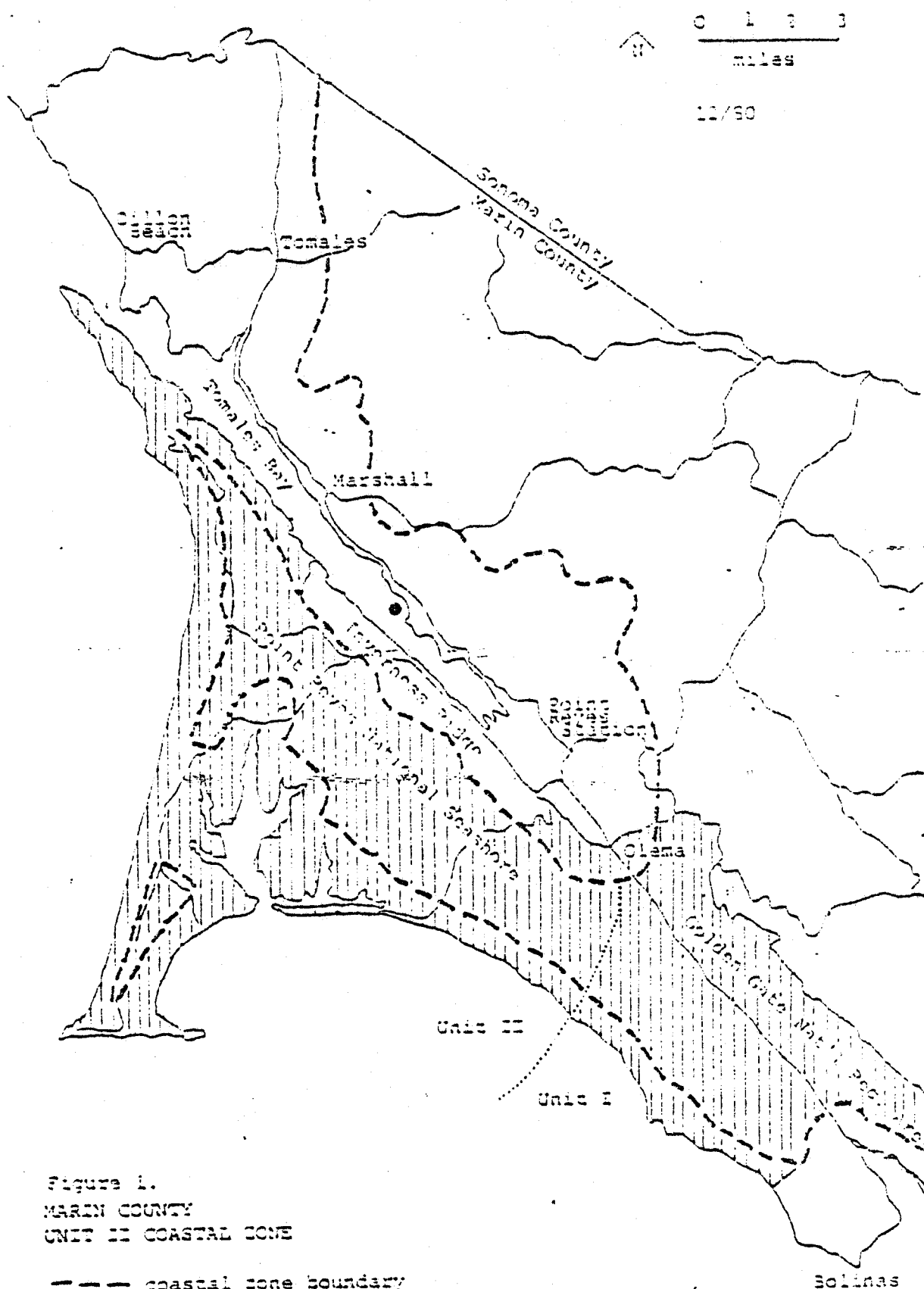


Figure 1.
MARIN COUNTY
UNIT II COASTAL ZONE

EXHIBIT A
• PROJECT LOCATION
2-84-10.
INTERTIDAL AQUAFARMS

11-430-0
PARCEL 3

M-430-06-

11-430-03

M-430-07
PARCEL 2

M-430-12

M-430-05

HIGHWAY 1

MA 430-07
PARCEL 1

EXHIBIT B

2-84-10

LEASE No. M-430-12

The cultivation methods proposed for the lease are currently being used in Tomales Bay and there is no evidence that their continued use in the area of this proposed lease would be either detrimental to the environment, or disruptive to other bay uses.

Recommended Action

The Department of Fish and Game recommends that the commission publish notice of intent to lease the described area to William C. Callahan, Intertidal Aquafarms. Conditions imposed on the lease should include:

1. Rack culture will not be used in waters less than 3 feet deep at MLW (0.0 tidal datum). Racks employed will not extend higher than two feet above the water surface at MLW.
2. Rack modules will be spaced a minimum of 16 feet apart to allow for boat passage at median water levels.
3. Submerged racks will be buoyed in a manner that will allow for the free passage of boats at all stages of the tide.
4. Rafts will be placed offshore of rack modules in a manner that will not prevent passage between the racks and will be suitably marked to prevent hazards to navigation..

Alternatives to the Recommended Action

Alternatives to the recommended action were considered. Each considered alternative and the actions taken are as follows:


Denial of Lease. Failure to grant the lease would deny an approved use of the clean waters of Tomales Bay which are ideal for the cultivation of shellfish. Denial of the lease would preclude a productive use of the bay that extends back at least to 1875.

Reduction in Acreage Requested. The acreage applied for is not considered excessive for the intended purpose. Planting and harvesting requirements established by the commission will determine if the proposed lease will be used in the prescribed manner. If the allotted acreage is not cultivated at the required level, then the lease can be reduced in proportion to the level of cultivation. Therefore, there are no grounds for reducing the acreage applied for.

Denial of Rack or Raft Culture. The use of racks and rafts for cultivation will enable the applicant to utilize the lease more efficiently. The proposed cultivation methods would cause minimal conflict with other uses of the area and would not be highly visible from Highway 1. The denial of rack or raft culture in the proposed location cannot be supported as an appropriate alternative.

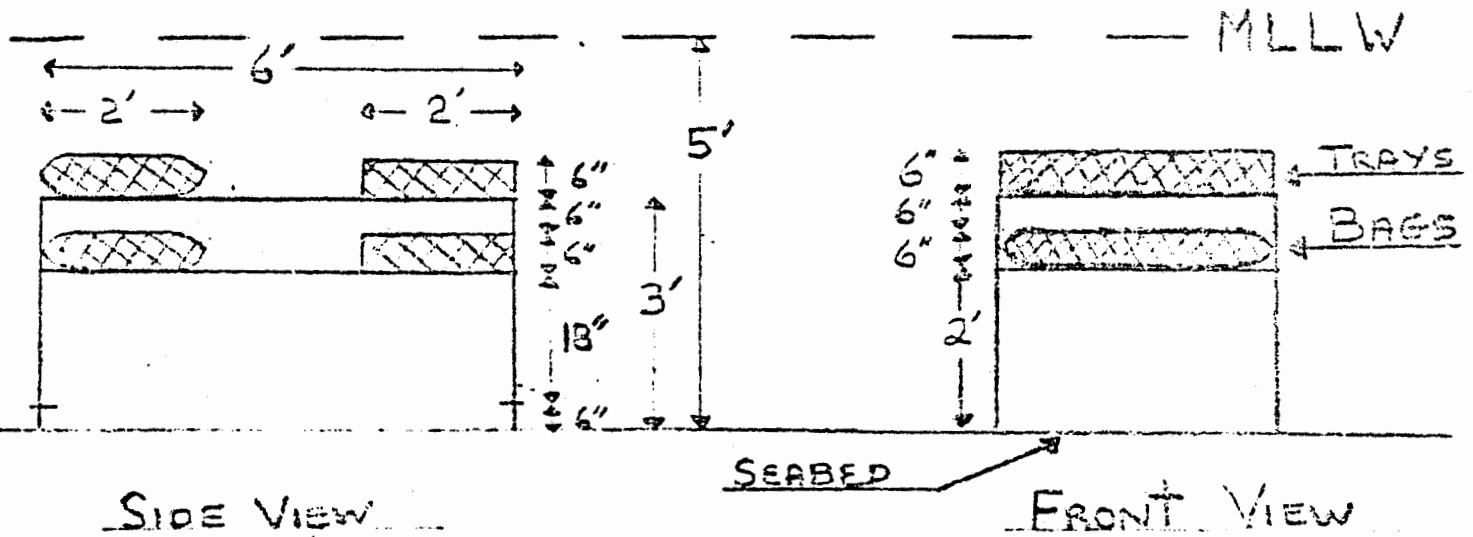
Mitigation Measures

No irreversible modification of the environment will result from the proposed action; therefore, no mitigation measures are required. The county in the form of increased employment and the shellfish on these state water bottoms, would more than

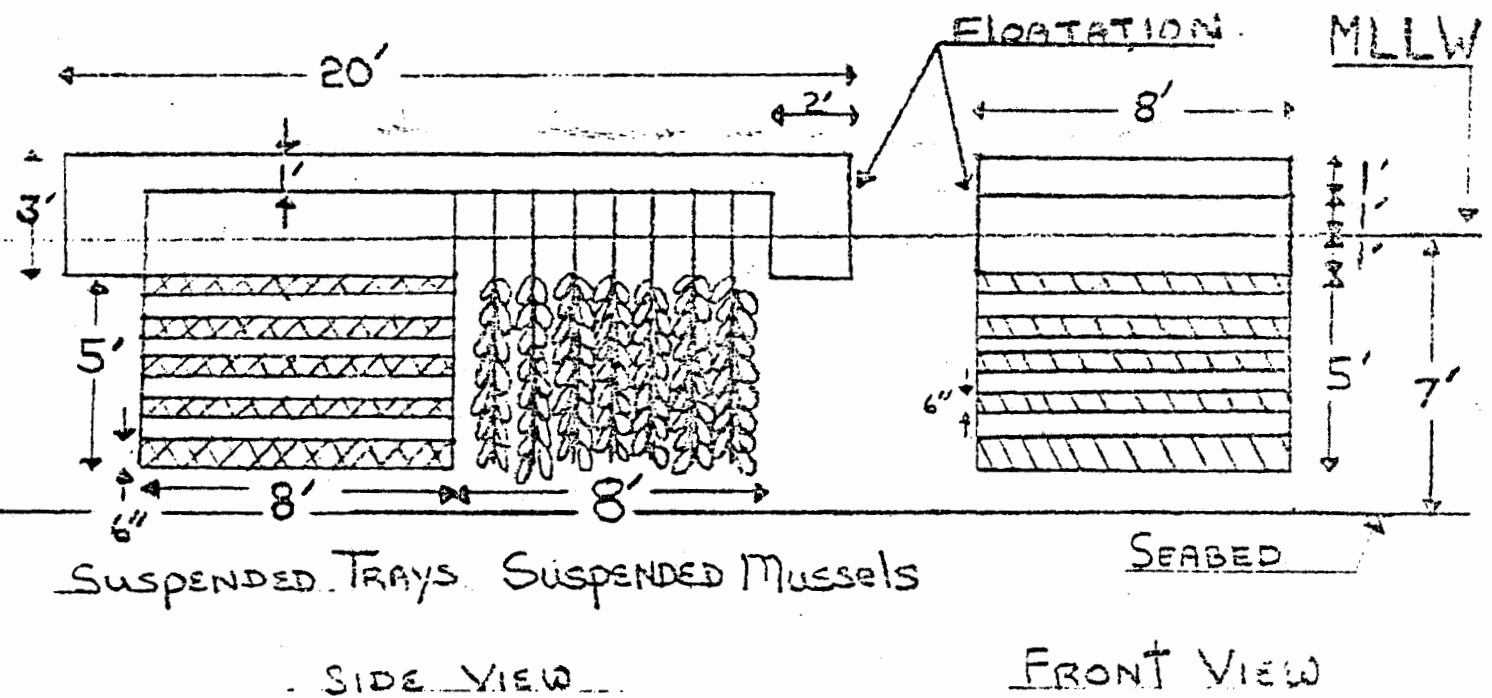
EXHIBIT NO. C
APPLICATION NO. 2-84-10
Fish & Game Restrictions
 California Coastal Commission

SECTION VIEWBottom RACKS with BAGS or TRAYS

Scale 1cm = 1'

FLOATING RAFTS WITH TRAYS AND ROPES

Scale 1cm = 2'



PURPOSE: Commercial Aquaculture

DATUM MEAN LOW LOW WATER U.S.G.S.

ADJACENT PROPERTY OWNERS:

① TOMALES Bay Oyster Co.

② HALF SHELL VENTURES, INC.

IN TOMALES
AT-NEAR THE
COUNTY OF MARIN
APPLICATION BY

EXHIBIT NO. D

APPLICATION NO.

2-84-10

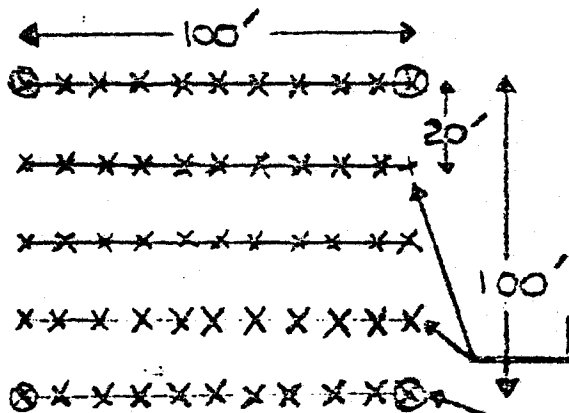
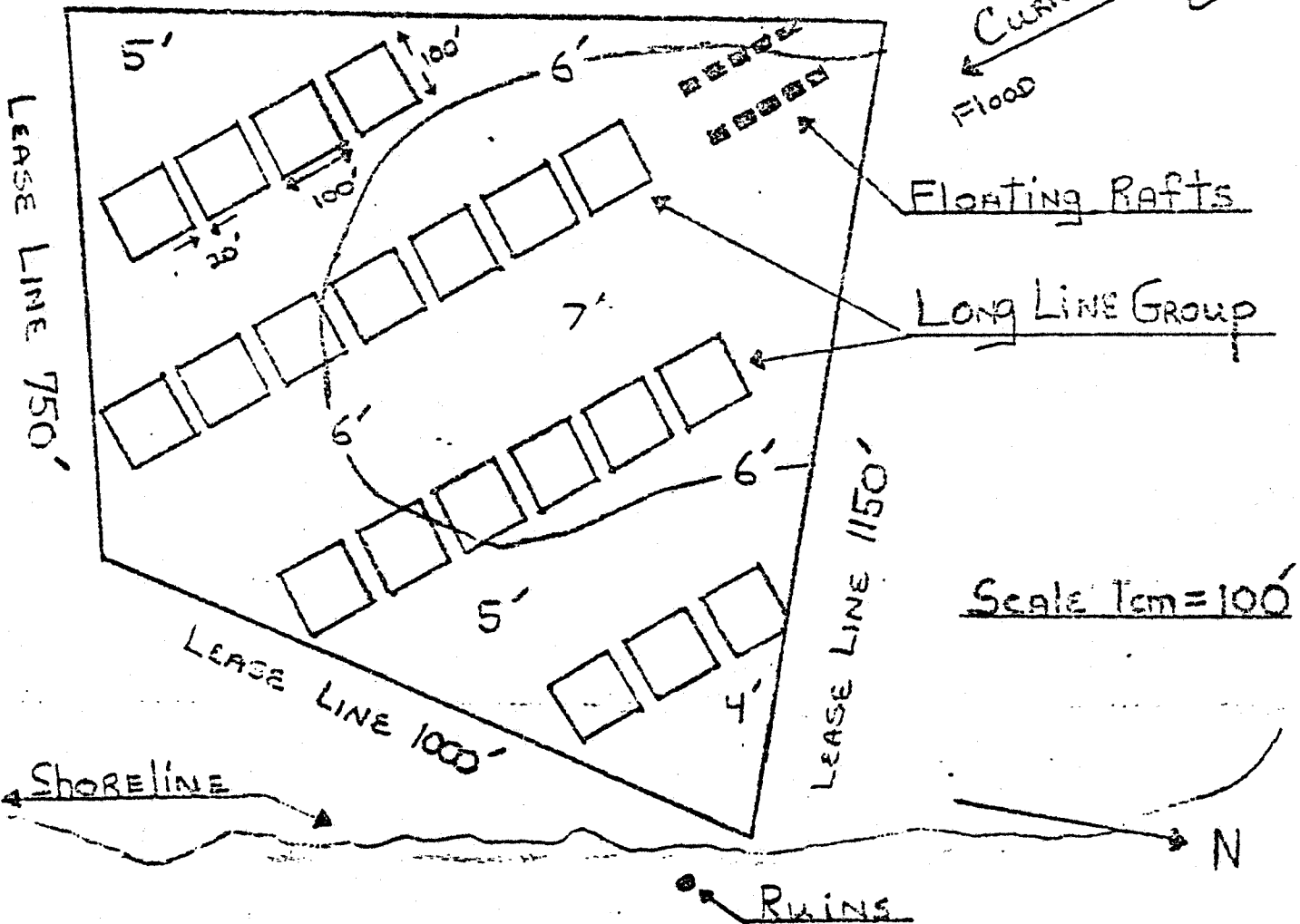
Callahan/Intertidal



California Coastal Commission

PLAN VIEW

LEASE LINE 1141'



LONG LINE GROUP

Scale 1cm = 20'

Bottom Racks

Bouys with Warning Signs

PURPOSE: Commercial Aquaculture
 DATUM MEAN LOW LOW WATER U.S.G.S.
 ADJACENT PROPERTY OWNERS:

- ① Tomales Bay Oyster Co
- ② Half Shell Ventures, Inc.

IN Tom
 AT/NEAR
 COUNTY OF
 APPLICATION

EXHIBIT NO. <input checked="" type="checkbox"/>
APPLICATION NO. 2-84-10
Callahan/Intertidal
California Coastal Commission

AN

Documents from CDP No. 1-94-55 for Lease No. M-430-15

PETE WILSON, Governor

NORTH COAST AREA
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
(415) 904-5260

JK 66



Filed: August 5, 1994
49th Day: September 23, 1994
180th Day: February 1, 1995
Staff: Bill Van Beckum
Staff Report: September 2, 1994
Hearing Date: September 15, 1994
Commission Action: *aw/c 8-D 9/15/94*
Eureka

STAFF REPORT: CONSENT CALENDAR

APPLICATION NO.: **1-94-55**

APPLICANT: **TOM'S POINT SHELLFISH**

PROJECT LOCATION: In an intertidal and submerged area of Tomales Bay (State Water Bottoms Lease M-430-15) adjacent to Tom's Point, in Marin County

PROJECT DESCRIPTION: Install shellfish cultivation apparatus for aquaculture in a 128.2-acre area leased from the Department of Fish & Game.

LOCAL APPROVALS RECEIVED: None required.

SUBSTANTIVE FILE DOCUMENTS: Marin County LCP, incorporating Department of Fish and Game Negative Declaration for Tomales Bay aquaculture projects.

STAFF RECOMMENDATION

The staff recommends that the Commission adopt the following resolution:

I. Approval with Conditions.

The Commission hereby grants a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions. See attached.

III. Special Conditions.

1. U.S. Army Corps of Engineers Review.

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the applicant shall provide to the Executive Director a copy of a U.S. Army Corps of Engineers permit, letter of permission, or nationwide permit for the project.

2. Protection of Eel Grass.

The applicant shall not cut or disturb any eel grass growing on the bay bottom during the installation or use of the proposed shellfish cultivation apparatus.

3. Removal of Cultivation Apparatus when Lease Terminates.

Within 90 days of termination or abandonment of the subject lease by the applicant or any assignees to this permit, the applicant or assignees shall remove all aquaculture apparatus from the affected lease area.

IV. Findings and Declarations.

The Commission hereby finds and declares as follows:

A. Site Description

The project site consists of an intertidal and submerged parcel off the east shore of Tomales Bay (Exhibits 1-3). This parcel has been leased to the applicant, by the California Department of Fish and Game, for aquaculture purposes.

The lease area, lease No. M-430-15, covers an area of 128.2 acres adjacent to the east side of Tom's Point (Exhibits 2 and 3). This site is the most northerly of Fish and Game's Tomales Bay lease areas, and is approximately a quarter mile northwest of the site of an earlier Commission permit for aquaculture facilities (Coastal Permit No. 1-93-73, Bay Bottom Beds, Inc., for lease No. M-430-04 for a 61.9-acre site).

The bay bottom at the lease site supports a variety of benthic organisms. In addition, scattered beds of eel grass grow in moderately shallow parts of the lease area (Exhibit 5).

B. Project Description

The applicant proposes to utilize the site for shellfish (bivalve) culture. The California Department of Fish and Game is the responsible agency for allocating and overseeing aquaculture allotments in Tomales Bay, pursuant to provisions of the Fish and Game Code. The lease agreement with the Department of Fish and Game specifies the types of shellfish which may be raised and the

types of cultivation methods that may be used within the lease area. The lease's development plan (Exhibit 4) outlines the types of shellfish proposed to be raised and the associated culture methods.

Exhibit 5 is a plan view of the proposed placement of culture apparatus within the lease area. Exhibits 6 and 7 illustrate and describe the culture methods. Processing and equipment storage will occur at the existing land base for the Hog Island Oyster Company, 3 miles to the south, in Marshall, at 20215 Highway One. No new shoreline support facilities are proposed in this application.

C. Protection of Coastal Waters and Marine Resources.

The intertidal and submerged lands where the aquaculture apparatus will be installed contain a variety of biological resources, including eelgrass habitat and various benthic organisms. The installation of racks, weights, and other shellfish cultivation apparatus could potentially disturb such resources and have other impacts on the marine environment as well. The principal impacts are discussed below.

1. Potential Impacts of Fill on Coastal Waters

a. Effects on Eel Grass

The Marin County Local Coastal Program (LCP) Mariculture Component includes the following discussion on the protection of eelgrass, from the possible effects of aquaculture apparatus practices:

Under existing law, eelgrass beds are protected from cutting or disturbance, and the Department of Fish and Game has the responsibility for ensuring their protection. According to the Department, mariculture operators whose allotments encompass eelgrass beds can only efficiently operate in the channels and openings within the beds. Their boats and barges are shallow draft and what little vegetation that is clipped soon regenerates. Surveys of eelgrass beds by the Department indicate that oyster culture as practiced in Tomales Bay is not a threat to this vegetation.

b. Effects on Siltation

The following paragraph from the Marin County LCP Mariculture Component discusses the effect of mariculture structures on siltation rates.

As far as siltation is concerned, the Department of Fish and Game does not anticipate that existing or proposed mariculture structures in Tomales Bay will seriously impede tidal flows or cause excessive siltation. The early use of stingray fences in the Bay caused a greater impediment to flows than existing structures and there is no evidence that these fences, the remains of which can still be seen, caused excessive siltation or scouring of bay bottoms. Dense eelgrass beds

would be as likely to cause settling of fine silt particles as mariculture structures; however, tidal currents prevent this from happening by maintaining the particles in suspension. Stream-borne sediment, deposited at the mouths of Walker and Lagunitas Creeks, is due to upstream erosion in the watershed, not to mariculture structures in the path of the flow.

c. Apparatus Hazards

Abandoned, unmaintained culture apparatus could create not only a safety hazard, to boaters, if it became dislodged or broken apart during a storm, but could also, under the same circumstances, make its way into sensitive habitat areas in and along the bay.

2. Coastal Act Resource Protection Policies

Coastal Act Section 30411(c) notes that:

The Legislature finds and declares that salt water or brackish water aquaculture is a coastal-dependent use which should be encouraged to augment food supplies ... The Department of Fish and Game may identify sites it determines to be appropriate for aquaculture facilities..... it shall transmit information identifying the sites to the Commission and the relevant local government agency.

Consistent with Section 30411(c), the certified Marin County LCP "Mariculture Component" describes the areas within Tomales Bay that have been designated by the Department of Fish and Game as suitable for aquaculture leases. Another section of the Coastal Act, Section 30411(a), points out that the Department of Fish and Game and the Fish and Game Commission are the principal state agencies responsible for the establishment and control of wildlife and fishery management programs. However, the Coastal Act also requires, in Section 30411(c), that:

The Commission, and where appropriate, local governments shall ... provide for as many coastal sites identified by the Department of Fish and Game for any uses that are consistent with the policies of Chapter 3 ... of this division.

Aquaculture projects are therefore subject not only to requirements of the Fish and Game Code but to separate Coastal Act requirements. The Coastal Commission, to approve any aquaculture project, such as proposed in this application for development in designated aquaculture lease areas, must find the project consistent with Chapter 3 policies, discussed below, that relate to marine environment uses.

A number of Coastal Act policies address the protection of marine environments from the impacts of aquaculture operations. Section 30230 provides, in part, that "Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will

1-94-55

TOM'S POINT SHELLFISH

Page 5

maintain healthy populations of all species of marine organisms adequate for long term commercial ... purposes." Coastal Act Section 30233(a) allows the placement of structures or other fill in coastal waters, wetlands, and estuaries, but only where the project is limited to one of eight specified uses, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects. Section 30108.2 of the Coastal Act defines "fill" as any "substance or material ... placed in a submerged area." Therefore, the floating or submerged apparatus associated with the various culture methods, including the various anchoring devices to be used, constitute "fill."

3. Permissible Use for Fill

The proposed project qualifies under Section 30233(a) as a permissible use for fill in coastal waters. The proposed use, aquaculture, is a "resource dependent" use, that is, one that in order to function at all depends on resources available in the bay's waters. Fill for aquaculture is permissible specifically under Section 30233(a)(8).

4. Alternatives

As noted above, Section 30233(a) does not allow fill in coastal waters when there are feasible less environmentally damaging alternatives. No such alternatives exist for the proposed project.

To perform its function of cultivating shellfish, the proposed fill must be located in coastal waters. There is no feasible upland alternative for the proposed use.

The Department of Fish and Game considered alternative locations within Tomales Bay when determining which sites to lease for aquaculture. A primary consideration in drawing the boundaries of the lease areas was the avoidance of the bay's larger masses of eel grass. Because of the ubiquitous nature of small, scattered eel grass beds in moderately shallow parts of Tomales Bay, however, the presence of some eel grass within the lease areas is unavoidable. In any event, the applicant has no alternative for locating the aquaculture structures in any areas other than those designated by the Department of Fish and Game.

5. Sustaining Biological Productivity and Providing Feasible Mitigation

The California Fish and Game Code includes various requirements pertaining to the designation of aquaculture lease areas that relate to the protection of marine organisms. For example, included in the lease agreement that is the subject of this permit application are prohibitions against disposing of any wastes within the lease area. The lease agreement also requires the applicant's participation in monitoring programs relating to Tomales Bay sedimentation and wintering shorebirds.

Concerns have been raised that (a) the results of the monitoring program should be known before the lease area is developed, and (b) the proposed project might compromise any control area for the study. The monitoring programs, coordinated by the Department of Fish and Game, do not contain any provisions that would require final analysis of the sedimentation and bird studies prior to developing the lease area as proposed in this application. In addition the Department of Fish and Game staff, in discussions and correspondence with Commission staff, has not expressed concerns that lease development might compromise any control area for the study.

While Department of Fish and Game lease agreements for Tomales Bay aquaculture contain no specific restrictions requiring minimum distances between mariculture apparatus and eel grass beds, the agreements require that "no eel grass.... shall be cut or disturbed." The lease agreements also require each lessee to participate in a program "monitoring the health of eelgrass beds located on the lease." This requirement and the other lease agreement provisions noted above are intended to ensure that the project will not contribute over time to any significant adverse change in the Tomales Bay ecosystem. Compliance with these provisions to protect the marine environment is required for the leases to be kept active; Section L of the subject lease agreement provides in part that:

If any of the environmental monitoring programs discussed above indicate, or any other reliable information leads the Lessor to conclude that Lessee's aquaculture operation is directly associated with a significant adverse change in the Tomales Bay ecosystem, Lessor shall notify the Executive Director of the Fish and Game Commission and the Lessee of such findings. Upon receipt of notice, Lessee shall take all necessary steps to modify, relocate or discontinue the operation in accordance with the Lessor's advice, unless Lessee demonstrates that its aquaculture operations are not a substantial factor, directly or cumulatively, causing the adverse environmental change. Failure to promptly respond shall be grounds for termination of the lease.

Section D of the lease agreement delineates the grounds by which the lease may be terminated should the culture apparatus fall into a state of disrepair, and furthermore requires an escrow deposit "as a financial guarantee of growing structure removal and/or clean-up expense in the event a lease is abandoned or otherwise terminated."

Section D. of the lease agreements further provides that:

If Lessee abandons this lease without removing growing structures therefrom, the escrow deposit shall be expended to remove growing structures, or otherwise clean, or in the alternative, the remaining lessees in Tomales Bay and the Tomales Bay Shellfish Growers Association may undertake the clean-up leaving the secured amount whole.

As long as the project is carried out as specified in the application materials, which include the already signed lease agreement, the project will

be consistent with the marine environment protection policies of Coastal Act Sections 30230 and will provide feasible mitigation measures to minimize adverse environmental effects consistent with Section 30233. To ensure that the project is carried out according to the intent of the lease agreement's protection provisions, the Commission attaches Special Condition No. 2 which incorporates the lease's prohibitions on eel grass cutting and disturbance and also specifies that the prohibition is applicable at all times of project implementation, i.e., during cultivation apparatus installation and use. In addition, the Commission attaches Special Condition No. 3, which requires the removal of all culture apparatus within 90 days of lease termination or abandonment. Special Condition No. 3 will allow sufficient time for apparatus removal yet ensure that the time that any unmaintained and potentially environmentally damaging or hazardous apparatus remains in the bay is minimized.

6. Conclusion to Finding C

The Commission finds that as conditioned to ensure that the project is carried out in accordance with the protective provisions of the Fish and Game lease agreement, the proposed project is consistent with Sections 30230 and 30233. As discussed above, the project satisfies the three tests set forth by Section 30233(a) for any project involving the filling of coastal waters to be permitted. The project is a resource dependent allowable use, it is located in the best locations to minimize impacts on Tomales Bay eel grass beds and, there are no feasible less environmentally damaging alternatives, and as conditioned, provides adequate mitigation measures to protect eel grass populations within the lease area and other sensitive habitats within the marine environment. With these protections, the project will be carried out in a manner that will sustain the biological productivity of coastal waters and will maintain healthy populations of marine organisms adequate for long term commercial purposes consistent with Section 30230.

D. Visual Resources

Section 30251 of the Coastal Act provides in part that:

"The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas ... (and) to be visually compatible with the character of surrounding areas."

The subject lease area is visible from various public vantage points along the east shore of Tomales Bay. The visibility of each proposed aquaculture apparatus will vary, depending on the distance the apparatus is from the shore, the kind of apparatus, and the stage of the tide. For example, at periods of very low tides, normally submerged apparatus would be exposed and could be visible. Despite their visibility, the aquaculture apparatus should not adversely affect visual resources. The layouts and types of apparatus that are proposed are not unlike those normally used in any modern aquaculture

activities. The Marin County Local Coastal Program provides a general description of visual impacts of aquaculture activities on the landscape that helps put the situation in perspective:

Though not invisible, mariculture structures can be viewed as part of the local color of Tomales Bay and tangible evidence that the Bay is being used for the beneficial use of producing food. Similar structures have been used in Drake's Estero, in the middle of the National seashore, for many years and have been favorably received by the public.

Whatever a visitor's visual perception of aquaculture apparatus in Drakes Estero may be, the experience of viewing similar apparatus in Tomales Bay is apt to be different because of the different uses of the two areas. Although Drakes Estero does contain some limited oyster farming operations, the Estero essentially is a mostly undeveloped passive recreation area. Tomales Bay, on the other hand, is the setting for not just recreation and oyster farming operations, but a variety of commercial fishing and boating activities in and on its waters. An aquaculture operation may be more in character with the more intensive uses being made of Tomales Bay. Therefore, the Commission finds that the proposed development is consistent with Coastal Act Section 30251 as the proposed shellfish apparatus is consistent with the visual character of the area and the structures will not adversely affect views to and along the coast.

E. U.S. Army Corps of Engineers Review.

The project requires review and approval by the U.S. Army Corps of Engineers. Pursuant to the Federal Coastal Zone Management Act, any permit issued by a federal agency for activities that affect the coastal zone must be consistent with the coastal zone management program for that state. Under agreements between the Coastal Commission and the U.S. Army Corps of Engineers, the Corps will not issue a permit until the Coastal Commission approves a federal consistency certification for the project or approves a permit. To ensure that the project ultimately approved by the Corps is the same as the project authorized herein, the Commission attaches Special Condition No. 1 which requires the permittee to submit to the Executive Director evidence of U.S. Army Corps of Engineers approval of the project prior to the commencement of work.

F. Public Access

Section 30211 of the Coastal Act requires that development not interfere with the public's right to access gained by use or legislative authorization. In applying Section 30211 the Commission is limited by the need to show that any denial of a permit application based on this section or any decision to grant a permit subject to special conditions requiring public access is necessary to avoid or offset a project's adverse impact on existing or potential access.

No part of the proposed project includes development on land. Boat access to the lease areas is available at an existing land base in Marshall. No public

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TOM'S POINT SHELLFISH

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recreational access that could potentially be affected by the project exists at the land base. The project will not create any additional demand for public access, as the aquaculture operations will not bring large numbers of new residents, workers, or visitors to the site who would use public access facilities, nor will it decrease the availability of nearby access in any way. The Commission therefore finds that the project is consistent with the Commission's coastal access policies.

Furthermore, even if the project did include land-based facilities, such land uses would receive a high-priority under Coastal Act Section 30222.5. That policy directs that aquaculture facilities receive high priority in land use planning, higher than all uses except other coastal dependent developments or uses.

G. Marin County Local Coastal Program

Marin County's Local Coastal Program (LCP), which includes a "Mariculture Component" that incorporates the Department of Fish and Game Negative Declaration for Tomales Bay aquaculture projects, was certified by the Commission in 1982. The LCP defines "mariculture" as "the term used to describe saltwater or marine aquaculture" and uses the term throughout the Mariculture Component "since all aquaculture in Marin's coastal zone occurs in saltwater."

The proposed project conforms to the LCP Mariculture Component's "general policy" that states in part:

The County of Marin supports and encourages mariculture in its coastal zone for the purposes of producing food ... and contributing to the State's economy. This policy recognizes, however, that the need for mariculture sites in coastal waters must be balanced with the need to provide for other uses, such as commercial fishing, recreational clamming and boating, and the need to protect coastal wildlife, water, and visual resources.

The Mariculture Component also contains provisions that relate specifically to Tomales Bay, such as a provision limiting the total acreage designated for mariculture to 900 acres (11.6% of the Bay's 7,760 acres of water surface). This figure recognized the 819 acres of allotments that existed in 1979, leaving a maximum of 81 acres for new allotments. The LCP also places a 5-acre maximum size limit for new "allotments and leases considered for development in a coastal permit," except for the 819 acres of "allotments and leases in existence at the time of LCP adoption." The Department of Fish and Game, the agency administering mariculture leases within Tomales Bay, considers the 128.2-acre lease area that is the site of the current permit application to be part of the 819 acres unaffected by the LCP 5-acre size limitations. The Commission finds that the project is consistent with the intent of the LCP to support mariculture on state tidelands in Tomales Bay, where LCP policies are advisory rather than binding.

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TOM'S POINT SHELLFISH

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The requirements of other LCP mariculture policies, relating, e.g., to protecting eelgrass beds and to marking structures for boating safety, are satisfactorily addressed by terms and conditions contained in the actual lease agreements that have been entered into by the applicant and the Department of Fish and Game.

H. California Environmental Quality Act (CEQA)

The proposed project as conditioned will not contribute to any significant adverse change in the Tomales Bay ecosystem, and will not have a significant adverse effect on the environment within the meaning of CEQA.

Attached Exhibits

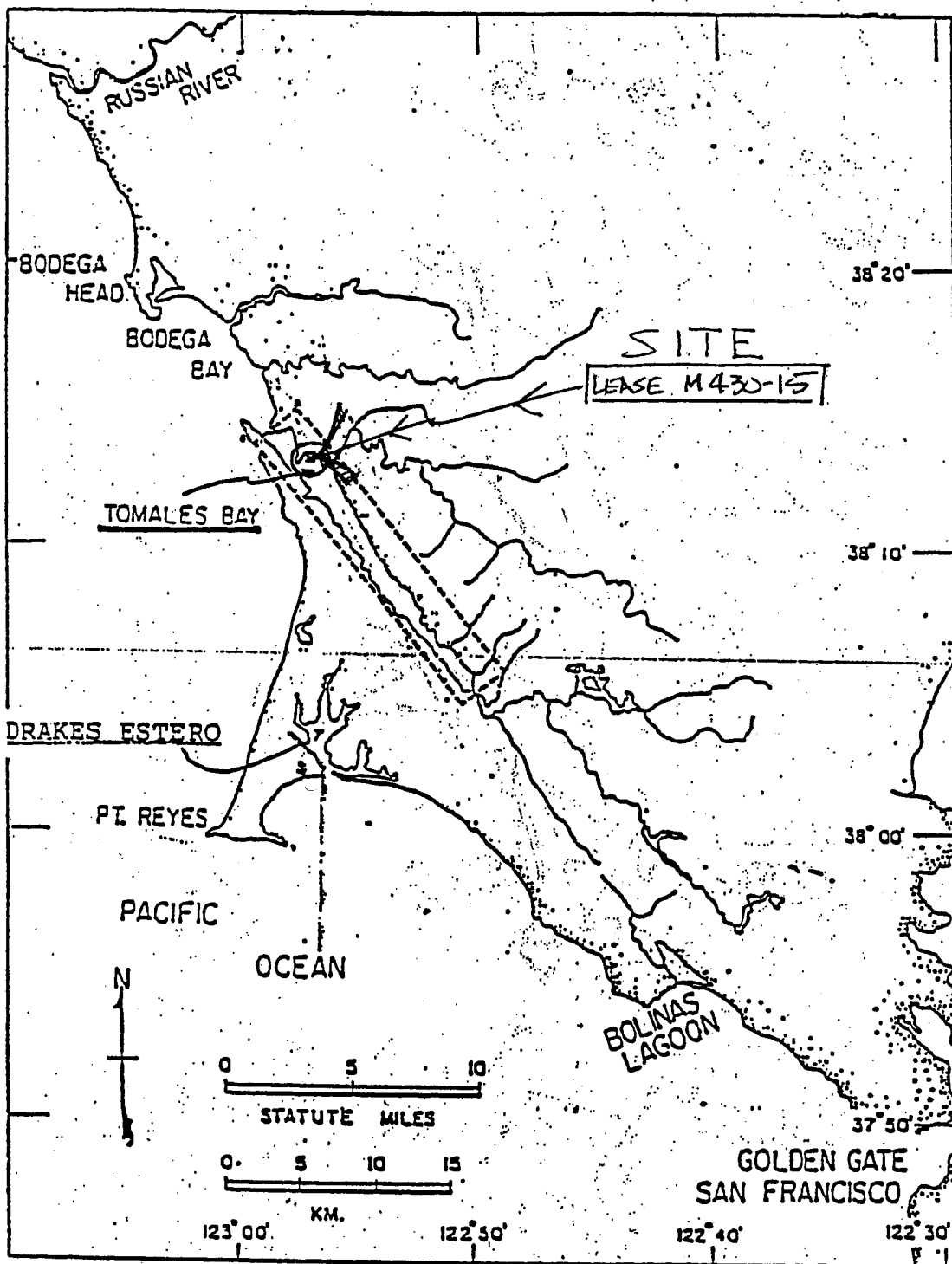
1. Regional Location Map
- 2.-3. Lease/Project Site
4. Development Plan
5. Project Plan View
- 6.-7.. Culture Apparatus Types

BVB/ltc/bvb
7328p

ATTACHMENT A

Standard Conditions

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.



Location of Tomales Bay in western Marin County.

EXHIBIT NO. 1

APPLICATION NO.

1-94-55 TOM'S

POINT SHELLFISH

Regional Location
California Coastal Commission

EXHIBIT NO. 3
APPLICATION NO. 1-94-55 TOM'S
POINT SHELLFISH
Lease M-430-15 California Coastal Commission

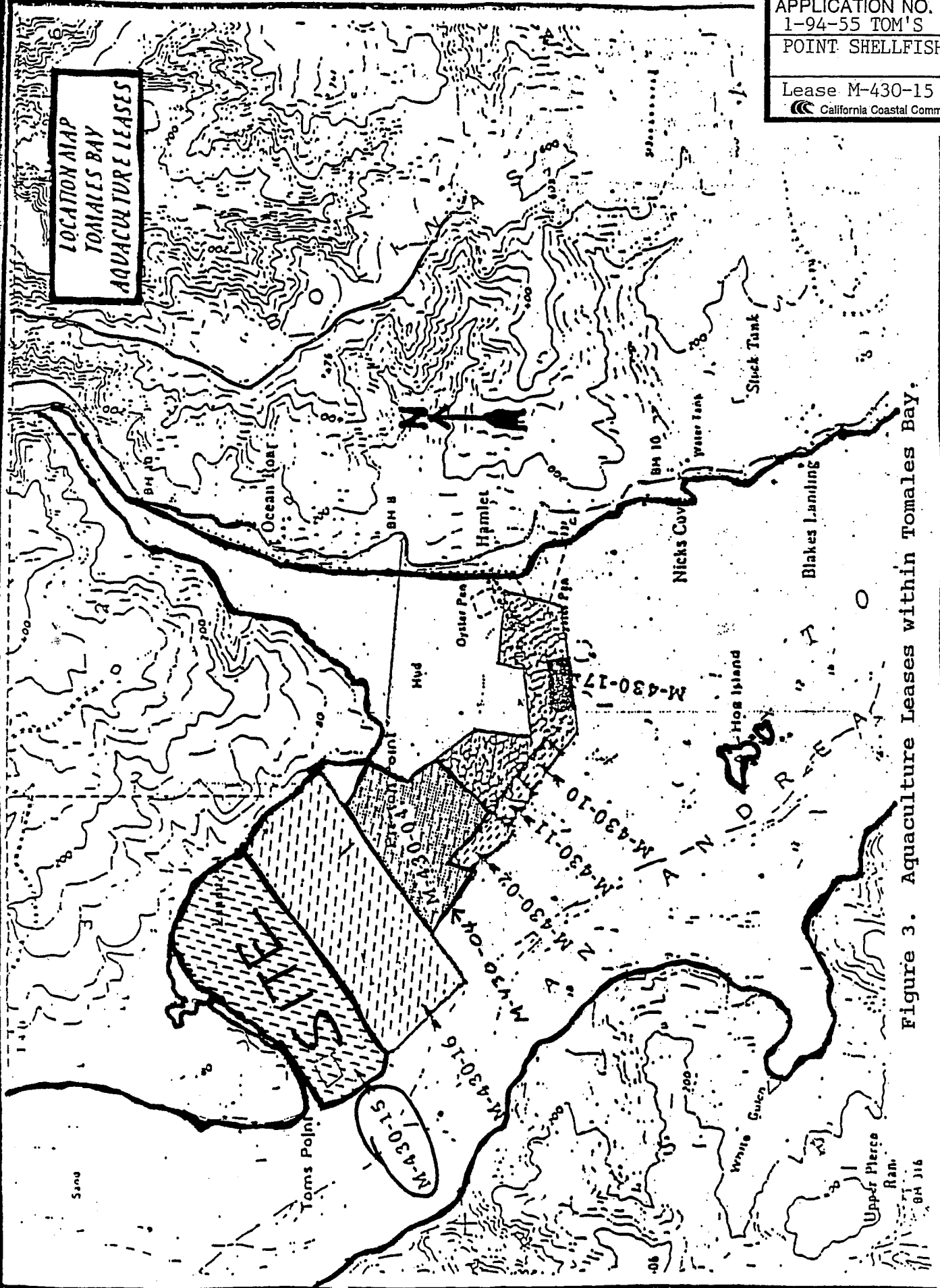


Figure 3. Aquaculture Leases within Tomales Bay.

SCALE = 1:24 000 SHORELINE SHOWN REPRESENTS MHHW.
LOCATION MAP: AQUACULTURE LEASE M 430-15

Development Plan For State of California
Waterbottom Lease M 430-15

The objective of this project is to develop lease M 430-15 for the culture of shellfish (oysters, clams, mussels, abalone). Seed purchased from commercial sources would be grown to market size using off - bottom and on - bottom methods.

State lease M 430-15 is approximately 128 acres in area. The water depth over most of the lease is less than 5 feet below MLLW. Several deeper channels exist on the western portion of the lease. Eelgrass beds cover approximately 50% of the lease, predominantly the southeast portions. No structures would be placed in or within 5 feet of any eelgrass beds currently existing on the lease.

Most of the culture methods proposed are already in use on state lease 430-10 & 430-11, leased by Hog Island Oyster Company (HIOC). Processing and equipment storage shall occur at the existing land base for HIOC, 3 miles to the south, at 20215 HWY 1, Marshall.

Descriptions of the proposed culture methods are as follows:

Oysters will be grown on - bottom and off - bottom. On - bottom culture will take place between 0.0' & 1.0' above MLLW. Oysters will be grown in black plastic mesh bags, approximately 2'x3' in size. About 50 bags would be tied onto 1/4" rope secured on the mudflats. Bags would be spaced alternately side by side to allow for water circulation (fig. 1). Spacing between lines (ropes) would be 8' & 16' alternately (fig. 1). Off - bottom culture would consist of 4 - 5 bags plastic mesh bags attached to 4'x8' re-bar frames. These frames would be supported 1' - 2' above the mudflat by (4) 2" PVC pipe legs (fig. 2). Racks would be placed in areas that are exposed at -0.5' to 1.0' in tidal height. Racks would be placed with their long axis perpendicular to the prevailing NW winds in rows that are parallel to this direction (fig. 3). Rows would vary in length from 20 to 60 racks. Spacing would be 2.5' between racks and 3' & 12' alternately between rows (fig. 3). Major groups (100 - 400 racks) would be separated by a minimum of 50'. During harvest the re-bar frames are lifted off leaving only PVC pipe legs. Areas are typically left fallow after harvests for 2 to 6 months.

Clams will be grown on - bottom in black plastic mesh bags measuring 3'x1.5'x4"H. Bags will be placed in groups of 40, consisting of 2 rows side by side 20 bags each. Rows would be oriented parallel or perpendicular to the shoreline, depending on bottom topography. Groups of clam bags would be placed on the bottom between 0.5' & 1.5' above MLLW. Spaces of 5' to the sides and ends would exist between all groups (fig 4). Growth time would be approximately 1 1/2 years and areas would be left fallow approximately 6 months before planting another group. A small number of rafts and /or longlines would be used for mussel and abalone culture in the deeper areas of the lease (site plan). Rafts would be constructed of wood, polyethylene, polypropylene, and /or PVC plastic. Mussel rafts would be approximately 20'Lx8'W with mussels suspended below on 4' to 8' ropes (fig. 5). Abalone rafts would be approximately 4'Lx3'Wx3' deep (fig. 6). Approximately 10 rafts would be used at maximum build - out. Long - lines, if used instead of rafts, would approximate specifications detailed in fig. 7.

The lease would be delineated by corner posts extending 10' above MLLW, or buoys. As shown on the plan view, at maximum development, there would be approximately 2 groups of oyster racks, 5 groups of clam bags/oyster bags, and 10 rafts/long lines. Maximum development of the lease should take around three years from commencement of work. No structures would be permanently fastened to the seafloor and would be removed if the lease is abandoned for any reason.

EXHIBIT NO. 4

APPLICATION NO.
1-94-55 TOM'S

POINT SHELLFISH
Development Plan

Vincent Landing

CLAM/OYSTER
ON-BOTTOM
AREA

MHHW

MLLW

CLAM
CULTURE
AREAS

OFF-BOTTOM
OYSTER
CULTURE

OFF-BOTTOM
OYSTER
CULTURE

EELGRASS
BEDS

M-430-15

LEASE
M-430-16

OFF-BOTTOM
OYSTER
CULTURE

MUSSEL/ABALONE
RAFTS

Toms Point

Mf

Sd

EXHIBIT NO. 5

APPLICATION NO.
1-94-55 TOM'S
POINT SHELLFISH
Project Plan

California Coastal Commission

SITE PLAN - PROPOSED DEVELOPMENT PLAN
FOR STATE AQUACULTURE LEASE M 430-15

1 PLAN VIEW - OYSTER BOTTOM CULTURE $\frac{1}{8}" = 1'0"$

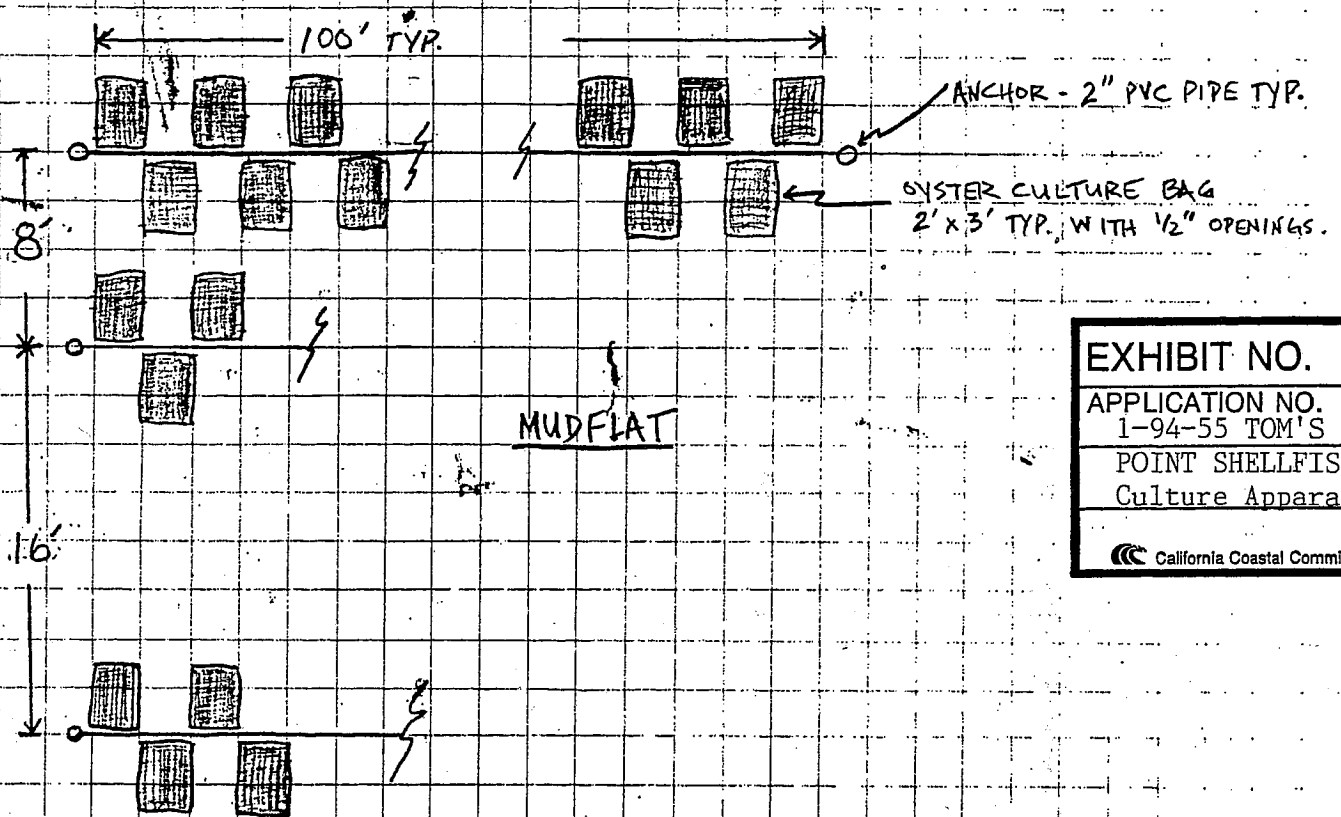


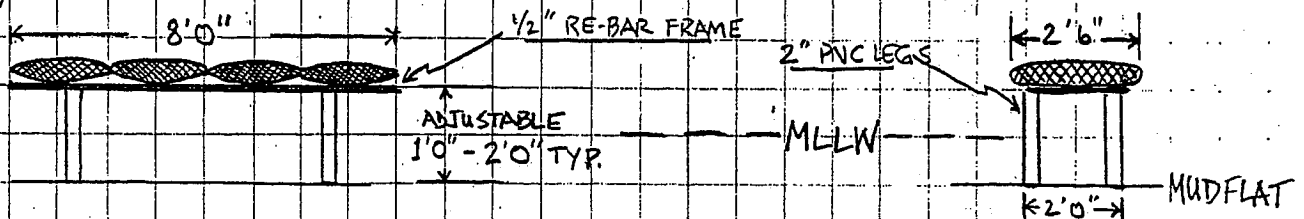
EXHIBIT NO. 6

APPLICATION NO.
1-94-55 TOM'S

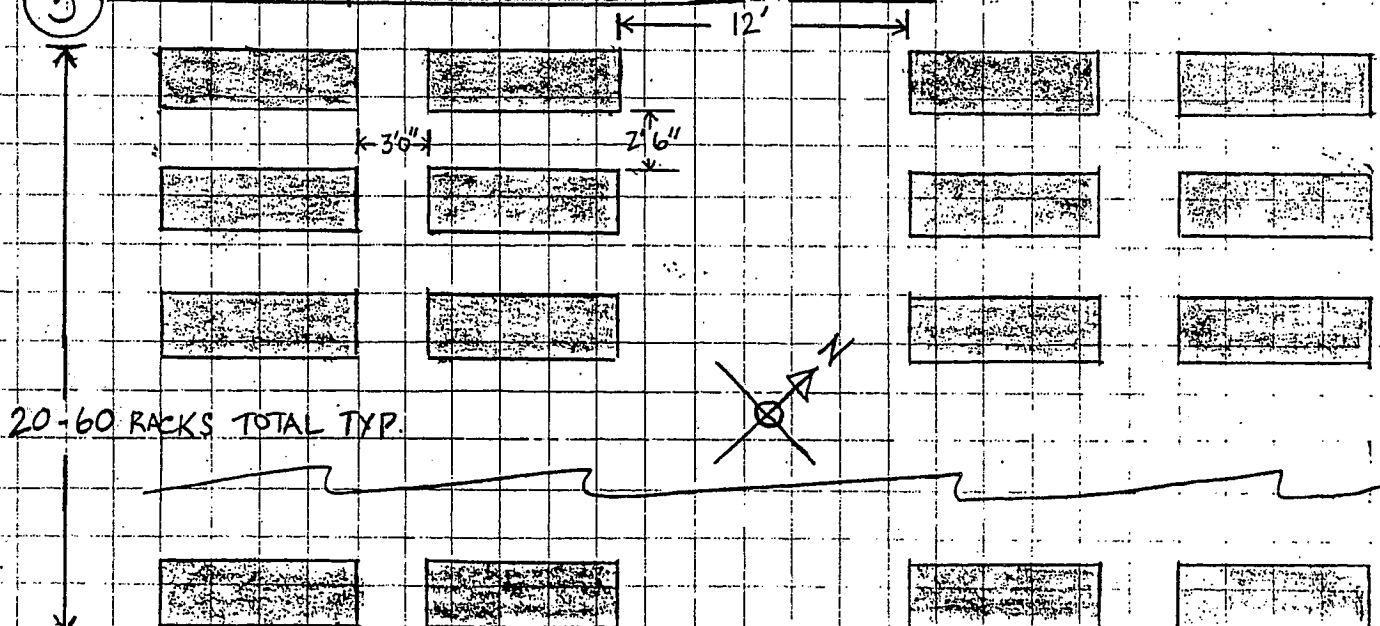
POINT SHELLFISH
Culture Apparatus

California Coastal Commission

2 SIDE ELEVATIONS - OYSTER OFF-BOTTOM CULTURE $\frac{1}{4}" = 1'0"$



3 PLAN VIEW - OYSTER OFF-BOTTOM CULTURE $\frac{1}{8}" = 1'0"$

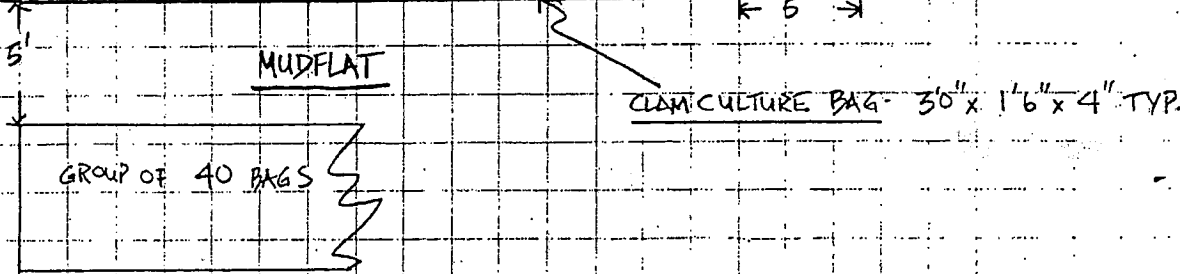


4 PLAN VIEW - CLAM BOTTOM CULTURE

$\frac{1}{8}'' = 1'0''$

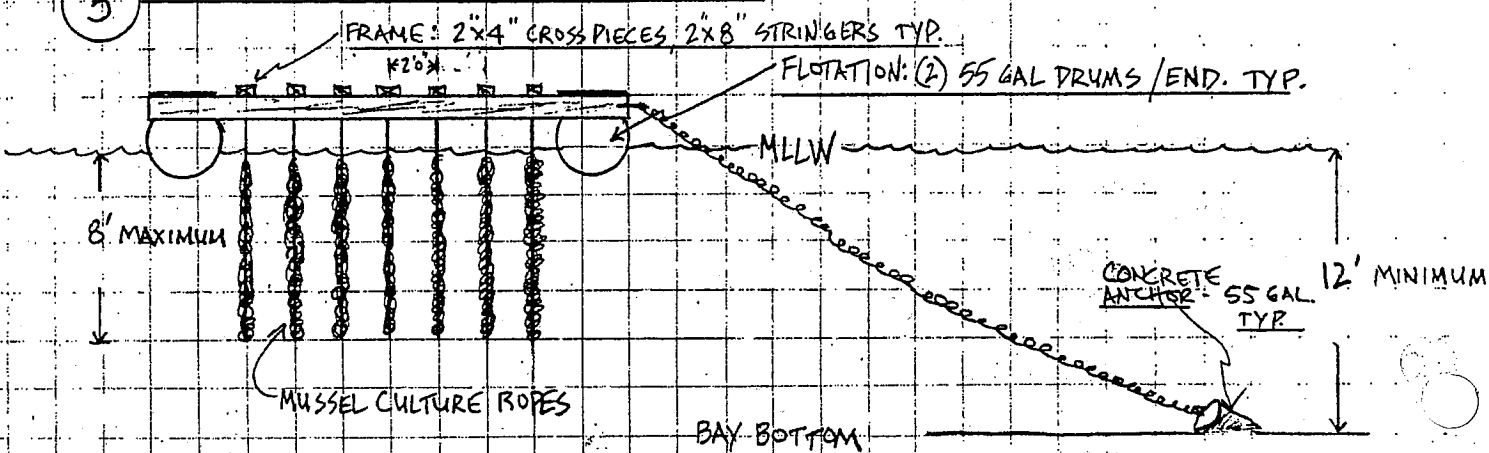


GROUP OF 40 BAGS



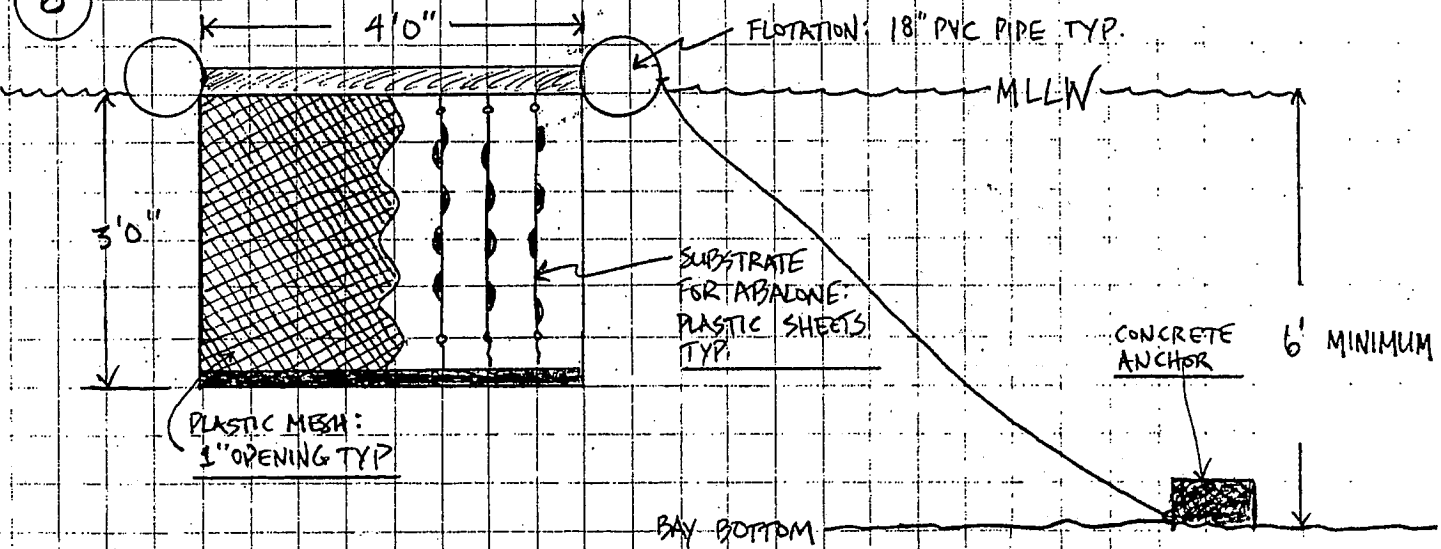
5 SIDE ELEVATION - MUSSEL RAFT

$\frac{1}{4}'' = 1'0''$



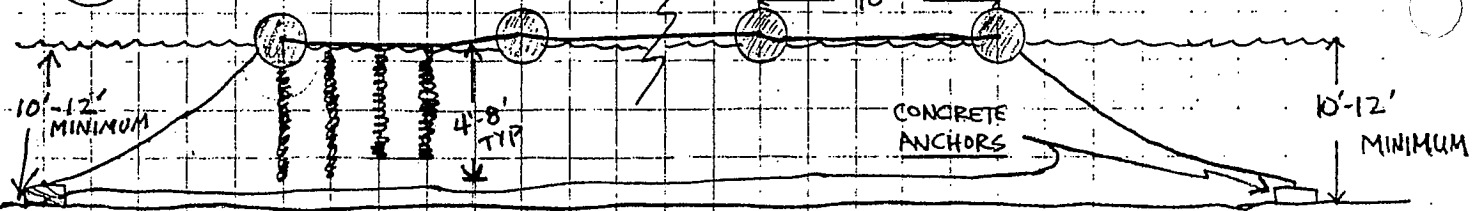
6 SIDE ELEVATION - ABALONE RAFT

$\frac{1}{2}'' = 1'0''$



7 SIDE ELEVATION - LONG LINE

$\frac{1}{8}'' = 1'0''$
 100' TYP.



CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



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(HOG ISLAND OYSTER COMPANY)

FEBRUARY 8, 2019

EXHIBITS

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Exhibit 1 – Project Area and Location of State Water Bottom Leases

Exhibit 2 - Maps of Existing Operations in State Water Bottom Leases

Exhibit 3 - Maps of Proposed Expanded Operations in State Water Bottom Leases

Exhibit 4 - Vessel Access Routes and Management Measures

Exhibit 5 - Marine Debris Management Plan

Exhibit 6 - Existing Cultivation Gear and Eelgrass

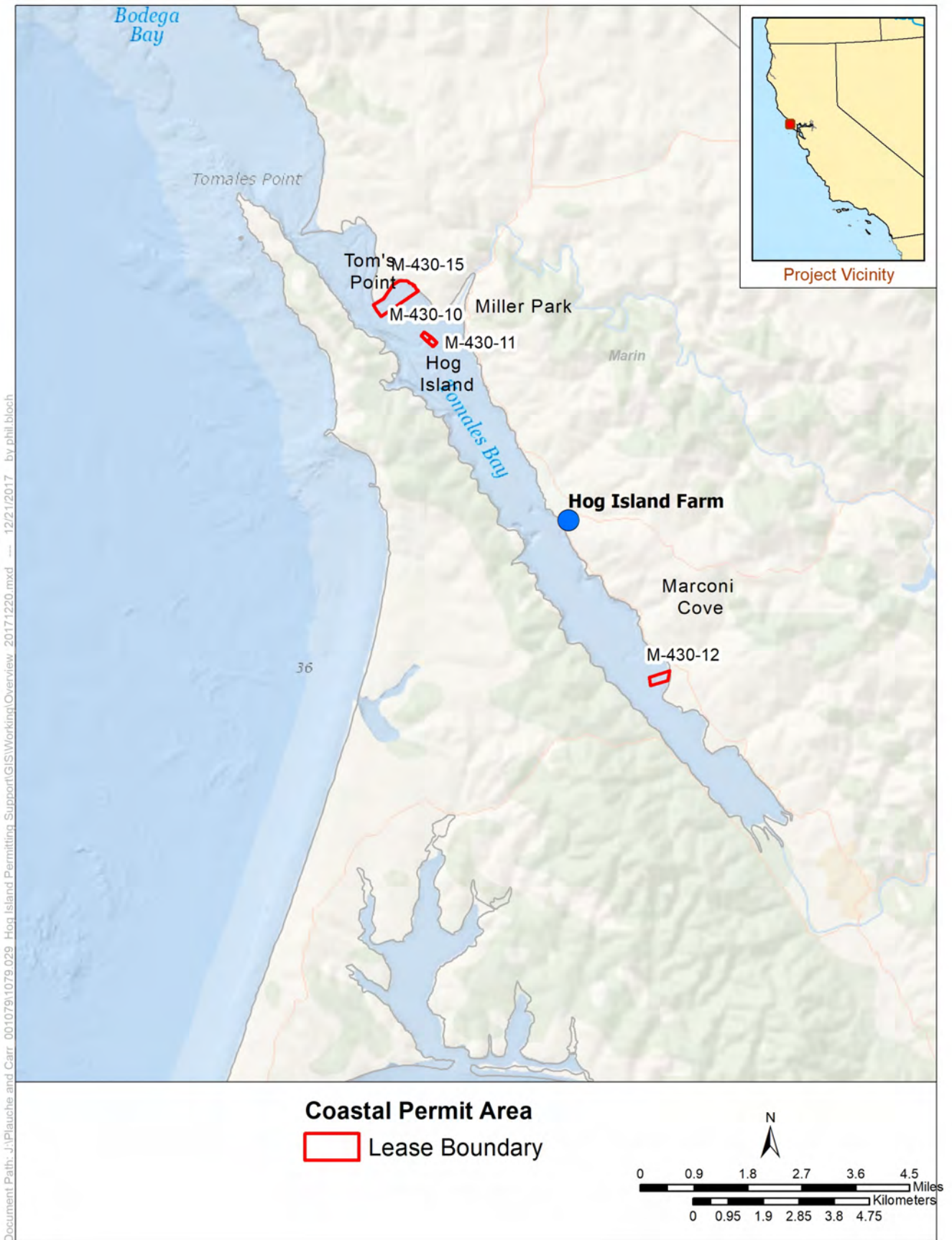


Figure 1. Location of HIOC Operations in Tomales Bay, California

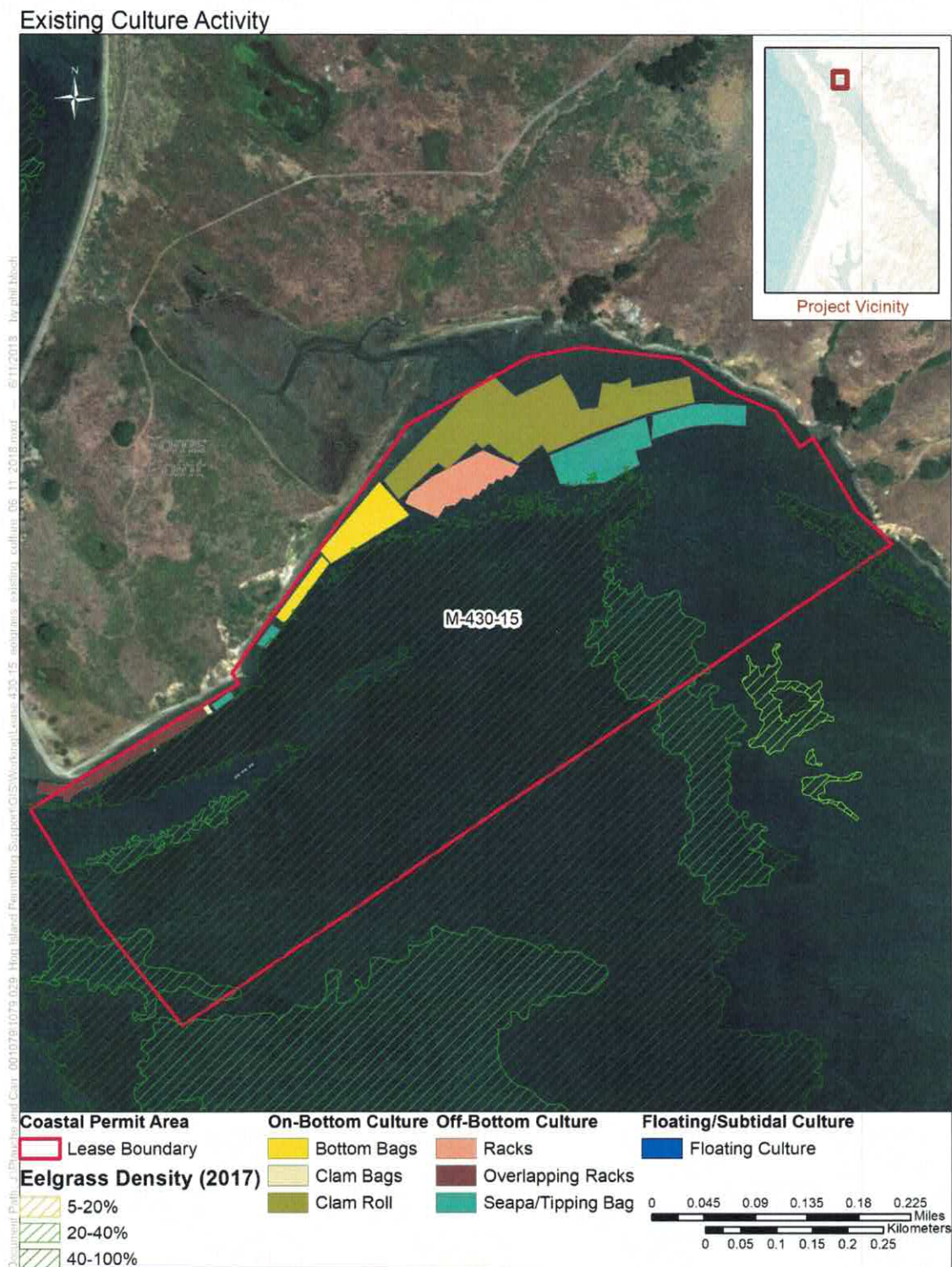


Figure 7: Existing Cultivation Activity – CFGC Lease M-430-15



Figure 8: Existing Cultivation Activity – CFGC Leases M-430-10 and M-410-11

EXHIBIT 3 - Maps of Existing Operations in State Water Bottom Leases (page 3 of 3)



Figure 9: Existing Cultivation Activity – CFGC Lease M-430-12

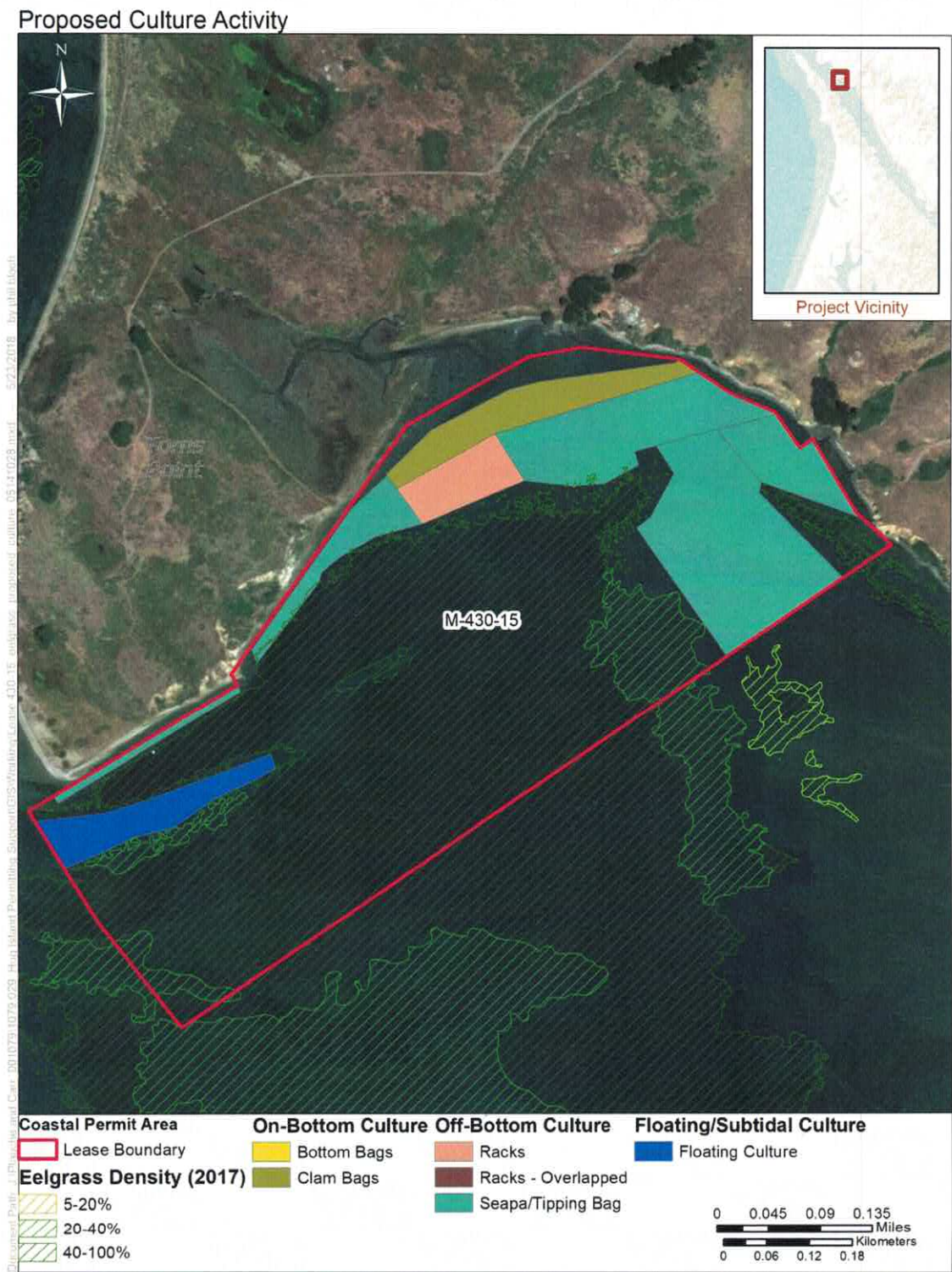


Figure 1: Proposed Cultivation Activity – CFGC Lease M-430-15

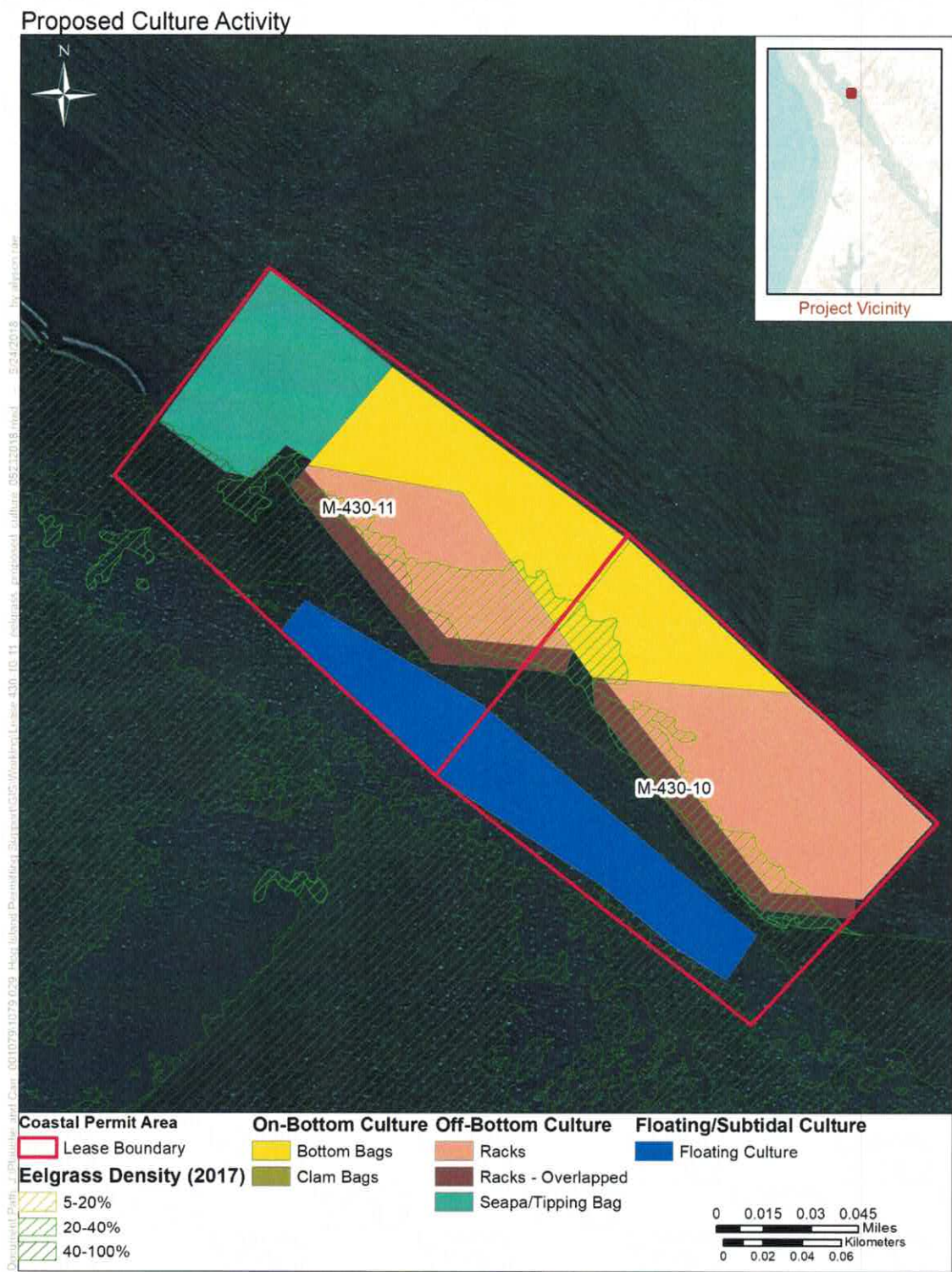


Figure 2: Proposed Cultivation Activity – CFGC Leases M-430-10 and M-410-11

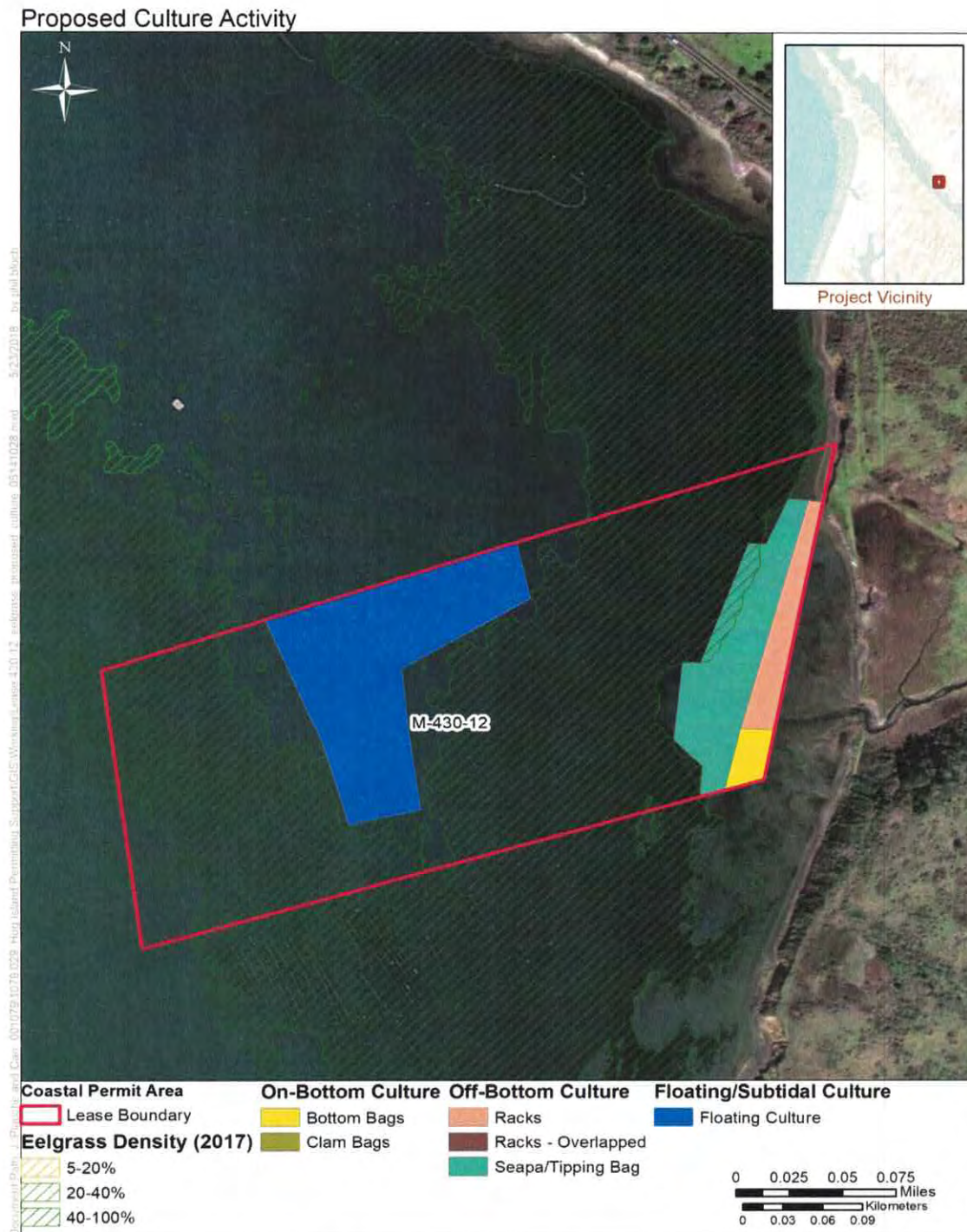


Figure 3: Proposed Cultivation Activity – CFGC Lease M-430-12⁴

⁴ This plan and Tables 1 and 2 include the modifications discussed in our January 25, 2018 letter to Commission staff.

APPENDIX C: VESSEL ROUTES

Hog Island Oyster Company (HIOC) has developed vessel routes in and around SAV or near marine mammal haul-out locations and areas where marine birds congregate. The following information is based on current best management practices associated with typical operations.

Vessel Routes in SAV

At low tides (≤ 3 feet), HIOC will avoid navigating over native eelgrass (*Zostera marina*) beds by staying in deeper channels, as much as possible, using the routes established on the route map (Figure C-1). Lease M-430-12 in the south end of the bay has deep water access to the lease area and therefore does not have a specified route. Larger work barges and work platforms are anchored outside of eelgrass and smaller skiffs are used to access any areas where eelgrass is present. All boats have an onboard global positioning system (GPS), and HIOC deploys floating markers, where appropriate, on the leases. Using these routes will help minimize impacts to eelgrass beds. In periods of darkness or inclement weather, HIOC staff use lights and onboard GPS units to aid navigation.

Vessel Routes Near Marine Mammal Haul-out Locations or Marine Birds

HIOC will maintain a distance of at least 100 yards from any identified seal haul-out site and will not intentionally approach any observed marine mammal in the water. Identified seal haul-out locations in Tomales Bay include Pelican Point, Duck Island, and the east side of Hog Island (Figure C-1). HIOC will report any injured or dead seals to the Marine Mammal Center, 415-289-SEAL. In addition, HIOC will avoid disrupting or hurting birds that are in the bay, especially during feeding events.

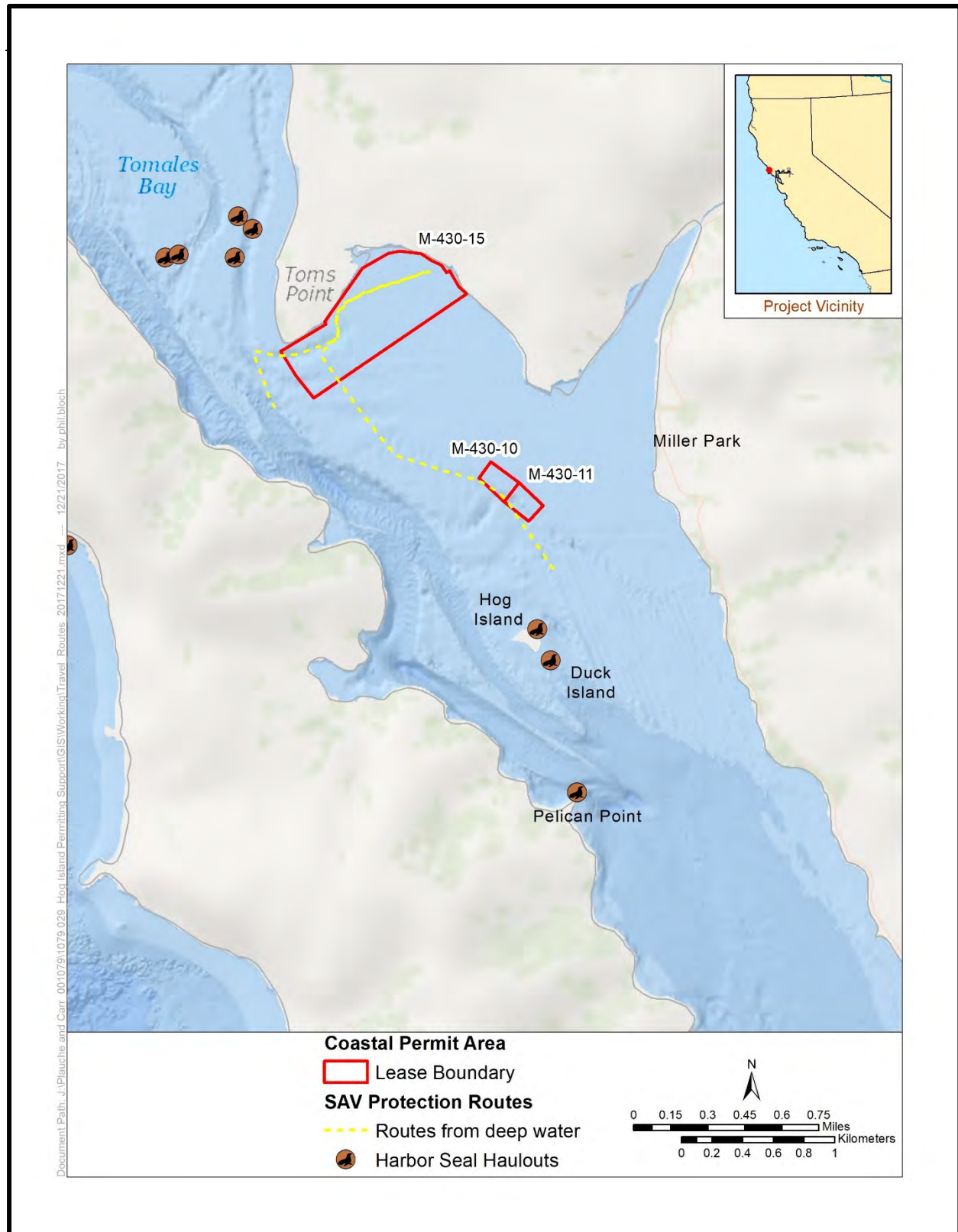


Figure C-1: Vessel Route to access Leases No. M-430-10, M-430-11, and M-430-15 from East Channel or West Shore in Tomales Bay, California.

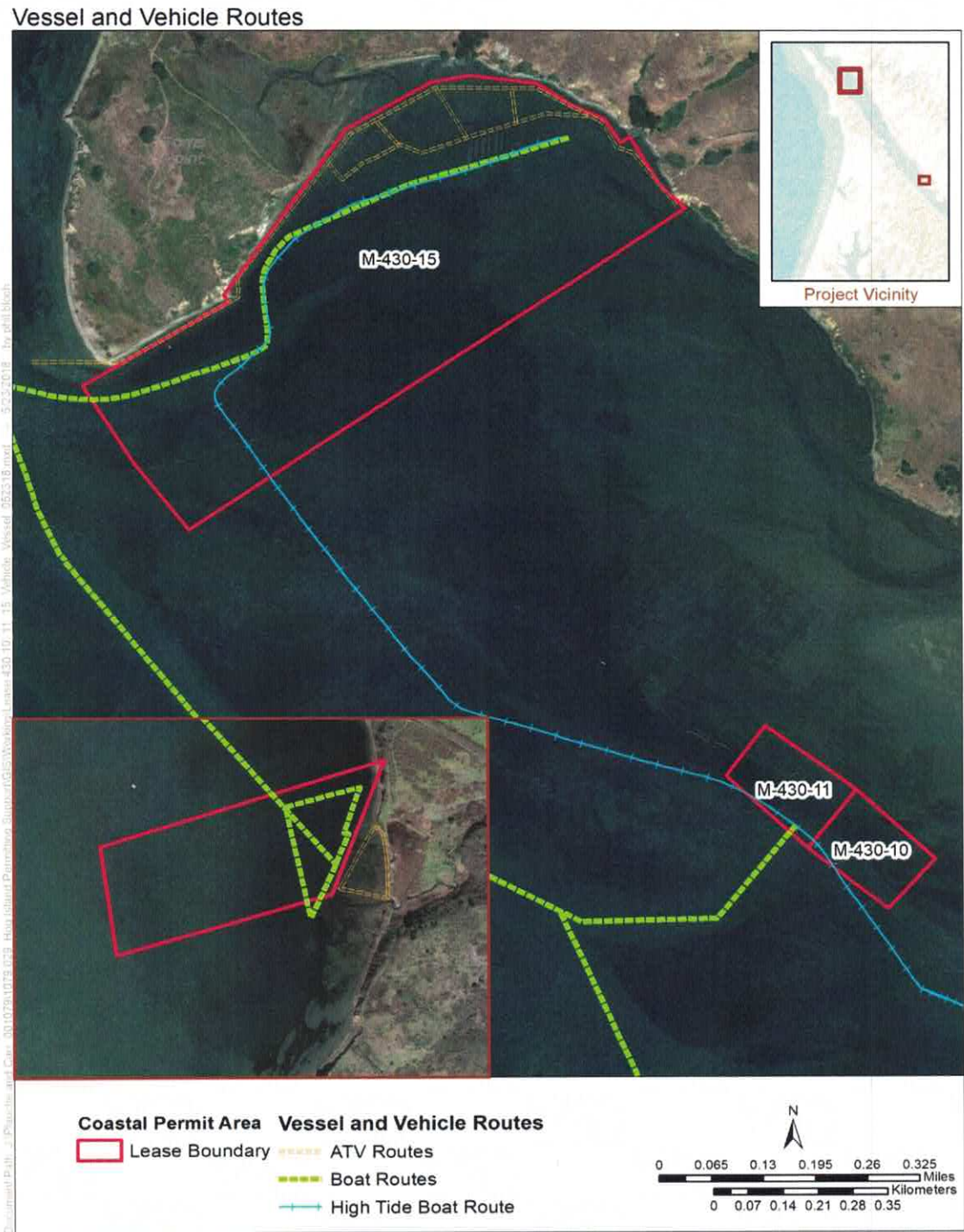


Figure 15: ATV and Vessel Routes



Figure 16: Vessel Routes and Boat Launches

APPENDIX A: MARINE DEBRIS MANAGEMENT PLAN

Hog Island Oyster Company (HIOC) worked closely with local citizens to address marine debris management. HIOC does a quarterly bay clean-up, with emphasis on the four HIOC leases (M-430-10, M-430-11, M-430-12, and M-430-15). There is an organized clean-up with all the Tomales Bay growers, and the goal is to conduct bi-weekly bay clean-ups on different sections of the bay. Figure A-1 and Figure A-2 provide the breakdown of responsibilities for clean-up events by grower. HIOC also helps organize a yearly bay clean-up event on California Coastal Clean Up Day. In addition to aquaculture debris, materials from other sources are also collected. During the 2016 to 2017 clean-up effort, waste associated with recreation (e.g., hats, cigarettes, styrofoam) and food (e.g., food wrappers, bottles) comprised the largest amount of debris collected.

The specific action items that are part of the marine debris management plan include:

- Regularly educate staff on the issues of marine debris. Ensure that all staff do not litter.
- Growers must strive to continually improve gear, so that breakage and scattering of debris is minimized.
- Avoid the use of any single-use materials. Minimize waste generation, practicing the principals of reduction, re-use, recycling and recovery. Purchase materials with a long a life span, preferably reusable but at least recyclable.
- Secure all buoys/floats properly to minimize loss.
- When tossing out loose bags or bundles of lightweight seed bags ensure that all bags are either heavy enough not to drift away or secured/anchored to prevent drifting or movement. All loose bags shall be secured within two weeks of being tossed out if not sooner.
- Avoid leaving tools, loose gear and construction materials on leases and surrounding area for longer than one week. All materials staged on leases shall be secured to prevent movement and or burial.
- If a culture method is unsuccessful, or is not in use for over a period of one year, all materials will be promptly removed.
- At a minimum, leases and surrounding areas shall be patrolled for lost and broken gear monthly. Patrols should occur as soon as possible or at least within two-weeks of any high wind or storm event.
- Growers will participate in quarterly bay clean-ups, which include walking the bay, shoreline and wetlands, to get to hard to reach areas. An itemized list of any, and all

Appendix A: Hog Island Oyster Company Marine Debris Management

debris (including shellfish gear), collected will be recorded and communicated to other growers. The goal is to reduce the total volume of debris that is accumulating in Tomales Bay.

- Growers will work with and collaborate with local community and other coastal clean-up people/organizations to coordinate bay wide clean-up efforts. All trash will be collected (including non-shellfish items) at all times.
- A review of lease escrow accounts shall occur on a regular basis to ensure that adequate funds are available to clean up abandoned leases. Growers shall retain the right to perform the clean-up of any abandoned leases themselves, so as to not decrease the balance in the escrow account.

EXHIBIT 6 – Existing Cultivation Gear and Eelgrass (page 1 of 2)

On the following figures, the results of the National Marine Sanctuary's 2017 eelgrass survey are indicated in green, the approximate boundaries of cultivation beds are shown in white and existing cultivation gear, structures, and equipment is shown in the underlying aerial photograph.

Existing Cultivation Gear and Eelgrass on Leases M-430-10 and M-430-11



Existing Floating Cultivation Gear and Eelgrass on Lease M-430-12

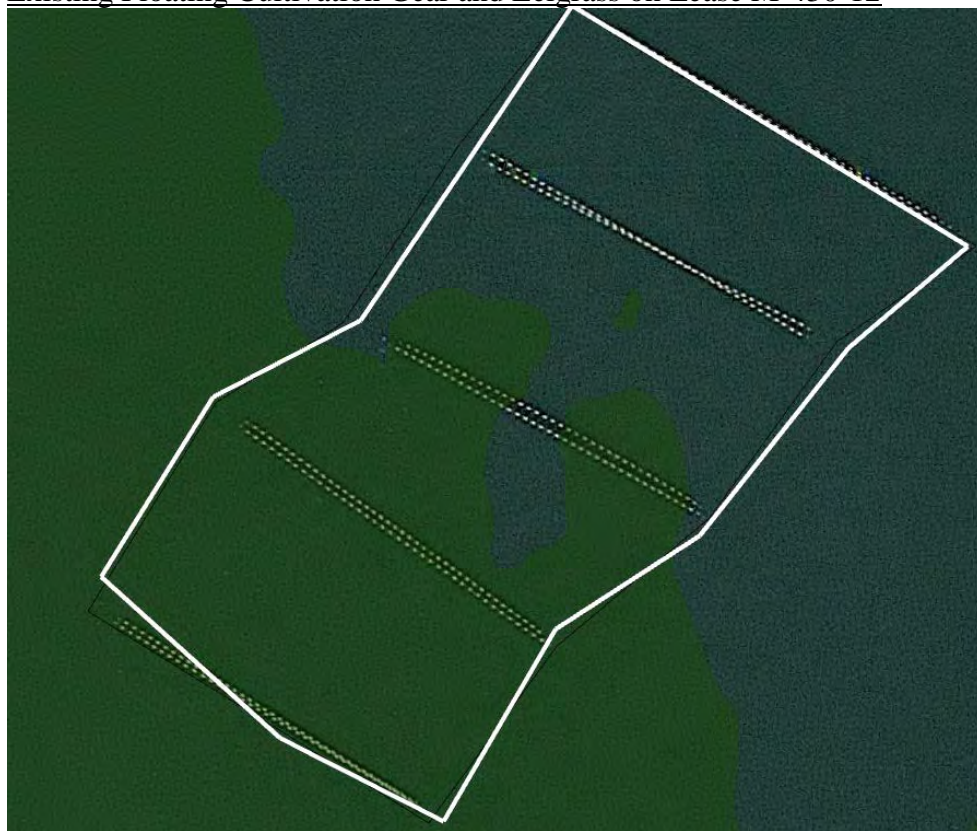
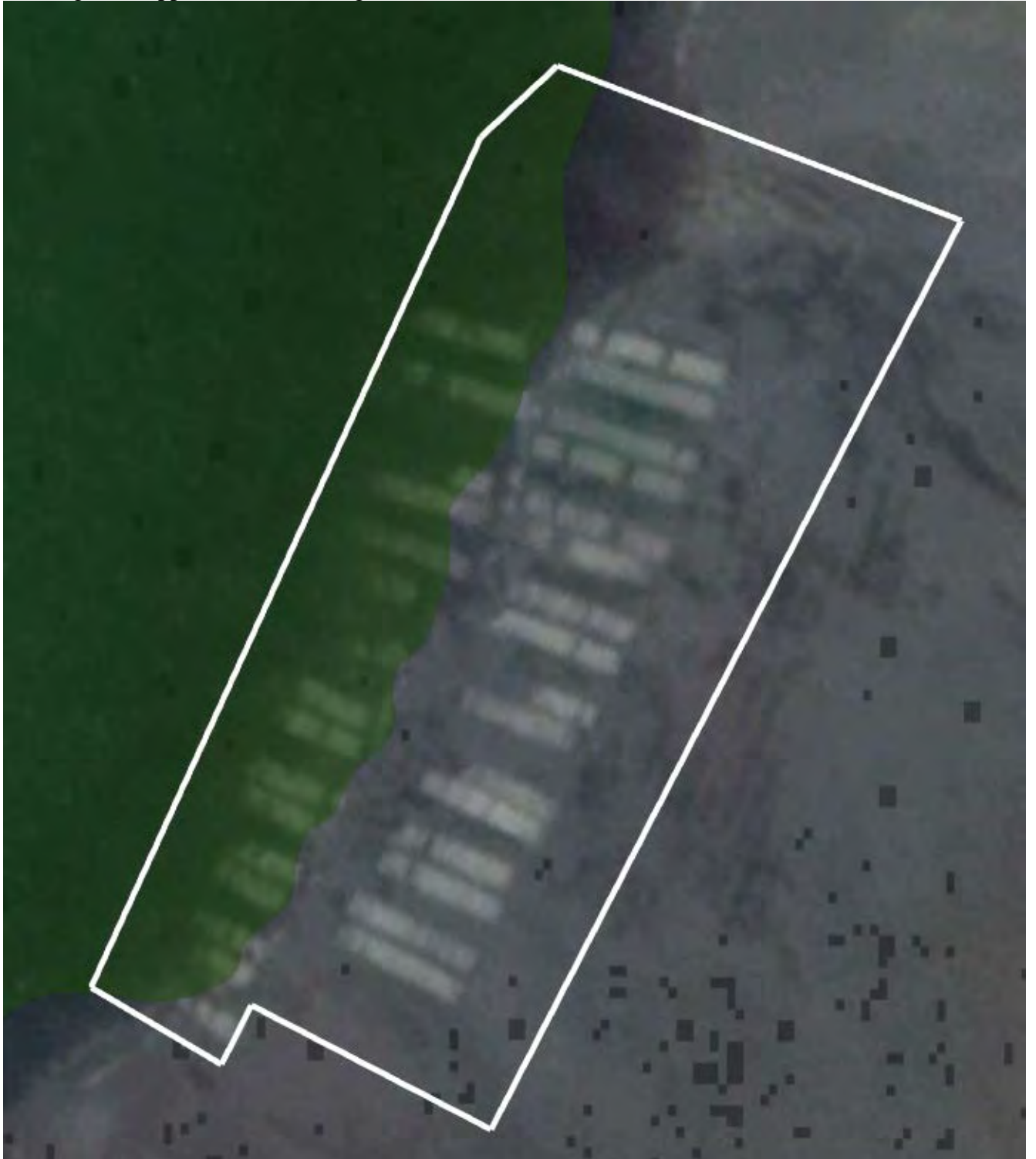


EXHIBIT 6 – Existing Cultivation Gear and Eelgrass (page 2 of 2)

Existing Overlapped Racks and Eelgrass on Lease M-430-12



Memorandum

Date: November 26, 2019

Received December 6, 2019.
Signed original on file.

To: Melissa Miller-Henson
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: **Request to consider approval of lease amendments requested by Hog Island Oyster Company for State Water Bottom Lease Nos. M-430-10, M-430-11, M-430-12, and M-430-15 for purposes of aquaculture in Tomales Bay**

The Department of Fish and Wildlife (Department) recommends that, pursuant to Fish and Game Code § 15400, the Fish and Game Commission (Commission) approve amendments to each of the four leases in Tomales Bay, M-430-10, M-430-11, M-430-12, and M-430-15, to allow the same set of approved species and certain cultivation methods.

Background

The Commission received a request dated January 28, 2019 from Mr. John Finger, co-owner of Hog Island Oyster Company (HIOC), that each of the four leases in Tomales Bay, M-430-10, M-430-11, M-430-12, and M-430-15 be amended to allow the same set of species and cultivation methods to give them the flexibility to manage their operations more adaptively in a changing environment. The Department of Fish and Wildlife (Department) is providing the following comments in support of its recommendation.

HIOC requests the following species be permitted on each of their leases: Pacific oyster (*Crassostrea gigas*), Eastern oyster (*Crassostrea virginica*), Kumamoto oyster (*Crassostrea sikamea*), European flat oyster (*Ostrea edulis*), Olympia oyster (*Ostrea lurida*), Manila clam (*Venerupis philippinarum*), and Mediterranean mussel (*Mytilus galloprovincialis*). The species requested all have a history of approval from the Commission, including various combinations on HIOC's four existing leases and are among the most cultivated species in California. The Department supports the approval of these species in each of the HIOC Tomales Bay leases.

HIOC has also requested that cultivation methods, which have previously been approved in varying combinations across its leases be uniformly approved for each of its four Tomales Bay leases. Requested methods included: rack and bag, bag/tray on bottom, intertidal longlines (with bags/baskets), floating longlines, and rafts. With the exception of bottom trays, these methods have commonly been used in shellfish cultivation in California and have previous authorization from the Commission in Tomales Bay and elsewhere in California.

The Department supports the use of rack and bag, bottom bag, intertidal longlines, floating longlines, and rafts, but not the bottom tray method. However, the Department has confirmed that HIOC no longer uses nor does it seek approval of the bottom tray method in its amended leases.

While the Department supports the cultivation of the species and the remaining methods requested by HIOC, the environmental impact of a particular cultivation practice is site-specific and not uniform across all areas of HIOC's four leases. Site- and project-specific evaluation is important to preserve the integrity of Tomales Bay's important ecological resources.

The Department agrees with the environmental review completed by the California Coastal Commission (CCC) in approving all but the bottom tray cultivation method throughout HIOC's four lease areas. The Department recommends the Commission consider utilizing the environmental analysis described in the CCC's Coastal Development Permit Amendments in granting approval of the four requested lease amendments.

The approval of the above suite of species and methods for each lease does not supersede permit conditions and prohibitions from other regulatory agencies and would require additional approvals before deviating from permitted activities. If a lease authorizes methods not currently authorized in the associated CCC Coastal Development Permit (CDP), an amendment to the CDP would be needed prior to installing and using that particular method in an approved cultivation area.

The Department recommends approval of the request to amend state water bottom leases M-430-10, M-430-11, M-430-12, and M-430-15 to uniformly allow the same set of approved species: Pacific oyster (*Crassostrea gigas*), Eastern oyster (*Crassostrea virginica*), Kumamoto oyster (*Crassostrea sikamea*), European flat oyster (*Ostrea edulis*), Olympia oyster (*Ostrea lurida*), Manila clam (*Venerupis philippinarum*), and Mediterranean mussel (*Mytilus galloprovincialis*), as well as rack and bag, bottom bag, intertidal longlines, floating longlines, and rafts as approved cultivation methods.

If you have any questions regarding this item, please contact Randy Lovell, State Aquaculture Coordinator at (916) 445-2008 or by email at randy.lovell@wildlife.ca.gov.

Melissa Miller-Henson, Executive Director
Fish and Game Commission
November 26, 2019
Page 3

ec: Department of Fish and Wildlife

Stafford Lehr, Deputy Director
Wildlife and Fisheries Division
Stafford.Lehr@Wildlife.ca.gov

Craig Shuman, D. Env.
Regional Manager
Marine Region
Craig.Shuman@wildlife.ca.gov

Randy Lovell
State Aquaculture Coordinator
Wildlife and Fisheries Division
Randy.Lovell@wildlife.ca.gov

Kirsten Ramey
Environmental Program Manager
Marine Region
Kirsten.Ramey@Wildlife.ca.gov



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David Wimpfheimer

Staff

Morgan Patton
Executive Director

Ashley Eagle-Gibbs, Esq.
Conservation Director

Jessica Reynolds Taylor
Development Director

Patricia Wimpfheimer
Bookkeeper

November 26, 2019

California Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090
Via electronic delivery to: fgc@fgc.ca.gov

Re: Comments on FGC Agenda Item 33
Hog Island Oyster Company

Dear Commissioners,

The Environmental Action Committee of West Marin (EAC) is based in Point Reyes Station and has been working to protect the unique lands, waters, and biodiversity of West Marin since 1971. Since our inception, we have been committed to the health of West Marin's estuaries, bays, and watersheds including our strong focus on Tomales Bay.

We submit these brief comments for inclusion in the binder, as the binder materials will not be made available until after the comment deadline. We continue to point out that it is procedurally problematic that the comment deadline (for inclusion in the binder) is in advance of the public's opportunity to review the substantive binder materials.

That being said, we submit brief generally supportive comments, which we may supplement, regarding Agenda Item 33, Hog Island Oyster Company.

Regarding Agenda Item 33, your consideration of approving lease amendments applied for by Hog Island Oyster Company for State

November 26, 2019
EAC Comments re. Agenda Item 33

Water Bottom Lease Nos. M-430-10, M-430-11, M-430-12, and M-430-15 for purposes of aquaculture in Tomales Bay, we remind the Fish and Game Commission (Commission) that we have been advocating to the Commission for aquaculture best management practices since 2015.

Many of the goals supported by a best management practices rulemaking have been accomplished through the California Coastal Commission's (CCC) coastal development permit (CDP) amendments, in which the CCC is including enforceable permit conditions around marine debris and other environmental considerations. We continue to support the CCC's efforts and your Commission's consistency with these efforts. While many improvements have been made on Tomales Bay related to the loss of aquaculture marine debris, the Bay continues to depend on all of the state agencies' close attention to any and all industrial practices on the Bay. While we are supportive of lease amendments which make the leases consistent with the actual practices and the applicable CDPs, we also point out that it would be better if this was not an after the fact process, which may inherently discourage compliance.

We thank Hog Island Oyster Company for their willingness to come into compliance and work with local stakeholders, as well as the state agencies. In sum, we appreciate your consideration of our comments; and without a chance to review the binder, we are in general support of Agenda Item 33.

Respectfully,



Morgan Patton
Executive Director



Ashley Eagle-Gibbs
Conservation Director

cc: Susan Ashcraft, California Fish and Game Commission
Elizabeth Pope, California Fish and Game Commission
Terry Sawyer, Hog Island Oyster Company
John Finger, Hog Island Oyster Company

**TO LEASE OF STATE WATER BOTTOMS FOR AQUACULTURE
LEASE NO. M-430-04**

This amendment of aquaculture lease made and entered into as of the 1st day of January 1993, by and between the State of California, acting by and through its Department of Fish and Game, hereinafter referred to as "lessor", and Bay Bottom Beds Inc., hereinafter referred to as "Lessee".

W I T N E S S E T H:

WHEREAS, on March 1, 1991, Lessor did enter into Lease Agreement No. M-430-17 with Shellfish Unlimited (a partnership comprised of Point Reyes Oyster Company and Bay Bottom Beds Inc.) for the purpose of cultivating oysters, mussels and clams, and

WHEREAS, Lessee has heretofore informed Lessor that the partnership has been dissolved and the partners have requested that the water bottom acreage contained in said leasehold (123.8 acres) be divided equally between the two partners in two, two 61.9-acre parcels, and

WHEREAS, Lessor has requested at a duly called and noticed hearing of the Fish and Game Commission of the State of California, that the partition and redescription of said lease would be in the best interest of the State of California.

NOW, THEREFORE, THIS AMENDMENT WITNESSETH:

That, in accordance with a request for partition of said lease made by Lessor and accepted at a duly called and noticed hearing of the Fish and Game Commission of the State of California, pursuant to Fish and Game Code Section 15400, Lessor does hereby grant to Lessee the exclusive privilege to cultivate shellfish thereon, and in those certain tidelands of the State of California, described as follows:

All that certain real property situated in the County of Marin, State of California, described as follows:

In Tomales Bay, Marin County, State of California, starting from Bench Mark 8 located at approximately 38°12'38.7" North Latitude, 122°55'22" West Longitude on the Tomales Bay Quadrangle, Marin County, California, U.S. Dept. of the Interior Geological Survey 7.5 minute series topographic map; thence North 83°31' West for a distance of 2,749.3 feet to the top of Preston Point Rock lying off the northeast end of Preston Point; thence South 65°57'51" West 2,128.40 feet to the true point of beginning; thence South 50°27'48" East 807.00 feet; thence N 46°50'24" E 1,028.82 feet; thence N 35°53'07" W 539.10 feet; thence N 29°23'42" E 655.05 feet; thence N 59°41'17" W 670.79 feet; thence S 58°38'08"

W 2,190.75 feet; thence S 51°18'13" E 1078.38 feet; thence N 39°32'12" E 357.16 feet; to the true point of beginning.

This parcel of water bottoms, formerly a portion of Aquaculture Lease No. M-430-17, containing an area of 61.9± acres, more or less, comprises Aquaculture Lease No. M-430-04. (Appendices 1 & 2).

This lease, in accordance with provisions of Fish and Game Code Section 15400, as may from time to time be amended or changed by the State Legislature, is for the sole purpose of cultivating Pacific oyster (Crassostrea gigas), Sumino oyster (C. rivularis), Eastern oyster (C. virginica), flat oyster (Ostrea edulis), Native oyster (O. lurida), Manila clam (Tapes japonica), California sea mussel (Mytilus californianus), and bay mussel (M. edulis), in the previously designated area.

The cultivation of additional species of aquatic plants and animals requires the approval of the Fish and Game Commission. Seed stocks must be certified before planting in compliance with Fish and Game Code Section 15201, and must be planted by Lessee in a manner and at a size approved by Lessor to assure that harvested animals are a product of the lease. A request for certification of planting stock will be submitted by Lessee to the Lessor at least ten (10) days prior to the proposed date of inspection.

Shellfish cultivation methods approved for the lease shall be long lines, rafts, stakes, racks and bags, rack and tray, floats, and bottom culture within the area approved by the Commission. No other mode of operation or culture method is authorized, unless Lessee shall first obtain approval from the Fish and Game Commission.

The required ten (10) day notice of intent to plant shellfish on the lease shall be given to the Department of Fish and Game, Marine Resources Division, 1136 Duer Road, Sebastopol, CA 95473. In addition to the ten (10) day notice, the Marine Unit Manager, Mr. Thomas Moore, telephone (707) 823-9236, shall be given notice at least 24 hours prior to the date of planting, giving details on where the shellfish seed can be inspected.

This amended lease falls within the authorized term of the initial lease of twenty-five (25) years which commenced on the 1st day of March, 1991, and ends on February 29, 2016, for a total rental of two thousand one hundred and sixty-six dollars and fifty cents (\$2,166.50) per year, and a privilege tax on all products harvested as provided by Fish and Game Code sections 8051 and 15406.7. Said annual rental will be payable to Lessor on a fiscal year basis, July 1 - June 30, and within thirty (30) days of the commencement of the lease, or after receipt of the consummated lease agreement. If said annual rental is not paid within sixty

(60) days after the close of the month in which it is due, an additional 10 percent penalty shall be paid. Lessor, at its option, may declare the lease abandoned for failure to pay such rental fees within 90 days from the beginning of the rental period; although such abandonment shall not relieve Lessee of his obligation to pay such rental and penalty which are due and owing. Lessee agrees to pay Lessor reasonable attorney fees and costs incurred in collecting any amounts and/or penalties due and owing from Lessee under the provisions of this lease. Lessee agrees to pay said rent to Lessor at its office in the City of Sacramento, State of California, or at such other place as Lessor may, from time to time, designate.

Lessee expressly recognizes and acknowledges that any payments by Lessee as provided for herein, are subject to the provisions of Fish and Game Code Section 15410, which provides that all leases shall be subject to the power of the Legislature to increase or decrease the rents, fees, taxes, and other charges relating to the lease, but no increase in rent shall be applicable to an existing lease until it is renewed.

This lease is made upon the following terms, conditions and covenants, to wit:

A. This lease may, at the option of the Lessee, be renewed for additional periods not to exceed 25 years each. If Lessee desires to enter into a new lease for a period commencing after expiration of the initial 25-year term, Lessee shall give notice to Lessor one (1) year prior to termination of the lease. The lease may be renewed if, during the notification period, terms for a new lease are agreed upon by Lessee and the Commission.

B. Lessee shall keep records as required in accordance with Fish and Game Code Section 15414, on forms to be supplied by Lessor, and shall maintain adequate accounting records sufficient to determine monies due to Lessor by the 10th day of each month, for all shellfish harvested during the preceding calendar month. Lessor reserves the right to inspect Lessee's premises, equipment, and all books at any time and records of Lessee pertaining to Lessee's cultivation on the leased premises.

C. In order to provide assurance to Lessor that this aquaculture lease is utilized for the purpose stated in the lease application, the lease shall be improved at no less than the minimum rate established by Commission regulations (Appendix 3). This annual rate of planting for shellfish shall be:

Off-bottom culture: 309,500 single seed less than 1 year old
(@ 5,000/acre) or 61.9 cases (@ 80 lbs.
shellstock/case) of seed-bearing shell.

The term of improvement for this lease shall be two years, with the minimum rate of planting for the entire acreage being reached by July 1, 1994. The minimum annual rate of planting for the entire acreage will be maintained thereafter until the end of the lease.

The minimum annual harvest requirement for the lease will be an average of 123,800 (@ 2,000/acre) oysters, clams or other shellfish, effective July 1, 1994.

A minimum rate of planting shall be negotiated for option period. Lessor may declare this lease terminated if Lessee fails to meet these cultivation and harvesting requirements and if Lessee, at any time, is proven to be failing in good faith, to pursue the purpose of this lease.

D. If, at any time subsequent to the beginning date of this lease, the use of cultural devices authorized herein shall fall into a state of disrepair or otherwise become an environmental or aesthetic degradation, as determined by Lessor, then upon written notice by Lessor, Lessee shall have sixty (60) days to repair and correct conditions cited by Lessor. Failure to comply with written notice shall be grounds for termination of this lease and Lessee shall, at the option of Lessor, remove all improvements located on lands covered by this lease.

As a financial guarantee of growing structure removal and/or clean-up expense in the event a lease is abandoned or otherwise terminated, Lessee shall place on deposit, pursuant to the "Escrow Agreement For Clean-up of Aquaculture Leases, Tomales Bay, California", a sum in a proportion that the Lessee's individual acreage bears to the total acreage of specified leased parcels of State water bottoms in Tomales Bay, Marin County, California, until the sum of five thousand dollars (\$5,000.00) is reached. This escrow deposit is established in compliance with Section 7 of the Fish and Game Commission Policy, Awarding of Tomales Bay Aquaculture Leases, adopted January 7¹², 1989 (Appendix 3⁴). Such money shall be deposited over a two-year period, payable one-half upon entering upon the lease, and one-half upon the first anniversary of such inception date. The escrow deposit shall be increased if the Fish and Game Commission determines that, if abandoned, any particular culture operation is likely to be more expensive to remove. The escrow deposit may be reduced by the Commission upon demonstration that the probable cost of removal of all improvements would be less than the deposit previously required. In its annual proof of use report, the Lessor shall advise the Commission of its best estimate of the probable cost of removal for each lease operation. The escrow agreement, escrow holder, and escrow depository shall be agreed upon by the Executive Director of the Fish and Game Commission, the Lessor and Tomales Bay Shellfish Growers Association.

It shall be the responsibility of the Lessee to maintain the specified security balance at the level established by the Commission, regardless of the number of lessees who continue in aquaculture operations within the bay.

If Lessee abandons this lease without removing growing structures therefrom, the escrow deposit shall be expended to remove growing structures, or otherwise clean, or in the alternative, the remaining lessees in Tomales Bay and the Tomales Bay Shellfish Growers Association may undertake the clean-up, leaving the secured amount whole.

In order to assure compliance with the escrow provisions of this lease, Lessee shall dedicate to the agreed upon escrow account specified in the "Escrow Agreement For Clean-up of Aquaculture Leases, Tomales Bay, California (Addendum 1), hereby attached to and made part of this agreement, a total of four hundred forty-nine dollars and fifty cents (\$449.50), a sum proportional to Lessee's total lease acreage of sixty-one and nine-tenths (61.9) acres. This amount equals one-half of the amount, eight hundred ninety-nine dollars (\$899.00), deposited in the "Tomales Bay Escrow Account" by the former partnership (Shellfish Unlimited).

E. Lessee shall observe and comply with all rules and regulations now or hereinafter promulgated by any governmental agency having authority by law, including but not limited to, State Water Resources Control Board, U.S. Coast Guard, and U.S. Army Corps of Engineers. Any other permits or licenses required by such agencies will be obtained by Lessee at his own sole cost and expense.

F. Lessee recognizes and understands in accepting this lease, that its interest therein may be subject to a possible possessory interest tax that the county may impose on such interest, and that such tax payment shall not reduce any rent or royalty due to the Lessor hereunder, and any such tax shall be the liability of, and be paid by, Lessee.

G. Any modification of natural or existing features of the real property described in this lease, which is not consistent with the authorized uses under this lease, is expressly prohibited without prior written consent of the Lessor.

H. As evidence of progress in aquaculture, Lessee shall submit each year to the State at the Marine Resources Division Office, 1136 Duer Road, Sebastopol, CA 95473, a written declaration under penalty of perjury, showing the date and amount of each type of aquaculture development and date and amount of designated

species comprising each planting, including a diagram showing area, amounts, and dates planted. Such declaration shall be submitted on or before July 15 of each year for the previous year, July 1 - June 30, inclusive.

I. This lease shall be canceled at any time Lessee fails to possess a valid aquaculture registration issued pursuant to Fish and Game Code Section 15101. Lessee agrees not to commit, suffer or permit any waste on said premises, or any act to be done thereon in violation of any laws or ordinances. This lease shall be subject to termination by Lessee at any time during the term thereof, by giving Lessor notice in writing at least ninety (90) days prior to the date when such termination shall become effective. In the event of such termination by Lessee, any unearned rental shall be forfeited to the Lessor.

J. This lease of State water bottom only grants Lessee the exclusive right to cultivate and harvest the specified species of oysters, mussels, and clams authorized in the original lease agreement.

K. The lease shall be clearly marked with buoys or stakes to prevent interference with boating or fishing activities that may take place in the area. Minimum marking of the lease shall include: One (1) buoy or stake on each of the four corners of the lease. All buoys or stakes used to define the boundaries of the lease shall be marked in conformance with the International Association of Lighthouse Authorities Maritime Buoyage System regulations (33 CFR sections 62.33 and 66.01-10). Lessee shall make application at the U.S. Coast Guard, Aids to Navigation Branch, 400 Ocean Gate, Long Beach, CA 90822, for approval of the buoys and stakes to be established on this lease. Each buoy or stake shall be set and maintained to extend at least three (3) feet above the surface of the water at mean-higher high water. All buoys or stakes shall bear the Aquaculture Lease No. M-430-04.

If buoys or stakes used to mark this lease are lost, displaced or otherwise removed from the lease area, they must be replaced within a two-week period, weather conditions permitting, or the lease may be subject to abandonment proceedings.

L. In compliance with sections 1,2, and 3 of the Policy, Awarding of Tomales Bay Aquaculture Leases, adopted by the Fish and Game Commission at its meeting on January 12, 1989 (Appendix 3), Lessee agrees to cooperate with the Lessor in the monitoring of the health of eel grass beds located on the lease and in conducting a study to gather baseline sedimentation data on eel grass beds lying within the lease boundary. Lessee further agrees to participate with the Lessor in the design, implementation, and operation of a study to collect baseline information on sedimentation occurring within the leasehold during the period

July 1, 1990 and June 30, 1994, and the monitoring of wintering shorebirds during the period November 1 to February 28 each year, adequate to measure any population or use changes due to lease operations.

If any of the environmental monitoring programs discussed above indicate, or any other reliable information leads the Lessor to conclude that Lessee's aquaculture operation is directly associated with a significant adverse change in the Tomales Bay ecosystem, Lessor shall notify the Executive Director of the Fish and Game Commission and the Lessee of such findings. Upon receipt of notice, Lessee shall take all necessary steps to modify, relocate or discontinue the operation in accordance with the Lessor's advice, unless Lessee demonstrates that its aquaculture operations are not a substantial factor, directly or cumulatively, causing the adverse environmental change. Failure to promptly respond shall be grounds for termination of the lease.

M. In addition to the conditions and restrictions herein provided for in this lease, and any right or privilege granted, conveyed or leased hereunder shall be subject to, and Lessee agrees to comply with all applicable provisions of the California Fish and Game Code, and regulations of the Fish and Game Commission, in particular Fish and Game Code sections 15400-15415, inclusive, and expressly recognizes the right of the Legislature and the Fish and Game Commission to enact new laws and regulations. In the event of any conflict between the provisions of this lease and any law or regulation enacted in the future, the latter will control.

N. This lease is personal to the Lessee and shall not be transferred, assigned, hypothecated, or subleased, either voluntarily or by operation of law, without prior approval of the Fish and Game Commission.

O. In the event of any breach by Lessee of any of the provisions hereof, other than the payment of any sum due from Lessee to Lessor hereunder, which breach is not remedied, abated and cured by Lessee within 60 days after notice in writing, shall cause this lease to thereupon cease and terminate.

P. The attached Nondiscrimination Clause (OCP-1) is hereby made a part of this agreement.

Q. All notices herein provided to be given or which may be given by either party to the other, shall be deemed to have been fully given when made in writing and deposited in the United States Mail, certified and postage prepaid and addressed as follows:

To the Lessor

DEPARTMENT OF FISH AND GAME
1416 Ninth Street
Sacramento, CA 95814

To the Lessee

LISA JANG
Bay Bottom Beds Inc
966 Borden Villa Dr. #103
Santa Rosa, CA 95401

Nothing herein contained shall preclude the giving of any such written notice by personal service. The address to which notices shall be mailed as aforesaid to either party may be changed by written notice given by such party to the other, as hereinbefore provided.

R. Lessee hereby indemnifies and holds harmless the Lessor, its officers, agents, and employees against any and all claims and demands of every kind and nature whatsoever, arising out of, or in any way connected with the use by Lessee of said lease, or the exercise of the privilege herein granted.

IN WITNESS WHEREOF, the parties have caused this amendment to said aquaculture lease to be executed as of the day and year first above written.

APPROVED:

FISH AND GAME COMMISSION

By: Robert R Treman

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

By: Dawn Christel
Lessor

BAY BOTTOM BEDS CO. INC.

By: Lisa Jang
Lessee

By: _____

ALL-PURPOSE ACKNOWLEDGMENT

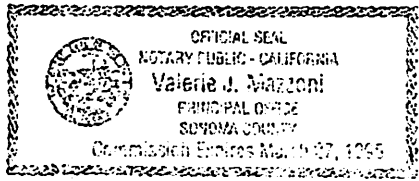
No. 5179

State of California
County of Sonoma

On 02/18/93 before me, Valerie J. Mazzoni Notary Public
DATE NAME, TITLE OF OFFICER - E.G., JANE DOE, NOTARY PUBLIC

personally appeared Lisa Jang
NAME(S) OF SIGNER(S)

☐ personally known to me - OR - ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Witness my hand and official seal.

Valerie J. Mazzoni
SIGNATURE OF NOTARY

CAPACITY CLAIMED BY SIGNER

- ☐ INDIVIDUAL
- ☒ CORPORATE Sec. Treasurer
OFFICER(S) TITLE(S)
- ☐ PARTNER(S) ☐ LIMITED
☐ GENERAL
- ☐ ATTORNEY-IN-FACT
- ☐ TRUSTEE(S)
- ☐ GUARDIAN/CONSERVATOR
- ☐ OTHER: _____

SIGNER IS REPRESENTING:

NAME OF PERSON(S) OR ENTITY(IES)

ATTENTION NOTARY: Although the information requested below is OPTIONAL, it could prevent fraudulent attachment of this certificate to an unauthorized document.

THIS CERTIFICATE
MUST BE ATTACHED
TO THE DOCUMENT
DESCRIBED AT RIGHT:

Title or Type of Document Fe Lease of State Under Bottom
Number of Pages 15 Date of Document 01/01/93
Signer(s) Other than Named Above None

ADDENDUM TO
AQUACULTURE LEASE
BETWEEN
DEPARTMENT OF FISH AND GAME, LESSOR
AND

BAY BOTTOM BEDS COMPANY

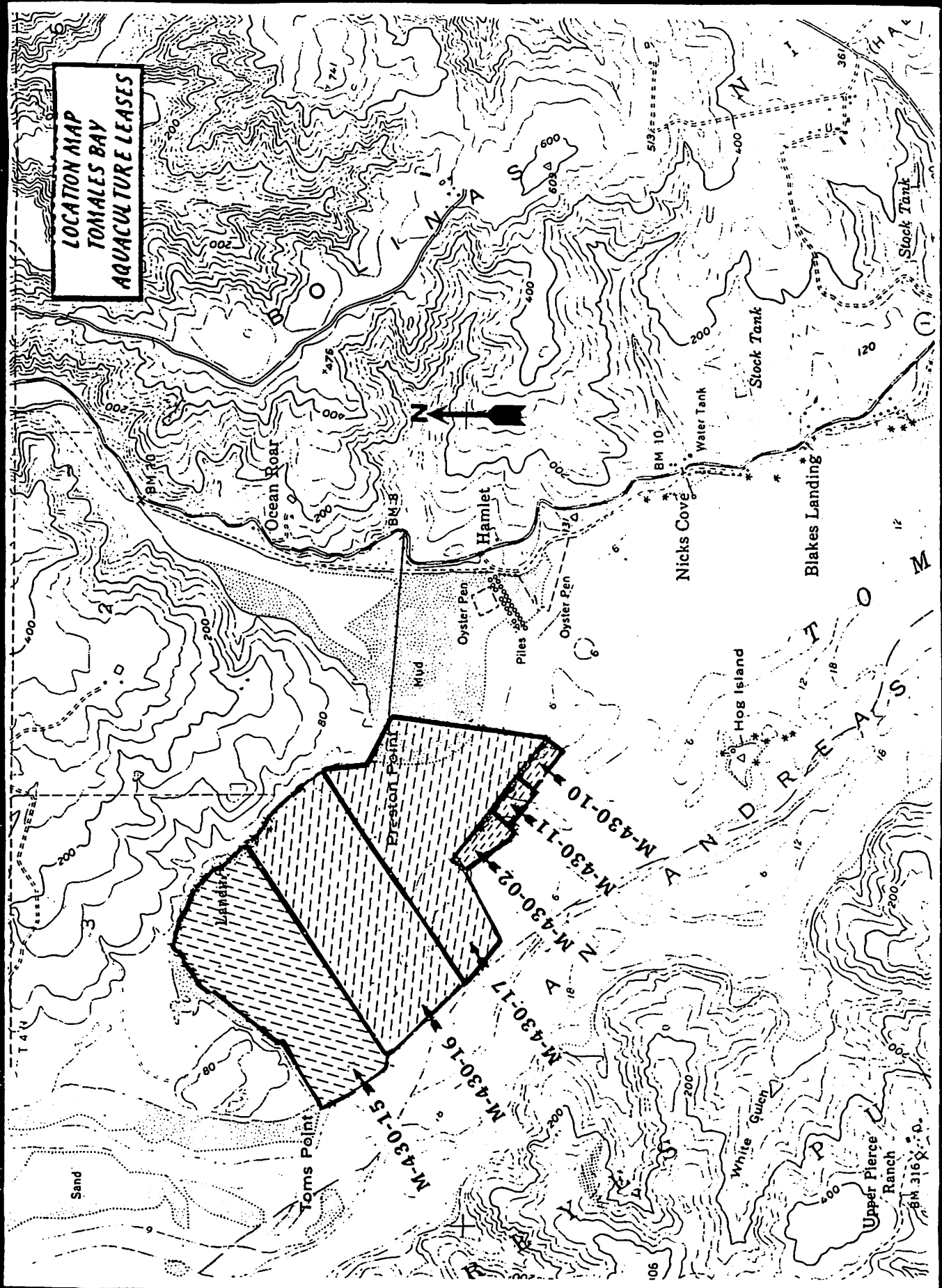
NONDISCRIMINATION CLAUSE

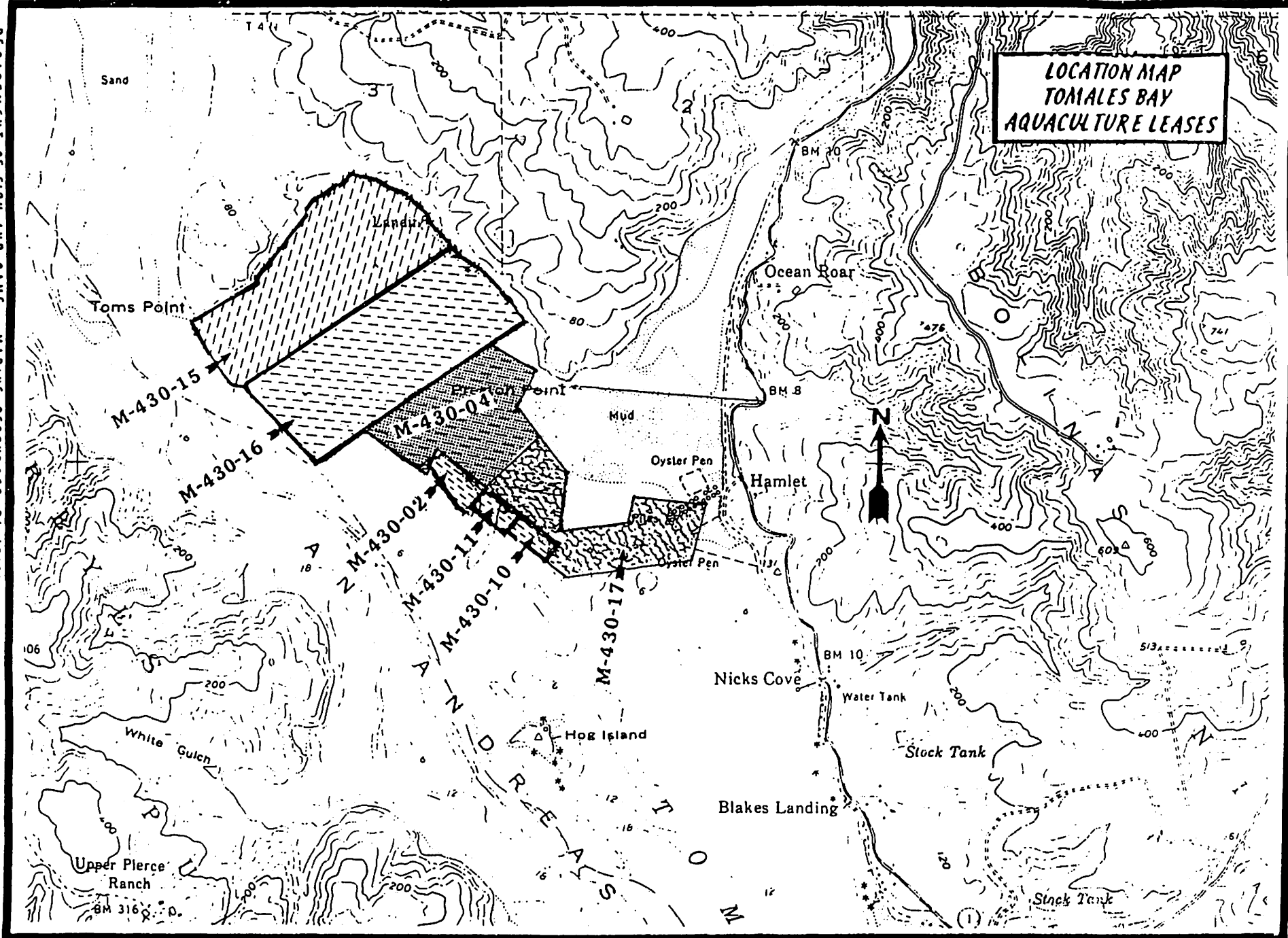
(OCP - 1)

1. During the performance of this contract, contractor* and its subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age (over 40) or sex. Contractors and subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination. Contractors and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.) and the applicable regulations promulgated thereunder (California Administrative Code, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990 set forth in Chapter 5 of Division 4 of Title 2 of the California Administrative Code are incorporated into this contract by reference and made a part hereof as if set forth in full. Contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
2. This contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.

* All references to "contractor" shall be deemed to be Lessee.

**LOCATION MAP
TOMALES BAY
AQUACULTURE LEASES**





ADDENDUM TO
AQUACULTURE LEASE
BETWEEN
DEPARTMENT OF FISH AND GAME, LESSOR
AND
SHELLFISH UNLIMITED
ESCROW AGREEMENT FOR
CLEANUP OF AQUACULTURE LEASES
TOMALES BAY, CALIFORNIA

(Addendum 1)

This Escrow Agreement is being entered into as of the 1st day of March, 1991, between the State of California, acting by and through its Department of Fish and Game, hereinafter referred to as "Lessor", and Shellfish Unlimited, hereinafter referred to as "Lessee", and Tomales Bay shellfish Growers Association, a California Nonprofit Corporation now forming, hereinafter referred to as the "Association."

Lessee has entered into an aquaculture lease this 1st day of March, 1991, for the lease of State water bottoms situated in Tomales Bay, Marin County, State of California, more particularly described as Lease No. M-430-17.

This Escrow Agreement is subject to Lease No. M-430-17 and in accordance with Paragraph D thereof.

As a financial guarantee of growing structure or other lease improvement removal and/or cleanup expense in the event that the aforementioned aquaculture lease is abandoned or otherwise terminated, the parties agree as follows:

1. Lessee will deposit or cause to be deposited in escrow in cash or by certified check, funds totaling \$899.00, which funds will consist of the following:

- (a) \$449.50 deposited upon entering upon the lease;
- (b) \$449.50 deposited upon the first anniversary of such inception date.

In the event that Lessor fails to deposit funds as required by Subparagraphs (a) or (b) herein, Lessor may terminate Lessee's aquaculture lease by giving sixty days notice to Lessee by registered or certified mail.

2. Mr. F. Robert Studdert shall act as Escrow Agent and shall place the escrow deposits in an interest-bearing account in the West America Bank, North Gate Branch, at San Rafael, California, subject to disposition as hereinafter provided. Such deposits shall be retained in a separate account designated "Tomales Bay Cleanup Fund" by Escrow Agent as trustee for Lessor, and shall designate the Association as the beneficial owners.

3. The Association shall be responsible for paying all fees and expenses incurred by Escrow Agent in administering the escrow account. These expenses and payment terms shall be determined by the Association and Escrow Agent.

4. The interest earned on the trust account held in escrow and all interest earned on that interest shall be for the sole account of the Association and may be withdrawn by the Association at any time for distribution to its members without notice to Lessor.

5. Lessees shall make payments to the Escrow Agent on account of the Tomales Bay Cleanup Fund in the manner prescribed in paragraph 1(a) and (b) until the sum of five thousand dollars (\$5,000.00) is reached. Thereafter, the Tomales Bay Cleanup Fund shall be maintained by the Lessees at Five Thousand Dollars (\$5,000.00) as hereinafter provided, regardless of the number of lessees who continue in aquaculture operations in Tomales Bay.

6. When Lessees deposit funds into escrow, Escrow Agent shall notify Lessor in writing within ten days of receipt thereof.

7. Escrow Agent shall notify Lessor and Association in writing when two thousand five hundred dollars (\$2,500.00) has been deposited to the escrow account and provide written verification from the bank of such deposit. Thereafter, on the anniversary date of such initial notification, Escrow Agent shall report and certify the balance of funds on deposit accompanied by the accounting records provided by the banking institution of deposit.

8. The Lessor may increase or decrease the security amount held in escrow upon cause shown therefor and sixty days notice to the Association. Lessee's annual Proof of Use Report shall contain a reasonable estimate of the cost of removal of growing structures from each operation. Any increase required by the Lessor shall be deposited by the Lessees in the same proportion as provided in Paragraph 1; and any decrease shall be returned to the Lessees by the Escrow Agent in the same proportion provided in Paragraph 1.

9. Should Lessee transfer his interest under the lease with the approval of the California Fish and Game Commission, Escrow Agent shall transfer such escrow deposit to the successor in interest, and thereafter notify all parties hereto of such transfer. The successor in interest shall have all of the rights and obligations of Lessee with respect to such escrow deposit.

10. If, on termination of an aquaculture lease, Lessee removes all growing structures and improvements within sixty days, Lessee's escrow deposit shall be returned to Lessee by Escrow Agent no later than two weeks after receipt of written notice by Escrow Agent from Lessor authorizing such return.

11. If at any time during the lease term, any Lessee abandons a lease without removing growing structures and improvements, Lessor and/or Association shall do one of the following acts:

- (a) The Association may undertake the cleanup, within sixty days, of the abandoned lease and Lessor shall not resort to the escrow security;
- (b) Lessor shall appropriate and apply any portion of the escrow security as may be reasonably necessary to fund the cleanup;

(c) Lessor may elect to have growing structures and improvements remain in place and return Lessee's escrow deposit as provided in Paragraph 10.

12. Lessor shall have a right to draw upon the escrow account in the event of default by the Lessees. Upon seven days written notice to the Escrow Agent from the Lessor of the default, Escrow Agent must immediately distribute funds as instructed by Lessor.

13. Should Lessor actually resort to any monies contained within the escrow account under any of the above applicable provisions, Lessees agree to deposit to the escrow account, in the same proportion as provided in Paragraph 1, the amount for which resort to the escrow security was had and necessary to restore the escrow security to the original sum required hereunder in thirty days after written demand by Lessor, except upon disbursement on account of return of escrow security to any Lessee as provided in Paragraph 10.

Restoration of escrow security shall be postponed during any period that Lessor re-advertises for bid and subsequently re-awards any Tomales Bay aquaculture lease. Upon Lessor granting a lease to a successful bidder, the Lessee thereunder shall assume the obligations and rights of his predecessor Lessee, including, but not limited to, the deposit of funds as prescribed in Paragraph 1(a) and (b).

Lessor shall not award or re-award a lease until the notice of deposit required by Paragraph 6 is received.

14. Escrow Agent shall rely on the written notifications from the Lessor and the Association, and the Lessor and the Association shall hold Escrow Agent harmless when Escrow Agent releases and disburses funds and interest pursuant to such a written notification.

15. Any notice required to be given under this Escrow Agreement may be given by personal delivery in writing or by registered or certified mail, postage prepaid, return receipt requested. Notice shall be deemed communicated as of mailing. Mailed notices shall be addressed as set forth below, but each party may change its address by written notice in accordance with this paragraph.

To the Lessor:

DEPARTMENT OF FISH AND GAME
1416 Ninth Street
Sacramento, CA 95814

To the Association:

TOMALES BAY SHELLFISH GROWERS
ASSOCIATION
P. O. Box 829
Marshall, CA 94940

To the Escrow Agent:

F. ROBERT STUDDERT
36 Professional Center Parkway
San Rafael, CA 94903

To the Lessee:

Lisa Jang
SHELLFISH UNLIMITED
966 Borden Villa Drive, #103
Santa Rosa, CA 95401

16. At the time this Escrow Agreement is executed by all parties, the Lessor shall deliver to the Escrow Agent a fully executed counterpart of this agreement.

In witness whereof, the parties have executed this Agreement by their proper officers on the date first set forth above.

LESSOR: Karyn A. Mayfield
Acting Asst. Director, Admin.

ASSOCIATION: _____

LESSEE: Lisa Jang
Martin G. G. G.

INDIVIDUAL ACKNOWLEDGMENT

NO. 201

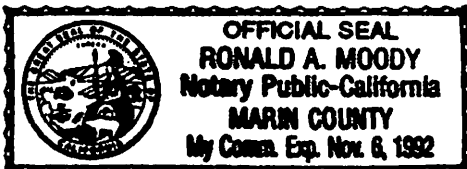
State of Calif.
County of San Mateo } SS.

On this the 4 day of February 1991, before me,

Ronald A. Moody

the undersigned Notary Public, personally appeared

Martin G. G. G.



☐ personally known to me

☒ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is subscribed to the within instrument, and acknowledged that he executed it.

WITNESS my hand and official seal.

Ronald A. Moody
Notary's Signature

ATTENTION NOTARY: Although the information requested below is OPTIONAL, it could prevent fraudulent attachment of this certificate to another document.

THIS CERTIFICATE
MUST BE ATTACHED
TO THE DOCUMENT
DESCRIBED AT RIGHT:

Title or Type of Document lease of state water M-430-17

Number of Pages 13 Date of Document signed 2-4-91

Signer(s) Other Than Named Above _____

**AMENDMENT NO. 1
TO
INDENTURE OF LEASE**

This amendment of Aquaculture Lease made and entered into as of the 1st day of April 1996, by and between the State of California, acting by and through its Department of Fish and Game, hereinafter referred to as "Lessor", and Bay Bottom Beds Incorporated, hereinafter referred to as "Lessee".

WITNESSETH:

WHEREAS, on March 1, 1991, Lessor did enter into Lease Agreement No. M-430-17 with Shellfish Unlimited (a partnership comprised of Point Reyes Oyster Company and Bay Bottom Beds Incorporated) for the purpose of cultivating oysters, mussels and clams, and

WHEREAS, on December 4, 1992 The Fish and Game Commission approved dissolution of the partnership and decreed that said leasehold (123.8 acres) be divided equally between the two partners in two, two 61.9-acre parcels and

WHEREAS, on February 5, 1993 the Fish and Game Commission of the State of California approved the reconfiguration and redescription of said 61.9 acre parcels to eliminate non-productive areas, and

WHEREAS, The Fish and Game Commission at its meeting on October 7, 1994 adopted new administrative procedures to standardize annual proof-of-use reporting and the rental period for aquaculture leaseholds, and approved revision of the Escrow Agreement for Cleanup of Aquaculture Leases in Tomales Bay (Addendum 1), and determined that the amendment of this aquaculture agreement would be in the best interest of the State.

NOW THEREFORE, THIS AMENDMENT WITNESSETH:

That, in accordance with actions taken by the Fish and Game Commission of the State of California, pursuant to Fish and Game Code Section 15400, Lessor does hereby amend said lease for such consideration, specific purposes and subject to covenants, terms, conditions, reservations, restrictions and limitations as are set forth herein.

This amended lease falls within the authorized term of the initial lease, twenty-five (25) years, which commenced on the 1st day of March 1991, and ends on February 29, 2016, for a total rental of two thousand one hundred and sixty-six dollars and fifty cents (\$2,166.50) per year, and a privilege tax on all products harvested as provided by Fish and Game Code sections 8051, 18406.5, and 15406.7. Beginning January 1, 1997, said annual rental fee will be payable to Lessor on a calendar year basis, January 1 -- December 31. The next annual rental fee will be due July 1, 1996, and will cover the period July 1, 1996 to December 31,

1996 in the amount of one thousand eighty-three dollars and twenty five cents (\$1,083.25). If said annual rental fee is not paid within sixty (60) days after the close of the month in which it is due, an additional 10 percent penalty shall be paid. Lessor, at its option, may declare the lease abandoned for failure to pay such rental fees within 90 days from the beginning of the rental period; although such abandonment shall not relieve Lessee of its obligation to pay such rental and penalty which are due and owing. Lessee agrees to pay Lessor reasonable attorney fees and costs incurred in collecting any amounts and/or penalties due and owing from Lessee under the provisions of this lease. Lessee agrees to pay said fee(s) to Lessor at its office in the City of Sacramento, State of California, or at such other place as Lessor may, from time to time, designate.

This lease is made upon the following additional terms, conditions, and covenants, to wit:

H. As evidence of progress in aquaculture, Lessee shall submit each year to the State at the Marine Resources Division office, P. O. Box 1560, Bodega Bay, California 94923, a written declaration under penalty of perjury, showing the date and amount of each type of aquaculture development and date and amount of designated species comprising each planting, including a diagram (map) showing area, amounts, and dates planted. Such annual proof-of-use shall be submitted on or before February 1 of each year for the previous year, January 1 -- December 31, inclusive.

P. All notices herein provided to be given or which may be given by either party to the other, shall be deemed to have been fully given when made in writing and deposited in the United States Mail, certified and postage prepaid and addressed as follows:

To the Lessor

DEPARTMENT OF FISH AND GAME
1416 NINTH STREET
SACRAMENTO, CALIFORNIA 95814

To the Lessee

LISA JANG
BAY BOTTOM BEDS COMPANY
966 BORDEN VILLA DRIVE, SUITE 103
SANTA ROSA, CALIFORNIA 95401

Nothing herein contained shall preclude the giving of any such written notice by personal service. The address to which notices shall be mailed as aforesaid to either party may be changed by written notice given by such party to the other, as hereinbefore provided.

Except as herein amended, all other terms of said lease agreement shall remain unchanged and in full force and effect.

IN WITNESS WHEREOF, the parties have caused this amendment to said aquaculture lease to be executed as of the day and year first above written.

APPROVED:

FISH AND GAME COMMISSION

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

By: _____

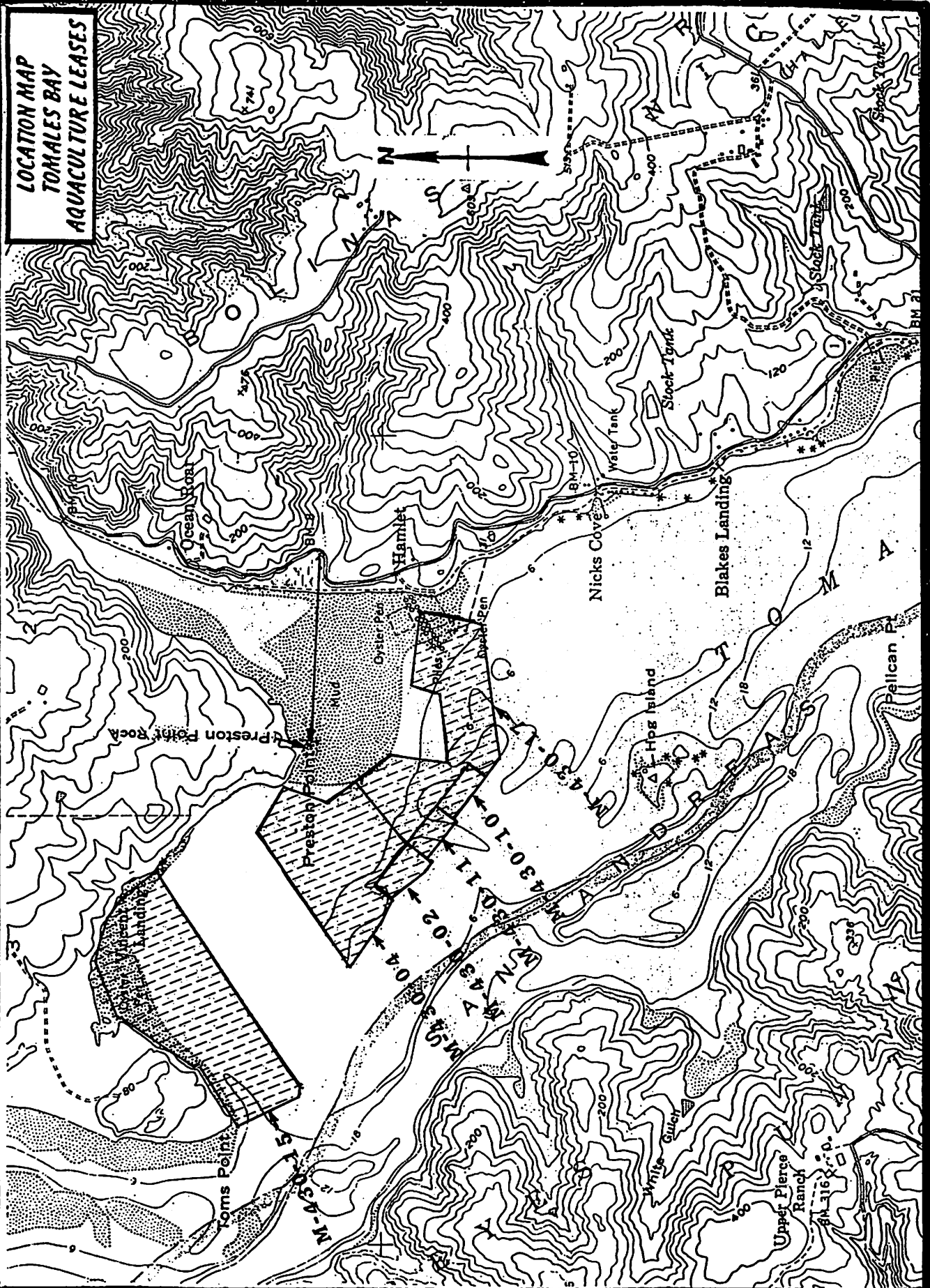
By: _____

BAY BOTTOM BEDS INCORPORATED

By: _____

By: _____

**LOCATION MAP
TOMALES BAY
AQUACULTURE LEASES**



ADDENDUM TO
AQUACULTURE LEASE
BETWEEN
DEPARTMENT OF FISH AND GAME, LESSOR
AND
BAY BOTTOM BEDS COMPANY
ESCROW AGREEMENT FOR
CLEANUP OF AQUACULTURE LEASES
TOMALES BAY, CALIFORNIA

(Addendum 1)

This Escrow Agreement is being entered into as of the 1st day of April 1996, between the State of California, acting by and through its Department of Fish and Game, hereinafter referred to as "Lessor", and Bay Bottom Beds Company hereinafter referred to as "Lessee", and California Aquaculture Association a California Nonprofit Corporation, hereinafter referred to as the "Association."

Lessee has entered into an agreement for the lease of State water bottoms for aquaculture situated in Tomales Bay, Marin County, State of California, more particularly described as Lease No. M-430-04.

This Escrow Agreement is subject to Lease No. M-430-04 and in accordance with Paragraph D thereof.

As a financial guarantee of growing structure or other lease improvement removal and/or cleanup expense in the event that the aforementioned aquaculture lease is abandoned or otherwise terminated, the parties agree as follows:

1. Lessee will deposit or cause to be deposited in escrow in cash or by certified check, funds totaling \$450.00, which funds will consist of the following:

- (a) \$225.00 deposited upon entering upon the lease;
- (b) \$225.00 deposited upon the first anniversary of such inception date.

In the event that Lessee fails to deposit funds as required by Subparagraphs (a) or (b) herein, Lessor may terminate Lessee's aquaculture lease by giving sixty days notice to Lessee by registered or certified mail.

2. The Treasurer of the California Aquaculture Association shall act as Escrow Agent for Lessees who are association members in good standing and shall place the escrow deposits in an interest-bearing account in the Union Bank Branch, at Brawley, California, subject to disposition as hereinafter provided. Such deposits shall be retained in a separate

account designated "Tomales Bay Cleanup Fund" by Escrow Agent as trustee for Lessor, and shall designate the Association as the beneficial owners.

3. The Tomales Bay Lessees contributing to the "Tomales Bay Cleanup Fund" shall be responsible for paying all fees and expenses incurred by Escrow Agent in administering the escrow account. These expenses and payment terms shall be determined by the Tomales Bay Lessees and Escrow Agent.

4. The interest earned on the trust account held in escrow and all interest earned on that interest shall be for the sole account of the Tomales Bay Lessees and may be withdrawn by the Escrow Agent at any time for distribution to Association members, who are Tomales Bay Lessees, without notice to Lessor.

5. Lessees shall make payments to the Escrow Agent on account of the Tomales Bay Cleanup Fund in the manner prescribed in paragraph 1(a) and (b) until the sum of five thousand dollars (\$5,000.00) is reached. Thereafter, the Tomales Bay Cleanup Fund shall be maintained by the Lessees at Five Thousand Dollars (\$5,000.00) as hereinafter provided, regardless of the number of lessees who continue in aquaculture operations in Tomales Bay.

6. When Lessees deposit funds into escrow, Escrow Agent shall notify Lessor in writing within ten days of receipt thereof.

7. Escrow Agent shall notify Lessor and Association in writing when two thousand five hundred dollars (\$2,500.00) has been deposited to the escrow account and provide written verification from the bank of such deposit. Thereafter, on the anniversary date of such initial notification, Escrow Agent shall report and certify the balance of funds on deposit accompanied by the accounting records provided by the banking institution of deposit.

8. The Lessor may increase or decrease the security amount held in escrow upon cause shown therefor and sixty days notice to the Tomales Bay Lessees. Lessee's annual Proof of Use Report shall contain a reasonable estimate of the cost of removal of growing structures from each operation. Any increase required by the Lessor shall be deposited by the Lessees in the same proportion as provided in Paragraph 1; and any decrease shall be returned to the Lessees by the Escrow Agent in the same proportion provided in Paragraph 1.

9. Should Lessee transfer his interest under the lease with the approval of the California Fish and Game Commission, Escrow Agent shall transfer such escrow deposit to the successor in interest, and thereafter notify all parties hereto of such transfer. The successor in interest shall have all of the rights and obligations of Lessee with respect to such escrow deposit.

10. If, on termination of an aquaculture lease, Lessee removes all growing structures and improvements within sixty days, Lessee's escrow deposit shall be returned to Lessee by

Escrow Agent no later than two weeks after receipt of written notice by Escrow Agent from Lessor authorizing such return.

11. If at any time during the lease term, any Lessee abandons a lease without removing growing structures and improvements, Lessor and/or Association shall do one of the following acts:

- (a) The Association may undertake the cleanup, within sixty days of written notification from Lessor that said lease is abandoned, and Lessor shall not resort to the escrow security account.
- (b) Lessor, after sixty days have elapsed, as defined in paragraph 11(a), may appropriate and apply any portion of the escrow security account as may be reasonably necessary to fund the cleanup;
- (c) Lessor may elect to have growing structures and improvements remain in place and return Lessee's escrow deposit as provided in Paragraph 10.

12. Lessor shall have a right to draw upon the escrow account in the event of default by the Lessees. Upon seven days written notice to the Escrow Agent from the Lessor of the default, Escrow Agent must immediately distribute funds as instructed by Lessor.

13. Should Lessor actually resort to any monies contained within the escrow account under any of the above applicable provisions, Lessees agree to deposit to the escrow account, in the same proportion as provided in Paragraph 1, the amount for which resort to the escrow security was had and necessary to restore the escrow security to the original sum required hereunder in thirty days after written demand by Lessor, except upon disbursement on account of return of escrow security to any Lessee as provided in Paragraph 10.

Restoration of escrow security shall be postponed during any period that Lessor re-advertises for bid and subsequently re-awards any Tomales Bay aquaculture lease. Upon Lessor granting a lease to a successful bidder, the Lessee thereunder shall assume the obligations and rights of his predecessor Lessee, including, but not limited to, the deposit of funds as prescribed in Paragraph 1(a) and (b).

Lessor shall not award or re-award a lease until the notice of deposit required by Paragraph 6 is received.

14. Escrow Agent shall rely on the written notifications from the Lessor and the Association, and the Lessor and the Tomales Bay Lessees shall hold Escrow Agent and Association harmless when Escrow Agent releases and disburses funds and interest pursuant to such a written notification.

15. In the event that any legal action is pursued in relation to this Escrow Agreement, the parties hereby agree to pay their own attorney's fees and legal costs regardless of who prevails.

16. Any notice required to be given under this Escrow Agreement may be given by personal delivery in writing or by registered or certified mail, postage prepaid, return receipt requested. Notice shall be deemed communicated as of mailing. Mailed notices shall be addressed as set forth below, but each party may change its address by written notice in accordance with this paragraph.

To the Lessor:	DEPARTMENT OF FISH AND GAME 1416 Ninth Street Sacramento, California 95814
To the Association:	CALIFORNIA AQUACULTURE ASSOCIATION P. O. Box 1004 Niland, California 92257
To the Escrow Agent:	THE TREASURER CALIFORNIA AQUACULTURE ASSOCIATION P. O. Box 1004 Niland, California 92257
To the Lessee:	BAY BOTTOM BEDS, INC. 966 Borden Villa Drive, #103 Santa Rosa, California 95401-4401

17. At the time this Escrow Agreement is executed by all parties, the Lessor shall deliver to the Escrow Agent a fully executed counterpart of this agreement.

In witness whereof, the parties have executed this Agreement by their proper officers on the date first set forth above.

LESSOR: _____

ASSOCIATION: _____

LESSEE: _____

COMMISSIONERS
Richard T. Thleriot, President
San Francisco
Michael Chrisman, Vice President
Visalia
Douglas B. McGeoghegan
Maxwell

GRAY DAVIS
Governor



ROBERT R. TREANOR
EXECUTIVE DIRECTOR
1416 Ninth Street
Box 944209
Sacramento, CA 94244-2090
(916) 653-4899
(916) 653-5040 Fax

STATE OF CALIFORNIA

Fish and Game Commission

October 14, 1999

Mr. Charles Friend
180 Montecito Avenue, #104
Oakland, California 94610

Dear Mr. Friend:

The Commission, at its October 8, 1999, meeting in Redding, approved the request of Bay Bottom Beds for authorization to transfer title of its State Water Bottom Lease (M-430-04), Tomales Bay, to you. The Department of Fish and Game will be completing the new lease agreement and sending it to you for your signature in the near future.

If you have any questions, please contact me.

Sincerely,

Robert R. Treanor
Executive Director

cc: LB Boydston, Intergovernmental Affairs Office
Marine Region - Monterey
Bob Hulbrock, Aquaculture Coordinator
Fred Wendell, Marine Region - Morro Bay
Lisa Jang, Bay Bottom Beds

AMENDMENT NO. 2
TO
INDENTURE OF LEASE

This amendment of Aquaculture Lease is made and entered into as of the 8th day of October 1999, by and between the State of California, acting by and through its Department of Fish and Game, hereinafter referred to as "Lessor", and Charles Friend, hereinafter referred to as "Lessee".

WITNESSETH:

WHEREAS, on February 5, 1993, Bay Bottom Beds, Incorporated did gain the exclusive privilege of cultivating specified shellfish on Lease M-430-04 created through the partition, reconfiguration and redescription of one-half of lease M-430-17, and

WHEREAS, Bay Bottom Beds, Incorporated applied to the Fish and Game Commission for authority to transfer title of Bay Bottom Bed's State Water Bottom Lease (M-430-04), Tomales Bay, to Charles Friend, and

WHEREAS, the Fish and Game Commission at its meeting on October 8, 1999, authorized the transfer of title from Bay Bottom Bed, Incorporated to Charles Friend;

NOW, THEREFORE, in accordance with actions taken by the Fish and Game Commission of the State of California, pursuant to Fish and Game Code Section 15400, Lessor does hereby amend said lease for such consideration, specific purposes, and subject to the additional covenants, terms, conditions, reservations, restrictions, and limitations as are set forth herein, and does hereby grant to Lessee the exclusive privilege to cultivate shellfish thereon, and in those certain lands of the State of California, described as follows:

All that certain real property situated in the County of Marin, State of California, described as follows:

In Tomales Bay, Marin County, State of California, starting from Bench Mark 8 located at approximately 38°12'38.7" North latitude, 122°55'22" West Longitude on the Tomales Bay Quadrangle, Marin County, California, U.S. Dept. of the Interior Geological Survey 7.5 minute series topographical map; thence North 83°31' West for a distance of 2749.30 feet to the top of Preston Point Rock lying off the northeast end of Preston Point; thence South 65°57'51" West 2128.40 feet to the true point of beginning; thence South 50°27'48" East 807.00 feet; thence North 46°50'24" East 1028.82 feet; thence North 35°53'07" West 539.10

feet; thence North 29°23'42" East 655.05 feet; thence North 59°41'17" West 670.79; thence South 58°38'08" West 2190.75 feet; thence South 51°18'13" East 1078.38 feet; thence North 39°32'12" East 357.16 feet; to the true point of beginning

This parcel of water bottoms, containing an area of 61.9 acres more or less, comprises Aquaculture Lease No. M-430-04

This lease, in accordance with provisions of Fish and Game Code Section 15400, as may from time to time be amended or changed by the State Legislature, is for the sole purpose of cultivating Pacific oyster (*Crassostrea gigas*), Sumino oyster (*C. rivularis*), Eastern oyster (*C. virginica*), flat oyster (*Ostrea edulis*), Native oyster (*O. lurida*), Manila clam (*Tapes japonica*), California sea mussel (*Mytilus californianus*), and bay mussel, (*Mytilus edulis*) in the previously designated area.

The cultivation of additional species of aquatic plants and animals requires the approval of the Fish and Game Commission. Seed stocks must be certified before planting in compliance with Fish and Game Code Section 15201, and must be planted by Lessee in a manner and at a size approved by Lessor to assure that harvested animals are a product of the lease. A request for certification of planting stock will be submitted by Lessee to the Lessor at least ten (10) days prior to the proposed date of inspection.

Shellfish cultivation methods approved for the lease shall be longlines, rafts, stakes, rack and bag, rack and tray, floats, and bottom culture within the area approved by the Commission. No other mode of operation or culture method is authorized, unless Lessee shall first obtain approval from the Fish and Game Commission.

This lease is made upon the following additional terms, conditions, and covenants, to wit:

D. If, at any time subsequent to the beginning date of this lease, the use of culture devices authorized herein shall fall into a state of disrepair, or otherwise become an environmental or aesthetic degradation, as determined by Lessor, then upon written notice by Lessor, Lessee shall have sixty (60) days to repair and correct conditions cited by Lessor. Failure to comply with written notice shall be grounds for termination of this lease and Lessee shall, at the option of Lessor, remove all improvements located on lands covered by this lease.

As a financial guarantee of growing structure removal and/or clean-up expense in the event a lease is abandoned or otherwise terminated, Lessee shall place on deposit, pursuant to the "Escrow Agreement For Cleanup of Aquaculture Leases, Tomales Bay, California", a sum in a proportion that the Lessee's individual acreage

bears to the total acreage of specified leased parcels of State water bottoms in Tomales Bay, Marin County, California, until the sum of five thousand dollars (\$5,000.00) is reached. This escrow deposit is established in compliance with Section 7 of the Fish and Game Commission Policy, Awarding of Tomales Bay Aquaculture Leases, adopted January 7, 1989. Such money shall be deposited over a two-year period payable one-half upon entering upon the lease and one-half upon the first anniversary of such inception date. The escrow deposit shall be increased if the Fish and Game Commission determines, that, if abandoned, any particular culture operation is likely to be more expensive to remove. The escrow deposit may be reduced by the Commission upon demonstration that the probable cost of removal of all improvements would be less than the deposit previously required. In its annual proof of use report, the Lessor shall advise the Commission of its best estimate of the probable cost of removal of each lease operation. The escrow agreement, escrow holder, and escrow depository shall be agreed upon by the Executive Director of the Fish and Game Commission, the Lessor and Tomales Bay Shellfish Growers Association.

It shall be the responsibility of the Lessee to maintain the specified security balance at the level established by the Commission, regardless of the number of lessees who continue in aquaculture operations within the bay. Since Bay Bottom Beds, Incorporated transferred their interest under the lease with the approval of the California Fish and Game Commission, the Escrow Agent shall transfer such escrow deposit to the successor in interest, Charles Friend, and thereafter notify all parties hereto of such transfer. The successor in interest shall have all of the rights and obligations of Lessee with respect to such escrow deposit.

If Lessee abandons this lease without removing growing structures therefrom, the escrow deposit shall be expended to remove the growing structures, or otherwise clean up the lease, or in the alternative, the remaining lessees in Tomales Bay and the Tomales Bay Shellfish Growers Association may undertake the clean-up leaving the secured amount whole.

P. All notices herein provided to be given or which may be given by either party to the other, shall be deemed to have been fully given when made in writing and deposited in the United States Mail, certified and postage prepaid and addressed as follows:

To the Lessor

DEPARTMENT OF FISH AND GAME
1416 NINTH STREET
SACRAMENTO, CALIFORNIA 95814

To the Lessee

CHARLES FRIEND
180 MONTECITO AVE. #104
OAKLAND, CALIFORNIA 94610

Nothing herein contained shall preclude the giving of any such written notice by personal service. The address to which notices shall be mailed as aforesaid to either party may be changed by written notice given by such party to the other, as hereinbefore provided.

Q. Lessee hereby indemnifies and holds harmless the Lessor, its officers, agents, and employees against any and all claims and demands of every kind and nature whatsoever, arising out of, or in any way connected with the use by Lessee of said lease, or the exercise of the privilege herein granted.

R. The lease does not imply that any guarantee is given that shellfish may be grown and harvested for human consumption. The Lessor only has the statutory authority to enter into aquaculture leases (Fish and Game Code Section 15400 et. seq.). The California Department of Health Services has the authority (Health and Safety Code Section 28500 et. seq.) to certify and regulate sanitary procedures followed in the harvesting, handling, processing, storage, and distribution of bivalve mollusk shellfish intended for human consumption.

Lessee must recognize that compliance by certified shellfish harvesters with the conditions and procedures set forth in the Department of Health Service's current "Management Plan for Commercial Shellfishing in Tomales Bay, California and in the current "Contingency Plan for Marine Biotoxins in California Shellfish" is mandatory. These conditions and procedures establish classifications for certification to harvest shellfish (oyster, mussels and clams) and establish rainfall closure rules which may delay or prevent harvesting of cultured organisms from this lease and are a condition of the Shellfish Growing Area Certificate .

S. The Nondiscrimination Clause (OCP-1) identified as item P in the original terms, conditions, and covenants is hereby relocated as item S for clarity between amendments.

:

Except as herein amended, all other terms of said lease agreement shall remain unchanged and in full force and effect.

IN WITNESS WHEREOF, the parties have caused this amendment to said aquaculture lease to be executed as of the day and year first above written

APPROVED:

FISH AND GAME COMMISSION

By: _____

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

By: _____
Lessor

CHARLES FRIEND

By: _____
Lessee

AMENDMENT NO. 3
TO 2012 AUG -3 PM 1:50
INDENTURE OF LEASE

This amendment to aquaculture lease is made and entered into as of the 30th day of June, 2011 at Stockton, California by and between the State of California, acting by and through its Department of Fish and Game, hereinafter referred to as "Lessor" and Charles Friend Oyster Company, Inc hereinafter referred to as "Lessee."

WITNESSETH:

WHEREAS, the parties hereto did on October 8, 1999, enter into Lease Agreement No. M-430-04 which transferred said lease from Bay Bottom Beds, Incorporated to Charles Friend Oyster Company, Inc. for the exclusive purpose of cultivating Pacific oysters, Suminoe oysters, eastern oysters, European flat oysters, native oysters, Manila clams, California sea mussels, and bay mussels and

WHEREAS, on June 30, 2011, Charles Friend Oyster Company, Inc., requested and received the Fish and Game Commission's authority to also cultivate kumamoto oysters, *Crassostrea sikamea*, on Lease M-430-04;

NOW, THEREFORE, in accordance with actions taken by the Fish and Game Commission of the State of California, pursuant to Fish and Game Code Section 15400, Lessor does hereby amend said lease for such consideration, specific purposes, and subject to the covenants, terms, conditions, reservations, restrictions, and limitations as are set forth herein, and does hereby grant to Lessee the exclusive privilege to cultivate shellfish thereon, and in those certain lands of the State of California, as described as follows:

All that certain real property situated in the County of Marin, State of California, described as follows:

In Tomales Bay, Marin County, State of California, starting from Bench Mark 8 located at approximately 38°12'38.7" North latitude, 122°55'22" West Longitude on the Tomales Bay Quadrangle, Marin County, California, U.S. Dept. of the Interior Geological Survey 7.5 minute series topographical map; thence North 83°31' West for a distance of 2749.30 feet to the top of Preston Point Rock lying off the northeast end of Preston Point; thence South 65°57'51" West 2128.40 feet to the true point of beginning; thence South 50°27'48" East 807.00 feet; thence North 46°50'24" East 1028.82 feet; thence North 35°53'07" West 539.10 feet; thence North 29°23'42" East 655.05 feet; thence North 59°41'17" West 670.79; thence South 58°38'08" West 2190.75 feet; thence South 51°18'13" East 1078.38 feet; thence North 39°32'12" East 357.16 feet; to the true point of beginning.

This parcel of water bottoms, containing an area of 61.9 acres more or less, comprises Aquaculture Lease No. M-430-04.

This lease, in accordance with provisions of Section 15400 of the Fish and Game Code, as may from time to time be amended or changed by the State Legislature, is for the sole purpose of cultivating Pacific oysters (*Crassostrea gigas*), Suminoe oysters (*C. rivularis*), eastern oysters (*C. virginica*), European flat oysters (*Ostrea edulis*), native oysters (*O. lurida*), kumamoto oysters (*C. sikamea*), Manila clams (*Venerupis philippinarum*), California sea mussels (*Mytilus californianus*), and bay mussels (*Mytilus edulis*) in the previously designated area.

The cultivation of additional species of aquatic plants or animals must have approval of the Fish and Game Commission. Seed stock must be certified before planting in compliance with Section 15201 of the Fish and Game Code, and must be planted by Lessee in a manner and at a size approved by the Lessor to assure that harvested animals are a product of the lease. A request for certification of planting stock will be submitted by Lessee to the Lessor at least ten (10) days prior to the proposed date of inspection.

All oyster cultivation on the lease shall be confined to longlines, rafts, stakes, rack and bag, racks and tray, floats and bottom culture within the area approved by the Commission. No other mode of operation or culture method is authorized unless Lessee shall first obtain approval thereof from the Fish and Game Commission.

The notice of intent to plant shellfish on the lease shall be given to the Department of Fish and Game's, Marine Region Aquaculture Coordinator, 619 Second Street, Eureka, CA 95501, (707) 445-5365, or at such other place as Lessor may from time to time designate. In addition to the required ten (10) day notice, at least a 24-hour notice shall be given to the aquaculture coordinator or their designee, giving the details on where the shellfish seed can be inspected.

This amended lease falls within the authorized term of the initial lease, twenty-five (25) years, which commenced on the 1st day of March 1991, and ends on February 29, 2016, for a total rental of two thousand one hundred and sixty-six dollars and fifty cents (\$2,166.50) per year, and a privilege tax on all products harvested as provided by Fish and Game Code sections 8051, 18406.5, and 15406.7. Beginning January 1, 1997, said annual rental fee will be payable to Lessor on a calendar year basis, January 1 – December 31. If said annual rental fee is not paid within sixty (60) days after the close of the month in which it is due, an additional 10 percent penalty shall be paid. Lessor, at its option, may declare the lease abandoned for failure to pay such rental fees within 90 days from the beginning of the rental period; although such abandonment shall not relieve Lessee of its obligation to pay such rental and penalty which are due and owing. Lessee agrees to pay Lessor reasonable attorney fees and costs incurred in collecting any amounts and/or penalties due and owing from Lessee under the

provisions of this lease. Lessee agrees to pay said rent to Lessor at its office in the City of Sacramento, or at such other place as Lessor may, from time to time, designate.

All notices herein provided to be given or which may be given by either party to the other, shall be deemed to have been fully given when made in writing and deposited in the United States mail, certified, and postage prepaid and addressed as follows:

To the Lessor

DEPARTMENT OF FISH AND GAME
1416 Ninth Street
Sacramento, CA 95814

To the Lessee

MR. CHARLES FRIEND
CHARLES FRIEND OYSTER COMPANY, INC
180 Montecito Avenue #104
Oakland, CA 94610

Nothing herein contained shall preclude the giving of any such written notice by personal service. The address to which notices shall be mailed as aforesaid to either party may be changed by written notice given by such party to the other, as hereinbefore provided.

Lessee hereby indemnifies and holds harmless the Lessor, its officers, agents, and employees against any and all claims and demands of every kind and nature whatsoever, arising out of, or in any way connected with the use by Lessee of said lease, or the exercise of the privilege herein granted.

This lease is made upon the following additional terms, conditions, and covenants to wit:

- A. This lease may, at the option of the Lessee, be renewed for additional periods not to exceed 25 years each. If Lessee desires to enter into a new lease for a period commencing after expiration of the initial 25-year term, Lessee shall give notice to Lessor one (1) year prior to termination of the lease. The lease may be renewed if, during the notification period, terms for a new lease are agreed upon by Lessee and the Commission.
- B. Lessee shall keep records as required in accordance with Fish and Game Code Section 15414 on forms to be supplied by Lessor, and shall maintain adequate accounting records sufficient to determine monies due to Lessor by the 10th day of each month for all shellfish harvested during the preceding calendar month. Lessor reserves the right to inspect Lessee's premises, equipment and all books at any time, and Lessee's records pertaining to its cultivation on the leased premises and all shellfish taken from the leased premises.

- C. The lease shall be improved at no less than the minimum rate established by Commission regulations (Section 237(i)(A) - (C), Title 14, CCR). A minimum rate of planting shall be negotiated for option periods. Lessor may declare this lease terminated if Lessee fails to meet these requirements, and if Lessee, at any time, is proven to be failing in good faith, to pursue the purpose of this lease.
- D. If, at any time subsequent to the beginning date of this lease the use of cultural devices authorized herein shall fall into a state of disrepair or otherwise become an environmental or aesthetic degradation, as determined by Lessor, then upon written notice by Lessor, Lessee shall have sixty (60) days to repair and correct conditions cited by Lessor. Failure to comply with the written notice shall be grounds for termination of this lease and Lessee shall, at the option of Lessor, remove all improvements located on lands covered by this lease.

As a financial guarantee of growing structure removal and/or clean-up expense in the event the lease is abandoned or otherwise terminated, Lessee shall place on deposit, pursuant to the "Escrow Agreement for Clean-up of Aquaculture Leased, Tomales Bay, California", a sum in a proportion that the Lessee's individual acreage bears to the total acreage of specified leased parcels of State water bottoms in Tomales Bay, Marin County, California, until the sum of five thousand dollars (\$5000.00) is reached. This escrow deposit is established in compliance with Section 7 of the Fish and Game Commission Policy, Awarding of Tomales Bay Aquaculture Leases, adopted January 12, 1989 (Appendix 4). Such money shall be deposited over a two-year-period, payable one-half upon entering upon the lease, and one-half upon the first anniversary of such inception date. The escrow account shall be increased if the Fish and Game Commission determines that, if abandoned, the culture operation is likely to be more expensive to remove. The escrow account may be reduced by the Commission upon demonstration that the probable cost of removal of all improvements would be less than the deposit previously required. In its annual Proof-of Use Report, the Lessor shall advise the Commission of its best estimate of the probable cost of removal the lease operation. The escrow agreement, escrow holder, and escrow depository shall be agreed upon by the Executive Director of the Fish and Game Commission, the Lessor, and Tomales Bay Growers Association.

It shall be the responsibility of the Lessee to maintain the specified security balance at the level established by the Commission, regardless of the number of lessees who continue in aquaculture operations within the bay.

If Lessee abandons this lease without removing growing structures therefrom, the escrow deposit shall be expended to remove growing structures, or otherwise clean, or in the alternative, the remaining lessees in Tomales Bay

and the Tomales Bay Growers Association may undertake the clean-up, leaving the secured amount whole.

In order to assure compliance with the escrow provisions of this lease, Lessee shall dedicate to the agreed upon escrow account specified in the "Escrow Agreement for Clean-up of Aquaculture Leases, Tomales Bay, California (Addendum 1)", hereby attached to and made part of this agreement, a total of four hundred forty-nine dollars and fifty cents (\$449.50), a sum proportional to Lessee's total lease acreage of sixty-one and nine-tenths (61.9) acres. This amount equals one-half of the amount, eight hundred ninety-nine dollars (\$899.00), deposited in the "Tomales Bay Escrow Account" by the former partnership (Shellfish Unlimited).

- E. Lessee shall observe and comply with all rules and regulations now or hereinafter promulgated by any governmental agency having authority by law, including but not limited to State Water Resources Control Board, State Coastal Commission, State Lands Commission, and U.S. Army Corps of Engineers. Any other permits or licenses required by such agencies will be obtained by Lessee at his own sole cost and expense.
- F. Lessee recognizes and understands in accepting this lease that his interest therein may be subject to a possible possessory interest tax that the county may impose on such interest, and that such tax payment shall not reduce any rent or royalty due the Lessor hereunder and any such tax shall be the liability of and be paid by Lessee.
- G. Any modification of natural or existing features of the real property described in this lease, which are not consistent with the authorized uses under this lease are expressly prohibited without prior written consent of the Lessor.
- H. As evidence of progress in aquaculture, Lessee shall submit each year to the Marine Region Aquaculture Coordinator, 619 Second Street, Eureka, CA 95501, a written declaration under penalty of perjury, showing the date and amount of each type of aquaculture development and date and amount of designated species comprising each planting, including a diagram (map) showing area, amounts, and date planted. Such annual proof-of-use shall be submitted on or before February 1 of each year for the previous year, January 1 - December 31, inclusive.
- I. This lease shall be canceled at any time Lessee fails to possess a valid aquaculture registration issued pursuant to Section 15101 of the Fish and Game Code. Lessee agrees not to commit, suffer, or permit any waste on said premises or any act to be done thereon in violation of any laws or ordinances. This lease shall be subject to termination by Lessee at any time during the term hereof, by giving Lessor notice in writing at least ninety (90)

days prior to the date when such termination shall become effective. In the event of such termination by Lessee, any unearned rental shall be forfeited to the Lessor.

- J. This lease of State water bottoms only grants Lessee the exclusive right to cultivate marine life as described in the lease. The lease does not imply that any guarantee is given that shellfish may be grown or harvested for human consumption. The Lessor only has the statutory authority to enter into aquaculture leases (Fish and Game Code Section 15400 et. seq.). The California Department of Health Services has the authority (Health and Safety Code Section 28500 et. seq.) to certify and regulate sanitary procedures followed in the harvesting, handling, processing, storage, and distribution of bivalve mollusk shellfish intended for human consumption.

Lessee must recognize that compliance by certified shellfish harvesters with the conditions and procedures set forth in the Department of Health Service's current "Management Plan for Commercial Shellfishing in Tomales Bay, California" and in the current "Contingency Plan for Marine Biotoxins in California Shellfish" is mandatory. These conditions and procedures establish classifications for certification to harvest shellfish (oysters, mussels and clams) and establish rainfall closures which may delay or prevent harvesting of cultured organisms from this lease and are a condition of the Shellfish Growing Area Certificate.

- K. In addition to the conditions and restrictions herein provided for in this lease, and any right or privilege granted, conveyed or leased hereunder, shall be subject to, and Lessee agrees to comply with all applicable provisions of the California Fish and Game Code, and regulation of the Fish and Game Commission, in particular Sections 15400 - 15415, inclusive, of the Fish and Game Code, and expressly recognizes the right of the Legislature and the Fish and Game Commission to enact new laws and regulations. In the event of any conflict between the provisions of this lease and any law or regulation, the latter will control. This lease shall be deemed amended automatically upon the effective date of such conflicting law or regulation.
- L. This lease is personal to the Lessee and shall not be transferred, assigned, hypothecated or subleased, either voluntarily or by operation of law, without prior approval of the Fish and Game Commission. Such written approval of the assignment or transfer of lease shall be subject to any and all conditions required by the Fish and Game Commission including, without limitation by reason of the specifications herein, the altering, changing or amending of this agreement as deemed by the Commission to be in the best interest of the State

Except as herein amended, all other terms of said lease agreement shall remain unchanged and in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused this amendment to said aquaculture lease to be executed as of the day and year first above written.

APPROVED:

FISH AND GAME COMMISSION

By: 
Sonke Mastrup, Executive Director

**STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME**

By: 
Helen Carriker, Deputy Director of Administration

CHARLES FRIEND OYSTER COMPANY, INC

By: 
Charles Friend, Owner

STAFF SUMMARY FOR FEBRUARY 6, 2019**27. CHARLES FRIEND OYSTER COMPANY STATE WATER BOTTOM LEASE****Today's Item**Information ☐Action ☒

Consider approving DFW's request to extend Charles Friend Oyster Company's State Water Bottom Lease No. M-430-04 for a period of one year.

Summary of Previous/Future Actions

- Received request to renew lease Aug 4-5, 2015; Fortuna
- Approved request to extend lease one year Feb 10-11, 2016; Sacramento
- Approved request to extend lease one year Feb 8-9, 2017; Rohnert Park
- Approved request to extend lease one year Feb 7-8, 2018; Sacramento
- **Today approve request to extend lease one year Feb 6, 2019; Sacramento**

Background

FGC has the authority to lease state water bottoms to any person for aquaculture for an initial lease term not to exceed 25 years (sections 15400 and 15405, Fish and Game Code). A lessee shall have a prior right to renew the lease on terms agreed upon between FGC and the lessee (Section 15406, Fish and Game Code).

Charles Friend Oyster Company, Inc. has held FGC-issued State Water Bottom Lease No. M-430-04 since 1999 for the purposes of culturing shellfish in Tomales Bay (Exhibit 1). The lessee, Charles Friend, requested to renew the lease prior to its expiration on Feb 29, 2016. However, in lieu of renewal, FGC granted a limited-term lease extension while specific non-compliance issues were addressed by the company. To date, three one-year lease extensions have been granted; full details on the lease approval requests and extensions are documented in a previous staff summary (Exhibit 2).

The most recent extension was granted due to the untimely passing of Mr. Friend in 2017, which left the company operations to his daughter, Heidi Gregory. The extension of the lease until Feb 11, 2019 was intended to provide Ms. Gregory time to familiarize herself with operations and fulfill remaining requirements for lease clean-up and permitting with the appropriate regulatory agencies.

DFW has reviewed progress made towards compliance in the last year; however, not all requirements have been fulfilled to date. DFW has outlined five specific measures that must be taken by the company before it will recommend lease renewal (Exhibit 3).

DFW recommends a one-year extension for Charles Friend Oyster Company to reach full compliance with outstanding regulatory permitting requirements and lease site conditions.

Significant Public Comments (N/A)

STAFF SUMMARY FOR FEBRUARY 6, 2019**Recommendation**

FGC staff: Approve a one-year extension of the existing lease, as recommended by DFW, through a lease amendment that also includes the five actions identified by DFW as conditions of the lease.

DFW: Extend existing lease for a period of one year, and consider renewal once lessee demonstrates compliance with five actions specified for permitting and lease site conditions (Exhibit 3).

Exhibits

1. State Water Bottom Lease No. M-430-04 and amendments
2. Staff summary from Feb 7-8, 2018 meeting, Agenda Item 9
3. DFW memo, received Jan 23, 2019

Motion/Direction

Moved by _____ and seconded by _____ that the Commission approves an amendment of State Water Bottom Lease No. M-430-04 granting a one-year extension under existing terms and additional conditions to specify the conditions for lease site clean-up and compliance with other permitting agencies.

Memorandum

Date: November 19, 2019

Received Nov 22, 2019; signed copy on file

To: Melissa Miller-Henson
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: **Agenda Item for the December 11-12, 2019, Fish and Game Commission Meeting Regarding Proposed Renewal of State Water Bottom Lease, M-430-04, Charles Friend Oyster Company, Tomales Bay, Marin County**

The Department of Fish and Wildlife (Department) is providing the following comments in regard to a request by Ms. Heidi Gregory, owner of Charles Friend Oyster Company (CFOC), for Fish and Game Commission (Commission) approval to renew the state water bottom lease, M-430-04, for a period of 15 years.

On February 6, 2019, the Commission granted a one-year extension for state water bottom lease, M-430-04, to CFOC to allow Ms. Gregory time to work toward full permitting compliance with the appropriate regulatory agencies and to address lease compliance issues. The one-year lease extension will expire on February 6, 2020.

The Department conducted a lease inspection of M-430-04 on September 26, 2019 after communications with Ms. Gregory that outstanding site issues had been resolved. The Department confirmed the operations are in good working order and that the previously noted areas of disrepair and incompliance, including marking of lease corners, shellfish bags placed in existing eelgrass beds, and abandoned equipment, were adequately corrected.

Additionally, CFOC has made notable progress towards coming into full permit compliance. CFOC has secured approval from the California Coastal Commission for operations on lease M-430-04 and is working in good faith with the San Francisco Regional Water Quality Control Board, the Gulf of Farallones National Marine Sanctuary, and the U.S. Army Corps of Engineers to secure additional required permits.

The proposed project is subject to the "Class 1" or "Existing Facilities" categorical exemption pursuant to CEQA Guidelines section 15301 (Cal. Code Regs., tit. 14, § 15301). In general, the Class 1 exemption consists of the leasing of existing facilities, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. This lease does not increase, decrease, or change existing operations in any way or allow for any new activities by the lessee.

Melissa Miller-Henson, Executive Director
Fish and Game Commission
November 19, 2019
Page 2

The Department recommends approval of the request to renew state water bottom lease M-430-04, to Ms. Heidi Gregory (CFOC) for a period of 15 years.

If you have any questions regarding this item, please contact Randy Lovell, State Aquaculture Coordinator at (916) 445-2008 or by email at randy.lovell@wildlife.ca.gov.

cc: Department of Fish and Wildlife

Stafford Lehr, Deputy Director
Wildlife and Fisheries Division
Stafford.Lehr@Wildlife.ca.gov

Craig Shuman, D. Env., Regional Manager
Marine Region
Craig.Shuman@wildlife.ca.gov

Kirsten Ramey, Environmental Program Manager
Marine Region
Kirsten.Ramey@wildlife.ca.gov

Randy Lovell, State Aquaculture Coordinator
Wildlife and Fisheries Division
Randy.Lovell@wildlife.ca.gov

Notice of Exemption**Appendix E**

To: Office of Planning and Research
P.O. Box 3044, Room 113
Sacramento, CA 95812-3044

County Clerk

County of: Marin

From: (Public Agency): D R A F T

California Fish and Game Commission

1416 Ninth St., Room 1320, Sacramento, CA 95814

(Address)

Project Title: Renewal of State Water Bottom Lease M-430-04, Charles Friend Oyster Company, Marin

Project Applicant: Charles Friend Oyster Company

Project Location - Specific:

See attached map and legal description

Project Location - City: Tomales Bay Project Location - County: Marin

Description of Nature, Purpose and Beneficiaries of Project:

Pursuant to Fish & Game Code Section 15406, the Commission is renewing lease M-430-04, Charles Friend Oyster Co. under existing terms & conditions. Renewing the lease provides stable revenue to the State through taxes, fees & rent and fulfills the State's mandate in support of environmentally sustainable aquaculture.

Name of Public Agency Approving Project: California Fish and Game Commission

Name of Person or Agency Carrying Out Project: California Department of Fish and Wildlife

Exempt Status: **(check one):**

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☒ Categorical Exemption. State type and section number: CCR, Title 14, Section 15301, Class 1
- ☐ Statutory Exemptions. State code number: _____

Reasons why project is exempt:

See attachment

Lead Agency
Contact Person: Melissa Miller-Henson Area Code/Telephone/Extension: 916-653-4899

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? ☐ Yes ☐ No

Signature: D R A F T Date: _____ Title: Executive Director

☒ Signed by Lead Agency ☐ Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR: _____

D R A F T

Attachment to Notice of Exemption

**Renewal of State Water Bottom Lease No. M-430-04, Charles Friend Oyster Company,
Tomaes Bay, Marin County**

(California Fish and Game Code Section 15406)

The California Fish and Game Commission (Commission) has taken final action to renew State Water Bottom Lease No. M-430-04, held by Charles Friend Oyster Company. In taking its final agency action for the purposes of the California Environmental Quality Act (CEQA), the Commission approved this lease renewal relying on the categorical exemption for “Existing Facilities” contained in CEQA Guidelines Section 15302 (California Code of Regulations, Title 14, Section 15301).

Class 1 Categorical Exemption

The Commission finds that the lease renewal is subject to the “Class 1” or “Existing Facilities” categorical exemption pursuant to CEQA Guidelines Section 15301. In general, the Class 1 exemption consists of the leasing of existing facilities, involving negligible or no expansion of use beyond that existing at the time of the lead agency’s determination. This lease renewal falls within the Class 1 exemption because it is renewing an already existing lease agreement for a period of 15 years. All provisions of the lease are identical to the original lease, with the only exception being the 15-year renewal. This lease does not increase, decrease, or change existing operations in any way or allow for any new activities by the lessee.

DRAFT LEASE

RECORDING REQUESTED BY AND)
WHEN RECORDED MAIL TO:)
)
State of California)
Fish and Game Commission)
1416 Ninth Street, Rm 1320)
Sacramento, CA 95811)
P.O. Box 944209)
Sacramento, CA 94244-2090)

Space Above Line for Recorder's Use Only

LEASE GRANTING THE EXCLUSIVE PRIVILEGE OF CONDUCTING AQUACULTURE AT STATE WATER BOTTOM NO. M-000-00

THIS LEASE GRANTING THE EXCLUSIVE PRIVILEGE OF CONDUCTING AQUACULTURE AT STATE WATER BOTTOM NO. M-430-04 ("Lease") is made and entered into as of [DATE], by and between Charles Friend Oyster Company, ("Tenant") and the California Fish and Game Commission ("State") with reference to the following facts:

RECITALS

Whereas, Fish and Game Code Section 15400 authorizes the State to lease to any person the exclusive privilege to conduct aquaculture in any designated State Water Bottom if it determines that such lease is in the public interest; and

Whereas, on March 1, 1991, the State did enter into Lease Agreement M-430-17 with Shellfish Unlimited (a partnership comprised of Point Reyes Oyster Company and Bay Bottom Beds Incorporated) for the purpose of cultivating oysters, mussels, and clams; and

Whereas, on December 4, 1992, the State recognized the dissolution of the partnership and approved the equal split of the original 123.8-acre lease between the two partners in two 61.9-acre parcels; and

Whereas, on February 5, 1993, Bay Bottom Beds Incorporated did gain the exclusive privilege of cultivating specified shellfish on Lease M-430-04 created through the partition, reconfiguration, and re-description of Lease M-430-17 under the same 25-year lease term (expiring February 29, 2016); and

Whereas, on October 8, 1999, the State authorized the assignment of Lease M-430-04 from Bay Bottom Beds Incorporated to Charles Friend Oyster Company (hereinafter referred to as "Tenant"); and

Whereas, on June 30, 2011, Tenant requested and received the State's authority to also cultivate kumamoto oysters (*Crassostrea sikamea*) on Lease M-430-04; and

DRAFT LEASE

Whereas, the State did approve a series of successive one-year extensions between February 2016 and February 2019 to the lease in order to allow Tenant to come into full permitting compliance with the appropriate regulatory agencies and to address lease compliance issues; and

Whereas, the Department of Fish and Wildlife (Department), after conducting a lease inspection on September 26, 2019, confirmed the Tenant's operations to be in good working order, that previously noted areas of disrepair and noncompliance were adequately corrected, and that Tenant has made notable progress toward coming into full permit compliance; and

Whereas, Tenant wishes to continue leasing a State Water Bottom for the purpose of propagating, cultivating, maintaining and harvesting aquatic plants and/or animals in marine waters of the state.

Whereas, on [DATE(s)] the State authorized renewal of the Lease for State Water Bottom No. M-430-04 to Tenant;

Now, Therefore, State and Tenant agree as follows:

TERMS AND CONDITIONS

- 1. LEASE.** The State hereby grants to Tenant the exclusive privilege to conduct aquaculture upon State Water Bottom No. M-430-04, subject to the terms and conditions of this Lease.
- 2. DESCRIPTION.** This Lease covers that area comprising approximately 61.9 acres designated as State Water Bottom No. M-430-04 and shown on the Map and Description attached as **Exhibit A**, which is made a part of this Lease by this reference.
- 3. TERM.** This Lease is for a period of FIFTEEN (15) years commencing on [START DATE] and ending on [END DATE], unless renewed or sooner terminated in accordance with its terms.
- 4. ANNUAL RENT.** The base rent for the Lease area is \$50.00 per acre, calculated to recover Tenant's share of the State's operational costs of the aquaculture bottom leasing program attributable to shellfish cultivation. The base rent shall be annually adjusted in the following manner:

The Department of Fish and Wildlife shall determine the change in the "Implicit Price Deflator for State and Local government Purchases of Goods and Services," as published by the U.S. Department of Commerce, for the quarter ending March 31 of the current year compared to the quarter ending March 31 of the previous year. The relative amount of the change shall be multiplied by the amount of the annual rent.

No more frequently than at five-year intervals, the State, in its sole discretion, may recalculate the productivity classification by which the annual rent is calculated for Tenant to reflect changes in the State's operational costs of the aquaculture bottom leasing

program attributable to shellfish cultivation. The 10-year average oyster production values fall into three productivity classifications:

- High productivity = >100,000 oysters/acre = \$150.00 per acre/year
- Moderate productivity = >20,000-99,000 oysters/acre = \$100.00 per acre/year
- Low productivity = >2,000-19,999 oysters/acre = \$50.00 per acre/year

Whenever such formula is updated, the annual rent first charged Tenant thereafter shall become the new base rent, subject to the foregoing adjustments for inflation thereafter.

Notice of the annual adjusted rent for the upcoming calendar year shall be given to Tenant by December 1. Until the notice of the annual adjustment is provided, Tenant remains obligated to pay rent at the previous rate. Pursuant to Fish and Game Code section 15407, the annual rent shall be paid within 30 days of the commencement date in Section 3, and within 30 days of each anniversary. Tenant shall remit such rent to: Department of Fish and Wildlife, Fiscal and Administrative Services Branch, 1416 Ninth Street, 12th Floor, Sacramento, California 95814 RE: State Water Bottom Lease No. M-430-04.

Payment shall be made to the State in lawful money of the United States, provided that, if any payment made by a check, draft or money order is returned to The State due to insufficient funds or otherwise, the State shall have the right, upon written notice to Tenant, to require Tenant to make all subsequent payments in cash, or by cashier's or certified check.

5. LATE PAYMENT. Annual payment of rent is due and payable on the commencement date of this Lease or any anniversary thereafter, and is timely if received by the State within thirty (30) days of such commencement date or anniversary. Any annual payment not received by the State within thirty (30) days of the Lease commencement date or anniversary thereof, regardless of whether the 30th day falls on a Saturday, Sunday or holiday, will be subject to a late penalty consisting of an administrative charge on the late amount, calculated at the rate of five percent (5%) of the amount of the late payment. The parties agree that the late charge represents a fair and reasonable estimate of the costs the State will incur because of late payment. Acceptance of the late charge by the State shall not constitute a waiver of Tenant's default for the overdue amount, nor prevent the State from exercising other rights and remedies granted under this Lease. Tenant shall pay the late charge as additional rent within 30 days of the due date of the original payment.

Any annual payment not received by the State within ninety (90) days of the commencement date of the Lease or within ninety (90) days of any anniversary thereof shall constitute a breach of Lease, giving rise to the State's remedies as set forth herein.

Annual rent due to the State, if not received by the State within ninety (90) days following the due date, will bear interest from the due date until paid at the rate of ten percent (10%) per year or, if a higher rate is legally permissible, at the highest rate legally permitted. Interest shall not be payable on late charges incurred by Tenant nor on any amounts on which late charges are paid by Tenant to the extent this interest would cause the total interest to be in excess of that legally permitted. Payment of interest shall not

excuse nor cure any default by Tenant.

Upon written request by Tenant to the State, demonstrating unusual or extenuating circumstances causing the late payment, the State, in its sole discretion, may waive the late charge.

6. INSURANCE. Tenant shall furnish to the State certificate(s) of insurance stating that Public Liability Insurance is presently in effect for the Tenant and will be in effect throughout the period of this Lease with a combined single liability limit of not less than One Million Dollars (\$1,000,000.00) per occurrence, and shall insure against all liability of Tenant and its employees and agents arising out of or in connection with Tenant's use and occupancy of the leased Lease area. The certificate(s) of insurance shall:

(a) Be furnished to the State by the insurance companies, and no such policy shall be cancelable or subject to reduction of coverage or other modification except after 30 days prior written notice to the State.

(b) Include the State of California, its officers, agents, employees and servants are included as additional insured but only insofar as the operations under the Lease are concerned.

(c) Provide that the State shall not be responsible for any premiums or assessments on any policy of insurance hereunder.

(d) Comply with those standards as determined by the State of California, Department of General Services, Office of Risk and Insurance Management.

Tenant agrees that the insurance required herein shall be in effect at all times during the term of this Lease, at the cost of Tenant. In the event said insurance, or any of it, expires or lapses at any time during the term of this Lease, the Tenant agrees to provide, no later than fifteen (15) days after said expiration or lapse, written evidence of required insurance coverage from the date of loss of the earlier insurance and continuing for not less than the remainder of the term of the Lease. Tenant's failure to keep in effect at all times all insurance required by this Lease shall be grounds for termination of the Lease, in addition to any other remedies available to the State.

Where Tenant has any employees, a program of workers' compensation insurance, in an amount and form to meet all applicable requirements of the Labor Code of California, shall be in place throughout the term of this Lease. Such insurance shall include employer's liability coverage of One Million Dollars (\$1,000,000.00) and shall specifically cover all persons providing services by or on behalf of Tenant and shall cover all risks to such persons under this Lease.

7. INDEMNITY AND WAIVER. (For purposes of this Section 7, the term, "State", shall include the Department of Fish and Wildlife as well as the Fish and Game Commission.) Tenant hereby waives all claims and recourse against the State, including the right to contribution for loss or damage to persons or property arising from, or in any way connected with or incident to this Lease, except claims arising from, and only to the extent of the gross negligence or willful misconduct of the State, its officers, agents or

employees. Tenant shall notify the Department of Fish and Wildlife Aquaculture Coordinator immediately in case of any serious accident, injury, or casualty on, or potentially related to, the Lease area.

Tenant shall protect, indemnify, hold harmless, and defend the State, its officers, agents or employees, against any and all claims, demands, damages, costs, expenses or liability costs arising out of the use by Tenant, including its employees and agents, of the Lease area, except for liability arising out of, and to the extent of, the gross negligence or willful misconduct of the State, its officers, agents or employees for which the State is found liable by a court of competent jurisdiction.

Should the State be named as a defendant in any claim or legal action arising out of the use by Tenant, including its employees and agents, of the Lease area, upon tender of the claim or action by the State to Tenant, the Tenant shall assume the State's defense and represent the State in such legal action at Tenant's expense, subject to the provisions herein.

In lieu of tender to Tenant of the claim or action against the State, the State may elect to represent itself, in which event, the State shall bear its own litigation costs, expenses and attorney fees. Notwithstanding the foregoing, in the event the State is required to represent itself because of a conflict of interest by counsel representing Tenant, then Tenant, upon demand by the State, shall reimburse the State for the State's litigation costs, expenses and attorney fees. Costs shall include, without limitation, all attorney fees and costs, court costs, if any, costs of mediators or arbitrators, experts and consultants, and any other costs reasonably incurred in response to any claim.

In the event the State is found to be concurrently liable with Tenant by a court of competent jurisdiction for loss or damage to persons or property arising out of the use by Tenant, its employees and agents, of the Lease area, the State and Tenant shall cooperate and use their best efforts to seek and obtain an apportionment of liability from the court and neither party shall request a jury apportionment.

In the event the State is found to be liable for any other wrongful act, for which liability to another is determined by a court of competent jurisdiction for loss or damage to persons or property arising out of the use by Tenant, its employees and agents, of the Lease area, the State shall bear its own litigation costs, expenses and attorney fees. If Tenant has paid for any such costs which are the responsibility of the State under this provision, the State shall reimburse Tenant at Tenant's request. The State, in its sole discretion, may provide any reimbursement required in the form of a credit against any other money due the State under this Lease.

8. RENEWAL. Tenant may provide written notice to the Department of Fish and Wildlife Aquaculture Coordinator that it is exercising its right to seek renewal of this lease at least 120 days and not more than 364 days (one year) prior to the expiration date in Section 3 pursuant to Fish and Game Code section 15406. So long as Tenant, during the period specified herein, is still actively engaged in aquaculture, as determined by the State, Tenant shall have a prior right to renew for a period of TEN (10) years on terms to be agreed upon between the State, in consultation with the Department of Fish and Wildlife Aquaculture Coordinator, and Tenant. If Tenant fails to give such notice of its

right to seek renewal during the period specified herein, the Lease, including any remaining right to seek renewal, shall terminate upon expiration of the then-current term. Moreover, if Tenant is in default on the date of giving such notice, the notice shall be ineffective; if Tenant cures the default and provides a new notice thereafter all within the period specified herein for giving notice, that new notice shall be sufficient to exercise Tenant's prior right to renew. Provided, further, that if on the date a renewal term is to commence Tenant is in default, the renewal term shall not commence and this Lease shall expire at the end of the current term. However, if the State continues negotiating renewal terms after the prior term expires, then the holdover provisions of Section 9 may apply. In no event shall the term of this Lease, or the term of any renewal thereof, extend beyond 25 years each.

9. HOLDOVER. If the Term in Section 3 expires and the Lease has not been renewed pursuant to Section 8, and Tenant remains in possession of the Lease area with State's express or implied permission, Tenant shall become a tenant from month to month only, subject to all the provisions of this Lease except Sections 3, 4 and 5. During this holdover tenancy, a monthly rent representing one-twelfth of the current adjusted annual rent shall be payable on or before the first day of each month. It is expressly understood that a holdover tenancy does not create any right of renewal beyond that provided by Fish and Game Code section 15406 as set forth in Section 8, and that the only purpose of a holdover tenancy is to allow continuity of use of the property while the State continues to negotiate renewal terms or undertakes to issue a new lease to the highest responsible bidder pursuant to Fish and Game Code section 15406, or to allow the holdover tenant time to terminate and remove the aquaculture operation consistent with Fish and Game Code section 15409(a). If either party desires to terminate such holdover tenancy, it shall give the other party not less than thirty days advance written notice of the date of termination.

10. POSSESSORY INTEREST. Tenant understands and acknowledges that, pursuant to Revenue and Taxation Code section 107.6(a), any possessory interest created by this Lease may be subject to the payment of property taxes levied on that possessory interest.

Tenant agrees to pay, before delinquency, all lawful taxes, assessments, license fees and any other charges of any type whatsoever which at any time may be levied by the State, County, City or any tax or assessment-levying body upon any interest in or created by this Lease, or any possessory right which Tenant may have in or to the Lease area covered hereby.

11. USE. Tenant shall use the Lease area only for the purpose stated in this Lease, and such use shall be continuous from commencement of the Lease term until its expiration or termination. Pursuant to Fish and Game Code section 15414, the State may require the Tenant to submit any periodic reports it deems necessary for the proper administration of State Water Bottom M-430-04.

The Lease area shall be continuously used by Tenant to conduct aquaculture operations, as aquaculture is defined in Fish and Game Code section 17. Tenant shall not use or permit the Lease area to be used in whole or in part during the term of this Lease for any purpose, other than as set forth herein, without the prior written consent of the State.

The possessory interest herein given to the Tenant does not exclude the general public from the Lease area, and Tenant may not unreasonably impede public access to state waters for purpose of fishing, navigation, commerce or recreation or other public trust values. However, Tenant may limit public access to the extent necessary to avoid damage to the Lease area and the aquatic life culture therein. This Lease is not intended to confer third party beneficiary status to anyone benefiting from the terms of this Lease. The possessory interest is further subject to all valid and existing contracts, leases, licenses, encumbrances, and claims of title which may affect the Lease area.

This Lease provides a tenancy of a temporary nature. The parties to this Lease agree that no Relocation Payment or Relocation Advisory Assistance will be sought or provided in any form as a consequence of this tenancy.

This Lease is of no force or effect until signed by both parties and all approvals are secured. Tenant may not commence performance until such approval has been obtained. Any commencement of performance prior to Lease approval shall be done at the Tenant's own risk. Nothing in this Lease may be waived, modified, amended or discharged except by a writing signed by the State and Tenant and approved by the State in a public meeting.

12. SHELLFISH PRODUCTION IMPROVEMENTS.

Oyster Cultivation.

(A) Bottom culture: leases must be improved at an average rate of at least two cases of seed-bearing shell (160 pounds of seed-bearing shell) or 30 bushels of shellfish one or more years of age per acre over the allotted acreage per year. Improvements by unattached, single seed (less than one year old) shall consist of planting an average rate of 10,000 single seed per acre per year over the allotted acreage. Term of improvement shall be four years for seed-bearing shell and three years for oysters one or more years of age.

(B) Off-bottom culture: leases must be improved at an average rate of at least one case of seed-bearing shell (80 pounds of seed-bearing shell), or 15 bushels of oysters one or more years of age per acre over the allotted acreage per year. Improvement by unattached single seed (less than one year old) shall consist of planting an average rate of 5,000 single seed per acre per year over the allotted acreage. Term of improvement shall be four years for seed-bearing shell and three years for oysters one or more years of age.

(C) Production requirements: the annual harvest rate shall be an average of 2,000 oysters per acre (over one year of age) over the allotted acreage effective three years after the effective date of the lease. Harvest reports shall be recorded in the form of a receipt in quadruplicate furnished by the Department of Fish and Wildlife. The triplicate copy shall be delivered to the Department of Fish and Wildlife on or before the first and sixteenth day of each month.

13. NO WARRANTY. This Lease is made without warranty of title, condition or fitness of State Water Bottom M-430-04 for the Tenant's intended purpose or use.

Tenant agrees to accept the Lease area in its presently existing condition, "As Is", and that the State shall not be obligated to make any alterations, additions or betterments thereto except as otherwise provided in the Lease.

14. COMPLIANCE. As a necessary condition for this Lease, Tenant must obtain and maintain all necessary registrations, permits and any other entitlements. Tenant shall comply with all applicable federal, state and local laws, including laws relating to public health and safety, zoning, resource conservation and environmental protection including, but not limited to, the Coastal Zone Act, the Porter-Cologne Water Quality Act, and the California Environmental Quality Act.

Tenant shall comply with all applicable resource management and preservation mandates in the conduct of all activities that impact cultural, natural, or scenic resources. These mandates include, but are not limited to, those found in Public Resources Code sections 5024 and 5097 and the United States Secretary of the Interior's Guidelines for Historic Preservation. Tenant's operations under this Lease shall ensure that the State's goals of ensuring historical preservation and proper cultural, scenic and natural resource management are continually achieved in a manner consistent with applicable law.

15. RECORD KEEPING. The State may require periodic reports from Tenant as the State deems necessary for the proper administration of the State's water bottoms.

Tenant agrees that the Fish and Game Commission, Department of Fish and Wildlife, and the Bureau of State Audits, or their designated representative, shall have the right to review and copy any records and supporting documentation pertaining to the performance of this Lease. Tenant agrees to maintain such records for possible audit for a minimum of three years after final payment. Tenant agrees to allow the auditor(s) prompt access to such records during normal business hours and similarly to allow interviews of any employees who might reasonably have information related to such records. Tenant agrees to include a similar right of the State to audit records and to interview staff in any sublease or contract related to performance of this Lease.

16. WAIVER AND CONSENT. Unless expressly acknowledged by the State in writing, no term, covenant, or condition of this Lease and no default or breach is waived by the acceptance of a late or nonconforming performance. The State's consent for one transaction or event under this Lease is not consent to any subsequent occurrence of the same or any other transaction or event.

17. BREACH. The occurrence of any one of the following shall constitute a breach of this Lease by Tenant: (1) Failure of Tenant to make any annual Lease payment within ninety (90) days of the commencement date of the Lease or within ninety (90) days of any anniversary thereof; (2) Failure of Tenant to make any other payment more than thirty (30) days after such payment is due; (3) abandonment of the Lease area determined after the State has followed the procedures set forth in Civil Code section 1951.3; or (4) any failure by Tenant to comply with laws applicable to the conduct of aquaculture.

Should a threat to public health or safety or to the environment be created or exist on the Lease area, the State may declare an emergency event and, unless an alternative

arrangement is preferable in the State's discretion, may enter upon and take possession of the Lease area to remedy the emergency without prior notice and/or demand an assignment of the right to operate the Lease area. Upon entering the Lease area under this Section, the State shall provide immediate notice of such action by hand delivery or fax of its declaration to Tenant. The State may retain possession of the Lease area until the emergency event has been completely and adequately addressed to the State's satisfaction. Where a breach of this Lease has caused or exacerbated the emergency event, or where the Tenant is non-cooperative in allowing or addressing any remedial action necessary because of the emergency event, the State may terminate the Lease. The State shall not be liable in any manner for any inconvenience, disturbance, loss of business, nuisance or other damage arising out of the State's entry in the Lease area as provided herein, except damage resulting from the active negligence or willful misconduct of the State or its authorized representatives.

Any failure by Tenant to observe or perform another provision of this Lease where such failure continues for twenty (20) days after written notice thereof by the State to Tenant; any such notice shall be deemed to be the notice required under Code of Civil Procedure section 1161. However, if the nature of Tenant's breach is such that it cannot reasonably be cured within the twenty (20) day period, Tenant shall not be deemed to be in breach if Tenant shall commence such cure within the twenty (20) day period and thereafter diligently prosecutes such cure to completion.

Neither this Lease nor any interest of Tenant hereunder in the Lease area shall be subject to involuntary assignment or transfer by operation of law in any manner whatsoever, including, without limitation, the following: (a) transfer by testacy or intestacy; (b) assignments or arrangements for the benefit of creditors; (c) levy of a writ of attachment or execution on this Lease; (d) the appointment of a receiver with the authority to take possession of the Lease area in any proceeding or action in which the Tenant is a party; or (e) the filing by or against Tenant of a petition to have Tenant adjudged a bankrupt, or of a petition for reorganization or arrangement under any law relating to bankruptcy. Any such involuntary assignment or transfer by operation of law shall constitute a breach by Tenant and the State shall have the right to elect to take immediate possession of the Lease area, to terminate this Lease and/or invoke other appropriate remedies, in which case this Lease shall not be treated as an asset of Tenant.

Notices of breach shall specify the alleged breach and the applicable Lease provision and shall demand that Tenant perform the provisions of this Lease within the applicable time period or quit the Lease area. No such notice shall be deemed a forfeiture or a termination of this Lease unless the State specifically so states in the notice.

18. REMEDIES. In the event of breach by Tenant, the State shall have the following remedies. These remedies are not exclusive; they are cumulative and are in addition to any other right or remedy of the State at law or in equity.

Collection of Rent: In any case where the State has a cause of action for damages, the State shall have the privilege of splitting the cause to permit the institution of a separate suit for rent due hereunder, and neither institution of any suit, nor the subsequent entry of judgment shall bar the State from bringing another suit for rent; it being the purpose of this provision to provide that the forbearance on the part of the State in any suit or entry

of judgment for any part of the rent reserved under this Lease, to sue for, or to include in, any suit and judgment the rent then due, shall not serve as defense against, nor prejudice a subsequent action for, rent or other obligations due under the Lease. The claims for rent may be regarded by the State, if it so elects, as separate claims capable of being assigned separately.

Continued Performance: At the State's option, Tenant shall continue with its responsibilities under this Lease during any dispute.

Termination of Tenant's Right to Possession: Upon an event of breach of this Lease by Tenant, in addition to any other rights or remedies it may have, the State may give Tenant a three-day notice to cure the breach or quit the Lease area. If Tenant fails to do either, the State may bring a statutory proceeding in unlawful detainer to regain possession of the Lease area. Any notice given by the State pursuant to this Section does not constitute a termination of this Lease unless expressly so declared by the State in the notice. In the absence of written notice from the State, no act by the State, including, but not limited to, acts of maintenance, efforts to re-let and/or assign rights to possession of the Lease area, or the appointment of a receiver on the State's initiative to protect the State's interest under this Lease shall constitute an acceptance of Tenant's surrender of the Lease area, or constitute a termination of this Lease or of Tenant's right to possession of the Lease area. Upon such termination, the State has the right to recover from Tenant: (a) the worth, at the time of the award, of the unpaid rent that had been earned at the time of termination of this Lease; (b) the worth, at the time of the award, of the amount by which the unpaid rent that would have been earned after the date of termination of this Lease until the time of the award exceeds the amount of loss of rent that Tenant proves could have reasonably been avoided; (c) the worth, at the time of the award, of the amount by which the unpaid rent for the balance of the term after the time of the award exceeds the amount of the loss of rent that Tenant proves could have been reasonably avoided; and (d) any other amount necessary to compensate the State for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease, and costs of clearing the State's title of any interest of Tenant, commissions, attorneys' fees, and any other costs necessary or appropriate to make the Lease area operational by a new Tenant.

"The worth, at the time of the award," as used herein above shall be computed by allowing interest at the lesser of a rate of ten percent (10%) per annum or the maximum legal rate.

Receiver: If Tenant is in breach of this Lease, the State shall have the right to have a receiver appointed to collect rent and conduct Tenant's business or to avail itself of any other pre-judgment remedy. Neither the filing of a petition for the appointment of a receiver nor the appointment itself shall constitute an election by the State to terminate this Lease.

Right to Cure Tenant's Breach: At any time after Tenant commits a breach, the State can cure the breach at Tenant's cost. If the State, at any time by reason of Tenant's breach, pays any sum or does any act that requires the payment of any sum, the sum paid by the State shall be due immediately from Tenant to the State, and if paid at a later date shall bear interest at the rate of ten percent (10%) per annum from the date the sum is paid by

the State until the State is reimbursed by Tenant.

Personal Property of Tenant: In the event any personal property or trade fixtures of Tenant remain at the Lease area after the State has regained possession, that property or those fixtures shall be dealt with in accordance with the provisions for Surrender of the Lease area provided below.

State's Obligations After Breach: The State shall be under no obligation to observe or perform any covenant of this Lease on its part to be observed or performed that accrues after the date of any breach by Tenant. Such nonperformance by the State shall not constitute a termination of Tenant's right to possession nor a constructive eviction.

No Right of Redemption: Tenant hereby waives its rights under California Code of Civil Procedure sections 1174 and 1179 or any present or future law that allows Tenant any right of redemption or relief from forfeiture in the event the State takes possession of the Lease area by reason of any breach by Tenant.

Other Relief: The State shall have such rights and remedies for failure to pay any and all monetary obligations under this Lease as the State would have if Tenant failed to pay rent due. The remedies provided in this Lease are in addition to any other remedies available to the State at law, in equity, by statute, or otherwise.

Attorney's Fees and Costs: Tenant shall reimburse the State on demand for all reasonable attorney fees and expenses incurred by the State as a result of a breach under this Lease, provided that, in any litigation between the parties to this Lease concerning it, the prevailing party shall be entitled to recover court costs, reasonable attorney fees, and other costs reasonably incurred to secure the remedy obtained in the action.

The State shall not be in breach of the performance of any obligation required of it under this Lease unless and until it has failed to perform such obligation for more than thirty (30) days after written notice by Tenant to the State specifying the alleged breach and the applicable Lease provision giving rise to the obligation. However, if the nature of the State's obligation is such that more than thirty (30) days is required for its performance, then the State shall not be deemed in breach if it shall commence performance within such 30-day period and thereafter diligently prosecute the same to completion.

19. ASSIGNMENT AND SUBLEASES. Pursuant to Fish and Game Code section 15412, this Lease may not be assigned, in whole or in part, by Tenant, either voluntarily or by operation of law, and no subleases or other rights may be granted under it by Tenant without the prior written approval of the State, subject to the conditions that it prescribes. At the election of the State, any attempted assignment or subletting without such prior approval of the State shall terminate this Lease.

20. TERMINATION. In the event the Lease area becomes unsuitable for the practical cultivation or harvest of shellfish, or in the event the Tenant becomes unable to continue operating the Lease for aquaculture for reasons beyond Tenant's ability to control, Tenant may terminate the Lease after thirty (30) days written notice to the State. Tenant may terminate the Lease for any other reason through a written request presented to and approved by the State at a public hearing held for purposes of consideration of Tenant's termination request. Such termination shall be effective thirty (30) days after State

approval.

On expiration of or within thirty (30) days after earlier termination of the Lease, Tenant shall surrender the Lease area to the State. Tenant shall remove all of its personal property as well as all man-made material deposited during Tenant's occupancy within the above stated time unless otherwise agreed to in writing.

If Tenant fails to surrender the Lease area to the State on the expiration, or within thirty (30) days after earlier termination of the term as provided by this Section, Tenant shall hold the State harmless for all damages resulting from Tenant's failure to surrender the Lease area.

21. QUITCLAIM. Tenant shall, within ninety (90) days of the expiration or sooner termination of this Lease, execute, acknowledge and deliver to the State in a recordable form provided by the State a release of all rights under this Lease. Should Tenant fail or refuse to deliver such a release, a written notice by the State reciting such failure or refusal shall, from the date of its recordation, be conclusive evidence against Tenant of the expiration or termination of this Lease.

22. TIME OF THE ESSENCE. Time is of the essence of this Lease and any term, covenant or condition in which performance is a factor.

23. CHANGES. Nothing in this Lease may be waived, modified, amended, or discharged except by an instrument in writing signed by Tenant and the State, in consultation with the Department of Fish and Wildlife Aquaculture Coordinator. At its discretion, the Department of Fish and Wildlife may charge Tenant for any and all costs it incurs in any lease amendment requested by Tenant.

24. SEVERABILITY. If a court of competent jurisdiction determines that a Lease provision is legally invalid, illegal or unenforceable, and such decision becomes final, the provision shall be severed and deleted from the Lease and the remainder reasonably interpreted to achieve its intent. Tenant and the State agree to replace such void or unenforceable provision with a valid and enforceable provision that will achieve, to the extent possible, the purpose of the original provision.

25. SITE CLEANUP. Tenant shall provide to the State financial assurance sufficient to ensure that, upon termination or abandonment of this Lease, the Lease area is surrendered in a condition that is in accordance with Section 20, to the satisfaction of the State.

The financial assurance amount shall be calculated based on an analysis of the physical activities and materials necessary to surrender the site in the required condition; the unit costs or costs for third party contracting, for each of the identified activities as applicable; the number of units of these activities; and a contingency amount not to exceed ten percent (10%) of the costs of the activities.

Financial assurances may take the form of surety bonds executed by an admitted surety insurer, as defined in subdivision (a) of section 995.120 of the Code of Civil Procedure, irrevocable letters of credit, trust funds, or other forms of financial assurances specified

by the State which it reasonably determines to be adequate to perform restoration of the site. Personal surety bonds cannot provide financial assurance under this requirement. The financial assurance shall be payable to the State and shall remain in effect throughout the duration of the tenancy under the Lease, and until the State accepts surrender of the Lease area or until replaced by an equivalent financial assurance.

The financial assurance shall be applied by the State to place the Lease area in the condition required for surrender under Section 20, whenever the Tenant fails or refuses to accomplish such activities, and to reimburse the State for all its costs of achieving that condition of the Lease area. Any assets remaining from the financial assurance after all costs to the State, including administrative costs to secure the funds, have been reimbursed therefrom, shall be returned to the Tenant.

26. NON-DISCRIMINATION. In its use of the Lease area, Tenant shall not discriminate against, harass, or allow harassment against any person or class of persons on the basis of race, color, creed, religion, national origin, ancestry, sex, sexual orientation, age, marital status, medical condition or disability. Tenant shall ensure that the evaluation and treatment of its employees and applicants for employment are free from such discrimination and harassment.

Tenant shall comply with the provisions of the Fair Employment and Housing Act (Government Code section 12900 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, section 7285.0 et seq.). Tenant shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement. Tenant shall include the non-discrimination and compliance provisions of this clause in all contracts to perform work under and/or in connection with this Lease.

Tenant shall be solely responsible for complying with the requirements of the Americans With Disabilities Act of 1990 (P.L. 101-336, commencing at section 12101 of Title 42, United States Code and including Titles I, II and III), the Rehabilitation Act of 1973, and all related regulations, guidelines and amendments to both laws.

27. DRUG-FREE WORKPLACE. Tenant will comply with the requirements of the Drug-Free Workplace Act of 1990, as amended, and will provide a drug-free workplace by taking the following actions:

(a) Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations.

(b) Establish a Drug-Free Awareness Program to inform employees about: (1) the dangers of drug abuse in the workplace; (2) the Tenant's policy of maintaining a drug-free workplace; (3) any available counseling, rehabilitation and employee assistance programs; and, (4) penalties that may be imposed upon employees for drug abuse violations.

(c) Provide that every employee who works on the Lease area will: (1) receive a copy of the Tenant's drug-free policy statement; and, (2) agree to abide by the terms of the Tenant's statement as a condition of employment on the Lease area.

Failure to comply with these requirements may result in suspension or termination of this Lease, and Tenant may be ineligible for award of any future State Water Bottom Leases if the State determines that any of the following has occurred: (1) the Tenant has made false certification, or (2) violated the certification by failing to carry out the requirements as noted above.

28. ENTIRE AGREEMENT. This Lease contains the entire agreement between the parties, and an agreement hereafter shall be ineffective to change, modify or discharge it in whole or in part, unless such agreement is in writing and contains the authorized signature of the party against whom enforcement of the change, modification or discharge is sought.

29. CONSTRUCTION. This Lease shall be governed by and construed in accordance with the laws of the State of California. The Section titles in this Lease are inserted only as a matter of convenience and for reference, and in no way define, limit, or describe the scope or intent of this Lease or in any way affect this Lease.

Tenant shall maintain annual registration of its aquaculture facility in accordance with Fish and Game Code sections 15101 and 15103 and shall keep current with all fees and surcharges, including any penalties for late payment of same, required by those statutes.

30. INCORPORATION BY REFERENCE. The provisions of Chapters 1 through 8 of Division 12 of the Fish and Game Code (commencing with section 15000) and the provisions of Chapter 9 of Division 1 of Title 14, California Code of Regulations (commencing with section 235), as may be amended from time to time, are made part of this Lease by this reference. If there is a conflict between any term or condition of this Lease and any of the provisions incorporated by reference in it, the incorporated provisions shall control.

31. CONFLICTS OF INTEREST. Tenant warrants that no official, employee in the state civil service or other appointed state official, or any person associated with same by blood, adoption, marriage, cohabitation, and/or business relationship: (a) has been employed or retained to solicit or aid in the procuring of this Lease; or (b) will be employed in the performance of this Lease without the immediate divulgence of such fact to the State. In the event the State determines that the employment of any such official, employee, associated person, or business entity is not compatible, Tenant shall terminate such employment immediately. For breaches or violations of this Section, the State shall have the right to annul this Lease without liability.

32. EXPATRIATE CORPORATION. Tenant hereby declares that it is not an expatriate corporation or subsidiary of an expatriate corporation, within the meaning of Public Contract Code sections 10286 and 10286.1 and is eligible to contract with the State.

33. NO AGENCY. The Tenant, and the agents and employees of the Tenant in the performance of the Lease, shall act in an independent capacity and not as officers or agents of the State of California.

34. CLOSURE. Neither the State nor the Department of Fish and Wildlife shall have

any liability arising from a closure of waters by the Department of Fish and Wildlife Director pursuant to Fish and Game Code section 5654, where aquaculture operations are taking place.

35. NOTICES. Notices to the parties to this Lease shall be made in writing and may be given by delivery in person, by U.S. Mail with postage prepaid, or by receipt-confirmed facsimile to:

FISH AND GAME COMMISSION Executive Director P.O. Box 944209 Sacramento, CA 94244 Telephone: (916) 653-4899 Facsimile: (916) 653-5040	Charles Friend Oyster Company Heidi Gregory, Farm Manager PO Box 847 Marshall, CA 94940 Telephone: 415-663-1242 / 415-439-9516 Email: missheidigregory@gmail.com
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Notices shall be deemed given upon delivery to the addressee. Any notice given by facsimile shall also be given to the addressee by U.S. Mail, with postage prepaid. If a notice given by facsimile is delivered to the addressee after 5:00 p.m. Pacific time, or on a Saturday, Sunday or State of California or national holiday, the notice shall be deemed given on the next business day. Either party may change its address for notice purposes by giving written notice to the other party in the manner provided in this Section.

36. SPECIAL CONDITIONS.

(a) This lease, in accordance with the provisions of Fish and Game Code Section 15400, as may from time to time be amended or changed by the State Legislature, is for the sole purpose of cultivating the following species in the previously designated area:

- Pacific oyster (*Crassostrea gigas*)
- Suminoe oysters (*C. rivularis*)
- Eastern oysters (*C. virginica*)
- European flat oysters (*Ostrea edulis*)
- Native oysters (*O. lurida*)
- Kumamoto oysters (*C. sikamea*)
- Manila clams (*Venerupis philippinarum*)
- California sea mussels (*Mytilus californianus*)
- Bay mussels (*Mytilus edulis* complex)

The cultivation of additional species of aquatic plants and animals requires the approval of the Fish and Game Commission. In compliance with Section 15200 et seq. of the Fish and Game Code, and Section 237 of Title 14, California Code of Regulations, and to assure that only healthy shellfish seed will be planted, seed stock must be inspected and certified before planting. A request for certification of seed stock will be submitted by the Tenant to the State at least ten (10) days prior of the proposed date of inspection.

All shellfish cultivation on the lease shall be confined to longlines, rafts, stakes, rack and bag, racks and tray, floats, and bottom culture within the area approved by the Commission. No other mode of operation or culture method is authorized unless Tenant shall first obtain approval thereof from the Fish and Game Commission.

(b) The notice of intent to plant shellfish on the lease shall be given to the Department of Fish and Wildlife's, Marine Region aquaculture project, whose current contact information is 4665 Lampson Ave, Suite C, Los Alamitos, CA 90720, telephone: 562-342-7161. This contact information will be maintained online at www.wildlife.ca.gov/aquaculture, or at such other place as the State may from time to time designate. In addition to the required ten (10) day notice, at least a 24-hour notice shall be given to the aquaculture supervisor or their designee, giving the details on where the shellfish can be inspected.

(c) In addition to annual rent, shellfish harvested from the lease is subject to the privilege taxes, and procedures for their payment, as established in Fish and Game Code, sections 15003 and, if applicable, 8051, as well as the applicable Title 14 regulations, including Section 237.

EXHIBITS:

Exhibit A Description of State Water Bottom Lease No. M-430-04
Exhibit B Map of State Water Bottom Lease No. M-430-04

(REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK)

SIGNATURE PAGE

This Lease and any amendment(s) may be executed in counterparts, each of which, when executed and delivered by the State and Tenant, shall be an original and together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

Each signatory attests he or she is duly authorized to execute this Lease on behalf of the principal he or she represents.

Where Tenant is a corporation, the signature of the Tenant on this Lease will be verifying that Tenant is currently qualified to do business in the State of California, as defined in Revenue and Taxation Code section 23101, in order to ensure that all obligations to the State are fulfilled. Both domestic and foreign corporations (those incorporated outside the State of California) must be in good standing in order to be qualified to do business in California.

STATE OF CALIFORNIA:

TENANT:

FISH AND GAME COMMISSION

CHARLES FRIEND OYSTER COMPANY

By: _____
MELISSA MILLER-HENSON
Executive Director

By: _____
HEIDI GREGORY
Farm Manager

Date: _____

Date: _____

EXHIBIT A

Description of State Water Bottom M-430-04

All that certain real property situated in the County of Marin, State of California, described as follows:

In Tomales Bay, Marin County, State of California, starting from Bench Mark 8 located at approximately 38°12'38.7" North latitude, 122°55'22" West Longitude on the Tomales Bay Quadrangle, Marin County, California, U.S. Dept. of the Interior Geological Survey 7.5 minute series topographical map; thence North 83°31' West for a distance of 2749.30 feet to the top of Preston Point Rock lying off the northeast end of Preston Point; thence South 65°57'51" West 2128.40 feet to the true point of beginning; thence South 50°27'48" East 807.00 feet; thence North 46°50'24" East 1028.82 feet; thence North 35°53'07" West 539.10 feet; thence North 29°23'42" East 655.05 feet; thence North 59°41'17" West 670.79; thence South 58°38'08" West 2190.75 feet; thence South 51°18'13" East 1078.38 feet; thence North 39°32'12" East 357.16 feet; to the true point of beginning.

This parcel of water bottoms, containing an area of 61.9 acres more or less, comprises Aquaculture Lease No. M-430-04.

EXHIBIT B

**State Water Bottom Lease M-430-04
Tomaes Bay, Marin County, CA**





Board of Directors

Bridger Mitchell, Ph.D.
President

Ken Drexler, Esq.
Vice-President

Terence Carroll
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Cynthia Lloyd, PhD
Secretary

Sarah Killingsworth, Esq.

Jerry Meral, Ph.D.

Claire Seda

David Weinsoff, Esq.

David Wimpfheimer

Staff

Morgan Patton
Executive Director

Ashley Eagle-Gibbs, Esq.
Conservation Director

Jessica Reynolds Taylor
Development Director

Patricia Wimpfheimer
Bookkeeper

November 26, 2019

California Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090
Via electronic delivery to: fgc@fgc.ca.gov

Re: Comments on FGC Agenda Item 34
Charles Friend Oyster Company State Water Bottom Lease
No. M-430-04

Dear Commissioners,

The Environmental Action Committee of West Marin (EAC) is based in Point Reyes Station and has been working to protect the unique lands, waters, and biodiversity of West Marin since 1971. Since our inception, we have been committed to the health of West Marin's estuaries, bays, and watersheds including our strong focus on Tomales Bay.

We submit brief generally supportive comments, which we may supplement, regarding Agenda Item 34, Charles Friend Oyster Company State Water Bottom Lease No. M-430-04. We remind the Fish and Game Commission (Commission) that we have been advocating to the Commission for aquaculture best management practices since 2015. Many of the goals supported by a best management practices rulemaking have been accomplished through the California Coastal Commission's (CCC) coastal development permit (CDP) amendments, in which the CCC is including enforceable permit conditions around marine debris and other environmental considerations. We continue to support the CCC's efforts and your Commission's consistency with these efforts.

November 26, 2019
EAC Comments re. Agenda Item 34

While many improvements have been made on Tomales Bay related to the loss of aquaculture marine debris, the Bay continues to depend on all of the state agencies' close attention to any and all industrial practices on the Bay.

We appreciate the Commission's careful consideration regarding compliance before the extension of a lengthy lease term. That being said, we understand that Charles Friend Oyster Company has made significant progress towards compliance, and we are supportive of the 15-year extension.

We thank Charles Friend Oyster Company for their willingness to come into compliance and work with local stakeholders, as well as the state agencies. In sum, we appreciate your consideration of our comments; and without a chance to review the binder, we are in general support of Agenda Item 34.

Respectfully,



Morgan Patton
Executive Director



Ashley Eagle-Gibbs
Conservation Director

cc: Susan Ashcraft, California Fish and Game Commission
Elizabeth Pope, California Fish and Game Commission
Heidi Gregory, Tomales Bay Oyster Company

To: Ashcraft, Susan@FGC; Pope, Elizabeth@FGC; Miller-Henson, Melissa@FGC
Subject: RE: Razor Clam Domoic Acid Results, Humboldt County

From: Christen, Joe@CDPH <Joe.Christen@cdph.ca.gov>

Sent: Wednesday, September 4, 2019 10:08 AM

To: Ashcraft, Susan@FGC <Susan.Ashcraft@fgc.ca.gov>; Christine Cosby <ccosby@yuroktribe.nsn.us>; Walker, David@Wildlife <David.Walker@wildlife.ca.gov>; Grant, Christina@CDPH <Christina.Grant@cdph.ca.gov>; Coe, Hannah-Contractor@Wildlife <Hannah.Coe@Wildlife.ca.gov>; Jacque Smith [REDACTED]; Jaytuk Steinruck <jaytuk.steinruck@tolowa.com>; Grebel, Joanna@Wildlife <Joanna.Grebel@wildlife.ca.gov>; Ken Graves [REDACTED]; Ramey, Kirsten@Wildlife <Kirsten.Ramey@wildlife.ca.gov>; Martel, Melissa (HUMBOLDT COUNTY) <mmartel@co.humboldt.ca.us>; Rosa Laucci <Rosa.Laucci@tolowa.com>; Klasing, Susan@OEHA <Susan.Klasing@oehha.ca.gov>; Suzanne Fluharty <sfluharty@yuroktribe.nsn.us>; Tom Weseloh (<Tom.weseloh@sen.ca.gov>) <Tom.weseloh@sen.ca.gov>; Trevena, Eric@CDPH <Eric.Trevena@cdph.ca.gov>; Ray, James@Wildlife <James.Ray@wildlife.ca.gov>

Cc: Zubkousky, Vanessa@CDPH <Vanessa.Zubkousky@cdph.ca.gov>

Subject: Razor Clam Domoic Acid Results, Humboldt County

Good morning –

Results for domoic acid in razor clam meat for clams collected by James Ray from Clam Beach in Humboldt County are tabulated below.

DA ranged from < 2.5 to 37 ppm with an average of 17 ppm; 3 out of 10 samples tested over 20 ppm.

Sample	Domoic acid (ppm)	Collection Date	Agency	Site
Razor Clam - Meat	< 2.5	08/03/19	CDFW	Clam Beach
Razor Clam - Meat	4.6	08/03/19	CDFW	Clam Beach
Razor Clam - Meat	6.5	08/03/19	CDFW	Clam Beach
Razor Clam - Meat	8.8	08/03/19	CDFW	Clam Beach
Razor Clam - Meat	9.2	08/03/19	CDFW	Clam Beach
Razor Clam - Meat	18	08/03/19	CDFW	Clam Beach
Razor Clam - Meat	18	08/03/19	CDFW	Clam Beach
Razor Clam - Meat	22	08/03/19	CDFW	Clam Beach
Razor Clam - Meat	27	08/03/19	CDFW	Clam Beach
Razor Clam - Meat	37	08/03/19	CDFW	Clam Beach

Joe Christen
Senior Environmental Scientist
California Department of Public Health
Environmental Health Services Section
850 Marina Bay Parkway, G-165
Richmond, CA 94804

[REDACTED]
Joe.Christen@cdph.ca.gov

From: Ray, James@Wildlife <James.Ray@wildlife.ca.gov>

Sent: Friday, November 22, 2019 11:54:30 AM

To: Pope, Elizabeth@FGC <elizabeth.pope@fgc.ca.gov>

Subject: FW: Domoic Acid Razor Clam Results - Del Norte Co

Oct 2019 results for CCity. No Humboldt sample for Sept. or Oct.

Attached is a map showing the approximately 2 mile stretch of beach that samples can be collected from. Typically samples come out of the first mile (from Clam Beach parking lot north). When you came out, we walked that stretch. Sampling replicates recreational sampling, in that some clams come from close together (20ft), while others may be 100's feet apart. Effort is made to ensure not all clams come from within a small area.

J

James Ray

CDFW | Marine Region

Office: (707) 441 5755



Clam Beach Ponds

Clam Beach

Crannell

101

Central Ave

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
© 2016 Google
Image © 2016 TerraMetrics

Google

Imagery Date: 5/28/2014 41°00'38.73" N 124°06'02.32" W elev 18

1993

From: Christen, Joe@CDPH <Joe.Christen@cdph.ca.gov>

Sent: Wednesday, November 6, 2019 3:57 PM

To: Ashcraft, Susan@FGC <Susan.Ashcraft@fgc.ca.gov>; Christine Cosby <ccosby@yuroktribe.nsn.us>; Walker, David@Wildlife <David.Walker@wildlife.ca.gov>; Grant, Christina@CDPH <Christina.Grant@cdph.ca.gov>; Jacque Smith [REDACTED] Jaytuk Steinruck [REDACTED]; Grebel, Joanna@Wildlife <Joanna.Grebel@wildlife.ca.gov>; Ken Graves [REDACTED]; Ramey, Kirsten@Wildlife <Kirsten.Ramey@wildlife.ca.gov>; Martel, Melissa (HUMBOLDT COUNTY) <mmartel@co.humboldt.ca.us>; Ray, James@Wildlife <James.Ray@wildlife.ca.gov>; Rosa Laucci [REDACTED] Klasing, Susan@OEHHA <Susan.Klasing@oehha.ca.gov>; Suzanne Fluharty <sfluharty@yuroktribe.nsn.us>; Tom Weseloh (<Tom.weseloh@sen.ca.gov> <Tom.weseloh@sen.ca.gov>); Trevena, Eric@CDPH <Eric.Trevena@cdph.ca.gov>

Cc: Zubkousky, Vanessa@CDPH <Vanessa.Zubkousky@cdph.ca.gov>

Subject: Domoic Acid Razor Clam Results - Del Norte Co

Hello –

Ken Graves submitted 8 razor clams collected on October 28 from Crescent Beach in Del Norte County for DA testing. Results for domoic acid in the meat are below. Results ranged from 110 to 180 ppm with an average concentration of 145 ppm.

Collection Date	Sample Site	Sample Type	Domoic acid (ppm)
10/28/19	Crescent Beach	Razor Clam Meat	180
10/28/19	Crescent Beach	Razor Clam Meat	130
10/28/19	Crescent Beach	Razor Clam Meat	130
10/28/19	Crescent Beach	Razor Clam Meat	160
10/28/19	Crescent Beach	Razor Clam Meat	130
10/28/19	Crescent Beach	Razor Clam Meat	110
10/28/19	Crescent Beach	Razor Clam Meat	160
10/28/19	Crescent Beach	Razor Clam Meat	160

Joe Christen
Senior Environmental Scientist
California Department of Public Health
Environmental Health Services Section
850 Marina Bay Parkway, G-165
Richmond, CA 94804
510 412-4638
Joe.Christen@cdph.ca.gov



Razor Clam Sampling for Domoic Acid Testing

Fish and Game Commission Meeting
December 12, 2019

Photo: James Ray CDFW



Sampling Effort

- California Department of Public Health (CDPH) responsible for Domoic Acid testing
- Local CDFW staff and other partners collect samples for CDPH
- In Humboldt County CDFW staff collects samples between Clam Beach and Moonstone Beach (red line)
- Sampling replicates recreational effort
- 6 clams sampled monthly (average 8 months/yr)





Partners

- California Department of Public Health
- Office of Environmental Health Hazard Assessment
- California Department of Fish and Wildlife
- County of Del Norte
- Tolowa Dee-Ni' Nation
- Citizen Volunteers



Photo: James Ray CDFW



Tracking Number: (2019-004)

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, 1416 Ninth Street, Suite 1320, Sacramento, CA 95814 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: Mike Conroy

Address:

Telephone number:

Email address:

2. Rulemaking Authority (Required) - Reference to the statutory or constitutional authority of the Commission to take the action requested: FGC 1050, 8254(a)

3. Overview (Required) - Summarize the proposed changes to regulations: Add: "No lobster trap will be deemed abandoned during the period when lobster traps can legally be deployed as described in subsection (a)."

4. Rationale (Required) - Describe the problem and the reason for the proposed change: In certain locations, some permitted commercial lobster fishermen are having their traps, line and buoys (collectively "the gear") stolen by other permitted commercial lobster fisherman. Purportedly, the individual suspected of stealing the gear is claiming he is allowed to have the gear by claiming they are "derelict lobster traps" under current regulations. Because he is declaring them abandoned, the rightful owner of the gear is subject to arrest for theft if they take any actions to recover the stolen gear. The effect of this is that law abiding commercial fishermen whose gear is being stolen are disadvantaged as follows: (A) They are fishing less gear which results in lost opportunity; (B) They have to replace the gear at considerable expense; (C) They are unable to get replacement trap tags because they have not cumulatively lost at least 75 trap tags. Note – at the December 2018 FGC meeting we will be asking the MRC to schedule a discussion at its March 2019 meeting on the issue of replacement of loss tags

SECTION II: Optional Information

5. Date of Petition: November 29



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>*)

- ☒ Amend Title 14 Section(s):122.2(h)(1)
- ☐ 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: Prior to opening of 2019 commercial lobster season

10. Supporting documentation: Identify and attach to the petition any information supporting the proposal including data, reports and other documents: Unavailable at this time due to an ongoing LED investigation

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: Should be a positive economic impact to law abiding permitted commercial lobster fishermen

12. Forms: If applicable, list any forms to be created, amended or repealed:

SECTION 3: FGC Staff Only

Date received: [Received by email on Monday, February 4, 2019 at 7:51 AM.](#)

FGC staff action:

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

Tracking Number 2019-004

Date petitioner was notified of receipt of petition and pending action: April 17, 2019

Meeting date for FGC consideration: June 12-13, 2019

FGC action:



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

Memorandum

Date: November 18, 2019

To: Melissa Miller-Henson
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: Petition #2019-004: Revise Existing Regulation Regarding Retrieval of Abandoned Lobster Traps

Background

On June 13, 2019, the California Fish and Game Commission (Commission) referred Petition #2019-004 to the California Department of Fish and Wildlife (Department) for review and recommendation. The petitioner requests a change to commercial lobster fishing regulations concerning the retrieval of abandoned lobster traps in section 122.2, Title 14, California Code of Regulations. Current provisions (subsection 122.2(h), Title 14, CCR) allow a lobster operator permit holder to retrieve up to six lost, damaged, abandoned, or otherwise derelict lobster traps of another lobster permit holder during the spiny lobster season without written permission or a waiver.

The petition proposes to add language to the current regulation specifying the condition under which a lobster trap can be considered "abandoned" to reduce the purported misuse of this provision. Specifically, the petitioner proposes the following text be added to subsection 122.2(h), Title 14, CCR: "No lobster trap will be deemed abandoned during the period when lobster traps can legally be deployed as described in subsection (a)."

Department Evaluation

The Department has reviewed the above referenced petition and identified a regulation change is not needed at this time. The original basis for subsection 122.2(h), Title 14, CCR, is to accommodate instances when it is necessary to retrieve lost, damaged, abandoned, or otherwise derelict traps during the season to help reduce potential impact of fishing gear on living marine resources and underwater habitat. The proposed change would render the current gear retrieval provision ineffective as a means to reduce gear loss during the lobster fishing season. Therefore, the Department recommends not changing current regulations at this time.

Melissa Miller-Henson, Executive Director
Fish and Game Commission
November 18, 2019
Page 2 of 2

To address the purported abuses of the provision, Department law enforcement is actively investigating the problem described in the petition and evaluating the scope of the issue and need for regulatory change. In addition, fishery participants have recently conveyed additional suggestions for regulatory change. The Department plans to meet with fishery participants at the end of the 2019/20 season to scope potential regulatory changes to improve the fishery in a comprehensive rulemaking.

The Department recommends rejecting the petition based on the above information. If you have any questions or need additional information, please contact Tom Mason by telephone at (858) 637-7100, or via email at Tom.Mason@wildlife.ca.gov.

cc: Stafford Lehr, Deputy Director
Wildlife and Fisheries Branch
Stafford.Lehr@Wildlife.ca.gov

Craig Shuman D. Env.
Regional Manager
Marine Region
Craig.Shuman@wildlife.ca.gov

Mike Stefanak, Assistant Chief
Law Enforcement Division
Mike.Stefanak@wildlife.ca.gov

Sonke Mastrup
Environmental Program Manager
Marine Region
Sonke.Mastrup@wildlife.ca.gov

Robert Puccinelli, Captain
Law Enforcement Division
Robert.Puccinelli@wildlife.ca.gov

Tom Mason, Senior Environmental
Scientist (Supervisor)
Marine Region
Tom.Mason@wildlife.ca.gov

California Fish and Game Commission

Potential Agenda Items for February 2020 Commission Meeting

The next Commission meeting is scheduled for February 5-6, 2020 in Sacramento. 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 (DFW).

Note that for two-day FGC meetings in 2020, marine items will be heard on the first day and wildlife and inland fisheries items will be heard on the second day.

Wednesday, February 5: Marine-related and administrative items

1. General public comment for items not on the agenda (Day 1)
2. Election of officers
3. Committee assignments
4. Tribal Committee
5. Marine Resources Committee
6. Executive director's report (staff report, legislative update)
7. Strategic planning – receive and discuss draft strategic plan
8. Marine items of interest from previous meetings
9. Action on marine petitions for regulation change
10. Action on marine non-regulatory requests from previous meetings
11. Receive DFW informational items (marine)
12. Executive (closed) session

Thursday, February 6: Wildlife- and inland fisheries-related and administrative items

13. General public comment for items not on the agenda (Day 2)
14. Wildlife Resources Committee
15. Discuss: mammal hunting
16. Discuss: waterfowl (annual)
17. Discuss: wildlife areas and ecological reserves
18. Discuss: Central Valley sport fishing (annual)
19. Discuss: Klamath River Basin sport fishing (annual)
20. Adopt: second 90-day extension of Klamath River Basin 2084 Spring Chinook Salmon emergency rulemaking
21. Discuss: Klamath River Basin 2084 Spring Chinook Salmon regular rulemaking (Certificate of Compliance)
22. If the Commission lists foothill yellow-legged frog as an endangered or threatened species under the California Endangered Species Act (CESA), consider ratifying findings
23. Receive DFW's one-year status review report for the petition to list Upper Klamath-Trinity river spring Chinook salmon as an endangered or threatened species under CESA

24. Receive DFW's 90-day evaluation report for the petition to list mountain lion as a threatened or endangered species under CESA
25. Determine whether change to listing status under CESA of Clara Hunt's milk-vetch may be warranted
26. Discuss and consider adopting a Commission Delta Fisheries Management Policy and an amended Striped Bass Policy
27. Wildlife and inland fisheries items of interest from previous meetings
28. Action on wildlife and inland fisheries petitions for regulation change
29. Action on wildlife and inland fisheries non-regulatory requests from previous meetings
30. Receive DFW informational items (wildlife and inland fisheries)
31. Administrative items (next meeting agenda, rulemaking timetable, new business)

State of California
Department of Fish and Wildlife

M e m o r a n d u m

Date: November 27, 2019

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) 2020 regulatory timetable:

- Add a rulemaking to amend Sections 163 and 164 to clarify implementing regulations for the Herring Fishery Management Plan related to the harvest of herring eggs on kelp.
 - The proposed schedule is notice at the April 2020 meeting, discussion at the June 2020 meeting, and adoption at the August 2020 meeting.
- Add a rulemaking titled "Recreational Dungeness Crab Marine Life Protection Measures" to amend Sections 1.74, 29.80, 29.85, and 29.91. The purpose of this rulemaking is to align the recreational Dungeness crab fishery with the whale safe measures and in-season management actions planned or already underway for the commercial Dungeness crab fishery.
 - The proposed schedule is notice at the April 2020 meeting, discussion at the June 2020 meeting, and adoption at the August 2020 meeting.

If you have any questions or need additional information, please contact Regulations Unit Manager, Michelle Selmon at (916) 653-4674 or by email at Michelle.Selmon@wildlife.ca.gov.

ec: Stafford Lehr, Deputy Director
Wildlife and Fisheries Division
Stafford.Lehr@wildlife.ca.gov

David Bess, Chief
Law Enforcement Division
David.Bess@wildlife.ca.gov

Melissa Miller-Henson, Executive Director
Fish and Game Commission
November 27, 2019
Page 2

Craig Shuman, D. Env., Manager
Marine Region
Craig.Shuman@wildlife.ca.gov

Michelle Selmon, Program Manager
Regulations Unit
Wildlife and Fisheries Division
Michelle.Selmon@wildlife.ca.gov

Fish and Game Commission:

David Thesell, Program Manager
Fish and Game Commission
David.Thesell@fgc.ca.gov

Perpetual Timetable for Anticipated Regulatory Actions

Updated: Wednesday, December 4, 2019

Items proposed for change are shown in blue underlined font

Regulatory Change Category	Title 14 Section(s)	FGC Sacramento Dec 11, 2019	FGC Sacramento Dec 12, 2019	WRC Los Angeles Area Jan 16, 2020	TC Los Angeles Area Jan 17, 2020	FGC Sacramento Feb 5, 2020	FGC Sacramento Feb 6, 2020	WRC Sacramento Mar 5, 2020	MRC Santa Rosa Mar 17, 2020	FGC Sacramento Apr 15, 2020	FGC Sacramento Apr 16, 2020	Teleconference May 14, 2020	WRC Santa Rosa May 14, 2020	FGC Santa Ana Area Jun 24, 2020	FGC Santa Ana Area Jun 25, 2020	MRC San Clemente Area Jul 21, 2020	TC Fortuna Area Aug 18, 2020	FGC Fortuna Area Aug 19, 2020	FGC Fortuna Area Aug 20, 2020	WRC Sacramento Sep 17, 2020	FGC Oakland Oct 14, 2020	FGC Oakland Oct 15, 2020	TC Monterey Area Nov 9, 2020	MRC Monterey Area Nov 10, 2020
Recreational and Commercial Pacific Herring (Fishery Management Plan Implementation)	26.50, 28.50, 28.60, 28.62, 55.00, 55.01, 55.02, 163, 163.1, 163.5, 164 and 705			E 1/1																				
Experimental Fishing Permit (EFP) Program (Phase I)	90 and 704			E 1/1																				
Possession of Nongame Animals (Nutria)	473	A								E 4/1														
Klamath River Basin 2084 (Emergency)	7.50(b)(91.2)	EE 12/24																						
Klamath River Basin 2084 (Emergency) (First 90-day Extension)	7.50(b)(91.2)		A	E 12/24 through 3/22					EE 3/23															
Klamath River Basin 2084 (Emergency) (Second 90-day Extension)	7.50(b)(91.2)						A		E 3/23 through 6/20					EE 6/21										
Klamath River Basin 2084 (Implementing Certificate of Compliance)	7.50(b)(91.2)	N					D				A			E 6/21										
Wildlife Areas/Public Lands and Ecological Reserves	550, 550.5, 551, 552, 630 and 702	N					D				A					E 7/1								
Mammal Hunting	360, 361, 362, 363, 364 and 364.1	N					D				A					E 7/1								
Waterfowl (Annual)	502, 507	N					D				A					E 7/1								
Central Valley Sport Fishing (Annual)	2.35, 7.00, 7.50(b)(5), (68), (124), (156.5)	N					D				D	A				E 7/16								
Klamath River Basin Sport Fishing (Annual)	7.50(b)(91.1)	N					D				D	A					E 8/15							
Commercial Pacific Herring (Fishery Management Plan Implementation)	163, 164									N				D/A									E 11/1	
Recreational Dungeness Crab Marine Life Protection Measures	1.74, 29.80, 29.85, 29.91									N				D				A						
Simplification of Statewide Inland Fishing Regulations ²	5.00, 7.00, 7.50, 8.10			V	V			R							N				D			A		

Rulemaking Schedule to be Determined	Title 14 Section(s)	FGC Sacramento Dec 11, 2019	FGC Sacramento Dec 12, 2019	WRC Los Angeles Area Jan 16, 2020	TC Los Angeles Area Jan 17, 2020	FGC Sacramento Feb 5, 2020	FGC Sacramento Feb 6, 2020	WRC Sacramento Mar 5, 2020	MRC Santa Rosa Mar 17, 2020	FGC Sacramento Apr 15, 2020	FGC Sacramento Apr 16, 2020	Teleconference May 14, 2020	WRC Santa Rosa May 14, 2020	FGC Santa Ana Area Jun 24, 2020	FGC Santa Ana Area Jun 25, 2020	MRC San Clemente Area Jul 21, 2020	TC Fortuna Area Aug 18, 2020	FGC Fortuna Area Aug 19, 2020	FGC Fortuna Area Aug 20, 2020	WRC Sacramento Sep 17, 2020	FGC Oakland Oct 14, 2020	FGC Oakland Oct 15, 2020	TC Monterey Area Nov 9, 2020	MRC Monterey Area Nov 10, 2020
Santa Cruz Harbor Salmon Fishing (FGC Petition #2016-018)	TBD																							
European Green Crab (FGC Petition #2017-006)	TBD																							
Wildlife Areas/Public Lands ¹	TBD																							
Experimental Fishing Permit (EFP) Program (Phase II)	TBD																							
Commercial Kelp and Algae Harvest Management	165, 165.5, 704																							
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																							
Commercial Pink Shrimp Trawl	120, 120.1, 120.2																							
Ridgeback Prawn Incidental Take Allowance	120(e)																							

KEY

FGC = Fish and Game Commission; MRC = Marine Resources Committee; WRC = Wildlife Resources Committee; TC = 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

¹ = Includes FGC Petition #2018-003 and FGC Petition #2018-005

² = Includes FGC Petition #2018-008



State of California - The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
License and Revenue Branch
1740 N. Market Blvd
Sacramento, CA 95834
<http://www.wildlife.ca.gov>

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director
FISH AND GAME
COMMISSION



2017 JUN 30 AM 9:30

Certified Mail

October 6, 2016

Mr. Louis J. Ferrari

██████████, California 94904

**SUBJECT: NOTICE OF DENIAL TO CONSIDER APPEAL FOR A TRANSFERABLE
NORTH CENTRAL COAST REGION NEARSHORE FISHERY PERMIT**

Dear Mr. Ferrari:

This letter is in response to your July 1, 2016 letter to the Department of Fish and Wildlife (Department) in which you asked the Department to convert your Non-Transferable North-Central Coast Region Nearshore Fisheries Permit (NTNCCRNFP) to a Transferable North-Central Region Nearshore Fisheries Permit (TNCCRNFP).

California Code of Regulations, Title 14, section 150, subdivision (m)(1) (Section 150(m)(1)) states:

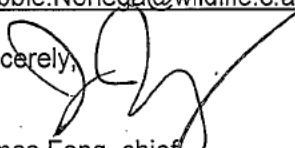
Any applicant who is denied initial issuance of a Nearshore Fishery Permit for any reason may appeal to the department in writing describing the basis for the appeal. The appeal shall be received or, if mailed, postmarked, no later than March 31, 2004. The appeal shall be reviewed and decided by the department. The decision of the department may be appealed in writing to the commission within 60 days of the date of the department's denial.

On May 7, 2003, Mr. Zeke Grader, with the Pacific Coast Federation of Fishermen's Associations, submitted to the Department on your behalf an appeal of the Department's denial of your request to receive a TNCCRNFP. The Department denied your appeal on June 11, 2003.

Pursuant to Section 150(m)(1), you were required to appeal the Department's appellate decision to the Fish and Game Commission (Commission) within 60 days of the Department's decision. While the 60 day period lapsed in 2004, you should nonetheless submit your appeal request to the Fish and Game Commission at California Fish and Game Commission, P.O. Box 944209, Sacramento, CA 94244-2090, or by e-mail at fgc@fgc.ca.gov.

If you have any questions or require further assistance, please contact Ms. Debbie Noriega, of my staff, at the letterhead address, by telephone at (916) 928-5817, or e-mail Debbie.Noriega@wildlife.ca.gov.

Sincerely,


James Fong, chief
License and Revenue Branch

cc: Mr. Mike Yuan
Fish and Game Commission
Sacramento, California

Ms. Debbie Noriega
Department of Fish and Wildlife
Sacramento, California

Conserving California's Wildlife Since 1870

To: Fish & Game Commission

January 8, 2018

P. O. Box 944209

Sacramento, CA 94244-2090

From: Louis J. Ferrari

RECEIVED
CALIFORNIA
FISH AND GAME
COMMISSION
2018 JAN 18 PM 2:05

Subject: Request to have my Non-Transferable North-Central Nearshore Fisheries Permit converted to a Transferable North-Central Nearshore Fisheries Permit.

Background and Justification:

I previously submitted this request to the Department of Fish and Wildlife, hoping the Department would be able to correct the mistake they made when they originally issued me a Nearshore Permit. The Department has declined to do so and referred me to the Fish & Game Commission. I am hereby exercising my right to appeal to the Commission the Department's decision to not correct this error.

Prior to Nearshore Fisheries becoming limited entry I had commercially fished for and landed thousands of pounds of Nearshore fish. The problem is that during the Nearshore Fisheries Permit qualification period 1994 to 2001 the Commercial Fish Buyers were not required by law to separate nearshore fish species from other rockfish species and therefore just put on the Landing Receipt all nearshore fish that they were paying the same price for, as "Bolina" rockfish. The same thing happened with my many pounds of Cabazon landings. All Cabazon were thrown in with and recorded as Lingcod. Bolina (brown) Rockfish and Lingcod were not listed as Nearshore Species, so when I applied for my initial Nearshore Fishery Permit, I was denied because the Department of Fish & Game Commercial Fish Landing data did not show that I had landed at least 500

pounds of nearshore fish pursuant to CCR Title 14 Section 150(d)(2)(A). I appealed the denial and was again told the Department did not have landing data to show that I would have enough qualified landings for a Transferable Nearshore Fishery Permit. I was however, issued a Non-Transferable Nearshore Fishery Permit pursuant to CCR Title 14 Section 150(e)(2)(B).

Even though I felt at the time that I was unjustly being denied a Transferable Nearshore Fishery Permit, there was nothing I could do about it, because all I had were Landing Receipts that only showed Bolina Rockfish and Lingcod. The reason for my request now to change my Non-transferable Nearshore Fishery Permit to a Transferable Nearshore Fishery Permit is that it has come to my attention the Department did, at the time of my permit denial, possess data that would have shown that I had sufficient landings of qualifying Nearshore Species during the qualification period of 1994-2001. This data was not available to me at the time and evidently was not available to the persons who were reviewing my permit application and appeal. Knowing that many different species of rockfish were being grouped on landing receipts as Unspecified Rockfish, Bolina Rockfish, Red Rockfish, and Gopher Rockfish, Department biologists did a census of what percentage of individual species of rockfish were being landed under one of the above groups. For instance in 1994, fish being recorded on Landing Receipts as Bolina rockfish actually included: Blue rockfish, Black rockfish, Brown rockfish, Black-and-Yellow rockfish, Cabezon, China rockfish, Copper rockfish, Gopher rockfish, Grass rockfish and Quillback rockfish. Based on Department of Fish & Wildlife data and the percentage of nearshore fish landed as Bolina rockfish on Landing Receipts I had 3,353 pounds of Nearshore fish (not including cabezon landed as lingcod) landed in 1994, 1,490 pounds of Nearshore fish in 1995 and 921 pounds in 1996. All this information is currently available to Department Personnel in the Commercial Fisheries Data Base.

If Department personnel who were reviewing permit qualifications had access to this information at the time, then I would have easily qualified for a Transferable Nearshore Fishery Permit. Therefore, I respectfully request this error be corrected by converting my Non-Transferable North-Central Nearshore Fishery Permit to a Transferable Nearshore Fishery Permit.

Sincerely,

A handwritten signature in black ink, appearing to read "Louis J. Ferrari". The signature is fluid and cursive, with the first name "Louis" and last name "Ferrari" clearly distinguishable.

Louis J. Ferrari

From: Kiene, David@Wildlife

Sent: Wednesday, October 10, 2018 1:16 PM

To: Yaun, Michael@FGC; [REDACTED]

Subject: RE: Ferrari appeal, 18ALJ11-FGC

Dear Mr. Yaun:

This e-mail is in response to Mr. Ferrari's appeal to the Fish and Game Commission ("Commission"), challenging the Department of Fish and Wildlife's ("Department") determination that it would not consider his appeal to redesignate his Non-Transferable North-Central Coast Nearshore Fishery Permit ("Permit") as transferable. As explained below, the Department of Fish and Wildlife ("Department") objects to this request.

Background

The deadline for requesting an appeal is described in Title 14, section 150(m)(1), which states:

Any applicant who is denied initial issuance of a Nearshore Fishery Permit for any reason may appeal to the department in writing describing the basis for the appeal. The appeal shall be received or, if mailed, postmarked, no later than March 31, 2004. The appeal shall be reviewed and decided by the department. The decision of the department may be appealed in writing to the commission within 60 days of the date of the department's denial.

Sometime in 2003, the Department denied Mr. Ferrari's request to receive a Nearshore Fishery Permit. On May 7, 2003, Zeke Grader, on behalf of Mr. Ferrari, appealed this denial to the Department. As a result, the Department reversed its earlier denial and sent two letters dated June 11, 2003, to Mr. Ferrari, one stating that the Department would issue a Non-Transferable North-Central Coast Nearshore Fishery Permit, and the other denying the issuance of a Transferable North-Central Coast Nearshore Fishery Permit. Mr. Ferrari could have appealed his Permit's designation as non-transferable to the Commission within 60 days of the date of those letters, but did not do so. (All 2003 correspondence in the Department's possession is attached.)

Over 13 years later, on July 1, 2016, Mr. Ferrari appealed the Department's designation of the Permit as non-transferable. The Department determined that the appeal request was late and sent a letter to Mr. Ferrari on October 6, 2016, stating that it would not consider his appeal. Mr. Ferrari finally submitted an appeal to the Commission on January 8, 2018, over a year after the date of the Department's October 6, 2016 letter, and over 14 years after the Department's June 11, 2013 letter, notifying him of his Permit's non-transferable designation.

Discussion

The deadline to appeal the Permit's designation as Non-Transferable to the Department was March 31, 2004, and the deadline to appeal to the Commission was within 60 days of the Department's denial. (Section 150(m)(1).) Thus, the deadlines for appealing the Permit's designation passed over a decade ago, and neither the Department nor the Commission has authority to consider these very late appeals. While Mr. Ferrari claims there is new landing information supporting his appeal, Section 150 provides no authority to waive the appeal deadlines.

Because Mr. Ferrari's appeal to the Commission is over 14 years late, the Department is respectfully requesting that the Commission not consider Mr. Ferrari's appeal. If you have any further questions, please do not hesitate to contact me.

From: Yaun, Michael@FGC

Sent: Friday, September 21, 2018 4:38 PM

To: [REDACTED]; Kiene, David@Wildlife <David.Kiene@wildlife.ca.gov>

Subject: Ferrari appeal, 18ALJ11-FGC

Mr. Ferrari and Mr. Kiene,

As legal counsel for the California Fish and Game Commission, I am attempting to process the appeal that Mr. Ferrari filed with the Commission in response to the notice of denial from the Department of Fish and Wildlife (Mr. Kiene's client).

I will be forwarding this matter to the Office of Administrative Hearings for the conduct of a hearing in Oakland and entry of a proposed decision for the Commission's subsequent consideration. Attached is a brochure with some general background information about OAH.

Please respond to this email with the following:

1. Dates of unavailability from each of you over the next 6 months.
2. Your estimation of the duration of the hearing, and
3. Confirmation that you or your client consent to audio recording of the hearing.

No need for a hearing

If you would like to discuss the possibility of agreeing to a joint stipulation or settlement, please do so between yourselves. If some agreement appears likely, please let me know so that I may avoid referring the matter to OAH for a hearing. Alternately, if the Department does not object to Mr. Ferrari's appeal and does not feel a need to participate in the proceeding, please respond stating that is the case.

Mike Yaun
Legal Counsel
Fish and Game Commission
1416 Ninth Street, Suite 1320
Sacramento CA 95814

(916) 653-9719



State of California - The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
License and Revenue Branch
1740 N. Market Blvd
Sacramento, CA 95834
<http://www.wildlife.ca.gov>

EDMUND G. BROWN JR, Governor
CHARLTON H. BONHAM, Director



Certified Mail

March 6, 2018

Mr. Meo Nauven

Sherman Oaks, CA

Subject: **NOTICE OF NONACCEPTANCE OF APPLICATION TO TRANSFER SALMON VESSEL PERMIT, PERMIT SA0875**

Dear Mr. Nguyen:

This letter is in response to your application to transfer Salmon Vessel Permit (SVP), from the FV *Miss Jacinda* (FG31827) to the FV *Shark Bait* (FG70651).

Authority

Fish and Game Code (FGC) Section 8239.1 states that the department shall accept a transfer application within one year after the date that a permitted vessel was lost, stolen, or destroyed, notwithstanding any inability to physically examine the permitted vessel to determine its salmon fishing potential. Only the permittee at the time of the loss, theft, or destruction of the vessel may apply for the transfer of the vessel permit. Proof that a vessel is lost, stolen, or destroyed shall be in the form of a copy of the report filed with the United States Coast Guard or any other law enforcement agency or fire department investigating the loss. The owner or the owner's agent may request an extension of time to complete a transfer for a period of six months. The Department of Fish and Wildlife ("Department") may grant further extensions not to exceed a total time period of five years after the date the permitted vessel was lost, stolen, or destroyed, if the permit fees are paid annually.

FGC Section 7881(d) states if a registered vessel is lost, destroyed, or sold, the owner of the vessel shall immediately report the loss, destruction, or sale to the Department.

FGC Section 7857(j) states that a commercial fishing permit is not transferable unless otherwise expressly specified in the FGC.

Documents Submitted By Permittee

- Commercial Salmon Vessel Permit Transfer Application, received February 12, 2018.
- Copy of the 2017-2018 Biennial Dungeness Crab Tag Fees Receipt.
- Letter from M.S. Young, Chief Warrant Officer, US Coast Guard Investigating Officer, dated November 16, 2017, stating that on February 26, 2016, the U.S. Coast Guard initiated an investigation into the sinking and loss of one life involving the commercial fishing vessel *Miss Jacinda*.
- Copy of the United States Coast Guard (USCG) Certificate of Documentation for the FV *Miss Jacinda*, dated November 20, 2015, which shows Meo V. Nguyen is the owner.
- Original 2017-2018 Commercial Boat Registration for the FV *Shark Bait*.
- Original 2017-2018 Commercial Fishing License for Mr. Bryan K. Bishop.

Conserving California's Wildlife Since 1870

- Original California Department of Motor Vehicles Certificate of Number for the F/V *Shark Bait*, dated August 14, 2017, showing Bryan K. Bishop is the owner.

Department Findings

On February 12, 2018, the Department received your application to transfer the SVP from the F/V *Miss Jacinda* to the F/V *Shark Bait*. FGC Section 8239.1(a) states that the department shall accept a transfer application within one year after the date that a permitted vessel was lost, stolen, or destroyed. FGC Section 8239.1(a) also states that the owner, or the owner's agent, may request an extension of the time to complete a transfer for a period of six months. The Department does not have any record that you submitted a transfer application or request for an extension of the deadline within one year of the date that the loss, theft, or destruction of the F/V *Miss Jacinda* occurred.

Furthermore, the USCG Certificate of Documentation on file with the Department, issued March 17, 2016, for the F/V *Miss Jacinda* shows that you are no longer the vessel owner and thus, are not the permittee. Only the permittee may submit an application to transfer the SVP.

In addition, a search of Department license records shows that the F/V *Miss Jacinda* does not have a valid 2017-2018 SVP.

Department's Determination

Based on the previously stated information, the Department cannot accept your application to transfer the SVP from the F/V *Miss Jacinda* to the F/V *Shark Bait*. FGC Section 7857(j) prohibits the transfer of a commercial fishing permit, such as the SVP, unless such a transfer is expressly authorized in the FGC. There is no authority allowing a person to sell a vessel, retain the SVP, then later transfer the permit to a vessel owned by a different person, which is what you would like to do. Moreover, you did not submit a transfer application within one year or request an extension of the deadline pursuant to FGC Section 8239.1(a).

The Department also notes that you did not notify the Department of the sale or loss of the F/V *Miss Jacinda* as required by FGC Section 7881(d).

Enclosed are your original documents you submitted to the Department.

Deadline to File an Appeal to the Fish and Game Commission


If you wish to appeal the Department's decision, you must submit a written request to the Fish and Game Commission ("Commission") at 1416 Ninth Street, Suite 1320, Sacramento, California 95814 or you can request an appeal by emailing the Commission at fgc@fgc.ca.gov. Pursuant to FGC Section 8246.6, your appeal must be received within 60 days of the date of this letter.

The Commission will review the information you submit and will notify you in writing if your appeal will be scheduled before the Office of Administrative Hearings.

If you have any questions or require further assistance, please contact Ms. Ruth Flores at (916) 928-7470 or Ruth.Flores@wildlife.ca.gov.

Mr. Meo Nguyen
March 6, 2018
Page Two

Sincerely,



Joshua Morgan, Chief
License and Revenue Branch

cc: Mr. Michael Yaun
Fish and Game Commission
Sacramento, CA

Mr. Bryan K. Bishop

Wilmington, CA

Ms. Ruth Flores
Department of Fish and Game
Sacramento, CA

From: Meo Nguyen <meonguyen[REDACTED].com>
Sent: Monday, June 11, 2018 8:52 AM
To: Ashcraft, Susan@FGC; Miller-Henson, Melissa@FGC; FGC
Cc: Flores, Ruth@Wildlife
Subject: Re: Salmon Permit Number SA0875

2nd Request...

I have been instructed by Ruth Flores of the Department of Wildlife to send my Appeal to the Department of Fish and Game. I do not know who to send this to, so I am sending to the emails I am aware of...

Dear Ms. Flores

I received your letter dated March 6 regarding the transfer of my salmon permit number SA0875.

There was an illness and death in my family. I was out of the country between mid-March and I returned mid-May.

Please consider this my Appeal to your decision to deny transferring my permit.

The above referenced Salmon permit was for my boat, Miss Jacinda. Miss Jacinda was sunk in February 2016. To date, to the best of my knowledge, the Coast Guard's final report has not been issued. I have not yet saved the funds for a new vessel. It is my intent to have a new vessel. It was my desire to maintain the ownership of my Salmon Permit and assign it to F/V Shark Bait until I acquire a new vessel.

If that is not allowed by the Department of Wildlife, I would to offer the following alternative. I would like to purchase an ownership interest in one of my family member's vessels. Then I would like to assign my Salmon permit to this vessel.

Will the Department of Wildlife allow me to do this? How can I proceed.

Thank you,

Meo Nguyen



Virus-free. www.avg.com

On Wed, Jun 6, 2018 at 2:45 PM, Meo Nguyen <[meonguyen\[REDACTED\].com](mailto:meonguyen[REDACTED].com)> wrote:

I have been instructed by Ruth Flores of the Department of Wildlife to send my Appeal to the Department of Fish and Game. I do not know who to send this to, so I am sending to the emails I am aware of...

I received your letter dated March 6 regarding the transfer of my salmon permit number SA0875.

There was an illness and death in my family. I was out of the country between mid-March and I returned mid-May.

Please consider this my Appeal to your decision to deny transferring my permit.

The above referenced Salmon permit was for my boat, Miss Jacinda. Miss Jacinda was sunk in February 2016. To date, to the best of my knowledge, the Coast Guard's final report has not been issued. I have not yet saved the funds for a new vessel. It is my intent to have a new vessel. It was my desire to maintain the ownership of my Salmon Permit and assign it to F/V Shark Bait until I acquire a new vessel.

If that is not allowed by the Department of Wildlife, I would offer the following alternative. I would like to purchase an ownership interest in one of my family member's vessels. Then I would like to assign my Salmon permit to this vessel.

Will the Department of Wildlife allow me to do this? How can I proceed.

Thank you,

Meo Nguyen

----- Forwarded message -----

From: **Flores, Ruth@Wildlife** <Ruth.Flores@wildlife.ca.gov>

Date: Wed, Jun 6, 2018 at 1:13 PM

Subject: RE: Salmon Permit Number SA0875

To: Meo Nguyen <[meonguyen\[REDACTED\].com](mailto:meonguyen[REDACTED].com)>

Cc: FGC <FGC@fgc.ca.gov>

Hello Mr. Nguyen,

Please send your appeal request directly to the Fish and Game Commission.

In regards to the alternative you suggested in which you would purchase an ownership interest in a family member's vessel and then assign the salmon vessel permit to that vessel, you may submit such a request but it may fall into the same problems as your previous transfer request.

Thank you,

Ruth

Ruth Flores

Commercial Fishing Analyst

License and Revenue Branch

California Department of Fish and Wildlife

[1740 N Market Blvd](#)

[Sacramento, CA 95834](#)

916.928.7470

Ruth.Flores@wildlife.ca.gov

www.wildlife.ca.gov

Every Californian should conserve water. Find out how at:



SaveOurWater.com · Drought.CA.gov

From: Meo Nguyen <[meonguyen\[REDACTED\].com](mailto:meonguyen[REDACTED].com)>
Sent: Monday, June 04, 2018 5:56 PM
To: Flores, Ruth@Wildlife <Ruth.Flores@wildlife.ca.gov>
Cc: FGC <FGC@fgc.ca.gov>
Subject: Salmon Permit Number SA0875

Dear Ms. Flores

I received your letter dated March 6 regarding the transfer of my salmon permit number SA0875.

There was an illness and death in my family. I was out of the country between mid-March and I returned mid-May.

Please consider this my Appeal to your decision to deny transferring my permit.

The above referenced Salmon permit was for my boat, Miss Jacinda. Miss Jacinda was sunk in February 2016. To date, to the best of my knowledge, the Coast Guard's final report has not been issued. I have not yet saved the funds for a new vessel. It is my intent to have a new vessel. It was my desire to maintain the ownership of my Salmon Permit and assign it to F/V Shark Bait until I acquire a new vessel.

If that is not allowed by the Department of Wildlife, I would to offer the following alternative. I would like to purchase an ownership interest in one of my family member's vessels. Then I would like to assign my Salmon permit to this vessel.

Will the Department of Wildlife allow me to do this? How can I proceed.

Thank you,

Meo Nguyen

**BEFORE THE
FISH AND GAME COMMISSION
STATE OF CALIFORNIA**

In the Matter of the Application of

MEO NGUYEN, Respondent

Case No. 18ALJ04-FGC

OAH No. 2019040883

PROPOSED DECISION

David B. Rosenman, Administrative Law Judge, Office of Administrative Hearings, State of California, heard this matter based on written submissions by the parties.

David Kiene, Senior Staff Counsel, represented the Department of Fish and Wildlife, State of California (Department).

Respondent Meo Nguyen represented himself.

The record was closed and the matter was submitted for decision on October 16, 2019.

FACTUAL FINDINGS

Procedural History and Jurisdictional Matters

1. As more specifically described below, the parties agreed that the matter would proceed on written submissions.

2. On February 6, 2018, Bryan Bishop signed an application to the Department to transfer salmon vessel permit (SVP) number SA0875, held by respondent Meo Nguyen (respondent), from the F/V *Miss Jacinda* to the F/V *Shark Bait* (the application). (The designation "F/V" will not be repeated.) The application was received by the Department on February 12. *Miss Jacinda* was owned by Dan Nguyen, a relative of respondent, and Bishop owns *Shark Bait*. It is noted on the application that the *Miss Jacinda* was accidentally lost, stolen, or destroyed on February 26, 2016.

3. The application, exhibit 5 (A1), identifies respondent as the permitted vessel owner, and Bishop as the replacement vessel owner. Bishop erroneously signed the application in the signature space for the owner of the permitted vessel, but not in the space for the signature of the owner of the replacement vessel. Respondent did not sign the application anywhere as it appears in exhibit 5 (A1). The parties proceeded as if respondent was the applicant. The anomalies regarding signatures are noted, but are not a basis for the outcome in this Proposed Decision.

4. On March 6, 2018, the Department sent respondent a letter notifying him that the Department denied to accept the application. On June 4 and 6, 2018, respondent sent emails requesting an appeal.

5. The parties agreed that the matter could be determined based on written submissions, without an administrative hearing, and that the relevant documents would be received in evidence without objection. For clarity of the record, the following documents relating to these procedural steps are marked for identification:

Exhibit 1: May 22, 2019, joint request for a written appeal.

Exhibit 2: May 30, 2019, additional stipulations.

Exhibit 3: May 31, 2019, Order Granting Stipulated Motion for Issuance of Proposed Decision Based on Written Submissions.

6. The May 31, 2019 Order sets deadlines for the parties' submissions, including any supporting documents and declarations. It was also ordered that the matter would be deemed submitted as of October 16, 2019, for purposes of issuance of a Proposed Decision.

7. The parties' submissions are marked for identification and received in evidence as follows.

Exhibit 4: August 12, 2019, respondent's argument.

Exhibit 5: September 11, 2019, Department's Written Arguments, with attachments, denoted as Exhibits A through G. The Written Arguments are marked for identification only; the attachments are received in evidence. Some of the attachments contain multiple documents, described below.

Exhibit 5 (A): Application; Department dungeness crab fee receipt 3/13/17; U.S. Coast Guard letter November 16, 2017; U.S. Department of Homeland Security

Certificate of Documentation issued November [day illegible] 2015; DMV vessel registration for Bishop [vessel identified by number, not name] issued 8/14/17; Department boat registration for *Shark Bait* and fishing license for Bishop. (These documents appear to have been sent to the Department along with the application.)

Exhibit 5 (B): March 6, 2018, Department Notice of Nonacceptance of Application to Transfer Salmon Vessel Permit, Permit SA0875. (This Notice includes the notation that all of the documents listed in Exhibit 5 (A), which accompanied the application, are being returned.)

Exhibit 5 (C): September 11, 2019, Declaration of Ruth Flores.

Exhibit 5 (D): January 30, 2016, U.S. Coast Guard Bill of Sale of *Miss Jacinda* from respondent to Dan Nguyen.

Exhibit 5 (E): September 11, 2019, Declaration of Paul Roberts.

Exhibit 5 (F): March 17, 2016, U.S. Coast Guard Certificate of Documentation of *Miss Jacinda*, owner Dan Nguyen.

Exhibit 5 (G): June 4 and 6, 2018, respondent's emails re appeal request.

Exhibit 6: Received October 14, 2019 [erroneously dated November 7, 2019], respondent's final rebuttal arguments.

Issues to be Determined

8A. The issues for determination are whether the evidence supports the reasons cited by the Department in its March 6, 2018 Notice of Nonacceptance of

Application, exhibit 5 (B). That Notice includes findings and determinations. The findings, in summary, are that:

1. The transfer application was received on February 12, 2018;
2. Fish and Game Code section 8239.1, subdivision (a), authorizes acceptance of a transfer application if filed within one year after the permitted vessel was lost, stolen, or destroyed, and allows a request for a six-month extension of the time to complete the transfer;
3. There was no record of a transfer application or request for extension within one year of the date the *Miss Jacinda* was lost, stolen, or destroyed;
4. U.S. Coast Guard documents showed that respondent was no longer the owner and, therefore, no longer the permittee, and only the permittee may apply to transfer the SVP; and
5. The Department did not have any record that the *Miss Jacinda* had a valid 2017-2018 SVP.

8B. The March 6, 2018 Notice of Nonacceptance of Application includes a section titled Department's Determination, which states:

Based on the previously stated information, the Department cannot accept your application to transfer the SVP from the F/V *Miss Jacinda* to the F/V *Shark Bait*. FGC Section 7857(j) prohibits the transfer of a commercial fishing permit, such as the SVP, unless such a transfer is expressly authorized in

the FGC. There is no authority allowing a person to sell a vessel, retain the SVP, then later transfer the permit to a vessel owned by a different person, which is what you would like to do. Moreover, you did not submit a transfer application within one year or request an extension of the deadline pursuant to FGC Section 8239.1(a).

The Department also notes that you did not notify the Department of the sale or loss of the F/V *Miss Jacinda* as required by FGC Section 7881(d).

(Exhibit 5 (B).)

Relevant Facts

9. SVP's are annual permits. From September 9, 2011 to March 31, 2017, respondent held SVP number SA0875, for use on the *Miss Jacinda*. The SVP expired on March 31, 2017, and has not been renewed.

10. On January 30, 2016, respondent completed a bill of sale to transfer ownership of the *Miss Jacinda* to Dan Nguyen (Exhibit 5 (D).) The U.S. Coast Guard issued a Certificate of Documentation on March 17, 2016, indicating the owner was Dan Nguyen. (Exhibit 5 (F).) Respondent wrote that he was in the midst of a divorce and, due to financial issues, he was advised to transfer the vessel to a family member. He intended to have the *Miss Jacinda* transferred back when his finances were better.

11. The *Miss Jacinda* sank in the Santa Barbara channel on February 26, 2016. A life was lost. An investigation of the incident by the U.S. Coast Guard commenced. Respondent understands that the investigation was recently completed, but he has not yet received the report.

12. The Department contends that respondent did not report the loss, destruction, or sale of the *Miss Jacinda* within one year, as required by law. In his declaration, Paul Roberts, a Department employee responsible for records relating to SVP's, testified that, after diligent searches: (1) the application is the only application for transfer of SVP number SA0875 from the *Miss Jacinda*; (2) there were no requests filed to extend the time to complete any transfer of SVP number SA0875; (3) he did not locate any reports filed with the U.S. Coast Guard or any other agency or fire department investigating the loss of the *Miss Jacinda*; and (4) the only notification of the sale of the *Miss Jacinda* to Dan Nguyen was dated January 30, 2016, and was received by the Department on June 26, 2017.

13. Respondent contends that, after the loss of the *Miss Jacinda*, he went to the Department's office in Long Beach "right away" and informed them of the sinking of the *Miss Jacinda*. (Exhibit 4.) He was told that the Department required the Coast Guard's report, which respondent has not yet received. Respondent did not provide a date or more specific time period of this contact, or the name of any person to whom he spoke, or any confirmation that the contact took place.

14. Along with the application received February 12, 2018, respondent provided to the Department a letter from the Coast Guard, dated November 16, 2017, indicating that the Coast Guard initiated an investigation into the sinking and loss of

life involving the *Miss Jacinda*. There is no evidence how or when respondent received this letter, or that it was submitted to the Department any time before February 2018.

15A. It was proven by the preponderance of the evidence that respondent did not properly and timely report to the Department either the sale of the *Miss Jacinda* in January 2016, or the loss of the *Miss Jacinda* in February 2016. As respondent was no longer the owner at the time of loss, the Department's contention that respondent failed to report the loss is given little evidentiary weight.

15B. Although the failure to properly and timely report the sale or loss is included in the Department's Determination, it is not among the primary reasons for nonacceptance. The primary reasons for nonacceptance cited by the Department are the failure to file the application in a timely manner, and that respondent was no longer the owner of the *Miss Jacinda* when the application was filed.

16. In the Department's March 6, 2018 Notice of Nonacceptance, it is noted that, according to the Department's records, the *Miss Jacinda* did not have a valid SVP for the period 2017-2018. The Department contends that the SVP cannot be transferred because it was not valid in 2017-2018. (Exhibit 5.) This is not listed as a basis for nonacceptance of the transfer application in the Department's Determination. Respondent offered information about his attempts to pay the permit fee for the period 2017-2018. However, because this was not a basis for nonacceptance, the Department contention and respondent's information are not relevant to the issues.

17. Respondent raises numerous other contentions, and makes other statements, some of which are addressed below. However, none of these other contentions or statements relate to the primary reasons for nonacceptance.

18. Respondent states that Department employee Ruth Flores had him revise the application several times "to get it right." (Exhibit 4.) Ms. Flores disputes this in her declaration. (Exhibit 5 (C).) Respondent replies that he had numerous contacts with Ms. Flores, including receipt of certified letters. (Exhibit 6.) This information is not relevant to the primary reasons for nonacceptance.

19. Respondent complains that he was never advised about any issue concerning his lack of an ownership interest in the *Shark Bait*, and that he would have arranged to get a percentage ownership had he known. This information is not relevant to the primary reasons for nonacceptance.

20. Respondent contends that the Department is not issuing new salmon permits and he is therefore effectively banned from obtaining one. (Exhibit 4.) The Department replies that there is nothing preventing respondent from obtaining another vessel with an existing SVP, or obtaining another vessel and having an SVP transferred to it. (Exhibit 5.) Respondent replies, again, that the Department is not issuing new SVP's and that he does not know anyone selling a vessel with an SVP or willing to transfer their SVP to him. These contentions and arguments are not relevant to the issues.

21. Respondent requests that Dan Nguyen be permitted to renew his SVP. That request is beyond the issues included in these proceedings.

22. In summary, respondent did not file his application to transfer his SVP within one year of the loss of the *Miss Jacinda* in February 2016. Prior to submitting the application in January 2018, respondent did not make a request for an extension of

time to complete the transfer, as is permitted by law. The application was filed beyond the time period allowed by law.

LEGAL CONCLUSIONS

1. The procedure to be followed in this matter is set forth in California Code of Regulations, title 14, section 746, to assure due process to the participants. Under subdivision (c), for an appeal from the denial of an application for transfer of a permit, the president of the Fish and Game Commission may appoint a member of the State Bar of California to be the hearing officer, and several procedures are set forth relating to the hearing. By agreement of the parties, this matter proceeded without a hearing, and on the parties' written submissions. (See Factual Findings 1 - 7.)

2. The burden of proof is on the applicant/respondent to establish he is entitled to the permit transfer for which he applied. (See *Breakzone Billiards v. City of Torrance* (2000) 81 Cal.App.4th 1205; *McCoy v. Board of Retirement* (1986) 183 Cal.App.3d 1044; *Coffin v. Department of Alcoholic Beverage Control* (2006) 139 Cal.App.4th 471, 476.)

3. Under Fish and Game code section 8246.6, a person who has been denied a permit transfer may appeal the denial within 60 days of the decision. Although respondent submitted the appeal beyond 60 days, the Fish and Game Commission has allowed the appeal to proceed. (Exhibit 5, page 3, lines 12 - 14.)

4. The circumstances under which the Fish and Game Commission can reverse the denial of an application to transfer a permit are described in Fish and Game Code section 8246.7, which states:

(a) The commission shall reverse an order of revocation, order the permit renewed, or order the approval of a permit transfer only if it finds one of the following grounds:

(1) The permittee failed to submit an application and pay the fees for renewal on or before April 30 pursuant to Section 8235 and the failure to renew a permit until after the expiration date was due to death, physical illness, mental incapacity, or being called to active military duty, and the person was not reasonably able to have an agent renew the permit.

(2) A lienholder of a permitted vessel, if the vessel is the property of the lienholder as a result of foreclosure, surrender, or litigation, can show loss due to the nonrenewal of a permit by the permittee, and the nonrenewal occurred without the knowledge of the lienholder.

(3) If, in the case of permit revocation because of fraud, evidence is provided to the commission disputing the charges of fraud. If the commission finds there was no fraud after consideration of all of the evidence, the commission

may order the revocation annulled, and, if the permit expiration date has passed during the pendency of the hearing on the appeal, the commission may order the department to renew the permit upon payment of the fees.

(4) The denial of the permit transfer was arbitrary or capricious.

(5) The denial of the permit transfer was pursuant to subdivision (g) or (h) of Section 8239 and the applicant can show that the 18-month requirement cannot be met due to death, physical illness, mental incapacity, or being called to active military duty.

(b) Each appeal shall be heard and considered separately on its own merits.

5. Fish and Game Code section 7881, subdivision (d), provides that the owner of a registered vessel that is lost or destroyed shall immediately report the loss or destruction of the vessel to the Department. Respondent was not the owner of the *Miss Jacinda* at the time of its loss.

6. Under Fish and Game Code section 8231, subdivision (d), a commercial SVP can be issued annually.

7. Under Fish and Game Code section 7857, subdivision (j): "A commercial fishing license, permit, or other entitlement is not transferable unless otherwise expressly specified in this code."

8. The transfer of an SVP from a lost vessel to a replacement vessel is governed by Fish and Game Code section 8239, subdivisions (a) and (b), which state:

(a) Unless otherwise prohibited, the department shall accept a transfer application within one year after the date that a permitted vessel was lost, stolen, or destroyed, notwithstanding any inability to physically examine the permitted vessel to determine its salmon fishing potential. Only the permittee at the time of the loss, theft, or destruction of the vessel may apply for the transfer of the vessel permit. Proof that a vessel is lost, stolen, or destroyed shall be in the form of a copy of the report filed with the United States Coast Guard or any other law enforcement agency or fire department investigating the loss.

(b)(1) The owner, or the owner's agent, may request an extension of the time to complete a transfer under subdivision (a) if the application for extension is submitted before the end of the time to submit an application under subdivision (a), or before the end of any previous extensions granted under this subdivision, whichever date is later.

(b)(2) The department, after consultation with the review board and for good cause shown, including, but not limited to, inability to find a replacement vessel or pending

litigation, may grant an extension of the time to complete a transfer under subdivision (a) for a period of six months.

The department may grant further extensions under this subdivision, not to exceed a total time period of five years after the date the permitted vessel was lost, stolen, or destroyed if the permit fees are paid annually as required in paragraph (2) of subdivision (b) of Section 8239 and subdivision (c) of Section 8240.

9. Fish and Game Code section 8239.1, subdivision (a), specifies that the applicant must provide proof that the vessel was lost, stolen, or destroyed by providing "a copy of the report filed with the United States Coast Guard or any other law enforcement agency or fire department investigating the loss." Respondent submitted evidence that the Coast Guard was investigating and recently prepared a report. Respondent noted that he could not supply the required proof of loss until the investigation report was complete. The statutory requirement, though, is not for respondent to provide a report prepared by the Coast Guard but, rather, a report filed with the Coast Guard or other listed agency. There is evidence that respondent did not provide such information to the Department.

10. Under Fish and Game Code section 8241, subdivision (c), the applicant for transfer of a permit to a replacement vessel must own the replacement vessel.

11. At the time the application was filed, February 12, 2018, respondent was no longer the owner of the *Miss Jacinda*, having transferred ownership to Dan Nguyen on January 26, 2018. Dan Nguyen, and not respondent, became the

permittee. As respondent was no longer the permittee, he could not apply for transfer of the permit. Accordingly, the Department correctly declined to grant the application, pursuant to Fish and Game Code section 8239.1.)See Factual Findings 9 and 10.)

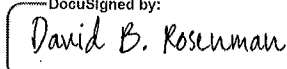
12. Respondent failed to apply to transfer the SVP within one year after the *Miss Jacinda* was lost, and did not request an extension of time for the filing of the application. Accordingly, the Department correctly declined to grant the application, pursuant to Fish and Game Code section 8239.1. (See Factual Findings 7 – 11.)

13. The Department's nonacceptance of the transfer application was not arbitrary or capricious.

ORDER

The application of respondent Meo Nguyen for transfer of his salmon vessel permit, SVP number SA0875, from the F/V *Miss Jacinda* to the F/V *Shark Bait*, is denied.

DATE: October 29, 2019

DocuSigned by:

DAVID B. ROSENMAN

Administrative Law Judge

Office of Administrative Hearings