

California Fish and Game Commission Supplemental Meeting Materials



April 17-18, 2024
San Jose

California Fish and Game Commission April 17-18, 2024 Supplemental Handouts Summary

Comments received from 5:01 p.m. on April 4, 2024 through 10:00 a.m. on April 15, 2024

Unless otherwise noted, "Commission" and "FGC" refer to the California Fish and Game Commission, "Department" and "DFW" refer to the California Department of Fish and Wildlife, and "CA" refers to California.

Agenda Item	Title	Date Rec'd	Entity/Individual	Description	Number Rec'd
2A	Commission Executive Director's Report	4/17/2024	California Fish and Game Commission staff	Staff summary for Item 2A. Commission Executive Director's Report.	1
6	Commission Policies	4/17/2024	California Fish and Game Commission staff	Staff summary for Item 6. Commission Policies.	1
7	Regulation change petitions (marine, wildlife, and inland fisheries)	4/9/2024	Adrian Granda	City and mayor of San Diego support Petition 2023-10 allowing anglers to donate recreational catch	1
7	Regulation change petitions (marine, wildlife, and inland fisheries)	4/9/2024	Ethan Estess	Transmits a link to a new study published in <i>Journal of Phycology</i> regarding the effectiveness and limits of marine protected reas.	1
7	Regulation change petitions (marine, wildlife, and inland fisheries)	4/10/2024	Aubrie Fowler	PowerPoint slide to accompany comments on Marine Protected Areas.	1
10	General public comment	4/5/2024	Inyo County Fish and Wildlife Commission	Calls on the Department to swiftly assess and implement methods of managing mountain lions in the eastern Sierras (particularly through depredation permits), stating that the lions are detrimental to various populations of game species in the area and a threat to the endangered Sierra Nevada bighorn sheep.	1
10	General public comment	4/5-4/8/2024	Jonathan Woodcock and John Becker	Photo of abalone survey and YouTube video compilation of three dives showcasing current abalone population.	2
10	General public comment	4/5-11/2024	Tom Hafer, President, Morro Bay Commercial Fisherman's Organization	Provides article presenting evidence suggesting high resolution geophysical surverys cause negative impact on zooplankton and fish and transmits a link to a documentary criticizing contemporary climate science as "climate alarmism."	4
10	General public comment	4/6/2024	Andrea Schreier et al., University of California, Davis	Scientists from UC Davis urge California to protect white sturgeon in the San Francisco Bay Delta. They state that the population is in decline from overharvest, habitat degradation, and harmful algal blooms. Additionally they state sturgeon can survive catch-and-release fishing, and a regulated fishery can coexist with conservation efforts.	1
10	General public comment	4/8/2024	Richard Oswitt	Email addressed to the Alpine County Fish and Game Commission supporting winter catch-and-release fishing on Carson River	1
10	General public comment	4/8-13/2024	Various	Form letter opposed to the Catalina Island Conservancy's plan to eradicate mule deer on the island. Asserts that removal of the deer and not other non-native species to the island such as bison is hypocritical and that state approval for the plan could not possibly be based on legitimate science. Calls for prohibition of the conservancy's proposal, revocation of the conservancy's use permit, and the elevation of a new operator to oversee the island.	754
10	General public comment	4/11/2024	Keiko Mertz, Friends of the River	Friends of the River writes in support of listing white sturgeon under the California Endangered Species Act, noting that the populations are in serious decline due to overharvest, harmful algal blooms, and changes to habitat.	1
10	General public comment	4/14/2024	Phoebe Lenhart	Expresses support for the Pacific Fishery Management Council's recommendation to close the salmon fishery. Criticizes Department hatchery operations and states that the loss of hundreds of thousands of salmon have far reaching effects, particularly on the food supply for southern resident orcas.	1
10	General public comment	4/15/2024	James Stone, Nor-Cal Guides and Sportsmen's Association	Requests that the Commission utilize California Fish and Game Code Section 2084 for recreational fishing while white sturgeon is listed as a candidate during the Department's review.	1

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10	General public comment	4/15/2024	Kenyon Hensel	Requests that the Department issue a non-transferrable deeper near-shore permit to him and his wife to fish within MPAs in the Crescent City area.	1
10	General public comment	04/15/2024	D. Newman	Criticizes the Catalina Island Conservancy's plans to eradicate mule deer on the island as inhumane and calls for other management options to be explored.	1
15	Greater sage grouse	4/5/2024	Inyo County Fish and Wildlife Commission	Supports the Department's management of sage grouse and commends past and ongoing efforts to ensure the health and survival of the species. Does not support listing as "endangered" under the California Endangered Species Act on the grounds that populations are successful and CESA listing may hamper the current effective management activities in place. Transmits California-Nevada bi-state report on sage grouse.	1
20	Waterfowl	4/12/2024	California Department of Fish and Wildlife	The Department's final environmental document for migratory game bird hunting regulation changes.	1
20	Waterfowl	4/10/2024	Ryan Forsyth et al.	Letters of opposition for proposed changes to the junior hunting days. The letters state that a minimum week of rest between balance of state (BOS) season and the junior hunt is needed for a hunt to be successful as end of season birds are tough to hunt given the season long pressure. The letters request a modification to either move up the BOS to October 19-January 26th or allow junior hunting on veterans weekend. Sample emails are provided.	15
21	Mammal hunting	4/12/2024	Estelle Clifton, Mendocino County Farm Bureau (MCFB)	MCFB shares concerns about the growth of Tule Elk populations in Mendocino County and the impacts, including competition for livestock foraging, impacts to crops, destruction of livestock and fencing, costs of crop loss and infrastructure damage, and lack of compensation to property owners. MCFB recommends an increase in bull tags for Mendocino County.	1
22	Southern California steelhead	4/8/2024	Patricia Wood, Los Angeles County Public Works	Los Angeles County Public Works re-submits comments previously submitted in 2022, when the potential listing of southern California steelhead was first being considered. Public works requested that, if southern California steelhead is declared a candidate species under CESA, Commission and Department staff work with the organization to develop a regulation under Section 2084 to allow work on continued projects and improvement of waterways.	1
22	Southern California steelhead	4/9/2024	Ileene Anderson, Center for Biological Diversity	The Center for Biological Diversity supports listing southern California steelhead rainbow trout as endangered due to sharp population decline, stating that endangered species designation is critical to stop the decline and help the population recover.	1
22	Southern California steelhead	4/10/2024	Russell Marlow, CalTrout	Petitioner PowerPoint presentation for CESA listing of southern California steelhead.	1
22	Southern California steelhead	4/11/2024	Matt Carpenter, Vice President of Environmental Resources, Fivepoint	Letter on behalf of Newhall Land and Farming Company transmitting studies to assert that no steelhead occupy the upper Santa Clara river, upstream of Piru dry gap. Requests that the Department revise its status review to not include that portion of the river in its distribution range of southern California steelhead.	1

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22	Southern California Steelhead	4/12/2024	Nick Cammarota, California Building Industry Association (CBIA)	CBIA questions the accuracy of maps used in the California Department of Fish and Wildlife's report on southern California steelhead populations. CBIA states that the Department's maps contain errors, such as misidentifying tributaries, raising concerns about how the Department defines "current" and "historical" steelhead populations. CBIA suggests using U.S. Fish and Wildlife Service data for better consistency. Uncertainties in the data make it difficult to assess steelhead population trends.	1
22	Southern California Steelhead	4/13/2024	Kam Bezdek, CalTrout	California Trout forwards two legislative letters of support to list southern California steelhead from Assemblyman Steve Bennet and Senator John Laird.	1
22, 23	Southern California steelhead and Mohave Desert tortoise	4/11/2024	Steve Veres, Santa Monica Mountains Conserancy	The Santa Monica Mountains Conservancy supports listing Mojave Desert tortoise and southern California steelhead as endangered under the California Endangered Species Act. The conservancy's territory includes habitat for both species, and both are facing threats from development and climate change. The conservancy urges the Commission to expedite the listing to aid in their recovery. Attached to their letter is maps of their territory.	1
22, 23	Southern California steelhead and Mohave Desert tortoise	4/12/2024	Andre Sanchez, CalWild	CalWild supports listing southern California steelhead (SCS) and Mojave Desert tortoise as endangered under the California Endangered Species Act stating that SCS listing is crucial for ongoing and future restoration efforts in southern California streams and Mojave Desert Tortoise faces increasing threats and needs stricter protection despite existing federal and state listings.	1
23	Mohave desert tortoise	4/9/2024	Ileene Anderson, Center for Biological Diversity	Letter of support for listing Mohave Desert tortoise as endangered under the California Endangered Species Act. The center hopes that the new listing status will lead to stronger conservation and help stop ongoing declines and stabilize the population.	1
23	Mohave desert tortoise	4/12/2024	Pamela Flick, Defenders of Wildlife, Michael Tuma, Desert Tortoise Council, and Roger Dale, Desert Tortoise Preserve Committee	Presentation from petitioners of the Mohave Desert tortoise petition.	1
24	Ballona Wetlands Ecological Reserve	4/12/2024	Walter Lamb, Ballona Wetlands Land Trust (BWLTT)	Letter from BWLTT expressing frustration with Department memorandum and Commission's recommendations regarding land use being compatible with the purpose of an ecological reserve.	1
24	Ballona Wetlands Ecological Reserve	4/12/2024	Walter Lamb, Ballona Wetlands Land Trust (BWLTT)	PowerPoint presentation on Ballona Wetlands use compatibility determination.	1
24	Ballona Wetlands Ecological Reserve	4/13/2024	Patricia McPherson, Grassroots Coalition	Asserts that the environmental impact report (EIR) underlying the staff recommendation for agenda Item 24 has been decertified and that a new EIR must be prepared.	1
24	Ballona Wetlands Ecological Reserve	4/13/2024	Patricia McPherson, Grassroots Coalition	Supports the Ballona Wetlands Land Trust's comments on agenda Item 24 and opposes the staff recommendation to determine that the visitor uses associated with the parking lots in Area A and the baseball fields in Area C are compatible with the purposes of Ballona Wetlands Ecological Reserve.	1

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24	Ballona Wetlands Ecological Reserve	4/14/2024	Patricia McPherson, Grassroots Coalition	Transmits a link to a 2021 article about the Ballona wetlands and its management by the Department, written by the Los Angeles Audobon Society.	1
24	Ballona Wetlands Ecological Reserve	4/15/2024	Kathy Knight	Asserts that the environmental impact report (EIR) underlying the staff recommendation for agenda Item 24 has been decertified and that a new EIR must be prepared.	1
27A	Commission Administrative Items - Legislation	4/18/2024	California Fish and Game Commission staff	Staff summary for Item 27A. Administrative Items - Legislation	1
27A	Commission Administrative Items - Legislation	4/9/2024	Michael Wagner, President, Andria's Seafood Restaurant and Market	Letter to Assembly Member Bennett asking for reconsideration of support on Assembly Bill 2220, stating it will negatively impact fish distributors and seafood restaurants and markets by disallowing any bycatch for market sale, instead making bycatch a crime.	1
27A	Commission Administrative Items - Legislation	4/9/2024	David Goldenberg, Executive Director, California Sea Urchin Commission	The California Sea Urchin Commission (CSUC) opposes Assembly Bill 2220, which CSUC states will subject all commercial fisherman to third-party observers onboard fishing vessels while conducting harvesting.	1

Staff Summary for April 17-18, 2024

2A. Commission Executive Director's Report**Today's Item**Information Action

Receive updates from the executive director and staff on items of note since the previous Commission meeting (February 14-15, 2024).

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

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

Today's report covers five topics:

- [Justice, equity, diversity and inclusion \(JEDI\) awareness and planning](#)
- [Service-based budgeting](#)
- [Staffing](#)
- [Bagley-Keene Open Meeting Act](#)
- [California Environmental Quality Act](#)

JEDI Awareness and Planning

As part of developing the Commission's JEDI plan, staff has been including JEDI activities and information in staff and Commission meetings. Today, there are four highlights: The California Natural Resources Agency's *Equity Year in Review 2024*, a Commission stakeholder engagement survey, Earth Day, and National Arab American Heritage Month.

Equity Year in Review 2024

The California Natural Resources Agency released its first-ever "Equity Year in Review." This report highlights the efforts of its departments, boards and commissions to advance equity, environmental justice, and tribal affairs while working to protect and conserve California's natural resources, and to expand access to the outdoors and nature for all Californians. For Commission highlights, see page 41 of Exhibit 1.

JEDI Survey – April 2024

The Commission is developing a stakeholder engagement plan as part of its broader effort to develop a JEDI plan. Public input is essential in this process, and to gather valuable insights, KH Consulting Group (KH) – the independent, third-party consultant retained by the Commission to assist with its JEDI planning efforts– will distribute a survey in the coming weeks. The survey aims to better understand the perspectives and experiences of current and potential stakeholders and partners, and identify areas where the Commission can strengthen its

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stakeholder engagement and commitment to JEDI principles. All responses to the survey will be kept confidential, and KH will only share tabulated results with the Commission.

Earth Day – April 22

The first Earth Day was celebrated in 1970 and is often cited as the birth of the modern environmental movement. Today, Earth Day has evolved into the largest global civic event, where billions of people in nearly 200 countries take part in planting trees and repairing urban tree canopies, collecting trash along roadways and waterways, talking with legislators and other decision-makers, teaching others about how we can reduce our environmental impacts, connecting farmers to increase sustainable agriculture practices, and much, much more.

The global theme for Earth Day 2024 is *Planet vs. Plastics*. EarthDay.org has created a 60x40 initiative and, by creating public awareness of the damage done by plastic to human, animal and all biodiversity's health, is seeking a 60% reduction in the production of all plastics by 2040. For example, EarthDay.org indicates that more than 500 billion plastic bags—one million bags per minute—were produced worldwide last year. Many plastic bags have a working life of a few minutes, yet take centuries to break down. Even after plastics disintegrate, they remain as microplastics, minute particles permeating every niche of life on the planet. In the United States, nearly 95% of all plastics will not be recycled, at all.

Earth Day is intended to promote protecting the environment and advocate for sustainable living. The day serves as an important reminder of the importance of environmental conservation and sustainability, encouraging us to come together and take action for a healthier planet and brighter future. Let's celebrate and take action together!

Arab American Heritage Month



President Biden first declared the month of April as National Arab American Heritage Month in 2021 to recognize Arab Americans that exemplify “so much of what our country stands for: hard work, resilience, compassion, and generosity.” In March 2024, President Biden issued a proclamation to honor the “rich heritage, history, and hopes of the more than 3.5 million Arab Americans across our country who have helped write the American story and move our Nation ever forward embodying the truth that diversity has been and always will be our country’s greatest strength.”

While Arab American Heritage Month is a relatively young celebration, it is significant and celebrates the accomplishments of Arab Americans, from scientists and engineers to artists and entrepreneurs. In 2022, Congress, the U.S. Department of State, and 45 state governors (including Governor Newsom), issued proclamations commemorating the initiative. Several states have passed permanent legislation to designate the month of April as Arab American Heritage Month. California’s 2022 resolution is at [Assembly Concurrent Resolution 185, Arab American Heritage Month](#).

In March, ahead of April’s Arab American Heritage Month, Governor Newsom sent an open letter to our Muslim, Palestinian American, and Arab American neighbors and friends who contribute so much to our state’s sense of faith and belonging, stating that California is a better place because they are here. He acknowledged the ways their communities are suffering,

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bearing the weight of lost family and friends abroad while facing a rise in discrimination and hate here at home. He closed by saying, “To every Muslim, Palestinian American, and Arab American who calls California home: please know that you belong here.”

Service Based Budgeting

In 2019, the Department launched a Service Based Budgeting (SBB) Initiative to identify tasks needed to accomplish its statutory responsibilities and fulfill its mission (“mission-level” data); the data collected would, in part, help inform future budget discussions and requests. As a sister agency whose budget is a line item within the Department’s, the Commission was included in the 2019 exercise. Initial efforts concentrated on identifying three key elements: all tasks necessary to accomplish the Commission’s mission, the appropriate types of staff skills (“classifications”) for each task, and the estimated time commitment from staff to complete each task. The effort resulted in a comprehensive break-down categorizing hundreds of tasks, their corresponding personnel classifications, and the number of staff-dedicated hours needed for completion.

Since completing the mission-level assessment, SBB has annually required a complete accounting of staff time allocated to each of the tasks. As staff engaged in and analyzed each annual reporting, it became clear that the list of tasks specified in the mission level information was incomplete and, in at least one case, a full personnel year was being incorrectly attributed to annual Commission work.

This spring marked five years since SBB commenced, and has offered the first opportunity to analyze the outcome of efforts, reevaluate included tasks, update the mission-level information, and correct inaccuracies or incomplete information. Staff has been engaging with the Department in the intensive mission level data “refresh” since early March as subject matter experts, with the goal of providing an accurate portrayal of the task-based staffing and funding needs for the Commission. The project is an important opportunity to identify gaps at the Commission between the resources necessary to meet its statutory responsibilities and fulfill its mission, as opposed to the reality of the resources currently available.

Staffing

For each Commission meeting, staff provides an update on its workload and activities of the previous two months; a few highlights are provided here, with additional details in Exhibit 2.

Regulatory Analyst: In February, *Regulatory Analyst Maurene Trotter*, also our records management expert, accepted a promotion to a managerial position at the California Department of General Services. Her absence has been felt strongly, though staff is excited for her significant promotion and wish her the very best. Recruitment efforts for her replacement began immediately; the last date to apply for the position, either as a staff services analyst or associate governmental program analyst (either classification can be used) is April 29.

Deputy Executive Director: After a robust recruitment process, staff is pleased to announce that *Commission Program Manager David Thesell* successfully competed for and was offered the deputy executive director position and began in his new role earlier this month. David joined the staff in 2017 as part of the executive leadership team, overseeing general administrative functions and managing the Commission’s statewide regulatory program. He

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brings a variety of experience and a wealth of state administrative knowledge, as well as a proven dedication to the Commission mission and vision. Recruitment to fill the vacant regulatory program manager position will begin soon.

Staff Vacancy Rate: Overall, the Commission has experienced a 25% staff vacancy rate since the beginning of January — including the project lead for policy reviews. Recruitment and onboarding efforts are underway to fill the gap. While one position was filled in February (executive analyst), three vacancies remain. One recruitment is underway, and two more will begin shortly. These vacancies have resulted in a heavier workload for the other staff, who are diligently juggling additional tasks from vacant positions on top of their own responsibilities. The pressure is compounded by the Commission’s deadline-driven environment, a larger than normal assemblage of rulemakings and projects, and the need for cross-training backups for critical tasks. As a result, some tasks are inevitably delayed until vacant positions are filled and new staff onboarded.

Bagley-Keene Open Meeting Act

The Bagley-Keene Open Meeting Act requires, with specified exceptions, that all meetings of a state body — such as the Commission — be open and public, and all persons be permitted to attend any meeting of a state body. The act includes provisions for holding different types of meetings, each subject to specified requirements. Through most of the COVID-19 pandemic, a number of exceptions were allowed via executive order and/or temporary statutory changes; all the exceptions to the act have expired, the most recent on December 31, 2023.

Changes to the Bagley-Keene Open Meeting Act were enacted through Senate Bill 544 (Statutes of 2023, Chapter 216) to establish an alternative set of provisions under which a state body may hold a meeting by teleconference, including when a member may participate remotely; most of the provisions became effective January 1, 2024 and will be repealed on January 1, 2026 unless further legislative action is taken. However, there are significant limitations to when the provisions may be used, so are generally not expected to have an impact on Commission or committee meetings.

The act contains numerous other provisions; see Exhibit 3 for California Government Code sections 11120-11132 for meeting requirements under the Bagley-Keene Open Meeting Act.

California Environmental Quality Act (CEQA) Actions

The Commission has delegated authority to its executive director to take actions necessary to comply with CEQA, guidelines generally implementing CEQA, and the Commission’s certified regulatory program approved under CEQA, including conducting — or causing to be conducted — initial studies and deciding whether to prepare draft environmental impact reports, negative declarations, mitigated negative declarations, or determinations of exemption. Since the February 2024 Commission meeting, your executive director determined multiple regulatory actions were exempt from CEQA, including:

- Department lands
- Recreational California halibut
- Recreational groundfish

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- Klamath River Basin dam removal sport fish
- Recreational sea urchin limit exemption
- Use of hoop nets for Dungeness crab fishing under California's Experimental Fishing Permit Program

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits

1. [California Natural Resources Agency's Equity Year in Review 2024](#)
2. [Staff Time Allocation and Activities, dated April 12, 2024](#)
3. [California Government Code Article 9, sections 11120-11132](#)

Motion (N/A)

EQUITY

YEAR IN REVIEW 2023



Advancing Equity, Environmental Justice, and Tribal Affairs in California's Natural Resources



CALIFORNIA
NATURAL
RESOURCES
AGENCY



Photo by Timothy Wong, from the California Coastal Commission's annual Ocean & Coastal Amateur Photography Contest

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MESSAGE FROM WADE

Welcome to our first annual “Equity Year in Review,” which highlights the critical work of our departments, boards and commissions to improve our organizations and better serve all Californians.

Governor Newsom has established **California for All** as a core pillar of state government. This means creating opportunities for *all* Californians to live healthy, safe, and fulfilling lives. To achieve this vision, he has directed state agencies to take strong, durable actions to embed equity into our mission, investments, policies, and programs.

At the Natural Resources Agency, we are responsible for safeguarding precious resources, including water, land, wildlife, parks, energy and our coast and ocean. We know that many Californians lack equal access to these resources and their benefits, and that many residents suffer disproportionate environmental burdens. We have a responsibility to confront these realities and reshape the work we do to better serve these Californians.

To do so, we are listening and learning from tribal and community partners to chart our path forward. For me personally, the best part of my job has been getting out of Sacramento to visit people across the state, from the Imperial Valley to the Klamath Basin. I’ve learned more from these visits than I could imagine, both about the daily struggles Californians face to the tremendous opportunities we have to help make things better.

Now across our agency, we are working to expand access to the outdoors and nature for all Californians, provide funding to communities and groups excluded in the past, build resilience in communities most vulnerable to climate change, broaden meaningful participation in government decision making, and much more.

We’re making real progress across our agency, as I hope you will see in this Year In Review. I’m thankful to leaders across the agency for making this work a clear priority.

While we are proud of our progress, we know that much more work lies ahead. And we are more committed than ever to build a California for All in true partnership with tribes and communities. The time is now and there’s no time to waste.

Onward,



Wade Crowfoot

California Natural Resources Secretary



ENVIRONMENTAL JUSTICE AND EQUITY LEADS ACROSS CNRA

Noaki Schwartz

Deputy Secretary for Equity and Environmental Justice, California Natural Resources Agency

Julie Alvis

Deputy Executive Officer, Sierra Nevada Conservancy

Erin Aquino-Carhart

Senior Environmental Scientist, Wildlife Conservation Board

Phoenix Armenta

Senior Manager for Climate Equity and Community Engagement, San Francisco Bay Conservation and Development Commission

Mona Badie

Public Advisor, California Energy Commission

Kathryn Baines

Chief of Administration, Central Valley Flood Protection Board

Rachel Ballanti

Deputy Executive Director, California Fish and Game Commission

Karen Buhr

*Deputy Executive Officer, Delta Conservancy
Interim Executive Officer, San Joaquin River Conservancy*

Sandy Cooney

*Chief, Communications and External Affairs,
Office of Energy Infrastructure Safety (Energy Safety)*

Nicole Cropper,

Deputy Director of Equity, Environmental Justice, and Tribal Affairs, California Department of Fish and Wildlife

Jamie Fong

*Outreach and Engagement Analyst,
California Department of Conservation*

Salian Garcia

Budgets & Administration Officer, San Gabriel & Lower Los Angeles Rivers and Mountains Conservancy

Dustin Harrison

*Senior Environmental Scientist (Specialist),
San Diego River Conservancy*

Raymond C. Hitchcock

Executive Secretary, Native American Heritage Commission

Monique Hudson

SR Vice President, Government Affairs & Chief Diversity Officer, California Science Center Foundation

Alfred Konuwa

Equal Employment Officer and Training Program Manager, California Science Center

Emely Lopez

Tribal and Equity Liaison, State Coastal Conservancy

Sara Lopez

Staff Attorney, Tahoe Conservancy

Liz McGuirk

*Chief Deputy Director,
California Department of Parks and Recreation*

David McNeill

*Executive Officer,
Baldwin Hills and Urban Watersheds Conservancy*

Kristina Ordanza

Environmental Justice, Equity, Diversity & Inclusion Coordinator, California Conservation Corps

Serena Ortega

Deputy Director, Equal Employment/Diversity, Equity, Inclusion, California Department of Forestry and Fire Protection (CAL FIRE)

Javier Padilla Reyes

*Environmental Justice Manager,
California Coastal Commission*

Yessica Ramirez

*Environmental Justice and Tribal Liaison,
California State Lands Commission*

Shana Rapoport

*Environmental Program Manager,
Colorado River Board of California*

Maria Rodriguez

*Climate and Environmental Justice Program Manager,
Ocean Protection Council*

Diana Rosas

Associate Director, Coachella Valley Mountains Conservancy

Sarah Rubin

*Outreach and Engagement Advisor,
California Department of Conservation*

Bianca Sievers

*Deputy Director of Special Initiatives,
Department of Water Resources*

Rorie Skei

Chief Deputy Director, Santa Monica Mountains Conservancy

Ryan Stanbra

Chief Deputy Executive Officer, Delta Stewardship Council

Randella Tyler

*DEI/EEO Specialist,
California Department of Conservation*

Debra Waltman

Assistant Executive Director, Delta Protection Commission

Joe Yun

Executive Officer, California Water Commission

CELEBRATING CULTURAL DIVERSITY

For more than a year, staff from departments across CNRA have come together to organize public panel discussions, hikes, social events and other activities that celebrate and uplift our diversity. In 2023 we organized a staff safe space discussion for Black History Month, toured Angel Island for Asian American & Pacific Islander Month, walked in the Sacramento Pride march with our CalEPA colleagues, organized a record 10 events for Latino Heritage Month, held a public film screening for Native American History Month and so much more. These months have filled us with cultural pride, helped us learn so we can better support colleagues, and continue to be an important way for all us to contribute to a more inclusive California.



ASIAN AMERICAN & PACIFIC ISLANDER HERITAGE MONTH

JOIN US FOR THESE SPECIAL VIRTUAL EVENTS



CAREER PATHWAYS FOR AAPI IN STATE SERVICE

WED, MAY 3, 2023, NOON-1:30 P.M.
VIRTUAL ON ZOOM

There are meaningful careers across all the departments, conservancies and boards that make up the Natural Resources Agency. Hear from Asian American and Pacific Islander employees on how they came to work for the state and advice they have on careers in public service.

REGISTER VIA ZOOM



REVISITING THE PAST TO REIMAGINE THE FUTURE

THU, MAY 11, 2023, 1-2:30 P.M.
VIRTUAL ON ZOOM

In this panel discussion, Asian American and Pacific Islander (AAPI) leaders talk about the significant historical events that have shaped the Asian American experience in California. The panelists will also discuss their plans, hopes and calls to action for the future.

REGISTER VIA ZOOM



SECRETARY SPEAKER SERIES ON AAPI LEADERS AND THE FUTURE OF NATURAL RESOURCE STEWARDS

THU, MAY 25, 2023, NOON-1 P.M.
VIRTUAL ON ZOOM

Join CNRA Secretary Wade Crowfoot for a special Secretary Speaker Series event. This panel will feature AAPI environmental leaders from across the state, who will share their perspectives and priorities on the natural resource and conservation movement.

REGISTER VIA ZOOM



The California Natural Resources Agency (CNRA) and its supporting departments invite you to celebrate Asian American and Pacific Islander Heritage Month, honoring Asian leaders in the environmental field who work to protect the environment for current and future generations.



resources.ca.gov/AAPIHeritageMonth

CELEBRATING CULTURAL DIVERSITY

For each cultural heritage month, a committee from across CNRA collaborated to create a monthlong series of meaningful events for staff and members of the public, like this for Asian American & Pacific Islander Month.





The California Natural Resources Agency (CNRA) oversees and supports more than 26 distinct departments, conservancies, and commissions. Our Agency executive team leads efforts to steward California’s natural environment and to advance Governor Newsom’s key priorities. More than 21,000 Californians work within our Agency all across the state to meet our mission “to restore, protect and manage the state’s natural, historical and cultural resources for current and future generations using creative approaches and solutions based on science, collaboration, and respect for all the communities and interests involved.”

2023 HIGHLIGHTS

Key CNRA positions overseeing equity and environmental justice and tribal affairs were elevated to the Deputy Secretary level in 2023, furthering the Agency’s commitment to these issues. Elevating these positions will ensure that these key issues are considered at the highest levels of the Agency.

CNRA released a draft strategy for its Outdoors for All initiative. Championed by Governor Newsom and First Partner Jennifer Siebel Newsom, Outdoors for All is expanding parks and outdoor spaces in communities that need them most, supporting programs to connect people who lack access, fostering a sense of belonging for all Californians in the outdoors and much more. The initiative follows a historic \$1 billion plus investment by the Newsom Administration to expand access, creating a once-in-a-generation opportunity.

CNRA developed the first ever \$100 million Tribal Nature-Based Solutions grant program to support tribally-led initiatives in the nature-based solutions space, including ancestral land return. This grant program is part of the Agency’s commitment to strengthening partnerships with California Native American tribes in all of our policies and programs and specifically in the implementation of the Pathways to 30x30 Strategy and the Natural and Working Lands Climate Smart Strategy.

As part of CNRA’s commitment to embed equity in all we do, we updated employee duty statements that outline key responsibilities for every position across our Agency team. Each duty statement now includes language devoting time to tasks, trainings and activities that support diversity, equity and inclusion. There is also language that “employees are expected to provide all members of the public equitable services and treatment, collaborate with underserved communities and tribal governments, and work toward improving outcomes for all Californians.” CNRA also strongly encouraged our departments to do the same to help ensure that progress will continue in these critical areas.

In partnership with the State Coastal Conservancy, CNRA had the honor to award funding to support the Hoopa Valley Tribe’s ancestral land return and acquisition of over 10,000 acres of forest lands. These lands will count towards our 30x30 goals and ensure the original stewards of the land have ownership of their important lands and resources.

CNRA hired four new staff to support the Tribal Affairs Unit. These new staff are administering the Tribal Nature-Based Solutions grant program and managing the California Advisor Committee on Geographic Names and its implementation of AB 2022 to replace all “sq_” offensive names on features and places throughout California.

Key California Natural Resource Agency positions overseeing equity and environmental justice and tribal affairs were elevated to the Deputy Secretary level in 2023, furthering the Agency’s commitment to these issues.

2024 AND BEYOND

CNRA will host the Justice Rising Summit, the Agency’s first environmental justice and equity conference in 2024. The in-person event in Sacramento will include environmental justice advocates, tribal members, CNRA leadership, department directors and their EJ and equity leads, as well as other experts in the field. The day will include featured speakers, panel discussions and listening sessions, which will inform and update CNRA’s environmental justice and equity policy.

In 2024, CNRA released a report on opportunities for its Salton Sea Management Program to address community needs, as well as a commissioned report from Better World Group Advisors that outlines a broad assessment of key community needs across the Salton Sea region ranging from more tribal engagement to increased public access. Over the past decade, community members near the Salton Sea have asked for multi-benefit restoration projects that provide community amenities and benefits. These benefits are critical in a region with historic underinvestment in infrastructure and services and where residents experience some of the highest rates of public health and environmental justice issues in California.

In 2024, CNRA will begin the process of updating its 2003 environmental justice policy. The new EJ and equity policy will be developed with the input of environmental justice advocates, tribal members and other interested members of the public. The document will cover a range of topics that CNRA departments oversee including public access, climate change, conservation and more.



CCC.CA.GOV



Since it was founded in 1976, the California Conservation Corps (CCC) has transformed the lives of thousands of young adults. Its mission is protecting and enhancing California’s natural resources and communities while empowering and developing young adults through hard work and education.

2023 HIGHLIGHTS

In 2023, nearly 2,000 young adults between the ages of 18-25 years old and some veterans through age 29 received paid job training through the CCC along with career development, educational scholarships, and housing. Transition navigators, based at centers across the state, advised Corpsmembers individually on their career and educational pathways in natural resources and conservation, including in firefighting, forestry, culinary arts, energy, apprenticeships, and public service careers.

across the state. This year, 10 crews assisted with the restoration of buildings at Colonel Allensworth State Historic Park in the community of Allensworth, the state’s first African American founded, financed, and governed community. CCC crews also assisted with statewide and out-of-state emergencies relating to floods, wildland fires, and agricultural emergencies.

The CCC created and filled a new executive role dedicated to creating career pathways from the CCC into state service opportunities at the California Natural Resources Agency (CNRA) departments, commissions, and conservancies. This effort will assist CNRA in achieving a more diverse government workforce that is better able to serve the state of California.

The CCC established the Tribal Youth Nature-Based Solutions Conservation Corps grant program or Tribal Corps in collaboration with CNRA. Assembly Bill 179 allocated \$10 million in grant funding exclusively for California Native American tribes to establish tribal youth conservation corps programs. CCC leaders reached out to tribal leaders and hosted consultations in development of grant guidelines, offered technical assistance workshops, and facilitated the review of grant proposals. The CCC awarded grant awards to the Washoe Tribe of Nevada and California, Tuolumne Band of Me-Wuk Indians, Fernandoño Tataviam Band of Mission Indians, Bishop Paiute Tribe, and Tolowa Dee-ni’ Nation.

The CCC is dedicated to equity in all aspects of program delivery and operational excellence, releasing a Racial Equity Action Plan report and a gender equity survey among field staff and Corpsmembers this year. Objectives and key results planning highlight the CCC’s strategic approach toward tangible outcomes in environmental justice and equity. Corpsmember voices matter in this work, and ongoing training and professional development for all CCC staff related to justice, equity, diversity, inclusion or cultural humility and competency are among annual performance measures.

2024 AND BEYOND

Partnerships with California community colleges offer Corpsmembers opportunities to explore college campuses and a range of programs in forestry, culinary arts, utility line apprenticeship training and more. The California Naturalist (CalNat) program with the University of California Agriculture and Natural Resources is focused on certifying 480 Corpsmembers as California naturalists, through approximately 24 courses at nine CCC sites across the state.

The CCC operates multiple conservation projects

“This park receives about 70,000 visitors a year. It’s a long time coming. We’re getting Conservation Corps to come in and fix peelings and paint and deferred maintenance. It’s incredible...We’re fighting to maintain this history here...When people can understand a culture and know the history, you develop an appreciation. And so we’re here to teach that, educate that, and heal that.”

– Denise Kadara, President of the Allensworth Progressive Association



California
**Department of
Conservation**

The Department of Conservation administers a variety of programs to create a safe and equitable environment for all Californians by balancing today's needs with tomorrow's challenges with the intelligent, sustainable, and efficient use of the state's energy, land, and mineral resources.

2023 HIGHLIGHTS

The Department of Conservation (DOC) has implemented a first-of-its-kind race and equity-focused public engagement training. The goal is to support state government staff in planning and implementing authentic community engagement. The model includes a benefit/burden analysis, evaluation of impacts on public decisions, policies, and actions, measurability of outcomes, and how to successfully share tools with teams and leadership. A total of 100 state staff members from across 14 different CNRA organizations have completed the two-day training. Per participant interest, follow up trainings are scheduled. Examples include facilitation skills, language access best practices, setting up effective local site visits and complex issues and high emotions in meetings.

Language access is a high priority at the Department. One strategy the Department has pursued is partnering with community-based organizations to better understand the needs and preferences of residents, specifically those who have been historically under-included in government decision-making. Staff traveled to Ventura County to meet with the Mixteco Indigena Community Organizing Project (MICOP) to explore effective engagement with local Mixteco speaking residents. One result of the visit will be collaboration with MICOP's local radio Indigena station featuring two DOC bilingual staff. Resources from the California Geological Survey will be featured, including landslides, fire, tsunami and earthquake preparedness.

Direct engagement with environmental justice advocates and community leaders is a foundational component to building trust and collaborative partnerships. In August 2023, staff traveled to the greater Los Angeles area to meet with a watchdog organization to discuss strategies for increasing transparency and information sharing with the California Geological Energy Management Division and its efforts on California's Orphan Well Abandonment Program. In October and November 2023, the Department organized informal group meetings with a variety of community leaders in the Delta and Central Valley to better understand how residents would like to engage around the development of a legal framework for a Carbon Capture and Storage initiative.

The Department made strides in its effort to



elevate a future workforce that reflects the diversity of California. In October 2023, the Department conducted outreach activities at the Expanding Your Horizon: Science, Technology, Engineering, and Mathematics Conference at California State University, Sacramento. The Department hosted a booth at the career demonstration and exposition section that had 200 diverse middle schoolers in attendance.

Increasing workplace diversity and inclusion awareness is an ongoing priority for the Department. One aspect of this effort is involvement in Agency-wide diversity, equity and inclusion initiatives. Department staff actively collaborated and played key roles in several heritage month committees that organize activities for staff across CNRA, including Black History Month, Native American Heritage Month, Pride Month, Women's History Month and Asian American & Pacific Islander Heritage Month.

2024 AND BEYOND

The Department of Conservation is proud that 78% of staff have completed our Understanding DEI training in 2023. In 2024, the remaining 22% of staff or about 150 individuals and new hires will receive this training which will be offered monthly. The training provides staff with an immersive learning experience that introduces terms, concepts, and methods for supporting and expanding structural change related to DEI in the workplace. Building on the foundational Understanding DEI training, the Department is working on vetting new DEI trainings in 2024. The Department recognizes that an ongoing



commitment to training and engagement on racial equity is necessary to support the cultural shift DOC is pursuing.

The Department of Conservation will offer its Race and Equity-Focused Public Engagement Training bi-annually to staff across CNRA. The living framework of this public engagement model will be evaluated and refined through input sessions held with several environmental justice community leaders in February 2024, as well as other avenues with state experts in the field.



The California Department of Fish and Wildlife is charged with managing the state’s diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public.

2023 HIGHLIGHTS

The California Department of Fish and Wildlife (CDFW), after the approval of the Wildlife Conservation Board, began taking steps to transfer more than 40 acres at no cost to Fort Independence Indian Community of Paiute Indians of the Fort Independence Reservation to own, operate, and maintain in perpetuity the historical Mount Whitney Fish Hatchery and to steward these lands for their tribal members, public access, and habitat preservation. This is the first ever type of transfer of CDFW property to a tribe at no cost.

To build an inclusive workplace and facilitate community building at Fish and Wildlife, the Equity, Environmental Justice and Tribal Affairs Office developed the Affinity Group Program which provides a space to share, engage in learning opportunities on various topics of interest, and create a support network for staff across the state to feel less isolated.

The Equitable Granting Team has developed a plan to collect demographics that will be implemented in the Fisheries Restoration Granting Program’s 2024 Proposal Solicitation. This will allow the program to review, analyze, and strategize outreach initiatives to improve inclusion and diversity.

Fish and Wildlife expanded its equity, environmental justice and tribal affairs work across the Department. This includes developing approaches for incorporating equity and environmental justice in programs such as publications, grantmaking, social media, language access and regulations.

The Equity Office also held training courses and discussions with programs across Fish and Wildlife on the principles of environmental justice and equity. This includes a training on CalEnviroScreen in collaboration with the Office of Environmental Health Hazard and Assessment (OEHHA), which included program specific case studies, to build the capacity of program staff to better understand the potential impacts of Department decisions on pollution burdened communities.

The Equity Office also hosted an inaugural gear donation drive for CNRA staff to donate gently used fishing, camping gear, and accessories that were distributed to organizations with programming geared to underserved, underrepresented, or otherwise vulnerable community members.



LOOKING BEYOND

Fish and Wildlife is also developing an equity advisor training that will provide liaison staff in each program and region advanced training on principles of equity and environmental justice. With this deeper understanding, the liaison will work within their program to ensure the Department centers equity in decision-making. We will have an inaugural cohort in the first quarter of 2024.

In 2024, the Department will focus on the implementation of an equity assessment for regulatory actions and programmatic policies to better understand the potential impacts of proposed decisions on pollution burdened communities, a majority of who are low-income and communities of color.



The California Department of Forestry and Fire Protection or CAL FIRE is dedicated to fire prevention and protection, and the stewardship of over 31 million acres of California’s privately-owned wildlands. CAL FIRE provides emergency services in 36 of the state’s 58 counties via contracts with local governments. CAL FIRE has adapted to the evolving destructive wildfires and succeeded in significantly increasing its efforts in fire prevention through wildland pre-fire engineering, vegetation management, fire planning, education and law enforcement.

2023 HIGHLIGHTS

Over the past three years, CAL FIRE distributed more than three quarters of its grants to Underserved communities. Utilizing the mapping tool Cal Enviro Screen 4.0, the allocation percentages were 85% in FY 2020-2021, 71% 2021-2022 and 80% in FY 2022-2023.

The CAL FIRE’s Workforce Planning and Recruitment Unit (WPRU) has partnered with our communications team to develop a recruitment vehicle wrap featuring images that highlight the diverse array of classifications available within CAL FIRE. This wrap will include a QR code enabling the public to access our webpage, recruitment email, phone number, social media pages, and e-newsletter sign-up page. The campaign aims to reach communities that are typically more challenging to engage with in order to broaden recruitment efforts statewide, reaching not only major population areas but also diverse and underserved communities.

CAL FIRE has granted \$120 million in Green Schoolyards awards to address the challenges posed by extreme heat in underserved K-12 public educational facilities. The inclusion of trees and vegetation on school campuses is recognized for enhancing student social interactions, health, cognition, and attentiveness, while concurrently decreasing exposure to heat and air pollutants. This initiative empowers students to learn about the benefits and care of nature within their own campus environment.

CAL FIRE’s Research Development and Innovation division has introduced various data analytic tools to champion equity and inclusion throughout the department’s operational domain. These tools provide informative resources, offering a comprehensive view of the diversity within the state and the individuals served. They present interactive displays of information such as languages spoken, ethnicity, and other demographic details, fostering dialogue and supporting the diversity, equity and inclusion (DEI) objectives for our regions, units, and the entire state.

CAL FIRE’s Research, Development and Innovation Program (RDI) is creating a comprehensive GIS digital atlas composed of qualitative and quantitative information (live demographics) of the communities served. This digital atlas will serve multiple purposes, ranging from better understanding the communities served, removing barriers, providing literature in languages most commonly spoken and seeking meaningful engagement through trusted resources. The Department has launched a revamped website that more accurately reflects and embraces the diverse populations served and offer translations in a variety of languages.

The Department’s diversity, equity and inclusion program is in the final phases of creating a comprehensive language survey dashboard to better understand the number and distribution of bilingual certified staff across CAL FIRE. The data will help

to formulate an implementation plan to identify areas requiring additional bilingual certified employees. Their presence ensures that documents, forms, and other written materials can be translated, facilitating the dissemination of important information to members of the public who may not speak English.

CAL FIRE is using platforms such as LinkedIn to help with its recruitment efforts to under-represented segments of the population to join the organization. The Department worked with LinkedIn in 2023 under the Hiring Enterprise Program to help elevate awareness of career opportunities, spotlight crucial and challenging-to-fill positions, connect with diverse communities, and offer a supplementary outreach avenue for individuals keen on joining the Department. CAL FIRE’s LinkedIn page has 15,159 followers with an impression rate nearing 341,800 over the past year.

The Tribal Wildfire Resilience grants form a crucial component of CAL FIRE’s Climate and Energy Program, aimed at assisting California Native American tribes in the effective management of their ancestral lands. These grants actively promote and implement Traditional Environmental Knowledges to enhance wildfire resilience and establish safety measures for tribal communities. These grants support projects dedicated to serving tribes advancing wildfire resilience, promoting forest health, and preserving the cultural use of fire within these

communities. The funded projects address critical needs and encompass a range of activities such as cultural and prescribed burns, creation and upkeep of shaded fuel breaks, and forest and wildfire resilience efforts.

2024 AND BEYOND

CAL FIRE is updating its 2024-2028 Strategic Plan and actively involving a diverse range of stakeholders in this initiative, including tribal groups. As part of this inclusive approach, various community members are being invited to participate in surveys designed to assess opinions on the Department’s direction and to explore ways in which CAL FIRE can enhance its partnerships with diverse organizations through meaningful engagement. Additionally, the Department has formally embraced diversity as a distinct value, encompassing associated behaviors and inclusive goals for the future.

The Urban and Community Forestry Program’s California Climate Action Corps Fellowship is currently underway. Fellows are tasked with planning and organizing the Urban Forestry Next Generation Camp based at the Sacramento headquarters, where they receive mentorship. The camp will focus on recruiting and training fellows from underrepresented communities. The fellows will also participate in volunteer events throughout California, receive training to match career goals, and learn about CAL FIRE programs and services.





The California Department of Parks and Recreation (DPR) provides access to parks and open spaces and contributes to a healthier and richer quality of life for Californians through its programs, including grant programs administered by the Office of Grants and Local Services (OGALS), the Off-Highway Motor Vehicle Recreation Division and the Division of Boating and Waterways. The Department's equitable access initiatives provide Californians benefits for their hearts, minds and bodies for generations to come. The Department contains the largest and most diverse recreational, natural and cultural heritage holdings of any state agency in the nation.

2023 HIGHLIGHTS

The Department supported California Natural Resources Agency's (CNRA) efforts to celebrate cultural diversity across the agency and the state through the following commemorative months: Black History Month, Latino Heritage Month, Native American Heritage Month, Pride Month, Women's History Month, and Asian American and Pacific Islander Heritage Month. To date, the DPR's team has led the Latino Heritage Month planning committee, created graphic and logo toolkits, organized outdoor experiences, and supported CNRA departments in further embedding equity in all that they do.

The Tribal Affairs Program promotes government-to-government relationships and opportunities for co-management of park lands with California Native American tribes through its Memorandum of Understanding (MOU) program. Six MOUs were signed in calendar year 2023 bringing the total number of MOUs with California Native American tribes to 10.

State Parks has been working to make its parks more inclusive through several efforts. This includes taking stock of and critically reexamining its past, looking specifically at contested place names, monuments, and interpretation across California's State Park System. The Tribal Lands Acknowledgment, Interpretation and Exhibits Project works to

engage and build relationships with California Native American tribes, with the goal of fostering co-creation of exhibits at state parks. The African American History and Engagement Project is addressing gaps in the representation, preservation, and interpretation of California's significant African American history through a partnership with the California African American Museum.

Seeking to provide more equitable access to California's State Park System, the Department established a three-year pilot program that provides free day-use access to more than 200 state parks through California through three innovative pass programs: the Golden Bear pass, the California State Park Adventure Pass and the California State Library Parks Pass. Since the three pilot programs began in 2021, more than 144,000 passes have been provided to Californians in an effort to remove income barriers which may prevent access to the state park system's rich natural and cultural resources, and high-quality outdoor recreational opportunities.

Department staff from leadership positions across the state joined the Capitol Collaborative for Racial Equity (CCORE) as a cohort. Working with staff from the Public Health Institute, participants advanced our work to integrate explicit considerations of racial equity into decisions, policies, practices, programs, and budgets.

State Parks has been working to make its parks more inclusive through several efforts, including taking stock of and critically examining its past, looking specifically at contested place names, monuments, and interpretation across California's State Park System.



Parks established the Leadership, Excellence, Advancement, Development and Recruitment Program (LEADR), which focuses on expanding career and leadership development. The goal of the program is to strengthen leadership and diversity in the Department.

The Department established guidelines for the next round of applications for the Outdoor Equity Grants Program. The Office of Grants and Local Services coordinated with representatives from organizations who work with underserved communities throughout California and conducted virtual and in-person application workshops where nearly 500 participants attended. In the last two years State Parks has trained 61 organizations and 179 staff that are running the Outdoor Equity Grants Programs.



2024 AND BEYOND

The Department aims to accelerate the pace of negotiations for tribal MOUs with more than a half dozen in the draft phase that will be completed in 2024.

State Parks anticipates selecting approximately 100 Outdoor Equity Grants Program grants by summer 2024. These programs will increase the ability of residents in underserved communities to participate in outdoor experiences within their community and at state parks and other public lands.





The Department of Water Resources (DWR) manages the water resources of California, in cooperation with other agencies, to benefit the state’s people and environment. In so doing, DWR operates the State Water Project, serving 27 million people and 750,000 acres of irrigated agriculture; maintains 300 miles of levees that protects millions of people and property; ensures the safety of more than 1,200 dams; provides policy direction, regulatory guidelines, and financial support for local water supply investments, sustainable groundwater management, and water use efficiency; and restores ecosystems in the state’s rivers and streams. Given the growing complexities of water management, DWR also strives to inform and educate the public about the importance of water, California’s unique challenges and opportunities, and DWR’s role in managing and protecting this valuable resource.

2023 HIGHLIGHTS

In 2023, DWR awarded a total of \$143.7 million to underserved communities for 36 drought-related projects through its Urban and Small Community Drought Relief Programs. Of this, \$10.2 million will implement solutions such as pipeline replacement, well rehabilitation, and infrastructure upgrades. Another \$133.5 million of the amount awarded will support efforts like groundwater recharge, improved water supply reliability, recycled water, and water conservation.

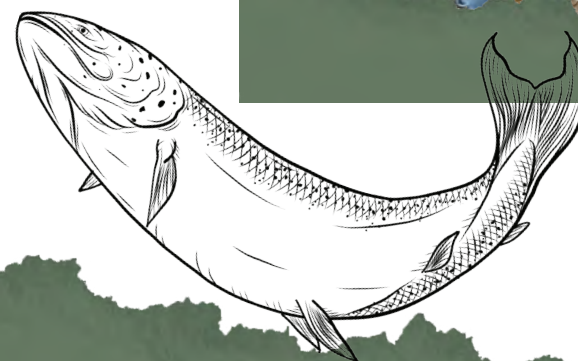
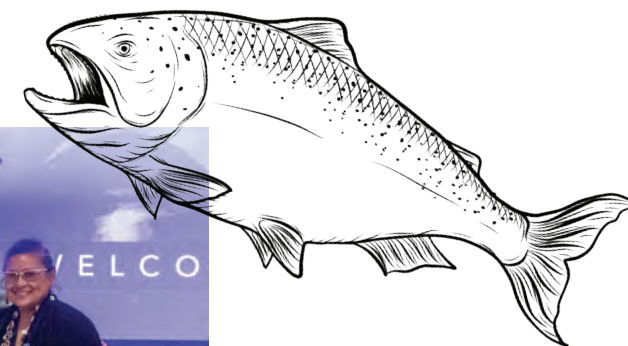
In spring 2023, the DWR executive team participated in its second Annual Community Visit to inform state policy and programs related to protecting groundwater dependent communities. In partnership with local non-governmental organizations and other state agencies, DWR explored important equity issues of the central coast region, including water quality and affordability of private domestic wells, regional flood emergency and preparedness, and Sustainable Groundwater Management Act’s impact on the agricultural workforce.

In April 2023, DWR convened the fourth Tribal Water Summit to incorporate tribal perspectives and recommendations into the California Water Plan Update 2023. The Summit, convened over three days, provided over 300 tribal leaders from

across California, Nevada, Arizona and New Mexico to join state and federal partners to discuss water management issues, resource management strategies and policy recommendations. Tribal governments and tribal communities identified recommendations to address historical underrepresentation in local and regional funding, human right to water, traditional ecological knowledge, and covered topics such as data sovereignty, the decommissioning and removal of the Klamath Dams, and tribal water rights.

In August 2023, DWR established a Racial Equity Office within the executive team and hired a racial equity officer. The office is responsible for the Department’s Racial Equity Action Plan which prioritizes workforce diversity, community engagement, and embedding racial equity into Department work. The office has onboarded an additional staff member at the end of 2023 to support plan implementation.

Launched in September 2023, DWR now provides comprehensive language services for public meetings, including translation of meeting materials, live translation support, and accessibility modifications of DWR resources. All DWR employees have been instructed to use this service in all external meeting notices to improve public access to state resources.



2024 AND BEYOND

In the coming year, DWR plans to expand its practice of building meaningful engagement with communities through developing and adopting best management practices for community engagement and expanding targeted outreach to underserved communities regarding combating drought and flood emergencies, preserving the ecosystems, and safeguarding the human right to water. DWR also plans to develop and incorporate inclusive language guidelines in all Department communications.

Top photo by DWR Public Affairs Office at the 2023 Tribal Water Summit. Bottom photo by Community Water Center at the San Jerardo Cooperative.



The Office of Energy Infrastructure Safety oversees California’s electrical corporations’ compliance with wildfire safety rules and regulations and develops and enforces safe excavation standards for all underground facilities.

2023 HIGHLIGHTS

In 2023, Energy Safety increased its outreach efforts to expand the diversity of qualified candidates who may apply for its positions. This initiative included promoting awareness of Energy Safety’s job opportunities among diverse student populations at colleges throughout the state.

Energy Safety conducted its first webinar with tribal leadership to engage their participation in the development of the 2026-2028 Wildfire Mitigation Plan Guidelines. This meeting was also the first step in establishing the process of early, often, and meaningful consultation with California Native American tribes.

Energy Safety required electrical utilities to incorporate community vulnerability into their risk modeling efforts. In support of that ongoing effort, Energy Safety held its first public scoping meeting that began a process to identify the disproportionate impacts of wildfire on socially vulnerable communities and to incorporate these factors into the electrical corporations’ wildfire mitigation planning.

In 2023, Energy Safety completed its implementation of translation services on its website, which will provide greater transparency and more access to the department’s work.

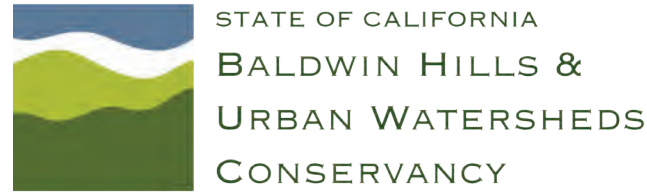
2024 AND BEYOND

In 2024, Energy Safety will continue to focus on promoting its job opportunities to diverse populations. This will include further promoting awareness of Energy Safety’s job opportunities among diverse student populations by expanding the number of colleges throughout the state.

In 2024, Energy Safety will continue to develop its relationships with California’s Native American tribes through early, often, and meaningful consultation. This will include proactively seeking tribal engagement in the Wildfire Mitigation Plan Guidelines development process.

Energy Safety will continue to ensure that socially vulnerable communities, disproportionately impacted by wildfires, will be represented in the electrical corporations’ wildfire mitigation planning.





STATE OF CALIFORNIA
BALDWIN HILLS &
URBAN WATERSHEDS
CONSERVANCY

The Baldwin Hills and Urban Watersheds Conservancy in Los Angeles County is the portal for communities of color with the highest population and pollution burdens in the state to access and experience the California’s conservation and climate initiatives first-hand. The Conservancy’s 70-square mile territory is characterized by lack of green and open space infrastructure unique to the urban watershed. With less than the County average of 3.3-acres per thousand people, investment in the territory will advance a more equitable distribution of resources and improve the quality of life in the most vulnerable neighborhoods in the state.

2023 HIGHLIGHTS

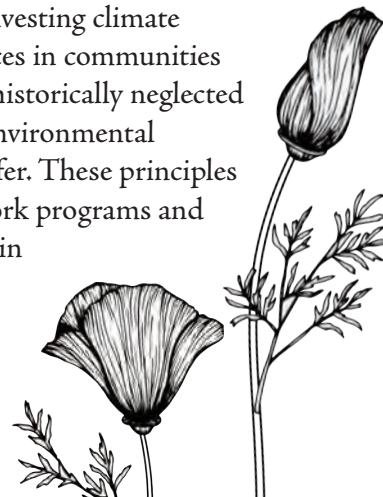
The Conservancy has undertaken the development of a territory-wide Watershed Improvement Plan. Working in partnership with several key partners, the Conservancy is compiling proposed climate resilience, transportation, housing, park and open space projects into a blueprint for watershed investments with equitable outcomes for regional stakeholders that have had a history of systemic neglect. A coalition of community business organizations have been engaged to create a capacity building toolkits as well identify funding mechanisms to help empower local leaders to implement resiliency and open space projects in the newly expanded Conservancy territory.

The Conservancy completed the Mar Vista Greenway Plan, which is the first of its kind greening plan in partnership with the Housing Authority of the City of Los Angeles. Mar Vista Gardens is the only large-scale public housing development on the westside of LA. This 40-acre community hosts 1,800 residents and is immediately adjacent to the seven-mile Ballona Creek Bike Path and the range of its connected outdoor amenities including the wetlands, beach and the Baldwin Hills Parklands. The Greenway Plan was a two-year community driven design development effort focused on removing barriers that disconnected the residents from the Ballona Creek, larger community and a healthy environment. The final plans for green infrastructure projects will transform and enhance the area with a

half-mile network of robust and sustainable public space amenities that will connect and unify the surrounding communities lining the Ballona Creek.

During the course of 2023, the Conservancy provided a \$500k grant to help build a coalition of community-based organizations and nongovernmental organizations that support increasing equitable access in the territory. Through compensated engagement, the one-year program facilitates and supports a regional coalition of up to 18 community-based organizations in land conservation, restoration, park, open space and recreation access. A series of coalition work sessions will solicit direct community input, feedback, review, guidance, and prioritization focusing on new project development in high need areas.

The Conservancy’s Governing Board articulated and adopted its Equity Guiding Principles for inclusion in the Conservancy’s statutory mandated Watershed Improvement Plan. These principles exemplify the Conservancy’s commitment to investing climate adaptation strategies and resources in communities that have been systemically and historically neglected or excluded from accessing the environmental opportunities the State has to offer. These principles will help guide Conservancy’s work programs and prioritization of project funding in the newly expanded territory.



2024 AND BEYOND

The Conservancy is collaborating with West LA College’s Center for Climate Education and LA Trade Tech’s School of Landscape Architecture for workforce development within the communities of color we serve. Training opportunities for digital virtual reality landscape design training will be deployed with local assistance grants for greenway projects in communities of high need. Outreach and engagement tools will also provide hands on experiential learning for the communities that will actively participate in the design and construction of their own pocket parks. These projects will include workforce development opportunities ranging from mentorships to partnerships with labor organizations that can certify skilled training to eligible workers that reside in the general area of proposed project sites.

Above photo: Martin Luther King Memorial Tree Grove at Kenneth Hahn State Recreation Area



The California Tahoe Conservancy (Conservancy) is a state agency, established in 1985, with a mission to lead California’s efforts to restore and enhance the extraordinary natural and recreational resources of the Lake Tahoe Basin. The Conservancy’s jurisdiction spans the 236 square miles of the California side of the Basin. The Conservancy manages 6,500 acres of state lands for wildlife habitat, open space, and to protect water quality, in addition to its programs to restore watersheds, enhance public access and recreational opportunities, increase forest health and reduce wildfire risk, and make Tahoe communities and natural resources more resilient to climate change.

2023 HIGHLIGHTS

With support from the Equity and Wellness Institute (EqWI), the Conservancy hosted listening sessions with its traditional partners, community-based organizations in the Lake Tahoe Basin, and Spanish-speaking families in South Lake Tahoe. Information gathered through these sessions is informing the Conservancy’s planning for actions to address racial equity and community engagement.

The Conservancy hosted two racial equity trainings for its Board, and two racial equity trainings for its staff.

The Conservancy partnered with the Washoe Tribe of Nevada and California and four community-based organizations to conduct community-based participatory research. This research will inform the Conservancy’s Racial Equity Action Plan and future trainings.

In December, the Conservancy Board approved multiple grants to support programs to expand recreational access to public lands in the Tahoe region for underserved communities and those who have faced barriers to outdoor recreation.

The Conservancy continues close, ongoing coordination with the Washoe Tribe, including providing grants that support tribal capacity building efforts and inclusion of ancestral science for forestry

management. The Conservancy is working with the tribe on incorporating tribal messaging and language and place names into signage and other documents. As part of updating its Strategic Plan, the Conservancy is engaging with the tribe to incorporate tribal practices and engagement in projects and to explore tribal access, land back, and co-management options.

2024 AND BEYOND

In 2024, the Conservancy plans to develop and implement a Racial Equity Action Plan. The Conservancy is updating its strategic plan, which will integrate equity initiatives and principles.





The Coachella Valley Mountains Conservancy’s mission is to protect and steward land in perpetuity and to provide for the public’s enjoyment and access to those lands, which include mountainous lands surrounding the Coachella Valley from the Banning Pass to the Riverside County border line of the Salton Sea. The Conservancy develops partnerships with local governments, state and federal agencies, the private sector, and the community as a whole to protect the magnificent biological, scenic, cultural, and recreational resources of the Coachella Valley area. The Conservancy is directed by a 20-member board representing nine incorporated cities in the Coachella Valley, the County of Riverside, the Agua Caliente Band of Cahuilla Indians, state agencies with land management responsibilities and citizens appointed by the Assembly, Governor and Senate offices.

2023 HIGHLIGHTS

The Conservancy board approved a \$292,000 grant to The Living Desert Zoo and Gardens to establish a tribal conservation workforce development program in collaboration with the Torres Martinez Native American Tribe and other Native American tribes throughout the Coachella Valley. The project will develop a community-based workforce that will help the tribal community build resilience to adapt to climate change and will promote cultural preservation by featuring in the training process diverse cultures and viewpoints of the people who ancestrally and culturally call the region home.

The Conservancy board approved a \$140,000 grant to the Council of Mexican Federations North America to expand its staff capacity and provide resources and services to underrepresented communities that include low-income, immigrant, Spanish-speaking, and mixed status families. The goal of the project is to promote sustainability and climate change adaptability by connecting underrepresented communities to nature and empowering communities that are often marginalized and the first to experience environmental issues due to poor air and water quality or lack of access to the outdoors. The project also aims to provide recreational and educational experiences to support the well-being and the benefit of those communities as a whole.

The Conservancy board approved a \$202,000 grant to the Desert Recreation Foundation, to develop two new youth programs: Trips for Kids and Recreation Outdoor Camp. The programs promote equity in access to outdoor recreation for underserved youth by connecting them to natural areas and wild spaces and providing experiences on nature exploration, mountain biking, and environmental education.

In an effort to continue to diversify the Conservancy to better serve the community, the Conservancy appointed its first bilingual Latina to an executive position and recruited an immigrant of indigenous heritage for a position as project coordinator. Both are longtime residents of the Coachella Valley with strong histories of community involvement.

This year, the Conservancy created a social media program to facilitate interactive communication within our large territory with the goal of reaching younger audiences. The Conservancy has shared images of endangered species, successful restoration or acquisition projects and even trail maps to facilitate access to public lands. It also enables the Conservancy to obtain continuous input from community members.

The Coachella Valley Mountains Conservancy has approved the transfer of 280-acres of ancestral lands

back to the Agua Caliente Band of Cahuilla Indians. In 2011, the Conservancy awarded funding to the Friends of the Desert Mountains for the purchase of a 280-acre parcel for important desert conservation purposes. Through the past couple of years, the Friends of Desert Mountains in partnership with Agua Caliente Band of Cahuilla Indians have identified this parcel is an important location for the return of ancestral lands and tribal stewardship. The transfer was approved at the November 2023 Conservancy meeting. Now through tribal law and stewardship, Agua Caliente Band of Cahuilla Indians will own and manage the land for recreation, preservation of open space, and cultural resources protection purposes.

2024 AND BEYOND

The Conservancy received \$8.5 million in funding for wildfire resilience. Conservancy staff reached out to tribal and local partners during the development of grant request for proposals and set aside \$4.5 million toward projects for tribal and underserved communities that target different aspects of wildfire risk. Applications for this grant program will be due in early 2024 and technical assistance workshops will be offered to facilitate successful proposals.

Several years ago, the Conservancy acquired a historic ranch in the mountains 4,000 feet above the Coachella Valley in a location that lacks outdoor recreational facilities. Working with the Desert Recreation District and nonprofit partners, the Conservancy built restrooms and a large shade structure to facilitate passive recreation, environmental research and historic preservation activities at the ranch. The ranch will open for public use in early 2024 and will provide outdoor education and recreational opportunities for underserved residents.

The Coachella Valley Mountains Conservancy has approved the transfer of 280-acres of ancestral lands back to the Agua Caliente Band of Cahuilla Indians. Now, through tribal law and stewardship, the tribe will own and manage the land for recreation, preservation of open space and cultural resource protection purposes.





The Coastal Conservancy plans and implements projects to protect, restore, and provide access to the California coast. The agency works along California’s coast and in coastal watersheds, the San Francisco Bay Area, and the Santa Ana River watershed to protect coastal resources, support climate adaptation projects such as wetland restoration, sea level rise adaptation, and wildfire resilience, and increase opportunities for the public to access and enjoy the coast. The Conservancy partners with California Native American tribes, local communities, nonprofit organizations, and other government agencies to implement multi-benefit projects that serve the diverse populations of California.

2023 HIGHLIGHTS

In September 2023, the Coastal Conservancy awarded 16 Explore the Coast projects, which enhance public opportunities to explore the California coast. This included a block grant to Justice Outside to sub-award to sub-award block grants to community-based organizations. Staff estimates the 2023-2024 grant program will engage over 7,500 people, serving over 6,100 low-income Californians, 6,600 people of color, 1,000 homeless or foster youth, approximately 1,800 people for whom English is not their first language, and at least 2,100 people with physical, cognitive, and emotional disabilities.

The Coastal Conservancy nurtures retention and professional growth through ongoing staff development training, including equity and tribal training. The trainings include a wide range of topics, such as guiding staff on tribal etiquette and partnerships, how to work with community-based organizations and diving into the complex racial history of the California coast in places such as Bruce’s Beach.

The Conservancy has funded 12 projects this year in collaboration with California Native American tribes. This includes funding tribal engagement and planning at the Frank and Joann Randall Preserve/Genga in Orange County and an award of \$4,500,000 to the Hoopa Valley Tribe to acquire approximately 10,300 acres of their historic lands

in the Klamath River watershed. The Coastal Conservancy’s 2023-2027 Strategic Plan targets spending 40% of the agency’s funding to benefit systemically excluded communities and tribes. In 2023, the Conservancy approved \$309 million for projects, and about 65% of that funding went to projects that benefit underserved communities.

The Conservancy has funded 16 projects this year that involve engaging with community based organizations. This includes the planning for an outdoor exhibit area at the Discovery Cube along Santiago Creek in the City of Santa Ana, the planning for the Great Redwood Trail in Mendocino, Humboldt, and Trinity Counties, and planning for the Crescent City Citizen’s Dock replacement in Del Norte County.

The Conservancy offers office hours to help grant applicants during grant solicitations and onboarding grantees post grant award. The technical assistance office hours help answer grant program, project, and invoicing questions to make the process smoother for partners. The Conservancy also created workforce development tips for staff and grantees to have clear guidelines for fair wage compensation on state projects.

In November 2023, the Coastal Conservancy awarded the second round of Coastal Stories



Above photo by Outdoor Outreach via the Explore the Coast grant program.

2024 AND BEYOND

The Coastal Conservancy will update its Tribal Consultation Policy in collaboration with California Native American tribes. The Conservancy also plans to collaborate with its sister agencies, the San Francisco Bay Conservation Development Commission and California Coastal Commission, to train all staff on tribal and equity topics.

projects. In total, 14 Coastal Stories projects will tell their cultural connection to the outdoors through installations or interpretive materials that represent diverse communities and perspectives that historically have been excluded from narratives of California’s coast and publicly accessible lands.

To further the Conservancy’s goal of making coastal access available to all Californians, in December 2023 it authorized a grant of \$250,000 to Orange County Coastkeeper to provide small grants to nonprofits, public entities, and tribes for beach wheelchairs and other adaptive equipment to increase accessibility to California’s beaches and coast in coastal counties statewide.



SACRAMENTO - SAN JOAQUIN

DELTA CONSERVANCY

A California State Agency

The Sacramento-San Joaquin Delta Conservancy (Conservancy) is a primary state agency in the implementation of ecosystem restoration in the Delta. We support efforts that advance environmental protection and the economic well-being of Delta residents. The Conservancy collaborates and cooperates with local communities and other parties to preserve, protect, and restore the natural resources, economy, and agriculture of the Sacramento-San Joaquin Delta and Suisun Marsh.

2023 HIGHLIGHTS

The Conservancy gave \$23 million in community enhancement grants to support community-based projects. Projects included a planning grant for the Stockton Aquatic Center to provide water access for the entire community on a sliding scale, a park in the city of Isleton to celebrate Asian American heritage, and an implementation grant to rebuild a public boat access ramp and park in the city of Pittsburg.

The Delta Conservancy provided technical assistance to applicants and grantees to support project development and management. Conservancy staff worked to remove barriers from accessing state dollars by using a rolling application deadline, providing assistance with the application process and allowing a longer time between pre-proposal and final proposal. This allowed many smaller or community-based organizations that historically lack technical capacity to access, apply, and receive state funding.

The Conservancy established internal groups to identify barriers that limit access to state resources. To address these barriers, these groups made improvements to communication styles, the hiring process, and grants proposal and administration procedures. Through these improvement efforts, the Conservancy is better able to make grants and careers accessible to all applicants.

2024 AND BEYOND

The Conservancy will continue to work to develop relationships with tribes and the community to grow the relevance and impact of the organization's work. Staff will also continue to assess barriers to access in the grant procedure, communications, and hiring process.



The San Diego River Conservancy is an independent, non-regulatory state agency established to preserve, restore and enhance the San Diego River Area. The Conservancy's 18-member Governing Board consists of both state and local representatives, creating a diverse partnership dedicated to conserving this highly valued resource of statewide significance. The San Diego River Conservancy's mission is accomplished by conserving land, and providing recreational opportunities, protecting wildlife species and native habitat, water quality, natural flood conveyance, historical, cultural, and tribal resources, and supporting educational opportunities.

2023 HIGHLIGHTS

The San Diego River Conservancy's Board awarded one grant to the San Diego Regional Fire Foundation to fund 13 Fire Safe Councils in San Diego County and to purchase a chipper for the Alpine Fire Protection District. The Fire Safe Councils prioritizes providing services to critically underserved communities including low income, elderly, veterans, and the disabled who are unable or can't afford to do the work to keep their homes and properties safe.

The Conservancy Governing Board approved eight grants totaling \$6.1 million from the Wildfire Early Action Plan, which support projects that support fire resilience and restoration. A quarter of the funding went to tribal governments and 63% to historically underfunded communities.

The Conservancy's work continues on a \$3.5 million grant to the Resources Conservation District of Greater San Diego County for their no cost chipping and defensible space assistance programs. In 2023, 284 homes were served, treating 420 acres and removing 6,137,045 cubic feet of biomass which assists homeowners that need to create defensible space, but are not able to do so because of physical, economic or other barriers.

The Conservancy provided outreach and engagement to bands of the Kumeyaay Nation and other tribal organizations. The Conservancy provided outreach for additional information on grant programs offered

by State agencies and provided technical assistance on Conservancy's grant applications.

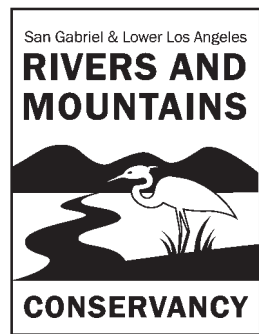
The Conservancy's deep commitment to outreach and engagement has resulted in substantial progress for underfunded communities and tribal organizations. The team provided extensive education on state grant opportunities and technical assistance to make the application process smooth. They created maps for tribal communities and presented to high school students and other rural East County Fire Safe Councils. With their assistance, the City of El Cajon was able to make significant progress in securing grants.

2024 AND BEYOND

The Conservancy will continue public outreach and engagement opportunities, technical assistance, and workshops for historically underfunded communities. The Conservancy will participate in the Eco Ambassadors program in the spring hosted by Mission Trails Regional Park Foundation, which offers inspiring programming to high school students. The students learn about local ecosystems and monitoring techniques and collaborate with peers on projects. The Conservancy plans to update its Tribal Consultation Policy and attend the Tribal EPA Workshop on tribal access, co-management, ancestral land return, and carbon sequestration. Tribal liaisons will also receive input and engage San Diego County tribal members.



RMC.CA.GOV



The Rivers and Mountains Conservancy’s mission is to preserve open space and habitat in order to provide for low-impact recreation and educational uses, wildlife habitat restoration and protection, and watershed improvements within its jurisdiction. The Conservancy’s territory includes eastern Los Angeles County and western Orange County, a vast and varied area with mountains, valleys, rivers, coastal plain, and coastline.

2023 HIGHLIGHTS

The Rivers and Mountains Conservancy or RMC received its first direct grant application from the Tongva Taraxat Paxaavxa Conservancy for accessibility and wildfire resiliency project. The Conservancy had their first land return just a year ago, which is the first time the tribe had land anywhere in LA County since 1833. RMC ramped up its outreach and technical assistance program by hosting workshop and created a consolidated grant program to cut green tape and accelerate application review.

2024 AND BEYOND

The RMC created a Natural Resources and Tribal Affairs Manager position, which will be dedicated to liaising with tribes and implementing tribal consultation efforts between tribes, local non-profits and governmental organizations. This manager will provide guidance on the analysis and integration of tribal recommendations to help the RMC’s work meaningfully reflect the needs of tribal communities as it relates to restoration, access, and climate adaptation plans and projects. The position is expected to be filled in late 2023.

SJRC.CA.GOV



The San Joaquin River Conservancy is a regionally governed agency created to develop and manage the San Joaquin River Parkway, a planned 22-mile natural and recreational area in the floodplain extending from Friant Dam to Highway 99. The Conservancy’s mission includes acquiring approximately 5,900 acres from willing sellers; developing, operating, and managing those lands for public access and recreation; and protecting, enhancing, and restoring riparian and floodplain habitat.

2023 HIGHLIGHTS

After extensive outreach, the Conservancy is working to create an access plan for tribal members that will include access to the land and management and planting of cultural resources. The Conservancy recognizes the important role these 22 properties can play in providing access to cultural resources and gathering places.

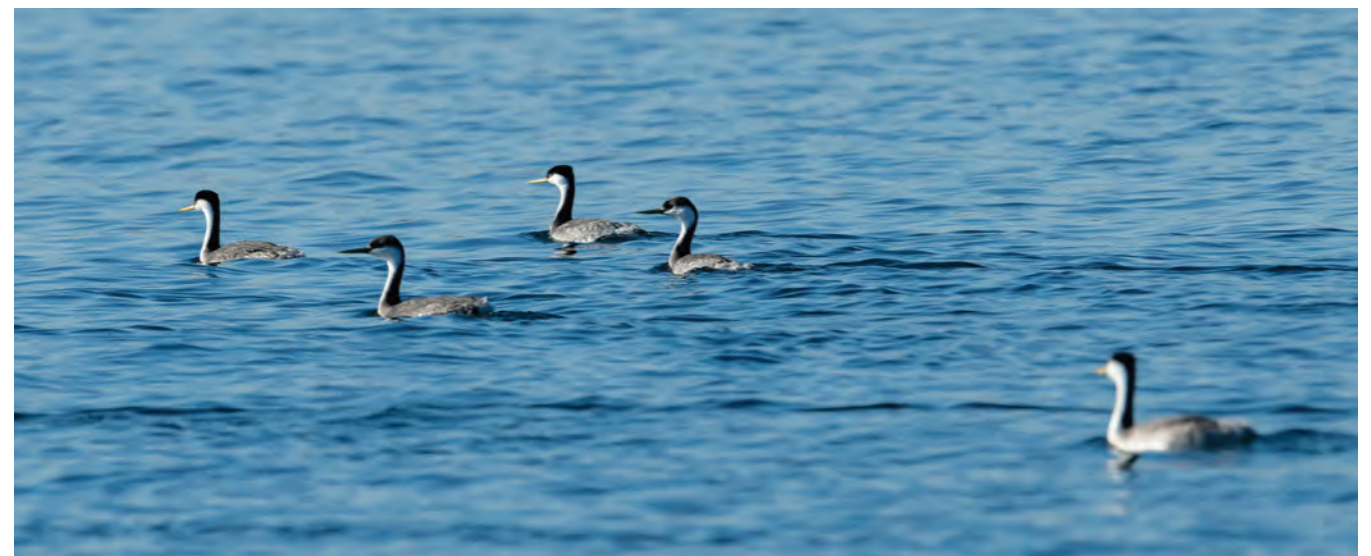
The Conservancy was created to provide recreational opportunities for the areas of Fresno and Madera, which are in great need of outdoor recreation opportunities. The Conservancy was able to open Sycamore Island and Van Buren for public access that includes swimming, fishing, hiking and boating opportunities closely accessible to Fresno and Madera.

The Conservancy provided approximately \$1.1 million to conduct outreach and design a welcome center for tribal members. The project design completed this year and is now seeking construction funding. In the meantime, the Conservancy continues outreach around this project and is developing a staged approach to open the property for traditional gathering.

2024 AND BEYOND

The Conservancy will work to advance the tribal access plan and incorporate this and other access goals into a new strategic plan.

The Conservancy also plans to open three more properties for public access for the communities of Fresno, Madera and beyond in 2024.





Through direct action, alliances, partnerships, and joint powers authorities, the Santa Monica Mountains Conservancy's mission is to strategically buy back, protect, preserve, restore, and enhance treasured pieces of Southern California to form an interlinking system of urban, rural, and river parks, open space, trails, and wildlife habitats that are easily accessible to the public.

2023 HIGHLIGHTS

The Conservancy granted funding to the Los Angeles Conservation Corps to provide fire resiliency and restoration projects throughout the conservancy zone. In addition, fire resiliency grants were made to two local tribes for workforce development and monitoring.

Though a fire resiliency grant to the Mountains Recreation and Conservation Authority, funding was provided to the Tataviam Conservation Corps for workforce development and trail building.

The Conservancy granted funding to community-based organizations, such as the Community Nature Connection to support workforce development for underserved youth, and restoration projects for fire resiliency and habitat improvements.

The Conservancy granted funding from its Regional Forest and Fire Capacity Program to the North East Trees, an urban greening nonprofit in Los Angeles, for habitat restoration and fire resiliency at Elyria Canyon Park and Flat Top, which also involved jobs for neighborhood youth.

A fire resiliency grant was awarded to Outward Bound Adventures for the development of pathways to park and public safety careers for fire resiliency, including engagement with community colleges to advance curriculum to facilitate those career paths.

The Conservancy and Mountains Recreation and Conservation Authority support urban and underserved communities' access to Malibu beaches, including sponsored trips for families with nature education and introduction to park careers components.



The Conservancy and Mountains Recreation and Conservation Authority support urban and underserved communities' access to Malibu beaches, including sponsored trips for families with nature education and introduction to park careers.



The Sierra Nevada Conservancy is a state agency with the mission to initiate, encourage, and support efforts to improve the environmental, economic, and social well-being of the Sierra-Cascades Region, its communities, and the people of California.

2023 HIGHLIGHTS

The Sierra Nevada Conservancy's governing statutes were amended this year to include equity among its priorities. The Conservancy is in the process of updating its five-year strategic plan, which will build in equity as a priority and help lead to outcomes that fully support diverse communities in the Sierra-Cascades Region. The Sierra Nevada Conservancy has continued to award grants that support tribes in the Sierra-Cascades Region.

A few examples of note in 2023: The Conservancy awarded \$1 million to the Western Rivers Conservancy (WRC) in Kern County to purchase 2,285 acres of the Fay Creek Ranch. The Conservancy will transfer more than half of that ranch to the Tubatulabal tribe for long term stewardship as a working ranch — the first time that culturally significant land has been returned to this tribe.

The Conservancy granted \$862,176 to the Sarah Priest Fuels Reduction Project. The American Indian Council of Mariposa County will use the funding to treat overloaded fuels on a 160-acre parcel that will reduce fire risk to communities.

The Conservancy awarded funds for a tribal land back purchase to conserve cultural and natural resources in Mono County. The Mono Lake Kutzadika's Indian Community Cultural Preservation Association will use the over \$2 million grant to help purchase a 160-acre parcel near Lee Vining.

2024 AND BEYOND

The Sierra Nevada Conservancy is at the beginning stages of developing a pilot tribal capacity building program. The pilot will strategically invest capacity funds in ways that specifically meet a tribe's needs, with the goal of putting more tribes in control of their funding opportunities. Available training and technical assistance that may be offered in the pilot include grant fundamentals, grant administration, subcontracts, contracts, and agreements, as well as reporting; leveraging funds, and other skills.





The California Coastal Commission is committed to protecting and enhancing California's coast and ocean for present and future generations. It does so through careful planning and regulation of environmentally sustainable development, rigorous use of science, strong public participation, education, and effective intergovernmental coordination.

2023 HIGHLIGHTS

For decades, visitors to Lunada Bay in Palos Verdes have been harassed, threatened and attacked by members of a local surfer gang known as the Lunada Bay Boys. In 2023, after the Commission ordered the city to demolish an illegal fort from which the Bay Boys organized their activities, an appellate court also found that it's illegal to intimidate and harass people to keep them off the beach. This case was a victory for public rights and is an example of how the Coastal Act can be used to address social and racial barriers to coastal access.

Teaching kids to surf is one of the most empowering ways to build a lifelong connection to the ocean. But coastal non-governmental organizations (NGO) have complained for years that it can be difficult and expensive to get the necessary permits for group surf lessons or camps. One of the most sought-after areas is Linda Mar Beach in Pacifica. After years of coordination with the City of Pacifica and local NGOs, the Commission approved a revamped surf school permitting system that provides parity for non-profits who previously had to compete with commercial surf schools for a limited number of permits. The new system is both affordable and accessible, and increases coordination between all user groups to ensure all participants can enjoy a safe, welcoming environment.

Just before Thanksgiving, the Tongva and Acjachemen Tribes celebrated the return of 6.2 acres of coastal ancestral land overlooking the Bolsa Chica wetlands in Orange County. The land had

been the site of an ancient village and holds deep cultural significance as well sensitive native habitat. The land owner had allowed extreme grading and land contouring on the site to create a competitive course for mountain bike competitions, without any permits or tribal consultations. With a significant Coastal Act enforcement action and administrative penalties looming, the landowners worked with the Coastal and the City of Huntington Beach on a to transfer the land to the Acjachemen Tongva Land Conservancy (ATLC) which will restore the land and preserve it for ceremonies and traditional cultural practices.

The Commission approved over \$2 million to 56 Whale Tail grantees, which funds experiential education and stewardship of the California coast. Recent funding includes 49 projects focusing on low-income communities, 39 supporting communities of color, 22 serving dual-language learners, 13 engaging inland communities, 9 providing programming for tribal communities, 9 addressing migrant communities, 7 engaging unhoused communities, and 3 focusing on LGBTQ2S+ communities.

To enhance meaningful engagement and enhance communication between EJ partners and Commission's executive leadership and staff, the Coastal Commission's environmental justice unit (EJ unit) launched quarterly partner calls with the Executive Director and senior management. Over a dozen EJ organizations participated in each of the calls in 2023, engaging in substantive discussions of

relevant topics, including offshore wind, equitable access to our beaches, and housing.

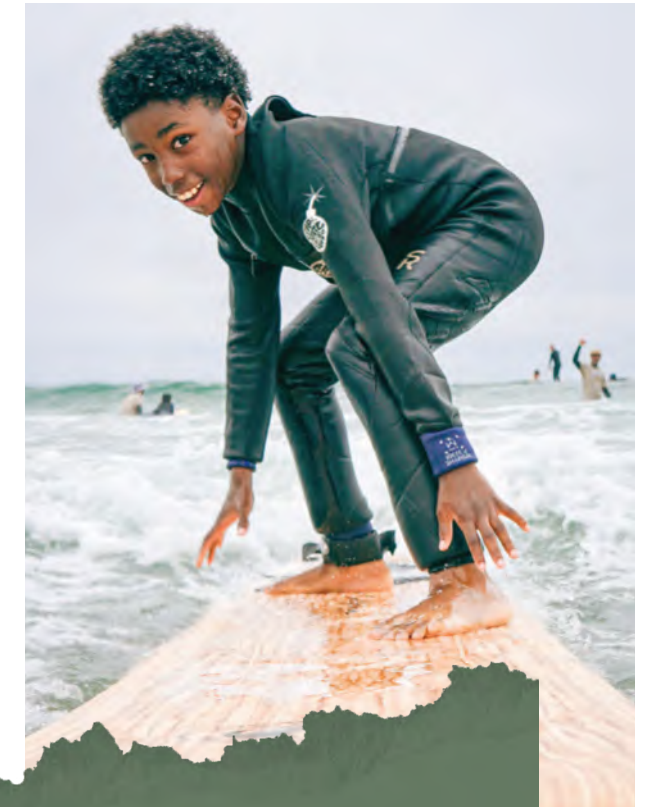
The EJ unit and sea level rise team started developing guidance for staff and local governments to better address environmental justice and equity in the Commission's sea-level rise work with funding from National Oceanic and Atmospheric Administration. Staff selected EJ and sea level rise advisors from across the state, who will be paid a stipend to provide input on the development of this new policy guidance and public engagement strategies.

The EJ unit also conducted environmental justice training sessions in several district offices. These sessions serve to teach new staff, refresh long-term employees, and showcase new and updated EJ tools available to staff across the state.

To help raise awareness of the rich history and contributions of California Native American cultures, and foster respectful engagement with Tribes today, the Commission created a deeply informative tribal consultation story map that features the voices of California tribal leaders in their own words. It provides an overview of the Commission's tribal consultation Policy as well as advances in state law and examples of how Tribal consultation leads to better project outcomes.

2024 AND BEYOND

To track and measure success, the Commission will undertake a review the effectiveness and progress of the agency's EJ policy. The Coastal Commission will release a public draft of the environmental justice update for the agency's Sea Level Rise Guidance, which will support consideration of environmental justice and sea level rise in coastal development permits as well as local coastal program (LCP) updates. This includes in vulnerability assessments, adaptation plans, and draft LCP policies on sea level rise.



To enhance meaningful engagement and communication between EJ partners and Commission's executive leadership and staff, the Coastal Commission's environmental justice unit launched quarterly partner calls with the Executive Director and senior management. Over a dozen EJ organizations participated in each of the calls in 2023, engaging in substantive discussions of relevant topics, including offshore wind, equitable access to our beaches, and housing.



The California Energy Commission (CEC) is the state’s primary energy policy and planning agency leading the state to a 100 percent clean energy future for all. The CEC plays a critical role in creating the energy system of the future — one that is clean, modern, and ensures the fifth largest economy in the world continues to thrive.

2023 HIGHLIGHTS

In February 2023, the CEC adopted the Justice Access Equity Diversity Inclusion (JAEDI) Framework as part of the 2022 Integrated Energy Policy Report. The framework is a tool for staff and leadership that functions as a north star to help guide agency-wide efforts by outlining CEC’s commitment, values, principles, and best practices for embedding energy equity and environmental justice into its programs and policies.

In March 2023, the Commission adopted a resolution recognizing and committing to support tribal energy sovereignty and independence at a first-of-its-kind convening, called a tribal en banc, held in Humboldt with Native American tribal leaders, CEC commissioners and the California Public Utilities Commission. To further the relationship building and to hear directly from tribes about their vision for clean energy and tribal sovereignty, the tribal en banc was followed by a series of engagement and visits with multiple tribes throughout the state.

In May 2023, through the Clean Transportation Program Investment Plan, CEC invested \$1 million to establish the ZEV Truck Training Program. The program is offered at six community colleges throughout the state located in underserved communities. Students will embark on clean transportation career pathways in heavy-duty electric truck technologies that will lead to good paying jobs and economic sustainability.

In August 2023, CEC launched the Communities of Practice (COP) effort aligning with Governor

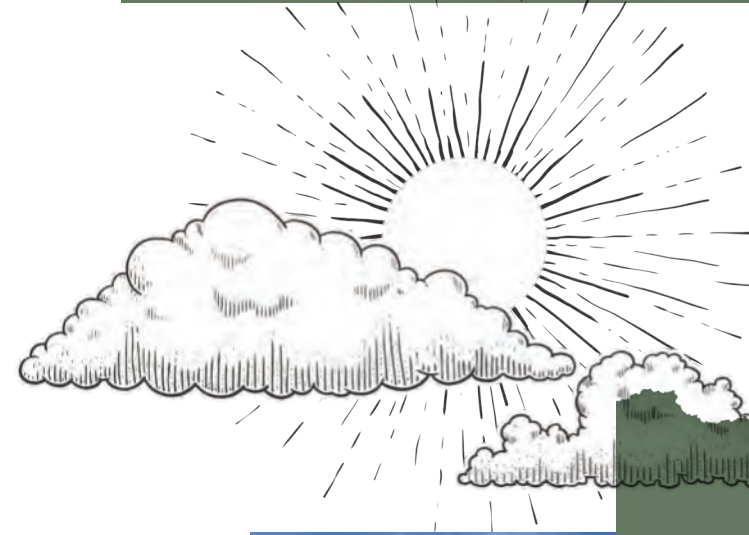
Newsom’s Executive Order N-16-22 to embed equity into all agency efforts. With a staff lead and commissioner sponsor, five COPs are convening and developing recommendations for the CEC to apply agency-wide to advance supplier diversity, language access, labor and workforce development, outreach and engagement, and benefits development.

In November 2023, the Commission adopted the Equitable Building Decarbonization Direct Install Program Guidelines, which aims to reduce greenhouse gas emissions in homes and advance energy equity. The program will provide energy-efficient electric appliances, other energy efficiency measures, and related upgrades to low-income households at no cost.

2024 AND BEYOND

In 2024, CEC plans to unveil an updated Energy Equity Indicators tool that will provide data visualization and mapping functions to enable communities and the public to access energy-related information to use for grant applications and other purposes. CEC staff will share the tool widely and provide trainings on how to use the tool for various purposes.

In 2024, the CEC plans to advance a partnership with the California Workforce Development Board to increase clean energy job opportunities, particularly for underserved and low-income communities. This will be in conjunction with participating in working groups convened by the Labor Workforce Development Agency.





The California Fish and Game Commission was one of the first wildlife conservation agencies in the country. Today, the Commission, which consists of five Governor-appointed Commissioners, protects and preserves the state's fish and wildlife by regulating hunting, sportfishing, and some commercial fishing. The Commission determines the status of species under the California Endangered Species Act, provides leases for aquaculture and adopts policies guiding the work of the California Department of Fish and Game and more.

2023 HIGHLIGHTS

In 2023, the Commission developed a framework for and initiated a review of all 63 Commission policies to proactively identify and address justice, equity, diversity and inclusion or JEDI issues, as well as identify opportunities for longer-term policy improvements. This full review of Commission policies through a JEDI lens is expected to be a multi-year process. The Commission has hired a consultant to assist the Commission in developing its first-ever JEDI plan. The Commission is in the process of hiring a tribal advisor and liaison to support the Commission's equity and tribal affairs work.

2024 AND BEYOND

The Commission has identified reviewing its policies through a JEDI lens to be a high priority for 2024 and 2025. In addition to guiding the work of the Commission, these policies also guide the work of the California Department of Fish and Wildlife, the largest fish and wildlife agency in the United States. Working closely with its consultant, the Commission is expected to adopt its first-ever JEDI plan in 2024. The plan will be developed with significant input from tribes, underserved communities and other members of the public. While many components of the Commission's plan are underway, the final plan will provide a foundation for additional, high priority JEDI initiatives.



The California State Lands Commission manages 4 million acres of tide and submerged lands and the beds of navigable rivers, streams, lakes, bays, estuaries, inlets, and straits. These lands, often known as sovereign or public trust lands, stretch from the Klamath River and Goose Lake in the north to the Tijuana Estuary in the south, the Colorado River in the east, and from the Pacific Coast three miles offshore in the west to world-famous Lake Tahoe in the east, and includes California's two longest rivers, the Sacramento and San Joaquin. The Commission oversees sovereign land granted in trust to about 70 local jurisdictions, which are predominantly prime waterfront lands, coastal waters, and the lands underlying California's major ports. The Commission also protects state waters from marine invasive species introductions and prevents oil spills by regulating oil transfers at marine oil terminals. The Commission is a leader in the fight against climate change and transitioning away from fossil fuel to clean energy, managing a portfolio of renewable energy leases and working alongside the California Energy Commission and others to bring offshore wind energy to California.

2023 HIGHLIGHTS

The Commission continued to implement its Environmental Justice and Tribal Consultation Policies, evaluating lease and permit applications through the lens of environmental justice and providing meaningful outreach and engagement with underserved communities and consultation with Tribes. Staff conducted environmental justice outreach on numerous lease applications and projects, sending over 100 letters and engaging with community-based organizations. Key outreach projects involve a vehicle triage center in San Francisco, offshore oil and gas operations in Long Beach, and California's offshore wind energy strategic plan. Staff consulted with tribes and participated in all the tribal consultations and tribal working group meetings for the strategic plan.

Staff helped launch the Coastal Justice Lab, a joint program led by Azul, a Latino-led and serving environmental justice organization focused on coastal and marine conservation; the Center for Land, Environment, and Natural Resources at UC Irvine Law; and UCI Newkirk Center for Science and Society. The Coastal Justice Lab is intended to advance environmental justice in coastal regions through research and facilitated dialogues.

The Commission prioritized language access by executing a language access contract and providing translation services on request. The Commission incorporated CNRA's language access best practices by advertising the availability of language access services and including instructions for how to access services on our website.

2024 AND BEYOND

Environmental justice is a priority for the Commission. We hope to update and strengthen our environmental justice and tribal consultation policies and continue learning and improving how we implement our policies, with the goal of providing tangible benefits to underserved communities.

The Commission also hopes to provide more staff training and education so we can better serve California's tribal nations and underserved communities.



The California Water Commission explores water management issues from multiple perspectives and formulates recommendations to advise the Department of Water Resources, and, as appropriate, the California Natural Resources Agency, the Governor and Legislature on ways to improve water planning and management in response to California’s changing hydrology. The Commission consists of nine members appointed by the Governor and confirmed by the State Senate. The Commission supports policies that result in sustainable water management and a healthy environment statewide.

2023 HIGHLIGHTS

In April of 2023, the Commission adopted a California Native American Tribal Leadership Comment Policy and began implementing the policy the following meeting. This policy acknowledges tribes’ unique political status and specifies a procedure for acknowledging tribal leaders and inviting them to comment prior to taking public comment.

Commission staff participated in a voluntary diversity, equity, and inclusion training pathway and held group discussions to process information and apply it to the Commission’s office culture and work. As a result of this process, staff launched a justice, equity, diversity and inclusion (JEDI) working group that meets monthly to provide a safe space for discussing JEDI topics and how to better integrate them into the Commission’s office culture.

The Commission’s operations are nested within the Department of Water Resources (DWR), and the Commission’s equity work is being rolled out in collaboration with DWR. The Commission works closely with DWR to get updates on their equity activities and to align the Commission’s work with these efforts.

2024 AND BEYOND

At its August 2023 meeting, the Commission asked staff to research options for developing a JEDI-related resolution. The Commission will consider adopting a resolution in 2024.



The Central Valley Flood Protection Board (Board) is the State regulatory agency responsible for ensuring that appropriate standards are met for the construction, maintenance, and protection of the flood control system that protects life, property, and wildlife habitat in California’s vast and diverse Central Valley from the devastating effects of flooding. Board issues encroachment permits and works with other agencies to improve the flood protection structures, enforces removal of problematic encroachments, represents the State as the non-federal sponsor in partnership with the U.S. Army Corps of Engineers for federal flood risk reduction projects, adopts five-year updates to the Central Valley Flood Protection Plan (CVFPP), and keeps watch over the Central Valley’s continually improving flood management system.

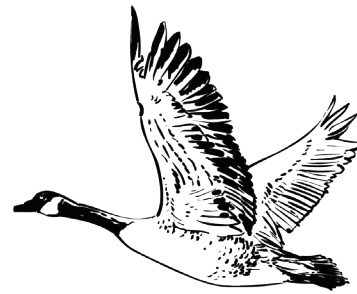
2023 HIGHLIGHTS

As part of a resolution declaring the Board’s commitment to diversity, equity and inclusion or DEI, the Board convened a DEI Task Force comprised of staff. The group has held monthly meetings to develop a vision statement, conducting extensive research, engaging with other DEI groups for knowledge sharing, and formulating recommendations to implement the new vision. The Task Force spent time educating members through training, self-reflection, and discussion.

2024 AND BEYOND

The Board will work with the Department of Water Resources or DWR to develop a 2027 Central Valley Flood Protection Plan Update to promote flood system equity in future flood management strategies, particularly those that consider climate change. The Board plans to increase engagement, both internally and externally by continuing to attend CNRA equity events and through additional communication with DWR’s team to learn more about their DEI efforts and find ways to leverage existing efforts and further collaboration. The Board will also evaluate equity gaps in regulatory functions and engage with its team and other partners to discuss equity in flood protection and risk reduction.





The Colorado River Board of California (Board) was established in 1937 to protect California’s rights and interests in the resources provided by the Colorado River and to represent California in discussions and negotiations regarding the Colorado River and its management. Seven counties in Southern California receive water and hydroelectric energy from the Colorado River. Colorado River water is used for drinking water by over 19 million people in Southern California and irrigates over 600,000 acres of agricultural lands that produce fruits, vegetables and other crops that help feed our nation’s families.

2023 HIGHLIGHTS

The Colorado River Board of California held Board meetings throughout Southern California. Board agencies hosting the meeting facilitated tours that increased the knowledge of Board members, staff, and the public regarding local usage and management of Colorado River water. The meetings and tours have helped facilitate cooperation and understanding and build upon the collaborative relationship among the Board’s member agencies.

The Board is working closely with Native American tribes in the development of the Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead. Within California, the Fort Yuma Quechan Indian Tribe has regularly participated in discussions with technical staff from water agencies reliant on water from the Colorado River. The Board is also actively engaged in the Post-2026 Federal-Tribes-States Work Group, an initiative led by the Bureau of Reclamation to facilitate discussions regarding water management along the Colorado River.

The Board’s public member seats have been filled, increasing the diversity of perspectives represented on the Board and facilitating increased collaboration between water agencies represented on the Board and the public. The Board’s public member seats are filled by the President of the Fort Yuma Quechan Indian Tribe and the Salton Sea Director for Audubon.

Through its recent hiring practices, the Board continued to advance its priority of filling departmental vacancies with qualified candidates reflective of California’s diverse population.

2024 AND BEYOND

In coordination with California’s Colorado River water and power users, the Board will continue working on the development of the Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead to ensure California’s diverse population continues to receive sufficient water supplies while ensuring system reliability. The Board is committed to collaboration with the federal government, tribes, Mexico, and the six other basin states receiving water from the Colorado River as we develop solutions to adapt to reduced water supplies due to the impacts from climate change.

The Board will continue working closely with Native American tribes, including the continued engagement in the Post-2026 Federal-Tribes- States Work Group. The Fort Yuma Quechan Indian Tribe is scheduled to host a monthly meeting of the Board in 2024 on tribal land.



The Delta Protection Commission is committed to the protection and health of the Sacramento-San Joaquin Delta in California. The Commission protects, maintains, enhances and enriches the overall quality of the Delta environment and economy. The Commission does this with a focus on agriculture, heritage, recreation, and natural resources while remaining mindful of the importance of the Delta to all Californians. Valuing the needs of the Delta as well as the needs of the State is fundamental to achieving the Commission’s vision: an ideal synthesis of cultural, ecological, and agricultural values in a sustainable, healthy, and celebrated way of life.

2023 HIGHLIGHTS

The Delta Protection Commission voted to add a tribal government seat on the Delta Protection Commission Advisory Committee and is recruiting for new members until the seats are filled.

2024 AND BEYOND

The Delta Protection Commission will be engaging in tribal consultation for the Sacramento-San Joaquin Delta National Heritage Area management plan approval and implementation.



The Native American Heritage Commission (NAHC) works with lead agencies, higher learning institutions, museums, the public, and California Native American tribes to protect Native American sacred sites from disturbance and desecration. The main goals of the NAHC are to help protect ancestors from being disturbed before ground disturbance, help to identify the tribe that is the most likely descendant for an inadvertent unearthing or discovery of ancestors, and to facilitate and enforce the return of ancestors and ancestral collections back to their respective tribal families.

2023 HIGHLIGHTS

The NAHC will make continuous efforts to adopt regulations to implement and interpret statutes under its authority. Some of these regulations include the contact list for tribal representatives, the most likely descendant process, the California Native American Grave Protection and Repatriation Act (CalNAGPRA.)

The Commission is working to update the rules and regulations for the California Native American Grave Protection and Repatriation Act process and the Most Likely Descendent process. This includes releasing in November 2023 a proposed draft contact list regulations for a tribal consultation period, virtual listening sessions, in-person inter-tribal roundtable sessions, and one-on-one tribal consultations. This process will continue into 2024.



The San Francisco Bay Conservation and Development Commission (BCDC/Commission) protects and enhances San Francisco Bay and advances the Bay's responsible, productive, and equitable uses for this and future generations in the face of changing climate and rising sea levels.

2023 HIGHLIGHTS

The Commission hired a second staff member, Lita Brydie, expanding its EJ program. Since joining the team, Brydie has taken lead roles to complete BCDC's Racial Equity Action Plan, setting up trainings for the Commission's EJ Advisors program, and drafting BCDC's Tribal Engagement Plan.

In 2023, BCDC secured additional funding from the Ocean Protection Council and Coastal Conservancy for its Environmental Justice Advisors Program. Advisors will be paid \$10,000 annually, which is a \$4,000 increase, to ensure they are fairly compensated for their time and expertise.

BCDC has ensured that each of its Bay Adapt committees has representation from underserved communities. There are reserved paid equity and EJ representative seats on the Regional Shoreline Adaptation Technical Advisory Group and the Bay Adapt Implementation Coordinating Group and have invited elected representatives from underserved communities to serve on the Commission's Elected Officials Task Force.

The Commission solicited proposals for a three-year translation services contract and began developing a plan to start translating meeting notices and other relevant documents. Interpretation and translation of other materials will now be available to the public by request.

BCDC tabled at nine community events in underserved communities across the Bay Area as part of its visioning phase of the Regional Shoreline

Adaptation Plan development. Staff talked with the public about what a Regional Shoreline Adaptation Plan could be and surveyed them about their attitudes regarding sea level rise.

2024 AND BEYOND

BCDC will complete a Tribal Engagement Policy in accordance with CNRA to build relationships with tribal communities and will coordinate with other California state agencies to learn from their experiences. BCDC plans to complete and adopt its Racial Equity Action Plan in early 2024. After adoption BCDC will develop an implementation plan that includes increasing staff time dedicated to the Racial Equity Plan and delegating roles in the implementation process.





The Wildlife Conservation Board (WCB) is an independent board under the California Natural Resources Agency that works closely with the Department of Fish and Wildlife. The Board administers programs that protect land, restore and enhance wildlife habitat and provide wildlife oriented public access. The Board is a key partner in implementing the State's 30 X 30 goals of advancing efforts to conserve biodiversity, increasing climate resilience, and providing access to nature for all.

2023 HIGHLIGHTS

The Wildlife Conservation Board provided a \$2.27 million grant to the 40 Acre Conservation League, California's only Black-led conservation group, for the Tahoe Forest Gateway Leidesdorff Property in Placer County in partnership with the Sierra Nevada Conservancy. The conservation group will acquire approximately 650 acres of land near the Tahoe Lake area for the purposes of providing opportunities for public access and wildlife oriented recreation as well as wildlife habitat preservation, restoration and management.

WCB supported Outward Bound Adventures, a non-profit dedicated to providing outdoor education, conservation, and environmental learning expeditions for low-income urban youth, to restore oak woodland habitat at the Los Angeles Zoo. The project engages members of underserved communities in paid, site-based workforce training and includes academic partners to learn about this incredibly important ecosystem while gaining valuable career skills in ecological restoration and land management. The Project provides employment, mentorship, and pathways to careers in outdoor education and conservation.

WCB provided a large block grant to Point Blue Conservation Science to implement projects to build wildlife-friendly resilience in working landscapes. Point Blue has awarded 77 small grants to a variety of local partners to implement projects such as riparian restoration, hedgerow plantings, beaver dam analogs, wildlife-friendly fencing, and monarch and

pollinator plantings. In the first funding round, 74% of applicants qualified as disadvantaged by one or more criteria.

The Board helped protect more than 2,285 acres in northeastern Kern County at Fay Creek Ranch through a grant to Western Rivers Conservancy and the Kern River Valley Heritage Foundation. The project expands connectivity by preserving a wildlife corridor, protecting rare and endangered flora and fauna, increasing climate resiliency, and providing the opportunity to create new, free outdoor public access for the nearby underserved communities. Of that, more than 1,246 acres of culturally significant ancestral lands have been directly conveyed to the Tübatulabal Tribe of Kern County.

WCB helped protect 5,105 acres in Monterey County through a grant to the Big Sur Land Trust. Big Sur Land Trust will co-manage the property with the Esselen Tribe of Monterey County. The Esselen Tribe will have access to the property for management and implementation of traditional ecological knowledge and cultural practices including harvesting of culturally relevant plants. The project protects habitat for a large diversity of plant and animal species, provides connectivity, and increases climate resiliency.

WCB provided a \$24 million grant to the Wildlands Conservancy to acquire the 11,691-acre Rana Creek Ranch in the Carmel Valley. The Ranch is

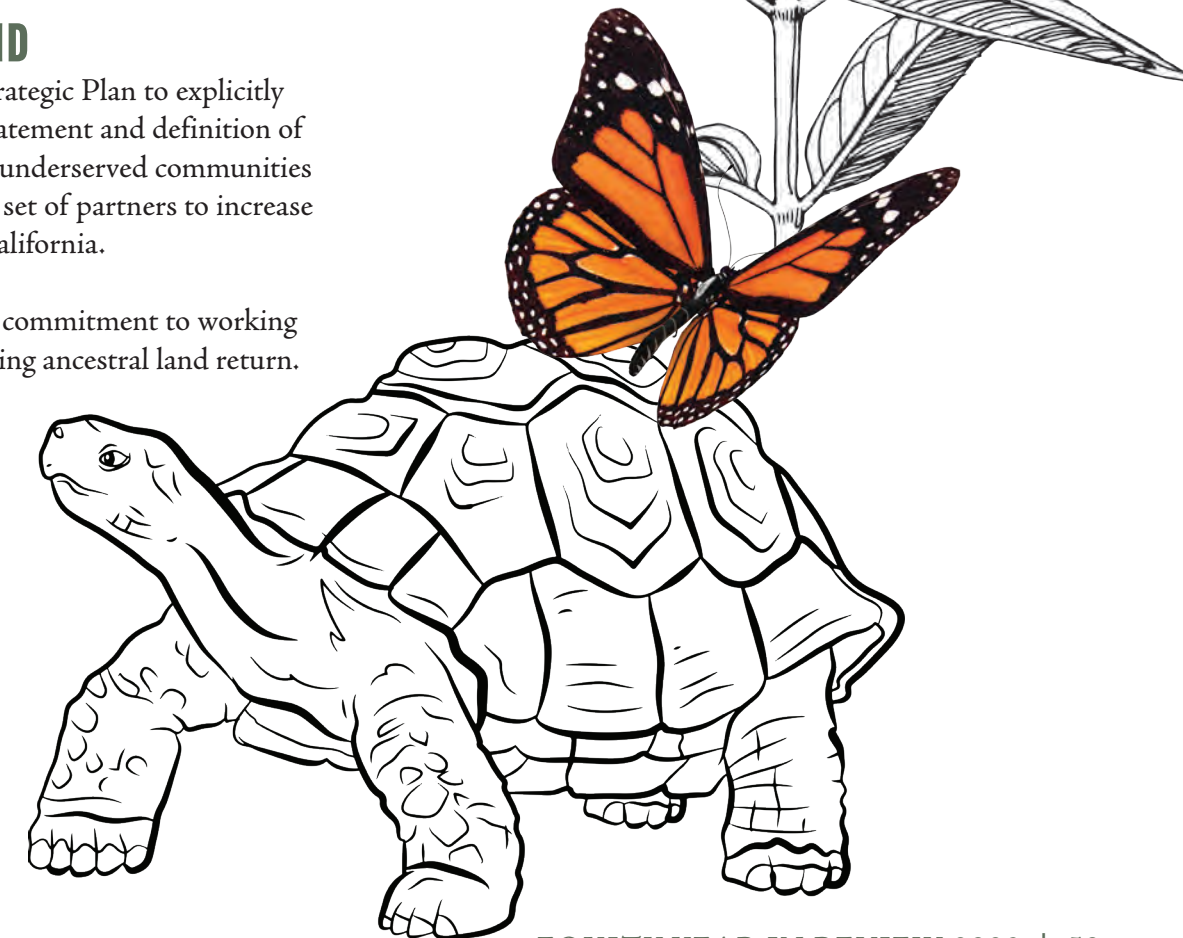


home to some of the best oak woodland habitat left on the central coast that provides wildlife habitat connectivity and will create new, free outdoor public access for the nearby underserved communities. The Ranch is the traditional homeland of the Esselen Tribe, and The Wildlands Conservancy is developing a strong partnership with the tribe to help steward the land, restore its fish and wildlife, and host the visiting public.

2024 AND BEYOND

WCB will update its Strategic Plan to explicitly incorporate an equity statement and definition of how WCB will work in underserved communities and with a more diverse set of partners to increase our reach throughout California.

WCB will continue our commitment to working with tribes and prioritizing ancestral land return.





Delta Stewardship Council

A CALIFORNIA STATE AGENCY

The Delta Stewardship Council was created to advance the state’s goals for the Delta, which include a more reliable statewide water supply and a healthy and protected ecosystem, achieved in a manner that protects and enhances the unique characteristics of the Delta as an evolving place. To do this, the Council developed an enforceable long-term sustainable management plan for the Delta to ensure coordinated action at the federal, state, and local levels. The Delta Plan, adopted in 2013, includes both regulatory policies and non-binding recommendations.

2023 HIGHLIGHTS

The Council’s 2019 Delta Plan Five-Year Review Report identified environmental justice (EJ) as a priority issue and recommended the council prepare an issue paper to investigate the need for additional strategies to address EJ within the Delta Plan, summarize the best available science, and identify future policy options for the Council to consider. To ensure the issue paper reflects the values and priorities of the Delta’s environmental justice community, staff undertook a robust public engagement strategy based on preliminary outreach. Completion of the issue paper is anticipated in fall 2024.



The Council embarked on the climate initiative Delta Adapts, which consists of a climate change vulnerability assessment for the Delta and Suisun Marsh and an adaptation plan detailing strategies and actions to adapt and respond to the identified vulnerabilities. Council staff is currently working with a diverse group of interests that includes community-based organizations, environmental groups, reclamation districts, local and state partners and others to prepare a draft adaptation plan that will include an emphasis on society and equity for public review in early 2024.

In 2021, the Council’s Delta Science Program provided research funding for a survey to better understand Delta residents’ livelihoods, well-being, priorities, and concerns for the region. A summary of survey results was presented at the October 2023

Council meeting. Additional products, including anonymized survey data and an interactive data viewer tool, will be made publicly available in early 2024.

The Council has focused on fostering partnerships with California Native American tribes that advance tribal considerations and finding ways to collaborate towards a more resilient Delta watershed for all. This included hosting the Council’s first tribal listening session, where the Council hosted representatives from Delta tribes, who spoke about their ties to the Delta, their sovereignty and relation to the state, and their opinions regarding Delta management. The Council has also worked to integrate tribal partners into the planning and roles at Council events such as the Adaptive Management Forum, numerous Restoration Forums, and the Delta Independent Science Board’s Food-webs Workshop, among others.



2024 AND BEYOND

Council staff has worked to launch a justice, equity, diversity and inclusion (JEDI) committee. They finalized a charter that outlines the committee’s purpose and preliminary objectives, which include equitable outreach, engagement, research, and funding, building an inclusive workplace and workforce, and recommending policy that considers equity in a manner that furthers the Council’s goals for the Delta. Staff are currently developing a duty statement for a JEDI position, which would be tasked with leading the committee and developing a work plan.

In 2024, the Council will continue to work to identify opportunities for greater integration of social sciences within the Council’s work and the Delta more broadly. Integrating the social sciences into environmental management in the Sacramento-San Joaquin Delta means gaining a better understanding of the people who live, work, and recreate in and around the estuary, along with how the region impacts their health and well-being, and how their behaviors influence environmental issues.



The California Ocean Protection Act established the Ocean Protection Council (OPC) as a Cabinet-level state policy body nested within the Natural Resources Agency that implements the Governor’s priorities for coastal and ocean policy. OPC is mandated to protect California’s coastal and ocean resources by effectively and strategically providing best available science to decision-makers, supporting targeted initiatives to protect and restore coastal and marine systems, collaboratively advancing policy, and coordinating relevant agency activities across jurisdictional, programmatic, and regional boundaries. To be successful, OPC’s work must be inclusive and reflect the diversity of perspectives and needs of California’s communities.

2023 HIGHLIGHTS

In April 2023, the OPC approved grant funding to the Better World Group Advisors (BWG) to provide guidance and support for implementation of select Equity Plan priorities for the next three years. Through this effort, BWG will develop and convene an Environmental Justice Advisory Board that will advise on the needs and perspectives of environmental justice communities, California Native American tribes and tribal governments into state policies, programs, and actions that impact the coast and ocean. Recruitment for the board is anticipated to launch in late 2023 to early 2024.

The Council has partnered with grantee, Justice Outside, to support the development and administration of OPC’s Environmental Justice Small Grants Program. The \$1 million program is a direct action from OPC’s Equity Plan and will support investments for organizations to fulfill small and short-term projects across coastal regions that create positive impacts in California’s EJ communities and advance coastal and ocean conservation priorities in OPC’s Strategic Plan. The program will include extensive and nontraditional outreach to priority communities, an accessible application process, technical assistance and capacity building for grantee partners, and opportunities to mobilize and join larger EJ networks in the state and across the country. The program will begin accepting applications in Spring 2024.

In December 2023, OPC approved \$1,500,000 to establish an Ocean Corps Pilot Program with the California Conservation Corps (CCC), in collaboration with local conservation corps and partners, to enhance coastal climate resilience and provide equitable opportunities for young adults. The Ocean Corps Pilot Program aims to build a resilient California by leveraging the CCC’s extensive experience in environmental conservation and youth empowerment. The pilot program also advances key equity priorities from OPC’s Equity Plan aimed at strengthening career pathways to create a more diverse ocean and coastal workforce throughout the state and expanding coastal access in both physical access and the quality of experience for California communities. OPC funding will support the CCC in implementing the Ocean Corps Program within three local corps programs operating in coastal regions: CCC Fortuna District, Conservation Corps Long Beach, and Urban Corps of San Diego. This pilot program has the potential to serve as a model and be expanded to six CCC centers and eight local corps operating in coastal regions, pending available federal funding. The Ocean Corps Pilot Program will advance equitable opportunities by engaging corps members in climate resiliency initiatives while providing mentorship, internship opportunities, and other types of support to young adults, particularly those from underserved communities.



In December 2023, OPC approved \$1.5 million to establish an Ocean Corps Pilot Program with the California Conservation Corps (CCC), in collaboration with local conservation corps and partners, to enhance coastal climate resilience and provide equitable opportunities for young adults. The Ocean Corps Pilot Program aims to build a resilient California by leveraging the CCC’s extensive experience in environmental conservation and youth empowerment.

In January 2023, OPC adopted its first-ever Tribal Engagement Strategy, which will serve as a framework for enhanced communication and partnership between OPC and California Native American tribes on ocean and coastal issues. The Tribal Engagement Strategy was crafted in close collaboration with California Native American tribes, including early consultations and listening sessions in 2021, as well as further consultation on a draft Strategy held in 2022. It provides specific actions that OPC will undertake to enhance tribal engagement in all aspects of its work, as well as approaches that OPC will pursue to improve communication with tribes. In January 2023, OPC approved the disbursement of \$1 million to establish a Tribal Small Grants Program to provide dedicated funding to California Native American tribes and tribally led entities in support of work that advances tribes’ priorities for conservation, management, and stewardship, as well as the goals in OPC’s Strategic

Plan and Tribal Engagement Strategy. The OPC Tribal Small Grants program will be part of the Natural Resources Agency Tribal Nature-Based Solutions program to assist California Native American tribes in advancing multi-benefit nature-based solutions in the coast and ocean.

Following Council approval in April 2023, OPC awarded Coastal Quest through a competitive solicitation for applicants to develop and manage OPC’s first-ever Senate Bill 1 Technical Assistance Program (SB 1 TA Program) to provide application support to local, regional, and tribal governments that represent environmental justice communities applying for Sea Level Rise Adaptation Planning funding. Recipients of technical assistance will be offered tailored and customized support based on their needs, including capacity building and grant writing support. The SB 1 TA Program is expected to launch in early 2024.



The California Science Center in Los Angeles is an educational and family destination that contains award-winning exhibits and world-renowned education programs. The Science Center’s mission values accessibility and inclusiveness, and aspires to stimulate curiosity and inspire science learning in everyone through fun, memorable experiences.

2023 HIGHLIGHTS

The Science Center continues to maintain and retain a diverse workforce representing our surrounding community by conducting employment opportunities to increase a diverse candidate pool. It also encourages current staff to participate in the Upward Mobility Program, which aims to provide guidance for entry level staff interested in advancement. The agency established a revamped Upward Mobility Program in June of 2023, targeting low-paying, entry level positions, and three applicants were approved.

The Center maintains and strengthens education program partnerships among diverse local communities by engaging with community-based organizations that work with youth ages 5 to 13. The Young Curators program continues to provide educational programming to youth from surrounding underserved neighborhoods and youth enrolled in programs with partner organizations. The Center delivers educational after-school programming to four community partners, including Brotherhood Crusade, Literacy, Arts, Culture, Education, and Recreation Afterschool Programs, Heart of Los Angeles, Para Los Niños and the Los Angeles Boys & Girls Club.

The Center continues to assess and expand language services for guests by ensuring all new exhibitions are fully bilingual in English and Spanish. Recent bilingual exhibits include Maya: The Exhibition, Nikon Small World and Jané’s Endangered Animal Experience. The Center works to create a sense of stewardship among employees by providing

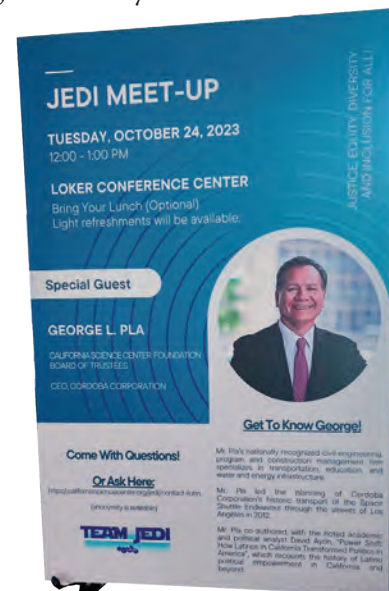
opportunities for employee involvement in addressing diversity, equity, and inclusion (DEI) concerns at regular meetings and access to training.

The Center held DEI training for staff in 2023 and continues to hold monthly Justice, Equity, Diversity and Inclusion (JEDI) meetings, which gives staff at all levels the opportunity to interact with members and invited guests and speakers.

2024 AND BEYOND

The California Science Center will continue to look for new community partnerships for after-school programming and participation in hands-on Science Camp for the upcoming calendar year.

The Center will continue to identify job boards and hiring programs that target underserved and marginalized communities throughout Los Angeles County.





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California Fish and Game Commission
Staff Time Allocation and Activities
April 12, 2024

This report identifies, for the months of February and March 2024, where California Fish and Game Commission staff allocated its time in general activity categories, trends in staff time allocation, and examples of specific activities in which staff engaged.

General Time Allocation

Task Category	February Staff Time	March Staff Time
Regulatory Program	7%	13%
Non-Regulatory Programs	6%	6%
Commission and Committee Meetings	28%	27%
Legal Matters	2%	3%
External Affairs	8%	7%
Special Projects	5%	4%
Administration	22%	22%
Leave Time	9%	4%
Unfilled Positions ¹	17%	20%
Total Staff Time ²	105%	106%

¹ *Unfilled positions are skewed downward due to contract and temporary help*

² *Total staff time is greater than 100% due to overtime*

Trends

Time allocations of note for the two-month period are *Regulatory Program, Commission and Committee Meetings, Administration, and Unfilled Positions.*

The *Regulatory Program* category is elevated in March, as staff advanced several rulemakings, including publication of recent rulemakings in the California Regulatory Notice Register, emergency actions, the extra work associated to gain final approval from the Office of Administrative Law (OAL) for the recreational sea urchin bag limits and the existing structures in marine protected areas rulemakings (both approved in March), and two unusually challenging rulemakings that have required multiple conversations with OAL attorneys and 15-day notices. Regulation work will continue to be elevated with an unusually high number of rulemakings currently in various stages of completion.

The *Commission and Committee Meetings* category is elevated during this reporting period, particularly for March. The hybrid format for Commission meetings requires all team members to assist, whether in person or remotely, while committee meetings require about half of the team. March is particularly elevated due to the Commission’s teleconference on March 26, 2024, in addition to a particularly full March Marine Resources Committee meeting.

In the *Administration* category, recruitment efforts for the multiple vacancies dominate staff time and will continue to for the foreseeable future, along with onboarding new staff. Recruiting is a time-consuming undertaking, from initial paperwork authorizing positions and advertising, to application screening, conducting interviews and reference checks, and documenting compliance with state processes; multiple staff and many hours are required. During this period, recruitment for the deputy executive director was completed and recruitments for the tribal advisor and liaison and the recently-vacated regulatory analyst are ongoing. Finally, training and onboarding of the new executive analyst and Sea Grant State Fellow began in February and continued into April.

Related, *Unfilled Positions* is extraordinarily high, though not fully represented by the time entries in the general time allocation table due to contract and temporary help. The continued and successful recruitment of quality personnel for vacant positions has been a staff priority the last three months and will continue over the next few months as remaining recruitments are completed.

Sample Activities for February 2024

- Conducted orientation and several follow-up meetings for newly-appointed Commissioner Darius Anderson
- Conducted field trip associated with the February Commission meeting to learn more about archery for hunting and recreational purposes within California
- Contributed to bi-weekly coordination meetings with Department aquaculture staff to further pending aquaculture lease actions
- Coordinated with the Department related to experimental fishing permit applications and requests
- Attended a Pacific Fishery Management Council meeting regarding offshore wind
- Attended the Department black history month event, "Academic Perspectives on Understanding and Protecting Natural Resources"
- Met with the Department and members from non-governmental organizations to discuss issues related to the MPA network and MPA regulation petitions
- Welcomed Executive Analyst Kelsey Leaird and 2024 Sea Grant State Fellow Devon Rossi, and commenced their onboarding
- Engaged in staff-led discussion about racial inequity to increase JEDI awareness as part of the monthly *Moment to Pause* effort
- Conducted an exam and completed the selection process for deputy executive director position
- Prepared for and conducted one publicly noticed meeting (Commission) and prepared for two publicly noticed meetings (Marine Resources Committee and Commission teleconference).

Sample Activities for March 2024

- Participated in discussions regarding improvements to the service-based budgeting task validation process and initiated the mission-level refresh for Commission tasks

- Contributed to the Offshore Aquaculture Interagency Working Group with feedback on a state aquaculture permitting guide
- Attended the World Fisheries Congress in Seattle and attended presentations related to such topics as fisheries adaptive management, climate change impacts, sustainable fisheries and aquaculture, and mitigating bycatch in commercial and recreational fisheries.
- Coordinated and facilitated individual conversations with state and federal agencies regarding the aquaculture leasing process and next steps to improve interagency coordination, including engagement in pre-application consultations
- Facilitated conversations with aquaculture leaseholders regarding lease requests.
- Attended multiple webinars to support awareness of partner efforts relevant to the Commission’s work, including Coastal 30 x 30 hosted by the Ocean Protection Council to learn about the four key approaches to 30 x 30, and Lenfest’s Ocean Program to learn about geospatial patterns and species impacts of changing ocean chemistry on U.S. West Coast
- Collaborated with a Scripps Institution of Oceanography graduate student regarding their volunteer opportunity with the Commission
- Participated in a virtual meeting of the Diversity, Equity, and Inclusion Committee of the Western Association of Fish and Wildlife Agencies
- Attended “Marking Our Progress – a Conversation with Secretary Crowfoot,” highlighting California Natural Resources Agency challenges and priorities for 2024
- Completed the selection process for the deputy executive director position, offered the position, and completed final negotiations
- Continued onboarding executive analyst and 2024 Sea Grant state fellow
- Prepared for and conducted two publicly noticed meetings (Marine Resources Committee and Commission teleconference) and prepared for two publicly noticed meetings (Tribal Committee and Commission).

Sample Tasks for the General Allocation Categories

Regulatory Program

- Coordination meetings with DFW to
- develop timetables and notices
- Prepare and file notices, re-notices, and initial/final statements of reasons
- Prepare administrative records
- Track and respond to public comments
- Consult, research, and respond to inquiries from the Office of Administrative Law
- Facilitate CEQA document review, certification of findings, and filing with state clearinghouse

Non-Regulatory Program

- DFW partnership, including jointly developing management plans and concepts
- Process and analyze non-regulatory requests

- Develop, review, and amend Commission policies
- Research and review adaptive management practices
- Review and process CESA petitions

Commission and Committee Meetings and Support

- Research and compile subject-specific information
- Develop and distribute meeting agendas and materials
- Agenda and debrief meetings
- Prepare meeting summaries, audio files, and voting records
- Develop and distribute after-meeting memos/letters
- Conduct onsite meeting management
- Process submitted meeting materials
- Provide commissioner support
- Process and analyze regulation change petitions

Legal Matters

- Public Records Act requests
- California Law Review Commission
- Process appeals and accusations
- Respond to litigation
- Process kelp and state water bottom leases
- Prepare administrative records

External Affairs

- Engage and educate legislators, monitor legislation
- Maintain state, federal, and tribal government relations
- Correspondence
- Respond to public inquiries
- Website maintenance
- Coyote workshops

Special Projects

- Coastal Fishing Communities
- Bullfrogs and non-native turtles stakeholder engagement
- Streamline routine regulatory actions

Administration

- Staff training and development
- Purchases and payments
- Contract management
- Personnel management
- Budget development and tracking
- Health and safety oversight
- Internal processes and procedures
- Document archival

Leave Time

- Holidays
- Sick
- Vacation or annual leave
- Jury duty
- Bereavement
- Administrative time off



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GOVERNMENT CODE - GOV

TITLE 2. GOVERNMENT OF THE STATE OF CALIFORNIA [8000 - 22980] (Title 2 enacted by Stats. 1943, Ch. 134.)

DIVISION 3. EXECUTIVE DEPARTMENT [11000 - 15986] (Division 3 added by Stats. 1945, Ch. 111.)

PART 1. STATE DEPARTMENTS AND AGENCIES [11000 - 11898] (Part 1 added by Stats. 1945, Ch. 111.)

CHAPTER 1. State Agencies [11000 - 11148.5] (Chapter 1 added by Stats. 1945, Ch. 111.)

ARTICLE 9. Meetings [11120 - 11132] (Article 9 added by Stats. 1967, Ch. 1656.)

11120. It is the public policy of this state that public agencies exist to aid in the conduct of the people's business and the proceedings of public agencies be conducted openly so that the public may remain informed.

In enacting this article the Legislature finds and declares that it is the intent of the law that actions of state agencies be taken openly and that their deliberation be conducted openly.

The people of this state do not yield their sovereignty to the agencies which serve them. The people, in delegating authority, do not give their public servants the right to decide what is good for the people to know and what is not good for them to know. The people insist on remaining informed so that they may retain control over the instruments they have created.

This article shall be known and may be cited as the Bagley-Keene Open Meeting Act.

(Amended by Stats. 1981, Ch. 968, Sec. 4.)

11121. As used in this article, "state body" means each of the following:

- (a) Every state board, or commission, or similar multimember body of the state that is created by statute or required by law to conduct official meetings and every commission created by executive order.
- (b) A board, commission, committee, or similar multimember body that exercises any authority of a state body delegated to it by that state body.
- (c) An advisory board, advisory commission, advisory committee, advisory subcommittee, or similar multimember advisory body of a state body, if created by formal action of the state body or of any member of the state body, and if the advisory body so created consists of three or more persons.
- (d) A board, commission, committee, or similar multimember body on which a member of a body that is a state body pursuant to this section serves in his or her official capacity as a representative of that state body and that is supported, in whole or in part, by funds provided by the state body, whether the multimember body is organized and operated by the state body or by a private corporation.
- (e) Notwithstanding subdivision (a) of Section 11121.1, the State Bar of California, as described in Section 6001 of the Business and Professions Code. This subdivision shall become operative on April 1, 2016.

(Amended by Stats. 2015, Ch. 537, Sec. 22. (SB 387) Effective January 1, 2016.)

11121.1. As used in this article, "state body" does not include any of the following:

- (a) Except as provided in subdivision (e) of Section 11121, state agencies provided for in Article VI of the California Constitution.
- (b) Districts or other local agencies whose meetings are required to be open to the public pursuant to the Ralph M. Brown Act (Chapter 9 (commencing with Section 54950) of Part 1 of Division 2 of Title 5).
- (c) State agencies provided for in Article IV of the California Constitution whose meetings are required to be open to the public pursuant to the Grunsky-Burton Open Meeting Act (Article 2.2 (commencing with Section 9027) of Chapter 1.5 of Part 1 of Division 2 of Title 2).

(d) State agencies when they are conducting proceedings pursuant to Section 3596.

(e) State agencies provided for in Section 109260 of the Health and Safety Code, except as provided in Section 109390 of the Health and Safety Code.

(f) The Credit Union Advisory Committee established pursuant to Section 14380 of the Financial Code.

(Amended by Stats. 2015, Ch. 537, Sec. 23. (SB 387) Effective January 1, 2016.)

11121.9. Each state body shall provide a copy of this article to each member of the state body upon his or her appointment to membership or assumption of office.

(Amended by Stats. 1981, Ch. 968, Sec. 7.1.)

11121.95. Any person appointed or elected to serve as a member of a state body who has not yet assumed the duties of office shall conform his or her conduct to the requirements of this article and shall be treated for purposes of this article as if he or she has already assumed office.

(Added by Stats. 1997, Ch. 949, Sec. 1. Effective January 1, 1998.)

11122. As used in this article "action taken" means a collective decision made by the members of a state body, a collective commitment or promise by the members of the state body to make a positive or negative decision or an actual vote by the members of a state body when sitting as a body or entity upon a motion, proposal, resolution, order or similar action.

(Amended by Stats. 1981, Ch. 968, Sec. 7.3.)

11122.5. (a) As used in this article, "meeting" includes any congregation of a majority of the members of a state body at the same time and place to hear, discuss, or deliberate upon any item that is within the subject matter jurisdiction of the state body to which it pertains.

(b) (1) A majority of the members of a state body shall not, outside of a meeting authorized by this chapter, use a series of communications of any kind, directly or through intermediaries, to discuss, deliberate, or take action on any item of business that is within the subject matter of the state body.

(2) Paragraph (1) shall not be construed to prevent an employee or official of a state agency from engaging in separate conversations or communications outside of a meeting authorized by this chapter with members of a legislative body in order to answer questions or provide information regarding a matter that is within the subject matter jurisdiction of the state agency, if that person does not communicate to members of the legislative body the comments or position of any other member or members of the legislative body.

(c) The prohibitions of this article do not apply to any of the following:

(1) Individual contacts or conversations between a member of a state body and any other person that do not violate subdivision (b).

(2) (A) The attendance of a majority of the members of a state body at a conference or similar gathering open to the public that involves a discussion of issues of general interest to the public or to public agencies of the type represented by the state body, if a majority of the members do not discuss among themselves, other than as part of the scheduled program, business of a specified nature that is within the subject matter jurisdiction of the state body.

(B) Subparagraph (A) does not allow members of the public free admission to a conference or similar gathering at which the organizers have required other participants or registrants to pay fees or charges as a condition of attendance.

(3) The attendance of a majority of the members of a state body at an open and publicized meeting organized to address a topic of state concern by a person or organization other than the state body, if a majority of the members do not discuss among themselves, other than as part of the scheduled program, business of a specific nature that is within the subject matter jurisdiction of the state body.

(4) The attendance of a majority of the members of a state body at an open and noticed meeting of another state body or of a legislative body of a local agency as defined by Section 54951, if a majority of the members do not discuss among themselves, other than as part of the scheduled meeting, business of a specific nature that is within the subject matter jurisdiction of the other state body.

(5) The attendance of a majority of the members of a state body at a purely social or ceremonial occasion, if a majority of the members do not discuss among themselves business of a specific nature that is within the subject matter jurisdiction of the state body.

(6) The attendance of a majority of the members of a state body at an open and noticed meeting of a standing committee of that body, if the members of the state body who are not members of the standing committee attend only as observers.

(Amended by Stats. 2009, Ch. 150, Sec. 1. (AB 1494) Effective January 1, 2010.)

11123. (a) All meetings of a state body shall be open and public and all persons shall be permitted to attend any meeting of a state body except as otherwise provided in this article.

(b) (1) This article does not prohibit a state body from holding an open or closed meeting by teleconference for the benefit of the public and state body. The meeting or proceeding held by teleconference shall otherwise comply with all applicable requirements or laws relating to a specific type of meeting or proceeding, including the following:

(A) The teleconferencing meeting shall comply with all requirements of this article applicable to other meetings.

(B) The portion of the teleconferenced meeting that is required to be open to the public shall be audible to the public at the location specified in the notice of the meeting.

(C) If the state body elects to conduct a meeting or proceeding by teleconference, it shall post agendas at all teleconference locations and conduct teleconference meetings in a manner that protects the rights of any party or member of the public appearing before the state body. Each teleconference location shall be identified in the notice and agenda of the meeting or proceeding, and each teleconference location shall be accessible to the public. The agenda shall provide an opportunity for members of the public to address the state body directly pursuant to Section 11125.7 at each teleconference location.

(D) All votes taken during a teleconferenced meeting shall be by rollcall.

(E) The portion of the teleconferenced meeting that is closed to the public may not include the consideration of any agenda item being heard pursuant to Section 11125.5.

(F) At least one member of the state body shall be physically present at the location specified in the notice of the meeting.

(2) For the purposes of this subdivision, "teleconference" means a meeting of a state body, the members of which are at different locations, connected by electronic means, through either audio or both audio and video. This section does not prohibit a state body from providing members of the public with additional locations in which the public may observe or address the state body by electronic means, through either audio or both audio and video.

(c) The state body shall publicly report any action taken and the vote or abstention on that action of each member present for the action.

(Amended by Stats. 2014, Ch. 510, Sec. 1. (AB 2720) Effective January 1, 2015.)

11123.1. All meetings of a state body that are open and public shall meet the protections and prohibitions contained in Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and the federal rules and regulations adopted in implementation thereof.

(Added by Stats. 2002, Ch. 300, Sec. 1. Effective January 1, 2003.)

11123.2. (a) For purposes of this section, the following definitions apply:

(1) "Teleconference" means a meeting of a state body, the members of which are at different locations, connected by electronic means, through either audio or both audio and video.

(2) "Teleconference location" means a physical location that is accessible to the public and from which members of the public may participate in the meeting.

(3) "Remote location" means a location from which a member of a state body participates in a meeting other than a teleconference location.

(4) "Participate remotely" means participation by a member of the body in a meeting at a remote location other than a teleconference location designated in the notice of the meeting.

(b) (1) In addition to the authorization to hold a meeting by teleconference pursuant to subdivision (b) of Section 11123 and Section 11123.5, a state body may hold an open or closed meeting by teleconference as described in this section, provided the meeting complies with all of this section's requirements and, except as set forth in this section, it also complies with all other applicable requirements of this article relating to the specific type of meeting.

(2) This section does not limit or affect the ability of a state body to hold a teleconference meeting under another provision of this article, including Sections 11123 and 11123.5.

(c) The portion of the teleconferenced meeting that is required to be open to the public shall be visible and audible to the public at each teleconference location.

(d) (1) The state body shall provide a means by which the public may remotely hear audio of the meeting, remotely observe the meeting, remotely address the body, or attend the meeting by providing on the posted agenda a teleconference telephone number, an internet website or other online platform, and a physical address for each teleconference location. The telephonic or online means provided to the public to access the meeting shall be equivalent to the telephonic or online means provided to a member of the state body participating remotely.

(2) The applicable teleconference telephone number, internet website or other online platform, and physical address of each teleconference location, as well as any other information indicating how the public can access the meeting remotely and in person, shall be specified in any notice required by this article.

(3) If the state body allows members of the public to observe and address the meeting telephonically or otherwise electronically, the state body shall do both of the following:

(A) Implement a procedure for receiving and swiftly resolving requests for reasonable modification or accommodation from individuals with disabilities, consistent with the federal Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12101 et seq.), and resolving any doubt whatsoever in favor of accessibility.

(B) Advertise that procedure each time notice is given of the means by which members of the public may observe the meeting and offer public comment.

(e) This section does not prohibit a state body from providing members of the public with additional locations from which the public may observe or address the state body by electronic means, through either audio or both audio and video.

(f) (1) The agenda shall provide an opportunity for members of the public to address the state body directly pursuant to Section 11125.7.

(2) Members of the public shall be entitled to exercise their right to directly address the state body during the teleconferenced meeting without being required to submit public comments before the meeting or in writing.

(g) The state body shall post the agenda on its internet website and, on the day of the meeting, at each teleconference location.

(h) This section does not affect the requirement prescribed by this article that the state body post an agenda of a meeting in accordance with the applicable notice requirements of this article, including Section 11125, requiring the state body to post an agenda of a meeting at least 10 days in advance of the meeting, Section 11125.4, applicable to special meetings, and Sections 11125.5 and 11125.6, applicable to emergency meetings.

(i) At least one member of the state body shall be physically present at each teleconference location.

(j) (1) Except as provided in paragraph (2), a majority of the members of the state body shall be physically present at the same teleconference location. Additional members of the state body in excess of a majority of the members may attend and participate in the meeting from a remote location. A remote location is not required to be accessible to the public. The notice and agenda shall not disclose information regarding a remote location.

(2) A member attending and participating from a remote location may count toward the majority required to hold a teleconference if both of the following conditions are met:

(A) The member has a need related to a physical or mental disability, as those terms are defined in Sections 12926 and 12926.1, that is not otherwise reasonably accommodated pursuant to the federal Americans with Disability Act of 1990 (42 U.S.C. Sec. 12101 et seq.).

(B) The member notifies the state body at the earliest opportunity possible, including at the start of a meeting, of their need to participate remotely, including providing a general description of the circumstances relating to their need to participate remotely at the given meeting.

(3) If a member notifies the body of the member's need to attend and participate remotely pursuant to paragraph (2), the body shall take action to approve the exception and shall request a general description of the circumstances relating to the member's need to participate remotely at the meeting, for each meeting in which the member seeks to participate remotely. The body shall not require the member to provide a general description that exceeds 20 words or to disclose any medical diagnosis or disability, or any personal medical information that is already exempt under existing law, such as the Confidentiality of Medical Information Act (Part 2.6 (commencing with Section 56) of Division 1 of the Civil Code).

(4) If a member of the state body attends the meeting by teleconference from a remote location, the member shall disclose whether any other individuals 18 years of age or older are present in the room at the remote location with the member, and the general nature of the member's relationship with any such individuals.

(k) (1) Except as provided in paragraph (2), the members of the state body shall visibly appear on camera during the open portion of a meeting that is publicly accessible via the internet or other online platform.

(2) The visual appearance of a member of the state body on camera may cease only when the appearance would be technologically impracticable, including, but not limited to, when the member experiences a lack of reliable broadband or internet connectivity that would be remedied by joining without video, or when the visual display of meeting materials, information, or speakers on the internet or other online platform requires the visual appearance of a member of a state body on camera to cease.

(3) If a member of the state body does not appear on camera due to challenges with internet connectivity, the member shall announce the reason for their nonappearance when they turn off their camera.

(l) All votes taken during the teleconferenced meeting shall be by rollcall.

(m) The state body shall publicly report any action taken and the vote or abstention on that action of each member present for the action.

(n) The portion of the teleconferenced meeting that is closed to the public shall not include the consideration of any agenda item being heard pursuant to Section 11125.5.

(o) Upon discovering that a means of remote public access and participation required by subdivision (d) has failed during a meeting and cannot be restored, the state body shall end or adjourn the meeting in accordance with Section 11128.5. In addition to any other requirements that may apply, the state body shall provide notice of the meeting's end or adjournment on the state body's internet website and by email to any person who has requested notice of meetings of the state body by email under this article. If the meeting will be adjourned and reconvened on the same day, further notice shall be provided by an automated message on a telephone line posted on the state body's agenda, internet website, or by a similar means, that will communicate when the state body intends to reconvene the meeting and how a member of the public may hear audio of the meeting or observe the meeting.

(p) This section shall remain in effect only until January 1, 2026, and as of that date is repealed.

(Added by Stats. 2023, Ch. 216, Sec. 1. (SB 544) Effective January 1, 2024. Repealed as of January 1, 2026, by its own provisions.)

11123.5. (a) For purposes of this section, the following definitions apply:

(1) "Participate remotely" means participation in a meeting at a location other than the physical location designated in the agenda of the meeting.

(2) "Remote location" means a location other than the primary physical location designated in the agenda of a meeting.

(3) "Teleconference" has the same meaning as in Section 11123.

(b) In addition to the authorization to hold a meeting by teleconference pursuant to subdivision (b) of Section 11123 or Section 11123.2, any state body that is an advisory board, advisory commission, advisory committee, advisory subcommittee, or similar multimember advisory body may hold an open meeting by teleconference as described in this section, provided the meeting complies with all of the section's requirements and, except as set forth in this section, it also complies with all other applicable requirements of this article.

(c) A member of a state body as described in subdivision (b) who participates in a teleconference meeting from a remote location subject to this section's requirements shall be listed in the minutes of the meeting.

(d) The state body shall provide notice to the public at least 24 hours before the meeting that identifies any member who will participate remotely by posting the notice on its internet website and by emailing notice to any person who has requested notice of meetings of the state body under this article. The location of a member of a state body who will participate remotely is not required to be disclosed in the public notice or email and need not be accessible to the public. The notice of the meeting shall also identify the primary physical meeting location designated pursuant to subdivision (f).

(e) This section does not affect the requirement prescribed by this article that the state body post an agenda of a meeting at least 10 days in advance of the meeting. The agenda shall include information regarding the physical meeting location designated pursuant to subdivision (f), but is not required to disclose information regarding any remote location.

(f) A state body described in subdivision (b) shall designate the primary physical meeting location in the notice of the meeting where members of the public may physically attend the meeting, observe and hear the meeting, and participate. At least one staff member of the state body shall be present at the primary physical meeting location during the meeting. The state body shall post the agenda at the primary physical meeting location, but need not post the agenda at a remote location.

(g) When a member of a state body described in subdivision (b) participates remotely in a meeting subject to this section's requirements, the state body shall provide a means by which the public may remotely hear audio of the meeting or remotely observe the meeting, including, if available, equal access equivalent to members of the state body participating remotely. The applicable teleconference phone number or internet website, or other information indicating how the public can access the meeting remotely, shall be in the 24-hour notice described in subdivision (b) that is available to the public.

(h) (1) Except as provided in paragraph (2), the members of the state body shall visibly appear on camera during the open portion of a meeting that is publicly accessible via the internet or other online platform.

(2) The visual appearance of a member of a state body on camera may cease only when the appearance would be technologically impracticable, including, but not limited to, when the member experiences a lack of reliable broadband or internet connectivity that would be remedied by joining without video, or when the visual display of meeting materials, information, or speakers on the internet or other online platform requires the visual appearance of a member of a state body on camera to cease.

(3) If a member of the body does not appear on camera due to challenges with internet connectivity, the member shall announce the reason for their nonappearance when they turn off their camera.

(i) Upon discovering that a means of remote access required by subdivision (g) has failed during a meeting, the state body described in subdivision (b) shall end or adjourn the meeting in accordance with Section 11128.5. In addition to any other requirements that may apply, the state body shall provide notice of the meeting's end or adjournment on its internet website and by email to any person who has requested notice of meetings of the state body under this article. If the meeting will be adjourned and reconvened on the same day, further notice shall be provided by an automated message on a telephone line posted on the state body's agenda, or by a similar means, that will communicate when the state body intends to reconvene the meeting and how a member of the public may hear audio of the meeting or observe the meeting.

(j) This section does not limit or affect the ability of a state body to hold a teleconference meeting under another provision of this article.

(k) This section shall remain in effect only until January 1, 2026, and as of that date is repealed.

(Amended by Stats. 2023, Ch. 216, Sec. 2. (SB 544) Effective January 1, 2024. Repealed as of January 1, 2026, by its own provisions. See later version added by Sec. 3 of Stats. 2023, Ch. 216.)

11123.5. (a) In addition to the authorization to hold a meeting by teleconference pursuant to subdivision (b) of Section 11123, any state body that is an advisory board, advisory commission, advisory committee, advisory subcommittee, or similar multimember advisory body may hold an open meeting by teleconference as described in this section, provided the meeting complies with all of the section's requirements and, except as set forth in this section, it also complies with all other applicable requirements of this article.

(b) A member of a state body as described in subdivision (a) who participates in a teleconference meeting from a remote location subject to this section's requirements shall be listed in the minutes of the meeting.

(c) The state body shall provide notice to the public at least 24 hours before the meeting that identifies any member who will participate remotely by posting the notice on its internet website and by emailing notice to any person who has requested notice of meetings of the state body under this article. The location of a member of a state body who will participate remotely is not required to be disclosed in the public notice or email and need not be accessible to the public. The notice of the meeting shall also identify the primary physical meeting location designated pursuant to subdivision (e).

(d) This section does not affect the requirement prescribed by this article that the state body post an agenda of a meeting at least 10 days in advance of the meeting. The agenda shall include information regarding the physical meeting location designated pursuant to subdivision (e), but is not required to disclose information regarding any remote location.

(e) A state body described in subdivision (a) shall designate the primary physical meeting location in the notice of the meeting where members of the public may physically attend the meeting and participate. A quorum of the members of the state body shall be in attendance at the primary physical meeting location, and members of the state body participating remotely shall not count towards establishing a quorum. All decisions taken during a meeting by teleconference shall be by rollcall vote. The state body shall post the agenda at the primary physical meeting location, but need not post the agenda at a remote location.

(f) When a member of a state body described in subdivision (a) participates remotely in a meeting subject to this section's requirements, the state body shall provide a means by which the public may remotely hear audio of the meeting or remotely observe the meeting, including, if available, equal access equivalent to members of the state body participating remotely. The applicable teleconference phone number or internet website, or other information indicating how the public can access the meeting remotely, shall be in the 24-hour notice described in subdivision (a) that is available to the public.

(g) Upon discovering that a means of remote access required by subdivision (f) has failed during a meeting, the state body described in subdivision (a) shall end or adjourn the meeting in accordance with Section 11128.5. In addition to any other requirements that may apply, the state body shall provide notice of the meeting's end or adjournment on its internet website and by email to any person who has requested notice of meetings of the state body under this article. If the meeting will be adjourned and reconvened on the same day, further notice shall be provided by an automated message on a telephone line posted on the state body's agenda, or by a similar means, that will communicate when the state body intends to reconvene the meeting and how a member of the public may hear audio of the meeting or observe the meeting.

(h) For purposes of this section:

(1) "Participate remotely" means participation in a meeting at a location other than the physical location designated in the agenda of the meeting.

(2) "Remote location" means a location other than the primary physical location designated in the agenda of a meeting.

(3) "Teleconference" has the same meaning as in Section 11123.

(i) This section does not limit or affect the ability of a state body to hold a teleconference meeting under another provision of this article.

(j) This section shall become operative on January 1, 2026.

(Repealed (in Sec. 2) and added by Stats. 2023, Ch. 216, Sec. 3. (SB 544) Effective January 1, 2024. Operative January 1, 2026, by its own provisions.)

11124. (a) No person shall be required, as a condition to attendance at a meeting of a state body, to register their name, to provide other information, to complete a questionnaire, or otherwise to fulfill any condition precedent to their attendance.

(b) If an attendance list, register, questionnaire, or other similar document is posted at or near the entrance to the room where the meeting is to be held, or is circulated to persons present during the meeting, it shall state clearly that the signing, registering, or completion of the document is voluntary, and that all persons may attend the meeting regardless of whether a person signs, registers, or completes the document.

(c) This section does not apply to an internet website or other online platform that may require the submission of information to log into a teleconferenced meeting, provided, however, that a person required to submit such information shall be permitted to submit a pseudonym or other anonymous information when using the internet website or other online platform to attend the meeting.

(Amended by Stats. 2023, Ch. 216, Sec. 4. (SB 544) Effective January 1, 2024.)

11124.1. (a) Any person attending an open and public meeting of the state body shall have the right to record the proceedings with an audio or video recorder or a still or motion picture camera in the absence of a reasonable finding by the state body that the recording cannot continue without noise, illumination, or obstruction of view that constitutes, or would constitute, a persistent disruption of the proceedings.

(b) Any audio or video recording of an open and public meeting made for whatever purpose by or at the direction of the state body shall be subject to inspection pursuant to the California Public Records Act (Division 10 (commencing with Section 7920.000) of Title 1), but may be erased or destroyed 30 days after the recording. Any inspection of an audio or video recording shall be provided without charge on equipment made available by the state body.

(c) No state body shall prohibit or otherwise restrict the broadcast of its open and public meetings in the absence of a reasonable finding that the broadcast cannot be accomplished without noise, illumination, or obstruction of view that would constitute a persistent disruption of the proceedings.

(Amended by Stats. 2021, Ch. 615, Sec. 161. (AB 474) Effective January 1, 2022. Operative January 1, 2023, pursuant to Sec. 463 of Stats. 2021, Ch. 615.)

11125. (a) The state body shall provide notice of its meeting to any person who requests that notice in writing. Notice shall be given and also made available on the Internet at least 10 days in advance of the meeting, and shall include the name, address, and telephone number of any person who can provide further information prior to the meeting, but need not include a list of witnesses expected to appear at the meeting. The written notice shall additionally include the address of the Internet site where notices required by this article are made available.

(b) The notice of a meeting of a body that is a state body shall include a specific agenda for the meeting, containing a brief description of the items of business to be transacted or discussed in either open or closed session. A brief general description of an item generally need not exceed 20 words. A description of an item to be transacted or discussed in closed session shall include a citation of the specific statutory authority under which a closed session is being held. No item shall be added to the agenda subsequent to the provision of this notice, unless otherwise permitted by this article.

(c) Notice of a meeting of a state body that complies with this section shall also constitute notice of a meeting of an advisory body of that state body, provided that the business to be discussed by the advisory body is covered by the notice of the meeting of the state body, provided that the specific time and place of the advisory body's meeting is announced during the open and public state body's meeting, and provided that the advisory body's meeting is conducted within a reasonable time of, and nearby, the meeting of the state body.

(d) A person may request, and shall be provided, notice pursuant to subdivision (a) for all meetings of a state body or for a specific meeting or meetings. In addition, at the state body's discretion, a person may request, and may be provided, notice of only those meetings of a state body at which a particular subject or subjects specified in the request will be discussed.

(e) A request for notice of more than one meeting of a state body shall be subject to the provisions of Section 14911.

(f) The notice shall be made available in appropriate alternative formats, as required by Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and the federal rules and regulations adopted in implementation thereof, upon request by any person with a disability. The notice shall include information regarding how, to whom, and by when a request for any disability-related modification or accommodation, including auxiliary aids or services may be made by a person with a disability who requires these aids or services in order to participate in the public meeting.

(Amended by Stats. 2002, Ch. 300, Sec. 2. Effective January 1, 2003.)

11125.1. (a) Notwithstanding Section 7922.000 or any other provisions of law, agendas of public meetings and other writings, when distributed to all, or a majority of all, of the members of a state body by any person in connection with a matter subject to discussion or consideration at a public meeting of the body, are disclosable public records under the California Public Records Act (Division 10 (commencing with Section 7920.000) of Title 1), and shall be made available upon request without delay. However, this section shall not include any writing exempt from public disclosure under Section 7924.100, 7924.105, 7924.110, 7924.510, or 7924.700 of this code, any provision listed in Section 7920.505 of this code, or Section 489.1 or 583 of the Public Utilities Code.

(b) Writings that are public records under subdivision (a) and that are distributed to members of the state body prior to or during a meeting, pertaining to any item to be considered during the meeting, shall be made available for public inspection at the meeting if prepared by the state body or a member of the state body, or after the meeting if prepared by some other person. These writings shall be made available in appropriate alternative

formats, as required by Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and the federal rules and regulations adopted in implementation thereof, upon request by a person with a disability.

(c) In the case of the Franchise Tax Board, prior to that state body taking final action on any item, writings pertaining to that item that are public records under subdivision (a) that are prepared and distributed by the Franchise Tax Board staff or individual members to members of the state body prior to or during a meeting shall be:

- (1) Made available for public inspection at that meeting.
- (2) Distributed to all persons who request notice in writing pursuant to subdivision (a) of Section 11125.
- (3) Made available on the internet.

(d) Prior to the State Board of Equalization taking final action on any item that does not involve a named taxpayer or feepayer, writings pertaining to that item that are public records under subdivision (a) that are prepared and distributed by board staff or individual members to members of the state body prior to or during a meeting shall be:

- (1) Made available for public inspection at that meeting.
- (2) Distributed to all persons who request or have requested copies of these writings.
- (3) Made available on the internet.

(e) Nothing in this section shall be construed to prevent a state body from charging a fee or deposit for a copy of a public record pursuant to Section 7922.530, except that no surcharge shall be imposed on persons with disabilities in violation of Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and the federal rules and regulations adopted in implementation thereof. The writings described in subdivision (b) are subject to the requirements of the California Public Records Act (Division 10 (commencing with Section 7920.000) of Title 1), and shall not be construed to limit or delay the public's right to inspect any record required to be disclosed by that act, or to limit the public's right to inspect any record covered by that act. This section shall not be construed to be applicable to any writings solely because they are properly discussed in a closed session of a state body. Nothing in this article shall be construed to require a state body to place any paid advertisement or any other paid notice in any publication.

(f) "Writing" for purposes of this section means "writing" as defined under Section 7920.545.

(Amended by Stats. 2021, Ch. 615, Sec. 162. (AB 474) Effective January 1, 2022. Operative January 1, 2023, pursuant to Sec. 463 of Stats. 2021, Ch. 615.)

11125.2. Any state body shall report publicly at a subsequent public meeting any action taken, and any rollcall vote thereon, to appoint, employ, or dismiss a public employee arising out of any closed session of the state body.

(Amended by Stats. 1981, Ch. 968, Sec. 10.3.)

11125.3. (a) Notwithstanding Section 11125, a state body may take action on items of business not appearing on the posted agenda under any of the conditions stated below:

- (1) Upon a determination by a majority vote of the state body that an emergency situation exists, as defined in Section 11125.5.
- (2) Upon a determination by a two-thirds vote of the state body, or, if less than two-thirds of the members are present, a unanimous vote of those members present, that there exists a need to take immediate action and that the need for action came to the attention of the state body subsequent to the agenda being posted as specified in Section 11125.

(b) Notice of the additional item to be considered shall be provided to each member of the state body and to all parties that have requested notice of its meetings as soon as is practicable after a determination of the need to consider the item is made, but shall be delivered in a manner that allows it to be received by the members and by newspapers of general circulation and radio or television stations at least 48 hours before the time of the meeting specified in the notice. Notice shall be made available to newspapers of general circulation and radio or television stations by providing that notice to all national press wire services. Notice shall also be made available on the Internet as soon as is practicable after the decision to consider additional items at a meeting has been made.

(Amended by Stats. 2001, Ch. 243, Sec. 9. Effective January 1, 2002.)

11125.4. (a) A special meeting may be called at any time by the presiding officer of the state body or by a majority of the members of the state body. A special meeting may only be called for one of the following purposes when compliance with the 10-day notice provisions of Section 11125 would impose a substantial hardship on the state body or when immediate action is required to protect the public interest:

- (1) To consider "pending litigation" as that term is defined in subdivision (e) of Section 11126.
- (2) To consider proposed legislation.
- (3) To consider issuance of a legal opinion.
- (4) To consider disciplinary action involving a state officer or employee.
- (5) To consider the purchase, sale, exchange, or lease of real property.
- (6) To consider license examinations and applications.
- (7) To consider an action on a loan or grant provided pursuant to Division 31 (commencing with Section 50000) of the Health and Safety Code.
- (8) To consider its response to a confidential final draft audit report as permitted by Section 11126.2.
- (9) To provide for an interim executive officer of a state body upon the death, incapacity, or vacancy in the office of the executive officer.

(b) When a special meeting is called pursuant to one of the purposes specified in subdivision (a), the state body shall provide notice of the special meeting to each member of the state body and to all parties that have requested notice of its meetings as soon as is practicable after the decision to call a special meeting has been made, but shall deliver the notice in a manner that allows it to be received by the members and by newspapers of general circulation and radio or television stations at least 48 hours before the time of the special meeting specified in the notice. Notice shall be made available to newspapers of general circulation and radio or television stations by providing that notice to all national press wire services. Notice shall also be made available on the Internet within the time periods required by this section. The notice shall specify the time and place of the special meeting and the business to be transacted. The written notice shall additionally specify the address of the Internet Web site where notices required by this article are made available. No other business shall be considered at a special meeting by the state body. The written notice may be dispensed with as to any member who at or prior to the time the meeting convenes files with the clerk or secretary of the state body a written waiver of notice. The waiver may be given by telegram, facsimile transmission, or similar means. The written notice may also be dispensed with as to any member who is actually present at the meeting at the time it convenes. Notice shall be required pursuant to this section regardless of whether any action is taken at the special meeting.

(c) At the commencement of any special meeting, the state body must make a finding in open session that the delay necessitated by providing notice 10 days prior to a meeting as required by Section 11125 would cause a substantial hardship on the body or that immediate action is required to protect the public interest. The finding shall set forth the specific facts that constitute the hardship to the body or the impending harm to the public interest. The finding shall be adopted by a two-thirds vote of the body, or, if less than two-thirds of the members are present, a unanimous vote of those members present. The finding shall be made available on the Internet. Failure to adopt the finding terminates the meeting.

(Amended by Stats. 2007, Ch. 92, Sec. 1. Effective January 1, 2008.)

11125.5. (a) In the case of an emergency situation involving matters upon which prompt action is necessary due to the disruption or threatened disruption of public facilities, a state body may hold an emergency meeting without complying with the 10-day notice requirement of Section 11125 or the 48-hour notice requirement of Section 11125.4.

(b) For purposes of this section, "emergency situation" means any of the following, as determined by a majority of the members of the state body during a meeting prior to the emergency meeting, or at the beginning of the emergency meeting:

- (1) Work stoppage or other activity that severely impairs public health or safety, or both.

(2) Crippling disaster that severely impairs public health or safety, or both.

(c) However, newspapers of general circulation and radio or television stations that have requested notice of meetings pursuant to Section 11125 shall be notified by the presiding officer of the state body, or a designee thereof, one hour prior to the emergency meeting by telephone. Notice shall also be made available on the Internet as soon as is practicable after the decision to call the emergency meeting has been made. If telephone services are not functioning, the notice requirements of this section shall be deemed waived, and the presiding officer of the state body, or a designee thereof, shall notify those newspapers, radio stations, or television stations of the fact of the holding of the emergency meeting, the purpose of the meeting, and any action taken at the meeting as soon after the meeting as possible.

(d) The minutes of a meeting called pursuant to this section, a list of persons who the presiding officer of the state body, or a designee thereof, notified or attempted to notify, a copy of the rollcall vote, and any action taken at the meeting shall be posted for a minimum of 10 days in a public place, and also made available on the Internet for a minimum of 10 days, as soon after the meeting as possible.

(Amended by Stats. 1999, Ch. 393, Sec. 3. Effective January 1, 2000. As provided in Sec. 7 of Ch. 393, amendment is to be implemented on July 1, 2001, or other date authorized by Dept. of Information Technology pursuant to Executive Order D-3-99.)

11125.6. (a) An emergency meeting may be called at any time by the president of the Fish and Game Commission or by a majority of the members of the commission to consider an appeal of a closure of or restriction in a fishery adopted pursuant to Section 7710 of the Fish and Game Code. In the case of an emergency situation involving matters upon which prompt action is necessary due to the disruption or threatened disruption of an established fishery, the commission may hold an emergency meeting without complying with the 10-day notice requirement of Section 11125 or the 48-hour notice requirement of Section 11125.4 if the delay necessitated by providing the 10-day notice of a public meeting required by Section 11125 or the 48-hour notice required by Section 11125.4 would significantly adversely impact the economic benefits of a fishery to the participants in the fishery and to the people of the state or significantly adversely impact the sustainability of a fishery managed by the state.

(b) At the commencement of an emergency meeting called pursuant to this section, the commission shall make a finding in open session that the delay necessitated by providing notice 10 days prior to a meeting as required by Section 11125 or 48 hours prior to a meeting as required by Section 11125.4 would significantly adversely impact the economic benefits of a fishery to the participants in the fishery and to the people of the state or significantly adversely impact the sustainability of a fishery managed by the state. The finding shall set forth the specific facts that constitute the impact to the economic benefits of the fishery or the sustainability of the fishery. The finding shall be adopted by a vote of at least four members of the commission, or, if less than four of the members are present, a unanimous vote of those members present. Failure to adopt the finding shall terminate the meeting.

(c) Newspapers of general circulation and radio or television stations that have requested notice of meetings pursuant to Section 11125 shall be notified by the presiding officer of the commission, or a designee thereof, one hour prior to the emergency meeting by telephone.

(d) The minutes of an emergency meeting called pursuant to this section, a list of persons who the president of the commission, or a designee thereof, notified or attempted to notify, a copy of the rollcall vote, and any action taken at the meeting shall be posted for a minimum of 10 days in a public place as soon after the meeting as possible.

(Added by Stats. 1998, Ch. 1052, Sec. 21. Effective January 1, 1999.)

11125.7. (a) Except as otherwise provided in this section, the state body shall provide an opportunity for members of the public to directly address the state body on each agenda item before or during the state body's discussion or consideration of the item. This section is not applicable if the agenda item has already been considered by a committee composed exclusively of members of the state body at a public meeting where interested members of the public were afforded the opportunity to address the committee on the item, before or during the committee's consideration of the item, unless the item has been substantially changed since the committee heard the item, as determined by the state body. Every notice for a special meeting at which action is proposed to be taken on an item shall provide an opportunity for members of the public to directly address the state body concerning that item prior to action on the item. In addition, the notice requirement of Section 11125 shall not preclude the acceptance of testimony at meetings, other than emergency meetings, from members of the public if no action is taken by the state body at the same meeting on matters brought before the body by members of the public.

(b) The state body may adopt reasonable regulations to ensure that the intent of subdivision (a) is carried out, including, but not limited to, regulations limiting the total amount of time allocated for public comment on particular issues and for each individual speaker.

(c) (1) Notwithstanding subdivision (b), when a state body limits time for public comment the state body shall provide at least twice the allotted time to a member of the public who utilizes a translator or other translating technology to ensure that non-English speakers receive the same opportunity to directly address the state body.

(2) Paragraph (1) shall not apply if the state body utilizes simultaneous translation equipment in a manner that allows the state body to hear the translated public testimony simultaneously.

(d) The state body shall not prohibit public criticism of the policies, programs, or services of the state body, or of the acts or omissions of the state body. Nothing in this subdivision shall confer any privilege or protection for expression beyond that otherwise provided by law.

(e) This section is not applicable to any of the following:

(1) Closed sessions held pursuant to Section 11126.

(2) Decisions regarding proceedings held pursuant to Chapter 5 (commencing with Section 11500), relating to administrative adjudication, or to the conduct of those proceedings.

(3) Hearings conducted by the California Victim Compensation Board pursuant to Sections 13963 and 13963.1.

(4) Agenda items that involve decisions of the Public Utilities Commission regarding adjudicatory hearings held pursuant to Chapter 9 (commencing with Section 1701) of Part 1 of Division 1 of the Public Utilities Code. For all other agenda items, the commission shall provide members of the public, other than those who have already participated in the proceedings underlying the agenda item, an opportunity to directly address the commission before or during the commission's consideration of the item.

(Amended by Stats. 2021, Ch. 63, Sec. 1. (AB 1291) Effective January 1, 2022.)

11125.8. (a) Notwithstanding Section 11131.5, in any hearing that the California Victim Compensation Board conducts pursuant to Section 13963.1 and that the applicant or applicant's representative does not request be open to the public, no notice, agenda, announcement, or report required under this article need identify the applicant.

(b) In any hearing that the board conducts pursuant to Section 13963.1 and that the applicant or applicant's representative does not request be open to the public, the board shall disclose that the hearing is being held pursuant to Section 13963.1. That disclosure shall be deemed to satisfy the requirements of subdivision (a) of Section 11126.3.

(Amended by Stats. 2016, Ch. 31, Sec. 72. (SB 836) Effective June 27, 2016.)

11125.9. Regional water quality control boards shall comply with the notification guidelines in Section 11125 and, in addition, shall do both of the following:

(a) Notify, in writing, all clerks of the city councils and county boards of supervisors within the regional board's jurisdiction of any and all board hearings at least 10 days prior to the hearing. Notification shall include an agenda for the meeting with contents as described in subdivision (b) of Section 11125 as well as the name, address, and telephone number of any person who can provide further information prior to the meeting, but need not include a list of witnesses expected to appear at the meeting. Each clerk, upon receipt of the notification of a board hearing, shall distribute the notice to all members of the respective city council or board of supervisors within the regional board's jurisdiction.

(b) Notify, in writing, all newspapers with a circulation rate of at least 10,000 within the regional board's jurisdiction of any and all board hearings, at least 10 days prior to the hearing. Notification shall include an agenda for the meeting with contents as described in subdivision (b) of Section 11125 as well as the name, address, and telephone number of any person who can provide further information prior to the meeting, but need not include a list of witnesses expected to appear at the meeting.

(Added by Stats. 1997, Ch. 301, Sec. 1. Effective January 1, 1998.)

11126. (a) (1) Nothing in this article shall be construed to prevent a state body from holding closed sessions during a regular or special meeting to consider the appointment, employment, evaluation of performance, or dismissal of a public employee or to hear complaints or charges brought against that employee by another person or employee unless the employee requests a public hearing.

(2) As a condition to holding a closed session on the complaints or charges to consider disciplinary action or to consider dismissal, the employee shall be given written notice of their right to have a public hearing, rather than a closed session, and that notice shall be delivered to the employee personally or by mail at least 24 hours before

the time for holding a regular or special meeting. If notice is not given, any disciplinary or other action taken against any employee at the closed session shall be null and void.

(3) The state body also may exclude from any public or closed session, during the examination of a witness, any or all other witnesses in the matter being investigated by the state body.

(4) Following the public hearing or closed session, the body may deliberate on the decision to be reached in a closed session.

(b) For the purposes of this section, "employee" does not include any person who is elected to, or appointed to a public office by, any state body. However, officers of the California State University who receive compensation for their services, other than per diem and ordinary and necessary expenses, shall, when engaged in that capacity, be considered employees. Furthermore, for purposes of this section, the term employee includes a person exempt from civil service pursuant to subdivision (e) of Section 4 of Article VII of the California Constitution.

(c) Nothing in this article shall be construed to do any of the following:

(1) Prevent state bodies that administer the licensing of persons engaging in businesses or professions from holding closed sessions to prepare, approve, grade, or administer examinations.

(2) Prevent an advisory body of a state body that administers the licensing of persons engaged in businesses or professions from conducting a closed session to discuss matters that the advisory body has found would constitute an unwarranted invasion of the privacy of an individual licensee or applicant if discussed in an open meeting, provided the advisory body does not include a quorum of the members of the state body it advises. Those matters may include review of an applicant's qualifications for licensure and an inquiry specifically related to the state body's enforcement program concerning an individual licensee or applicant where the inquiry occurs prior to the filing of a civil, criminal, or administrative disciplinary action against the licensee or applicant by the state body.

(3) Prohibit a state body from holding a closed session to deliberate on a decision to be reached in a proceeding required to be conducted pursuant to Chapter 5 (commencing with Section 11500) or similar provisions of law.

(4) Grant a right to enter any correctional institution or the grounds of a correctional institution where that right is not otherwise granted by law, nor shall anything in this article be construed to prevent a state body from holding a closed session when considering and acting upon the determination of a term, parole, or release of any individual or other disposition of an individual case, or if public disclosure of the subjects under discussion or consideration is expressly prohibited by statute.

(5) Prevent any closed session to consider the conferring of honorary degrees, or gifts, donations, and bequests that the donor or proposed donor has requested in writing to be kept confidential.

(6) Prevent the Alcoholic Beverage Control Appeals Board or the Cannabis Control Appeals Panel from holding a closed session for the purpose of holding a deliberative conference as provided in Section 11125.

(7) (A) Prevent a state body from holding closed sessions with its negotiator prior to the purchase, sale, exchange, or lease of real property by or for the state body to give instructions to its negotiator regarding the price and terms of payment for the purchase, sale, exchange, or lease.

(B) However, prior to the closed session, the state body shall hold an open and public session in which it identifies the real property or real properties that the negotiations may concern and the person or persons with whom its negotiator may negotiate.

(C) For purposes of this paragraph, the negotiator may be a member of the state body.

(D) For purposes of this paragraph, "lease" includes renewal or renegotiation of a lease.

(E) Nothing in this paragraph shall preclude a state body from holding a closed session for discussions regarding eminent domain proceedings pursuant to subdivision (e).

(8) Prevent the California Postsecondary Education Commission from holding closed sessions to consider matters pertaining to the appointment or termination of the Director of the California Postsecondary Education Commission.

(9) Prevent the Council for Private Postsecondary and Vocational Education from holding closed sessions to consider matters pertaining to the appointment or termination of the Executive Director of the Council for Private

Postsecondary and Vocational Education.

(10) Prevent the Franchise Tax Board from holding closed sessions for the purpose of discussion of confidential tax returns or information the public disclosure of which is prohibited by law, or from considering matters pertaining to the appointment or removal of the Executive Officer of the Franchise Tax Board.

(11) Require the Franchise Tax Board to notice or disclose any confidential tax information considered in closed sessions, or documents executed in connection therewith, the public disclosure of which is prohibited pursuant to Article 2 (commencing with Section 19542) of Chapter 7 of Part 10.2 of Division 2 of the Revenue and Taxation Code.

(12) Prevent the Corrections Standards Authority from holding closed sessions when considering reports of crime conditions under Section 6027 of the Penal Code.

(13) Prevent the State Air Resources Board from holding closed sessions when considering the proprietary specifications and performance data of manufacturers.

(14) Prevent the State Board of Education or the Superintendent of Public Instruction, or any committee advising the board or the Superintendent, from holding closed sessions on those portions of its review of assessment instruments pursuant to Chapter 5 (commencing with Section 60600) of Part 33 of Division 4 of Title 2 of the Education Code during which actual test content is reviewed and discussed. The purpose of this provision is to maintain the confidentiality of the assessments under review.

(15) Prevent the Department of Resources Recycling and Recovery or its auxiliary committees from holding closed sessions for the purpose of discussing confidential tax returns, discussing trade secrets or confidential or proprietary information in its possession, or discussing other data, the public disclosure of which is prohibited by law.

(16) Prevent a state body that invests retirement, pension, or endowment funds from holding closed sessions when considering investment decisions. For purposes of consideration of shareholder voting on corporate stocks held by the state body, closed sessions for the purposes of voting may be held only with respect to election of corporate directors, election of independent auditors, and other financial issues that could have a material effect on the net income of the corporation. For the purpose of real property investment decisions that may be considered in a closed session pursuant to this paragraph, a state body shall also be exempt from the provisions of paragraph (7) relating to the identification of real properties prior to the closed session.

(17) Prevent a state body, or boards, commissions, administrative officers, or other representatives that may properly be designated by law or by a state body, from holding closed sessions with its representatives in discharging its responsibilities under Chapter 10 (commencing with Section 3500), Chapter 10.3 (commencing with Section 3512), Chapter 10.5 (commencing with Section 3525), or Chapter 10.7 (commencing with Section 3540) of Division 4 of Title 1 as the sessions relate to salaries, salary schedules, or compensation paid in the form of fringe benefits. For the purposes enumerated in the preceding sentence, a state body may also meet with a state conciliator who has intervened in the proceedings.

(18) (A) Prevent a state body from holding closed sessions to consider matters posing a threat or potential threat of criminal or terrorist activity against the personnel, property, buildings, facilities, or equipment, including electronic data, owned, leased, or controlled by the state body, where disclosure of these considerations could compromise or impede the safety or security of the personnel, property, buildings, facilities, or equipment, including electronic data, owned, leased, or controlled by the state body.

(B) Notwithstanding any other law, a state body, at any regular or special meeting, may meet in a closed session pursuant to subparagraph (A) upon a two-thirds vote of the members present at the meeting.

(C) After meeting in closed session pursuant to subparagraph (A), the state body shall reconvene in open session prior to adjournment and report that a closed session was held pursuant to subparagraph (A), the general nature of the matters considered, and whether any action was taken in closed session.

(D) After meeting in closed session pursuant to subparagraph (A), the state body shall submit to the Legislative Analyst written notification stating that it held this closed session, the general reason or reasons for the closed session, the general nature of the matters considered, and whether any action was taken in closed session. The Legislative Analyst shall retain for no less than four years any written notification received from a state body pursuant to this subparagraph.

(19) Prevent the California Sex Offender Management Board from holding a closed session for the purpose of discussing matters pertaining to the application of a sex offender treatment provider for certification pursuant to Sections 290.09 and 9003 of the Penal Code. Those matters may include review of an applicant's qualifications for certification.

(d) (1) Notwithstanding any other law, any meeting of the Public Utilities Commission at which the rates of entities under the commission's jurisdiction are changed shall be open and public.

(2) Nothing in this article shall be construed to prevent the Public Utilities Commission from holding closed sessions to deliberate on the institution of proceedings, or disciplinary actions against any person or entity under the jurisdiction of the commission.

(e) (1) Nothing in this article shall be construed to prevent a state body, based on the advice of its legal counsel, from holding a closed session to confer with, or receive advice from, its legal counsel regarding pending litigation when discussion in open session concerning those matters would prejudice the position of the state body in the litigation.

(2) For purposes of this article, all expressions of the lawyer-client privilege other than those provided in this subdivision are hereby abrogated. This subdivision is the exclusive expression of the lawyer-client privilege for purposes of conducting closed session meetings pursuant to this article. For purposes of this subdivision, litigation shall be considered pending when any of the following circumstances exist:

(A) An adjudicatory proceeding before a court, an administrative body exercising its adjudicatory authority, a hearing officer, or an arbitrator, to which the state body is a party, has been initiated formally.

(B) (i) A point has been reached where, in the opinion of the state body on the advice of its legal counsel, based on existing facts and circumstances, there is a significant exposure to litigation against the state body.

(ii) Based on existing facts and circumstances, the state body is meeting only to decide whether a closed session is authorized pursuant to clause (i).

(C) Based on existing facts and circumstances, the state body has decided to initiate or is deciding whether to initiate litigation.

(3) The legal counsel of the state body shall prepare and submit to it a memorandum stating the specific reasons and legal authority for the closed session. If the closed session is pursuant to subparagraph (A) of paragraph (2), the memorandum shall include the title of the litigation. If the closed session is pursuant to subparagraph (B) or (C) of paragraph (2), the memorandum shall include the existing facts and circumstances on which it is based. The legal counsel shall submit the memorandum to the state body prior to the closed session, if feasible, and in any case no later than one week after the closed session. The memorandum shall be exempt from disclosure pursuant to Section 7927.205.

(4) For purposes of this subdivision, "litigation" includes any adjudicatory proceeding, including eminent domain, before a court, administrative body exercising its adjudicatory authority, hearing officer, or arbitrator.

(5) Disclosure of a memorandum required under this subdivision shall not be deemed as a waiver of the lawyer-client privilege, as provided for under Article 3 (commencing with Section 950) of Chapter 4 of Division 8 of the Evidence Code.

(f) In addition to subdivisions (a), (b), and (c), nothing in this article shall be construed to do any of the following:

(1) Prevent a state body operating under a joint powers agreement for insurance pooling from holding a closed session to discuss a claim for the payment of tort liability or public liability losses incurred by the state body or any member agency under the joint powers agreement.

(2) Prevent the examining committee established by the State Board of Forestry and Fire Protection, pursuant to Section 763 of the Public Resources Code, from conducting a closed session to consider disciplinary action against an individual professional forester prior to the filing of an accusation against the forester pursuant to Section 11503.

(3) Prevent the enforcement advisory committee established by the California Board of Accountancy pursuant to Section 5020 of the Business and Professions Code from conducting a closed session to consider disciplinary action against an individual accountant prior to the filing of an accusation against the accountant pursuant to Section 11503. Nothing in this article shall be construed to prevent the qualifications examining committee established by the California Board of Accountancy pursuant to Section 5023 of the Business and Professions

Code from conducting a closed hearing to interview an individual applicant or accountant regarding the applicant's qualifications.

(4) Prevent a state body, as defined in subdivision (b) of Section 11121, from conducting a closed session to consider any matter that properly could be considered in closed session by the state body whose authority it exercises.

(5) Prevent a state body, as defined in subdivision (d) of Section 11121, from conducting a closed session to consider any matter that properly could be considered in a closed session by the body defined as a state body pursuant to subdivision (a) or (b) of Section 11121.

(6) Prevent a state body, as defined in subdivision (c) of Section 11121, from conducting a closed session to consider any matter that properly could be considered in a closed session by the state body it advises.

(7) Prevent the State Board of Equalization from holding closed sessions for either of the following:

(A) When considering matters pertaining to the appointment or removal of the Executive Secretary of the State Board of Equalization.

(B) For the purpose of hearing confidential taxpayer appeals or data, the public disclosure of which is prohibited by law.

(8) Require the State Board of Equalization to disclose any action taken in closed session or documents executed in connection with that action, the public disclosure of which is prohibited by law pursuant to Sections 15619 and 15641 of this code and Sections 833, 7056, 8255, 9255, 11655, 30455, 32455, 38705, 38706, 43651, 45982, 46751, 50159, 55381, and 60609 of the Revenue and Taxation Code.

(9) Prevent the California Earthquake Prediction Evaluation Council, or other body appointed to advise the Director of Emergency Services or the Governor concerning matters relating to volcanic or earthquake predictions, from holding closed sessions when considering the evaluation of possible predictions.

(g) This article does not prevent either of the following:

(1) The Teachers' Retirement Board or the Board of Administration of the Public Employees' Retirement System from holding closed sessions when considering matters pertaining to the recruitment, appointment, employment, or removal of the chief executive officer or when considering matters pertaining to the recruitment or removal of the Chief Investment Officer of the State Teachers' Retirement System or the Public Employees' Retirement System.

(2) The Commission on Teacher Credentialing from holding closed sessions when considering matters relating to the recruitment, appointment, or removal of its executive director.

(h) This article does not prevent the Board of Administration of the Public Employees' Retirement System from holding closed sessions when considering matters relating to the development of rates and competitive strategy for plans offered pursuant to Chapter 15 (commencing with Section 21660) of Part 3 of Division 5 of Title 2.

(i) This article does not prevent the Managed Risk Medical Insurance Board from holding closed sessions when considering matters related to the development of rates and contracting strategy for entities contracting or seeking to contract with the board, entities with which the board is considering a contract, or entities with which the board is considering or enters into any other arrangement under which the board provides, receives, or arranges services or reimbursement, pursuant to Part 6.2 (commencing with Section 12693), former Part 6.3 (commencing with Section 12695), former Part 6.4 (commencing with Section 12699.50), former Part 6.5 (commencing with Section 12700), Part 6.6 (commencing with Section 12739.5), or Part 6.7 (commencing with Section 12739.70) of Division 2 of the Insurance Code.

(j) Nothing in this article shall be construed to prevent the board of the State Compensation Insurance Fund from holding closed sessions in the following:

(1) When considering matters related to claims pursuant to Chapter 1 (commencing with Section 3200) of Division 4 of the Labor Code, to the extent that confidential medical information or other individually identifiable information would be disclosed.

(2) To the extent that matters related to audits and investigations that have not been completed would be disclosed.

(3) To the extent that an internal audit containing proprietary information would be disclosed.

(4) To the extent that the session would address the development of rates, contracting strategy, underwriting, or competitive strategy, pursuant to the powers granted to the board in Chapter 4 (commencing with Section 11770) of Part 3 of Division 2 of the Insurance Code, when discussion in open session concerning those matters would prejudice the position of the State Compensation Insurance Fund.

(k) The State Compensation Insurance Fund shall comply with the procedures specified in Section 11125.4 of the Government Code with respect to any closed session or meeting authorized by subdivision (j), and in addition shall provide an opportunity for a member of the public to be heard on the issue of the appropriateness of closing the meeting or session.

(Amended by Stats. 2021, Ch. 615, Sec. 163. (AB 474) Effective January 1, 2022. Operative January 1, 2023, pursuant to Sec. 463 of Stats. 2021, Ch. 615.)

11126.1. The state body shall designate a clerk or other officer or employee of the state body, who shall then attend each closed session of the state body and keep and enter in a minute book a record of topics discussed and decisions made at the meeting. The minute book made pursuant to this section is not a public record subject to inspection pursuant to the California Public Records Act (Division 10 (commencing with Section 7920.000) of Title 1), and shall be kept confidential. The minute book shall be available to members of the state body or, if a violation of this chapter is alleged to have occurred at a closed session, to a court of general jurisdiction. The minute book may, but need not, consist of a recording of the closed session.

(Amended by Stats. 2021, Ch. 615, Sec. 164. (AB 474) Effective January 1, 2022. Operative January 1, 2023, pursuant to Sec. 463 of Stats. 2021, Ch. 615.)

11126.2. (a) Nothing in this article shall be construed to prohibit a state body that has received a confidential final draft audit report from the Bureau of State Audits from holding closed sessions to discuss its response to that report.

(b) After the public release of an audit report by the Bureau of State Audits, if a state body meets to discuss the audit report, it shall do so in an open session unless exempted from that requirement by some other provision of law.

(Added by Stats. 2004, Ch. 576, Sec. 2. Effective January 1, 2005.)

11126.3. (a) Prior to holding any closed session, the state body shall disclose, in an open meeting, the general nature of the item or items to be discussed in the closed session. The disclosure may take the form of a reference to the item or items as they are listed by number or letter on the agenda. If the session is closed pursuant to paragraph (2) of subdivision (d) of Section 11126, the state body shall state the title of, or otherwise specifically identify, the proceeding or disciplinary action contemplated. However, should the body determine that to do so would jeopardize the body's ability to effectuate service of process upon one or more unserved parties if the proceeding or disciplinary action is commenced or that to do so would fail to protect the private economic and business reputation of the person or entity if the proceeding or disciplinary action is not commenced, then the state body shall notice that there will be a closed session and describe in general terms the purpose of that session. If the session is closed pursuant to subparagraph (A) of paragraph (2) of subdivision (e) of Section 11126, the state body shall state the title of, or otherwise specifically identify, the litigation to be discussed unless the body states that to do so would jeopardize the body's ability to effectuate service of process upon one or more unserved parties, or that to do so would jeopardize its ability to conclude existing settlement negotiations to its advantage.

(b) In the closed session, the state body may consider only those matters covered in its disclosure.

(c) The disclosure shall be made as part of the notice provided for the meeting pursuant to Section 11125 or pursuant to subdivision (a) of Section 92032 of the Education Code and of any order or notice required by Section 11129.

(d) If, after the agenda has been published in compliance with this article, any pending litigation (under subdivision (e) of Section 11126) matters arise, the postponement of which will prevent the state body from complying with any statutory, court-ordered, or other legally imposed deadline, the state body may proceed to discuss those matters in closed session and shall publicly announce in the meeting the title of, or otherwise specifically identify, the litigation to be discussed, unless the body states that to do so would jeopardize the body's ability to effectuate service of process upon one or more unserved parties, or that to do so would jeopardize its ability to conclude existing settlement negotiations to its advantage. Such an announcement shall be deemed to comply fully with the requirements of this section.

(e) Nothing in this section shall require or authorize a disclosure of names or other information that would constitute an invasion of privacy or otherwise unnecessarily divulge the particular facts concerning the closed

session or the disclosure of which is prohibited by state or federal law.

(f) After any closed session, the state body shall reconvene into open session prior to adjournment and shall make any reports, provide any documentation, and make any other disclosures required by Section 11125.2 of action taken in the closed session.

(g) The announcements required to be made in open session pursuant to this section may be made at the location announced in the agenda for the closed session, as long as the public is allowed to be present at that location for the purpose of hearing the announcement.

(Amended by Stats. 2001, Ch. 243, Sec. 11. Effective January 1, 2002.)

11126.4. (a) Nothing in this article shall be construed to prevent the California Gambling Control Commission from holding a closed session when discussing matters involving trade secrets, nonpublic financial data, confidential or proprietary information, and other data and information, the public disclosure of which is prohibited by law or a tribal-state gaming compact.

(b) Discussion in closed session authorized by this section shall be limited to the confidential data and information related to the agenda item and shall not include discussion of any other information or matter.

(c) Before going into closed session the commission shall publicly announce the type of data or information to be discussed in closed session, which shall be recorded upon the commission minutes.

(d) Action taken on agenda items discussed pursuant to this section shall be taken in open session.

(Added by Stats. 2005, Ch. 274, Sec. 1. Effective January 1, 2006.)

11126.4.5. (a) This article does not prohibit the Tribal Nation Grant Panel from holding a closed session when discussing matters involving information relating to the administration of Article 2.3 (commencing with Section 12019.30) of Chapter 1 of Part 2 that describes, directly or indirectly, the internal affairs of an eligible tribe, including, but not limited to, the finances and competitive business plans of an eligible tribe.

(b) Discussion in closed session authorized by this section shall be limited to the confidential information related to the agenda item and shall not include discussion of any other information or matter.

(c) Before going into closed session, the Tribal Nation Grant Panel shall publicly announce the type of information to be discussed in closed session, which shall be recorded in the minutes.

(d) Action taken on agenda items discussed pursuant to this section shall be taken in open session.

(e) For purposes of this section, the terms "Tribal Nation Grant Panel" and "eligible tribe" shall have the same meanings as set forth in Article 2.3 (commencing with Section 12019.30) of Chapter 1 of Part 2.

(Added by Stats. 2018, Ch. 801, Sec. 1. (AB 880) Effective January 1, 2019.)

11126.5. In the event that any meeting is willfully interrupted by a group or groups of persons so as to render the orderly conduct of such meeting unfeasible and order cannot be restored by the removal of individuals who are willfully interrupting the meeting the state body conducting the meeting may order the meeting room cleared and continue in session. Nothing in this section shall prohibit the state body from establishing a procedure for readmitting an individual or individuals not responsible for willfully disturbing the orderly conduct of the meeting. Notwithstanding any other provision of law, only matters appearing on the agenda may be considered in such a session. Representatives of the press or other news media, except those participating in the disturbance, shall be allowed to attend any session held pursuant to this section.

(Amended by Stats. 1981, Ch. 968, Sec. 15.)

11126.7. No fees may be charged by a state body for providing a notice required by Section 11125 or for carrying out any provision of this article, except as specifically authorized pursuant to this article.

(Amended by Stats. 1981, Ch. 968, Sec. 16.)

11127. Each provision of this article shall apply to every state body unless the body is specifically excepted from that provision by law or is covered by any other conflicting provision of law.

(Amended by Stats. 1981, Ch. 968, Sec. 17.)

11128. Each closed session of a state body shall be held only during a regular or special meeting of the body.

(Amended by Stats. 1981, Ch. 968, Sec. 18.)

11128.5. The state body may adjourn any regular, adjourned regular, special, or adjourned special meeting to a time and place specified in the order of adjournment. Less than a quorum may so adjourn from time to time. If all members are absent from any regular or adjourned regular meeting, the clerk or secretary of the state body may declare the meeting adjourned to a stated time and place and he or she shall cause a written notice of the adjournment to be given in the same manner as provided in Section 11125.4 for special meetings, unless that notice is waived as provided for special meetings. A copy of the order or notice of adjournment shall be conspicuously posted on or near the door of the place where the regular, adjourned regular, special, or adjourned special meeting was held within 24 hours after the time of the adjournment. When a regular or adjourned regular meeting is adjourned as provided in this section, the resulting adjourned regular meeting is a regular meeting for all purposes. When an order of adjournment of any meeting fails to state the hour at which the adjourned meeting is to be held, it shall be held at the hour specified for regular meetings by law or regulation.

(Added by Stats. 1997, Ch. 949, Sec. 11. Effective January 1, 1998.)

11129. Any hearing being held, or noticed or ordered to be held by a state body at any meeting may by order or notice of continuance be continued or recontinued to any subsequent meeting of the state body in the same manner and to the same extent set forth in Section 11128.5 for the adjournment of meetings. A copy of the order or notice of continuance shall be conspicuously posted on or near the door of the place where the hearing was held within 24 hours after the time of the continuance; provided, that if the hearing is continued to a time less than 24 hours after the time specified in the order or notice of hearing, a copy of the order or notice of continuance of hearing shall be posted immediately following the meeting at which the order or declaration of continuance was adopted or made.

(Amended by Stats. 1997, Ch. 949, Sec. 12. Effective January 1, 1998.)

11130. (a) The Attorney General, the district attorney, or any interested person may commence an action by mandamus, injunction, or declaratory relief for the purpose of stopping or preventing violations or threatened violations of this article or to determine the applicability of this article to past actions or threatened future action by members of the state body or to determine whether any rule or action by the state body to penalize or otherwise discourage the expression of one or more of its members is valid or invalid under the laws of this state or of the United States, or to compel the state body to audio record its closed sessions as hereinafter provided.

(b) The court in its discretion may, upon a judgment of a violation of Section 11126, order the state body to audio record its closed sessions and preserve the audio recordings for the period and under the terms of security and confidentiality the court deems appropriate.

(c) (1) Each recording so kept shall be immediately labeled with the date of the closed session recorded and the title of the clerk or other officer who shall be custodian of the recording.

(2) The audio recordings shall be subject to the following discovery procedures:

(A) In any case in which discovery or disclosure of the audio recording is sought by the Attorney General, the district attorney, or the plaintiff in a civil action pursuant to this section or Section 11130.3 alleging that a violation of this article has occurred in a closed session that has been recorded pursuant to this section, the party seeking discovery or disclosure shall file a written notice of motion with the appropriate court with notice to the governmental agency that has custody and control of the audio recording. The notice shall be given pursuant to subdivision (b) of Section 1005 of the Code of Civil Procedure.

(B) The notice shall include, in addition to the items required by Section 1010 of the Code of Civil Procedure, all of the following:

(i) Identification of the proceeding in which discovery or disclosure is sought, the party seeking discovery or disclosure, the date and time of the meeting recorded, and the governmental agency that has custody and control of the recording.

(ii) An affidavit that contains specific facts indicating that a violation of the act occurred in the closed session.

(3) If the court, following a review of the motion, finds that there is good cause to believe that a violation has occurred, the court may review, in camera, the recording of that portion of the closed session alleged to have violated the act.

(4) If, following the in camera review, the court concludes that disclosure of a portion of the recording would be likely to materially assist in the resolution of the litigation alleging violation of this article, the court shall, in its discretion, make a certified transcript of the portion of the recording a public exhibit in the proceeding.

(5) Nothing in this section shall permit discovery of communications that are protected by the attorney-client privilege.

(Amended by Stats. 2009, Ch. 88, Sec. 43. (AB 176) Effective January 1, 2010.)

11130.3. (a) Any interested person may commence an action by mandamus, injunction, or declaratory relief for the purpose of obtaining a judicial determination that an action taken by a state body in violation of Section 11123 or 11125 is null and void under this section. Any action seeking such a judicial determination shall be commenced within 90 days from the date the action was taken. Nothing in this section shall be construed to prevent a state body from curing or correcting an action challenged pursuant to this section.

(b) An action shall not be determined to be null and void if any of the following conditions exist:

(1) The action taken was in connection with the sale or issuance of notes, bonds, or other evidences of indebtedness or any contract, instrument, or agreement related thereto.

(2) The action taken gave rise to a contractual obligation upon which a party has, in good faith, detrimentally relied.

(3) The action taken was in substantial compliance with Sections 11123 and 11125.

(4) The action taken was in connection with the collection of any tax.

(Amended by Stats. 1999, Ch. 393, Sec. 5. Effective January 1, 2000.)

11130.5. A court may award court costs and reasonable attorney's fees to the plaintiff in an action brought pursuant to Section 11130 or 11130.3 where it is found that a state body has violated the provisions of this article. The costs and fees shall be paid by the state body and shall not become a personal liability of any public officer or employee thereof.

A court may award court costs and reasonable attorney's fees to a defendant in any action brought pursuant to Section 11130 or 11130.3 where the defendant has prevailed in a final determination of the action and the court finds that the action was clearly frivolous and totally lacking in merit.

(Amended by Stats. 1985, Ch. 936, Sec. 2.)

11130.7. Each member of a state body who attends a meeting of that body in violation of any provision of this article, and where the member intends to deprive the public of information to which the member knows or has reason to know the public is entitled under this article, is guilty of a misdemeanor.

(Amended by Stats. 1997, Ch. 949, Sec. 14. Effective January 1, 1998.)

11131. No state agency shall conduct any meeting, conference, or other function in any facility that prohibits the admittance of any person, or persons, on the basis of ancestry or any characteristic listed or defined in Section 11135, or that is inaccessible to disabled persons, or where members of the public may not be present without making a payment or purchase. As used in this section, "state agency" means and includes every state body, office, officer, department, division, bureau, board, council, commission, or other state agency.

(Amended by Stats. 2007, Ch. 568, Sec. 32. Effective January 1, 2008.)

11131.5. No notice, agenda, announcement, or report required under this article need identify any victim or alleged victim of crime, tortious sexual conduct, or child abuse unless the identity of the person has been publicly disclosed.

(Added by Stats. 1997, Ch. 949, Sec. 16. Effective January 1, 1998.)

11132. Except as expressly authorized by this article, no closed session may be held by any state body.

(Added by Stats. 1987, Ch. 1320, Sec. 4.)

Staff Summary for April 17-18, 2024

6. Commission Policies**Today's Item**Information Action

Discuss potential amendments to five Commission policies currently under review.

- (A) Code of Conduct
- (B) Planting Fish in Youth Camps
- (C) Youth Fishing Programs
- (D) Research
- (E) Naming Installations

Summary of Previous/Future Actions

- Received recommendations for first policies to review and potential policies for repeal August 22-23, 2023
- Repealed selected policies October 11-12, 2023
- Amended *Legislation Policy* and *Designation of Department Controlled Lands as State Wildlife Areas Policy*, delayed action on *Naming Installations Policy*, and concurred with recommendation to begin review of four additional policies February 14-15, 2024
- **Today receive update on the review of five Commission policies** **April 17-18, 2024**
- Consider action on policies currently under review June 19-20, 2024

Background

In December 2022, the Commission directed staff to conduct an initial assessment of Commission policies with a justice, equity, diversity and inclusion (JEDI) and tribal lens, consistent with the Commission's JEDI policy (Exhibit 1). In June 2023, staff presented the assessment and a proposed plan for a comprehensive assessment of all policies, both developed in coordination with Department staff. At its June 2023 meeting, the Commission provided feedback on the proposed plan and direction to staff. At the August 2023 Commission meeting, consistent with Commission direction, staff provided a list of all policies categorized into one of five groups — referred to as “bins” — reflecting a combination of general priorities, anticipated levels of revision, and expected workload. See Exhibit 2 for additional details.

Based on the August categorization, the Commission directed staff to work with the Department to identify policies suitable for repeal and develop potential revisions to a selection of policies recommended for initial review.

- At its October 2023 meeting, the Commission repealed three policies: *Retention of Commission Records*, *Warmwater Game Fish Stocking*, and *Planning*.
- At its February 2024 meeting, the Commission approved amendments to two policies (*Legislation* and *Designation of Department Controlled Lands as State Wildlife Areas*) and continued action on amendments to *Naming Installations* (Exhibit 3) until this

Staff Summary for April 17-18, 2024

meeting; the delay would allow additional opportunity to request input from tribes and tribal communities, especially in the context of potential changes to the state's marine protected area network and management program being considered as an outcome of the first decadal management review.

- Also in February 2024, the Commission concurred with staff's recommendation to next review: *Code of Conduct, Planting Fish in Youth Camps, Youth Fishing Programs, and Research* (Exhibit 4). Staff committed to beginning the review with a letter to tribes and a notice to stakeholders to seek suggestions for revisions; due to staff capacity issues as outlined below, staff has been unable to meet this commitment.

Staff has updated the table of Commission policies to reflect Commission actions since beginning the current policies review process (Exhibit 5).

Update

Multiple hurdles have affected staff's ability to continue progress on the policies review project, including a 25% staff vacancy rate since the beginning of January (which includes the project lead for policy reviews) and subsequent recruitment and onboarding efforts to fill the gap, as well as an intensive mission-level refresh for the service-based budgeting (SBB) project. Staffing and SBB are described in more detail in the executive director's report for this meeting (Agenda Item 2B).

While staff was unable to send the previously-planned letter to tribes and notice to stakeholders for input between meetings, today's meeting offers an opportunity for stakeholders and the Commission to suggest potential revisions to the policies currently under review. Following this meeting, staff will send the letter to tribes and notice to stakeholders requesting input before the June Commission meeting to support a robust discussion.

Significant Public Comments (N/A)

Recommendation

Commission staff: For the June 19-20, 2024 Commission meeting, schedule receipt and discussion of potential revisions to the five policies currently under review.

Exhibits

1. [Commission Justice, Equity, Diversity and Inclusion Policy](#)
2. [Staff summary from August 22-23, 2023 meeting \(for background purposes only\)](#)
3. [Proposed revisions to Commission Naming Installations Policy, dated December 2023](#)
4. [Commission Code of Conduct Policy; Planting Fish in Youth Camps Policy; Youth Fishing Programs Policy; and Research Policy](#)
5. [Commission policy bins, rationale for binning, and status of Commission action, dated April 5, 2024](#)

Staff Summary for April 17-18, 2024

Motion

Moved by _____ and seconded by _____ that the Commission and moves consideration of proposed changes to its *Code of Conduct Policy, Planting Fish in Youth Camps Policy, Youth Fishing Programs Policy, Research Policy, and Naming Installations Policy* to its June 19-20, 2024 meeting. Further, the Commission directs staff to seek input from tribes, tribal communities and stakeholders regarding potential revisions to the policies.

California Fish and Game Commission Justice, Equity, Diversity and Inclusion Policy

Approved February 2022

Positive Vision

It is the policy of the Fish and Game Commission that, as an agency charged with serving the public, the Commission has the responsibility to make decisions in a just, equitable and inclusive manner. As such, the Commission is committed to ensuring California's fish and wildlife are managed with public confidence and participation and striving toward safe and equitable access to California's thriving native wildlife and natural habitats, supported by inclusive decision-making that reflects the needs and values of the state's diverse communities.

To achieve this vision, it is necessary to acknowledge and address significant past injustices suffered by California Native American tribes and to recognize their interwoven connection to and stewardship of the environment. It is also necessary to acknowledge the well-documented prejudices and barriers experienced by historically marginalized and underserved communities in terms of access to nature and regulatory decision-making processes, in addition to the privilege associated with outdoor access.

Values Central to the Mission of the Commission

The Commission holds certain values as central to its mission and strives to uphold and exemplify these values in all its actions and interactions. In addition to formally adopting values of integrity, transparency, innovation, collaboration, excellence and stewardship, the Commission has made a strong commitment to upholding justice, equity, diversity and inclusion. The Commission recognizes environmental justice as essential to addressing historic and current inequities, and to creating equitable access to environmental benefits. Central to the mission of the Commission is serving all people of California; people of all backgrounds, cultures, circumstances, lived experiences and worldviews hold essential perspectives that strengthen our collective decision-making. Respect for all persons is fundamental to our organization. The Commission commits to focusing on these values as they are fundamental to creating a just, equitable and inclusive future.

Actions to Which We Commit

In support of its vision and values, the Commission also commits to overarching actions to advance justice, equity, diversity and inclusion, including:

- Conduct the Commission's business in a manner that operationalizes justice, equity, diversity and inclusion;
- Use our sphere of influence to counteract historic legacies and systems of exclusion and the way that they hinder individual and community participation;
- Create and maintain a space where all ideas, values and cultures are welcomed, heard and respected;
- Provide accessible engagement opportunities to Commission decision-making for all affected and interested people;
- Promote equity through more inclusive decision-making that considers and

corrects for disproportionate burdens on historically marginalized communities, including California Native American tribes;

- Expand understanding of and improve response to the needs of marginalized fish and wildlife users;
- Amplify tribal voices and issues;
- Invest in meaningful and long-term partnerships with communities and cultures that have relationships with activities, fish or wildlife that we regulate;
- Consider implications of our decisions on subsistence activities;
- Improve and champion equitable access to nature and abundant and healthy fish and wildlife populations;
- Promote cultural, community, and economic opportunities related to fish and wildlife;
- Ensure non-discriminatory and equitable practices in recruiting, training, and supporting a highly qualified, professional staff that reflects California's diversity; and,
- Encourage the governor to make appointments — including to the Commission — that are representative of California's diverse communities.

For Background Purposes Only
STAFF SUMMARY FOR AUGUST 22-23, 2023

19. COMMISSION POLICIES

Today's Item	Information <input checked="" type="checkbox"/>	Action <input type="checkbox"/>
Receive update and presentation on planning and coordination for review of Commission policies, and initial list of policies proposed for review.		

Summary of Previous/Future Actions

- | | |
|---|---|
| <ul style="list-style-type: none"> • Commission requested staff develop plan for review of policies that includes a “JEDI and tribal lens” | December 14-15, 2022 |
| <ul style="list-style-type: none"> • Updates on policy review during executive director’s reports | February 8-9, 2023 and
April 19-20, 2023 |
| <ul style="list-style-type: none"> • Received initial staff assessment and provided direction on next steps | June 14-15, 2023 |
| <ul style="list-style-type: none"> • Today receive recommendations for first policies to review | August 22-23, 2023 |
| <ul style="list-style-type: none"> • Consider repeal of selected policies | October 10-11, 2023 |
| <ul style="list-style-type: none"> • Receive drafts of first three revised policies | December 13-14, 2023 |
| <ul style="list-style-type: none"> • Consider actions for first three revised policies | February 2024 |

Background

In December 2022, the Commission directed staff to conduct an initial assessment of Commission policies, and in June 2023, Commission staff presented that initial assessment as well as a proposed plan for moving forward with a comprehensive assessment of all policies (see Exhibit 1 for more information).

At its June 2023 meeting, the Commission provided feedback on the proposed plan for review and directed staff to bring to the August 2023 meeting:

- all policies categorized into one of five groups, referred to as “bins”(see Exhibit 1 for descriptions of the bins);
- a list of policies that staff believes do not need updates as part of this review process or that can be repealed, for potential Commission action in October; and
- a list of three to four policies to prioritize for further review and potential revision, and a proposed timeline for reviewing those policies (selecting policies that only need “minor revision” to fine tune the process before tackling more challenging policies).

Exhibit 2 provides the full list of proposed review bins and rationale for the proposed bin categorization of each policy; note that each policy is numbered for ease of tracking. Per Commission direction, staff has identified and proposes six policies for “no additional review,” three for “initial further review and revision,” and three for “repeal.”

For Background Purposes Only
STAFF SUMMARY FOR AUGUST 22-23, 2023

No Additional Review Recommended

Policies not recommended for any further additional review at this point are identified as “No Update Needed” in Exhibit 2. Most of these policies were updated relatively recently and no needed changes were identified by Department and Commission staff during their initial review.

- 1.7 [Justice, Equity, Diversity and Inclusion](#)
- 1.10 [Wildlife Prosecutor of the Year](#)
- 2.8 [Forage Species](#)
- 2.13 [Striped Bass](#)
- 3.5 [Terrestrial Predator Policy](#)
- 4.17 [Prospecting on Fish and Game Lands](#)

Recommended for Initial Further Review and Revision

Staff recommends that three policies be the first considered for further review and revision. Staff propose a two-meeting process for items 1.8 and 4.8: initial proposed revisions would be presented at the December Commission meeting for public comment and Commissioner feedback, and staff would provide revised draft policies for Commission consideration at its February 2024 meeting. Recognizing that item 4.13 is of high interest and also has a Justice, Equity, Diversity and Inclusion nexus, staff is seeking feedback from the Commission regarding process and timing.

- 1.8 [Legislation](#)
- 4.8 [Designation of Department Controlled Lands as State Wildlife Areas](#)
- 4.13 [Naming Installations](#)

Repeal Recommended

Staff recommends that the Commission consider repealing three policies at the October Commission meeting. Policies may be recommended for repeal for various reasons, such as they are duplicative of statute, regulation or a Commission-adopted management plan, or are no longer applicable. Some policies are identified as "repeal" or "repeal and replace" in Exhibit 2, but are not identified for potential action at the October meeting to ensure any relevant language can be retained in other related policies that will be reviewed at a later date.

- 1.9 [Retention of Commission Records](#)
- 2.16 [Warmwater Game Fish Stocking](#)
- 4.16 [Planning](#)

At today’s meeting, staff seeks the Commission’s guidance regarding the proposed bins for policy review, particularly those recommended for “no additional review” or “repeal”, and next steps in the policy review process.

For Background Purposes Only
STAFF SUMMARY FOR AUGUST 22-23, 2023

Significant Public Comments (N/A)

Recommendation

Commission staff: Direct staff to work with the Department to develop potential revisions to the initial policies recommended for further review and revision, and present proposed revisions at the December meeting. Schedule Commission consideration of policies proposed for repeal for the October meeting.

Exhibits

1. Staff Summary from June 14-15, 2023 Meeting (*for background purposes only*)
2. Policies review: Proposed bins

Motion (N/A)

California Fish and Game Commission

Potential Modifications to the Commission Naming Installations Policy

December 10, 2023

The Commission Naming Installations Policy is numbered 4.13 for tracking during the 2023-24 Commission policies review process. This document proposes changes to the policy for discussion and feedback at the December 2023 Commission meeting.

The Commission has expressed concerns regarding its existing Naming Installations Policy providing an exception for naming a marine protected area (MPA) after an individual; the over 70-year-old policy was amended in 2012 to allow the exception. Currently, there are three MPAs named after individuals: Lovers Point-Julia Platt State Marine Reserve, Edward F. Ricketts State Marine Conservation Area, and Robert W. Crown State Marine Conservation Area.

Additionally, the Commission has stated the importance of its policies taking into consideration tribal and justice, equity, diversity and inclusion values. The Naming Installations Policy currently does not recognize that, when Europeans arrived, specific geographies already had names established by Native Americans in what is now known as California and off its shores.

For naming purposes, the Commission is directly involved in naming protected areas when it designates such areas: state wildlife areas, ecological reserves, and marine protected areas. The Commission does not have a direct role in establishing, purchasing or naming refuges (established by the California State Legislature), fish hatcheries, vessels, and other installations owned or managed by the Department.

Potential revisions to the policy could include: (1) removing the MPA naming exception; (2) adding a provision to consider, in collaboration with local tribes, tribal placenames when naming or renaming installations, including MPAs; and (3) revising the policy title to reflect proposed policy language focused on protected areas.

If the Commission moves forward with removing the option to name MPAs after individuals, the Commission may wish to specify how to address the three MPAs currently named after an individual. For example, they could be renamed immediately, allowed to remain named as they are, or, if the MPA is renamed, a nearby structure or facility could be named in honor of the individual.

If the Commission moves forward with using tribal placenames, the Commission may wish to consider whether or not a western geographic name might also be referenced to maximize public understanding of where the MPA is located. If a western name is included, the Commission may wish to provide direction regarding a standardized format (e.g., tribal name MPA at western geographic location) and whether to apply the same standard to Kashtayit State Marine Conservation Area and Matlahuayl State Marine Reserve.

Potential revisions are being presented at this meeting for discussion purposes; proposed policy revisions based on Commission and public input are expected to be presented at the February 2024 Commission meeting for potential adoption.

Naming Installations Policy with Draft Potential Revisions

Naming Protected Areas Installations Policy

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

- I. ~~No fish hatchery, game refuge, wildlife area, ecological reserve, or marine protected area (MPA) or any installation, other than Marine Protected Areas (MPAs), shall be named for any person, living or dead. Installations-Protected areas shall be named in a manner which will indicate their geographical location, avoiding as far as possible the names of local political units. ~~Vessels shall be named for fish.~~~~
- II. Traditional tribal placenames for a geographic location shall be considered in collaboration and collaboration with local tribes when naming or renaming any protected area, including MPAs.
- I. ~~The Commission may commemorate an individual by including that individual's name after the geographic name of an MPA if all of the following criteria are met:~~
 1. ~~The individual has been deceased for a minimum of 5 years;~~
 2. ~~It has been determined the individual has made an extraordinary, unique, and long-lasting contribution to the conservation, use, and/or enjoyment of California's living marine resources;~~
 3. ~~It has been determined with reasonable care and consideration that the individual's merit and/or contribution can stand the test of time;~~
 4. ~~The individual and/or their efforts have a direct connection with the geographic location of the MPA or immediate vicinity.~~
- III. The Commission shall be represented at and may participate in all ceremonies dedicating the launching or inauguration of any wildlife area, ecological reserve, or MPA or any installation of the facilities mentioned above. The Department and the Commission staff shall coordinate their work and efforts in ~~setting up or arranging~~ such dedication ceremonies programs.

(Amended 4/7/1994, and 5/23/2012, 2/xx/2024)

California Fish and Game Commission

Commission Policies Under Review for Potential Revisions

April 5, 2024

The California Fish and Game Commission is inviting comments on, and proposed revisions to, four policies currently under review: *Code of Conduct*, *Planting Fish in Youth Camps*, *Youth Fishing Programs*, and *Research*. The policies are being reviewed as part of a broader, multi-year effort initiated in December 2022 to review and consider revisions to all the Commission's policies, including "with a justice, equity, diversity and inclusion lens and a tribal lens."

This document contains existing language for the four policies currently under review. A fifth policy (*Naming Installations*) was previously identified for review; Commission staff, with input from the California Department of Fish and Wildlife, has identified potential revisions to the policy, which are available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=222127>. The Commission also seeks input on the proposed revisions to the *Naming Installations Policy*.

Additional details about the Commission's policy review process is available on the Commission website at <https://fgc.ca.gov/meetings/2024> in the meeting documents for the April 2024 (Agenda Item 6) and February 2024 (Agenda Item 12) Commission meetings.

Comments, suggestions and questions may be sent to fgc@fgc.ca.gov or to California Fish and Game Commission, P.O. Box 944209, Sacramento, CA 94244-2090.

Code of Conduct

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

1. A commissioner shall faithfully discharge the duties, responsibilities, and quasi-judicial actions of the commission.
2. A commissioner shall conduct his or her affairs in the public's best interest, following principles of fundamental fairness and due process of law.
3. A commissioner shall conduct his or her affairs in an open, objective, and impartial manner, free of undue influence and the abuse of power and authority.
4. A commissioner understands that California's wildlife and natural resources programs require public awareness, understanding, and support of, and participation and confidence in, the commission and its practices and procedures.
5. A commissioner shall preserve the public's welfare and the integrity of the commission, and act to maintain the public's trust in the commission and the implementation of its regulations and policies.
6. A commissioner shall not conduct himself or herself in a manner that reflects discredit upon state laws or policies, regulations, and principles of the commission.
7. A commissioner shall not make, participate in making, or in any other way attempt to use his or her official position to influence a commission decision in which the member has a financial interest.

(Adopted 3/6/2013)

Planting Fish in Youth Camps

It is the policy of the Fish and Game Commission that: The Department may plant fish in suitable waters at certain youth camps. Such camps must be operated primarily for underprivileged or disabled children or youth, with most costs of supporting a child at camp not paid by the children or their families. The Department shall report in writing annually to the Commission on the program. If a conflict exists between this policy and the salmon and steelhead or trout policies, the latter policies prevail.

(Amended 5/4/04)

Youth Fishing Programs

The Department is supportive of youth fishing programs sponsored by city, county or other public entities. Through its urban fishing program, the Department will combine fisheries resource management with educational services to develop healthy urban fisheries, and provide young people with an opportunity to fish close to home. Fish planted for such programs may be obtained from State hatcheries.

(Amended 5/14/93)

Research

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

1. Research, including the investigation of disease, shall be performed to provide scientific and management data necessary to promote the protection, propagation, conservation, management or administration of fish and wildlife resources of this state when such data is not available by other means.
2. Whenever possible and advantageous, the services of the University of California or other academic or research institutions, or federal, state or local agencies shall be used.
3. The Department shall review the following information, which must be clearly stated in any proposed research programs: (a) goals and objectives of proposed research, including benefits to be derived from such research; (b) pertinent background information, including a literature review which supports this research; (c) experimental design, including methods of data collection and analysis; (d) estimated cost of program; (e) its estimated duration; and (f) how results will be presented to the Department. The provisions of this paragraph shall not extend to emergency investigations of disease.
4. The Department shall report regularly to the Commission on the status of major research programs in progress.

(Amended 6/16/1994)

California Fish and Game Commission
Commission Policies Review: Bins, Rationale for Binning, and Status

Revised April 12, 2024

Current Category	Policy No.*	Policy Title	Bin	Rationale for Bin	Status
Commission	1.1	Code of Conduct	Minor Revisions	Staff have not identified any concerns with the current language; however, the Commission may desire to strengthen or augment this policy.	Under review
Commission	1.2 - 1.5	Policies related to agendas, staffing needs, criteria for appeals, and officer elections	N/A	N/A	Repealed by the Commission in 2012 and 2013
Commission	1.6	Implementation and Review of Policies	Major Revisions	Both environmental and organizational conditions have changed since this policy was last reviewed. The reporting standards seem infeasible, prompting the need for major revisions. Reporting requirements are scattered throughout other individual policies and should likely be consolidated through this policy.	
Commission	1.7	Justice, Equity, Diversity and Inclusion	No update needed at this time	This is one of the Commission's most recently adopted policies. The Commission is currently in the process of developing a full justice, equity, diversity and inclusion plan and may wish to revisit this policy after the plan is complete; however, staff do not recommend revising this policy as part of the current policy review process.	Affirmed no update needed August 23, 2023
Commission	1.8	Legislation	Minor Revisions	While the Department does provide regular legislative updates to the Commission, this policy should be updated to reflect current practices. Staff expect this revision to require relatively low effort, making it a good candidate for an early review.	Amendments approved February 14, 2024
Commission	1.9	Retention of Commission Records	Repeal	This policy is unnecessary because it is duplicative of and inconsistent with the Commission's records retention schedule (Form STD. 73, filed with the Secretary of State) developed by staff with the assistance of legal counsel. The policy does not provide the level of nuance and differentiation between different types of records that is achieved in the records retention schedule, especially as technology evolves. A revision of the Commission's records retention schedule has been drafted by staff and is under final review; staff expects to file the updated form with the Secretary of State in September.	Repealed October 12, 2024
Commission	1.10	Wildlife Prosecutor of the Year	No update needed at this time	This policy was last updated in 2019 and it is currently functioning as intended; staff has not identified any necessary or desired updates.	Affirmed no update needed August 23, 2023
Fisheries	2.1	Anadromous Rainbow Trout	Minor Revisions	While this policy could require minor or major revision, staff recommend starting with minor revisions and adjusting as or if necessary. Environmental conditions have changed significantly since this policy was last updated in 2008. Some of the content is overly specific and/or duplicative of the fish stocking environmental impact report/statement. Staff recommends revisions to ensure this policy is not duplicative of other guidance. Alternatively, if the Commission pursues a general stocking policy, components of this policy could be incorporated therein.	

* Each policy is numbered simply for ease of tracking.

Current Category	Policy No.*	Policy Title	Bin	Rationale for Bin	Status
Fisheries	2.3	Commercial Use of Native Reptiles	Unclear; more work needed	This policy may need major revisions or could potentially be repealed if the Commission adopts a regulation on the subject. More research and analysis is needed prior to proposing a specific bin for review.	
Fisheries	2.4	Commission Designated Wild Trout Waters	Minor Revisions	This policy was recently updated and there were no additional needed changes identified. The Commission may wish to consider minor revisions to consider JEDI impacts (at most).	
Fisheries	2.5	Cooperatively Operated Rearing Programs for Salmon and Steelhead	Unclear; more work needed	Potentially this policy may have tribal and/or JEDI implications. Needs further discussion between Commission and Department staff before a recommendation can be made.	
Fisheries	2.6	Delta Fisheries Management Policy	Major Revisions	While a relatively recent policy (2020), the Commission may desire to strengthen language regarding considering native wildlife. The scope of changes are likely minor; however, this is identified as a major revision due to the extent of public process expected.	
Fisheries	2.7	Emerging Fisheries	Unclear; more work needed	Sections of this policy are duplicative of code. Needs further discussion between Commission and Department staff before a recommendation can be made.	
Fisheries	2.8	Forage Species	No update needed at this time	This policy was developed through a multi-interest stakeholder group and is equipped to address emerging needs, such as those related to climate change and implementing the experimental fishing program.	Affirmed no update needed August 23, 2023
Fisheries	2.9	Golden Trout	Unclear; more work needed	The Commission may want to consider combining with overall trout policy, though as the official state fish in California, golden trout may be worthy of its own policy. Need to also consider the impact of stocking in lakes otherwise devoid of fish. Needs further discussion between Commission and Department staff before a recommendation can be made.	
Fisheries	2.10	Planting Fish in Youth Camps	Minor Revisions	Overall, the Department finds this policy to be working well; however, minor changes are likely needed (e.g., reporting requirements, JEDI considerations, and potentially combine with other, similar policies).	Under review
Fisheries	2.11	Salmon	Major Revisions	Staff recommends revisions to this policy be considered "major" due to the expected significant interest in elements of the policy. Additionally, there is a tribal nexus that necessitates a more extensive process. Based on initial review, suggested revisions include removing the coded wire tag requirement to reflect current practices and changing technology, revising sections that are overly specific or prescriptive, and recognizing the cultural significance of salmon to tribes and tribal ecological knowledge. Note: The Commission could consider revising this policy in two parts. Part one: Address coded wire tags, which is a high priority for the department (minor). Part two: Full-scale revision (major).	
Fisheries	2.12	Stocking Fish in Waters Where Anglers Pay Access Fees	Unclear; more work needed	Needs further discussion between Commission and Department staff before a recommendation can be made.	

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Current Category	Policy No.*	Policy Title	Bin	Rationale for Bin	Status
Fisheries	2.13	Striped Bass	No update needed at this time	This policy was updated in 2020 through an extensive public process; staff do not recommend revising as part of the current policy review process.	Affirmed no update needed August 23, 2023
Fisheries	2.14	Trophy Black Bass Program	Unclear; more work needed	Needs further discussion between Commission and Department staff before a recommendation can be made.	
Fisheries	2.15	Trout	Major Revisions	This policy appears to be duplicative of a number of sections of Fish and Game Code. If further research confirms duplication, revision to remove duplicative sections is recommended. Changes are expected to be significant. Additionally, the Commission may wish to combine this policy with the Golden Trout Policy.	
Fisheries	2.16	Warmwater Game Fish Stocking	Repeal	This policy generally recommends against stocking warm water fish because satisfactory populations are usually sustained by natural reproduction. Climate change has reduced the Department's ability to stock trout in lower elevation areas, particularly in southern California and closer to urban centers. While this policy does not prohibit stocking of warm water fish, repeal of this policy would give the Department additional flexibility to respond to climate change and help ensure the ability to stock native warmwater fish closer to urban population centers. Additionally, this policy was adopted prior to the fish stocking environmental impact report/statement, which will continue to guide the Department's stocking practice if this policy is repealed.	Repealed October 12, 2024
Fisheries	2.17	Youth Fishing Programs	Minor Revisions	This policy starts with "The Department is supportive..." Staff recommends retaining this policy, which supports the use of hatchery fish for youth fishing programs, and rewording to make it clear that this is a policy of the Commission rather than the Department. The Commission may also wish to consider combining with its Planting Fish in Youth Camps Policy (2.10).	Under review
Wildlife	3.1	Deer Management	Major Revisions	This policy was last updated in 1984 and staff recommends significant review and revision. In particular, the Commission may wish to incorporate co-management perspectives.	
Wildlife	3.2	Depredation Control	Unclear; more work needed	Staff does not recommend selecting a bin for potential revisions until the "take of nongame mammals" subject is addressed through the Commission Wildlife Resources Committee process.	
Wildlife	3.3	Elk	Major Revisions	While the extent of revisions will depend on the results of a more detailed review, a major stakeholder process is expected. This policy should be updated to incorporate tribal co-management and revisions may be more global than just elk.	
Wildlife	3.4	Raptors	Minor Revisions	This policy is anticipated to need to be updated based on upcoming revisions to relevant U.S. Fish and Wildlife Service regulations. While a current read of the policy suggests minor revisions, federal regulation changes and stakeholder interest may elevate the policy changes to the major revisions bin.	
Wildlife	3.5	Terrestrial Predator Policy	No update needed at this time	This policy was updated recently and staff has not identified any necessary or desired changes.	Affirmed no update needed August 23, 2023

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Current Category	Policy No.*	Policy Title	Bin	Rationale for Bin	Status
Wildlife	3.6	Upland Game	Minor Revisions	While significant revisions are expected, staff also believe that all stakeholder involvement could potentially occur through the Commission Tribal Committee and the Commission Wildlife Resources Committee, keeping the process for revision within the "minor revision" bin.	
Wildlife	3.7	Wild Pigs	Unclear; more work needed	This policy is likely to be informed by the wild "exotic" pig rulemaking currently under development for Commission consideration. Staff will assess what is the appropriate bin once the proposed rulemaking is mostly complete.	
Miscellaneous	4.1	Al Taucher's Preserving Hunting and Sport Fishing Opportunities Policy	Minor Revisions	While staff expects significant stakeholder interest, the scope of changes is expected to be minor and staff do not recommend a separate stakeholder process for the revisions.	
Miscellaneous	4.2	California Policy for Native Plants	Unclear; more work needed	Staff recommends conferring with tribes through the Commission Tribal Committee regarding the potential need for revisions, prior to determining a bin. A discussion about the need for revisions could be added to the Tribal Committee's December 2023 meeting agenda.	
Miscellaneous	4.3	Cooperation	Unclear; more work needed	It appears this policy is partially duplicative of Fish and Game Code, but not entirely; there do not appear to be any overarching references to cooperation in code but, rather, are related to specific subjects.	
Miscellaneous	4.4	Endangered and Threatened Species	Major Revisions	While this policy may appear to be duplicative of California Fish and Game Code sections 2052, 2053, 2055 and 2056, there is a significant difference in that the policy focuses not just on all species currently listed under the California Endangered Species Act (CESA), but also those that may become eligible for listing, and specifically native species. The reference to native species in significant decline that may become endangered or threatened is not addressed within CESA, though perhaps elsewhere in Fish and Game Code. The second sentence may be duplicative of the Commission's Cooperation Policy. Warrants further review and consideration of potential revisions; a high level of public interest suggests binning as major revision.	
Miscellaneous	4.5	Introduction of Non-native Species	Unclear; more work needed	Staff anticipates revisions are needed to update definitions, remove sections that are duplicative of code, and more, though the full extent is not yet clear. Needs further discussion between Commission and Department staff before a recommendation can be made.	
Miscellaneous	4.6	Kelp	Unclear; more work needed	This policy is outdated and does not account for current kelp conditions. The Department is developing a kelp recovery and management plan through a public process and is anticipated to incorporate aspirational components of this policy into the plan. Staff recommends considering this policy after the kelp plan is completed and adopted.	
Miscellaneous	4.7	Land Use Planning	Unclear; more work needed	Staff believes the policy needs modification, but the scope of revisions is not yet clear. Needs further discussion between Commission and Department staff before a recommendation can be made.	

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Current Category	Policy No.*	Policy Title	Bin	Rationale for Bin	Status
Miscellaneous	4.8	Designation of Department Controlled Lands as State Wildlife Areas	Minor Revisions	Staff recommends repealing the first sentence because it is inconsistent with Fish and Game Code Section 1019 (regarding management plan, timing, and reporting to the legislature). In the second sentence, consider adding "ecological reserves." Consider additional guidance regarding Title 14 updates and adding a reasonable time limit for the Department to develop a draft management plan.	Amendments approved February 14, 2024
Miscellaneous	4.9	Management and Utilization of Fish and Wildlife on Federal Lands	Repeal	While this policy is not necessarily duplicative of any particular code section, it essentially states that: (1) the Department should follow the law, (2) the policy does not extend into areas in which it legally cannot apply, and (3) the Department will cooperate with the federal government (duplicative of Cooperation Policy). The statements are not particularly meaningful and staff not see a need to retain this policy; if there are elements that the Commission wants to retain, they should be added to a general federal lands policy.	
Miscellaneous	4.10	Management and Utilization of Fish and Wildlife on Private Lands	Minor Revisions	A portion is of this policy is already in regulation and can be deleted. The Commission may wish to expand or further clarify the enhancement component. Other minor modifications are anticipated as well.	
Miscellaneous	4.11	Marine Protected Areas	Unclear; more work needed	This policy appears to have been completely—or at least largely—incorporated into statute, the master plan for marine protected areas (MPAs), and/or established interagency governance structures; however, the policy needs close review and confirmation, and elements not already captured should be added to the master plan. Cultural values and practices are missing from the current policy and also should be considered for inclusion in the master plan.	
Miscellaneous	4.12	Multiple Use of Lands Administered by the Department of Fish and Game	Minor Revisions	Human use conflicts on Department lands have been raised in multiple venues; as a result, staff anticipates significant stakeholder interest. While a current read of the policy suggests minor revisions are needed, stakeholder interest ultimately may elevate the policy changes to the major revisions bin.	
Miscellaneous	4.13	Naming Installations	Major Revisions	As already identified during Commission discussions, updates are needed to this policy and may be significant (i.e., incorporating the voices of underrepresented communities). Stakeholder interest will also be high, securing the policy in the major revisions bin.	Amendments under review
Miscellaneous	4.14	National Forests	Repeal and Replace	As written, this policy creates significant workload for the Department and U.S. Forest Service (USFS) with limited benefit given the current working relationship. Any USFS participation is entirely voluntary. If elements of this policy are desired to be retained, they should be combined with elements of the Management and Utilization of Fish and Wildlife on Federal Land Policy within a general federal lands policy.	
Miscellaneous	4.15	Non-native Turtles and Frogs	Unclear; more work needed	Staff anticipates that this policy will need to be significantly modified or repealed. Necessary revisions and process depend in part on the outcomes of the Commission's American bullfrog and non-native turtles project; after the Commission takes action on the project, staff will revisit the policy bin.	

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Current Category	Policy No.*	Policy Title	Bin	Rationale for Bin	Status
Miscellaneous	4.16	Planning	Repeal	The policy requires the Department to prepare and submit annually to the Commission a report on progress in implementing the Comprehensive Management System adopted by the Department in March 1992, and to obtain Commission approval for any proposed program not identified in the strategic planning component of the system unless mandated by the legislature. The system no longer exists and, hence, the policy is obsolete.	Repealed October 12, 2024
Miscellaneous	4.17	Prospecting on Fish and Game Lands	No update needed at this time	This policy is clear and straightforward. At some point in the future, the Commission may wish to codify the first paragraph in regulation (likely as part of a Department lands package); at that point, the policy could be revisited and the second paragraph could then be incorporated into a more general Department lands policy.	Affirmed no update needed August 23, 2023
Miscellaneous	4.18	Public Information and Education	Minor Revisions	Updates are needed to add modern communication tools and incorporate JEDI. The last statement regarding wild animals as pets is disconnected from the rest of the policy and likely does not belong here. Need to ensure public information and education is provided in a way that supports JEDI.	
Miscellaneous	4.19	Research	Minor Revisions	No updates are needed currently; however, the Commission may wish to revisit item IV when the idea of reporting to the Commission in general is revisited.	Under review
Miscellaneous	4.20	Restricted Access Commercial Fisheries	Major Revisions	This policy is foundational to the established structure of California's commercial fisheries. Legal and socio-economic implications of changes to the policy must be carefully considered. Significant resources and stakeholder engagement are anticipated. A two-phase process should be considered, where the first phase is reviewing and assessing the performance of existing restricted access fisheries relative to the policy objectives.	
Miscellaneous	4.21	Salton Sea	Unclear; more work needed	Needs further discussion between Commission and Department staff before a recommendation can be made.	
Miscellaneous	4.22	Season Opening Dates	Unclear; more work needed	Hard-coded season opening dates are challenging in the face of climate disruption. Predictability has value to local communities that host openers, though species biology, as well as matching the window of hunting and fishing seasons with species activity, life cycles, and variable social considerations is paramount. Further thinking and discussion is needed before making a recommendation.	
Miscellaneous	4.23	Shellfish and Sea Otter Conflicts	Major Revisions	Changes to this policy will need to be considered in the context of U.S. Fish and Wildlife Service efforts currently underway to explore sea otter range expansion. Staff anticipates a high level of interest and engagement by stakeholders and other agencies.	
Miscellaneous	4.24	Training, Testing and Trialing of Hunting Dogs	Unclear; more work needed	If substantive changes are made to this policy, a high level of stakeholder interest is expected. Needs further discussion between Commission and Department staff before a recommendation can be made.	

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Current Category	Policy No.*	Policy Title	Bin	Rationale for Bin	Status
Miscellaneous	4.25	Tribal Consultation Policy	Major Revisions	The policy was a good first step for a consultation policy in the Commission's effort to build a tribal affairs program. However, the policy needs to be updated due to the evolution of tribal consultation and engagement since the policy was first adopted in 2015. The California Natural Resources Agency, in coordination with the governor's office, is heading up a collaborative effort amongst its natural resource agencies to develop a basic agency-wide policy that can then be built upon and customized by the Commission.	
Miscellaneous	4.26	Use of Designated Department Lands for Privately Managed Public Hunting Areas	Unclear; more work needed	Additional research is needed regarding authorities and current practices before a recommendation can be made.	
Miscellaneous	4.27	Water	Unclear; more work needed	The Department is already completing many of the tasks described in the policy, as required by law. Significant changes have occurred to both the physical environment and governance structures since the policy was adopted almost 30 years ago. Additional research is needed before a recommendation can be made.	
Miscellaneous	4.28	Wetlands Resources	Major Revisions	This policy should be retained with modifications, and elements of policies 4.29 and 4.30 incorporated.	
Miscellaneous	4.29	DFG Recommended Wetland Definition, Mitigation Strategies, and Habitat Value Assessment Methodology (this policy goes hand-in-hand with the CFGC response to the proposal, 4.30)	Repeal and Replace	Much of the content is outside the scope of a policy and is more appropriate for program management guidelines. Any needed content should be combined with the Commission Wetlands Resources Policy.	
Miscellaneous	4.30	CFGC Comment to DFG on the Wetland Policy Implementation Proposal	Repeal and Replace	Much of the content is outside the scope of a policy and is more appropriate for program management guidelines. Any needed content should be combined with the Commission Wetlands Resources Policy.	
Miscellaneous	4.31	Wilderness Areas	Minor Revisions	Conceptually the policy has value (retain all wild areas as such), though there is at least one change that would provide greater clarity: What are the "selected habitat management programs" and, if the individual programs cannot be identified, at least provide a general definition. Need to also assess potential JEDI and tribal impacts.	
Joint Policies - California State Board of Forestry and the California Fish and Game Commission	5.1	Joint Policy Statement on Pacific Salmon and Anadromous Trout	Major Revisions	Staff recommends this policy be amended in conjunction with the policy on fire activities and wildlife habitat (5.2). Review will necessitate a series of concerted meetings with BOF and the Department, and is expected to generate significant tribal and stakeholder interest.	
Joint Policies - California State Board of Forestry and the California Fish and Game Commission	5.2	Interim Joint Policy on Pre, During, and Post Fire Activities and Wildlife Habitat	Major Revisions	Staff recommends this policy be amended in conjunction with the policy on Pacific salmon and anadromous trout (5.1). Review will necessitate a series of concerted meetings with BOF and the Department, and is expected to generate significant tribal and stakeholder interest.	

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Current Category	Policy No.*	Policy Title	Bin	Rationale for Bin	Status
Joint Policies - California State Board of Forestry and the California Fish and Game Commission	5.3	Policy on Hardwoods	Major Revisions	Amendments to this policy is of high interest to the California Board of Forestry and Fire Protection (BOF), which contacted the Commission in early 2023 about initiating an amendment process. The review process will necessitate a series of concerted meetings with BOF and the Department, and is expected to generate significant tribal and stakeholder interest. BOF is developing proposed amendments to the policy for discussion purposes.	

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On Apr 9, 2024, at 11:07 AM, Granda, Adrian <ADGranda@sandiego.gov> wrote:

You don't often get email from adgranda@sandiego.gov. [Learn why this is important](#)

WARNING: This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Good Morning,

I'm writing to express the City and Mayor's support of the requested changes below. We've been outreached to by Mr. Bluechel and his proposal seems like a commonsense way to allow fishers to provide excess fish to nonprofits and schools. My understanding is a petition is under review and may be complete by this summer.

Please let us know if we can be of additional assistance.

Sincerely,

On Mon, Feb 26, 2024 at 2:37 PM Todd Bluechel <toddbluechel@gmail.com> wrote:

Hello Mayor Gloria,

We've met a couple times at events where you've shown and voiced support of my charity: **Fish. Food. Feel Good.** (F3G), see attached pics.

BRIEF HISTORY: In 2012, I created F3G which remains America's only sustainable fishing charity. F3G is a San Diego 501c3 that has collected and distributed sport caught fish: (Yellowfin, Yellowtail, Bluefin, Albacore, Mahi Mahi, Wahoo, etc.) to numerous nonprofits including: Father Joe's villages, San Diego Food Bank, Imperial Valley Food Bank, San Diego Rescue Mission, Kitchens for Good, Urban Angels, Ronald McDonald House Charities of San Diego, and Jewish Family Services. In the past 10+ years, F3G has fed hundreds of thousands in need for free! A few months ago, I invited you to join Deacon Jim Vargas and me at Father Joes when they received another 5000 pounds of fish for free from F3G but unfortunately Michelle Porras said my invite came too late, you were busy. I've never asked for you to voice your support of my charity but because you do so much to support the environment and helping those in need I thought you would like to learn about what I'm doing and possibly offer your support.

MY ASK: I'm trying to change California Fish and Game regulations so sport fishermen can donate their catch to nonprofits. In a few weeks, the California Fish and Game commission will vote on my petition to amend language within CCR T14 231(b). I recently spoke with the administrative office and I was told that public support "is" taken into consideration and who better to voice their support than Mayor Gloria!

Current language within CCR T14 231(b) says: "Any legally taken species of sport-caught fish may be possessed for filleting, smoking, or canning if the same fish is returned to the angler or if the fish is exchanged pound for pound"

My suggested language (in bold) requests the following language be added to the regulation: "Any legally taken species of sport-caught fish may be possessed for filleting, smoking, or canning if the same fish is returned to the angler or if the fish is exchanged pound for pound **or if the fish is donated by the angler to a nonprofit(s) instead of being returned to the angler.**"

If you believe sport fishermen should be allowed to donate his/her fish to nonprofits to feed those in need, I would be honored if you would show your support for my petition. One way to show your support would be to send an email to: Melissa Miller-Henson at fgc@fgc.ca.gov. My petition number is: 2023-10. A suggested reply could be as simple as:

Hello Ms. Miller-Henson,

My name is Mayor Todd Gloria,

I recently learned about Todd Bluechel's efforts to amend current California Fish and Game regulation, section: CCR T14 231(b). I support Todd's efforts to amend the regulation so that it will allow sport fishermen to donate their fish to nonprofits. I support the amended language (in bold) so that it reads: "Any legally taken species of sport-caught fish may be possessed for filleting, smoking, or canning if the same fish is returned to the angle of if the fish is exchanged pound for pound **or if the fish is donated by the angler to a nonprofit(s) instead of being returned to the angler.**"

Thank you in advance for considering my support.

Best,

Mayor Gloria

Mayor Gloria, thank you in advance for your time and past support! If you, or anyone from your team, have any questions, please feel free to call my cell: (858) 382-8220

Best,

Todd Bluechel

Petition 2023-33: Recent study of relevance

Ethan Estess <eeestess@gmail.com>

Tue 04/09/2024 01:35 PM

To:FGC <FGC@fgc.ca.gov>

Cc:Shuman, Craig@Wildlife <Craig.Shuman@wildlife.ca.gov>;Ashcraft, Susan@FGC <Susan.Ashcraft@fgc.ca.gov>;
Commissioner.Zavaleta@gmail.com <Commissioner.Zavaleta@gmail.com>

Some people who received this message don't often get email from eeestess@gmail.com. [Learn why this is important](#)

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To Whom It May Concern,

I am writing on behalf of Allwaters.org to share a recently published meta-analysis that has particular relevance to the conversation around petition 2023-33.

Filbee-Dexter, K. et al. "Marine protected areas can be useful but are not a silver bullet for kelp conservation." *Journal of Phycology* (2024)

<https://onlinelibrary.wiley.com/doi/10.1111/jpy.13446>

This study provides both local and global context for the petition's scientific rationale. It aligns with our perspective that MPA's are effective at addressing many of the threats to kelp forests, but they have a poor track record in protecting them from marine heatwaves/climate impacts.

We figured we'd pass it along in the off-chance you hadn't seen it already!

Thank you for your efforts and looking forward to talking through this study and others at upcoming meetings!

Ethan and the Allwaters Team

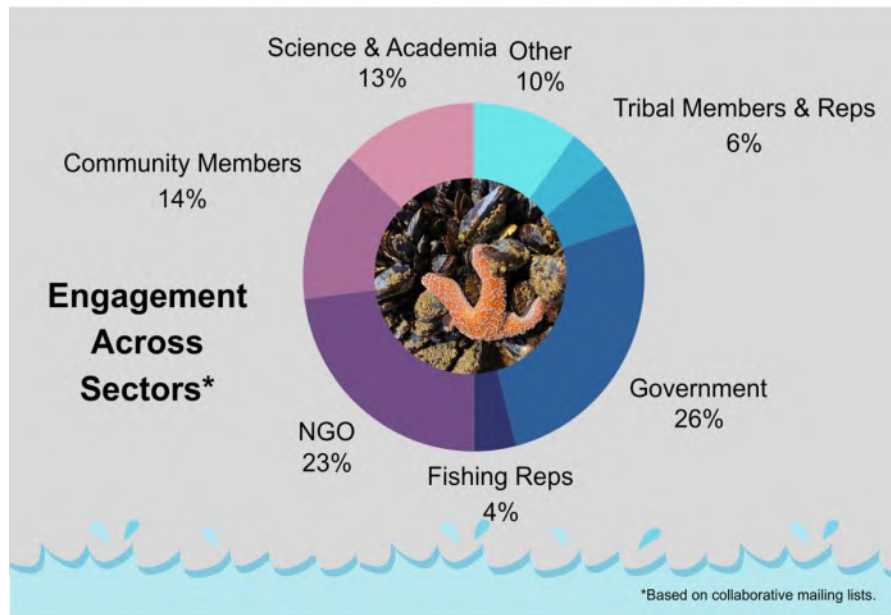
A Culture of Collaboration

14 collaboratives

450+ distinct affiliations

1,700+ volunteer members

100% staff time dedicated to MPA management



\$20 million

estimated annual in-kind support to MPA management



\$1.5 million

in grant funding for local MPA projects procured and facilitated



The mission of the MPA Collaborative Network is to empower diverse communities to engage in marine protected area stewardship for a healthy ocean.

MPAcollaborative.org





INYO COUNTY FISH AND WILDLIFE COMMISSION

BISHOP, CA 93514

COMMISSION MEMBERS
DOUGLAS BROWN
STEVE IVEY
WARREN ALLSUP
GAYE MUELLER
JARED SMITH

ALTERNATE MEMBER
NICK LARA

REPLY TO:
Pat Gunsolley, Secretary
4801 Alison Lane
Bishop, CA 93514
pgunsolley@gmail.com

Ms. Melissa Miller-Henson, Executive Director
California State Fish and Game Commission
P. O. box 944209
Sacramento, CA 94244-20990

Dear Director Miller-Henson

The Inyo County Fish and Wildlife Commission is requesting the California Department of Fish and Wildlife (CDF&W) take immediate action to protect and enhance the deer and endangered Sierra Nevada Big Horn Sheep populations in Inyo County and the Eastern Sierra. Since the passage of Proposition 117 over twenty years ago, the management of the State's top predator by CDF&W, the mountain lion, has been non-existent due to provisions in the law. The Commission believes it is important for the Department to find a way to include depredation permits for mountain lions in any management scenario. Managing wildlife through the ballot box can cause problems which are being detrimentally manifested in Inyo County and the Eastern Sierra. It has been reported that 69% of collared deer mortality is attributed to mountain lions.

It should be noted that while hunting impacts on deer herds are managed without equal management of the mountain lions, the deer herd numbers will continue to decrease because of increased numbers of mountain lions. The decrease and loss of the lions preferred prey, the mule deer, will inevitably result in a change in prey for the mountain lions which most definitely include the big horn sheep as well as ranching stock and other wildlife in the area. Additionally, the mountain lions do not discriminate in the gender of the prey that are killed. It includes female deer, and fawns as well as bucks. This indiscriminate prey choice of killing the females and fawns is impacting the herds abilities to sustain appropriate population levels. This cycle has resulted in fewer and more fluctuations in the number of deer in our area, which is negatively impacting the hunting resources which are important to Inyo County's tourist-based economy. What is even more troubling are the impacts of mountain lion predation on the listed Endangered Sierra Nevada Big Horn Sheep population. The Sierra Nevada Big Horn Sheep numbers are reaching extremely low numbers. Mountain lion impacts must be mitigated to sufficiently protect this vanishing species.

The Commission urges the Department to increase whatever form of management is available to introduce innovative ways of managing the mountain lion populations in California to protect humans as well as other domestic and wildlife resources for the benefit of our residents and tourists in not only Inyo County and the Eastern Sierra but for all residents and visitors to our Great State.

Sincerely,

Doug Brown

Doug Brown, Chairperson

Abalone survey still shot

jonathan woodcock <jonathan5685@gmail.com>

Fri 04/05/2024 12:18 PM

To:FGC <FGC@fgc.ca.gov>

You don't often get email from jonathan5685@gmail.com. [Learn why this is important](#)

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Re: Attn David Thesei and Susan Ashcroft

jonathan woodcock <jonathan5685@gmail.com>

Fri 04/05/2024 08:41 PM

To:JEFFBALDWIN39@GMAIL.COM <JEFFBALDWIN39@GMAIL.COM>;JBECKERSUP@GMAIL.COM <JBECKERSUP@GMAIL.COM>;
Mark Becker <markbeckerr@gmail.com>;Steve Rebuck <absforman@sbcglobal.net>;FGC <FGC@fgc.ca.gov>
Cc:TRENT ROBERT PETERSEN <TRENTPETT1212@GMAIL.COM>

You don't often get email from jonathan5685@gmail.com. [Learn why this is important](#)

WARNING: This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Hello,

This is a 3 1/2 minute video we put together from 3 different dive clips at two different dive locations. I hope you can use this at the upcoming meetings to showcase the current and abundant abalone population.

Please find the attached you tube link below. Please share with anyone else who is relevant to the situation. We decided to upload to YouTube for ease of sharing and viewing.

Best regards,

Jonathan Woodcock

<https://youtu.be/nEnUn4u7YL0?feature=shared>

On Wed, Apr 3, 2024 at 8:01 AM John Becker <jbeckersup@gmail.com> wrote:

Great work guys!

Thanks, john

On Tue, Apr 2, 2024 at 9:40 PM jonathan woodcock <jonathan5685@gmail.com> wrote:

Hello my name is Jonathan Woodcock I wanted to share with you some video clips. This is from April 1st, 2024. I did two survey dives along with Trent Pettersen and John Becker at San Miguel

island. I'm hoping we can address the abundant abalone population at your next meeting. This is just one small example of the population. I would like the chance to show and talk furthermore.

Best Regards,

Jonathan Woodcock
805-722-4857

--

John Becker

Re: Attn David Thesel and Susan Ashcroft

John Becker <jbeckersup@gmail.com>

Mon 04/08/2024 04:15 PM

To: JONATHAN5685@GMAIL.COM <JONATHAN5685@GMAIL.COM>

Cc: JEFFBALDWIN39@GMAIL.COM <JEFFBALDWIN39@GMAIL.COM>; Mark Becker <markbeckerr@gmail.com>; Steve Rebuck <absforman@sbcglobal.net>; FGC <FGC@fgc.ca.gov>; TRENT ROBERT PETERSEN <TRENTPETT1212@GMAIL.COM>

You don't often get email from jbeckersup@gmail.com. [Learn why this is important](#)

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Dear Commission members and staff,

Attention David Thesell, Susan Ashcroft, and Kimi Rogers

I was on the 1 April 2024 dive survey with Jonathan Woodcock and Trent Patterson; Jonathan sent you the 3.5-minute video on April 5th. I just wanted to follow up with a few points that we want to highlight in the videos.

- We captured various size classes of abalone to demonstrate the full recovery of juvenile to legal-sized and larger abalone.
- We filmed below Tyler Bight and inside Crook's Point, on the backside of San Miguel Island. As captured in the video, both these areas show prolific growth of palm kelp and sea lettuce, indicative of a healthy bottom ecosystem (in other footage we also show extensive *Macrocystis*). When I was diving abalone and sea urchins at San Miguel, the other Channel islands, and the coast, this was the type of healthy bottom we were always looking for.
- We could only cover an extremely small portion of the island in the jumps made that day (i.e., diving hose swim lengths were only 50-150 feet), but much of the backside of San Miguel looks like what was shown in the video in terms of both the bottom growth and abundant abalone populations.
- What we were not able to film in a single day trip (due to weather and swell conditions) is the Sandspit at the southern end of the island, and the Foul Area, Castle Rock, and Otter Harbor on the frontside of the island. They have traditionally been some of the best abalone diving sites. We will try to provide additional video footage of these areas soon as weather and time permits.

We strongly encourage you to join us on a dive trip so that you can check out the substantial and complete recovery of the red abalone population at San Miguel Island.

Per a previous email from Kimi Rogers on 5 April, we confirm that we would like the videos to be included in the meeting materials, thank you.

Thanks for your time and consideration. If you have any questions, please don't hesitate to reach out.

John Becker

805-680-3389

Video link again for your convenience:

<https://youtu.be/nEnUn4u7YL0?feature=shared>

On Fri, Apr 5, 2024 at 8:41 PM jonathan woodcock <jonathan5685@gmail.com> wrote:

Hello,

This is a 3 1/2 minute video we put together from 3 different dive clips at two different dive locations. I hope you can use this at the upcoming meetings to showcase the current and abundant abalone population.

Please find the attached you tube link below. Please share with anyone else who is relevant to the situation. We decided to upload to YouTube for ease of sharing and viewing.

Best regards,

Jonathan Woodcock

<https://youtu.be/nEnUn4u7YL0?feature=shared>

On Wed, Apr 3, 2024 at 8:01 AM John Becker <jbeckersup@gmail.com> wrote:

Great work guys!

Thanks, john

On Tue, Apr 2, 2024 at 9:40 PM jonathan woodcock <jonathan5685@gmail.com> wrote:

Hello my name is Jonathan Woodcock I wanted to share with you some video clips. This is from April 1st, 2024. I did two survey dives along with Trent Pettersen and John Becker at San Miguel island. I'm hoping we can address the abundant abalone population at your next meeting. This is just one small example of the population. I would like the chance to show and talk furthermore.

Best Regards,

Jonathan Woodcock
805-722-4857

--

John Becker

--

John Becker

Climate: The Movie

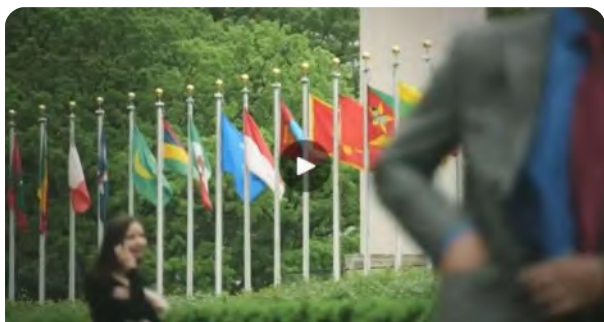
mbcfo member <mbcfo1972@gmail.com>

Thu 04/11/2024 07:55 AM

To: Doug Boren <douglas.boren@boem.gov>; Andrea Chmelik <Andrea.Chmelik@asm.ca.gov>; Dobroski, Nicole@SLC <Nicole.Dobroski@slc.ca.gov>; FGC <FGC@fgc.ca.gov>; Flint, Scott@Energy <Scott.Flint@energy.ca.gov>; Greg Haas <greg.haas@mail.house.gov>; Harland, Eli@Energy <Eli.Harland@energy.ca.gov>; Huckelbridge, Kate@Coastal <Kate.Huckelbridge@coastal.ca.gov>; Lucchesi, Jennifer@SLC <Jennifer.Lucchesi@slc.ca.gov>; Mattox, Jennifer@SLC <Jennifer.Mattox@slc.ca.gov>; Miller-Henson, Melissa@FGC <Melissa.Miller-Henson@fgc.ca.gov>; Michael Milstein <michael.milstein@noaa.gov>; Payne, Elizabeth@Waterboards <Elizabeth.Payne@waterboards.ca.gov>; John Romero <john.romero@boem.gov>; Wyer, Holly@Coastal <holly.wyer@coastal.ca.gov>

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This is fairly long but worth the watch, especially if you are in a position of political power.



Climate: The Movie | By Save The Ocean From
Big WindFacebook
fb.watch

Tom Hafer, President
(805) 610-2072
mbcfo1972@gmail.com

RE: BOEM study used to analyze the impacts of HRG surveys on fish are irrelevant. There are no studies

Miller-Henson, Melissa@FGC <Melissa.Miller-Henson@fgc.ca.gov>

Tue 04/09/2024 02:20 PM

To:SOMETHINGSFISHY@CHARTER.NET <SOMETHINGSFISHY@CHARTER.NET>

Cc:FGC <FGC@fgc.ca.gov>

Tom, thanks for continuing to send information, but please include fgc@fgc.ca.gov in the “to” or the “cc” lines for record-keeping purposes. I don’t want your messages to get lost in the tidal waves of email I receive...

Thanks,

Melissa

From: Tom and Sheri Hafer <somethingsfishy@charter.net>

Sent: Tuesday, April 9, 2024 12:52 PM

To: Doug Boren <douglas.boren@boem.gov>; Andrea Chmelik <Andrea.Chmelik@asm.ca.gov>; Dobroski, Nicole@SLC <Nicole.Dobroski@slc.ca.gov>; Flint, Scott@Energy <Scott.Flint@energy.ca.gov>; Greg Haas <greg.haas@mail.house.gov>; Harland, Eli@Energy <Eli.Harland@energy.ca.gov>; Huckelbridge, Kate@Coastal <Kate.Huckelbridge@coastal.ca.gov>; Lucchesi, Jennifer@SLC <Jennifer.Lucchesi@slc.ca.gov>; Mattox, Jennifer@SLC <Jennifer.Mattox@slc.ca.gov>; Miller-Henson, Melissa@FGC <Melissa.Miller-Henson@fgc.ca.gov>; Michael Milstein <michael.milstein@noaa.gov>; Payne, Elizabeth@Waterboards <Elizabeth.Payne@waterboards.ca.gov>; John Romero <john.romero@boem.gov>; Wyer, Holly@Coastal <holly.wyer@coastal.ca.gov>

Subject: BOEM study used to analyze the impacts of HRG surveys on fish are irrelevant. There are no studies

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Please also add this information to your administrative records regarding impacts to fish from HRG surveys.

These are screen shots of an email conversation with Author Popper, a leading authority in Fish Bioacoustics and co-author of “An overview of fish bioacoustics and the impacts of anthropogenic noise on fish” in 2019. This is his responses to BOEM’s PEIS report on the impacts from HRG surveys on fish:

On Nov 8, 2023, at 7:52AM, Arthur N. Popper >apopper@umd.edu> wrote:

Indeed, from my brief look at the report you sent, it looks as if the conclusions regarding fishes are based on two irrelevant paper - one which seems (on first look) to be speculation about sounds and not about fish per se, and the other based on dredging - something totally different than the signals that will be used in the surveys. Moreover, and as usual for reports like the one you shared, fishes are "step animals" to marine mammals, and so the people who write these reports really dismiss the fish (and invertebrates) and say nothing of value. And, of course, there are no funds to do the needed research to give any sort of real guidance.

So, as much as I'd like to give you a science-based opinion, I cannot do that, and if anyone else says they can give you answers, I'd be very wary!

But, and I think this is important, there may be some data in Europe, and there may be some ways to at least share hypothetical ideas on potential impacts. But I'd have to spend some time to think about this, and see I can dig up information from Europe (I doubt there are data from any other places). And, to be totally honest, whatever ideas I come up with may not be to your liking!

The bottom line is that I cannot easily answer your questions (and no one can!) but I could at least try and give you some insight into whatever science there may be, and its relevance to the issues that interest you.

I'd be glad to discuss this with you further if you wish.

Best wishes, and thanks for contacting me.

Art

Arthur N. Popper
Environmental BioAcoustics LLC
Silver Spring, MD 20906
[email: anpopper@gmail.com](mailto:anpopper@gmail.com)

On Nov 21, 2023, at 3:02PM, Arthur N. Popper <apopper@umd.edu> wrote:

There are lots of other issues here - like the fact that all the data, even the 2014, focus on sound pressure and not the signal that most fishes, and all invertebrates, detect - particle motion, and so what really impacts fish behavior is unknown. Trouble is, as I may have explained, our understanding of particle motion is relatively new, and it is hard (and expensive) to measure there is not much known about levels that could impact fishes.

So, now a question for you. I am meeting next week with folks from coastal commission, thanks to you. Are you involved with them, and does your group overlap?

Let me know if my response is clear or if you have other questions. Have a lovely holiday.

Art

Arthur N. Popper
15501 Prince Frederick Way
Silver Spring, MD 20906
email: apopper@umd.edu
phone: (240) 401-0253

Fwd: Research on impacts to fish from HRG surveys on West Coast

Miller-Henson, Melissa@FGC <Melissa.Miller-Henson@fgc.ca.gov>

Tue 04/09/2024 07:15 AM

To:FGC <FGC@fgc.ca.gov>

Cc:mbcfo member <mbcfo1972@gmail.com>;Ashcraft, Susan@FGC <Susan.Ashcraft@fgc.ca.gov>

Per request below. GPC. Thx!

From: mbcfo member <mbcfo1972@gmail.com>

Sent: Monday, April 8, 2024 5:28 PM

To: Doug Boren <douglas.boren@boem.gov>; Andrea Chmelik <Andrea.Chmelik@asm.ca.gov>; Dobroski, Nicole@SLC <Nicole.Dobroski@slc.ca.gov>; Flint, Scott@Energy <Scott.Flint@energy.ca.gov>; Greg Haas <greg.haas@mail.house.gov>; Harland, Eli@Energy <Eli.Harland@energy.ca.gov>; Huckelbridge, Kate@Coastal <Kate.Huckelbridge@coastal.ca.gov>; Lucchesi, Jennifer@SLC <Jennifer.Lucchesi@slc.ca.gov>; Mattox, Jennifer@SLC <Jennifer.Mattox@slc.ca.gov>; Miller-Henson, Melissa@FGC <Melissa.Miller-Henson@fgc.ca.gov>; Michael Milstein <michael.milstein@noaa.gov>; Payne, Elizabeth@Waterboards <Elizabeth.Payne@waterboards.ca.gov>; John Romero <john.romero@boem.gov>; Wyer, Holly@Coastal <holly.wyer@coastal.ca.gov>

Subject: Fwd: Research on impacts to fish from HRG surveys on West Coast

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Please add to your administrative records regarding the need for further study of impacts on fish and invertebrates from BOEM permitted HRG surveys.

Tom Hafer, President
(805) 610-2072
mbcfo1972@gmail.com

Begin forwarded message:

From: "Arthur N. Popper" <apopper@umd.edu>

Subject: Re: Research on impacts to fish from HRG surveys on West Coast

Date: April 5, 2024 at 12:16:53 PM PDT

To: mbcfo member <mbcfo1972@gmail.com>

Hi Tom:

Your statement about my conclusions is pretty accurate. **The extent of data we have on impacts of pile driving and seismics on fishes is minuscule and getting the needed information needs to be done.** However, as I think I pointed out, getting useful data is going to be rather hard work, and it is going to be expensive. And, the design of the work needs to be done carefully and by experts since it is very easy to get incorrect and equivocal data.

So, suggesting a study design at this point is impossible - but **I do know that a number of different studies are needed.** What these studies might be depend

upon the specific question you want to ask and what we decide are the best ways to answer the questions.

And, confounding the answer, and making any study more difficult, is deciding on the species that are most important to you. A real problem here, as I hope I made clear, is that one cannot easily extrapolate how one species reacts to another species with any ease. Thus, species selections must be integral to deciding , the studies done.

I do “applaud” you for asking this question, and I’d be glad to have a discussion, but please understand that **the answers will not be simple, easy to implement, or inexpensive to get.**

Best wishes.

Art

Arthur N. Popper
Environmental BioAcoustics LLC
Silver Spring, MD 20906
email: anpopper@gmail.com

On Apr 5, 2024, at 1:17 PM, mbcfo member <mbcfo1972@gmail.com> wrote:

Good morning,

Thank you for your assistance in the California Commission’s 7c working group. **It seems that your conclusion was that you were unable to conclude with absolute certainty what the impacts on fish and invertebrates will be from the planned HRG surveys for offshore wind.**

What study design would you recommend to assist in determining the impacts from HRG surveys using the proposed frequencies and decibels permitted?

We appreciate any advice you can offer,

Tom Hafer, President
(805) 610-2072
mbcfo1972@gmail.com

Widely used marine seismic survey air gun operations negatively impact zooplankton

Robert D. McCauley^{1*}, Ryan D. Day², Kerrie M. Swadling³, Quinn P. Fitzgibbon², Reg A. Watson² and Jayson M. Semmens^{2*}

Zooplankton underpin the health and productivity of global marine ecosystems. Here we present evidence that suggests seismic surveys cause significant mortality to zooplankton populations. Seismic surveys are used extensively to explore for petroleum resources using intense, low-frequency, acoustic impulse signals. Experimental air gun signal exposure decreased zooplankton abundance when compared with controls, as measured by sonar (-3–4 dB drop within 15–30 min) and net tows (median 64% decrease within 1 h), and caused a two- to threefold increase in dead adult and larval zooplankton. Impacts were observed out to the maximum 1.2 km range sampled, which was more than two orders of magnitude greater than the previously assumed impact range of 10 m. Although no adult krill were present, all larval krill were killed after air gun passage. There is a significant and unacknowledged potential for ocean ecosystem function and productivity to be negatively impacted by present seismic technology.

Phytoplankton and their grazers—zooplankton—underpin ocean productivity^{1,2}, therefore significant impacts on plankton by anthropogenic sources have enormous implications for ocean ecosystem structure and health. In addition, a significant component of zooplankton communities comprises the larval stages of many commercial fisheries species. Healthy populations of fish, top predators and marine mammals are not possible without viable planktonic productivity^{1–3}.

Man's dependence on fossil fuels requires continual exploration for new resources. Deposits of undiscovered oil and gas reserves in the world's oceans⁴ are estimated to be substantial (Fig. 1), with exploration occurring in most petroleum provinces. In the marine environment, exploration is achieved via an acoustic imaging technique that uses intense, low-frequency impulse signals generated near the sea surface and directed into the seabed ('seismic surveys')⁵. Spatially distributed arrays of air guns simultaneously release high-pressure air (13.8 MPa or 2,000 psi) into the water to produce the impulse signal. Reflections from sub-sea density discontinuities received by strings of hydrophones enable sub-sea image generation. Commonly, a series of closely spaced parallel tracks are followed to systematically survey large swathes of ocean, each track with a series of acoustic signal locations (Fig. 1b,c)⁵.

Published details of global seismic survey activity are scarce. As an example of effort, in Australian waters alone during 2014 and early 2015, an average of 15,848 km of petroleum-related marine seismic surveys were completed every three months⁶. Along with petroleum exploration, seismic surveys are also used: (1) to image sub-sea formations likely to be used as 'traps' for sequestering CO₂ (ref. 7); (2) in scientific surveys of the Earth's geology; (3) for shallow, engineering-related 'site' surveys; or (4) for monitoring petroleum recovery from producing fields⁵.

Our understanding of the impact of seismic surveys on the environment is still developing. Considerable effort has been put into

understanding the impacts on whales, with evidence of affected behaviour and hearing physiology⁸. Although fish have received less attention⁹, behavioural and pathological impacts have been reported for adults^{10–13} and eggs^{14,15}. Comparatively little effort has been focussed on impacts on invertebrates^{16,17}. One study on larval invertebrates showed significant malformations to scallop veliger larvae from simulated air gun exposure in the laboratory¹⁸, whereas a second found no meaningful impacts on larval hatching success or viability immediately post-hatching for lobster eggs exposed to an air gun *in situ* while on the adult female¹⁹. No published studies have been conducted on seismic impacts on plankton. On small scales zooplankton can be surprisingly mobile, capable of moving several body lengths per second^{20–23}; however, they cannot escape an approaching air gun array. We cannot fully understand impacts of seismic surveys on higher order fauna or on an ecosystem level without knowledge of how organisms at the base of the food chain respond. Our experiments were designed to assess how operation of a single air gun (2.461 or 150 inch³) of similar mean volume to those used commercially in an array (2.571 or 157 inch³ from 25 arrays²⁴), operating in a field environment, would impact the local zooplankton field. To investigate potential impacts, sonar surveys, net tows for zooplankton abundance and measurements of dead to total zooplankton counts were assessed before and after air gun operations.

Results

Replicated experiments were conducted on the 2 and 3 March 2015 (Day 1 and Day 2; operations shown in Fig. 2 for Day 1). The conductivity–temperature–depth (CTD) casts (Supplementary Fig. 1) suggested that the upper 25 m of the water column was well mixed, so drifter measurements applied to the entire upper water column. At the time of air gun runs, drift rates were 0.19 m s⁻¹ at 171° on Day 1 and 0.12 m s⁻¹ at 56° on Day 2. Thirty-four plankton taxa were

¹Centre for Marine Science and Technology, Curtin University, GPO Box U 1987, Perth 6845, Western Australia, Australia. ²Institute for Marine and Antarctic Studies, Centre for Fisheries and Aquaculture, University Tasmania, Private Bag 49, Hobart, 7001 Tasmania, Australia. ³Institute for Marine and Antarctic Studies, Centre for Ecology and Biodiversity, Antarctic Climate and Ecosystems Cooperative Research Centre, Private Bag 80, Hobart, 7001 Tasmania, Australia. *e-mail: R.McCauley@cmst.curtin.edu.au; jayson.semmens@utas.edu.au

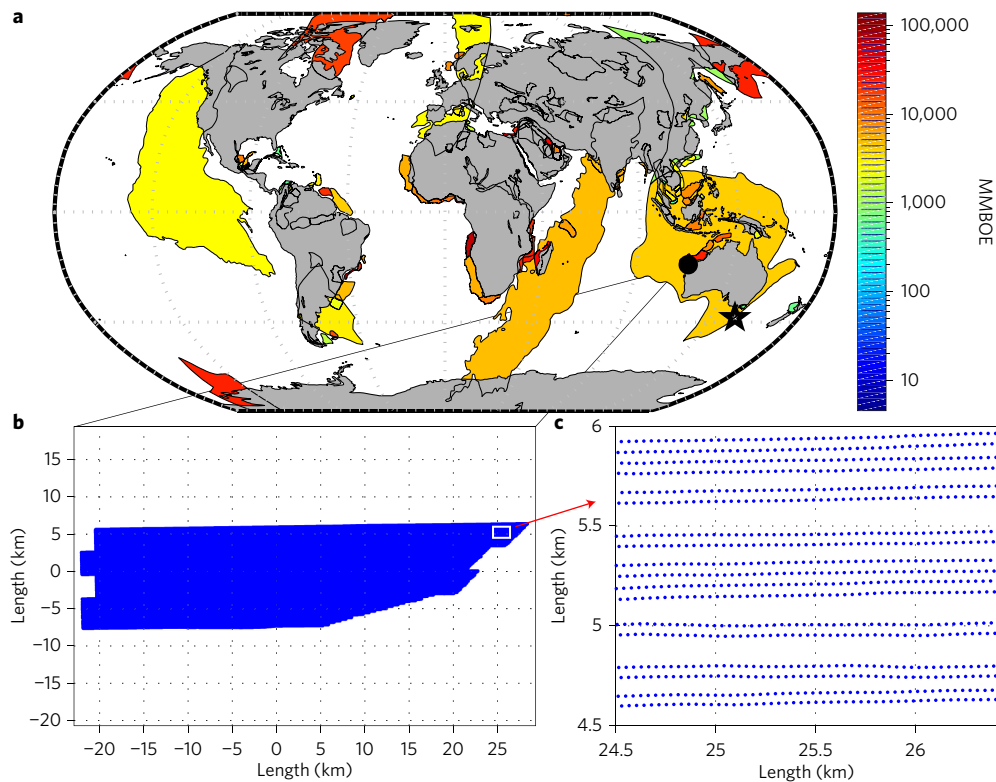


Figure 1 | Potential undiscovered oil deposits worldwide and seismic survey scales. a, Estimated undiscovered marine oil deposits shown by geological province using a logarithmic colour scale in millions of barrels of oil equivalent (MMBOE; source: USGS data⁶ for 2012), location of experiment shown by a star symbol. **b**, A typical 3D seismic survey area, located by the black circle in **a**. **c**, Close-up of seismic lines with individual air gun firing locations, from the area indicated by the white rectangle in **b**.

counted in net tows (abundance as individuals (ind.) m^{-3} , listed in Supplementary Table 1). After excluding tows with zero values, 189 taxa/tow combinations ('taxa/tow') were available for comparison of abundance. The taxonomic composition of control tows was similar on Days 1 and 2, with copepods comprising 71% of total taxa counted, cladocerans 15%, euphausiid larvae 4%, appendicularians 5% and the remainder comprising meroplanktonic groups such as larvae of decapods, polychaetes and molluscs. Of the Euphausiidae (krill, *Nyctiphanes australis*), only larval forms were present in samples, possibly due to low net tow speeds. One shark was sighted immediately after the air gun transect on Day 2 and no marine mammal sightings were made.

The site characteristics differed between Days 1 and 2 based on control sonar backscatter observations, zooplankton net tow abundance and locations of fish in the water column. On Day 2, control sonar results showed a significant decrease in zooplankton backscatter (Sv, dB $re\ m^{-3}$) from Day 1 ($P < 0.001$, two-tailed t -test when comparing mean values within 6–15 m depth range and 10 m range increments, mean \pm s.d. of -81 ± 0.1 and -85 ± 0.1 , Days 1 and 2, respectively). On Days 1 and 2, the numbers of individual fish targets per 100 m in the control sonar transects were similar (6.8 and 6.1 fish, respectively), but on Day 2 significantly more of these fish were in the water column rather than close to the seabed (comparing mean fish depth below sea surface Days 1 and 2 in 5–25 m depth range, $P < 0.05$, two-tailed t -test). Sonar-derived fish schools were similar in number and area on Days 1 and 2 (5 and 7 schools of 82 and 106 m^2 , respectively). The mean and median zooplankton abundance decreased by 89% and 96%, respectively (Fig. 3d), when comparing ratios of control zooplankton abundance (Day 2/Day 1) using all taxa/tows with non-zero data ($N = 78$), with data highly skewed to lower abundances in any tow made on Day 2. Mean control

abundance had decreased by 91% on Day 2 with all taxa combined each day ($N = 30$).

When comparing exposed with control zooplankton abundance for Days 1 and 2 (Supplementary Table 1), 58% of taxa abundance (ind. m^{-3}) were reduced by $\geq 50\%$ after air gun exposure when using all taxa pooled for all range categories (so excluding range effects) and only taxa with >10 counts in exposed or control groups ($N = 48$). Furthermore, there was a statistically significant lower zooplankton abundance after air gun exposure ($P < 0.001$, two-tailed t -test) when comparing ratios of control abundance with exposed divided by mean control ratios (exposed/control), using all taxa combined or using all crustacean taxa. The distribution of exposed/control abundance for all taxa was skewed to low values with a median abundance reduction of 64%, and 37% with an abundance decrease of $\geq 95\%$. For exposed/control ratios ≥ 1 , or no impact, 89% of these occurred on Day 2 when total zooplankton abundance was lower, and 50% of these occurred on Day 2 at the greatest range from the air gun signal (1,200–1,300 m). Exposed abundance reductions of no-change (0%), 25% and 50% compared with control values occurred at ranges of 808, 639 and 409 m, respectively (s.d. 390, 312, 270 m, respectively), as calculated from means of fitted power curves of abundance reduction with range from the drift translated air gun signal location (DTASL; see Supplementary Table 2 for plankton tow ranges, Methods for DTASL definition) for ten independent taxa with r^2 value of >0.8 where only tows with $N > 10$ (control or exposed) were used to generate the curves. Copepods and cladocerans comprised 86% of total zooplankton present, so their pooled abundance reduction with range after air gun passage is important (Fig. 3e). The ranges at which, respectively, no change, and abundance reductions of 25% and 50% occurred for copepods and cladocerans, were

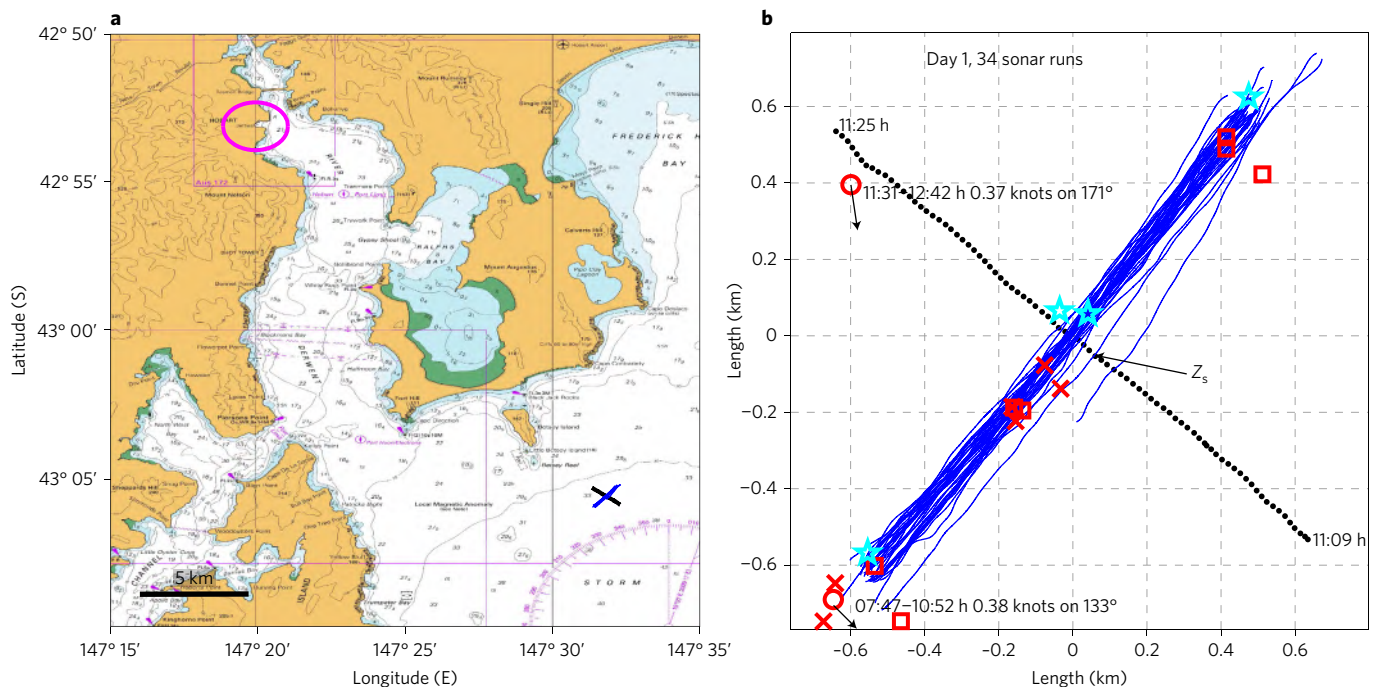


Figure 2 | Location of experimental site in southern Tasmania. **a**, General area showing air gun (black) and sonar transects (blue) overlaid on Australian chart AUS00796. The magenta circle is Hobart city (from Australian Hydrographic Service chart under Seafarer GeoTIFF Curtin University licence no. 2618SG). **b**, Close-up of experimental set-up for Day 1. Black dots, air gun signal locations; blue lines, sonar transects; red circles with arrows, drifters; red squares, control plankton tow locations; red crosses, plankton tow locations made after air gun exposure; cyan pentagrams, sea noise logger locations. One air gun sonar transect crossing point (Z_s) is shown. Axis scales are zeroed to the Z_s point. The world-wide location of the site was shown by the star in southern Tasmania in Fig. 1.

at 973–1,119 m, 795–932 m and 509–658 m (mean to median values using fitted power curves, $r^2 > 0.92$).

In addition to zooplankton abundance, mortality was assessed using vital stain counts and dead/total ratios (total being dead + live animals) as derived for taxonomic groups of copepods, nauplii and all other taxa (impact ranges and raw counts in Supplementary Tables 2 and 3, respectively). Vital stain control counts were pooled for each taxa per day. To look for range impact effects of air gun exposure in the vital stain results, exposed plankton tows were pooled into range groups of: (1) 79 m Day 1 + 71 m Day 1 + 149 m Day 2; (2) 451 m Day 1 + 547 m Day 2; and (3) 1,248–1,300 m Day 2 (Supplementary Table 3). There were significantly more dead animals in all taxa (copepods, nauplii and other taxa) for all range groups when comparing dead/total ratios of exposed with their respective controls (Fig. 3f for mean values, Supplementary Table 4 for statistics). In general, there were two to three times more dead zooplankton after air gun exposure compared with controls at all range groups for all taxa. All krill larvae found in all exposed samples were dead at all range groups following the air gun pass. The ‘copepods dead’ category was dominated by the smaller copepod species (*Acartia trauteri*, *Oithona* spp.). Although there were decreasing trends apparent in the ratio of dead to total counted with distance from impact for copepods and nauplii, these were not significant given the variance.

On Day 1, a ‘hole’ developed in the non-fish sonar backscatter (S_v) extending to ~20–30 m depth, which became noticeable 15 min after air gun passage and continued to expand and move coincident and symmetrically with the DTASL through time. When S_v in the upper 20 m of the water column was significantly reduced on Day 2, this ‘hole’ was not evident. Examples of the development of this ‘hole’ are shown in Fig. 4a–d, where consecutive sonar transects made every 15 min from the first air gun, sonar transect crossing time (T_{s1}), are shown.

To elaborate ‘hole’ definition, S_v on Day 1 was averaged over 6–16 m depth in 10 m range bins and is shown stacked in time

zeroed to T_{s1} as a plan view in Fig. 4e along with the DTASL (noting the x axis here is time of full experiment, not distance). A noticeable drop in depth-averaged S_v can be seen in Fig. 4e 30 min post T_{s1} in the 6–16 m depth bin. In Fig. 4f, the average S_v over 6–16 m depth and for 100 m each side of the sonar and air gun line crossing point (Z_s) is shown, along with the average S_v for the same depth and range dimensions but following the DTASL for sonar transects after T_{s1} . A significant, 6 dB drop in depth-averaged S_v occurred 30 min post T_{s1} when following the DTASL track. A depth slice through the water column is shown in Fig. 4g, which averages S_v for five sonar pings either side of the Z_s point prior to air gun operations and which follows the DTASL trajectory for times after the start of air gun operations. The ‘hole’ in the plankton was clear down to 15 m depth appearing to extend as deep as 30 m, began to be noticeable in the 10–15 m depth range at 15 min post T_{s1} , was most persistent in the 10–13 m depth range and increased in radius through time.

The smoothed, depth- and range-averaged S_v curves for sonar transects after air gun crossing on Day 1 are shown in Fig. 5a, and the resulting ‘hole’ radius is shown increasing through time in Fig. 5b (see Methods). The development of the plankton backscatter ‘hole’ is clearly seen (sonar transects 27 onwards) in Fig. 5a, while the ‘hole’ radius increasing linearly with time is evident in Fig. 5b. The increase of the ‘hole’ radius through time gave a significant linear fit ($r^2 = 0.91$) with maximum radius based on the 3 dB drop (half power) below the least-impacted northeastern transect end, at 1,161 m, 78 min post T_{s1} during the last sonar transect, 34.

Passage of the operating air gun (Day 1) caused a ‘hole’ to open in sonar backscatter, a decrease in zooplankton abundance and increased dead/total zooplankton ratios in net tow observations. On Day 1, the sonar backscatter ‘hole’ followed the prevailing track of the air gun firing locations when these were corrected for water drift, was symmetrical about this track and showed a time-dependency, as evidenced by the ‘hole’ radius increasing for 78 min after the air

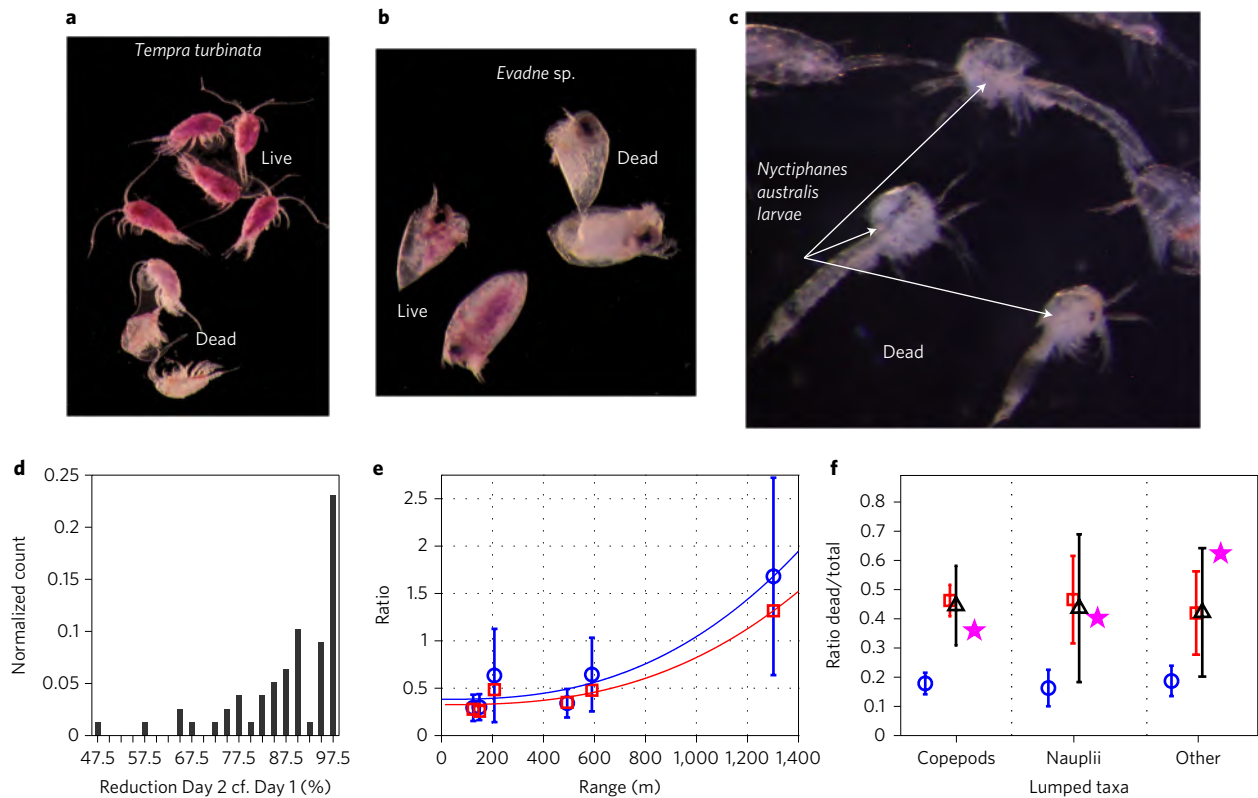


Figure 3 | Zooplankton vital staining images, and ratios of zooplankton abundance and dead to total plankton counted. **a–c**, Image of copepod (*Tempra turbinata*, Temoridae; **a**), cladoceran (*Evadne* sp., Podanidae; **b**) and krill larvae (*Nyctiphanes australis*, Euphausiidae; **c**). **d**, Distribution for control samples of the percentage reduction in abundance of all net tows on Day 2 compared with Day 1. **e**, Ratio of exposed/control abundance for copepods and cladocerans with range from DTASL showing mean (circles), median (squares), and power fit to mean (blue) and median (red) values ($r^2 = 0.92$ and 0.96 , respectively). **f**, Ratio of dead/total animals counted for copepods, nauplii and other zooplankton, with means of controls (blue circles), and 71–150 m (red squares), 451–547 m (black triangles) and 1,248 m (magenta stars) from DTASL. Error bars are 95% confidence limits. Live and dead animals are shown in the vital staining images.

gun crossed the sonar line. The maximum range for a reduction in sonar backscatter associated with the air gun impact track corresponded to the maximum sampling range for sonar (1.2 km). The lower zooplankton abundance on Day 2 meant the sonar backscatter ‘hole’ could not be visualized after air gun exposure, but like Day 1, on Day 2 statistically significant zooplankton mortality and decreased abundance were found after air gun passage. The zooplankton dead/total ratios were significantly reduced compared with controls at the maximum sampling range of ~1.2 km, although the abundance measures suggested a range for a detectable drop in abundance at approximately 1 km. Copepods and cladocerans had the greatest sample size for detecting range effects. Their abundance measures (ind. m^{-3}) after exposure had dropped to 50% of control abundance at 509–658 m from air gun passage, with no impact at 973–1,119 m (Fig. 3e). The received air gun level at 509–658 m range was 156 dB re $1 \mu Pa^2 s^{-1}$ sound exposure levels and 183 dB re $1 \mu Pa$ peak-to-peak, and at 1.1–1.2 km range was 153 dB re $1 \mu Pa^2 s^{-1}$ and 178 dB re $1 \mu Pa$ for the same units (Supplementary Fig. 2).

Discussion

On Day 2, even before the use of the air gun, the zooplankton net tow abundance counts were significantly lower than Day 1, and although individual fish sonar targets were of similar abundance, there was a significant increase in fish presence higher in the water column. The drop of zooplankton abundance on Day 2 compared with Day 1 and increase of fish in the water column on Day 2 raises the question of whether the scale of air gun impact on Day 1 carried over into Day 2. The tidal regime was oscillatory (diurnal tide;

Supplementary Fig. 3) and sampling was approximately 24 h apart, but the impact range measured (1.2 km) was unlikely to have been large enough to overcome mixing or advection. Without detailed information on mixing, advection and current set above tidal flow (not known), it is not possible to draw any conclusions on the difference of zooplankton abundance and fish depth observed between Days 1 and 2.

Previous attempts to quantify ecological scale impacts on planktonic larvae from seismic surveys used modelling scenarios with impact ranges of <10 m (refs ^{14,15}) and suggested insignificant impacts compared with the naturally high turnover of plankton²⁵. The impact range observed here, at the maximum range sampled of 1–1.2 km, is more than two orders of magnitude higher than what was assumed in these modelling studies. The impacts seen here were taxon-, range- and time-dependant, with outside bounds for time (1.2 h) and range impacts on the maximum scale of sampling.

Although we did not study the impact mechanism of the impulsive air gun signal, we can present a hypothesis on what may have occurred. Many marine invertebrates, late stage larval fauna and the zooplankton Mysidae use mechanoreceptors of a small, dense mass to ‘drive’ sensory hairs (‘statocyst’ systems²⁶) partly for vibration perception. Most zooplankton do not have mass loaded mechanosensory systems but have external sensory hairs on the distal antenna ends, attached to ‘rigid and stiff’ sections of cuticle^{27,28}, with the cuticle potentially acting as a mechanical impedance for the sensory hairs to move against when driven by hydrodynamic stimuli. The zooplankton mechanosensory systems may be extremely sensitive²⁹ and either system will respond to an impulsive air gun signal by

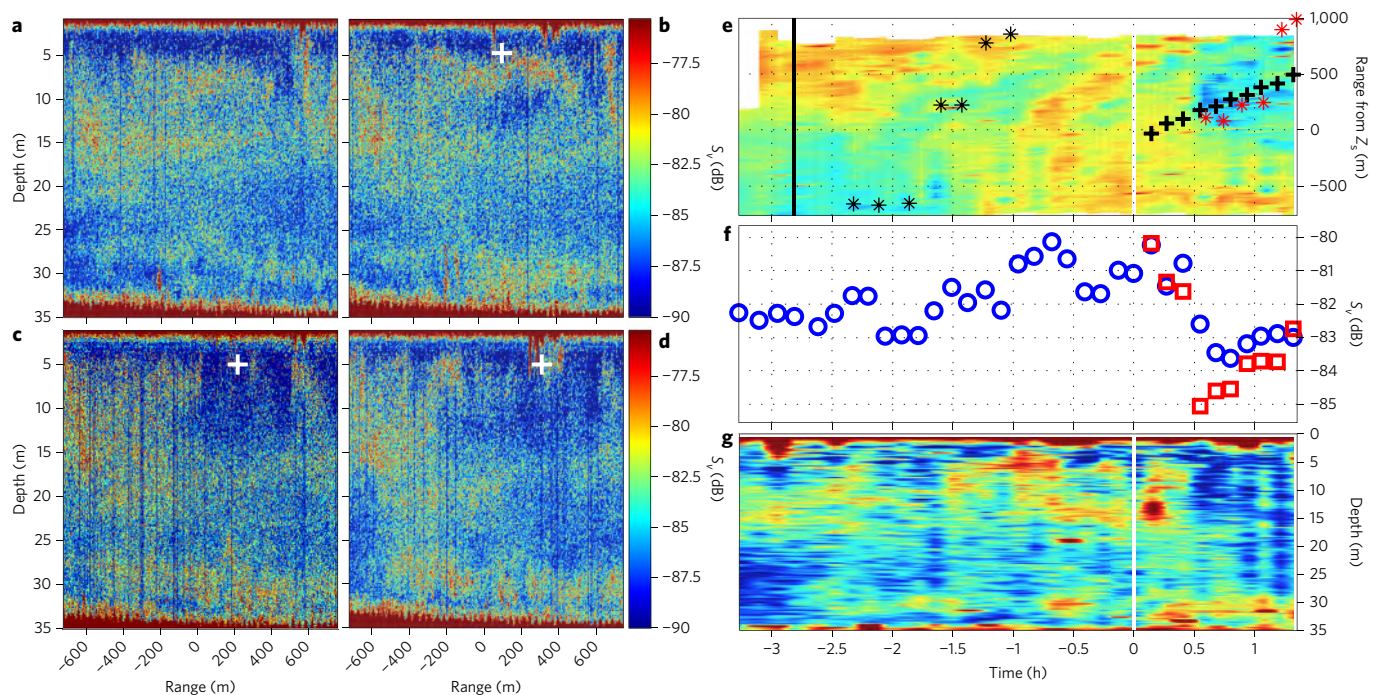


Figure 4 | S_v after Day 1 air gun exposure. **a**, Immediately before air gun crossing sonar line (run 25). **b**, 15 min after air gun crossed sonar line (run 27). **c**, 32 min after air gun crossed sonar line (run 29). **d**, 47 min after air gun crossed sonar line (run 31). **e**, Plan view of Day 1 range and depth-averaged S_v with range from Z_c (air gun/sonar crossing point) as y axis and time from T_{s1} (white line) as x axis. **f**, Averaged S_v from 100 m each side of Z_c over 6–16 m depth (circles) with red squares centred on DTASL (drifted location of air gun signal that most impacted sonar line). **g**, A vertical slice through the water column averaged five pings either side of Z_c before air gun crossing then DTASL after air gun starts. The white crosses in **b–d** represent DTASLs, as do black crosses in **e**; the vertical black line in **e** is time of control air gun pass, black asterisks show control plankton tow locations and red asterisks show exposed plankton tow locations. The axes and colour scales are matched in **a–d**, and **e** and **f**. Range in **a–d** is from Z_c .

‘shaking’, hypothetically, to the point where damage could accrue to sensory hairs or tissue. A subsequent loss or degradation of sensory ability would explain differing results among zooplankton taxa, as there are vast differences in presence, morphology and sensitivity of such systems. Impacted animals might not die immediately after air gun exposure, but rather may be disabled in their sensory capacity with an accompanying loss of fitness and so increased predation risk through time. An orientation disability would alter observed sonar reflectivity as swimming orientations changed from the upright position. The 120 kHz sonar frequency used in experiments will not observe individual zooplankton directly but will measure reflectivity from aggregated zooplankton, thus the observed ‘hole’ may have been due to a statistical change in zooplankton orientation or to dispersal of aggregations.

Plankton lie well on the r side of the r/K continuum in life strategies¹. r -selected species typically have a short life span, large numbers of offspring and little if any offspring care, whereas K -selected species have the reverse. For anthropogenic sources to have significant impacts on an ecological scale on plankton, then the spatial or temporal scale of impact must be large in comparison with the ecosystem concerned. More than 90% of seismic surveys are conducted in a three-dimensional (3D) mode, where the density of sampling points allows 3D imaging of sub-sea geology⁵. These 3D surveys are focussed from a few hundred to thousands of square kilometres, taking weeks to months to complete, and importantly have repetitive signal locations well within the impact ranges observed here (15–25 m along line, 400–800 m across line⁵). Given the extensive spatial scale for serious impacts on plankton observed here, combined with the repeat and sustained nature of many seismic surveys in a comparatively small spatial area, it is highly probable that significant depletion or modification of plankton community structure is occurring on the scale of 3D seismic surveys undertaken.

The significance and implications of potential large-scale modification of plankton community structure and abundance due to seismic survey operations has enormous ramifications for larval recruitment processes, all higher order predators and ocean health in general. There is an urgent need to conduct further study to mitigate, model and understand potential impacts on plankton and the marine environment, and to prioritize development and testing of alternative seismic sources.

Methods

Summary. Two replicated experiments were carried out in Storm Bay at the southeastern end of Tasmania, Australia, at the same location across a uniform 34–36 m depth seabed (Figs 1 and 2) on 2 and 3 March 2015 (Days 1 and 2). Each experiment involved: (1) deployment of acoustic noise loggers with surface buoys at the extremities (1.6 km apart) and centre of a planned line of sonar transects (planned zero point for experiment, or Z_c) to measure air gun signals; (2) deployment of a drifter with drogue at 5 m depth to track surface water drift; (3) CTD measures (Day 2); (4) a control air gun transect, with the air gun (2.46 l or 150 inch³ volume) deployed, the source vessel run on a heading perpendicular to and starting 800 m from the sonar transect, through the Z_c out to 800 m past, but the air gun not operated (1.6 km air gun line); (5) replicate control vertical plankton tows at nominally 0, 250 and 800 m southwest of the Z_c from the seabed to surface using a bongo net with two 0.75 m mouth diameter, 200 μ m nets with flow meter and samples split into formalin and a vital stain (so two plankton tows at each nominal range, two cod-ends per tow, to give 12 cod-ends each day at a mean net ascent rate of 0.25 m s⁻¹); (6) active air gun transect (location and headings identical to control); (7) replicate vertical plankton tows after completion of the air gun transect (sampling same as controls); and (8) continual sonar observations between the buoys marking the sonar transect end points. Sonar transects were made for ~3 and 1.5 h pre- and post- the active air gun passage, respectively. Weather was calm on Day 1 (<12 knots) and calm to moderate on Day 2 (12–18 knots). Details of control and active air gun transects and sonar transects are listed in Supplementary Table 5. Note that the actual air gun and sonar transects did not exactly cross through the planned experimental zero point (Z_c), thus the crossing location of each sonar and air gun transect for that day is termed the point Z_s , which is unique for each sonar transect. The measured water

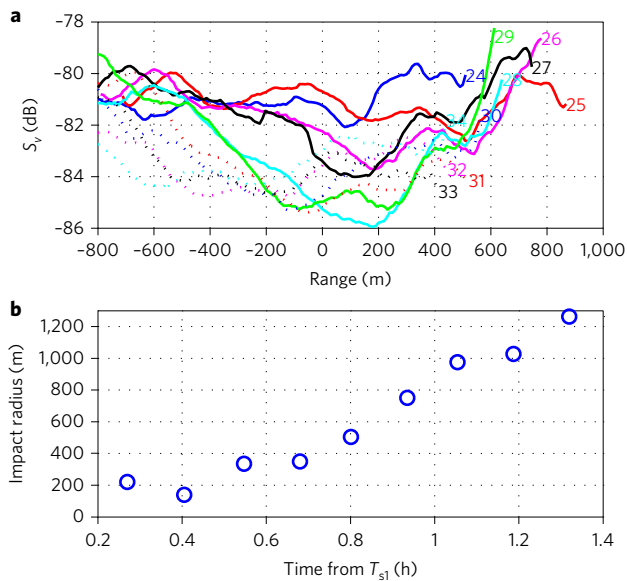


Figure 5 | Quantification of S_v hole averaged within 10–12.5 m depth range. **a**, Smoothed, averaged S_v on Day 1 for sonar transects 24–34 after the air gun had crossed the sonar transect (that is, from and inclusive of T_{s1} , which occurred during sonar transect 24). The sonar transect numbers are shown for each curve (transects 24–29 solid lines, 30–34 dotted lines) and the zero range point is the DTASL (drifted location of air gun signal that most impacted that sonar line). **b**, The measured radius of impact for the zooplankton 'hole', symmetric about the DTASL as given by 3 dB down points below the mean of the first 90 m from the northeast (–ve), plotted with time from T_{s1} , is shown. Note that many sonar transects extended beyond the –800 m shown.

body drift direction and rate was used to account for water impacted by the air gun signals, which when it was sampled by plankton tow or sonar, had drifted (termed DTASL, see below).

Air gun operations. A Sercel G. Gun II with a 2.461 (150 cubic inch) chamber was used as the air gun source, towed at 5.1 m depth 17 m astern the 11 m vessel *FV Shelle Ton* (10 t gross, 400 hp single propeller). Two GPS units logging every 1 s were mounted side-by-side inboard with the aerial and tow offsets used to calculate air gun location. A near-field hydrophone (HTIU-90) was located 0.5 m off the gun ports and all near-field air gun signals logged to a Sound Devices (SD) 722 or 744 digital recorder, using a –20 dB pre-amplifier, –5 dB gain on the recorder and 24 bit, 48 kHz sampling. The time of the first shot was logged manually and the SD logged near-field hydrophone, air gun signal times used to define all shot fired times. These fired shot times were used to interpolate into the source vessel navigation data to derive the fired signal location. The air gun was operated from a bank of four G-size high-pressure air bottles (35 MPa or 350 bar). Twin SCUBA compressors were operated in parallel to pump the bottles. Approximately 110 shots at full pressure (13.8 MPa or 2,000 psi) were available with full gas bottles and the compressors running. All air gun signals were at 13.8 MPa (2,000 psi). Four vessel crew were used, a skipper, marine mammal observer and two air gun operators.

CTD casts. A Seabird SBE19plus CTD profiler was used on Day 2, with one cast pre-exposure and one post-exposure, each within 100 m of the Z_c point. Data were read and plotted (Supplementary Fig. 1) to ascertain if the water column was well mixed or stratified.

Drifter deployments. Two deployments of a drifter were made on Day 1 and one on Day 2. The drifter comprised a sea anchor (drogue) of 1 m diameter attached to a weighted line at 5 m depth. A surface buoy and a buoy with pole and flag were attached at the surface. The universal time and GPS position of deployment, during deployment and recovery locations were logged.

Water body drift allowance. All plankton net tows and sonar transects were made along approximately the same line perpendicular to the centre of the air gun transect (Z_c point). Many of the sonar transects and plankton tows were made after air gun operations commenced or ceased. The water body was drifting. Thus for sonar transects or plankton tows after air gun operations commenced,

allowance had to be made for water drift moving the air-gun-impacted water body, to ascertain the nearest location of the water body impacted by a fired air gun signal for that sampling time point (plankton tows) or time period (sonar transect). To account for drift of the air-gun-impacted water body during sonar transects sampled after air gun operations commenced, several steps were required. First, the location of all air gun signals fired before a sonar ping time point were displaced in the water body drift direction for the distance given by the water body drift rate and elapsed time between that sonar ping and air gun firing. The air-gun-signal-displaced location that had the minimum range difference to the sonar ping location gave the displaced air gun signal location for that sonar ping. This was iterated for all sonar pings in a sonar transect, and the minimum range of the displaced air gun signal locations to all sonar pings in the transect gave the air gun signal location that most impacted that sonar transect. This location has been termed the drift translated air gun signal location (DTASL) and applies to a sonar transect. An example of the air gun signal displacement accounting for drift for the ping at which the DTASL occurred on sonar transect 30, Day 1, is shown in Supplementary Fig. 4. The similarly derived air-gun-displaced location, accounting for drift and time (sampling time minus air gun fire time), that best matched the plankton net tow location, gave the range of plankton net tow to air gun shot firing point, with these ranges listed in Supplementary Table 2.

Sonar. Sonar transects were made using a Simrad EK60 echosounder mounted on a pole bolted athwartships a 6 m vessel. A single beam, 120 kHz transducer was mounted at 0.5 m depth, using a 156 ms ping rate, maximum power, pulse length of 0.06–1.02 ms (depth resolution of 0.048 m) with a mean vessel speed of 3.2 ± 0.10 m s^{-1} (or 6.4 ± 0.21 knots) and median time for a line 8.2 min. On Day 1, 34 sonar transects were completed, 23 before the active air gun transect, 3 during and 8 after. On Day 2, 28 sonar transects were completed, 19 before the active air gun line, 4 during and 5 after. Details of sonar transects are listed in Supplementary Table 5.

The sonar data raw files were read into MATLAB (Mathworks) and converted to grids of calibrated volume backscattering strength (S_v , in units of $dB m^{-3}$) with associated navigation and time data. The sonar navigation data were used to align each sonar transect, deemed to be from one end of its line to the other before or after turns, to the crossing point of the active air gun track for that day. The air gun crossing point was set as the zero range location for that transect (the air gun track was interpolated at a 1 m resolution and the closest sonar ping location to the air gun track found and deemed to be the zero point for that sonar transect, Z_c). Each ping along a sonar line was assigned a range perpendicular to the Z_c point and its sign set so that the northeastern portion of the line was –ve and the southwestern portion +ve. Each sonar transect had a start time, end time and air-gun-line crossing time (T_c). The difference between T_c and the first sonar transect crossing time, T_{s1} , gave the time the sonar transect preceded (–ve) or followed (+ve) the time the air gun crossed the first sonar transect.

The 120 kHz S_v values have been averaged in different range and depth bins. All S_v averaging was carried out in the linear domain ($L = 10^{(S_v/10)}$, where L is the linear value of S_v), summed as appropriate then divided by the number of depth bins and pings, and the result converted back to decibels ($10 \times \log_{10}(L)$). All zooplankton S_v averaging had the surface bubble layer, fish schools, individual fish targets and bad pings removed before averaging. The surface bubble layer was found by following a ping down from the surface in consecutive 3 m bins and finding the first bin with no S_v values exceeding –68 dB. The start of the next bin + 1 m was taken as the surface depth free of surface bubble contamination. Individual fish targets were found by locating the characteristic chevron shape of a fish backscatter return as it moved through the sonar beam. The dimensions of these targets, plus surrounding pings out to 0.25 m, were removed from all analysis of mean S_v values. There were several fish schools on each day; these could not be resolved as individual targets so the boundary of each school was established manually and the schools removed from all analysis of mean S_v values. Several sonar pings were artificially low, usually due to high attenuation of the signal in the surface bubble layer. These pings were found by deriving the median value from below the surface bubble layer to just above the seabed for each ping, and removing any pings where the median value was < –95 dB. These 'bad pings' were excluded from all analyses.

The development and dimensions of the sonar backscatter 'hole' that developed post air gun passage on Day 1 were quantified by averaging S_v in the depth of maximum impact over 10–12.5 m in 10 m range bins along a sonar line, smoothing the resulting curve using a running linear fit (8 points either side), calculating the range at which the curve fell 3 dB (half power) below the mean S_v calculated over 90 m from the northeastern line end (least impacted end of sonar due to prevailing drift), and where possible finding the 3 dB down-crossing points symmetric about the DTASL. On Day 1, when moving from –ve to +ve ranges (northeast to southwest), the curve always fell below the threshold leading towards the DTASL as the drift was taking the water mass in the +ve direction, but the curve did not necessarily climb back up to this value on the southwestern side of the DTASL, as the sonar transects were too short at the longer time periods post T_{s1} . Where the curve did cross the threshold on the northeast and southeast side of the DTASL, the difference in range values at each threshold was divided by two to give the radius of the 'hole', where the curve did not reach the threshold on the southeastern side (transects 31–34), the radius was derived as the distance of range at the

DTASL minus distance of where the curve reached the 3 dB down-threshold on the northeastern side.

Air gun signal measures. Three sea noise loggers were set on the seabed during each day's experiment, one in the centre of the air gun transect (a) and two at the ends of the sonar transects (b and c). A fourth sea noise logger (d), with hydrophone located 9.4 m below the sea surface, was suspended from surface floats above receiver (a). All sea noise loggers recorded pressure while (b) and (c) also recorded ground-borne vibration via geophones. The sea noise loggers were Curtin University designed, CMST-DSTO sea noise recorders (see www.cmst.curtin.edu.au/products). The two noise loggers at the centre of the air gun line (a and d) sampled 2 channels at 0 and 20 dB gain (50 min of every hour at 4 kHz sample rate) with the low gain channel not overloading for air gun signals at short range. The noise loggers at the sonar line ends used 20 dB gain and 4 kHz sample rate (2,600 s every hour) with no overloading of air gun signals. All noise loggers had a High Tek HTI U90 hydrophone, individually calibrated with sensitivities ranging from -197.6 to -197 dB re $1\text{ V } \mu\text{Pa}^{-1}$. All air gun lines were carried out during the 'on' times of all receivers. All sea noise recorders were calibrated for the pressure response by inputting white noise of known level into the instrument with the white noise and hydrophone in series. Analysis of the logged signal gave the system gain with frequency, accounting correctly for the impedance match of the hydrophone, pre-amplifier and system electronics. This system gain curve was used with the known hydrophone sensitivity to convert the logged volts to pascals in the time domain with the system response calibrated over 1 Hz to the anti-aliasing filter frequency. The on-board noise logger clocks were set to GPS, universal time transmitted before deployments and the drift read after recovery to give absolute timing accuracies of <0.1 s.

Air gun signals were analysed as described in ref. ²⁴, briefly by: (1) extracting the signals from the sea noise logger files; (2) converting volts to sound pressure (Pa) using the system calibration curve (system gain with frequency) and hydrophone sensitivity in the time domain; (3) characterizing the air gun signal for 16 signal parameters as defined in ref. ³⁰; and (4) aligning the shot received time with source navigation data to give source–receiver slant range (direct path source to receiver). The signal parameters of sound exposure levels and peak-to-peak have been used here to describe air gun signal levels. Sound exposure levels were calculated as in ref. ³⁰.

Plankton tows and analysis. At each site, the first tow cod-ends (two of) were placed into the vital stain neutral red, the second tow had one cod-end into neutral red and the second into 4% buffered formaldehyde. The GPS time and co-ordinates of each drop (1: start lowering; 2: reach bottom and start raising; and 3: at surface) were made by a dedicated observer, as were the flow meter readings (model GeoEnvironmental, serial no. 23227) before and at the end of each tow. The summary vertical ascent times, rates, the horizontal distance moved during ascent and the volume sampled by each cod-end using the GPS distance traversed, water depth and net radius are listed in Supplementary Table 6. The water volume sampled during each tow was calculated using the GPS data from the horizontal drift (GPS) and water depth (sonar) to give distance of the net tow, which combined with the area of the net mouth opening gave volume of water sampled for each cod-end and therefore net. The flow meter readings were calibrated to cubic metres of water sampled, but while many agreed with the GPS calculations, some were less than as derived from the net radius and water depth. The flow meter used was capable of spinning backwards, possibly during descent, thus in abundance analysis the GPS-derived water volume sampled by each tow was used.

Samples of zooplankton that had been preserved in formaldehyde were identified and counted using a Leica M165C stereomicroscope. Where necessary, samples were split with a Folsom plankton splitter³¹, until there were between 500 and 1,000 individuals in a subsample. All zooplankton in each subsample were identified to the lowest taxonomic level possible; genus or species level for copepods, cladocerans, chaetognaths and euphausiids, and higher levels for other groups.

The methods used for assessing plankton survival followed that of ref. ³². Vital stained samples were frozen after collection in the field, thawed individually in cold, filtered ($0.2\text{ }\mu\text{m}$) seawater, acidified with a small volume (~ 1 ml) of 1 M HCl, rinsed with small amounts of filtered seawater, subsampled so that >400 individuals were counted (three replicates each sample) and backwashed into a sorting tray. The samples were examined under a Leica M165C stereomicroscope, fitted with a Canon 5D Mark II camera. Samples were examined using dark field microscopy, which maximized the contrast between live (bright pink after having taken up the vital stain internally) and dead (pale pink, having not taken up the stain internally) specimens. Processing of each sample was completed within 60 min, as after that time the sample became visibly degraded. The ratio of dead zooplankton to total numbers of that taxa counted were derived for each tow.

In assessing change in abundance of zooplankton between pre-air-gun periods on Day 1 compared with Day 2 or control versus exposed periods on Day 1 and Day 2, counts of ind. m^{-3} have been compared as ratios and two-tailed *t*-tests used to determine if the sets of ratios differ. Comparisons were made for control tows of Day 2 divided by control tows of Day 1 abundance to determine how the

site differed between days, or of exposed divided by mean control abundance (exposed/control), including data from both days, to compare how air gun exposure impacted measured abundance. As there is normally naturally high spatial variability in plankton abundance, and as there was a time offset between control and exposed plankton tows, then for calculation of exposed divided by mean control abundance, daily control abundance was averaged within a taxa (that is, the mean of the control abundance values at the three nominal ranges that day was used). Control abundance variability ratios were calculated for all combinations of non-zero plankton tows within a taxa and day, and combined for appropriate taxa to compare with exposed divided by mean control ratios. Any taxa with zero control or exposed counts was excluded, leaving 189 taxa/tow combinations ('taxa/tow') for comparison. The ratios of exposed divided by control abundance have been expressed as percentage reductions, or $[1 - \text{Ratio}] \times 100$. To compare abundance trends for taxa with range, drift-corrected impact ratios were used and power curves of the form $y = a \times x^b + c$ fitted to data, where y is range exposed/control abundance, x is range (m), and a , b and c are fitted constants. Correlation coefficients were calculated for all fits.

General analysis. All air gun, sonar and spatial analysis was carried out in the MATLAB (Mathworks) environment using purpose-built software. All times given are Australian eastern standard time daylight saving, or universal time + 11 h. Errors given against mean values are indicated as $\pm 95\%$ confidence intervals or standard deviation as s.d. Samples sizes are given as N .

Data availability. The sonar data that support the findings of this study are available on request from the corresponding author, while the zooplankton abundance and vital staining results are available in the Supplementary Information.

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Author contributions

R.D.M., R.D.D., Q.P.F. and J.M.S. conceived the study, with R.D.M. setting the initial study plan based on previous experiences. All authors but R.A.W. contributed to the final study design and field planning. R.D.M. and R.D.D. collected field data. K.M.S. and R.D.D. analysed plankton tows. R.D.M. analysed air gun and sonar data, and wrote the main manuscript. All authors reviewed and revised the manuscript.

Additional information

Supplementary information is available for this paper.

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Correspondence and requests for materials should be addressed to R.D.M. and J.M.S.

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Competing interests

The authors declare no competing financial interests.



DEPARTMENT OF ANIMAL SCIENCE
ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616.8521
TELEPHONE: (530) 752-1250
FAX: (530) 752-0175

April 6, 2024

Dear California Fish and Game Commission:

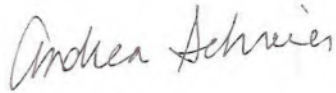
We, the undersigned scientists with decades of experience studying sturgeon and other vulnerable fishes, are writing to support the California Department of Fish and Wildlife's recommendation to designate the San Francisco Bay Delta (SFBD) white sturgeon as a candidate threatened species under the California Endangered Species Act. White sturgeon in California have been declining for several decades, due to overharvest, inconsistent recruitment, and reduced water quantity and quality in the SFBD. California's recent multi-year drought and the San Francisco Bay's devastating harmful algal bloom (HAB) in the summer of 2022 have put significant pressure on the population. Though 864 adult white sturgeon are known to have perished in the 2022 HAB, the actual toll on the population was likely much greater, as only 20% of the shoreline of the Bay could be surveyed for carcasses and sturgeon carcasses tend to sink. Because the species that caused the HAB, *Heterosigma akashiwo*, leaves dormant cysts in the environment after a bloom, we can expect future HABs to threaten SFBD white sturgeon.

The sturgeon guide industry has lobbied hard to maintain harvest on the white sturgeon population and claims that the population is not declining. Some (though not all) guides claim their catch is as high or higher than in previous years and can provide fish-finder footage showing many sturgeon at their favorite fishing spots. Unfortunately, fishes like sturgeon that exhibit site fidelity (tendency to aggregate in a few chosen locations) are especially vulnerable to overharvest because their actual declines are not noted until abundance is very low. This phenomenon is known as hyperstability. Accompanying this letter is a peer-reviewed journal article describing hyperstability as well as a few articles demonstrating white sturgeon's tendency for site fidelity in other, better-studied populations. Increased access to improved fish-finding technologies (e.g. side scan sonar) and more rapid communication about sturgeon aggregations via social media has increased anglers' abilities to locate and harvest sturgeon. If protective measures are not taken until after the population has been depleted enough for angler catch to decline, recovery of the population may be difficult.

Though many in the guide industry believe that the CESA listing of white sturgeon would put them out of business, those who filed the petition support catch and release angling on the population. Several peer-reviewed papers demonstrate that catch and release typically does not cause mortality of adult sturgeon unless angling occurs during an otherwise stressful time (high water temperatures, low dissolved oxygen). In the Snake River, adult white sturgeon captured for population monitoring are routinely found to have fishing tackle in their guts and recaptured fish have been shown to pass it. We support a regulated catch and release fishery for white sturgeon in the SFBD, even if the population is listed as threatened. Fishing guides have voiced the concern that anglers will not pay to catch and release sturgeon. However, there are thriving catch and release guided fisheries on the Fraser and Snake Rivers. Also, it is important to consider that the 2023 CDFW angler survey shows that only a small minority of anglers in our system identify as being associated with the guide industry. Most California anglers participate in the sturgeon fishery recreationally and a majority (57%) have indicated that they would continue to fish if only catch and release were allowed.

In closing, we, undersigned below, urge the California Fish and Game Commission to vote to uphold CDFW's recommendation to list SFBD white sturgeon as a candidate threatened species under the California Endangered Species Act. Please don't hesitate to contact any one of us with questions.

Sincerely,



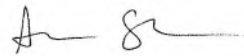
Andrea Schreier, PhD
Adjunct Associate Professor
University of California Davis
amdrauch@ucdavis.edu



Peter Moyle, PhD
Professor Emeritus
University of California Davis
pmmoyle@ucdavis.edu



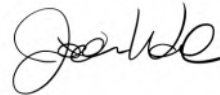
Anderson Tate
Graduate Student Researcher
University of California, Davis
atate@ucdavis.edu



Anna Steel, PhD
Project Scientist
University of California, Davis
aesteel@ucdavis.edu



Scott Colborne
Academic Specialist
Quantitative Fisheries Center
Michigan State University
colborne@msu.edu



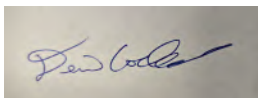
Jonathan Walter
Senior Researcher
University of California Davis
jawalter@ucdavis.edu



Aviva Fiske
PhD candidate
University of California Davis
afiske@ucdavis.edu



Sarah Baird, MS
Staff Research Associate III
University of California Davis
sebaird@ucdavis.edu



Dennis Cocherell
Laboratory Research Manager
University of California, Davis
decocherell@ucdavis.edu

Winter Catch & Release Fishing on the Carson River in Alpine County

Dick Oswitt <roswitt66@gmail.com>

Mon 04/08/2024 10:38 AM

To:FGC <FGC@fgc.ca.gov>

Cc:Dan Kaffer <dkaffer@aol.com>

You don't often get email from roswitt66@gmail.com. [Learn why this is important](#)

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To: the Alpine County F&G Commission:

I heard that winter C&R fishing on the Carson River may be in jeopardy.

Please tell the Alpine County F&G Commission that I support Winter C&R fishing on the east Fork of the Carson River. And, I enjoy the restaurants in Markleville!

Richard Oswitt

Gardnerville, NV (26 year resident of NV and member of the High Sierra Fly Casters in Gardnerville)

Oppose the Eradication of Mule Deer on Catalina Island

Dalise Falkenstein <dalise.falkenstein@grassrootsmessage.com>
via sendgrid.net

Wed 04/10/2024 08:44 PM

To:FGC <FGC@fgc.ca.gov>

You don't often get email from dalise.falkenstein@grassrootsmessage.com. [Learn why this is important](#)

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Dear,

Please STOP the proposed eradication of mule deer on Catalina Island. Join such varied groups as the Humane Society, Safari Club International, and the California Rifle and Pistol Association to stop this needless killing. The mule deer population provides enjoyment for island residents and tourists and supports active recreation in a state where such opportunities are dwindling.

It is clear that the Catalina Island Conservancy and its supporters are not concerned about non-native species, or they would similarly propose elimination of the bison herd and other species. The Conservancy applied for a scientific collection permit years ago and was rejected due to a lack of science. Yet now the Department of Fish and Wildlife is set to approve the permit without demonstration of any previously-required supportive science. This is clearly not about the species or island restoration; it is about those who have political access to the Governor and his willingness to respond.

You can help stop this slaughter by prohibiting these actions, revoking the Use Permit for the Conservancy, and requiring a new operator of the Conservancy that represents all the uses on Catalina Island.

Sincerely,

Sincerely,
Dalise Falkenstein
15912 Puritan Cir
Huntington Beach, CA 92647



FRIENDS OF THE RIVER

3336 BRADSHAW RD., SUITE 335, SACRAMENTO, CA 95827

PHONE: 916-442-3155

WWW.FRIENDSOFTHERIVER.ORG

April 11, 2024

President Samantha Murray
California Fish and Game Commission
715 P Street, 16th Floor
Sacramento, CA 95814

**RE: Meeting of the Fish and Game Commission April 17-18, White Sturgeon,
Public Receipt of CDFW evaluation report on petition**

Dear President Murray and members of the California Fish and Game Commission,

Friends of the River (FOR) is a non-profit 501(c)(3) organization that was founded in 1973 in the fight to save the Stanislaus River from the construction of New Melones Dam. FOR has since grown to become a leading voice in preserving and restoring California's rivers, streams, and their watersheds. FOR is the only state-wide organization focused solely on restoring and protecting California's rivers, and is nationally recognized for its expertise in addressing the adverse impacts of dams on rivers and ecosystems. We write today on behalf of our thousands of passionate members and supporters across the state.

Friends of the River has a long history of advocacy for river conservation and the protection of native fishes. FOR was essential in the passage of the California Wild and Scenic Rivers Act, and has led or participated in every state and federal Wild and Scenic River designation in the state. FOR is leading the opposition to Sites Reservoir, and engages in other major water infrastructure proposals, such as the Delta Tunnel. FOR also participates in water policy and regulatory processes, including the Bay-Delta Water Quality Control Plan Update, the California Water Plan, and other water plans from the state administration, including *California's Water Supply Strategy: Adapting to a Hotter, Drier, Future*. Additionally, FOR works on flood management, hydropower relicensing, dam safety, and watershed-level stakeholder water management forums such as the Sacramento Water Forum (American River). FOR is also a participant in the collaborative Reorienting to Recovery process, which is focused on salmon recovery in the Central Valley. In each of these workstreams, FOR raises concerns and

advocates for native fishes, including White Sturgeon, Chinook Salmon, Central Valley Steelhead, Longfin Smelt, Delta Smelt, and others.

The White Sturgeon (*Acipenser transmontanus*) is the largest freshwater fish species in North America and is considered "endangered" by the American Fisheries Society (AFS 2008).¹ In California, the only reproducing population of White Sturgeon occurs in the Central Valley, specifically in the Sacramento River and San Joaquin River watersheds. These sturgeons, referred to as the California White Sturgeon population, are of high management concern according to the California Department of Fish and Wildlife (CDFW 2015).

Recent studies have indicated a troubling decline in the annual recruitment of California White Sturgeon since the early 1980s, and evidence suggests that this decline is ongoing (Blackburn et al. 2019; Ulaski et al. 2022). The San Francisco Bay Estuary (SFE) and its watersheds, where California White Sturgeon spawn and rear, are in a critical state of collapse. Unsustainable water diversions and adverse reservoir operations have led to extremely altered hydrographs throughout the SFE watershed, impairing successful reproduction (TBI 2016; SWRCB 2016, 2017; Reis et al. 2019). Additionally, overharvest in the recreational fishery and catastrophic harmful algal blooms in San Francisco Bay and the Delta further threaten the population's survival (Blackburn et al. 2019; CDFW 2023).

The recent harmful algal blooms in San Francisco Bay and San Pablo Bay in 2022 resulted in the deaths of large numbers of adult California White Sturgeon, highlighting the population's vulnerability to future algal blooms (CDFW 2023). Furthermore, the current regulations governing river flow and water quality conditions in the SFE are insufficient to support native fish viability, including the California White Sturgeon (SWRCB 2010, 2017; CDFW 2010). These consecutive fish kills, coupled with inadequate river flow and water quality conditions, have likely exacerbated the chronic declines in California White Sturgeon abundance.

Given the severity of these threats and their cumulative impacts on the California White Sturgeon population, action must be taken to protect and recover this charismatic species. We urge the California Fish and Game Commission to list the California White Sturgeon population as threatened under CESA. Additionally, the Commission should immediately grant a status review, which would give the species full protection while the status review proceeds.

White Sturgeon are an important part of California's unique culture, and rich history. We must protect this species for the benefit of current and future generations. Thank you for

¹ For all parenthetical citations, please see *Petition to List the White Sturgeon as Threatened under the California Endangered Species Act, San Francisco Baykeeper, November 29, 2023.*

considering our request and for your commitment to the conservation of California's natural resources.

Sincerely,



Keiko Mertz
Policy Director
Friends of the River

April 17, 2025, #10: General Public comment for items not on the agenda. Thank you for suspending CA salmon fishing in 2024. And, 830,000 dead Chinook fry!!!

Phoebe Lenhart <elaphusandfelis2@gmail.com>

Sun 04/14/2024 04:31 PM

To:FGC <FGC@fgc.ca.gov>

Cc:NOAA.Staff.Directory@noaa.gov <NOAA.Staff.Directory@noaa.gov>;Wildlife Ask BDR <AskBDR@wildlife.ca.gov>; robin.ehlke@noaa.gov <robin.ehlke@noaa.gov>;angela.forristall@noaa.gov <angela.forristall@noaa.gov>

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Dear FGC,

Thank you for your extended deadline to comment on explosive issues regarding the survival of Chinook (and ALL) salmon in the Pacific Ocean off the CA coast.

First, the situation with our Pacific salmon is extremely GRAVE and requires prompt, if not drastic action, to ensure the survival of ALL salmon species. This is not only for the benefit of fishermen; but also, for the survival of millions of MARINE MAMMALS in the Pacific Ocean who are dependent upon salmon for their survival!!! As you have heard the euphemism: "...too little, too late!" Shame on all the agencies responsible!!!

Second, how can the CA DFW release 830,000 Chinook salmon fry into Fall Creek WITHOUT knowing anything about the conditions in the river??? It is logical and scientific to release a FEW (a few hundred/a few thousand) Chinook fry into the river and to follow their survival as they swim to the Pacific Ocean. That will determine whether it is appropriate to release all the Chinook salmon fry or if the fry need to be trucked to a location farther down stream!!! Why did the DFW allow this to happen??

The disaster of the loss of 830,000 Chinook salmon fry has horrific ramifications to the marine mammals on the Pacific coast that the DFW/FGC/NOAA/ NMFC will, unfortunately, never be able to mitigate. The National Oceanic and Atmospheric Administration (NOAA)is responsible for providing oversight for our West Coast killer whales, the Southern Resident orcas (SRO). The population of SRO has been in decline for 20 years with only 73 existing today. It's been reported numerous times that the SRO are starving, because the Chinook salmon (their main diet) are not in sufficient supply. Due to the inadequate population of Chinook salmon (being near to extinction numbers), the SRO are hunting for food farther offshore and are hunting for other fish to eat. The Chinook salmon are rich in all the nutrients required by the SRO's survival; other fish are not sufficient for the SRO; they depend on eating Chinook salmon.

As best as I can follow the labyrinth between the aforementioned government agencies, it appears that the FGC has the final word on decisions made by the CA DFW, the NMFC, and the NOAA (Department of Commerce). I am appalled at the failure of so many government agencies responsible for the survival of the Pacific salmon. Two populations of salmon are listed as "endangered" and 7 are listed as "threatened"; to what benefit has that done for the Pacific salmon? An idiom you may have heard: Mother Earth, who is life giving and nurturing. God created this universe and it is good.

Sincerely,

Phoebe Lenhart
elaphusandfelis2@gmail.com
Crescent City, CA
Sent from my iPad

Bacon, Jennifer@FGC

From: James Stone <jstone@ncgasa.org>
Sent: Monday, April 15, 2024 9:54 AM
To: FGC
Subject: PUBLIC COMMENT

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Commission,

Our organization respectfully request to utilize fishing game code 2084 regarding fishing recreationally continually while white sturgeon is listed as a candidate and is under review.

Thank you

James Stone
President
NCGASA.org
530-923-9440

Request from Kenyon and Kathleen Hensel for a non-transferable deeper near shore permit.

kenyon hensel <kenyohensel@gmail.com>

Mon 04/15/2024 09:23 AM

To:FGC <FGC@fgc.ca.gov>

You don't often get email from kenyohensel@gmail.com. [Learn why this is important](#)

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I have fished for near shore rock fish continuously in state waters for over forty years. In 2019 I suffered a heart attack while fishing and was unsure if I would ever return to my fishing career.

During rehabilitation, I had to sell my near shore permits, and go through bankruptcy.

I was able to retain my 22ft Boston Whaler the Arosa, and teach myself to fish for open access species in the state waters I know so well. Now with the closure of those state waters to open access fishing, I have found my fishing to be much more difficult.

I have to travel as much as 16 miles just to reach legal waters holding abundant levels of the fish I am allowed to catch.

This offshore fishing expends much more time, resources, and energy than fishing in state waters did. Greatly increasing the difficulty and risk to my operation and personal safety.

I had been catching these fish in state waters with much less effort, but because of this year's state closure that option is no longer available.

I hope you can grant my request and allow my wife and I to have a non-transferable deeper near shore permit. I do not need a shallow near shore permit as black and blue rockfish were my predominant catch before my illness, and I am willing to have the permit revert back to the state when my wife and I, who are in our middle Sixties, are finished fishing. Any fish we might catch would directly benefit my local fishing community and our continued fishing would support the local fishing infrastructure which has been adversely affected by years of closures and reductions.

These fish are plentiful in our shallow state waters, and I have hundreds of rocks within a ten mile radius of the port of Crescent City that support large populations of these fish. These populations are fully protected by MPAs and catch limits that insure overfished can not happen. Some of these catch areas are less than a quarter mile from port. Being able to fish these areas again would greatly reduce the strain of traveling and fighting offshore weather. Making my work on the water much less dangerous and difficult.

I hope you will find time to consider my request as soon as possible.

Thank you for consideration. Kenyon Hensel.

Barbaric plan by the Catalina conservancy

D. Newman <taleoftwocities@mail.com>

Mon 04/15/2024 09:44 AM

To:FGC <FGC@fgc.ca.gov>

[You don't often get email from taleoftwocities@mail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

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Hi,

I understand, from a CBS evening news story from April 13, that the Catalina Conservancy is planning to shoot it deer population from helicopters, instead of creating a safe plan to relocate them?

And that now this plan to shoot them from helicopters is in your department's hands to review?

I have never heard of anything more barbaric in this day and age regarding wildlife.

The deer were brought to the island by hunters 100 years ago. They did not come voluntarily. And now you're going to kill them instead of forcing the Conservancy to create a plan to safely relocate them?

Even the thought of this is such a black cloud over Catalina Island and will absolutely affect tourism to the island, if you start shooting deer from helicopters.

How truly barbaric to even consider a plan like this. Plant life is more important than animal life? Unbelievable.

****Please consider a plan to safely relocate the deer to a different place**.**

Thank you.

Sent from my iPhone



INYO COUNTY
FISH AND WILDLIFE COMMISSION
BISHOP, CA 93514

COMMISSION MEMBERS
DOUGLAS BROWN
STEVE IVEY
WARREN ALLSUP
GAYE MUELLER
JARED SMITH

ALTERNATE MEMBER
NICK LARA

REPLY TO:
Pat Gunsolley, Secretary
4801 Alison Lane
Bishop, CA 93514
pgunsolley@gmail.com

Ms. Melissa Miller-Henson, Executive Director
California State Fish and Game Commission
P. O. box 944209
Sacramento, CA 94244-20990

Re: The Greater Sage-grouse being a candidate for listing under California Endangered Species Act (CESA)

Dear Director Miller-Henson

The Inyo County Fish and Wildlife Commission supports the California Department of Fish and Wildlife (CADF&W) in its management of the Greater Sage-grouse. As verified by the information in the most recent ten-year (2014-2024) CADF&W study results, (study attached) which reflect a substantial 39% increase in the Bi-State Greater Sage-grouse population levels. The information demonstrates the effectiveness of the Department's activities to ensure the continued success of the greater sage-grouse in the Eastern Sierra. The Commission believes that the Department's successes should be used to improve, enhance, and protect all species of sage grouse throughout the state.

The study results show that the Greater Sage-grouse populations are recovering thus the need to list the species as endangered is not needed. CADF&W has done an exceptional job in the past ten years of managing the local populations. The study confirms that recovery is in progress. Any effort to list the species as endangered may detrimentally affect the success of the current management activities and adversely impact on-going improvements. The listing of this species as endangered is not warranted.

The Commission commends CADF&W and supports its continued management of the Greater Sage-grouse. The success of the Department's program will ensure a strong future for the Greater Sage-grouse in California.

Sincerely

Doug Brown

Doug Brown, Chairperson

Attachment: Ten Year (2014-2024)
Greater Sage-grouse Study



Bi-State Sage-Grouse 10-Year Accomplishment Report 2012-2021



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Figure 1: Ancestral lands of the Bi-State area (map source: Indian Claims Commission)

ANCESTRAL LANDS ACKNOWLEDGEMENT

The Bi-State area is located in the heart of the Northern Paiute (Numu) territory and extends to include the lands of the Washoe (Wa She Shu) in the north, and Western Shoshone (Newe) in the south. We honor the Indigenous caretakers who have stewarded these lands, waters, and animals since time immemorial and pay respect to the elders who lived before, the people of today, and the generations to come.

CONSERVATION HISTORY

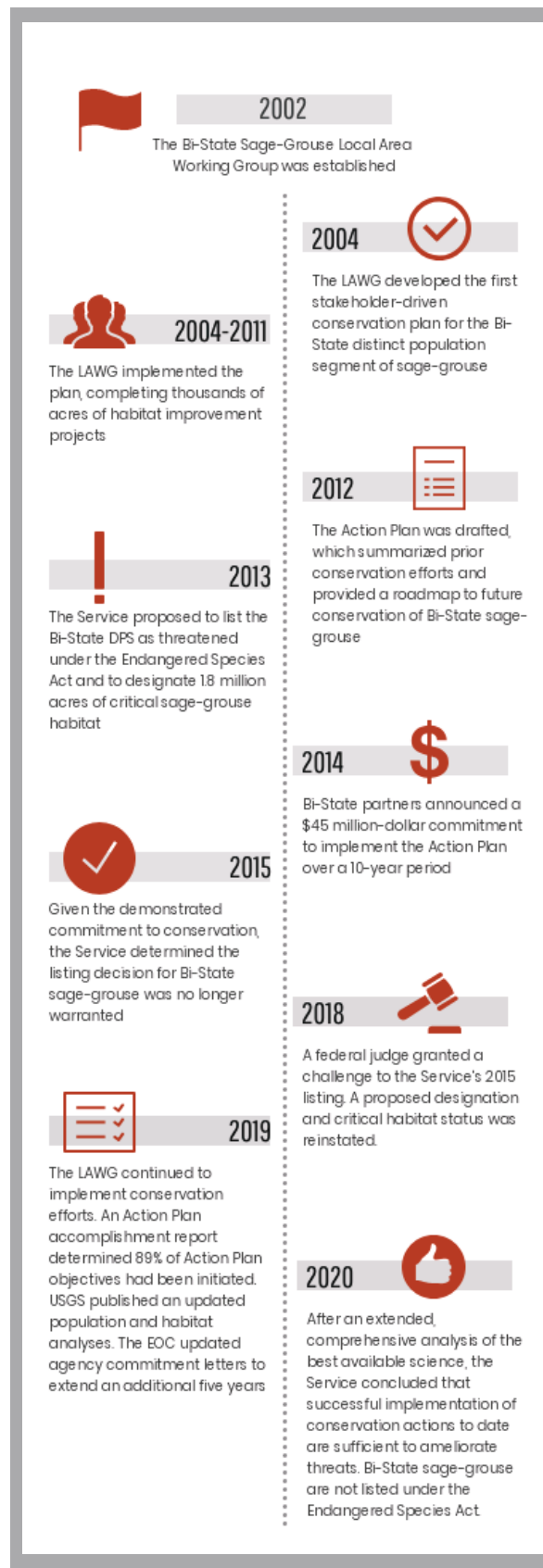


Figure 2: Timeline of Bi-State conservation efforts and USFWS listing decisions



Bi-State sage-grouse, habitat, and people

EXECUTIVE SUMMARY

The Bi-State Sage-Grouse Conservation Action Plan was written in 2012 to provide a roadmap to conservation for the Bi-State greater sage-grouse distinct population segment (Bi-State DPS). The Bi-State area, located along the California and Nevada state border, is divided into six Population Management Units (PMUs) (Figure 4). In each PMU, threats were identified and ranked, and unique conservation strategies were created to address threats (Table 3). The Action Plan called out priority actions deemed necessary to protect sage-grouse populations and their habitats. Projects in the Action Plan sought to:

- implement a coordinated interagency approach,
- incorporate science-based adaptive management,
- increase regulatory mechanisms,
- minimize and eliminate risk,
- improve and restore habitat,
- monitor sage-grouse populations,
- and maintain stakeholder involvement.

At every step it was assumed that projects would be altered or added as priorities change based on new information, and new priorities occur that were unknown when the Action Plan was written.

Action Plan strategies and objectives are implemented through the Bi-State Local Area Working Group (Bi-State LAWG), a collaborative conservation network of federal, state, and local government agencies, Native American tribal members and representatives, nonprofits organizations, and private landowners.

The Bi-State LAWG receives guidance from a team of agency scientists and biologists that make up the Technical Advisory Committee (TAC), as well as support from agency directors and leadership that make up the Executive Oversight Committee (EOC). Each year projects outlined in the Action Plan are implemented utilizing a science-based adaptive management and collaborative conservation approach. In 2014, agency partners announced a \$45 million dollar commitment to implement the Action Plan over a 10-year period.

The purpose of this report is to provide a 10-year summary of Bi-State Action Plan implementation which includes population monitoring, vegetation monitoring, and the implementation of a wide variety of habitat improvement projects. Understanding Action Plan implementation and the effectiveness of conservation actions will help Bi-State partners to prioritize future conservation actions for Bi-State sage-grouse.

ACCOMPLISHMENTS

Much has been accomplished since the implementation of the Action Plan in 2012 (Figure 3). Bi-State partnerships remain strong and active and the Action Plan, while flexible, remains the guiding framework for Bi-State conservation efforts. Additionally, partners are well on their way to meeting the \$45 million dollar funding commitment established in 2014. To date, approximately 84% of that funding has been allocated with a total of \$37.6 million dollars spent on sage-grouse conservation efforts over the last eight years.

The objectives, strategies, and actions outlined in the Action Plan include population monitoring, habitat monitoring, and the implementation of a wide variety of conservation actions to maintain healthy sage-grouse populations and habitat in the Bi-State conservation planning area. Population monitoring includes sage-grouse capture, intensive monitoring of survival, nest success, and brood success, and annual lek monitoring. The collection of these data provides information on habitat selection and utilization as well as factors influencing sage-grouse population trends. Vegetation monitoring efforts aim to evaluate habitat quality and the effectiveness of completed conservation actions including post-fire restoration and conifer treatment. Finally, Action Plan directed conservation projects are carried out to address the following threats to Bi-State sage-grouse and their habitats:

- Wildfire
- Urbanization
- Conifer expansion
- Invasive species
- Infrastructure
- Loss of sagebrush/meadows
- Small populations
- Human disturbance
- Wild horse grazing
- Permitted livestock grazing
- Predation

Since 2012, 945 sage-grouse have been captured and fitted with very high frequency (VHF) or Global Positioning System (GPS) transmitters across all Bi-State Population Management Units (PMUs) (Table 2, Figure 6). Population monitoring has occurred through annual lek counts and through the tracking of marked birds to better understand survival, reproduction, and recruitment. Vegetation monitoring has been completed at 816 sites to measure vegetation response to habitat improvement projects including changes in sagebrush cover, perennial grass cover, species richness and presence of non-native and invasive species. A total of 141 of the 159 actions identified in the Action Plan have been implemented. These projects have improved habitat conditions for sage-grouse on more than 143,000 acres of land in the Bi-State.

Over the last ten years, the Action Plan has provided a clear framework to guide this collaborative conservation effort. It has helped the Bi-State LAWG increase their understanding of sage-grouse population trends, gain a better understanding of

sage-grouse and their habitats. Recent USGS research suggests the implementation of the Action Plan has bolstered Bi-State sage-grouse populations by 3.9% annually and 31.1% since 2012 (Bi-State TAC, 2022). Bi-State partners are currently evaluating the most recent science and working to update the Action Plan so that it may continue to act as a guiding document for sage-grouse related conservation efforts in the Bi-State.

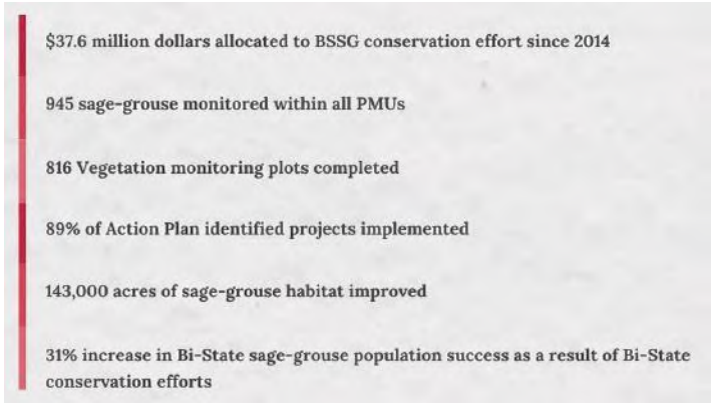


Bi-State sage-grouse



Conservation Highlights

Figure 3: Bi-State highlights





Bi-State sage-grouse on lek

INTRODUCTION

The Bi-State Local Area Working Group (Bi-State LAWG) was formed in 2002 to establish a landscape-level approach to conservation and management of the Bi-State greater sage-grouse distinct population segment (Bi-State DPS). This diverse group of stakeholders includes, federal, state, and local government agencies, Tribal members and representatives, non-profit organizations, and private landowners.

This group has been striving to implement a collaborative approach to sage-grouse conservation and management for twenty years and has been lauded nationally as a model of collaborative conservation success. Together they developed the first Bi-State sage-grouse conservation plan in 2004. In 2012, the Bi-State LAWG organized a planning and strategy approach to build and improve upon the multi-pronged effort to affect the conservation of the Bi-State DPS. While an important milestone, it was not the beginning of the Bi-State LAWG's effort but a continuation of efforts that began a decade before.

Encouraged by a potential listing of the species under the Endangered Species Act, the Bi-State LAWG set out to evaluate threats to Bi-State sage-grouse and identify tangible on-the-ground actions to alleviate these concerns. This effort culminated in the 2012 Bi-State Conservation Action Plan (Action Plan), which provided a 10-year adaptable scope of work, grounded in the

best available science, and supported by funding commitments provided by local, state, and federal agency partners. The Action Plan summarized relevant threats and prior conservation efforts and outlined a comprehensive set of strategies, objectives, and actions designed to achieve conservation of sustainable populations and habitats for the Bi-State DPS (Bi-State TAC, 2012).

Each year projects outlined in the Action Plan are implemented utilizing a science-based adaptive management and collaborative conservation approach. Understanding Action Plan implementation and the effectiveness of conservation actions will help Bi-State partners to update the Action Plan and prioritize future conservation actions for Bi-State sage-grouse. The purpose of this report is to provide a 10-year summary of Bi-State Action Plan implementation which includes population monitoring, vegetation monitoring, and the implementation of a wide variety of habitat improvement and conservation projects.

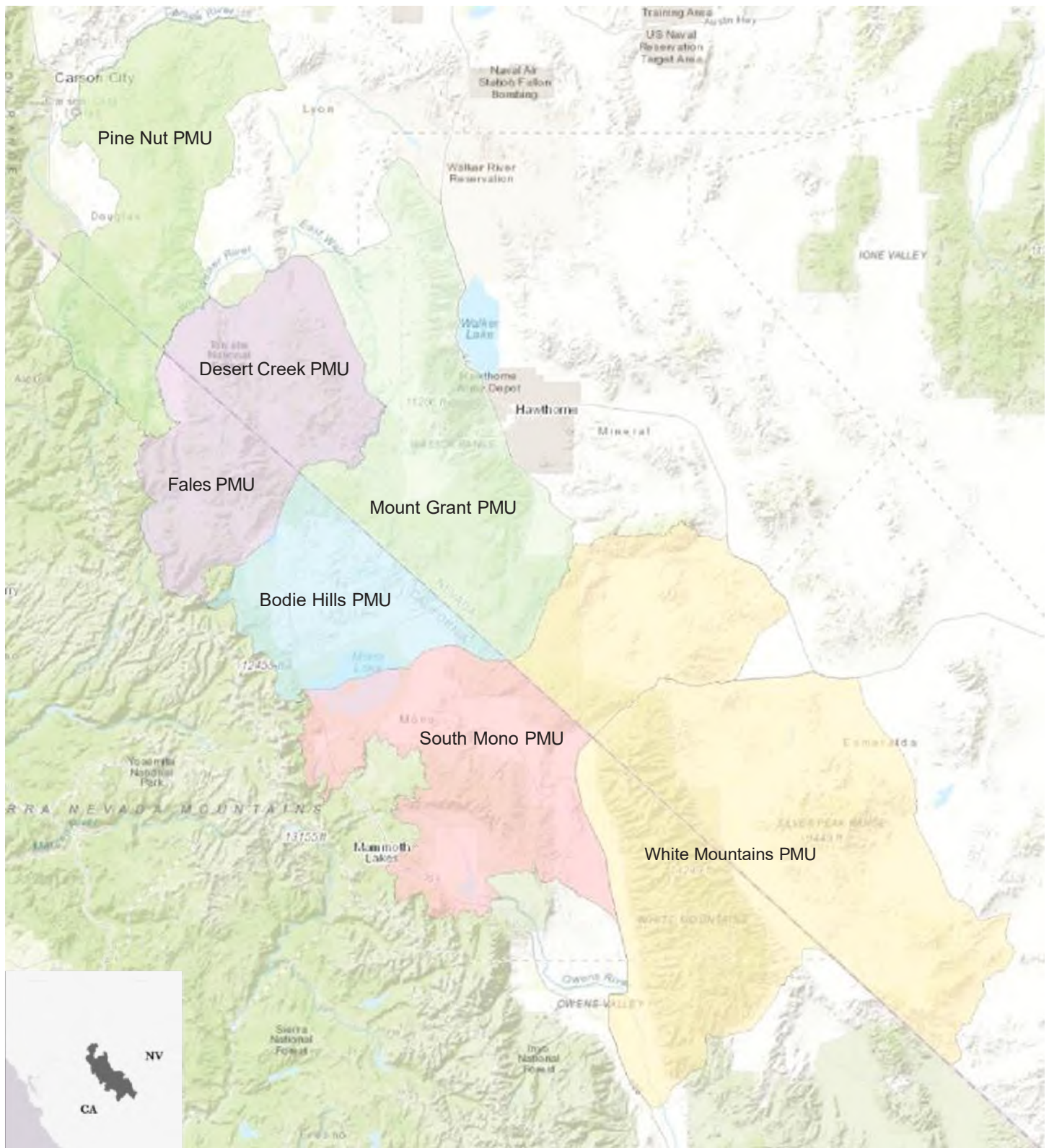


Figure 4: Bi-State Population Management Units



POPULATION MONITORING

There are six Population Management Units (PMUs) within the Bi-State, including the Bodie Hills, Desert Creek/Fales, Mount Grant, Pine Nut, South Mono and White Mountains (Figure 4). Research and monitoring projects detailed in the Action Plan include telemetry, habitat and vital rate data collection, and the coordination of annual lek counts to better understand population demographics and improve predictive models and adaptive management capabilities.

Monitoring efforts were in place in 2012 when the Action Plan was written but a cooperative plan to intensively monitor sage-grouse populations was initiated during the fall of 2015. This monitoring plan allows partners to identify long-term population trends, understand key habitat characteristics, and ultimately allows for a before and after study design to quantify sage-grouse response to management actions (Table 1).

Since 2012, 945 sage-grouse have been captured in the spring and fall seasons and fitted with Very High Frequency (VHF) collars or Global Positioning Satellite (GPS) transmitters (Table 2, Figure 6). Sage-grouse movement and survival is tracked in consecutive years. Intensive monitoring is conducted during nesting and brood-rearing periods to track reproduction and recruitment (Mathews et al., 2018). These vital rates provide data for the Integrated Population Model (IPM) which can characterize population growth rate and isolate factors affecting that rate for individual sub-populations and the Bi-State DPS.

Bi-State sage-grouse capture and monitoring

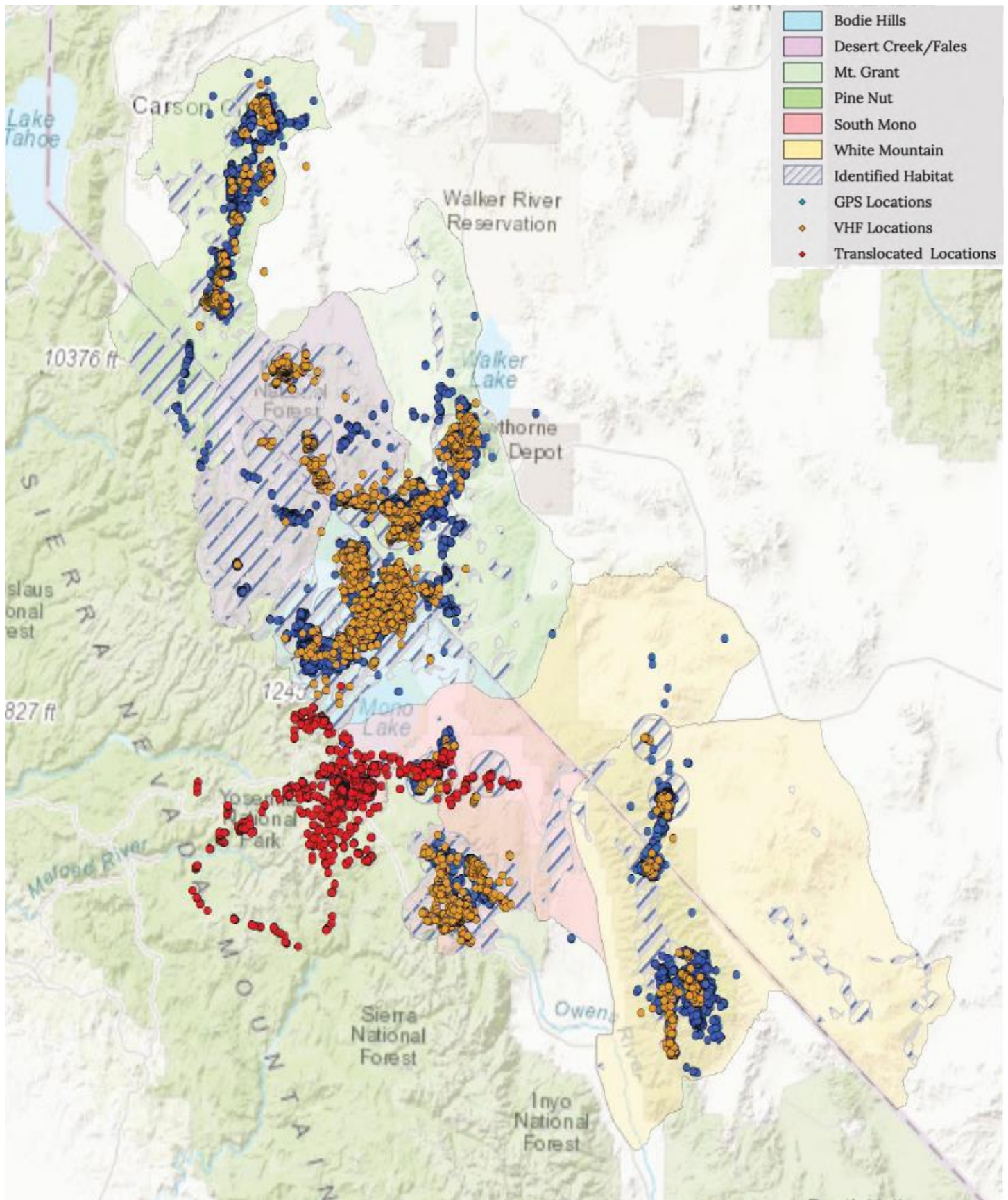


Figure 5: Bi-State sage-grouse locations and identified habitat

PMU	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Pine Nut	●	●	●	●						
Desert Creek-Fales	●			●	●	●	●			
Bodie Hills	●	●	●	●	●	●	●	●	●	●
Mount Grant	●	●	●	●	●	●	●			●
South Mono			●	●	●	●	●	●	●	●
Parker Meadows *	●				●	●	●	●		●
White Mountains		●			●	●	●	●	●	●

Table 1: Bi-State monitoring schedule
* South Mono PMU

PMU	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
Mount Grant	20	10	1	14	32	27	18			23	145
Desert Creek-Fales	6			12	31	20	10				79
Pine Nut	39	14	9	3							65
South Mono			9	39	12	33	26	11	9	33	172
Parker Meadows *	5				2	28	20	20		5	80
White Mountains		2			4	23	46	26	28	22	151
Bodie Hills	2	1	9	29	14	60	51	35	26	26	253
Bi-State Total	72	27	28	97	95	191	171	92	63	109	945

Table 2 Number of sage-grouse captured and marked each year within each Population Management Unit in the Bi-State.
* Birds were captured in Bodie Hills PMU and translocated to Parker Meadows (South Mono PMU)

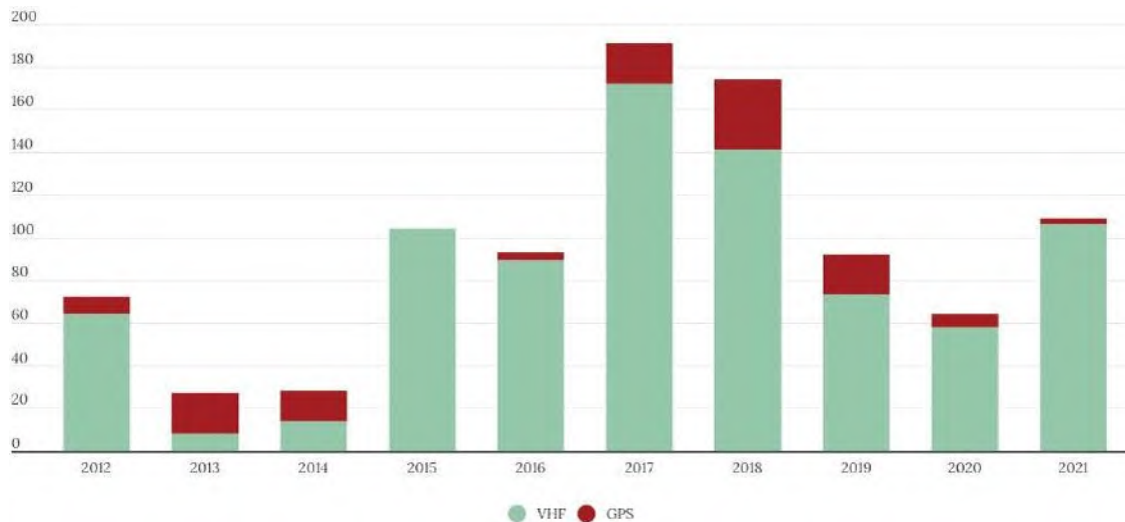


Figure 6: Sage-grouse marked annually by collar type

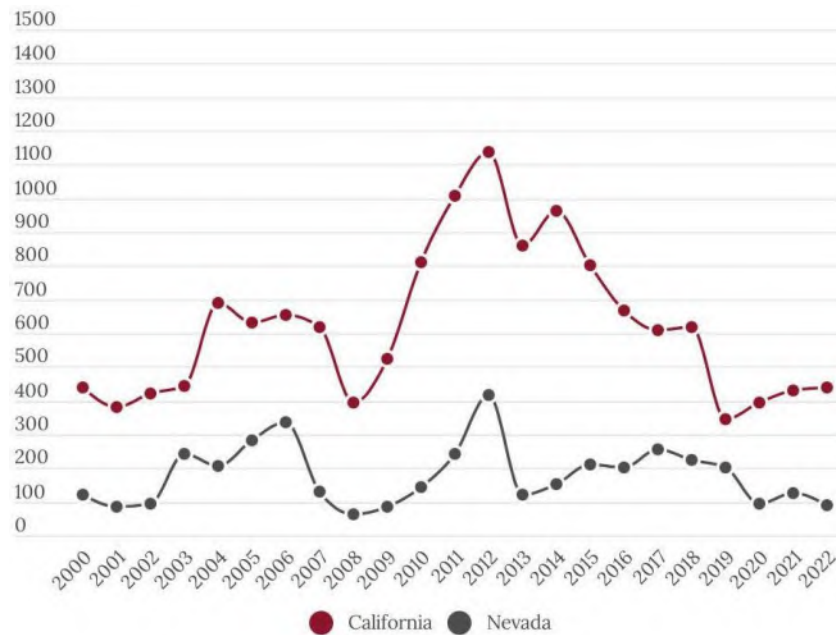


Figure 7: Bi-State sage-grouse lek attendance trends

LEK MONITORING

Each spring, between the months of March and May, Bi-State partners collaborate to monitor known leks to count sage-grouse when they congregate and visibly display on lekking grounds. These counts generate annual population estimates which help Bi-State partners understand population trends over time. These population trends are cyclical and count results fluctuate year to year. To determine long-term trends, annual lek count data is incorporated into an Integrated Population Model which accounts for low counts or leks not counted and generates modeled population estimates.

Within the Bi-State area, there are a total of 101 documented lek locations between California and Nevada, of which 49 are considered currently active (Figure 8). The active lek status is defined by two or more males present for at least two of five recorded years (Connelly et al., 2003). The total number of documented leks may be somewhat misleading due to the presence of “satellite leks” within many of the PMUs. Satellite leks are small leks that often occur near larger active leks during years of relatively high abundance. The “active” definition is sometimes difficult to apply to satellite leks that are utilized sporadically and do not persist each year. State agencies including NDOW and CDFW are currently working on delineating satellite leks as autonomous or connected, thereby removing some uncertainty surrounding lek counts as an index of population change.

CALIFORNIA LEK SURVEYS

California sage-grouse lek counts are conducted by CDFW, USFS, USGS, LADWP, BLM, Mono County, and others. The primary method used to obtain lek count data in California involves saturation counts which is the simultaneous survey of all leks within a breeding complex on a minimum of three separate days spaced throughout the survey period. The peak male count is represented by the survey having the highest cumulative number of grouse counted on all leks within a breeding complex on any one day.

NEVADA LEK SURVEYS

Lek counts in the Nevada portion of the Bi-State are conducted by NDOW, USFS, BLM, USGS personnel, and volunteers using on-the-ground survey and aerial survey methods. Because many leks in Nevada are remote in nature and difficult to access, saturation counts are not attempted. Lek counts are attempted at all known active leks multiple times during the lekking season, and the highest recorded number of males is documented as the annual count. Remote leks are often surveyed aurally by helicopter.

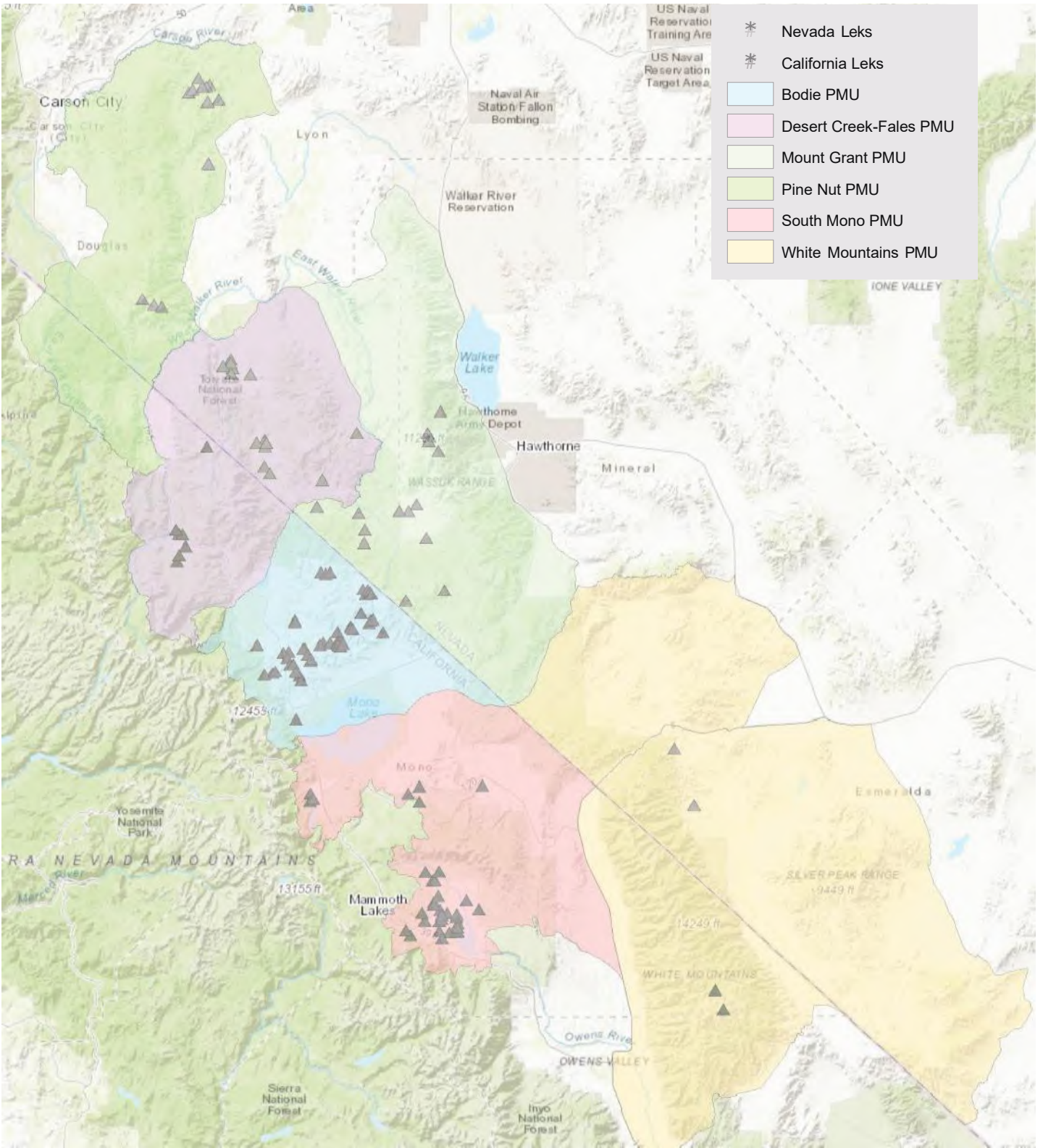


Figure 8: Known Bi-State lek locations

POPULATION MANAGEMENT UNIT SUMMARY

Sage-grouse population trends are cyclical and typically mirror climatic conditions. During periods of adequate moisture, sage-grouse populations often do well, while periods of drought bring population declines (Blomberg, 2012). The five-year period between 2012 and 2016 saw extreme drought conditions, with record-high temperatures and record-low snow pack and precipitation (Gleick, 2017). Since 2012, there have only been two years that California reached or surpassed long-term average precipitation levels and sage-grouse population trends have reflected this. (Figure 9). The following PMU sections summarize scientific research modeled by USGS' IPM. The population demographic descriptions that follow are for the reporting period between 2012 and 2021. They are heavily influenced by recent climatic conditions and do not accurately represent long-term population trends in the Bi-State.

PINE NUT

The Pine Nut PMU is in the northernmost region of the Bi-State. This area contains 574,373 acres of BLM, USFS, Tribal, private, and state or county managed lands (Bi-State Action Plan, 2012). This population of sage-grouse is relatively isolated from the rest of the Bi-State and with population estimates of 48 birds it is the smallest in the Bi-State area (Coates, 2022). Monitoring efforts took place from 2012 through 2015. Over that time 109 birds were captured, marked, and monitored for survival, nest, and brood success. Monitoring efforts were planned to initiate again in 2020 but halted due to concerns around capturing birds within such a small population.

The greatest threats to sage-grouse populations and their habitats in the Pine Nut PMU are wildfire, conifer encroachment, invasive species, recreational use impacts, infrastructure, and energy development (Table 3). Examples of completed conservation actions to address identified threats include:

- 11,704 acres of post-wildfire restoration
- 20,837 acres of conifer expansion treatment
- 838 acres of invasive species monitoring and removal
- 651 acres of meadow restoration and improvement
- 14.8 miles of fence removal and fence marking
- 3 wild horse gathers to maintain AML
- 4 projects to improve livestock grazing management
- 7 education and outreach events

Since 2012, sage-grouse populations in the Pine Nut PMU have been in decline. The likelihood that this population will become extirpated within the next ten years is 67.7% (Coates, 2019). Drought, wildfire, and wild horse impacts have all played a role in limiting habitat and reproductive success. Telemetry data between 2013 and 2015 indicates that some birds have moved from the Pine Nuts to the Bodie Hills PMU (Coates et al., 2016). Considering the Pine Nut subpopulation only makes up approximately 1% of the entire Bi-State population, changes in the overall total of birds in this area will not have great effects on the Bi-State as a whole, however, loss of population distribution is concerning (Coates, 2019).

	Pine Nut	Desert Creek/Fales	Bodie Hills	Mount Grant	South Mono	White Mtns.
Wildfire	●	●	●	●	●	●
Conifer Encroachment	●	●	●	●	●	●
Invasive Species	●	●	●	●	●	●
Sagebrush Habitat Conditions		●				
Urbanization	●	●	●		●	●
Human Disturbance & Recreation	●	●	●	●	●	●
Infrastructure	●	●	●	●	●	●
Landfill					●	●
Surface Water Management					●	
Licensed Hunting					●	
Poaching						
Grazing-Wild Horses	●		●	●	●	●
Grazing-Permitted Livestock	●	●	●	●	●	●
Predation	●	●	●	●	●	●
Disease		●				
Energy Development	●				●	●
Wind Energy Testing	●					
Geothermal Development			●	●	●	

● low ● moderate ● high

Table 3: Identified threats to sage-grouse by PMU

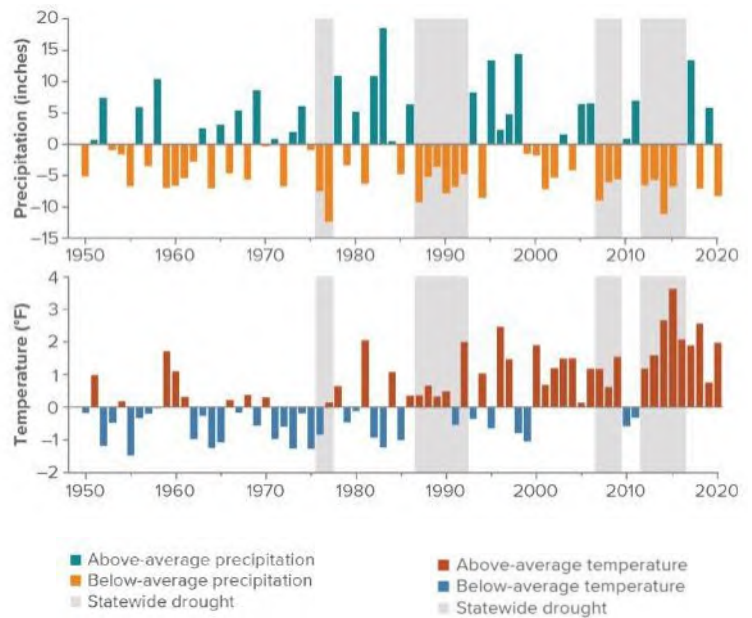


Figure 9: California drought and temperature data (Source: Western Regional Climate Center California Climate Tracker)

DESERT CREEK-FALES

The Desert Creek subpopulation is on the Nevada side of the Bi-State and is bordered to the west by the Fales subpopulation in California. These subpopulations are managed as one PMU. The Desert Creek-Fales PMU contains 567,992 acres of USFS, private, BLM, state or country, and Department of Defense managed lands (Bi-State Action Plan, 2012). IPM population estimates for Desert Creek total 237 birds while Fales is estimated at 88 (Coates, 2022). Monitoring in Desert Creek occurred in 2012 and between 2015 through 2018. During that time 79 birds were captured, marked, and monitored for survival, nest success, and brood success.

The greatest threats to sage-grouse populations and their habitats in the Desert Creek-Fales PMU are urbanization, conifer encroachment, wildfire, and infrastructure (Table 3). Examples of completed conservation actions to address identified threats include:

- 6,578 acres protected through conservation easements
- 21,016 acres of conifer expansion treatment
- 26 miles of fence marking
- 218 acres of sagebrush and meadow restoration
- 453 acres of invasive species removal
- 6 projects to improve livestock grazing management
- 1 education and outreach event

Since 2012, sage-grouse populations in the Desert Creek-Fales PMU have been in a slight decline. The most recent IPM estimates suggest that decline to be 4.5% annually (Coates, 2019). The ten-year extirpation estimates were 23.4% for Desert Creek and 38.4% for Fales (Coates, 2019). Sage-grouse in Desert Creek are located in lower elevation, drier habitats. Impacts from drought have likely caused these declines. However, recent lek counts suggest that sage-grouse numbers have been improving in the Fales PMU.

BODIE HILLS

The Bodie Hills PMU is west of the Mount Grant PMU on the California side of the Bi-State. It contains 349,630 acres of BLM, USFS, private, state, county, and Tribal lands (Bi-State Action Plan, 2012). This subpopulation is the largest in the Bi-State. Recent IPM estimates suggest there are 819 birds in the Bodie Hills PMU, which represents 36.6 percent of all sage-grouse within the Bi-State DPS (Coates, 2022). The Bodie Hills are higher in elevation compared to the rest of the Bi-State and habitat and bird populations tend to fare better during periods of drought as a result. Because the Bodie Hills subpopulation accounts for the bulk of population abundance, Bodie Hills PMU trends substantially influence overall trends across the Bi-State DPS (Coates, 2022). Capture and monitoring in the Bodie Hills occurred between 2012 and 2021. During that time 253 birds were collared and monitored for survival, nest success, and brood success.



Bodie Hills PMU in spring

The greatest threats to sage-grouse populations and their habitats in the Bodie Hills PMU are wildfire and conifer encroachment (Table 3). Examples of completed conservation actions to address identified threats include:

- 825 acres of post-wildfire restoration
- 7,713 acres of conifer expansion treatment
- 1,690 acres of sagebrush and meadow restoration
- 32 miles of fence removal, modification, and marking
- 11,624 acres protected through conservation easements
- 170 acres of invasive species removal
- Annual monitoring of the Montgomery Pass wild horse herd
- 32 projects to improve livestock grazing management
- 3 education and outreach events

In 2012, sage-grouse populations were at an all-time high in the Bodie Hills PMU. Since then, coincident with a long period of drought, populations have declined slightly but population estimates in the Bodie Hills PMU still remain four times higher than they were two decades ago (Coates, 2019). The IPM estimates the likelihood of ten-year extirpation to be low at 2.4% (Coates, 2019). The Bodie Hills PMU is higher in elevation relative to other Bi-State PMUs and can withstand the effects of drought longer than other lower elevation sites (Coates, 2019). Bodie Hills also contains a relatively large amount of late brood-rearing habitat in the Bi-State, which has led to higher recruitment rates for this reporting period (Coates, 2019).



Sage-grouse in Long Valley meadow

MOUNT GRANT

The Mount Grant PMU is east of the Bodie Hills on the Nevada side of the Bi-State. This area contains 699,079 acres of USFS, BLM, Department of Defense, private, and Tribal managed lands (Bi-State Action Plan 2012). IPM estimates suggest there are 230 sage-grouse in the Mount Grant PMU (Coates, 2022). Capture and monitoring in Mount Grant occurred between 2012 and 2018, and in 2021. During that time 145 birds were captured and monitored for survival, nest, and brood success.

The greatest threats to sage-grouse populations and their habitats in the Mount Grant PMU are wildfire, conifer encroachment, infrastructure, mineral exploration and development, and energy development (Table 3). Examples of completed conservation actions to address identified threats include:

- 1,562 acres of post-wildfire restoration
- 8,862 acres of conifer expansion treatment
- 60 acres of sagebrush and meadow restoration
- 47 sites monitored to assess meadow conditions
- 26 miles of fence marking
- 2,607 acres of invasive species monitoring and removal
- 1 wild horse gather to maintain AML
- 2 projects to improve permitted livestock grazing management
- 3 projects to limit recreational use impacts
- 2 education and outreach events

Between 2012 and 2018, sage-grouse populations in the Mount Grant PMU remained very close to stable. Since 2019 there have been sharper declines in male lek attendance, which is

likely a result of long-term drought in the higher elevations of the Mount Grant PMU. USGS has documented movement of birds from Mount Grant to the Bodie Hills PMU. The IPM estimates the likelihood of ten-year extirpation to be moderate at 24.6% (Coates, 2019). More intensive monitoring of this population will begin in 2022, which may provide more understanding of the demographic rates associated with population declines.

SOUTH MONO

The South Mono PMU contains 579,483 acres of BLM, USFS, private, county, and Tribal managed lands (Bi-State Action Plan, 2012). This subpopulation is the second largest in the Bi-State and includes the Parker Meadows, Sagehen, and Long Valley subpopulations. Recent IPM estimates suggest there are 769 birds in the South Mono PMU, the majority of which utilize the Long Valley area (Coates, 2022). As of spring 2021, the Long Valley subpopulation represents 31 percent of all sage-grouse within the Bi-State DPS. Because of its large size, population changes at Long Valley have large impacts on the overall Bi-State DPS trends (Coates, 2022). Capture and monitoring in the Sagehen subpopulation occurred in 2014 and 2015. Capture and monitoring in the Parker Meadows subpopulation occurred in 2012 and between 2017-2021. Capture and monitoring in the Long Valley subpopulation occurred from 2015 to 2021. During that time a total of 250 birds were collared and monitored for survival, nest success, and brood success.

The greatest threats to sage-grouse populations and their habitats in the South Mono PMU are wildfire, infrastructure, recreation and human disturbance, and urbanization (Table 3). Examples of completed conservation actions to address identified threats include:

- 2,926 acres of post-wildfire restoration
- Progress has been made to close the Benton Crossing landfill by 2023
- 1,246 acres of seasonal road closures to limit recreational use impacts during lekking season
- 52.8 miles of permanent road closures in critical sage-grouse habitat
- 2,305 acres protected through conservation easements
- 5.7 miles of fence removal, modification, and marking
- 6,275 acres of conifer expansion treatment
- Implementation of LADWP's Adaptive Management Plan for watering in Long Valley
- Raven monitoring and egg oiling efforts to reduce predation impacts
- 5 acres of invasive weed treatment
- 4 projects to improve permitted livestock grazing management
- 16 education and outreach events

The South Mono population has experienced slight declines over the reporting period likely associated with drought, predation, and high levels of recreational activity in the Long Valley area.



White Mountain PMU



Sage-grouse and pronghorn

The 10-year extirpation probability remained low at 3.8 %. Birds in the Long Valley portion of the South Mono PMU rely heavily on wet meadows and irrigated pastures near Crowley Lake during nesting and brood rearing periods. During long periods of drought, birds may venture further out in those irrigated pastures with little overhead protection from avian predators (Coates, 2022). Although the effect of outdoor recreation pressure on sage-grouse has not been quantified, recreational use has increased significantly over the reporting period and may be affecting habitat selection patterns (Coates, 2022). Birds in the Sagehen area have sharply declined, it is presumed that they have joined the core population in the Long Valley area during the drought period. Birds in the Parker Meadows area have experienced a large increase after experimental translocation efforts were implemented between 2017 and 2021 (see translocation section).

WHITE MOUNTAINS

The White Mountains PMU is the highest elevation sage-grouse habitat in the Bi-State area and contains 1,753,875 acres of BLM, USFS, and privately managed lands (Bi-State Action Plan, 2012). Recent IPM estimates suggest there are 40 birds in this population (Coates, 2022). However, the White Mountains are remote and difficult to access in the spring, sage-grouse in the PMU have not been extensively monitored, and historic lek count data is lacking. Therefore, the IPM should be interpreted with caution as bird numbers could be much higher than the model suggests (Coates, 2022). Capture and monitoring efforts took place in 2013, 2015 and from 2017 to 2021. During that period 196 birds were collared and monitored for survival, nest success, and brood success.

The greatest threats to sage-grouse populations and their habitats in the White Mountains PMU are conifer expansion and wild horses (Table 3). Examples of completed conservation actions to address identified threats include:

- TAC members evaluated 5 conifer treatment sites
- Monitoring of White Mountain and Silver Peak wild horse herds
- Coordinated management of Crooked Creek grazing allotment
- 1.7 miles of fence marking
- 4 education and outreach events

Sage-grouse in the White Mountains were relatively understudied, largely because these sage-grouse reside at high elevations that are often inaccessible until mid-summer. The subpopulation represents the most southwestern, and potentially highest elevation occupancy of greater sage-grouse across the species range, representing a unique and potentially extreme study site. Thus, less is known about this population compared to other Bi-State populations (Coates, 2022). Capture and monitoring efforts will continue in an effort to increase understanding of demographic rates and population trends in the White Mountains PMU.



Parker Meadow brood translocation

PARKER MEADOW TRANSLOCATION

One management action specifically listed in the Action Plan was the addition of birds, through translocation, from other PMUs to critically small and isolated sub-populations of sage-grouse. Translocations are designed to: 1) bolster population size to reduce the eminent likelihood of local extinction that would negatively impact the overall stability and persistence of the DPS; and 2) infuse genetic variation to ‘rescue’ this population from the harmful effects of low genetic diversity within the subpopulation.

Ongoing research conducted by the USGS highlighted the potential for population declines within the Parker Meadow subpopulation in the South Mono PMU to critically low levels. It was determined that intervening management efforts were necessary to maintain and increase the Parker Meadow subpopulation.

After three years of planning, the first of a multi-year translocation effort began in March 2017. That year, 28 sage-grouse (20 females, 8 males) were captured at Bodie Hills and translocated to Parker Meadows. All captured birds were fitted with VHF or GPS (male only) transmitters. As part of an experimental design, a subset of females was artificially inseminated prior to release to help increase the probability of nest initiation that spring. Additionally, three post-hatch broods, females with newly hatched chicks, were translocated. These were the first greater sage-grouse brood translocations attempted range-wide. The expectation is that these reproductive conditions would help “anchor” the female to the release area, and their surviving chicks would add new recruits to the population at Parker Meadows.

Data from 2017 efforts suggested that brood translocations are more successful because they bypass the effects of low nest initiation and success associated with the translocation of pre-nesting females. In 2018, 20 more sage-grouse (13 females, 7 males) were translocated from Bodie Hills to Parker Meadows, five of which were pre-nesting hens and eight were females with broods. In 2019, a total of 20 birds (10 females with broods, 5 pre-nesting females, 5 males) were translocated from the Bodie Hills PMU. Fifteen were outfitted with VHF transmitters and 5 with GPS transmitters to track movement and monitor survival. No translocations took place in 2020 due to the covid-19 pandemic. In 2021, five hens with their broods were translocated to Parker Meadows.

Given what has been learned during the initial years of translocation efforts, measures have been identified to minimize morality and dispersal rates. Design changes to transport boxes and increasing the emphasis on brood translocations promise to reduce the number of individuals required to be handled and improve success of the translocation overall (Figure 10). Moving forward USGS will be using a new protocol that involves mixed brood translocations, where one hen is translocated with her brood and part of another hen’s brood. The purpose of this method is to limit the number of adults removed from the source population, decreasing negative demographic impacts to that population. The translocation effort in Parker Meadows will continue in the coming years. Changes to protocols and methods will continue to utilize a science based, adaptive approach to allow this effort to be as successful as possible.

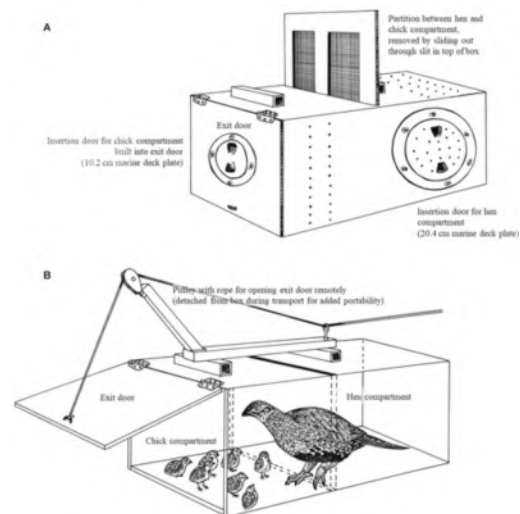


Figure 10: Schematic of translocation release boxes. Illustration credit: Diana Muñoz

	2017	2018	2019	2020	2021	Total
Males	8	7	5	–	–	20
Females (pre-nesting)	17	5	5	–	–	27
Females (w/ broods)	3	8	10	–	5	26
Chicks	17	39	70	–	20	146
Total	45	59	90	0	25	219

Table 4: Sage-grouse translocated to Parker Meadows annually

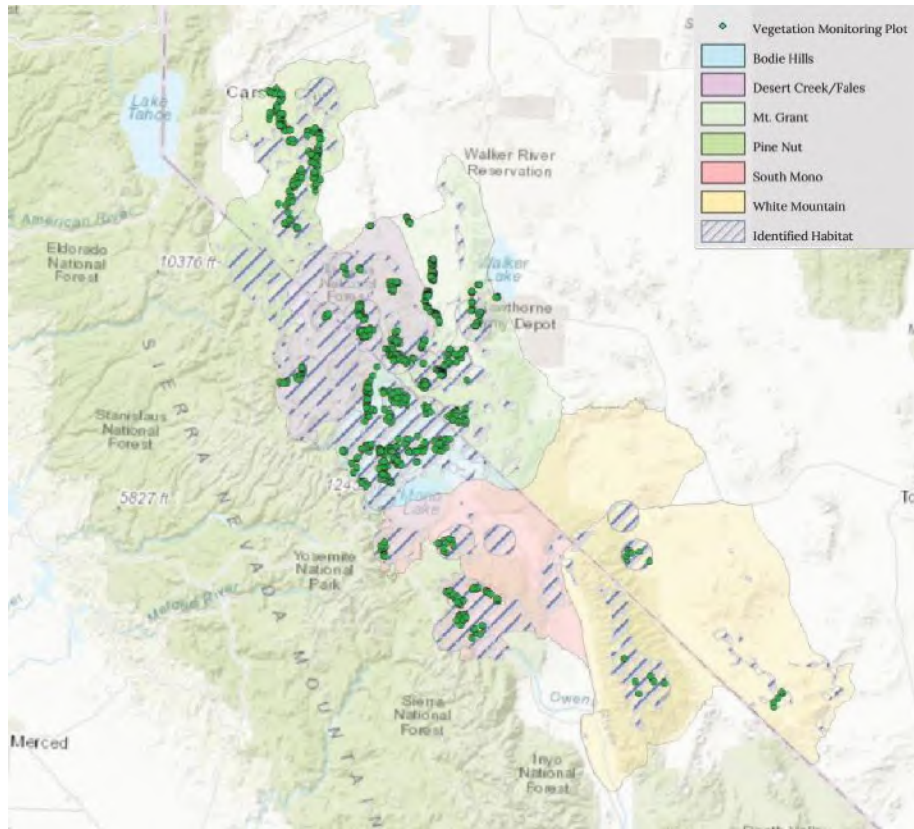


Figure 11: Vegetation monitoring plot locations

VEGETATION MONITORING

The Nevada Partners for Conservation and Development (NPCD), housed within the Nevada Department of Wildlife (NDOW), has been collecting vegetation data across numerous sites across all Bi-State PMUs since 2011.

In areas identified for conifer removal and at sites that have experienced episodes of wildfire, the NPCD establishes monitoring plots both within and outside of treatment and wildfire boundaries. Sampling is conducted prior to treatment to establish baseline conditions and sites are revisited post treatment to determine treatment and fire restoration effectiveness. Plots outside of treatment and wildfire boundaries serve as controls against which the restoration projects' effectiveness can be compared. The methods NPCD employs are consistent with the BLM's Assessment, Inventory and Monitoring protocols (AIM; Taylor et al. 2014) and are designed to be easily replicated, requiring little or no expensive equipment.

Since the Action Plan was implemented, 816 vegetation plots have been monitored across the Bi-State. Monitoring measures vegetation response to treatment including changes in sagebrush cover, perennial grass cover, species richness and presence of non-native and invasive species (Figure 12). Vegetation response to treatment is often slow; however, preliminary results

from selected sites suggest that species richness, sagebrush, perennial grass, and forb cover are elevated in treatment plots compared to control sites. These results suggest that conifer treatment and post wildfire restoration efforts are improving habitat conditions for sage-grouse.

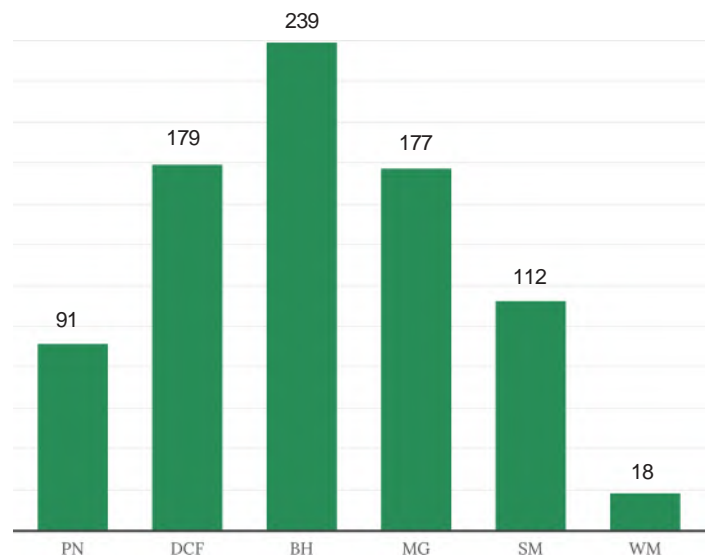


Figure 12: Completed vegetation monitoring plots

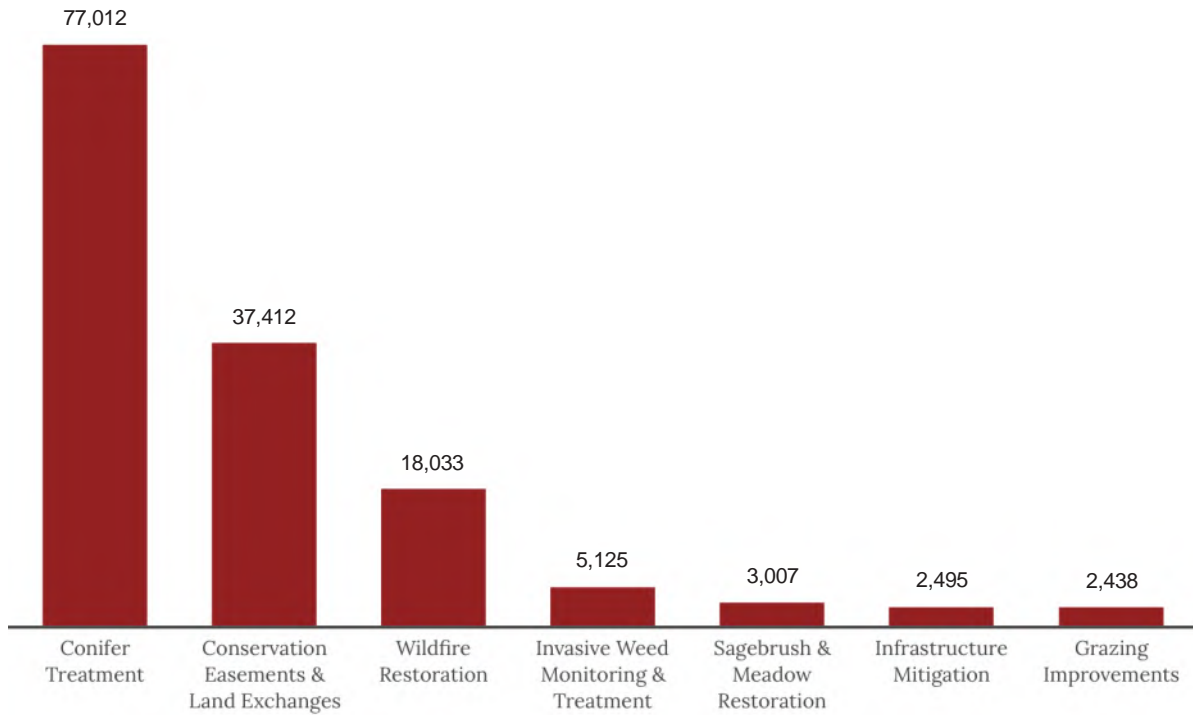


Figure 13: Acres of work completed to address identified threats to Bi-State sage-grouse

CONSERVATION ACTION IMPLEMENTATION

The Action Plan intended to provide a foundation and vision for a coordinated and cooperative management approach for conservation of the Bi-State sage-grouse, to ensure healthy population levels, and to maintain and improve sage-grouse habitat.

Individual objectives, strategies, and actions outlined in the Plan provide a strategic framework designed to achieve these overall conservation goals. Conservation actions are outlined using a hierarchical approach that identifies each action relative to the broader conservation objectives and strategies identified in the Plan (Bi-State Action Plan, 2012). The highest priority threats were identified and prioritized for each individual PMU.

In the last ten years, on-the-ground conservation efforts have been initiated to improve habitat conditions on more than 143,000 acres in the Bi-State (Figure 13). The following pages identify threats to Bi-State sage-grouse and their habitats and detail actions taken to address those threats. Work completed represents the highest priority actions in the Bi-State informed by research, a conservation planning tool developed by USGS, input from the Bi-State Local Area Working Group, and common-sense realities of implementing projects.

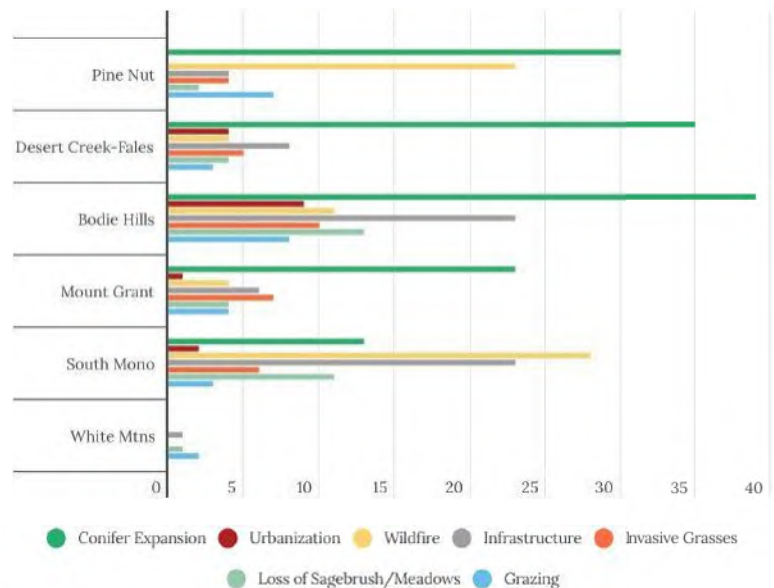


Figure 14: Number of completed projects by PMU



Post fire conifer removal



Wind fencing to improve soil stabilization

WILDFIRE

Large, intense wildfires are an increasing issue across the West and the Bi-State is not immune to this threat. Addressing wildfire is identified as a high priority in the Pine Nut, Desert Creek-Fales, Mt. Grant, Bodie and South Mono PMUs.

Changing climate, periods of drought, encroaching conifer, and the proliferation of non-native weeds, such as cheatgrass, alter sagebrush ecosystems and increase the likelihood of ignition and fuel load available for wildfire that can quickly devastate large expanses of important sage-grouse habitat.

A disturbed ecosystem post-fire is more susceptible to further invasion of non-native plant species and conversion of sagebrush to annual grass monocultures, which in turn increases potential for fire. This cycle alters fire regimes, causing more frequent and intense fires that perpetuate loss of habitat and threats to sage-grouse. Actions employed to address the threat of wildfire include, strategic fire suppression, fuel breaks, conifer removal, fuel reduction and post-fire rehabilitation. The removal of encroaching conifer reduces fuel availability for wildfires in sagebrush ecosystems and can act as a fuel break to halt or slow the progress of a spreading wildfire. Fuel reduction entails thinning thick stands of conifer, mosaic mowing and prescribed burns to limit the spread and decrease the intensity of wildfires while promoting native plant species production. Post-fire rehabilitation helps avoid ecosystem type conversion and promotes the return of suitable sage-grouse habitat through erosion control and seeding of native shrubs and grasses.

ACCOMPLISHMENTS

- To address the threat of wildfire, Bi-State LAWG partners communicate across jurisdictional boundaries to implement coordinated fire-management strategies that minimize the loss of suitable sage-grouse habitat.
- A concerted effort is made to ensure that fire personnel are informed and respond to wildfire with consistency across management boundaries. This requires the ability to: 1) identify locations that provide current or potential habitat for sage-grouse and 2) prioritize fire suppression and management actions in these areas to minimize sage-grouse habitat loss.
- Interagency fire management and suppression agreements were established between the BLM and USFS. Existing fire management plans were updated to include conservation measures identified by the National Sage-Grouse Technical Team to reduce long-term loss of sagebrush.
- Since 2012, a total of 18,034 acres of work, including conifer removal, fuel breaks, fuels reduction and post-fire rehabilitation has occurred in the Pine Nut, Desert Creek-Fales, Mount Grant, Bodie and South Mono PMUs.
- Resource advisor kits are updated annually to provide the most recent information on sage-grouse populations and all fire personnel receive training on fire protocols specific to sage-grouse habitat.
- Wildfire prevention activities include patrols to locate fire starts, document campfires and educate the public on fire regulations.
- LADWP prohibits camping on their lands and has adopted a no campfire policy to reduce the potential for human caused fire.



Bi-State conservation easement

URBANIZATION

Biomes in the arid west have uneven distributions of food and cover, thus fragmentation can be particularly acute for the wildlife that depend on these environments. Many sagebrush obligate species have evolved to require very large areas of intact habitat to meet their seasonal and annual resource needs. Therefore, disturbance of a relatively small number of fragmented sagebrush acres can have a disproportionate impact on the species that need that habitat to survive (Crist, 2015).

Maintaining high quality, intact habitat conditions into the future and addressing the risks associated with urbanization is a high priority in the Desert Creek-Fales, Pine Nut, and South Mono PMUs.

Conservation easements are implemented to limit urban development that may fragment habitat. These are voluntary legal agreements between a landowner and a qualified organization, like a land trust, which places some conservation restrictions on the use of a property to protect its natural values. These agreements provide benefits to both landowners and wildlife. They protect large quantities of suitable habitat from further development and allow landowners to pursue available funding to implement conservation projects on their land.

In addition to conservation easements on private lands, land purchases or exchanges have occurred that resulted in public, state, or federal ownership of occupied sage-grouse habitat. These acquisitions ensure that land remains intact for generations and managed in a way that will maintain quality habitat and provide conservation value to Bi-State sage-grouse.

ACCOMPLISHMENTS

- The Action Plan identifies 12 actions to address the threat of urbanization in the Desert-Creek Fales, Bodie Hills, and White Mountain PMUs, seven of which are

complete. In total, 37,412 acres have been entered into conservation easement agreements or have been acquired through land purchase or exchange since 2012. These completed projects insure that connected, high-quality habitat is available for sage-grouse and other wildlife species well into the future.

- Partners have implemented new policies, plans and programs to promote land conservation and to reduce development and human disturbance impacts.
- In 2014 the NRCS designated the Bi-State region as “Grasslands of Special Environmental Significance.” This designation raised the amount of funds NRCS contributes to the acquisition of easements from 50 percent to 75 percent.
- In 2017, the Eastern Sierra Land Trust secured \$8 million dollars in funding through the USDA’s Regional Conservation Partnership Program (RCP) which allowed ranchers and landowners to apply for conservation funding for projects on their lands that benefit both working lands and wildlife.
- Mono County implemented new policies in their County Plan to reduce the impact of development in sage-grouse habitat.

Actions not completed include the following:

- MER2-2: Secure a conservation easement or agreement with the Desert Creek Ranch to maintain essential brood rearing habitat in proximity to lek # 2 in the Desert Creek-Fales PMU.
- MER2-5: Secure a conservation easement or agreement with the Mormon Ranch to maintain essential brood rearing habitat in proximity to the Bridgeport Canyon/ Little Mormon lek complex in the Bodie Hills PMU.
- MER2-6: Secure a conservation easement or agreement for the Aurora Meadow complex to maintain brood rearing habitat in proximity to the Aurora lek in the Mount Grant PMU.
- MER2-8: Secure conservation easements or agreements with willing landowners in the Burcham Flat, Wheeler Flat and Fales Hot Springs vicinities to prevent further development impacts in proximity to leks in the Fales breeding complex in the Desert Creek Fales PMU.
- MER2-12: Secure conservation easements or agreements with willing landowners to maintain key nesting or wintering habitats along the east side of the White Mountains in the White Mountains PMU.

CONIFER ENCROACHMENT

The loss and fragmentation of high-quality, intact sage-grouse habitat to encroaching conifer is a high priority threat in the Pine Nut, Desert Creek-Fales, Mt. Grant, Bodie and White Mountain PMUs. Pinyon pine, juniper, and Jeffery pine are native species in the Bi-State but expansion beyond historical limits due to fire suppression, historic overgrazing by domestic livestock and favorable climate conditions has become problematic (Brockway et al. 2002). Across the Bi-State area, it is estimated that approximately 40 percent of the historically available sagebrush habitat has experienced woodland expansion over the past 150 years (USGS, 2012). Conifer encroachment into sagebrush systems is problematic as it may increase fire severity and size, deplete soil water and nutrients, reduce native understory, provide perches for avian predators, and alter sage-grouse habitat selection. All of which can affect behavioral decisions, distribution, and population dynamics of sage-grouse.

Previous studies have shown that sage-grouse experience population-level impacts at low levels of encroachment and that leks are less likely to be active near small, dispersed trees (Baruch-Murdo et al. 2013). In 2017, the USGS published a study, conducted in the Bi-State, that demonstrated changes in sage-grouse habitat selection and negative effects to vital rates directly associated with encroaching conifer (Coates et al. 2017). To address the threat of conifer encroachment, the USGS and TAC developed a spatially explicit Conservation Planning Tool (CPT). The CPT is a model that ranks the relative benefit of individual conifer removal projects. Bi-State partners can utilize this tool to select and prioritize conifer removal projects that will provide the most conservation value to sage-grouse and maximize benefit from dollars spent. Addressing conifer encroachment and infill provides a myriad of benefits to sage-grouse that include increasing habitat connectivity, maintaining native understory, eliminating perches for predators, conserving soil water and nutrients, and increasing ecosystem resilience to fire and resistance to cheatgrass invasion.

Conifer projects within the Bi-State are ranked using the CPT and the TAC's expertise regarding areas of occupied sage-grouse habitat being impacted by conifer encroachment. Conifer removal projects aim to improve habitat, increase connectivity, and reduce risk to sage-grouse. Phase I conifer cover is targeted to provide the most benefit at the lowest cost. Post-treatment maintenance is often required in the years following initial treatment to ensure that small seedlings and saplings were not missed in the original treatment.



Parker Meadows pre conifer treatment



Parker Meadows post conifer treatment

ACCOMPLISHMENTS

- The Action Plan contains 20 actions that call for the evaluation and implementation of conifer removal projects as a method to restore and maintain intact sagebrush habitat for sage-grouse. Of those 19 have been initiated and are in various states of completion.
- In total, 64,697 acres of conifer treatment and 12,315 acres of conifer treatment maintenance have been completed.

Actions not completed include the following:

MER4-2: Evaluate pinyon-juniper encroachment and potential connectivity issues in the Masonic Gulch, Red Wash, and Chinese Camp vicinities in the Mount Grant PMU.



Native seed collection



Cheatgrass



Aerial seeding with native seed source post fire

INVASIVE AND NOXIOUS SPECIES

Non-native plants are not overly abundant in the Bi-State area, except for cheatgrass, which occurs in all PMUs throughout the range. It is most prevalent in the Pine Nut PMU, where it is identified as a high priority threat and in the Mt. Grant PMU where it is listed as a moderate threat. The infiltration of cheatgrass into sagebrush systems can increase fire potential size and severity, out-compete native understory species after fires, and perpetuate a devastating disturbance cycle.

To counter the threat of habitat loss, Bi-State land management agencies and their partners have implemented numerous conservation actions and strategies. These include strategic fire suppression to avoid ecosystem-type conversion, utilization of native plant species to rehabilitate burned areas, and mechanical and chemical weed treatments.

ACCOMPLISHMENTS

- Since 2012, monitoring to detect invasive annual grasses has occurred on 3,325 acres across multiple PMUs in the Bi-State.
- Post fire restoration and conifer treatment sites are assessed prior to treatment to select appropriate methods to minimize site disturbance that could result in the establishment of non-native plant species.
- Chemical and mechanical treatment of non-native plant species have occurred on 1,786 acres in the Pine Nut, Desert Creek-Fales, Bodie Hills, and South Mono PMUs.
- Native seeds are collected for future Bi-State restoration and rehabilitation projects.



Bi-State meadow habitat

LOSS OF SAGEBRUSH AND MEADOWS

Healthy sagebrush and meadow conditions are necessary components of sage-grouse habitat, crucial to supporting sage-grouse throughout their life cycle. Land managers make every effort to implement best management practices to avoid the degradation of intact sage-grouse habitat through adopted regulatory mechanisms. When sagebrush and meadow conditions are compromised, improvements are made through restoring native hydrology, installing check dams to stabilize stream headcuts, fencing areas to allow recovery from livestock grazing, prescribed fire, and irrigation.

ACCOMPLISHMENTS

- Through the completion of 40 projects within all Bi-State PMUs, 3,008 acres of meadow and sagebrush were restored or enhanced through irrigation, meadow improvement, and vegetation restoration.
- Meadow habitat improvement efforts on public and private lands in upper Aurora Canyon in the Bodie Hills PMU have been implemented.
- The Bishop BLM installed check dams to stabilize stream area headcuts in 2010, since then additional check dams have been installed in subsequent years and maintenance of these structures occurs annually.
- Hydrological function was returned to Wheeler Creek through restoration efforts to increase plant cover and diversity on adjacent brood meadows.
- The Eastern Sierra Land Trust cleaned up two dump sites and cleared out irrigation ditches in sage-grouse habitat located on privately owned property.

- In 2018 and 2019, the Nevada State Parks conducted proper functioning condition surveys to evaluate and assess stream health within the Walker River State Recreation Area. The objective of these projects is to gather information on creeks and their associated meadows to develop restoration projects designed to reconnect fragmented habitat and restore summer brooding habitat in the Mt. Grant PMU.
- Assessment, inventory, and monitoring (AIM) vegetation plots are completed throughout the Bi-State annually to evaluate ecosystem health.
- Through the Seeds of Success program native seeds were collected at multiple sites to provide a local seed source for restoration projects.
- Between 2015 and 2021, partners met seven times to complete assessments for future wet meadow and stream restoration sites in multiple PMUs.
- LADWP developed an adaptive management plan for irrigating meadows in the Long Valley area of the South Mono PMU to maintain important sage-grouse habitat.

Actions not completed include the following:

HIR1-5-PN: Manage high elevation wet meadows in the southern portion of the Pine Nut PMU. Maintain existing fences and mark with diverters.

HIR2-1-PN: Restore previously burned sagebrush habitat within a three mile radius of Mill Canyon Lek.

HIR2-2-PN: Maintain meadows in Mount Seigal and Bald Mountain areas in proper functioning condition or improve through livestock management.

HIR2-3-PN: Improve sagebrush habitat quality west of Big Meadow.

HIR2-3-MG: Evaluate meadow habitat conditions in the Aurora and Gregory Flat vicinities.



Converting Bodie Hills fence to let down

ACCOMPLISHMENTS

The Action Plan identifies 12 actions to decrease infrastructure threats to Bi-State sage-grouse. Since 2012, 11 of these 12 actions have been addressed and include, fence evaluation, the removal of the site-specific hazards, and the following actions:

- Fourteen miles of fence have been removed in the Bodie Hills, Pine Nut, and South Mono PMUs. An additional 7.5 miles of fencing was converted to “let down”. Many miles of fence across the Bi-State were marked with flight diverters.
- LADWP imposes seasonal closures of their land near Crowley Lake during the peak lekking period to reduce the potential for human disturbance. 2,420 acres of land near leks and nesting habitat benefit from seasonal road closures annually.
- Four windmills in Adobe Valley located within the South Mono PMU were removed and converted to solar in 2014. Over six miles of the Fletcher power line located in the Bodie Hills PMU was decommissioned and removed. This project was completed in 2014. Progress toward the closure and relocation of the Mono County landfill has been made through planning and funding acquisition. Closure is on track to be completed in 2024.
- With the new designation of the Walker River State Recreation Area in the Mt. Grant PMU, law enforcement patrols to deter poaching and manage recreational use have increased.
- Partners worked together to develop public lek viewing guidelines and produced outreach material to disseminate information to the public.
- The BLM adopted a land use amendment that regulates the development of new roads or OHV trails in Bi-State sage-grouse habitat. Recreation monitoring and management activities have increased in the South Mono and Bodie Hills PMUs.

Actions not completed include the following:

MER3-7: Minimize impacts from traffic near the Aurora Borealis mine in the Mount Grant PMU.

INFRASTRUCTURE & HUMAN DISTURBANCE

Infrastructure is identified as a high priority threat in the Pine Nut, Desert Creek- Fales and Mount Grant PMUs. The threat of human disturbance is high in the Pine Nut and South Mono PMUs and moderate in the Desert Creek-Fales PMU.

Infrastructure features impacting sage-grouse in the Bi-State region include linear features such as roads, power lines and fences and location specific features like landfills, communication towers and windmills. Impacts from linear features include fragmentation of habitat (Braun 1998), direct mortality through collisions and increased available perches for predators (Connelly et al. 2000). Roads not only fragment habitat but also increase potential for human access and disturbance. Site specific infrastructure, such as landfills, attract and increase predator populations. Recent studies found that transmission lines in central Nevada affected multiple demographic rates of sage-grouse and influenced raven abundance and habitat selection, which had cascading effects to associated sage-grouse populations (Gibson, 2018).

To address threats posed by infrastructure, fences in occupied sage-grouse habitat are evaluated for strike hazards and are either removed, modified, or marked as necessary. Permanent and seasonal road closures serve to reduce disturbance and potential fragmentation. Location specific infrastructure threats are evaluated, and steps are taken to remove structures that increase risk to sage-grouse.

Threats associated with human disturbance include illegal hunting and recreational use impacts to sage-grouse habitat. These threats have been addressed through increased law enforcement, public education and the adoption of land management policies that restrict access to key habitat through road closures, regulation of new road development, and seasonally enforced regulations.



Converting Bodie Hills fence to let down

GRAZING WILD HORSES

Grazing of wild horses and burros are listed as a low or moderate threat in the Pine Nut, Bodie Hills and Mt. Grant PMUs. Each year the USGS documents the presence of wild horses and burros through the completion of raptor, raven, horse, and livestock surveys. Land management agencies make efforts to monitor Bi-State wild horse and burro populations to establish and maintain Appropriate Management Levels (AML) to protect their health as well as that of the habitat they and other species rely upon.

ACCOMPLISHMENTS

- The U.S. Forest Service and BLM completed aerial surveys of the Montgomery Pass Wild Horse Territory to generate a minimum count and assess the herds size compared to the established AML in the Desert Creek Fales PMU.
- USFS staff completed wild horse surveys in the Powell Mountain herd in the Mt. Grant PMU.
- Bishop BLM completed wild horse surveys in the South Mono and Bodie Hills PMUs.
- Horses were gathered in the Wassuk range to maintain AML in the Mt. Grant PMU.
- Carson City BLM District Office organized and implemented a wild horse gather in the Pine Nut Mountain PMU to meet AML, a total of 404 horses were gathered. Animals gathered were made available for adoption at Palomino Valley Wild Horse and Burro Center in Reno through the Wild Horse and Burro Adoption Program. Those that were not adopted are cared for in off-range pastures, where they retain their “wild” status and protection under 1971 Wild Free-Roaming Horses and Burros Act.
- USFS and BLM employees attended the Wild Horse and Burro National Overview meeting, held in Reno, Nevada, to discuss new science and facts, public involvement, ongoing and future planning regarding the management of wild horses and burros.
- The Inyo National Forest filled a rangeland specialist position whose duties include the management of wild horse and burro territories on National Forest lands.

GRAZING PERMITTED LIVESTOCK

The grazing of permitted livestock is listed as a low priority threat in all PMUs across the Bi-State. To address the threat of habitat degradation caused by grazing and to implement beneficial livestock management strategies, the NRCS and ESLT provided \$8 million in funding for habitat improvement and enhancement projects on private lands through the Regional Conservation Partnership Program. Land management agencies monitor active grazing allotments on their land for compliance with permit terms and conditions within all Bi-State PMUs.

ACCOMPLISHMENTS

- USGS completed livestock surveys in conjunction with sage-grouse monitoring efforts.
- Grazing management tactics to improve sage-grouse habitat were employed across 1,127 acres in the Bodie Hills PMU.
- Fences were erected around the area burned during the Hot Creek Fire in the South Mono PMU to limit grazing impacts to recovering resources.
- Seven range improvement inspections were completed in the Pine Nut and Mount Grant PMUs.
- A 15-year USDA Conservation Reserve Program lease in the Bodie PMU was signed this year protecting 1,054 acres of land.



Bi-State partners

COLLABORATIVE CONSERVATION

Additional actions to improve sage-grouse conservation efforts are completed each year to implement a coordinated interagency approach, incorporate a science-based adaptive management plan, improve regulatory mechanisms, and maintain stakeholder involvement.

of responsibility and dedication to implement a coordinated interagency approach to conservation.

- Since 2014, approximately 84% of that funding has been allocated with a total of \$37.6 million agency dollars spent on sage-grouse conservation efforts over the last eight years (Figure 15).

INTERAGENCY APPROACH

The Action Plan identifies three actions designed to implement a coordinated interagency approach to sage-grouse conservation, all of which have been initiated. These actions include:

- Development of a “Sage-Grouse Service Team” approach to support the conservation and management of sage-grouse populations in the Bi-State. This requires that partners work collaboratively and provide multi-jurisdictional funding to facilitate the conservation of Bi-State sage-grouse and its habitats.
- Each year, Bi-State partners work together to leverage expertise and develop conservation strategies to develop a proposed program of work based on priority, staff availability and funding. Agencies work across jurisdictional boundaries to monitor population demographics, complete vegetation monitoring plots, and carry out Action Plan projects.
- In 2014, Bi-State partners announced a \$45 million-dollar commitment to implement the 2012 Action Plan over a 10-year period (Table 5). Under the direction of the Executive Oversight Committee, each partnering agency drafted a commitment letter to the Service, stating their acknowledgment

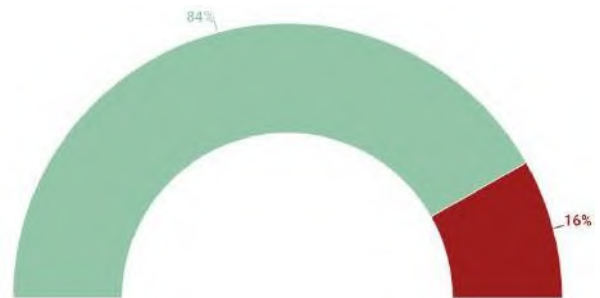


Figure 15: Allocated funding for sage-grouse conservation 2014-2021

Agency	Funding Commitment	Conservation Role
NDOW	\$3.6M	Vegetation monitoring, population monitoring
CDFW	\$1M	Translocation, population monitoring, predator monitoring, habitat acquisition
USFS	\$13.9M	NEPA planning for projects, planting and irrigation plans, grazing management, meadow restoration, population monitoring
NRCS	\$12M	Land owner outreach on easement and habitat restoration opportunities, conservation easements, matching funds for partners, utilize program funding to implement projects
BLM	\$6.5M	NEPA planning for projects, conifer removal, meadow enhancement, infrastructure evaluation, wild horse assessment, population monitoring
USGS	\$2.5M	Develop and apply modeling and science to inform adaptive management, CPT, IPM, population monitoring
Mono County	\$5.9M	Coordinate on easement development and provide matching funds, relocate landfill, landowner education and outreach, general plan update
USFWS	\$1M	Science and capacity support, landowner engagement and outreach, implementation of private lands restoration opportunities

Table 5: Partner funding commitment and conservation role

SCIENCE-BASED ADAPTIVE MANAGEMENT

Bi-State partners utilize a science-based adaptive management approach to generate a strategic process for guiding sage-grouse management. This approach integrates the best available science to inform local and landscape-level management and conservation decisions for Bi-State sage-grouse.

Science-based adaptive management guides management decisions based on data-driven models, implementation of actions, outcome evaluation and modification of management practices based on this iterative learning process (Bi-State Action Plan, 2012). This management strategy provides insight into what management actions should be conducted and which areas should be targeted, while reducing the chances of carrying out actions in areas where the effects are inconsequential and not meaningful. The Action Plan identifies seven actions necessary to manage sage-grouse populations and implement projects through adaptive, science-based methods. These actions include:

- Establishment of inter-agency agreements and funding mechanisms to support a USGS Science Adviser. The primary duty of the Science Adviser was the development of the Conservation Planning Tool (CPT) to prioritize conservation projects (Bi-State Action Plan, 2012). Funding for this position was initially acquired in 2012 and has been secured annually.
- The six remaining actions detail necessary information to be acquired and incorporated into the CPT to increase its function and management value. These actions include defining habitat, ranking risks, integrating population performance, and identifying factors that influence population vital rates. Each of these actions is carried out annually to improve the predictive power of the CPT and inform management decisions to maximize benefit to Bi-State sage-grouse populations.
- The USGS has also furthered science based adaptive management initiatives through additional research and the development of analytical tools beyond those originally identified in the Action Plan. Those accomplishments include furthering research on sage-grouse response to conifer density and conifer treatment, appropriate normalized difference vegetation index (NDVI) levels for irrigated meadows in sage-grouse habitat, and by developing a targeted annual warning system that helps to identify when sage-grouse subpopulations are experiencing declines that should trigger management actions.

IMPROVED REGULATORY MECHANISMS

The Action Plan outlines 13 actions for improved regulatory mechanisms, 12 of which have been completed. These actions provide consistent land management direction across jurisdictional boundaries to conserve Bi-State sage-grouse and their habitats into the future. Considering the majority of sage-grouse habitat in the Bi-State is on federally managed public lands, effective conservation of Bi-State DPS and its habitats requires strong land use management plans.

Plans are implemented by land management agencies in close coordination with state and federal wildlife agencies to ensure there is seamless regulatory direction for all sage-grouse related issues across management boundaries. These amendments aim to minimize or eliminate threats affecting the status of sage-grouse and to improve habitat conditions. Ongoing plan maintenance occurs to incorporate the most recent information ensuring that public lands containing Bi-State sage-grouse and sage-grouse habitat are adequately protected.

Bi-State land management agencies agreed to adopt plan amendments to incorporate best management practices, standardize operating procedures, implement conservation measures, and mitigate threats to increase regulatory effectiveness and provide direction specific to conservation of the Bi-State DPS. These plan amendments require that agencies consider sage-grouse populations and habitat in land use planning and activity plan analysis to limit potential impacts on sage-grouse or their habitat.

Since the Action Plan was implemented:

- The Humboldt-Toiyabe National Forest has signed an amendment to their Land Use Plan.
- The Carson District and Tonopah Field Offices of the NV BLM have signed amendments to their Land Use Plans.
- The Inyo National Forest updated their Land Management Plan.
- Mono County has updated their General Plan to better manage Bi-State habitat and protect sage-grouse populations.

Actions not completed include the following:

IRM2-2: Coordinate with local and county governments in Nevada to incorporate sage-grouse conservation guidance.

MAINTAINING STAKEHOLDER INVOLVEMENT

Relationships built on trust and cooperation among stakeholders are essential to the goal of long-term conservation of sage-grouse and its habitats. Participants involved in this conservation effort include federal, state, and local governments; Native American tribes; non-profit organizations; ranchers and landowners; among others. The Action Plan identifies six priorities for maintaining stakeholder involvement, all of which are implemented annually. Actions include conducting Local Area Working Group meetings developing outreach materials to facilitate the sharing and distribution of information, and maintaining a Bi-State website that provides accessible information to partners and the public.

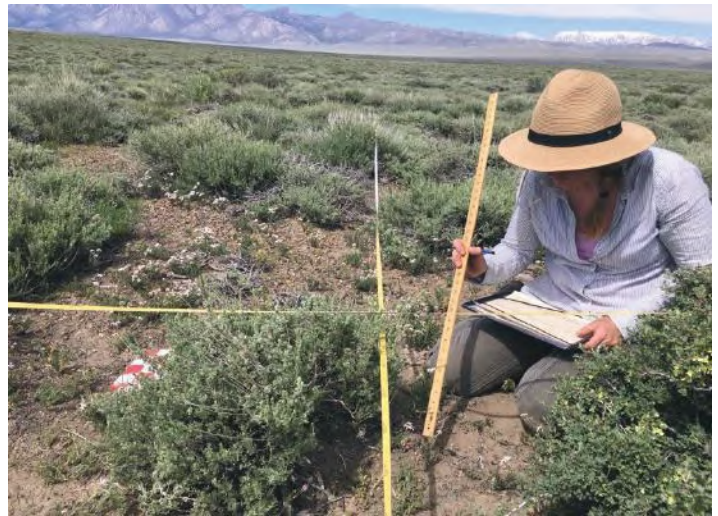
Together, partners conduct Action Plan maintenance, carry out identified actions and track implementation progress to ensure the Action Plan is effectively guiding conservation and management efforts.

Since 2012, considerable progress has been made toward maintaining stakeholder involvement. Accomplishments include:

- Formation of the Bi-State Tribal Natural Resource Committee (BTNRC), 20 BTNRC meetings, and two Traditional Ecological Knowledge Summits.
- Thirteen Local Area Working Group meetings.
- Creation of the Bi-State Sage-Grouse website.
- Production of LAWG newsletters to provide sage-grouse related updates and notifications to partners and public.
- 183 education and outreach accomplishments.



Bi-State partners



Bi-State sage-grouse, habitat, and conservation efforts

EFFECTIVENESS MONITORING

The 2012 Action Plan was designed to provide a “road-map” to conservation. It contains 159 actions intended to be implemented over a ten-year span. The implementation of multiple projects is often required to achieve the intended goal of a single action. These projects represent the highest priority actions deemed necessary to conserve Bi-State sage-grouse populations and their habitats. Projects are prioritized through a science-based adaptive management process that utilizes on-the-ground evaluation to inform management decisions and prioritize conservation actions. This process incorporates the best available science and key lessons learned from prior efforts to: 1) identify the most critical issues; 2) develop projects that address those issues and 3) assess and adjust project implementation as necessary to improve the probability of benefiting sage-grouse.

Population monitoring provides the basis of understanding for what types of projects should be implemented and where they

should be placed. Utilizing monitoring data, the USGS developed a resource selection function that identified key sage-grouse habitat in the Bi-State. The highest priority projects are in this identified habitat to provide the most ecological benefit to sage-grouse. Published research regarding habitat selection, population models, genetics and conservation strategies all contribute to effective adaptive management. In 2014, the USGS incorporated completed research into the development of a Conservation Planning Tool (CPT), which measures ecological benefits to sage-grouse for a given management action using resource selection functions and estimates of abundance and space use (Ricca et al., 2017). The CPT informs and prioritizes habitat improvement project design and is especially valuable for prioritizing conifer treatment and wildfire restoration projects. Boundaries of these projects are initially drawn as a best guess based on bird use, aerial imagery, and knowledge of the habitat. The CPT then ranks these projects based on benefit to grouse

and cost effectiveness. Each year additional research and monitoring data is incorporated into the CPT, and it becomes more valuable as a result.

In 2015 and again in 2017, the TAC used the CPT results as the basis for re-prioritizing Bi-State conifer projects. This planning tool has proven to be incredibly valuable when combined with other information, such as on-the-ground knowledge of an area, logistics of planning and implementing projects and professional expertise. Combined, these tools provide the basis for prioritization of conservation projects.

Another important scientific tool used to help direct conservation efforts and understand their impacts is USGS' Integrated Population Model (IPM). The IPM helps partners understand the demographic rates that are driving population trends and aids in the development of targeted actions to improve those rates and overall population trends.

Efforts to implement conservation projects across the Bi-State have increased annually since 2012. Currently, 141 of 159 identified actions in the Action Plan have been initiated, meaning they are in progress, ongoing or occur annually, or have been evaluated as part of the planning process. These actions represent 89% of all identified actions in the Action Plan.

The completion of these projects illustrates the effectiveness of long-held and time-tested partnerships between stakeholders. Together, they established and implemented a framework that

fostered ongoing problem solving and proactive engagement. This collaborative process effectively integrates multiple perspectives and interests and has proven to be more successful in providing durable solutions to complex issues and challenges.

Over the last ten years, the Action Plan has provided a clear framework to guide this collaborative conservation effort. The Bi-State LAWG increased their understanding of sage-grouse population trends, gained a better understanding of factors influencing populations, and learned how and where to implement conservation actions to provide the greatest benefit to sage-grouse and their habitats. Recent USGS research suggests the implementation of the Action Plan has bolstered Bi-State sage-grouse populations by 3.9% annually and 31.1% since 2012 (Bi-State TAC, 2022).

Moving forward with maintained momentum, Bi-State stakeholders will continue to conduct collaborative conservation efforts at the landscape scale to benefit sage-grouse populations and the sagebrush ecosystem in the Bi-State. The group is currently working to expand the partnership to include the diversity of stakeholders necessary to find solutions to these large-scale and often complex ecological challenges. Together the group will evaluate the most recent science and work to update the Action Plan so that it may continue to act as a guiding document for future sage-grouse related conservation efforts in the Bi-State.



Bi-State sage-grouse lekking in spring

Action Type	Actions Identified	Actions Initiated	Total Projects
Coordinated Interagency Approach	3	3	46
Science Based Adaptive Management	7	7	16
Increased Regulatory Mechanisms	13	12	24
Wildfire	9	9	154
Urbanization	12	7	24
Infrastructure & Human Disturbance	12	11	85
Conifer Encroachment	13	13	85
Disease and Predation	4	4	12
Wild Horses	5	5	13
Small Populations	6	6	8
Habitat Restoration & Improvement	41	35	216
Research and Monitoring	28	27	94
Maintaining Stakeholder Involvement	6	6	125
Total	159	145	902

Table 6: Compelled Action Plan associated projects

Action ID	PMU	Action Description
HIR1-5-PN	Pine Nut	Manage high elevation wet meadows in the southern portion of the Pine Nut PMU. Maintain existing fences and mark with diverters
HIR2-1-PN	Pine Nut	Restore previously burned sagebrush habitat within a three mile radius of Mill Canyon Lek
HIR2-2-PN	Pine Nut	Maintain meadows in Mount Seigal and Bald Mountain areas in proper functioning condition or improve through livestock management
HIR2-3-PN	Pine Nut	Improve sagebrush habitat quality west of Big Meadow
MER2-2	Desert Creek/Fales	Secure a conservation easement with Desert Creek Ranch
MER2-8	Desert Creek/Fales	Secure conservation easements with willing landowners in the Burcham Flat, Wheeler Flat and Fales Hot Springs vicinities
HIR2-4-DCF	Desert Creek/Fales	Determine the feasibility for improving perennial grass and forb cover in proximity to Desert Creek Lek #2 in the Desert Creek-Fales PMU. Design and implement site specific habitat improvement projects based on the results
HIR2-6-DCF	Desert Creek/Fales	Evaluate nesting habitat and brood meadow condition on Burcham/Wheeler Flats in the Desert Creek-Fales PMU. Design and implement site specific habitat improvement projects based on the results
HIR2-7-DCF	Desert Creek/Fales	Improve meadow habitat on private lands in Huntoon Valley, Swauger Creek, and north Bridgeport Valley
RAM3-6	Desert Creek/Fales	Continue and supplement ongoing telemetry effort in Fales PMU
MER2-6	Mount Grant	Secure conservation easement or agreement for Aurora Meadows complex
HIR2-3-MG	Mount Grant	Evaluate meadow habitat conditions in the Aurora and Gregory Flat vicinities
MER3-7	Mount Grant	Minimize impacts from traffic near the Aurora Borealis mine
MER4-2	Mount Grant	Evaluate pinyon-juniper encroachment and potential connectivity issues in the Masonic Gulch, Red Wash, and Chinese Camp vicinities of the Mount Grant PMU. Design and implement site-specific tree removal projects based on the results
HIR1-7-B	Bodie Hills	Complete the Lime Kiln windmill removal and solar pump replacement project in the southern portion of the Bodie PMU
MER2-5	Bodie Hills	Secure conservation easement or agreement with Mormon Ranch
MER2-12	White Mountain	Secure conservation easements or agreements along the eastside of the White Mountains
IRM2-2	Multiple PMUs	Coordinate with local and county governments in Nevada to incorporate sage-grouse conservation guidance

Table 7: Action Plan associated projects not yet completed

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APPENDIX A: ACTION PLAN IMPLEMENTATION

Strategy	Identified Actions	Completed Projects
Coordinated Interagency Approach: Implement a coordinated interagency approach towards conservation and management of greater sage-grouse populations and habitats within the Bi-State Plan area.	CIA1-1: Implement a "Sage-Grouse Service Team" approach to support sage-grouse conservation and management in the Bi-State area. Provide cross-jurisdictional staff support to facilitate the coordinated interagency effort to conserve the Bi-State DPS and its habitat.	
		Executive Oversight Committee meetings
		Development of the Bi-State coordinator position
		Updated Bi-State MOU
		2014 Partner funding commitment letters
		2019 update of funding commitment letters
		Interagency funding agreements to support on-the-ground projects, USGS science and research, lek monitoring, vegetation monitoring, Bi-State coordinator position, translocation efforts, and the Traditional Ecological Knowledge Summit
Science Based Adaptive Management: Implement scientifically and economically sound management strategies to conserve greater sage-grouse populations and habitats within the Bi-State Plan area.	CIA1-3: Annually engage the Bi-State Local Area Working Group (LAWG) via the Technical Advisory Committee (TAC) to develop a proposed program of work for the upcoming calendar year based on available staff and funding. The proposed annual program of work should be completed by January 31 each calendar year.	
		Technical Advisory Committee meetings
		Annual accomplishment reporting
SAM1-1: Establish interagency agreements and funding mechanisms needed to provide funding and logistical support to secure the services of a USGS Science Advisor.	SAM2-1: Acquire high resolution (5 meter or less), multi-spectral (7 band minimum), imagery for the entire Bi-State area and begin the image classification and field verification process required to model sage-grouse habitat selection and suitability based on resource availability and use.	
		Annual funding provided to USGS
		Bi-State Sage-Grouse resource selection function and map developed
		Critical habitat map created
		Pinyon-juniper layer acquired to model habitat
		Life-stage habitat selection maps generated
SAM2-2: Continually incorporate new sage-grouse telemetry, habitat, and vital rate data into the CPT to improve predictive modeling and adaptive management capabilities.		
		Telemetry data has been incorporated into the CPT

	SAM2-3: Incorporate the CPT into habitat improvement project design and population augmentation and reintroduction evaluation processes to provide managers with an interactive, spatially-explicit tool to choose the most appropriate areas for management action, as well as to evaluate and quantify project effectiveness following implementation.	
		CPT was created and published in Ecological Applications
		CPT used to rank conifer treatment projects in 2015 and 2017
		Meetings held regarding updated and automated CPT
	SAM2-4: Incorporate hypothesized risk factors into the CPT to model and quantify the relative importance of each risk factor by life-history stage for each PMU.	
		In progress
	SAM2-5: Incorporate sage-grouse vital rates into the CPT to identify which environmental factors are likely exerting the greatest influence on sage-grouse persistence to determine the probability of population performance for each PMU.	
		Integrated Population Models completed and updated
		Incorporating the IPM into CPT in progress
	SAM2-6: Incorporate the vital rate adjusted CPT into habitat improvement project design and population augmentation and reintroduction evaluation processes to further improve managers abilities to choose the most appropriate areas for management action, as well as to evaluate and quantify project effectiveness following implementation.	
		Life-stage habitat selection maps generated
		Incorporating the IPM into CPT in progress
Improved Regulatory Mechanisms: Improve regulatory effectiveness and consistency for discretionary agency actions that may affect the Bi-State DPS and its habitats.		
	IRM1-1: Develop and issue interim BLM/USFS guidance designed to increase the regulatory effectiveness and consistency for Federal land management actions that may affect the Bi-State DPS and its habitat until land use plans are updated to include additional guidance specific to sage-grouse conservation in the Bi-State area. Land use plan updates are identified by relative priority in this section.	
		2012 Inyo NF supervisors letter
		2012 BLM NV Instructional Memorandum
	IRM1-2: Coordinate and informally confer with state wildlife agencies and the FWS when evaluating Federal land management actions that may affect the Bi-State DPS and its habitat or when developing and implementing policies or land use plan objectives designed to avoid or minimize impacts to the Bi-State DPS and its habitat.	
		Inter-Agency Coordination for Land Management Actions
		USFWS Coordination and Conferencing
	IRM1-3: Implement BLM Manual 6840 to increase conservation efforts for the Bi-State DPS and its habitat.	
		All projects for BLM follow guidance in Manual Policies

	IRM1-4: Implement National Forest Manual 2670 to increase conservation efforts for the Bi-State DPS and its habitat.	
		BSSG designation as USFS Sensitive Species for Region 4
		Implementation of National Forest Plan Policies
		Implement BSSG in policy and in LMP as "At Risk Species"
		Inyo Land Use Plan Implementation
	IRM1-5: Revise the Carson City District Consolidated RMP (Sierra Front and Stillwater Field Offices) to incorporate additional land use plan guidance specific to greater sage-grouse conservation.	
		Land Use Planning Amendment for the Bi-State DPS in the Carson City District RMP
	IRM1-6: Revise or amend the Toiyabe National Forest LRMP (Bridgeport and Carson Ranger Districts) according to the Region 4 schedule.	
		The "Greater Sage-grouse Bi-state Distinct Population Segment Forest Plan Amendment Record of Decision" was signed in May 2016, revising the Forest Plan with new conservation measures for the Bi-state sage-grouse.
	IRM1-7: Revise the Tonopah RMP (Tonopah Field Office) to incorporate additional land use plan guidance specific to greater sage-grouse conservation	
		Land Use Planning Amendment for the Bi-State DPS in the Tonopah RMP
	IRM1-8: Revise the Inyo National Forest LRMP (Mono Lake, Mammoth, White Mountain and Mount Whitney Ranger Districts) according to the Region 5 schedule.	
		Inyo NF Land Use Plan revised and updated
	IRM1-9: Implement actions in support of the Bishop RMP.	
		Implementation of Bishop BLM Supplemental Rules to Land Use Plan
	IRM1-10: Revise or amend the Bishop RMP according to the California BLM schedule.	
		Current plan deemed adequate
	IRM1-11: Annually conduct plan maintenance on applicable RMPs (Carson City, Tonopah, and Bishop) to incorporate the most recent information specific to sage-grouse populations and habitats on public lands administered by the BLM to insure the Bi-State DPS and its habitats are adequately protected	
		Annual and ongoing incorporation of relevant science into Annual Plans
	IRM2-1: Coordinate with Mono County to develop and incorporate sage-grouse conservation guidance into applicable plans and programs.	
		Mono County General Plan update
		Mono County review projects for consistency with grouse policies
	IRM2-2: Coordinate with county and local governments in Nevada to develop and incorporate sage-grouse conservation guidance into applicable plans and programs.	
		Efforts have been made to reach out to county and local government but successful engagement is still lacking

Minimize and Eliminate Wildfire Risk: Implement a coordinated interstate/interagency approach towards management of wildfire incidents and suppression activities designed to minimize the risk of catastrophic wildfire and the associated loss of sage-grouse habitat in the Bi-State area.		
	MER1-1: Develop and implement an interagency fire management and suppression agreement specific to the management of wildland fire incidents within and immediately adjacent to known occupied and potential sage-grouse habitats in the Bi-State area prior to the 2012 fire season.	
		Inter-agency fire agreement was signed for the Inyo National Forest and the Bishop BLM
		Inter-agency fire agreement was signed between Carson BLM and H-T National Forest
	MER1-2: Update existing Fire Management Plans (FMPs) to incorporate fire and fuels management conservation measures identified by the National Sage-Grouse Technical Team prior to the 2012 fire season.	
		Fire management plans were updated to incorporate suppression direction to minimize loss of suitable sage-grouse habitat.
	MER1-3: Annually update dispatch systems and protocols to include line officer and resource advisor notifications and requirements for all wildland fire incidents within and immediately adjacent to known occupied and potential sage-grouse habitats in the Bi-State area.	
		Annual Bishop BLM dispatch updates for fire protocols in sage-grouse habitat
		Annual Carson BLM dispatch updates for fire protocols in sage-grouse habitat
		Annual Inyo NF dispatch updates for fire protocols in sage-grouse habitat
	MER1-4: Annually update resource advisor kits to include to the most recent information specific to sage-grouse populations and habitats within the Bi-State area to insure the DPS and its habitat are adequately protected.	
		Resource Advisor Kit Updates- BLM Bishop/ Inyo NF
		Resource Advisor Kit Updates- Humboldt-Toiyabe NF
		Resource Advisor Kit Updates- BLM Carson
	MER1-5: Develop and provide sagebrush and sage-grouse habitat sensitivity training during required annual fireline refreshers for federal fire personnel in the Bi-State area. Focus training on sagebrush habitat identification, basic sagebrush habitat ecology, and initial attack strategies and tactics designed to minimize long-term impacts to sagebrush ecosystems.	
		Bishop BLM annual fire refresher for sage-grouse SOPs
		Inyo NF annual fire refresher for sage-grouse SOPs
	MER1-6: Establish an interagency cadre of sagebrush/sage-grouse habitat resource advisors (READs) to support fire suppression, burned area emergency rehabilitation (BAER), and fuels management projects in the Bi-State area. Include NDOW, CDFG, FWS, NRCS, and NDF representation on this team.	
		Resource Advisor Development and Cadre

	MER1-7: Prioritize fire suppression actions, fire rehabilitation efforts, and fuels treatments to minimize sagebrush habitat loss or type conversions in and immediately adjacent to known occupied and potential sage-grouse habitats in the Bi-State area.	
		Alpine County forest restoration project
		Burbank fire rehabilitation seeding
		Ray May fire rehabilitation seeding
		TRE fire rehabilitation seeding
		Como fire rehabilitation seeding
		Preacher fire rehabilitation seeding
		Doe Ridge fire rehabilitation, restoration, and planting
		Indian fire rehabilitation, seeding, planting, and erosion control
		Mono fire restoration seeding
		Spring Peak fire rehabilitation and conifer removal
		Spring Peak fire rehabilitation, seeding, sagebrush planting, and conifer removal
		Walker fire Sage-Grouse SOPs implemented
		Bodie fire invasive plant removal
		Indian fire seeding
		Green Creek fire rehabilitation
		Pine Nut Land Health Project (sunrise unit)
		Fuel breaks on private land
		Bodie State Park fuels reduction
		Green Creek fire restoration
		Owens River fire restoration
		Slinkard post fire restoration, planting, seeding, invasive species removal, and mowing
		Buckskin Valley post-fire rehabilitation
		Pipeline conifer thinning
		Sunrise Pass firewood stewardship contract
		Illinois Unit, Thinning/Pile Burning
		Seeding of dozer lines on Hot Creek fire
		Hot Creek fire restoration, grazing enclosure, seeding, and planting
		West Antelope fuel break maintenance
		East Antelope fuel break maintenance
		Mono City and Conway Ranch Estates fuel break maintenance
		Tufa fire suppression
		Lyon Fire sagebrush seedling planting
		Mountain View Fire ESR plan and treatment
		Slink Fire soil stabilization, seeding, and planting
		Topaz Marine Corps housing fuel break
	MER1-8: Increase wildfire prevention activities and programs in and adjacent to known occupied and potential sage-grouse habitats in the Bi-State area.	
		LADWP policy restricting campfires and stoves
		Fire prevention patrols
		Bodie State Park Fire Plan
		Targeted wildfire prevention

		Fire related public education events
	MER1-9: Develop and implement a native species seed bank program for the Bi-State DPS. Establish a seed storage facility and conduct seed collections to insure the availability of locally adapted seed for fire rehabilitation efforts in important sage-grouse habitats. Coordinate with the Nevada Division of Forestry (NDF) and other interested agencies to collect and store locally adapted seed for use in fire rehabilitation efforts.	
		Seeds of Success program
		Post fire native seeding contracts
		Seed storage facility for native plants
		Bishop native plant nursery
		Native seed collection
Minimizing and Eliminating Urbanization Risk: Secure conservation easements or agreements with willing landowners to maintain private lands and associated sage-grouse habitats values and minimize the risk of future development impacts to important sage-grouse habitats in the Bi-State area.		
	MER2-1: Provide technical assistance to willing landowners to develop Conservation Agreements or Candidate Conservation Agreements with Assurances.	
		Private Lands Conservation Plan
		CDFW and Mono County workshop to share information and develop project conditions/mitigations for sage grouse
		Designation of Walker River State Recreation Area
		Funding acquisition for Black Lake Preserve easement
		Annual conservation easement planning
		Mono County conservation easement assistance
	MER2-2: Secure a conservation easement or agreement with the Desert Creek Ranch to maintain essential brood rearing habitat in proximity to Desert Creek Lek #2 in the Desert Creek-Fales PMU.	
		Incomplete
	MER2-3: Secure a conservation easement or agreement with the Sceirine Ranch to maintain current land use practices and associated sage-grouse brood rearing/late summer habitat values in the Bodie, Mount Grant and Desert Creek-Fales PMUs.	
		Easements secured in the Bodie Hills and Desert Creek-Fales PMUs
	MER2-4: Secure a conservation easement or agreement with the Sweetwater Ranch to maintain essential brood rearing habitat in proximity to the Wiley Ditch/Sweetwater Summit lek complex in the Desert Creek-Fales PMU.	
		Easements secured near Sweetwater Summit
	MER2-5: Secure a conservation easement or agreement for the Mormon Ranch to maintain essential brood rearing habitat in proximity to the Bridgeport Canyon/Little Mormon lek complex in the Bodie PMU.	
		Incomplete
	MER2-6: Secure a conservation easement or agreement for the Aurora Meadows complex to maintain brood rearing habitat in proximity to the Aurora lek in the Mount Grant PMU.	
		Incomplete

	MER2-7: Secure a conservation easement or agreement for Sinnamon Meadows to maintain brood rearing/late summer habitat values in the western portion of the Bodie PMU.	
		Easement secured
	MER2-8: Secure conservation easements or agreements with willing landowners in the Burcham Flat, Wheeler Flat and Fales Hot Springs vicinities to prevent further development impacts in proximity to leks in the Fales breeding complex in the Desert Creek-Fales PMU.	
		Incomplete
	MER2-9: Secure conservation easements or agreements with willing landowners for important brood meadow habitat in the Green Creek area.	
		Green Creek land donation
		CDFW aquired lands
		Conservation easement secured
	MER2-10: Secure conservation easements or agreements with willing landowners to maintain key brood rearing/late summer habitats in Bodie Hills portion of the Bodie PMU.	
		Easements secured
	MER2-11: Secure conservation easements or agreements with willing landowners in Huntoon Valley, Swauger Creek and northern Bridgeport Valley to maintain brood rearing/late summer habitat values in the southwest portion of the Desert Creek-Fales PMU.	
		Easement secured in Huntoon Valley
	MER2-12: Secure conservation easements or agreements with willing landowners to maintain key nesting or wintering habitats along the eastside of the White Mountains in the White Mountains PMU.	
		Incomplete
Minimize and Eliminate Infrastructure and Human Disturbance Risk: Implement site-specific conservation measures designed to minimize or eliminate risks associated with existing infrastructure and human disturbance in the Bi-State area.		
	MER3-1: Install flight diverters on the existing non-let down fence adjacent to Long Valley Lek 2 to deter documented fence strikes.	
		Fence near lek 2 converted to lek down
		Flight diverters installed in surrounding area
	MER3-2: Identify and provide an alternate location for the Mono County landfill and work towards removing the existing landfill out of the Long Valley portion of the South Mono PMU.	
		Mono County continued planning and funding acquisition for the closure of the Benton Crossing landfill. The project is projected to be completed by 2023
	MER3-3: Design and implement public lek viewing guidelines and other management strategies to reduce human disturbance in the vicinity of Desert Creek Lek #2 in the Desert Creek-Fales PMU.	
		Developed lek viewing guidelines consistent with widely accepted policies to ensure minimization of potential human impacts. Produced brochure for public education and outreach

	MER3-4: Evaluate existing fences in the Bodie PMU for fence strike hazards. Remove extraneous fences or mark existing fences with flight diverters to deter fence strikes in areas where fence strike hazards are documented. Focus initial efforts in the vicinity of Bodie State Historic Park, 7-Troughs, and Lower Summers Meadow.	
		Race Track fence removal and fence marking
		Lower Summers meadow fence marking
		Bodie Creek Electric Fence Removal
		Sinnamon Meadows fence removal and fence marking
		Bodie Bowl fence removal
		Conway Ranch fence removal and fence marking
		Private lands fence marking in Bodie
		Bodie State Park Volunteer Day - fence and corral Removal
		Bodie Hills fence marking near Beideman lek
		Big Flat fence marking
		Bodie Hill fence maintenance
		Potato Peak enclosure fence converted to let down
		Converted Fence to Let Down in the Bodie Hills
		BLM annual maintenance of all let down fencing in Bodie Hills PMU
	MER3-5: Work with private landowners in the Long Valley portion of the South Mono PMU to evaluate existing fences for fence strike hazards. Provide assistance to modify or mark existing fences with flight diverters to deter fence strikes in areas where fence strike hazards are documented.	
		Cashbaugh fence marking
	MER3-6: Remove or relocate the existing fence near Wiley Ditch Lek #3 in the Desert Creek-Fales PMU if flight diverters are ineffective at preventing fence strikes.	
		Flight diverters installed in surrounding area
	MER3-7: Develop and implement stipulations to minimize disturbance impacts associated with increased traffic from the Aurora-Borealis mine in the Mount Grant PMU.	
		Incomplete
	MER3-8: Increase warden presence during the sage-grouse breeding season in the lower elevations of the Mount Grant PMU to deter poaching.	
		Walker River State Recreation law enforcement and park patrols
	MER3-9: Avoid the construction of new roads and other infrastructure within known occupied and potential sage-grouse habitat in the Mount Siegel and Bald Mountain vicinities in the Pine Nut PMU unless these features are designed to improve habitat conditions.	
		BLM Resource Management Plans contain actions and best management practices to address new road construction. Future planned Travel Management will take into consideration limiting any new roads/OHV trails in this area as well
	MER3-10: Design and implement public lek viewing guidelines to address potential human disturbance impacts if demand increases in the Long Valley portion of the South Mono PMU.	

		Developed lek viewing guidelines consistent with widely accepted policies to ensure minimization of potential human impacts. Produced brochure for public education and outreach
	MER3-11: Install "grouse crossing" signs at strategic locations along the Owens River Road in the Long Valley portion of the South Mono PMU where birds are known to roost and road kills have been documented.	
		CDFW, BLM and Mono County met to discuss "grouse crossing sign". Action deemed not necessary in Long Valley. Signs were installed in Parker Meadow area
	MER3-12: Provide educational opportunities to landowners about the importance of sage-grouse habitat and the need to reduce predation caused by pets in areas where sage-grouse occur.	
		NRCS, federal land management agencies, and ESLT all interact with private landowners to stress the importance of sage-grouse habitat
Minimize and Eliminate Conifer Encroachment Risk: Map and quantify the spatial juxtaposition and level of pinyon-juniper encroachment that has occurred in relation to known occupied and potential sage-grouse habitat in the Bi-State area. Develop and implement site specific treatments designed to maintain, improve, or restore key seasonal ranges and habitat connectivity within and among breeding populations based on restoration potential.		
	MER4-1: Evaluate pinyon-juniper encroachment and potential connectivity issues between upper elevation sagebrush habitats in the Bodie PMU and adjacent low elevation habitats including the Bridgeport Valley and East Walker River in the Bodie and Desert Creek-Fales PMUs and the East Walker River, Ninemile Flat, Aurora, and Alkali Valley portions of the Mount Grant PMU. Design and implement site-specific tree removal projects based on the results.	
		East Walker Landscape Habitat Improvement Project NEPA
		East Walker Landscape Habitat Improvement Project Units A & C
		East Walker Landscape Habitat Improvement Project Units F & B
		East Walker Landscape Habitat Improvement Project Unit D
		East Walker Landscape Habitat Improvement Project Unit B East
		East Walker Landscape Habitat Improvement Project Unit B
		East Walker Landscape Habitat Improvement Project Unit C
		East Walker Landscape Habitat Improvement Unit E
		East Walker Landscape Habitat Improvement Unit K
		East Walker Landscape Habitat Improvement Unit L
		East Walker Landscape Habitat Improvement Unit N
		Mormon Meadows Conifer Removal and pile scattering
		Bridgeport Canyon Conifer Removal
		Bridgeport Canyon Sagebrush Restoration through Conifer Removal
		Big Flat Conifer Removal

		Bodie Hills Upland Vegetation Restoration Conifer Removal DNA 2015
		Bodie Hills Upland Vegetation Restoration Conifer Removal DNA 2016
	MER4-2: Evaluate pinyon-juniper encroachment and potential connectivity issues in the Masonic Gulch, Red Wash, and Chinese Camp vicinities of the Mount Grant PMU. Design and implement site-specific tree removal projects based on the results.	
		Incomplete
	MER4-3: Evaluate pinyon-juniper encroachment and potential connectivity issues in the Huntoon Valley, Swauger Creek and Mount Jackson vicinities of the Desert Creek-Fales PMU. Design and implement site-specific tree removal projects based on the results.	
		The TAC evaluated these areas in 2015 (CPT reranking reports) and determined they were a lower priority than other work in the northern half of the Bi-State. After high priority work is completed the TAC will reevaluate using the CPT and local knowledge
	MER4-4: Evaluate pinyon-juniper encroachment and potential connectivity issues in the Aurora and Gregory Flats vicinities of the Mount Grant PMU. Design and implement site-specific tree removal projects based on the results.	
		The TAC evaluated these areas in 2015 (CPT reranking reports) and determined they were a lower priority than other work in the northern half of the Bi-State. After high priority work is completed the TAC will reevaluate using the CPT and local knowledge
	MER4-5: Evaluate pinyon-juniper encroachment and potential connectivity issues in the lower Rough Creek and Del Monte Canyon vicinities of the Mount Grant PMU. Design and implement site-specific tree removal projects based on the results.	
		Rough Creek Sage-Grouse Habitat Improvement Project NEPA
		Rough Creek Unit 5
		Rough Creek Unit 1
		Rough Creek Unit 2
		Rough Creek Unit 3
		Rough Creek Unit 6
		Rough Creek Unit 7
		Rough Creek Unit 8
	MER4-6: Evaluate pinyon-juniper encroachment and potential connectivity issues in the Spring Peak, Mount Hicks, and Powell Mountain vicinities of the Mount Grant PMU. Design and implement site-specific tree removal projects based on the results.	
		Field evaluation determined that there were only about 10 trees to cut in a drainage. Other trees were in true conifer areas.
	MER4-7: Evaluate pinyon-juniper encroachment and potential connectivity issues in the Baldwin Canyon and Lapon Canyon vicinities of the Mount Grant PMU. Design and implement site-specific tree removal projects based on the results.	
		Hawthorne Army Depot meeting
		Baldwin Canyon PJ NEPA
		Baldwin Canyon Habitat Improvement

	MER4-8: Evaluate pinyon-juniper encroachment and potential connectivity issues between upper elevation sagebrush habitats in the Bodie PMU and adjacent low elevation habitats in the Mono Basin portion of the Bodie PMU. Design and implement site-specific tree removal projects based on the results.	
		Bodie Hills Upland Vegetation Restoration Conifer Removal 2015
		Bodie Hills Upland Vegetation Restoration Conifer Removal 2016
		Sinamon Cut Sagebrush Restoration through Conifer Removal
		Bodie Hills Pinyon-Juniper Removal NEPA 2021
		Bridgeport Canyon Conifer Pile Burning
	Action MER4-9: Evaluate pinyon-juniper encroachment and potential connectivity issues along the northern flank of the Sweetwater Mountains between Burcham Flat and Jackass Flat in the Desert Creek-Fales PMU. Design and implement site-specific tree removal projects based on the results.	
		Sweetwater P-J Re-treatment
		Jackass Flat Pinyon-Juniper Removal NEPA
	MER4-10: Evaluate pinyon-juniper encroachment and potential connectivity issues along the eastside of the White Mountains and Palmetto Mountains in the White Mountains PMU. Design and implement site-specific tree removal projects based on the results.	
		TAC evaluated these areas in 2015 and determined they were lower priority than other work in the southern half of the Bi-State. Additional data from telemetry studies will help define these areas
		TAC evaluated these areas in 2017 and determined they were lower priority than other work in the southern half of the Bi-State. Additional data from telemetry studies will help define these areas
	MER4-11: Evaluate pinyon-juniper encroachment and potential connectivity issues along the eastside in the Truman Meadows portion of the White Mountains PMU. Design and implement site-specific tree removal projects based on the results.	
		TAC evaluated these areas in 2015 and determined they were lower priority than other work in the PMU
		TAC evaluated these areas in 2017 and determined they were lower priority than other work in the PMU
	MER4-12: Evaluate pinyon-juniper encroachment and potential connectivity issues between Long Valley and Adobe Valley in the South Mono PMU. Design and implement site-specific tree removal projects based on the results.	
		Arcularius Jeffrey Pine Removal
		Long Valley Habitat Enhancement NEPA
		INF Parker Jeffrey Pine Removal NEPA
		Long Valley - Jeffrey Pine Removal
		South Mono Conifer Treatment Site Visits
		Pre-NEPA Planning: Hilton and Clover Patch Conifer Treatment
	MER4-13: Evaluate pinyon-juniper encroachment and potential connectivity issues in the Waterson draw area and at the base of south slope of Glass Mountains in the South Mono PMU. Design and implement site-specific tree removal projects based on the results.	

		Long Valley Unit 4 Habitat Enhancement
Minimize and Eliminate Disease and Predation Risk: Monitor, and quantify where possible, the extent of disease and predation risks to greater sage-grouse populations in the Bi-State area. Take appropriate management action where causal effects can be identified and effectively mitigated.		
	MER5-1: Evaluate raptor and raven use of the DC Intertie transmission line in the Mount Grant PMU. Install perch deterrents if the data indicate facilitated predation is adversely affecting sage-grouse population performance.	
		Raptor raven surveys were completed in Mount Grant in association with telemetry efforts in 2016, 2017, 2018, and 2021
	MER5-2: Evaluate raptor and raven use of the double wood transmission line that crosses brood meadows along the upper Owens River east of Lek 9x at Inaja Ranch. Install perch deterrents if the data indicate facilitated predation is adversely affecting sage-grouse population performance.	
		A field trip occurred to evaluate this transmission line. No mitigation was implemented
		Raptor raven surveys were completed in Long Valley in association with telemetry efforts between 2014 and 2021
		USGS implemented raven egg oiling effort to reduce predation
	MER5-3: Evaluate raptor and raven use of the west-side transmission lines in the Bodie PMU. Install perch deterrents if the data indicate facilitated predation is adversely affecting sage-grouse population performance.	
		Raptor raven surveys were completed annually in the Bodie Hills in association with telemetry efforts
	MER5-4: Develop and implement a West Nile virus surveillance and detection program. Implement mosquito abatement measures and/or Best Management Practices (BMPs) designed to minimize or prevent the potential for a West Nile virus outbreak if the data indicate that West Nile virus is prevalent in the Bi-State area.	
		Investigation of Inyo guzzlers resulted in their design that prohibit larval development due to the enclosed systems, lack of light, routine maintenance at off-site drinker. County Abatement Program confirmed that such guzzlers do not pose a risk to west Nile virus
Minimize and Eliminate Wild Horse Grazing Risks: Maintain wild horse populations at the appropriate management levels (AMLs) and within designated herd management areas (HMAs) or wild horse territories (WHTs) to minimize the risk of excessive use levels and range expansion		
	MER6-1: Implement captures or contraceptive methods to maintain the Powell Mountain Wild Horse Herd at or below AML and within the designated WHT.	
		Annual monitoring of the Powell Mountain herd for horses outside boundary
	MER6-2: Implement captures or contraceptive methods to maintain the Pine Nut Wild Horse Herd at or below AML and within the designated HMA.	
		Pine Nut Mountains Herd Management Area Plan EA
		Pine Nut wild horse gather
		Pine Nut wild horse sterilization efforts

	MER6-3: Evaluate the status of the White Mountain and Silver Peak Wild Horse and Burro herds. Establish AML and implement captures or contraceptive methods if needed to maintain the herds at or below AML and within the designated WHT.	
		Wild Horse monitoring in White Mountain and Silver Peak herds in White Mountains PMU
	MER6-4: Implement captures or contraceptive methods to maintain the Wassuk Wild Horse Herd at or below AML and within the designated HMA.	
		Wassuks Mountain wild horse gather
	MER6-5: Evaluate the status of the Montgomery Pass Wild Horse Herd. Establish AML and implement captures or contraceptive methods if needed to maintain the herd at or below AML and within the designated WHT.	
		2014 Montgomery Pass wild horse herd survey
		2015 Montgomery Pass wild horse population estimate completed
		Annual wild horse monitoring in Sagehen
		2020 aerial survey of the Montgomery Herd Wild Horse Territory
		2020 Montgomery Pass wild horse ground survey
Minimize and Eliminate Small Population Size Risks: Identify potential sage-grouse population augmentation and re-introduction sites and develop translocation guidelines to support potential augmentation and reintroduction efforts in the Bi-State area.		
	MER7-1: Develop a contingency plan for emergency augmentation of small breeding populations at Parker Meadows and Gaspie Spring in the South Mono PMU if the need arises.	
		Parker Meadow translocation efforts 2017, 2018, 2019, and 2021
	MER7-2: Develop a contingency plan for emergency augmentation of small breeding populations in the Pine Nut Range in the Pine Nut PMU if the need arises.	
		TAC met to discuss translocations 2015. It was determined that only the Parker population was in need of a translocation until the IPM or other data suggested that there was an clear reason to begin translocation elsewhere. Leks in the pine nuts are monitored yearly to track the status of the population
	MER7-3: Evaluate the need for augmentation of the Fales population in the Desert Creek- Fales PMU.	
		Discussions within the TAC have occurred , but translocations have not been implemented at this time?
	MER7-4: Evaluate the Powel Mountain area in the Mount Grant PMU as a potential sage-grouse habitat restoration and reintroduction area.	
		BSSG TAC met to discuss translocations 2015. It was determined that only the Parker population was in need of a translocation until the IPM or other data suggested that there was an clear reason to begin translocation elsewhere
	MER7-5: Evaluate the McBride Flat/Sagehen Spring area in the Truman Meadows portion of the White Mountains PMU as a potential sage-grouse habitat restoration and reintroduction area.	

		BSSG TAC met to discuss translocations 2015. It was determined that only the Parker population was in need of a translocation until the IPM or other data suggested that there was an clear reason to begin translocation elsewhere. Telemetry work in the White Mountain PMU will help determine if this is necessary
	MER7-6: Evaluate Coyote Flat as a potential sage-grouse habitat restoration and reintroduction area.	
		BSSG TAC met to discuss translocations 2015. It was determined that only the Parker population was in need of a translocation until the IPM or other data suggested that there was an clear reason to begin translocation elsewhere. Telemetry work in the White Mountain PMU will help determine if this is necessary
Habitat Improvement and Restoration: Implement habitat improvement and restoration projects designed to ensure the long-term viability of greater sage-grouse populations within the Bi-State Plan area. Continue to implement on-going habitat improvement and restoration projects on public and private lands in the Bi-State area. Design and implement additional site-specific sage-grouse habitat improvement and restoration projects on public and private lands in the Bi-State area in cooperation with the Bi-State Local Area Work Group.		
	HIR1-1-PN: Continue to implement pinyon and juniper removal projects in appropriate areas adjacent to occupied sage-grouse habitat in Upper Mill Canyon in the Pine Nut PMU.	
		Mill Canyon conifer treatment Lyon Unit
		Mill Canyon conifer treatment unit 1
		Mill Canyon conifer treatment unit 2
		Mill Canyon conifer treatment Big Lake unit
		Mill Canyon conifer treatment maintenance
		Mt Siegel conifer treatment
	HIR1-2-PN: Continue to implement pinyon and juniper removal in the Buckskin Valley Vegetation Treatment project area in the Pine Nut PMU.	
		EQIP contract to treat a portion of the BLM land in Buckskin Valley project area (3 sites: 411, 147, 747)
		2012 Buckskin Valley Vegetation Management Project
		2013 Buckskin Valley Vegetation Management Project
		Private Lands EQIP/WHIP program: PJ Removal in Buckskin Valley area
		2013 EQIP contract to treat a portion of the BLM land in Buckskin Valley project area
		2014 EQIP contract to treat a portion of the BLM land in Buckskin Valley project area
		2015 EQIP contract to treat Crest Unit of Pine Nut Land Health Project
		Buckskin Valley conifer treatment
		2013 private lands conifer treatment
		Crest 2 conifer treatment
		Lyons Fire conifer removal
		Crest 3 conifer treatment
		Buckskin Valley conifer treatment maintenance
		Pine Nut Mountain Powerline Project

		2020 Buckskin Valley conifer treatment
		2021 Buckskin conifer treatment
	HIR1-3-PN: Maintain the existing fence around the Big Meadow complex in the Pine Nut PMU and mark with flight diverters to deter fence strikes.	
		Big Meadow fence marking
		Big Meadow fence maintenance
	HIR1-4-PN: Continue to manage livestock to maintain proper functioning condition of the Big Meadow complex in the Pine Nut PMU.	
		Churchill Canyon grazing permit written with flexibility to change grazing if problems arise
	HIR1-5-PN: Manage high elevation wet meadows in the southern portion of the Pine Nut PMU for proper functioning condition and forb abundance and diversity. Maintain existing fences and mark with flight diverters to deter fence strikes.	
		Incomplete
	HIR2-1-PN: Restore previously burned sagebrush habitat within a three-mile radius of the Mill Canyon lek in the Pine Nut PMU.	
		Incomplete
	HIR2-2-PN: Maintain meadows in the Mount Siegel/Bald Mountain area in proper functioning condition or improve through livestock management or fencing in the Pine Nut PMU.	
		Incomplete
	HIR2-3-PN: Evaluate options to improve sagebrush habitat quality west of the Big Meadow complex in the Pine Nut PMU. Design and implement site specific habitat improvement projects based on the results.	
		Incomplete
	HIR2-4-PN: Control noxious weeds within and surrounding the Big Meadow complex in the Pine Nut PMU.	
		Ongoing weed treatments completed by Carson City BLM
	HIR1-1-DCF: Continue pinyon and juniper removal across Sweetwater Flat and in adjacent pinyon and juniper encroached sagebrush habitats in the Desert Creek-Fales PMU.	
		2013 Sweetwater Summit conifer treatment maintenance
		2016 Sweetwater Summit conifer treatment
		2017 Sweetwater Summit conifer treatment maintenance
	HIR1-2-DCF: Implement the Long Doctor pinyon-juniper removal project in the Desert Creek-Fales PMU.	
		Long Doctor pinyon removal-Sweetwater Summit area 2012
		Long Doctor pinyon removal - Sweetwater Summit Area 2013
		Long Doctor pinyon removal - Sweetwater Summit Area 2014
		Long Doctor pinyon removal maintenance 2015
	HIR1-3-DCF: Continue to work with the permittees on Wheeler Flat to develop and implement grazing management strategies that reduce the impacts of early season grazing on key brood meadows in the Desert Creek-Fales PMU.	

		Wheeler Flat fence marking
		Wheeler Flat trough installation
	HIR1-4-DCF: Continue to develop and implement an interagency restoration plan for Wheeler Creek to restore hydrologic function and increase forb cover and diversity on adjacent brood meadows in the Desert Creek-Fales PMU.	
		Wheeler Creek restoration NEPA
		Wheeler Creek meadow restoration
	HIR2-1-DCF: Design and implement site specific projects to improve meadow habitat conditions on Wheeler Flat in the Desert Creek-Fales PMU.	
		Wheeler Flat enclosure fence construction, marking, and maintenance
	HIR2-2-DCF: Investigate opportunities to implement habitat improvement projects on the Sweetwater Ranch in the Desert Creek-Fales PMU. Design and implement site specific habitat improvement projects where feasible.	Private Lands-EQIP/WHIP conifer treatment
		Sweetwater Flat fence marking
	HIR2-3-DCF: Evaluate options to reduce cheatgrass densities southeast of Desert Creek Lek #2 in the Desert Creek-Fales PMU. Design and implement site specific habitat improvement projects based on the results.	
		2013 Smith Valley Conservation District weed treatments
	HIR2-4-DCF: Determine the feasibility for improving perennial grass and forb cover in proximity to Desert Creek Lek #2 in the Desert Creek-Fales PMU. Design and implement site specific habitat improvement projects based on the results.	
		Incomplete
	HIR2-5-DCF: Determine the feasibility for improving perennial grass and forb cover across Sweetwater Flat to improve pre-laying and nesting habitat conditions in the Desert Creek-Fales PMU. Design and implement site specific habitat improvement projects based on the results.	
		Private Lands-EQIP/WHIP program irrigation project
		Private Lands-EQIP/WHIP program rabbit brush removal project
	HIR2-6-DCF: Evaluate nesting habitat and brood meadow condition on Burcham/Wheeler Flats in the Desert Creek-Fales PMU. Design and implement site specific habitat improvement projects based on the results.	
		Incomplete
	HIR2-7-DCF: Investigate opportunities for meadow habitat improvement on private lands in the Huntoon Valley, Swauger Creek and north Bridgeport Valley vicinities in the Desert Creek-Fales PMU. Design and implement site specific habitat improvement projects where feasible.	
		Incomplete
	HIR1-1-MG: Continue pinyon and juniper removal in the China Camp area and adjacent public and private lands in the Mount Grant PMU.	
		China Camp pinyon removal 2012
		China Camp pinyon removal 2013
		China Camp pile burning 2016

		Flying M conifer treatment
		China Camp (Long Meadow) conifer treatment
		Private lands conifer treatment
	HIR2-1-MG: Develop and implement a management strategy to restore brood habitat on the Rosaschi Ranch in the Mount Grant PMU.	
		2012 Meadow restoration Rosaschi Ranch
		2014 Rosaschi Ranch brood rearing habitat improvement
		Rosaschi Ranch annual irrigation
		2013 Meadow Restoration Rosaschi Ranch
		Rosaschi Ranch upland field restoration (east field)
		Rosaschi Ranch upland field restoration (west field)
	HIR2-2-MG: Work with Flying M Ranch to maintain and improve brood habitat conditions in the Rough Creek and lower Bodie Creek vicinities of the Mount Grant PMU. Design and implement site specific habitat improvement projects where feasible.	
		Flying M Ranch project demonstration sites (seeding and fuel break)
		FM Ranch sage-grouse habitat enhancement
		Meadow and stream proper functioning condition surveys completed
		UAV surveys in Walker River State Recreation Area
		9 Mile Ranch fence marking
		Installed HOBOS on Bodie and Rough Creeks
		Streamflow monitoring
	HIR2-3-MG: Evaluate meadow habitat conditions in the Aurora and Gregory Flats vicinities of the Mount Grant PMU. Design and implement meadow habitat restoration projects based on the results.	
		Incomplete
	HIR2-4-MG: Work with the Hawthorne Army Depot to maintain and improve brood habitat quality at Lapon Meadows in the Mount Grant PMU. Design and implement site specific habitat improvement projects where feasible.	
		2013 Hawthorne Army Depot meeting
	HIR2-5-MG: Investigate options to control noxious weeds and cheatgrass within and around the Ninemile Ranch Unit in the Mount Grant PMU. Design and implement site specific habitat restoration projects based on the results.	
		2012 Smith Valley Conservation District weed monitoring and treatment
		2013 Smith Valley Conservation District weed monitoring and treatment
		2015 Smith Valley Conservation District weed monitoring and treatment
		2016 Smith Valley Conservation District weed monitoring and treatment
		2017 Smith Valley Conservation District weed monitoring and treatment
		2019 Nine Mile weed monitoring and treatment
		2020 Nine Mile weed monitoring and treatment
	HIR1-1-B: Complete ongoing pinyon and juniper removal projects in the Lower Summers (Lek 10), Green Creek, Stringer Meadows (Lek 9A), and Upper Aurora Canyon vicinities in the Bodie PMU.	

		Lek 9a conifer treatment maintenance
		Lower Summers conifer treatment
		Lower Summers conifer treatment East Unit
		Lower Summers conifer treatment Meadow Unit
		Lower Summers conifer treatment maintenance
		2012 Upper Aurora conifer treatment maintenance
		2013 Upper Aurora conifer treatment maintenance
		2014 Upper Aurora conifer treatment maintenance
		Stringer Meadow Unit conifer treatment
		Green Creek conifer treatment
		Green Creek conifer treatment
		2012 Green Creek conifer treatment maintenance
		2014 Green Creek conifer treatment maintenance
		2018 Green Creek conifer treatment maintenance
		2017 Green Creek pile burn
	HIR1-2-B: Maintain existing meadow habitat protective enclosures in the Bodie Hills portion of the Bodie PMU. Incorporate targeted short-duration grazing to improve brood meadow forb production where appropriate.	
		Murphy Meadow #1 fence conversion and yearly enclosure maintenance
		Upper Bodie Creek riparian pasture
		Aspen B1072 enclosure
		Artesian Spring enclosure
		Murphy Meadows enclosure #2
		Aspen P1094 enclosure
		7 Troughs Riparian Pasture
		Fourway Meadow enclosure
		N. Potato Peak Meadow enclosure
		Aspen P1094A enclosure
		Aspen B1075 enclosure
		Aspen B1076 enclosure
		Upper Geiger meadow enclosure
		Geiger Meadow #1 enclosure maintenance
		Geiger Meadow #2 enclosure maintenance
		Kirkwood Meadow restoration
	HIR1-3-B: Continue meadow habitat improvement efforts on public and private lands in Upper Aurora Canyon in the Bodie PMU.	
		Private Lands-EQIP/WHIP program rabbitbrush control
		Upper Aurora Canyon meadow improvement
		Aurora meadow owing
		Aurora Canyon electric fence
		Aurora Canyon headcut stabilization
		Aurora Canyon enclosure maintenance
	HIR1-4-B: Complete the planned removal of the Bodie to Fletcher transmission line that traverses portions of both the Bodie and Mount Grant PMUs.	
		Bodie sub to Fletcher sub power line removal

	HIR1-5-B: Continue to manage permitted livestock grazing to maintain current nesting habitat quality in the Bodie Hills breeding complex in the Bodie PMU.	
		Bodie Mountain Allotment
		Dog Creek Allotment
		Green Creek Allotment
		Mono Sand Flat Allotment
		Mormon Ranch Allotment
		Potato Peak Allotment
		Rancheria Gulch Allotment
		Aurora Canyon Allotment
		15 Year CRP Lease
	HIR1-6-B: Complete the ongoing NEPA analysis to support implementation of sage-grouse habitat improvement projects in the Bodie PMU consistent with the findings of the Bodie Hills Conservation Action Plan (Provencher et al. 2009).	
		Bodie Hills Upland Vegetation Restoration Programmatic NEPA
	HIR1-7-B: Complete the Lime Kiln windmill removal and solar pump replacement project in the southern portion of the Bodie PMU.	
		Incomplete
	HIR2-1-B: Evaluate stringer meadows, spring complexes, and irrigated meadows in the Bodie PMU as potential brood habitat improvement sites. Design and implement site specific habitat improvement projects based on the results.	
		Warm Springs meadow improvement
		Private Lands - EQIP/WHIP program project-watering facility to redistribute livestock
		Field tour with Sherm Swanson to assess riparian areas
		Drafted EA and NEPA for Bodie Hills meadow restoration
	HIR2-2-B: Evaluate mid-elevation sagebrush habitats in the Bodie Hills breeding complex for potential early brood habitat improvement sites in the Bodie PMU. Design and implement site specific habitat improvement projects based on the results.	
		Noxious weed survey and treatment
	HIR1-1-SM: Continue to implement and enforce seasonal road closures designed to reduce human disturbance on public lands in the vicinity of Lek 1, Lek 5, and Lek 8 in the Long Valley portion of the South Mono PMU.	
		Lek 8 nesting habitat seasonal closure
		Lek 1 nesting habitat seasonal closure
		Lek 5 nesting habitat seasonal closure
		Long Valley seasonal road closure
	HIR1-2-SM: Continue to monitor for illegal vehicle use and camping within the Long Valley portion of the South Mono PMU. Increase law enforcement presence and enforcement activities were required to minimize or eliminate recreation impacts.	
		Shepherd's Tub vegetation restoration
		Habitat protection through boulder placement
		Inyo NF Long Valley recreation monitoring
		Long Valley restoration project

		Bishop BLM Long Valley recreation monitoring
	HIR1-3-SM: Implement the proposed tree encroachment removal project near Sagehen Summit in the South Mono PMU.	
		2014 Sagehen Summit conifer treatment
		Sagehen II Sage-Grouse Habitat Enhancement Project NEPA
		2018 Sagehen II conifer treatment
	HIR1-4-SM: Continue to monitor implementation of new grazing permit terms and conditions in the Long Valley portion of the South Mono PMU. Identify priorities for more intensive management attention, especially in upland sagebrush types.	
		Annual livestock grazing monitoring
	HIR1-5-SM: Complete the windmill removal and solar pump replacement projects in the Adobe Valley portion of the South Mono PMU.	
		Four Adobe Valley windmills removed and conversion to solar
	HIR1-6-SM: Maintain the Indian Spring protective fence in the Mono Basin portion of the South Mono PMU.	
		Fence removed after fire. Now riparian area is monitored and maintained.
	HIR2-1-SM: In drought years, work with the LADWP to prioritize irrigation for important brood meadows (e.g., Laurel meadows) in the Long Valley portion of the South Mono PMU.	
		CDFW works with LADWP to advise on best irrigation practices
		LADWP, CDFW, USFWS, Audubon met to discuss water allocation strategies in Long Valley that provide adequate habitat for bird and fish species while maintaining LADWP's mission to provide water to paying customers
		LADWP submitted a commitment letter to the USFWS stating willingness to manage their land with best management practices for sage-grouse in mind
		LADWP developed and implemented and Adaptive Management Plan for watering in Long Valley
Research and Monitoring: Implement a coordinated interagency research and monitoring program to support the conservation and management of greater sage-grouse populations and habitats within the Bi-State Plan area.		
	RAM1-1: Coordinate annual lek monitoring efforts across state and federal jurisdictional boundaries.	
		Annual lek counts are carried out by a diversity of partners across the Bi-State
	RAM1-2: Increase the level of interagency support and effort for annual lek counts in the Pine Nut, Desert Creek-Fales, Mount Grant, and White Mountains PMUs. Implement "saturation counts" where logistically feasible.	
		Beginning in 2012 NDOW, Bishop BLM, Carson BLM, USGS, CDFW determine staff needs and coordinate lek surveys in Pine Nut, Desert Creek-Fales, Mt. Grant, and White Mountain PMUs
	RAM1-3: Maintain the current level of interagency support and effort required to conduct annual "saturation counts" in the Bodie and South Mono PMUs.	

		Annual coordinated saturation counts. BIFO/CDFW leads the coordination of these counts. LADWP, NRCS, USFS and volunteers are involved
	RAM1-4: Conduct a systematic aerial inventory of potential breeding habitats in the Bi-State area to identify new or previously undocumented leks.	
		Aerial lek inventory occurred in 2012
	RAM1-5: Focus aerial lek monitoring efforts on remote or otherwise inaccessible locations. Augment aerial surveys with ground counts when and where logistically feasible.	
		Aerial helicopter surveys are conducted most years in hard to access areas in the the Pine Nut, Desert Creek and Mount Grant PMUs
	RAM1-6: Increase the level of volunteer training and support for annual lek monitoring efforts in the Bi-State area.	
		Mono County Lek tour and training
		Annual Bi-State volunteer lek survey training
	RAM1-7: Incorporate lek habitat inventory and assessment protocols identified in the interagency Sage-Grouse Habitat Assessment Framework (Stiver et al. 2010) into lek inventory and monitoring efforts in the Bi-State area.	
		Sage-grouse HAF conducted on leks within Mount Grant PMU in FY19 included Baldwin Canyon, Nine Mile Flat, Nine Mile 2, and Mudspring leks. 4 more in Pine Nut PMU
	RAM1-8: Develop and implement a standardized lek location database for documented (active and historic) leks in the Bi-State area.	
		Development of the California Lek database
		Development of the integrated lek database (CA and NV)
	RAM2-1: Identify and map existing sagebrush habitats and important sage-grouse habitats within each PMU. Develop a draft interim habitat map for the Bi-State area by April 30, 2012. Complete a final interim habitat map for the Bi-State area by September 30, 2012.	
		Published map of BSSG habitat
	RAM2-2: Incorporate standardized vegetation and environmental characteristics data sampling into existing agency vegetation inventory and monitoring protocols to support the development and implementation of the Conservation Planning Tool (CPT).	
		Standardized vegetation sampling protocols for treatment efficacy
		Standardized vegetation sampling protocols for nest and brood sites
	RAM2-3: Incorporate multi-scale sage-grouse habitat inventory and assessment protocols identified in the interagency Sage-Grouse Habitat Assessment Framework (Stiver et al. 2010) into habitat inventory and monitoring efforts in the BiState area.	
		Annual vegetation monitoring and treatment efficiency monitoring
	RAM3-1: Continue and expand the on-going telemetry effort in the Pine Nut PMU. Incorporate additional capture locations into the study design based on lek inventory results.	

		Capture and monitoring efforts in the Pine Nut PMU (2012-2015)
	RAM3-2: Implement a new telemetry effort in the Mount Grant PMU to supplement and expand on previous efforts focused in the Bodie PMU. Focus initial capture efforts in the China Camp, Baldwin Canyon, Aurora and Lapon Meadows lek areas, as well as brood rearing habitat on Ninemile Ranch and Scierine Ranch. Incorporate additional capture locations into the study design based on lek inventory results.	
		Capture and monitoring efforts in the Mount Grant PMU (2012-2018 and 2021)
	RAM3-3: Implement a new telemetry effort in the Desert Creek portion of the Desert Creek-Fales PMU to supplement and expand on previous efforts. Focus initial capture efforts in the Desert Creek, Sweetwater and Wiley Ditch lek areas, as well as brood-rearing habitats on the Desert Creek Ranch, Sweetwater Ranch and Scierine Ranch. Incorporate additional capture locations into the study design based on lek inventory results.	
		Capture and monitoring efforts in the Desert Creek-Fales PMU (2012, 2015-2018)
	RAM3-4: Implement a new telemetry effort in the White Mountains PMU to supplement and expand on previous efforts. Incorporate the use of GPS technology to improve data collection capabilities in the White Mountains. Incorporate additional capture locations into the study design based on lek inventory results.	
		Capture and monitoring efforts in the White Mountain PMU (2013, 2016-2021)
	RAM3-5: Continue and supplement the on-going radio telemetry effort in the South Mono PMU. Focus new capture efforts in the Sagehen Summit, Sagehen Meadows, Gaspie Spring and McLaughlin Spring areas. Incorporate additional capture locations into the study design based on lek inventory results.	
		Capture and monitoring efforts in the South Mono PMU (2014-2021)
	RAM3-6: Continue and supplement the on-going telemetry effort in the Fales Portion of the Desert Creek-Fales PMU. Focus additional capture efforts in the upper elevations of the Sweetwater Range and in the Huntoon Valley. Incorporate additional capture locations into the study design based on lek inventory results.	
		Incomplete
	RAM3-7: Continue and supplement the on-going radio telemetry effort in the Bodie PMU. Focus additional capture efforts in previously un-sampled lek areas and habitat restoration project areas. Incorporate additional capture locations into the study design based on lek inventory results.	
		Capture and monitoring efforts in the Bodie Hills PMU (2012-2021)
	RAM3-8: Collect vegetation and environmental characteristics data at telemetry relocation points and random points following standardized protocols to support the development and implementation of the Conservation Planning Tool (CPT).	
		Vegetation characteristics collected at telemetry locations

	RAM3-9: Incorporate the use of GPS technology into the study design for ongoing and planned telemetry efforts to collect data on intra-day and potential long-range and inter-PMU movements.	
		USGS deploys GPS collars to monitor sage-grouse movement
	RAM3-10: Collect feces in addition to environmental and vegetation characteristics data at winter relocations for diet quality analysis using gas chromatography	
		UC Davis diet and behavioral study was completed
	RAM4-1A: Collect a blood sample from each captured bird and submit these samples to the University of Denver for genetic analyses.	
		Blood samples are collected
	RAM4-1B: Collect feathers from each captured bird and submit these samples to the University of Idaho and/or the US Forest Service Rocky Mountain Research Station (RMRS) genetics lab in Missoula, Montana for genetic analyses.	
		Feathers are collected
	RAM4-1C: Collect morphological measurements from each captured bird to calculate body condition index (BCI) by obtaining mass, flat wing, tarsus, and culmen measurements.	
		Morphological measurements are collected
	RAM4-2: Collect feathers from each monitored lek and submit these samples to the University of Idaho and/or the US Forest Service RMRS genetics lab in Missoula, Montana for genetic analyses.	
		Feathers are collected and genetic analyses are complete
	RAM5-1A: Develop and implement a standardized spatial database (ArcMap geodatabase) to collect and store all greater sage-grouse conservation related project work occurring in the Bi-State area. Coordinate geodatabase development with signatories to the Bi-State MOU and the Bi-State LAWG to ensure end user compatibility. Populate the geodatabase with conservation actions completed to date by September 30, 2012. Establish procedures for effective and efficient geodatabase maintenance and distribution.	
		Geodatabase to track BSSG projects was developed
	RAM5-1B: Develop and implement a standardized tabular database (Microsoft Access database) to collect and store all greater sage-grouse related conservation work occurring in the Bi-State area. Coordinate database development with signatories to the Bi-State MOU and the Bi-State LAWG to ensure end user compatibility. Populate the database with conservation actions completed to date by September 30, 2012. Establish procedures for effective and efficient database maintenance and distribution.	
		Tabular database was developed
	RAM5-2: Investigate options to develop and implement an Interagency BiState Sage-Grouse Conservation sharepoint site to facilitate collaborative projects and data sharing. If determined to be feasible, establish the sharepoint site and provide access to signatories of the Bi-State MOU.	
		Google Drive created

Maintaining Stakeholder Involvement: Develop active, well informed, local planning groups committed to the development and implementation of sage-grouse conservation actions within the Bi-State Plan area.		
	MSI1: Continue to support the stakeholder based Bi-State Local Area Working Group (LAWG) process to identify, develop, and implement PMU specific conservation actions for greater sage-grouse populations and habitats in the Bi-State area.	
		The Sage-Grouse Conservation Plan for Bi-State Area is updated through meetings held by the Technical Advisory Committee
	MSI1-2: Conduct PMU planning meetings on an as needed basis to address PMU specific issues and to identify, develop, and prioritize PMU specific conservation actions.	
		Minden NRCS SGI SWAT Workshop
		Long Valley Tribal Forum
		Adobe Field Tour
		Parker Meadow Field Tour
		Presentation on the BSSG to the LA Audubon in Bishop
		Aurora Canyon Road Hydrology Restoration Field Trip
		Pine Nut Project Field Tour with Assistant Secretary of Interior
		Pine Nut Project, Field tour with NCCS regional director
		Pine Nut Land Health Annual Meeting
		LAWG Field Tour of 9 Mile Ranch
		Nevada PMU Meeting
		Parker Meadow Disturbance Meeting
	MSI1-3: Conduct Bi-State LAWG planning meetings on a semi-annual basis to review the status of greater sage-grouse populations and habitats in the Bi-State area and to identify, prioritize, and coordinate implementation of annual conservation actions. Continue University of Nevada Cooperative Extension facilitation of the BiState LAWG meeting.	
		Annual Bi-State LAWG meetings held
	MSI2-1: Conduct workshops to provide information about programs available to assist ranchers and other private landowners that may be interested in the implementation of sage-grouse conservation projects and to explore opportunities for cooperative conservation of sage-grouse in the Bi-State area.	
		Bi-State landowner open house
		RCPP Grant meeting
		Deep Springs resource management team meeting
		Mono County meetings
	MSI2-2: Develop and publish a Bi-State LAWG sage-grouse conservation newsletter.	
		Mailchimp e-newsletter was created
	MSI2-3: Develop and implement a publically accessible Bi-State LAWG Sage-Grouse Conservation webpage to facilitate the sharing and distribution of information specific to greater sage-grouse conservation efforts in the Bi-State area.	
		Website was created and is maintained to provide BSSG related information

**FINAL
ENVIRONMENTAL DOCUMENT
MIGRATORY GAME BIRD HUNTING
(WATERFOWL, COOTS, MOORHENS)
Section 502, Title 14
California Code of Regulations**



April 18, 2024
STATE OF CALIFORNIA
THE NATURAL RESOURCES AGENCY
DEPARTMENT OF FISH AND WILDLIFE



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CHAPTER 1 - SUMMARY

On behalf of the California Fish and Game Commission (Commission), the California Department of Fish and Wildlife (Department) has prepared this environmental document (ED) pursuant to the California Environmental Quality Act (CEQA)(Public Resources Code Section 21000 et seq.) in compliance with the Commission's certified regulatory program (CRP) as approved by the Secretary for the California Natural Resources Agency (Public Resources Code, Section 21080.5; CEQA Guidelines Section 15251, subsection (b); California Code of Regulations, Title 14, Section 781.5). This summary provides a brief description of the proposed project, project alternatives and summary of environmental impacts.

PROPOSED PROJECT

The project discussed in this document (the proposed project) involves modifications to the current waterfowl hunting regulations for the 2024-25 waterfowl hunting season. Specifically, the Department is proposing to:

- Decrease the duck season length to 98 days in the Southern San Joaquin Valley, the Southern California, and the Balance of State zones. This recommendation decreases the duck season length by 5 days.
- Decrease the goose season length to 98 days in the Southern San Joaquin Valley, the Southern California, and Balance of State zones. This recommendation decreases the goose season length by 5 days in the San Joaquin Valley and Southern California zones and by 2 days in the Balance of State Zone.
- Allow geese to be taken during the Veteran and Active Military Personnel Hunting Days (VAMP Days) in the Balance of State Zone.
- Allow up to 5 days of falconry-only season in the Balance of State, Southern San Joaquin Valley and Southern California zones. The recommendation increases the falconry-only season.

State and Federal roles in establishing waterfowl hunting regulations

Migratory birds are managed under the provisions of the Migratory Bird Treaty Act of July 3, 1918 (Volume 40 Statutes at Large page 755: Title 16 United States Code sections 703 et seq.), Federal regulations [50 CFR 20(K)(L)], as well as California statutes (Fish and Game Code sections 355 and 356) and regulations selected by the Commission.

The regulations governing the take of migratory game birds in California are selected by the Commission and forwarded to the U.S. Fish and Wildlife Service (Service) each year. States (California) must set waterfowl hunting regulations within the federal frameworks established by the Service through the following generalized four-step process:

1. The Service, with assistance from the states, assesses the status of migratory game bird populations and establishes a set of regulation frameworks;
2. The Department recommends season dates and proposed changes to the Commission;
3. The Commission makes and forwards season selections to the Service regarding regulations for California; and
4. The Service and the State publish the final regulations.

The federal frameworks specify the outside dates, total number of hunting days, bag limits, shooting hours, and methods of take authorized for migratory game birds. The Department will recommend specific season dates and bag limits to the Commission that are within the federal frameworks.

The Commission may not select more liberal season dates or bag limits than those set by the federal frameworks. The Department can only make recommendations within the federal framework and the Commission's decision is whether to adopt the proposed changes or consider more restrictive regulations.

The Department is providing the Commission with a range of alternatives to the proposed project. Table 1 summarizes the Department findings that there are no significant long-term adverse impacts associated with the proposed project or any of the project alternatives considered for the 2024-25 waterfowl hunting regulations.

In selecting hunting regulations, the Commission is governed by the State's Conservation of Wildlife Resources Policy (Fish and Game Code, Section 1801). This policy contains, among other things, objectives to maintain sufficient populations of wildlife resources in the State and to provide public hunting opportunities through regulated harvest where such harvest is consistent with maintaining healthy wildlife populations (California Fish and Game Code, Section 1801).

In February, the Service provided notice to establish hunting regulations for the 2024-25 hunting season; see Federal Register 89 FR 8631-8639. The notice also solicits public comments and establishes the annual schedule for meetings.

The Department is recommending four changes to the existing hunting regulations (Appendix A). The frameworks for the 2024-25 season have been approved by the Flyway Councils and adopted by the Service Regulation's Committee meeting in October 2023. The frameworks allow for a liberal duck season which includes a 107-day season, 7 daily duck limit including 7 mallards but only 2 hen mallards, 1 pintail, 2 canvasback, 2 redheads, and 2 scaup (during an 86 day season). The Department's proposals for the 2024-25 hunting season for waterfowl, coots, and moorhens are based on these federal frameworks. A range of season length and bag limit (zero bag limit represents a closed season) is also provided for black brant. The range is necessary, as the black brant framework cannot be determined until the Pacific Flyway Winter Brant Survey is conducted in January 2024. The regulatory package is to be determined by the most current Winter Brant Survey, rather than the prior year survey. The regulatory package will be prescribed per the Black Brant Harvest Strategy (Pacific Flyway Council 2018) pending results of the January survey.

The 2024-25 Preliminary Federal Frameworks Pertaining to California

Ducks, Mergansers, Coots, Moorhens and Gallinules

Hunting Seasons and Duck Limits: Concurrent 107 days. The daily bag limit is 7 ducks and mergansers, including no more than 2 female mallards, 1 pintail, 2 scaup (86-day season), 2 canvasback, and 2 redheads. The season on coots and common moorhens may be between the outside dates for the season on ducks, but not to exceed 107 days. Coot, Common Moorhen, and Purple Gallinule Limits: The daily bag limits of coots, common moorhens, and purple gallinules are 25, singly or in the aggregate. Possession limits for all species are triple the daily bag limit.

Outside Dates: Between the Saturday nearest September 23 and January 31.

Zoning and Split Seasons: Arizona, California, Idaho, Nevada, Oregon, Utah, Washington, and Wyoming may select hunting seasons by zones. Arizona, California, Idaho, Nevada, Oregon, Utah, Washington, and Wyoming may split their seasons into two segments. Colorado, Montana, and New Mexico may split their seasons into two segments.

Colorado River Zone, California: Seasons and limits shall be the same as seasons and limits selected in the adjacent portion of Arizona (South Zone).

Geese

Season Lengths, Outside Dates, and Limits

Canada geese and brant: Except as subsequently noted, 107-day seasons may be selected with outside dates between the Saturday nearest September 23 and January 31. In California, Oregon, and Washington, the daily bag limit is 4 Canada geese. For brant, the season framework will be determined by the harvest strategy in the management plan for the Pacific Population of Brant, pending results of the 2023 Winter Brant Survey (WBS). If the results of the 2024 WBS are not available, results of the most recent WBS will be used. Days must be consecutive. Washington and California may select hunting seasons for up to two zones. The daily bag limit is in addition to other goose limits. In Oregon and California, the brant season must end no later than December 15.

White-fronted geese: Except as subsequently noted, 107-day seasons may be selected with outside dates between the Saturday nearest September 23 and March 10. The daily bag limit is 10.

Light geese: Except as subsequently noted, 107-day seasons may be selected with outside dates between the Saturday nearest September 23 and March 10. The daily bag limit is 20.

Split Seasons: Unless otherwise specified, seasons for geese may be split into up to 3 segments. Three-way split seasons for Canada geese and white-fronted geese require Pacific Flyway Council and Service approval and a 3-year evaluation by each participating State.

California: The daily bag limit for Canada and cackling geese is 10 in the aggregate.

Balance of State Zone (includes Southern San Joaquin Valley Zone): A Canada goose season may be selected with outside dates between the Saturday nearest September 23 and March 10. Canada and cackling goose seasons may be split into 3 segments. In the Sacramento Valley Special Management Area, the season on white-fronted geese must end on or before December 28, and the daily bag limit is 3 white-fronted geese. In the North Coast Special Management Area, hunting days that occur after the last Sunday in January should be concurrent with Oregon's South Coast Zone.

Northeast Zone: White-fronted goose seasons may be split into 3 segments.

Shooting Hours – From One-half hour before sunrise to sunset.

SUMMARY OF IMPACTS AND MITIGATION

Table 1. Summary of Alternatives and Their Impacts

Alternative	Description	Significant Impact	Mitigation
Proposed Project	<p>Decrease the duck season length to 98 days in the Southern San Joaquin Valley, the Southern California, and the Balance of State zones. The current duck season length is 103 days.</p> <p>Decrease the goose season length to 98 days in the Southern San Joaquin Valley, the Southern California, and Balance of State zones. The current goose season length is 100 days in the referenced zones.</p> <p>Allow geese to be taken during the Veteran and Active Military Personnel Hunting Days (VAMP Days) in the Balance of State Zone.</p> <p>Allow up to 5 days of falconry-only season in the Balance of State, Southern San Joaquin Valley and Southern California zones. The current falconry-only season is closed in the referenced zones.</p>	No	N/A
Alternative 1. No Project	No change from the 2023-24 hunting regulations.	No	N/A
Alternative 2. Reduced Season Lengths, Timing and Bag Limits	Reduce season lengths, timing, and/or bag limits by up to 50 percent.	No	N/A
Alternative 3. Elimination of All Mechanical Decoys.	Eliminate mechanical decoys as a method of take.	No	N/A

The Department concludes that the regulated harvest of migratory game birds within the federal frameworks does not result in a significant adverse impact to their populations as analyzed in the 2006 Final Environmental Document for

Migratory Game Bird Hunting of Waterfowl, Coots, and Moorhens (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 95605). This is because the size of a wildlife population at any point in time is the result of the interaction between population (reproductive success and mortality rates) and its environment (habitat). Declines in habitat quality and quantity result in reduced carrying capacity, which results in corresponding declines in populations.

AREAS OF CONTROVERSY

A public scoping session regarding the preparation of environmental documents for hunting waterfowl was held on January 16, 2024, via a teleconference. No areas of controversy regarding migratory bird hunting were identified at the meeting. However, members of the public have expressed concern regarding the following: 1) mechanical spinning wing decoys in the use of taking waterfowl during past hunting seasons. Specifically, since 2002 about 100 letters and or public testimony has been received by the Fish and Game Commission to ban mechanically spinning wing decoys while only about 12 letters of support or public testimony in favor of mechanically spinning wing decoys during the same time period (Department files); 2) the Commission has received numerous letters both supporting and opposing the continued hunting in Morro and Tomales bays; and 3) opposition to the continued restrictions on bag limit and season length for white-fronted geese in the Sacramento Valley Special Management Area.

ISSUES TO BE RESOLVED

As provided by existing law, the Commission is the decision-making body (lead agency) considering the proposed project, while the Department has responsibility for conducting management activities such as resource assessments, preparing management plans, operating public hunting opportunities and enforcing laws and regulations. The primary issue for the Commission to resolve is whether to change waterfowl hunting regulations, within the federal framework, as an element of waterfowl management. If such changes are authorized, the Commission will specify the areas, season lengths, and bag and possession limits and other appropriate special conditions.

FUNCTIONAL EQUIVALANCY

The California Environmental Quality Act (CEQA) requires all public agencies in the State to evaluate the environmental impacts of projects they approve, including regulations, which may have a potential to significantly affect the environment. CEQA review of the proposed project will be conducted in accordance with the CRP approved by the Secretary for the California Resources Agency pursuant to Public Resources Code section 21080.5 (see generally California Code of Regulations, Title 14, sections 781.5, and 15251, subsection (b)). The Department has prepared this Environmental Document (ED) which is the functional equivalent of an Environmental Impact Report, on behalf of the Commission in compliance with this requirement. The ED provides the Commission, other agencies, and the general public with an assessment of the potential environmental effects.

SUBMITTING COMMENTS ON THE ED

Pursuant to Section 15087 of the CEQA Guidelines, this ED is available for public review for 45 days. During the review period, the public is encouraged to provide written or emailed comments regarding the environmental document to:

California Department of Fish and Wildlife
Wildlife Branch
Attention: Waterfowl Program
P.O. Box 944209
Sacramento, CA 94244-2090
Waterfowlmgmt@wildlife.ca.gov

Comments must be received by the Department by 5:00 p.m. on April 11, 2024.

CHAPTER 2 - THE PROPOSED ACTION

The proposed project being considered consists of the following modifications to existing migratory game bird hunting regulations:

1. Decrease the duck season length to 98 days in the Southern San Joaquin Valley, the Southern California, and the Balance of State zones. The current duck season length is 103 days in the referenced zones.
2. Decrease the goose season length to 98 days in the Southern San Joaquin Valley, the Southern California, and Balance of State zones. The current goose season length is 100 days in the referenced zones.
3. Allow geese to be taken during the Veteran and Active Military Personnel Hunting Days (VAMP Days) in the Balance of State Zone. Currently, all available days for hunting geese have been allocated in this zone.
4. Allow up to 5 days of falconry-only season in the Balance of State, Southern San Joaquin Valley and Southern California zones. The current falconry-only season is closed in the referenced zones.

Table2. Proposed Changes to Season Dates and Bag Limits for 2024-2025.

Species by Zone	Daily Bag Limit	Possession Limit	Season Length
COOTS AND MOORHENS			
Northeastern CA	no change	no change	no change
So. San Joaquin Valley	no change	no change	no change
So. California	no change	no change	no change
Colorado River	no change	no change	no change
Balance of State	no change	no change	no change
DUCKS			
Statewide	no change	no change	
EXCEPTIONS			
Mallard (max.)	no change	no change	no change
Mallard Hen (max.)	no change	no change	no change
Pintail (max.)	no change	no change	no change
Redhead (max.)	no change	no change	no change
Scaup (max.)	no change	no change	no change
Canvasbacks (max.)	no change	no change	no change
Northeastern Calif.	no change	no change	no change
So. San Joaquin Valley	no change	no change	98-103
Southern California	no change	no change	98-103
Colorado River	no change	no change	no change
Balance of State	no change	no change	98-103
GEESE			
Northeastern Calif.		no change	no change
EXCEPTIONS			
Large Canada Geese (max.)	no change	no change	
White-Front (max.)	no change	no change	no change
Small Canada Geese (max.)	no change	no change	
White Geese (max.)	no change	no change	no change
So. San Joaquin Valley	no change	no change	98-103
EXCEPTIONS			
Large Canada Geese (max.)	no change	no change	
White-Front (max.)	no change	no change	
Small Canada Geese (max)	no change	no change	
White Geese (max.)	no change	no change	
Southern Calif.	no change	no change	98-103
EXCEPTIONS			
Large Canada Goose (max.)	no change	no change	
White-Front Geese (max.)	no change	no change	
Small Canada Geese (max)	no change	no change	
White Geese (max.)	no change	no change	
Colorado River	no change	no change	no change
EXCEPTIONS			
White Geese (max.)	no change	no change	
Dark Geese (max.)	no change	no change	
Balance of State	no change	no change	98-100
EXCEPTIONS			
Large Canada Geese (max.)	no change	no change	
White-Front (max.)	no change	no change	
Small Canada Geese (max)	no change	no change	
White Geese (max.)	no change	no change	
Special Management Areas			
	Species		Season
North Coast	no change		no change
Humboldt Bay South Spit	no change		no change
Klamath Basin	no change		no change
Sacramento Valley (West)	no change		no change
Morro Bay	no change		no change
Martis Lake	no change		no change
North Coast Brant	no change		0-37 days
Balance of State Brant	no change		0-37 days
Imperial County	no change		no change

BACKGROUND AND EXISTING CONDITIONS

Background

Waterfowl, coots and moorhens are migratory game birds that use varied habitat types in different geographical areas of North America. Many individuals of these species reproduce in other states and countries and migrate in the fall and winter to California, although there are substantial resident populations of some species.

There are 36 species of migratory game birds from two of the taxonomic families that occur in California, listed below. Migratory game birds are defined by convention and law as belonging to the following taxonomic families (USDI 1988a:1):

Anatidae (ducks, geese, brant, and swans);
Columbidae (doves and pigeons);
Gruidae (cranes);
Rallidae (rails, coots, and gallinules);
Scolopacidae (woodcock and snipe);
Corvidae (crows).

The two families discussed in this ED are *Anatidae* and *Rallidae*. These families are combined herein due to similarities in basic life-history characteristics. These characteristics include: (1) the use of California as a migration and wintering area (Palmer 1976, Bellrose 1980, Zeiner et al. 1990); (2) the use of seasonal wetlands as roosting and foraging habitats (Bellrose 1980, Heitmeyer and Raveling 1988, USDI 1988a:31-56); and (3) for most duck species, similarities in nesting areas, habitat types, age at reproduction, and clutch sizes (Palmer 1976, Bellrose 1980, USDI 1988). Some differences among the species in these families exist. Geese and some duck species breed at an older age than do most ducks (Palmer 1976, Bellrose 1980). Deepwater and estuarine habitats are more important to some species (Palmer 1976, Bellrose 1980), and the use of dry and wet agricultural fields are more important to other species (Bellrose 1980, Zeiner et al. 1990).

Individuals and populations of migratory birds spend parts of the year in different geographical areas. Due to this geographic distribution and migratory nature, management for these species is based on geographic units, or flyways, (USDI 1975, USDI 1988a:63) comprised of several states (Figure 2).

These units, or flyways, incorporate populations that are generally discrete from populations in other units. Therefore, an analysis of the environmental effects of

the proposed project in California must consider the status of the affected species at a flyway level.

Figure 2. Administrative Waterfowl Flyways



Adaptive Harvest Management

In March 1995 (60 FR 15642–15648), the Service implemented a general harvest strategy for setting duck framework regulations and the process will be used again in 2024, see Federal Register 89 FR 8631-8639. The regulatory process for migratory birds has evolved since the early 1900s from one that included little, or no monitoring of populations and the establishment of regulations based on traditions, to today's more data-driven process (Johnson et al. 1993). The current process, known as Adaptive Harvest Management (AHM)(USFWS 2023a) establishes explicit harvest objectives and a single regulatory package is selected from a limited array of options. This single package is evaluated based on mathematical models, with the goal of ensuring that duck populations are healthy over the long-term while providing hunting opportunity consistent with the long-term health while learning more about the effect of hunting mortality on population parameters (See Final Environmental Document for Migratory Game Bird Hunting August 2006, incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 95605)

AHM balances hunting opportunities with the desire to achieve the duck population goals identified in the North American Waterfowl Management Plan (NAWMP). Currently, a set of four regulatory options, each containing flyway-specific season lengths, bag limits, and dates are being used. The selection of a specific option is recommended each year from a decision matrix based on mid-continent mallard breeding populations and habitat conditions in the current year, although the State continues to have the option to establish more restrictive regulations.

For the Pacific Flyway, the proposed regulatory packages vary primarily in season length (closed, 60, 86, or 107 days) and total duck bag limit (either four or seven ducks per day). Species- (e.g. mallard) and sex- (e.g. mallard) specific limits are contained within the AHM packages. Additionally, prescriptive regulation processes for pintail, canvasback and scaup have been adopted by the Service that determine daily bag limits depending on breeding population size, habitat conditions, and the season length established through the AHM process (see below).

In March 2008, the Pacific Flyway Council recommended that the Service set duck season frameworks in the Pacific Flyway based on a separate modeling approach that uses data from western mallards rather than mallards from the mid-continent region. This is because most of the mallards harvested in the Pacific Flyway originate from within the Flyway. The Service adopted the separate mallard model in August 2008 and plans to continue the use of that approach in 2024, see Federal Register 89 FR 8631-8639.

The western mallard approach uses the same regulatory packages as currently in use under continental AHM. Instead of a harvest objective constrained by the population goal in the NAWMP plan, the harvest objective for western mallards is based on a “shoulder approach”, or a proportion of maximum sustained yield.

Current modeling suggests that western mallards have been harvested at about 80% of their maximum potential, compared to about 90% for mid-continent mallards under the continental AHM approach.

As in mid-continent AHM, daily bag limits and season length will be set based on the status of the Western Mallard breeding population (Appendix C). Bag limits for other species, including those for which individual harvest strategies have been adopted (pintail, canvasbacks, scaup) are based on mid-continent AHM and will be used in the Pacific Flyway. The State continues to have the option to establish more restrictive regulations.

Western mallards consist of 2 sub stocks and are defined as those birds breeding in Alaska and those birds breeding in the Southern Pacific Flyway (California, Oregon, Washington, and British Columbia). Breeding population surveys are conducted annually by both the Service and the states (Appendix C, CDFW 2023, USFWS 2023b).

Pintail Harvest Strategy

In 1997 a prescribed harvest strategy was developed (62 FR 39721 and 50662) with several modifications since inception. The harvest strategy was revised in 2002 when Flyway-specific harvest models were updated (67 FR 40131). In 2002 and 2003, the Service set pintail regulations that deviated from the strict prescriptions of the harvest strategy (i.e., partial season), but remained true to the intent of the strategy (67 FR 53694 and 59111; 68 FR 50019 and 55786). In 2004, the harvest strategy was modified to include a partial season option (69 FR 43696 and 52971). In adopting those changes, the USFWS and others called for review of the pintail strategy (69 FR 57142) and consideration of technical modifications that could be made to improve it. As a result of this review, the strategy was revised in 2006 to include updated flyway-specific harvest models, an updated recruitment model, and the addition of a procedure for removing bias in the breeding population size estimate based on its mean latitude (71 FR 50227 and 55656). Pursuant to requests from flyways and other stakeholders, a compensatory model was added to the strategy in 2007 (72 FR 18334, 31791, and 40198) as an alternative to the existing additive harvest model, and this update made the harvest strategy adaptive on an annual basis. The current strategy was developed in 2010 (75 FR 32873) and designed to maximize long-term cumulative harvest, which inherently requires perpetuation of a viable population. Hunting will be allowed when the observed breeding population is above 1.75 million birds (based on the lowest observed breeding population size since 1985 of 1.79 million birds in 2002).

The adaptive management protocol considers a range of regulatory alternatives for pintail harvest management that includes a closed season, 1-bird daily bag limit, or 2-bird daily bag limit. The maximum pintail season length depends on the general duck season framework (characterized as liberal, moderate, or restrictive and varying by Flyway) specified by mallard AHM.

An optimal pintail regulation is calculated under the assumption of a liberal mallard season length in all Flyways. However, if the season length of the general duck season determined by mallard AHM is less than liberal in any of the Flyways, then an appropriate pintail daily bag limit would be substituted for that Flyway. Thus, a shorter season length dictated by mallard AHM would result in an equivalent season length for pintails, but with increased bag limit if the expected harvest remained within allowable limits. See Appendix D for pintail status (USFWS 2023b).

Canvasback Harvest Strategy

Since 1994 the Service has followed a harvest strategy that if canvasback population status and production are sufficient to permit a harvest of 1-bird daily bag limit nationwide for the entire length of the regular duck season, while still attaining a projected spring population objective of 500,000 birds. In 2008 (73 FR 43290), the strategy was modified to incorporate the option for a 2-bird daily bag limit for canvasbacks when the predicted breeding population the subsequent year exceeds 725,000 birds. A partial season would be permitted if the estimated allowable harvest was within the projected harvest for a shortened season. If neither of these conditions can be met, the harvest strategy calls for a closed season. See Appendix D for canvasback status (USFWS 2023b).

Scaup Harvest Strategy

The scaup population has experienced a significant long-term decline. The 2007 population estimate was the third lowest on record. Recent population estimates have been more than 30 percent below the 55-year average with the biggest decline occurring over the last 25 years. There is evidence that the long-term scaup decline may be related to changes in scaup habitat. Several different ideas have been proposed to explain the decline, including a change in migration habitat conditions and food availability, effects of contaminants on scaup survival and reproduction and changing conditions on the breeding grounds possibly related to warming trends in portions of northern North America. Hunting has not been implicated as a cause of the past scaup decline, but the Service is committed to ensuring that harvest levels remain commensurate with the ability of the declining population to sustain harvest. In 2008 the Service implemented a new scaup harvest strategy (73 FR 43290) that used restrictive, moderate, and liberal regulatory alternatives. The scaup harvest strategy prescribes optimal harvest levels given an observed breeding population size and an explicit harvest management objective; maximize 95% of long-term cumulative harvest. See Appendix D for scaup status (USFWS 2023b).

Service Changes in the Timing of Annual Migratory Bird Hunting Adoption

Historically, the Service published preliminary federal frameworks in mid-August and states adopted hunting regulations in early August based on the decisions of the Service Regulation Committee (SRC) in late July. The Service then published final frameworks, which contained the state-selected seasons in

September. Beginning with the 2016 hunting seasons (79 FR 56864) a new schedule is now used for setting annual migratory bird hunting regulations. The new schedule will establish migratory bird hunting seasons much earlier than the historic system. Under the new process, proposed hunting season frameworks for a given year will be developed in early fall of the prior year. Those frameworks will be finalized in October, thereby enabling the state agencies to select their seasons by late April and the Service will publish final frameworks in early summer.

Biological data (spring and summer surveys) for the following year will not be available in the fall, when the Flyway Councils and the Service will be developing hunting regulations for the next year. Thus, regulation development will be based on predictions derived from long-term biological information and established harvest strategies (as described above). This process will continue to use the best science available and will balance hunting opportunities with long-term migratory game bird conservation, while fulfilling all administrative requirements. Existing individual harvest strategies have been modified using either data from the previous year(s) or model predictions to fit this new schedule. Many existing regulatory prescriptions used for Canada Goose, Sandhill Cranes, Mourning Doves, and American Woodcock currently work on this basis. Uncertainty associated with these population status predictions has been accounted for and incorporated into the decision-making process. The Service concluded (Boomer, et al. 2015) that this uncertainty should not result in a disproportionately higher harvest rate for any stock, nor substantially diminish harvest opportunities, either annually or on a cumulative basis.

Service Changes to Season Ending Date (Season Extensions)

At the Service's Regulation Committee meeting in October 2018 the ending date for the duck season framework was changed to January 31, replacing the last Sunday in January. The framework ending date of the last Sunday in January has been in place since 2002, as previously analyzed in the 2006 Final Environmental Document for Migratory Game Bird Hunting of Waterfowl, Coots, and Moorhens (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 95605). The maximum season length remains 107 days.

This change results in up to a 6-day later ending date, depending on the year. For example, the new closing date for the 2023-24 season was Wednesday, January 31, 2023, rather than Sunday, January 28, 2023: resulting in 103-day seasons. For the 2024-25 season, January 31 will occur on a Friday, resulting in 98-day seasons. All closing dates are based on the traditional opening Saturday in late October.

COVID-19 Pandemic

The COVID-19 pandemic prevented the Service and their partners (Department) from performing the 2020 and 2021 Breeding Population and related surveys. As a result, the Service and Flyway councils agreed to use predictions of breeding population sizes and habitat conditions to determine regulatory decisions for the 2022-23 hunting season. Current system models for which there is an AHM decision framework (western mallard, pintail, canvasback, scaup) were used to predict 2021 population sizes as a function of 2020 predictions of breeding populations and habitat conditions, along with harvest and harvest rate estimates observed during the 2020–21 hunting seasons. These policies represent optimal decisions based on the most recent observations and understanding of system dynamics (USFWS 2021). The 2023 Breeding Population and related surveys were conducted by the Service and state partners, resulting in the use of current population models (USFWS 2023a) to determine optimal regulatory strategies for the 2024-25 season.

Existing Conditions

Northeastern Zone: In that portion of California lying east and north of a line beginning at the intersection of Interstate 5 with the California-Oregon line; south along Interstate 5 to its junction with Walters Lane south of the town of Yreka; west along Walters Lane to its junction with Easy Street; south along Easy Street to the junction with Old Highway 99; south along Old Highway 99 to the point of intersection with Interstate 5 north of the town of Weed; south along Interstate 5 to its junction with Highway 89; east and south along Highway 89 to Main Street in Greenville; north and east to its junction with North Valley Road; south to its junction of Diamond Mountain Road; north and east to its junction with North Arm Road; south and west to the junction of North Valley Road; south to the junction with Arlington Road (A22); west to the junction of Highway 89; south and west to the junction of Highway 70; east on Highway 70 to Highway 395; south and east on Highway 395 to the point of intersection with the California-Nevada state line; north along the California-Nevada state line to the junction of the California-Nevada-Oregon state lines west along the California-Oregon state line to the point of origin.

Ducks: From the first Saturday in October extending for 103 days, 7/day which may include 7 mallards, 2 hen mallard, 1 pintail, 2 canvasback, 2 redheads, 2 scaup during the 86-day season. Possession limit triple the daily bag.

Small and Large Canada Geese: from the first Saturday in October extending for 100 days, White-fronted geese and white geese from the first Saturday in October extending for a period of 58 days and from the first Saturday in January extending for a period of 14 days. 30/day, up to 20 white geese and up to 10 dark geese, but not more than 2 Large Canada geese Possession limit triple the daily bag.

Coots and Moorhens: Concurrent with Duck Season. 25/day. Possession limit triple the daily bag.

Youth Hunting Days: The Saturday fourteen days before the opening of waterfowl season extending for 2 days. To participate in these Youth Waterfowl Hunts, youth must be accompanied by a non-hunting adult 18 years of age or older. Federal regulations require that hunters must be 17 years of age or younger.

Veterans and Active Military Personnel Waterfowl Hunting Days Regulations
The Saturday following the closing of the regular duck season extending for 2 days. Goose hunting in this zone is not permitted during these days.

NOTE: Veterans (as defined in Section 101 of Title 38, United States Code) and members of the Armed Forces on active duty, including members of the National Guard and Reserves on active duty (other than training), may participate.

Persons participating in this special hunt must possess and present upon demand verification of eligibility to participate in this hunt. Verification includes: Veteran's ID Card and/or Military ID Card for active duty, or a State issued driver's license or Identification Card with Veteran Designation.

Falconry Take of Ducks: Open concurrently with duck season extending for 103 days. 3/day. Possession limit triple the daily bag.

Southern San Joaquin Valley Zone: All of Kings and Tulare counties and that portion of Kern County north of the Southern California Zone.

Ducks: From the third Saturday in October extending for 105 days, 7/day which may include, 7 mallards, 2 hen mallards, 1 pintail, 2 canvasback, 2 redheads, 2 scaup during the 86-day season. Possession limit triple the daily bag.

Geese: From the fourth Saturday in October extending for 100 days, 30/day, up to 20 white geese and up to 10 dark geese. Possession limit triple the daily bag.

Coots and Moorhens: Concurrent with Duck Season, 25/day. Possession limit triple the daily bag.

Youth Hunting Days: The first Saturday in February extending for 2 days. The Saturday following the closing of the regular duck season extending for 2 days. Goose hunting in this zone is not permitted during these days.

Veterans and Active Military Personnel Waterfowl Hunting Days Regulations
The second Saturday in February extending for 2 days. Veterans (as defined in Section 101 of Title 38, United States Code) and members of the Armed Forces on active duty, including members of the National Guard and Reserves on active duty (other than training), may participate. Persons participating in this special hunt must possess and present upon demand verification of eligibility to participate in this hunt. Verification includes: Veteran's ID Card and/or Military ID Card for active duty, or a State issued driver's license or Identification Card with Veteran Designation.

Falconry Take of Ducks: Ducks only, concurrent with duck season and February 5-6, 2022. 3/day. Possession limit triple the daily bag.

Southern California Zone: In that portion of southern California (but excluding the Colorado River zone) lying south and east of a line beginning at the mouth of the Santa Maria River at the Pacific Ocean; east along the Santa Maria River to where it crosses Highway 101-166 near the City of Santa Maria; continue north on 101-166; east on Highway 166 to the junction with Highway 99; south on Highway 99 to the junction of Interstate 5; south on Interstate 5 to the crest of the Tehachapi Mountains at Tejon Pass; east and north along the crest of the Tehachapi Mountains to where it intersects Highway 178 at Walker Pass; east on Highway 178 to the junction of Highway 395 at the town of Inyokern; south on Highway 395 to the junction of Highway 58; east on Highway 58 to the junction of Interstate 15; east on Interstate 15 to the junction with Highway 127; north on Highway 127 to the point of intersection with the California-Nevada state line.

Ducks: From the third Saturday in October extending for 105 days, 7/day which may include, 7 mallards, 2 hen mallards, 1 pintail, 2 canvasback, 2 redheads, 2 scaup during the 86-day season. Possession limit triple the daily bag.

Geese: From the fourth Saturday in October extending for 100 days, 23/day, up to 20 white geese, up to 3 dark geese. Possession limit triple the daily bag.

Coots and Moorhens: Concurrent with duck season, 25/day. Possession limit triple the daily bag.

Youth Hunting Days: The first Saturday in February extending for 2 days. To participate in these Youth Waterfowl Hunts, youth must be accompanied by a non-hunting adult 18 years of age or older. Federal regulations require that hunters must be 17 years of age or younger.

Veterans and Active Military Personnel Waterfowl Hunting Days Regulations The second Saturday in February extending for 2 days.

Veterans (as defined in Section 101 of Title 38, United States Code) and members of the Armed Forces on active duty, including members of the National Guard and Reserves on active duty (other than training), may participate. Persons participating in this special hunt must possess and present upon demand verification of eligibility to participate in this hunt. Verification includes: Veteran's ID Card and/or Military ID Card for active duty, or a State issued driver's license or Identification Card with Veteran Designation.

Falconry Take of Ducks: Concurrent with duck season and February 3–4, 2024, February 17–18, 2024 and February 24, 2024 EXCEPT in the Imperial County Special Management Area where the falconry season for geese runs concurrently with the season for white geese. 3/day. Possession limit triple the daily bag.

Colorado River Zone: In those portions of San Bernardino, Riverside, and Imperial counties lying east of the following lines: Beginning at the intersection of Nevada State Highway 95 with the California-Nevada state line; south along Highway 95 through the junction with Highway 40; continue south on Highway 95 to Vidal Junction; south through the town of Rice to the San Bernardino-Riverside county line on a road known as "Aqueduct Road" also known as Highway 62 in San Bernardino County; southwest on Highway 62 to Desert Center Rice Road; south on Desert Center Rice Road/Highway 177 to the town of Desert Center; continue east 31 miles on Interstate 10 to its intersection with the Wiley Well Road; south on this road to Wiley Well; southeast along the Milpitas Wash Road to the Blythe, Brawley, Davis Lake intersections; south on the Blythe Ogilby Road also known as County Highway 34 to its intersection with Ogilby Road; south on this road to Highway 8; east seven miles on Highway 8 to its intersection with the Andrade-Algodones Road/Highway 186; south on this paved road to the intersection of the Mexican boundary line at Los Algodones, Mexico.

Ducks: From the fourth Friday in October extending for 101 days, 7/day which may include 7 mallards, 2 hen mallards or Mexican-like ducks, 2 pintail, 2 canvasback, 2 redheads, 2 scaup during the 86-day season. Possession limit triple the daily bag.

Geese: From the fourth Friday in October extending for 101 days, 24/day, up to 20 white geese, up to 4 dark geese. Possession limit triple the daily bag.

Coots and Moorhens: Concurrent with Duck Season, 25/day, 25 in possession.

Youth Hunting Days: The Saturday following the closing for waterfowl season. To participate in these youth hunts hunters must be 17 years of age or younger and must be accompanied by a non-hunting adult 18 years of age or older.

Falconry Take of Ducks: Ducks only. Concurrent with duck season and from February 1-4, 2024. 3/day. Possession limit triple the daily bag.

Balance of State Zone: That portion of the state not included in Northeastern California, Southern California, Colorado River or the Southern San Joaquin Valley zones.

Ducks: From the fourth Saturday in October extending for 100 days, 7/day which may include 7 mallards, 2 hen mallards, 1 pintail, 2 canvasback, 2 redheads, 2 scaup during the 86-day season. Possession limit triple the daily bag.

Geese: Early Season: Large Canada only from the Saturday closest to October 1 for a period of 5 days EXCEPT in the North Coast Management Area where Large Canada geese are closed during the early season. Regular Season: Dark and white geese from the third Saturday in October extending for 100 days EXCEPT in the Sacramento Valley Special Management Area where the white-fronted goose season will close after December 21. Late Season: White-fronted geese and white geese from the second Saturday in February extending for a period of 5 days EXCEPT in the Sacramento Valley Special Management Area where the white-fronted geese is closed. During the Late Season, hunting is not permitted on wildlife areas listed in Sections 550–552 EXCEPT on Type C wildlife areas in the North Central Region. 30/day, up to 20 white geese and up to 10 dark geese, but not more than 3 white-fronted geese in the Sacramento Valley Special Management Area. Possession limit triple the daily bag.

Coots and Moorhens: Concurrent with Duck Season, 25/day. Possession limit triple the daily bag.

Youth Hunting Days: The first Saturday in February extending for 2 days. To participate in these Youth Waterfowl Hunts, youth must be accompanied by a non-hunting adult 18 years of age or older. Federal regulations require that hunters must be 17 years of age or younger.

Veterans and Active Military Personnel Waterfowl Hunting Days Regulations The second Saturday in February extending for 2 days. Goose hunting in this zone is not permitted during these days.

Veterans (as defined in Section 101 of Title 38, United States Code) and members of the Armed Forces on active duty, including members of the National Guard and Reserves on active duty (other than training), may participate. Persons participating in this special hunt must possess and present upon

demand verification of eligibility to participate in this hunt. Verification includes: Veteran's ID Card and/or Military ID Card for active duty, or a State issued driver's license or Identification Card with Veteran Designation.

Falconry Take of Ducks: Open concurrently with duck season and February 3–4, 2024, February 17-18, 2024 and February 24, 2024. 3/day. Possession limit triple the daily bag.

North Coast Special Management Area: All of Del Norte and Humboldt counties.

All Canada Geese: From November 9 extending for a period of 84 days (Regular Season) and from February 18 extending for a period of 21 days (Late Season). During the Late Season, hunting is only permitted on private lands with the permission of the land owner under provisions of Section 2016. Up to 10/day Canada geese of which only 1 may be a Large Canada goose, EXCEPT during the Late Season the bag limit on Large Canada geese is 0/day. Possession limit triple the daily bag.

Falconry Take of Ducks: Geese only. Concurrent with Small Canada goose season. 3/day. Possession limit triple the daily bag.

Humboldt Bay South Spit (West Side) Special Management Area: Beginning at the intersection of the north boundary of Table Bluff County Park and the South Jetty Road; north along the South Jetty Road to the South Jetty; west along the South Jetty to the mean low water line of the Pacific Ocean; south along the mean low water line to its intersection with the north boundary of the Table Bluff County Park; east along the north boundary of the Table Bluff County Park to the point of origin.

All species: Closed during brant season

Klamath Basin. Beginning at the intersection of Highway 161 and Highway 97; east on Highway 161 to Hill Road; south on Hill Road to N Dike Road West Side; east on N Dike Road West Side until the junction of the Lost River; north on N Dike Road West Side until the Volcanic Legacy Scenic Byway; east on Volcanic Legacy Scenic Byway until N Dike Road East Side; south on the N Dike Road East Side; continue east on N Dike Road East Side to Highway 111; south on Highway 111/Great Northern Road to Highway 120/Highway 124; west on Highway 120/Highway 124 to Hill Road; south on Hill Road until Lairds Camp Road; west on Lairds Camp Road until Willow Creek; west and south on Willow Creek to Red Rock Road; west on Red Rock Road until Meiss Lake Road/Old State Highway; north on Meiss Lake Road/Old State Highway to Highway 97; north on Highway 97 to the point of origin.

Small and Large Canada Geese from the first Saturday in October extending for 100 days, White-fronted and white geese from the first Saturday in October extending for 105 days. 30/day, up to 20 white geese and up to 10 dark geese, but not more than 2 Large Canada geese Possession limit triple the daily bag.

Sacramento Valley (West) Special Management Area: Beginning at the town of Willows; south on Interstate 5 to the junction with Hahn Road; east on Hahn Road and the Grimes-Arbuckle Road to the town of Grimes; north on Highway 45 to its junction with Highway 162; north on Highway 45-162 to the town of Glenn; west on Highway 162 to the point of beginning.

White-fronted geese: Closed after Dec 21, 3/day. Possession limit triple the daily bag.

Morro Bay Special Management Area: Beginning at a point where the high tide line intersects the State Park boundary west of Cuesta by the Sea; northeasterly to a point 200 yards offshore of the high tide line at the end of Mitchell Drive in Baywood Park; northeasterly to a point 200 yards offshore of the high tide line west of the Morro Bay State Park Boundary, adjacent to Baywood Park; north to a point 300 yards south of the high tide line at the end of White Point; north along a line 400 yards offshore of the south boundary of the Morro Bay City limit to a point adjacent to Fairbanks Point; northwesterly to the high tide line on the sand spit; southerly along the high tide line of the sand spit to the south end of Morro Bay; easterly along the Park boundary at the high tide line to the beginning point.

All species: Open in designated areas only

Martis Creek Lake Special Management Area: The waters and shoreline of Martis Creek Lake, Placer and Nevada counties.

All species: Closed until Nov 16

Northern Brant Special Management Area: Del Norte, Humboldt and Mendocino Counties.

Black Brant: From November 8 extending for 37 days. Possession limit triple the daily bag.

Balance of State Brant Special Management Area: That portion of the state not included in the Northern Brant Special Management Area.

Black Brant: From November 9 extending for 37 days. Possession limit triple the daily bag.

Imperial County Special Management Area: Beginning at Highway 86 and the Navy Text Base Road; south on Highway 86 to the town of Westmoreland; continue through the town of Westmoreland to Route S26; east on Route S26 to Highway 115; north on Highway 115 to Weist Rd.; north on Weist Rd. to Flowing Wells Rd.; northeast on Flowing Wells Rd. to the Coachella Canal; northwest on the Coachella Canal to Drop 18; a straight line from Drop 18 to Frink Rd.; south on Frink Rd. to Highway 111; north on Highway 111 to Niland Marina Rd.; southwest on Niland Marina Rd. to the old Imperial County boat ramp and the water line of the Salton Sea; from the water line of the Salton Sea, a straight line

across the Salton Sea to the Salinity Control Research Facility and the Navy Test Base Road; southwest on the Navy Test Base Road to the point of beginning.

White geese: From November 5 extending for a period of 88 days (Regular Season) and February 1-3, 2023, February 6-10, 2023 and February 13-21, 2023 (Late Season). During the Late Season, hunting is only permitted on private lands with the permission of the landowner under provisions of Section 2016. Up to 15 geese. Possession limit is triple the daily bag.

Proposed Changes and Analysis

1. Decrease the duck season length to 98 days in the Southern San Joaquin Valley, the Southern California, and the Balance of State zones. This recommendation decreases the duck season length by five days.

The existing duck season length for the referenced zones is 103 days. Closing on January 31 and maintaining a traditional opening day of Saturday in late October results in an annual adjustment to the general season length; from 103 to 98 days for the upcoming season. In prior rulemakings, the Commission adopted the latest possible closing date of January 31 rather than the historical closing day of the last Sunday in January, based on public input. The total days for all hunting methods combined is unchanged, remaining at 107 days.

2. Decrease the goose season length to 98 days in the Southern San Joaquin Valley, Southern California and Balance of State zones. This recommendation decreases the goose season length by 5 days in the in the Southern San Joaquin Valley and Southern California zones and two days in the Balance of State Zone.

The existing goose season length for the Southern San Joaquin Valley and Southern California zones is 103 days and 100 days in the Balance of State Zone. Closing on January 31 and maintaining a traditional opening day of Saturday in late October results in an annual adjustment to the general season length; to 98 days for the upcoming season. In prior rulemakings, the Commission adopted the latest possible closing date of January 31 rather than the historical closing day of the last Sunday in January, based on public input. The total amount of days for all hunting methods combined is unchanged, remaining at 107 days.

3. Allow geese to be taken during the Veterans and Active Military Personnel Waterfowl hunting days (VAMP Days) for the Balance of State Zone.

The existing regulation does not allow geese because all available hunting days in the Balance of State Zone were allocated prior to implementation of VAMP Days. See item 1 above. The decrease in the goose season to 98 days allows the option of goose hunting during VAMP Days in this zone while still offering the existing early and late goose seasons. However, in future rulemakings, either modifying the timing or reducing the Late Season for geese will need to be considered to allow goose hunting during VAMP Days in this zone. An alternative would be to move the Late Season for geese to coincide with VAMP Days in this zone. The total amount of days for all hunting methods combined is unchanged, remaining at 107 days. The total amount of days for all hunting methods combined is unchanged, remaining at 107 days.

4. Allow up to five days of falconry-only season in the Balance of State, Southern San Joaquin Valley and in the Southern California zones.

The existing regulation does not allow a falconry-only season because all available hunting days have been allocated. The length of the falconry-only season is contingent upon the number of days used for the general duck and goose seasons, in addition to the Youth and Veteran Hunt Days, as seasons cannot exceed 107 days.

POLICY CONSIDERATIONS

The legislature formulates laws and policies regulating the management of fish and wildlife in California. The general wildlife conservation policy of the State is to encourage the conservation and maintenance of wildlife resources under the jurisdiction and influence of the State (Section 1801, Fish and Game Code). The policy includes several objectives, as follows:

1. To provide for the beneficial use and enjoyment of wildlife by all citizens of the State;
2. To perpetuate all species of wildlife for their intrinsic and ecological values, as well as for their direct benefits to man;
3. To provide for aesthetic, educational, and non-appropriative uses of the various wildlife species;
4. To maintain diversified recreational uses of wildlife, including hunting, as proper uses of certain designated species of wildlife, subject to regulations consistent with public safety, and a quality outdoor experience;
5. To provide for economic contributions to the citizens of the State through the recognition that wildlife is a renewable resource of the land by which economic return can accrue to the citizens of the State, individually and collectively, through regulated management. Such management shall be consistent with the maintenance of healthy and thriving wildlife resources and the public ownership status of the wildlife resource;
6. To alleviate economic losses or public health and safety problems caused by wildlife; and
7. To maintain sufficient populations of all species of wildlife and the habitat necessary to achieve the above-state objectives.

With respect to migratory game birds, Sections 355 and 356 of the Fish and Game Code provides that the Commission may adopt migratory game bird hunting regulations as long as they are within the federal frameworks.

The Department has concluded that the proposed project will not have a significant adverse effect on the environment. No mitigation measures or alternatives to the proposed project are needed.

POTENTIAL FOR SIGNIFICANT EFFECTS

Previous reviews of other potential environmental effects were analyzed extensively in previous environmental documents. The analysis of these fifteen factors regarding migratory game bird hunting were examined in the 2006 Final Environmental Document for Migratory Game Bird Hunting of Waterfowl, Coots, and Moorhens (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605) and certified by the Fish and Game Commission. The modifications proposed are to increase hunter opportunity and reduce depredation of some goose populations

that winter in California. The Department concludes that the proposed project and existing hunting regulations will not cause significant adverse effects on the factors analyzed in the 2006 FED and summarized below.

Effects of Habitat Degradation

Breeding Areas

The 2006 analysis was presented on page 100 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605). The primary impacts on breeding waterfowl from agriculture are the cultivation or tillage of nesting cover (Higgins 1977, Kirsch 1969, Milonski 1958). A secondary effect of the agricultural process is the tillage of lands right up to the edges of ponds or other water sources, which effectively eliminates brood rearing habitat. These activities in the prairies are especially prevalent in years of drought where farmers can intensively farm all of a wetland basin.

In the primary duck production areas of Canada, there is greater opportunity during drought periods for intensive farming and greater demand for available forage for cattle. Unfortunately, waterfowl must compete for the same resources. Agriculture does not generally impact breeding habitats for most goose populations, because most goose nesting occurs in undeveloped areas of the arctic.

Wintering Areas

The 2006 analysis was presented on page 101 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605). Wetland habitats in California have been reduced from an estimated five million acres to less than 450,000 acres at present. Most of these wetlands have been converted to agricultural uses, but urban developments have also reduced the wetland acreage in California. In the critically important Central Valley, about 70 percent of the remaining acreage is in private ownership and managed primarily as duck hunting clubs.

Some of the agricultural areas continue to provide habitat of value to waterfowl through the availability of waste grains and the provision of nesting cover. However, certain agricultural activities, such as fall plowing, can reduce food availability for waterfowl.

Habitat conversions by humans have reduced the habitat available for waterfowl. These conversions take place over a period of time, such that substantial habitat losses during the period of the proposed project are not likely to occur and act in a cumulative manner with the hunting of waterfowl, coots and moorhens in California that would result in significant adverse effects to the environment.

Effects of Diseases, Pesticides, and Other Contaminants

The 2006 analysis was presented on page 101 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605). Diseases, pesticides and other contaminants will likely cause the death of waterfowl, coots, and moorhens in California. Even though some losses to disease can be in the tens of thousands of individual birds, these losses are small relative to the populations present in the State. Accordingly, the Department concludes that the combination of the proposed project and existing regulations and potential losses to diseases and other contaminants will not result in a significant adverse impact to waterfowl, coot and moorhen populations in California in 2024-2025.

Effects of Illegal Harvest

The 2006 analysis was presented on pages 110 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605). The Department currently has a staff of about 430 game wardens stationed throughout the State. The Department analyzed waterfowl-related citations to estimate the extent of waterfowl mortality occurring as a result of illegal take of waterfowl in California. The level of illegal harvest is difficult to determine (USDI 1988a:29–30). To model the possible extent of illegal harvest, the Service compared known survival rates of mallards against known hunting mortality (USDI 1988a). Estimated average annual survival rates are 66 percent and estimated hunting mortality is 18 percent (based on recoveries of banded birds), all other forms of mortality would thus equal 16 percent of the population. Since other mortality factors are known to exist (disease, predation, starvation, weather), illegal harvest is considerably less than 16 percent and is probably not a significant portion of the annual mortality of mallards (USDI 1988a).

Effects of Subsistence Harvest

The 2006 analysis was presented on page 112 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605). Native and nonnative peoples living in remote areas of Alaska and Canada are dependent on migratory birds and other wildlife for subsistence. They take birds and eggs during spring and summer for food (USDI 1988a:26). These levels of harvest do not appear to be acting as a cumulative effect in conjunction with current hunting, because in general, the populations of migratory birds that are being monitored continue to increase. In particular, goose populations affected by this project are growing and some are at or near record levels (Appendix F).

Effects of Harvest Outside the United States

The 2006 analysis was presented on page 113 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605). The harvest of waterfowl in areas outside of California is easier to quantify than to determine what specific effects it has on California's migratory and resident populations because of mixing of different populations on the winter grounds. Harvest in two areas, Canada, where most of California's waterfowl originate, and Mexico, where segments of some populations winter, could act in addition to the harvest in California.

This information identifies the need for migratory game bird management to be conducted on a flyway, multi-flyway, or population basis. The total harvest of waterfowl throughout North America results in a decrease in the number of waterfowl in that year. Issues, such as subsistence harvest in Alaska and Canada and the harvest of birds outside the United States, clearly identify the need for a comprehensive perspective. The establishment of hunting frameworks by the Service addresses this issue by modifying hunting regulations in response to long-term population fluctuations. The Department concludes that the combination of California harvest from this proposed project and harvest outside the State will not result in significant adverse impacts to migratory bird populations.

Effects of Major Development Projects

The 2006 analysis was presented on page 115 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605). Migratory game bird habitat will continue to be altered in California as the human population increases. However, strong enforcement of State and Federal laws, such as the Clean Water Act, as well as Commission policy of no net loss of wetlands, will help to minimize any adverse effect. Changes in agricultural policies at the national level may also affect the quantities of waste grain available to some species of migratory game birds. Competitive urban needs for water, especially as it relates to rice production, may affect waterfowl food supplies in the future. This will be especially prevalent when drought conditions return.

Effects on Listed Species

The 2006 analysis was presented on page 91 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605). The Department is charged with the responsibility to determine if any hunting regulations will impact threatened and endangered species. It complies with this mandate by consulting internally and with the Commission when establishing migratory game bird regulations to ensure that the implementation of the proposed project and existing hunting regulations do not affect these species. The Department has concluded that, based on conditions of the proposed project and existing hunting regulations, differences in

size, coloration, distribution, and habitat use between the listed species and legally harvested migratory game birds, the proposed project will not jeopardize these species.

Effects on Migratory Bird Habitats

Habitat Protection Effects

The 2006 analysis was presented on page 93 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605). Waterfowl, coot and moorhen hunting in California provide a positive incentive for private individuals to acquire, develop, and maintain habitat that might otherwise be converted to other uses. Habitat provided by hunters is entirely available at night as a roosting site and is partially available during the day during hunting season (during days when private wetlands are not hunted or on portions of private wetlands that are not hunted). Long-term vegetative changes may occur in areas that are managed specifically for wintering waterfowl foods. This may affect species more dependent upon climax vegetation than waterfowl, coots and moorhens, which favor early successional stages of vegetation.

Short-term Effects on Habitat

The 2006 analysis was presented on pages 93 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605). Some short-term impacts of the proposed project, and existing hunting regulations such as vegetative trampling and litter in the form of spent shell casings, occur. These impacts are considered minor, and the effects on vegetation are generally reversed in the next growing season (USDI 1975:205).

Effects on Recreational Opportunities

The 2006 analysis was presented on page 96 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605). The implementation of the proposed project and existing regulations will result in the presence of hunters, their vehicles, and their dogs in migratory bird habitats throughout the State. The enjoyment of observing waterfowl by those opposed to hunting may be reduced by some degree by the knowledge or observation of hunters in the field. Because the proposed project and existing regulations occurs for no more than 107 days in largely unpopulated areas of the State, this will not result in significant adverse environmental impacts.

Effects on Methods of Take and Impacts on Individual Animals

The 2006 analysis was presented on page 88 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 9605). Section 20.21, subpart C, of Part 20, Title 50, CFR, and Section 507, Title 14, CCR, stipulate the methods of hunting that are allowed by the Service for migratory game birds. The Commission, in concert with Federal law, has authorized the use of shotguns 10-gauge or smaller, muzzle-loading shotguns, falconry, bow and arrow and crossbows, and dogs for retrieval or take. Historically, these methods of take have been used on a variety of migratory game birds throughout North America. In previous regulation-setting processes, both the Service and the Commission have stipulated restrictions on equipment and methods of take which attempt to provide for reasonably efficient and effective taking of waterfowl, coots and moorhens.

Effects from Drought

Drought cycles are part of the ecological system in California and waterfowl are well adapted to dealing with low water years e.g., delaying nest initiation, re-nesting capability, and reduced clutch size. Still, multi-year droughts can reduce waterfowl populations on a local scale and a much broader continental scale. Drought conditions impact waterfowl in a variety of ways including: degraded habitat quality which creates poor breeding habitat conditions (McLandress et al. 1996), lower food production (both natural and agricultural) which can limit the ability of birds to migrate and breed successfully (McWilliams et al. 2004), as well as expose large portions of waterfowl populations to disease. This section summarizes potential impacts that drought may have on waterfowl throughout the annual cycle in California.

California is an area of continental importance for waterfowl during various annual life history events (CVJV 2009). Winter is more significant than breeding due to the abundance of waterfowl that migrate here from northern breeding areas (Bellrose 1980). Stresses encountered on wintering areas can have carry over effects during spring migration or the breeding season, which ultimately can limit populations (Klaassen 2002, Inger et al. 2008). It is critical that adequate habitat for waterfowl is provided during winter.

Breeding

Female ducks find a mate on wintering areas and breed where they were hatched because of high natal fidelity (Rowher and Anderson 1988). Critical components to when and where a hen will nest are available brood water and adjacent upland habitat. In dry years females may leave their natal area and migrate to areas with better quality habitat (Johnson and Grier 1988). Females need time in a location to build energy stores such as protein which is typically associated with aquatic invertebrates (Krapu 1974). Egg formation and laying will be delayed until conditions are adequate (Ankney and Alisauskas 1991). Early in the breeding season many species of ducks delay nest-initiation in response to

drought. During periods of severe drought many species of waterfowl may not breed at all. If a rapid decline in water levels occurs midway into nesting or during incubation females may desert their nests (Smith 1971). By not breeding when conditions are poor, birds enhance their survival and their probability of reproducing later when habitat conditions improve (Krapu et al. 1983).

Reduced recruitment can occur when ducks travel great distances to find adequate habitat conditions for nesting or re-nesting because energy reserves have been depleted. Reduced recruitment can result from: choosing not to nest, smaller clutch sizes, a lower likelihood of laying a second clutch (Grand and Flint 1991) and later laying date which has been shown to reduce nest success and brood survival in some species (Dzus and Clark 1998). Further, females that migrate out of their natal area may also have a higher mortality rate due to increase susceptibility to predation in unfamiliar areas. Reduced recruitment and adult survival could decrease short-term population levels and if poor habitat conditions persist for subsequent years, reduce long term population levels. An adaptation to drought is in years of good habitat conditions, hens can raise numerous broods giving waterfowl populations the ability to recover quickly (McLandress et al. 1996).

Critical breeding areas for ducks in California as identified by the Department's breeding population survey for waterfowl (Figure 3-A) are the Sacramento Valley, San Joaquin Valley Grasslands, Suisun Marsh and high desert region of Northeastern California. Figures are for mallards because they make up the majority of the breeding duck population in California (Figure F-4). Breeding population numbers in the Central Valley (i.e. Sacramento and San Joaquin valleys) are correlated to precipitation as well as recruitment from previous years (Figure 3-B and C). Breeding mallard populations in northeastern California, however, do not follow precipitation trends (Figure 3-D) indicating that other factors may be impacting duck production and breeding population trends in that region. The statewide breeding population of mallards has remained relatively stable except for northeastern California where the population trends are decreasing. The cause of this decline is unknown but speculated to be the lack of adequate brood water in early spring and the increase in invasive plant species (e.g. *Lepidium* sp.) throughout the area (Dave Mauser, Klamath Basin NWR personal communication).

Another breeding population indicating a decline is Canada geese that nest in northeastern California. Historically, Canada geese nested in this region in larger numbers but have declined considerably (Figure 4). Climate change is speculated (i.e. dry conditions over the long term; NOAA unpublished data) to play a significant role in the decline but no analysis or studies has been conducted (Melanie Weaver CDFW personal communication). The Department will include an analysis of possible climate change impacts as well as a survival analysis from Department leg banding data in an upcoming management plan for this population.

Molting

During late July, male ducks will typically migrate to a large permanent water marsh to molt while females follow soon after nesting in August. Like nest site fidelity, ducks will molt in the same location as previous years (Yarris et al. 1994). One study has indicated that 60 percent of mallards that breed in the Central Valley will migrate 280 miles to northeastern California to molt while 25% molt in marshes in the Central Valley (Yarris et al. 1994). Molt is an extremely vulnerable time for ducks because they become completely flightless for 30–40 days. Marsh water levels are critically important during the molting period and must be maintained or birds could be subject to depredation by mammalian and avian predators (Arnold et al. 1987).

Avian botulism

Botulism outbreaks typically occur in marshes with warm water, little flow, high organic load (rotting vegetation) and high amounts of algae (Rocke and Samuel 1999). Botulism is a bacterium that naturally occurs in wetland environments and persists in marshes with histories of outbreaks due to the release of spores into the environment. Ducks are infected by ingesting the bacterium and become paralyzed, eventually dying. Duck carcasses attract flies which lay eggs that produce maggots that in-turn eat the flesh of the carcass and consume botulism spore. Maggots drop into the water and are eaten by ducks in the marsh thereby escalating mortality events (Rocke and Samuel 1999). Outbreaks of avian botulism (Fleskes et al. 2010) often coincide with the molt cycle of ducks and the brood rearing stages of late nesting duck species. Many studies have been conducted to better understand the cycle of botulism and inform managers of how to prevent or minimize outbreaks

In California, botulism outbreaks have been reported in every region of the state however, frequency is not well known due to reporting inconsistencies (Figure 5; USGS National Wildlife Health Center personal communication). A robust analysis on this disease data is not possible because of the reporting inconsistencies and the numerous factors possible that may have caused the outbreaks. In some years die-offs can be quite severe (Figure 5). Botulism outbreaks can kill large numbers of hens, broods and molting ducks (Fleskes et al. 2010).

During drought summer water allocation is reduced for managed wetlands in the Central Valley and the Klamath Basin in northeastern California. Decreasing the number of flooded wetlands increases concentrations of waterfowl, thus raising the chance of an outbreak and more birds being affected. Breeding mallards throughout California molt in the Klamath Basin. The Klamath Basin experiences botulism annually, even during normal water years (Figure 5-C). During drought years the potential for a high mortality event is great.

Wintering Waterfowl

Waterfowl migrate from northern latitudes to California beginning in August. Multiple stopover sites are used during migration to rebuild energy reserves. The Klamath Basin in northeastern California is one of the most important waterfowl stopover sites during fall and spring for waterfowl in the Pacific Flyway (Bellrose 1980). Peak numbers of waterfowl are seen on major wintering areas south of the Klamath Basin by December.

During early January, the Department and the Service and conduct the Midwinter Waterfowl Survey. This survey has been conducted since 1953 and has provided managers with midwinter indices of waterfowl species. During midwinter California supports 66 percent of all ducks (excluding mergansers; based on long term average 1955–2014) in the Pacific Flyway, 40 percent of which occur in the Sacramento Valley. Of total waterfowl in the Pacific Flyway (i.e. geese, ducks, swans, coots and cranes), California supports 73 percent, the Sacramento Valley alone supports 43 percent (Olson 2014, Department unpublished data). California waterfowl distribution based on this survey indicates the Sacramento Valley harbors 60 percent of total waterfowl, the San Joaquin has 20 percent, and the Delta, Suisun Marsh, northeastern California combined hold 10 percent of total waterfowl.

Sensitive wintering populations

Sensitive waterfowl subspecies also occur in California during winter. Tule greater white-fronted geese are one of the smallest populations of geese occurring in North America making them a species of conservation concern (Yparraguirre et al. 2020). Tule geese are monitored by the Department and Service through telemetry and population surveys throughout the winter in the Sacramento Valley, the Delta and northeastern California. This subspecies of white-fronted goose uses permanent marshes early in winter and begins to feed in rice fields during midwinter. The bulk of the Tule population overwinters (November to February) adjacent to and on the Sacramento National Wildlife Refuge Complex. To minimize hunting pressure on this population, a special management area in the Sacramento Valley is maintained that has restrictive hunting regulations (reduced season length and bag limit). Department staff monitor harvest by collecting tissue samples from all hunter-harvested greater white-fronted geese coming through check stations on the Sacramento National Wildlife Refuge Complex. DNA is extracted from the tissue samples and analyzed to determine if a Tule goose.

This population could be negatively impacted by poor body condition caused by limited habitat, particularly reduced rice decomposition flooding.

Wintering waterfowl habitat

Since the implementation of the NAWMP (USFWS 1986) and the subsequent initiation of the Central Valley Joint Venture (CVJV 1990), the wetlands of the Central Valley have fluctuated in size and quality (Fleskes et al. 2005, CVJV

2009). Wetland acres as of 2006 were estimated to be 205,900. Current wetland acres are being calculated as there have been a number of large easement properties acquired since 2006. The amount of wetland acres as well as the quality have increased since the last update (i.e. moist soil management and infrastructure).

Additionally, since 1996 changes in post-harvest rice straw decomposition have added an estimated 209,000 acres of flooded rice for wintering waterfowl in the Sacramento Valley (Garr 2014). Increased post-harvest flooded rice and increased wetland area is speculated to be the cause for the increasing densities of waterfowl seen in the Sacramento Valley relative to other areas on the midwinter survey (Fleskes and Yee 2005). Recent body condition studies of numerous wintering waterfowl species have improved significantly (Ely and Raveling 1989, Miller 1986, Thomas et al. 2008, Skalos et al. 2011) particularly within the Sacramento Valley. Numerous duck and goose species have changed their roosting and feeding habits considerably because of the increase in water on the landscape (Fleskes et al. 2005). For example, prior to post-harvest flooded rice Pacific greater white-fronted geese traveled an average of 17.5 miles from roost to forage areas. This distance has been reduced to 15 miles (14%) because the proximity of undisturbed roost areas (Ackerman et al. 2006). Increased body condition (Skalos et al. 2011) combined with undisturbed roost areas (Ackerman et al. 2006) has probably been a major contributor to the recovery of Pacific greater white-fronted geese since the record low in the mid 1970's (Appendix F); Pacific greater white-fronted goose population indices). Waterfowl and non-game waterbird species have been known to use flooded agriculture in the Sacramento/San Joaquin Delta region (Shuford 1998) as well as the Tulare Basin in the San Joaquin Valley (Fleskes et al. 2013). Reduction of post-harvest agricultural field flooding because of drought in these regions could have a large impact on wintering waterfowl populations because most of the natural marsh habitat has been eliminated (Gilmer et al. 1982).

The CVJV has modeled the food resource needs of wintering ducks in California. The CVJV estimated that California currently has an adequate supply of food resources for all waterfowl species during winter. The drought model scenario decreased the total winter flooded wetlands from an estimated 197,200 to 148,000 acres and flooded rice from 305,000 to 135,000 acres in the Central Valley. Flooding rice for decomposition was assumed to be limited and at least 136,000 acres of the dry acreage would be harvested and not deep tilled post-harvest (therefore accessible). In this scenario energy available to ducks would be reduced to below adequate levels by mid-January (CVJV 2014).

Waterfowl can make up energetic shortfalls from limited food resources (Skalos et al. 2011) on wintering areas during migration if the adequate food resources are provided on stopover sites (Bauer et al. 2008). If the Central Valley has limited food resources for waterfowl, the CVJV speculates that further stress would be applied to waterfowl populations migrating through the Klamath Basin during spring due to the ongoing water allocation issues in that region (CVJV 2014).

Avian cholera

Avian cholera (*Pasturella multocida*) is a common winter bacterial infection in waterfowl. This disease agent occurs naturally in waterfowl populations and particular species (e.g. Lesser snow geese, Ross's geese, mute swans) tend to be reservoirs for cholera (Samuel et al. 2005, Pedersen et al. 2014).

Environmental and physiological conditions that stress (e.g. prolonged cold temperatures, wind, precipitation, inadequate food resources and injury) birds tend to influence the expression of this disease. Blanchong et al. (2006) found that highly eutrophic water conditions are correlated to cholera abundance in wetlands. These conditions would be promoted in years of drought due to slow flow-through in wetlands. Eutrophic conditions would also be exacerbated by large concentrations of waterfowl defecating in wetlands, agricultural runoff (i.e. cattle and fertilizer) or other upstream sources of nutrients. This study also cited the increased abundance of cholera in wetlands with higher protein concentrations. Increased protein concentrations were correlated with the number of dead bird carcasses found emphasizing the need for monitoring and removal to stem outbreaks.

Figure 6 indicates the frequency and intensity of avian cholera mortality events in California as reported to the USGS Wildlife Health Center. Cholera outbreaks tend to be more common in the Sacramento Valley and northeastern California. This may be from colder temperatures experienced during winter but more likely from the high densities of waterfowl (particularly *Chen sp.*) at the time of the outbreak. Cholera outbreaks have the potential to be very severe; an outbreak in the Salton Sea during 1991 claimed an estimated 155,000 birds.

Concerning sensitive waterfowl populations Greater white-fronted geese (i.e. Tule geese) seem to be resistant to outbreaks of avian cholera (Blanchong 2006).

Hunter harvest impacts on waterfowl populations

Wintering numbers of mallards are relatively low compared to other wintering species and the population of mallards that breed in the state. The 2023 California midwinter survey (the 2021 and 2022 survey was not conducted due to the COVID-19 pandemic and the 2024 results were not available at the time of environmental document development) indicate 1,705,261 Northern pintail, 564,442 Northern shoveler, 342,545 American wigeon, 333,104 American green-winged teal, compared to 88,091 mallards counted on the survey. Nonetheless, mallards are the most sought-after species by hunters by proportion of population (Raftovich et al. 2019).

Currently, little evidence supports hunter harvest having an additive effect on duck population trends (Afton and Anderson 2001). Rather, available breeding habitat (i.e. nesting habitat and brood habitat) is the driving factor behind most duck population changes. Even in absence of hunter or other mortality factors, density dependent factors on breeding areas (available habitat, predator response etc.) drive duck populations (Newton 1994, Clark and Shulter 1999, Viljugrein et al. 2005). Figure 7 compares hunter harvest in relation to the

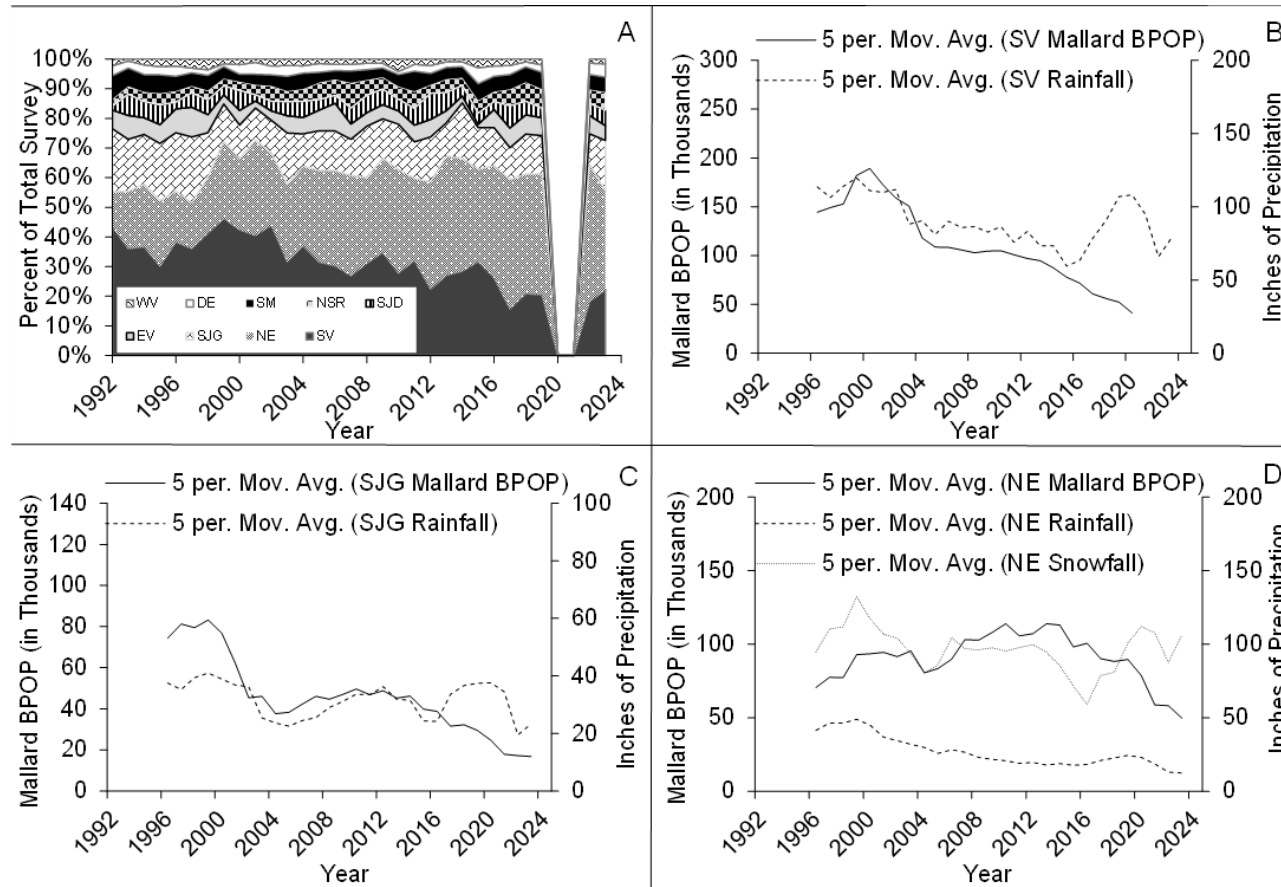
breeding population of mallards in California. Harvest has very little correlation (Chart A; $R^2=0.11$, Chart B; $R^2=0.29$, respectively) with subsequent breeding population levels.

A number of goose populations have increased substantially in the Pacific Flyway in recent years, with continued hunting and more liberal season and bag limits (Appendix F). Examples are the Pacific greater white-fronted goose and the Ross's goose. Pacific greater white-fronted geese have increased from 75,000 in 1978 to 650,000 by 2010. Surveys conducted in the 1960's estimated Ross's geese at 10,000 while the current population estimate is 700,000. When goose populations are low, they are vulnerable to over exploitation by sport hunting. Ducks can breed successfully at age one while geese will breed at age two to three (refer to "K selection"). In the past, goose populations have been subject to overexploitation by predators (e.g. Aleutian Canada goose; PFC 2006^b) or overharvest by subsistence or recreational hunting (Pacific greater white-fronted goose; Pamplin 1986). Recovery actions have successfully increased these populations.

The Service implemented a general harvest strategy for setting duck framework regulations that regularly occur in California and are sought after by hunters (as explained in the Adaptive Harvest Management Section under Background and Existing Conditions). These harvest management strategies ensure duck populations are healthy over the long-term while providing hunting opportunity consistent with the long-term health. As a participant of the Pacific Flyway Council, the Department reviewed and voted to adopt these management strategies for establishing seasons and bag limits. In addition, the Department participates in the monitoring of various populations, both wintering and breeding. If defined populations goals are not met than bag or season limit reductions are triggered. For example, the California Breeding Population Survey is used in the Adaptive Harvest Management strategy that establishes regulatory packages for most duck species for all 11 states in the Pacific Flyway.

The Pacific Flyway is currently working on revising the management plan for Tule white-fronted geese. The plan will incorporate population estimates derived from Department ground surveys (Yparraguirre et al. 2020), telemetry data and public hunt area harvest from check station measurements. Data based management actions will ensure the conservation of waterfowl species in California over the long term.

Figure 3. Proportion of California breeding mallard population⁵ by stratum 1992-2023 (Chart A), Sacramento Valley (SV) mallard breeding population estimates and total rainfall¹ 1992-2023 (Chart B), San Joaquin Grasslands (SJG) mallard breeding population estimates and total rainfall² 1992-2023 (Chart C), Northeastern California (NE) mallard breeding population estimate, total rainfall³ and average seasonal snow water content⁴ 1992-2023 (Chart D).



¹Total precipitation values derived January to April prior to breeding season using Lincoln, Nicolaus, Stonyford, Bangor, Paradise, Thomas Creek weather stations. ²Total precipitation values derived January to April prior to breeding season using Green Springs and Stockton weather stations. ³Total precipitation values derived January to May prior to breeding season using Cedarville, Doyle, Juniper Creek and Tulalake weather stations. ⁴Total precipitation values derived January to May prior to breeding season using Adin Mountain, Cedar Pass, Dismal Swamp and Independence

Figure 4. California Department of Fish and Wildlife, Northeastern California Canada Goose Survey 1950–2013.

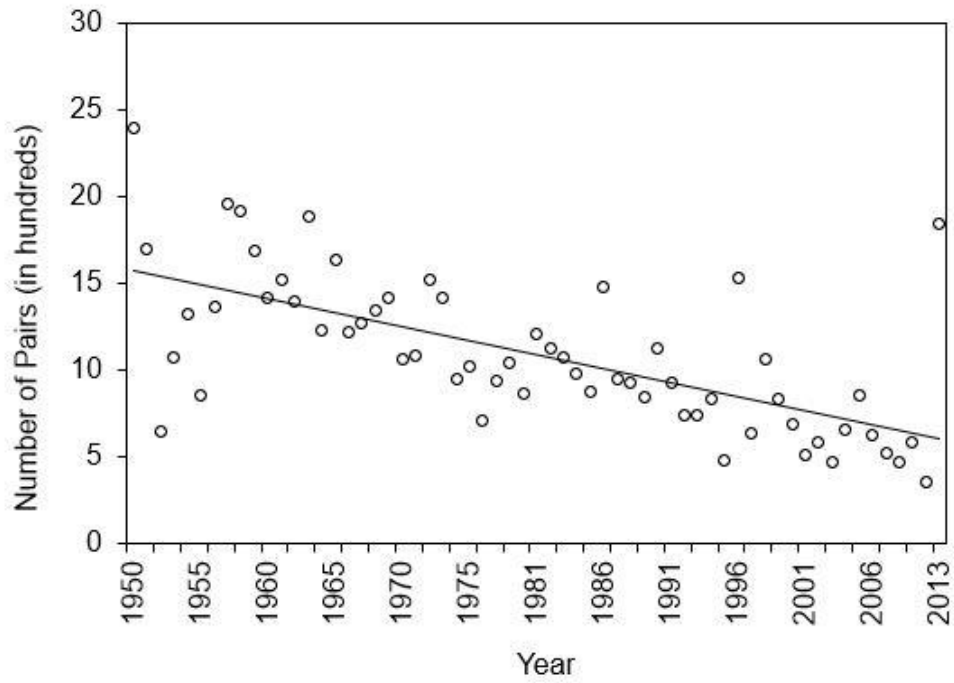


Figure 5. Regional waterfowl mortality from botulism, 1970–2023. Data from U.S. Geological Survey WHISPer database.

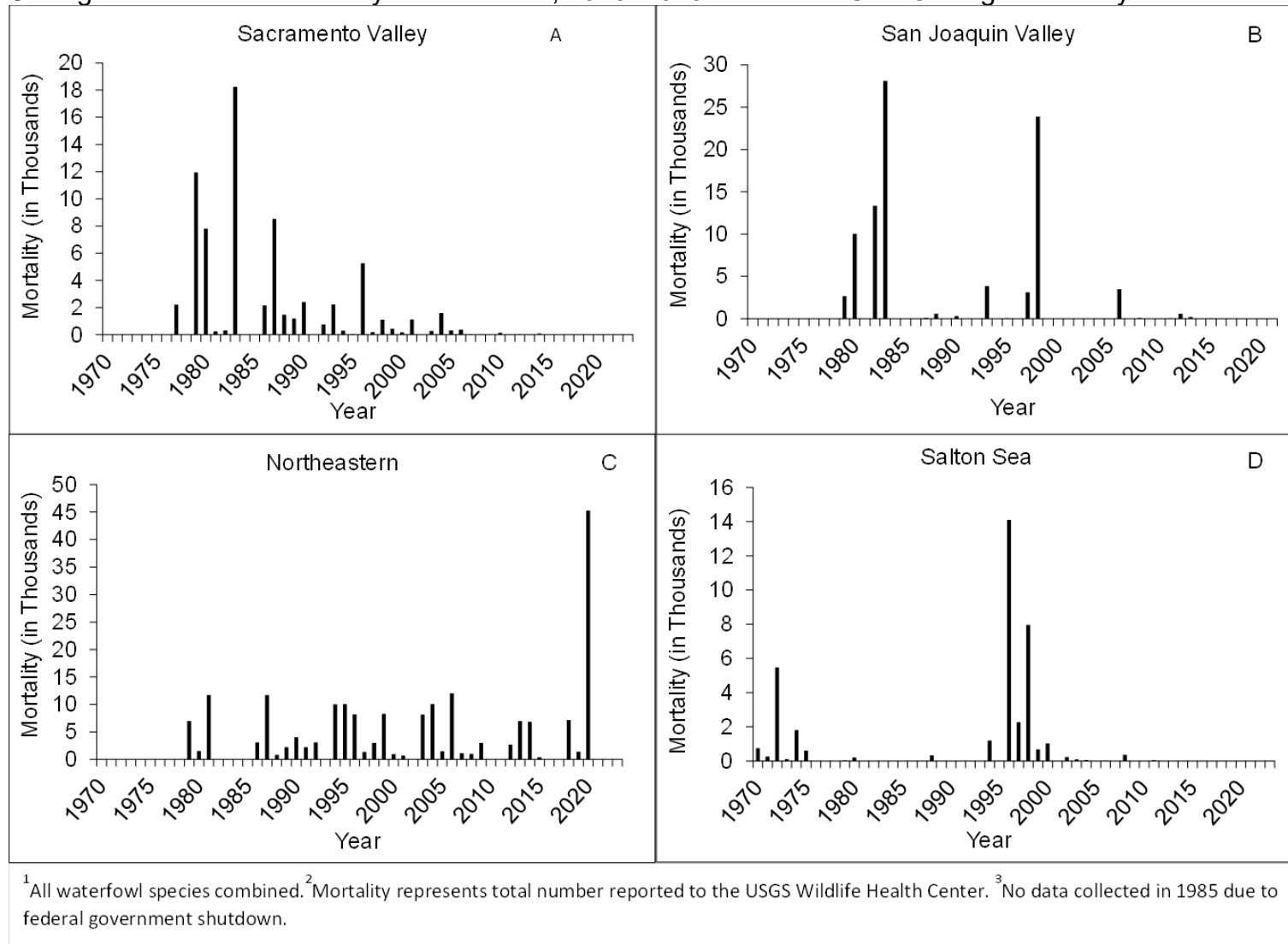


Figure 6. Regional waterfowl mortality from avian cholera, 1970–2022. Data from U.S. Geological Survey WHISPers database.

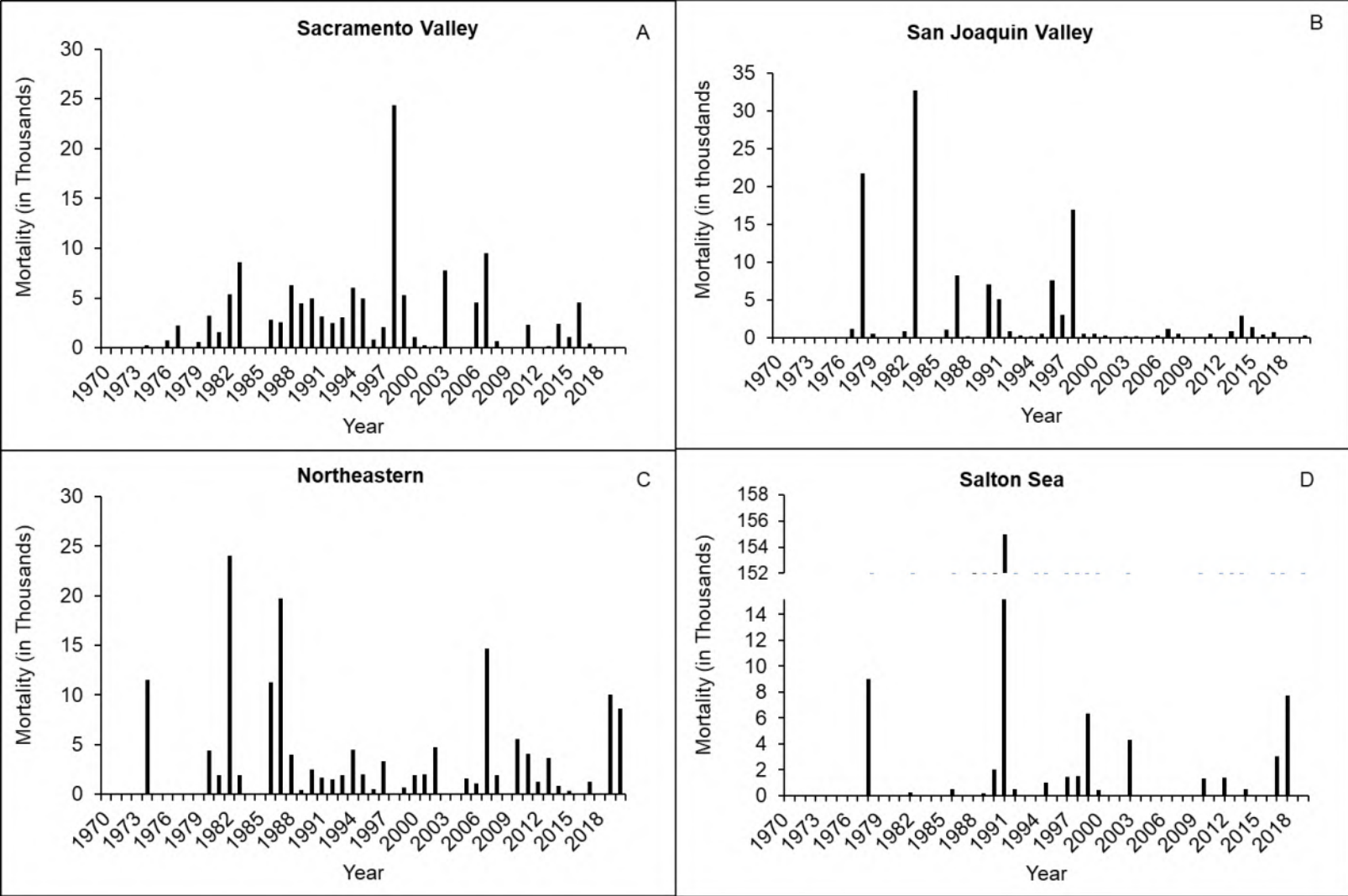
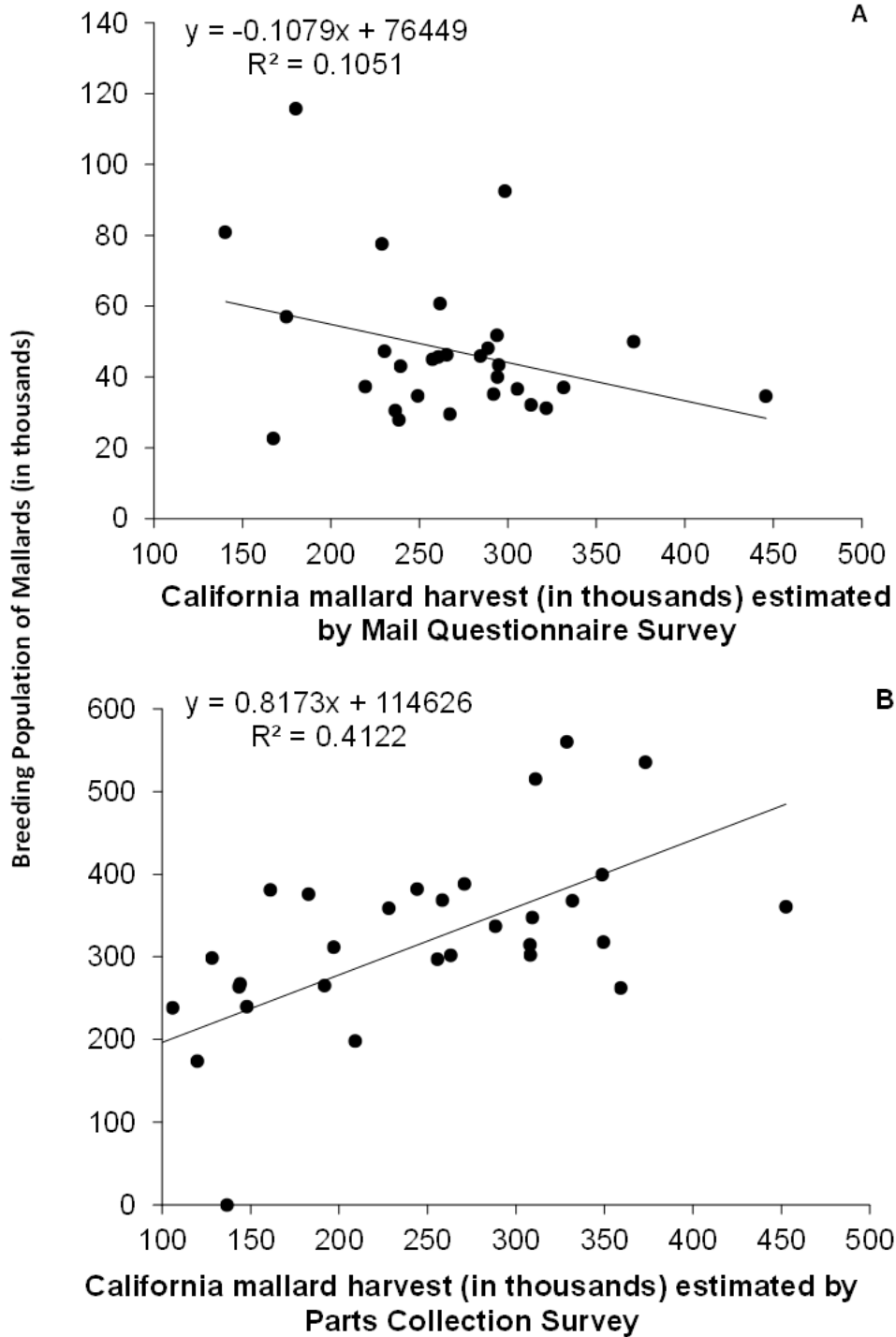


Figure 7. California breeding mallard populations estimates vs hunter harvest: 1960–1990 (Chart A), 1991–2023 (Chart B).



Effects of Habitat Change

Agriculture and urban development dominate the landscape in the Central Valley of California (Framer et al. 1989). Over the past 30 years cropping patterns have changed considerably and urban development has increased by 25–35% in the Central Valley (U.S. Department of Agriculture National Agricultural Statistics Service [USDA NASS] 1992–2017, California Department of Conservation [CDOC]). Mallards use certain agricultural crops for breeding, however urban development does not provide useful habitat (Skone et al. 2016, McLandress et al. 1996, Kucera and Barrett 1995). Numerous studies indicate that population bottlenecks in waterfowl often occur when vital rates during the breeding season (e.g., nest success, duckling survival) are low (Koons et al. 2014). Low vital rates can be caused by several reasons but the removal or reduction in quality of habitat in areas with extensive human development is a common problem (Reynolds et al. 2001). Understanding how local mallard populations change in conjunction with land use would help managers strategize conservation planning to benefit breeding mallards in the Central Valley.

Breeding waterfowl surveys have been conducted by the Service in the midcontinent of North America since 1955 (USFWS 2022b). More recently, states began breeding waterfowl surveys as part of a joint effort to manage migrant and local populations. The Department has monitored breeding waterfowl populations since 1950, with a major revision to the survey design in 1992 (Appendix C, CDFW 2022). The Central Valley boasts some of the highest densities of breeding mallards in North America and is a major component of the Western Mallard population in the Pacific Flyway (USFWS 2022b, Sauer et al. 2017, McLandress et al. 1996). Over the past 30 years the Central Valley has seen a 60% decline in breeding mallards (CDFW 2022).

The CVJV was established in 1988 as part of the North American Waterfowl Management Plan (1986) due to its critical importance to wintering waterfowl. The CVJV is considered the major conservation planning entity for birds and their habitats in the Central Valley, as it incorporates elements of resource agencies as well as academic and private interests (CVJV 2006). The CVJV consists of five major planning regions which include: the Sacramento, Yolo–Delta, Suisun, San Joaquin and Tulare (CVJV 2016, see Figure 1). The priorities of the CVJV have evolved to incorporate a wider reach of species and protect and restore habitat for both non-breeding and breeding birds (CVJV 2006). An evaluation of mallard populations in conjunction with land use changes within planning regions of the CVJV is necessary for the Department and its partners to improve mallard habitat and their breeding populations in the state.

Analysis

Waterfowl breeding population surveys (hereafter BPOP) conducted by the Department were used to assess mallard population trends in conjunction with agricultural and urban landscape changes. Department survey estimates for the Central Valley were recalculated to fit CVJV regional strata (Appendix G-5). These adjustments were possible because the Department survey uses georeferenced transects which allow assigning of new strata using GIS (ESRI 2013). The CVJV boundary for the Tulare region was not included as it encompasses a significant amount of dry foothill and desert areas that have little waterfowl value. Instead, the San Joaquin Desert survey strata was used, and the north boundary was adjusted to fit the CVJV boundary. The Suisun region was not included in this assessment as it has very little agriculture or urban land use types. Other methods (e.g., Normalized Difference Vegetation Index, a.k.a. NDVI) may be used to assess breeding waterfowl trends in this region in the future along with other Department survey strata like Napa and Santa Rosa valleys and northeastern California.

Agricultural data was obtained from California county agricultural commissioner's reports spanning 1980–2017 (USDA NASS 2019). Urban development data were obtained from California Department of Conservation (CDOC) bi-annual reports (CDOC 2019). To assess various aspects of habitat conservation, the cumulative total acres of areas purchased by the Department and the Service; or private lands enrolled into the Conservation Reserve Program (hereafter CRP) were used (CDFW unpublished data, USFWS unpublished data, USDA Farm Services Agency 2019). Lastly, rainfall and temperature data were gathered from weather stations via the National Oceanic and Atmospheric Administration National Centers for Environmental Information, to assess breeding population changes in relation to climate (NOAA NCEI 2019).

Survey strata boundaries overlap numerous counties, therefore aggregation of agriculture or urban area from the county level to the survey strata level was necessary (Appendix G-17). Central Valley Joint Venture regional boundaries extend to the edge of the Central Valley, but county boundaries often extend well beyond into the coastal or Sierra foothills. The vast majority of each counties' agricultural footprint lies within the Central Valley; therefore, the aggregation of total county data was not considered problematic for most crop types, except for rangeland. In some cases, adjustments needed to be made to distribute crops where counties overlapped basin boundaries (Appendix G-5).

Rangeland was difficult to assess within each survey stratum as it occurs on the fringes of the valley and most often extends beyond the boundaries of the CVJV. Thus, total rangeland based on county data was the only available option at this time. Even though an accurate amount of rangeland could not be calculated in

the CVJV area, total rangeland is a useful index because conversion to other agriculture (e.g., almonds) or to urban area is more likely to occur on the edges of the Central Valley.

Urban area extent reported in CDOC biannual reports was converted into annual estimates using simple linear regression to fill in the gaps between years (CDOC 2015, Kutner et al. 2005). GIS was used to assess whether cities fell within CVJV boundaries to not inflate the amount of urban in each area. In some cases, a correction factor was created (ESRI 2013). For example, in Solano County, the cities of Benicia, Dixon, Fairfield (including Travis Airforce Base), Rio Vista, Suisun City, Vacaville and Vallejo are largely urban development. Some of these cities overlap both the Yolo–Delta region and Suisun regions, or lie on the edge of planning regions where part of the urban footprint is outside of the scope of the survey strata. Data reported by Gazetteer in 1980, 2005 and 2016 was used to estimate annual urban growth of these areas from 1992–2017 using linear regression (U.S. Census Bureau 2016). Historic satellite imagery was used to assess the proportion of each city that occurred in each region to derive an accurate representation of urban growth over time within the Yolo–Delta and Suisun planning regions (Appendix G-17).

Three sets of covariates were modeled against mallard BPOP estimates from 1992–2017 to assess the effects of land use changes, conservation efforts and climate. The first set of models compares mallard BPOP estimates to changes in the agricultural landscape in each region. Crops were combined to include: Tree Crops, Vine Crops, Row Crops and Field Crops. Rice, Irrigated Pasture and Rangeland were considered different enough to have their own category. Crop specific relationships were not explored but may reviewed in the future. Mallard populations are expected to correlate positively with habitat types that ducks are known to use for nesting (e.g., row crops, field crops, pasture) and correlate negatively with habitat types that provide no nesting value (e.g., tree crops or urban). Over the past 30 years considerable effort has been placed on habitat protection and restoration via fee title acquisition or by easements. Thus, the second set of models compare combinations of managed (i.e., Type A Wildlife Areas) and unmanaged (i.e., Type C Wildlife Areas) governmental (i.e., Department and Service combined) habitat acquisitions, along with CRP acreages to mallard BPOP within each region by year. Fee title acquisitions were assumed to have little correlation with mallard BPOP as many of these properties do not provide significant amounts of summer wetlands. CRP properties are comprised of unirrigated farmland set aside, fallowed or planted with a cover crop but do not provide summer water. Mallard BPOP's are expected to have little correlation with CRP acreage as the total area is relatively small in most regions and only a portion of these acres would be suitable breeding habitat. Precipitation and temperature can affect the success of waterfowl nesting therefore the third set of models compared these variables to mallard BPOP by

year. Specifically, the cumulative amount of precipitation and average temperature between January–April prior to the breeding season at one weather station per stratum was used. Previous assessment of precipitation by the Service indicated that California mallard BPOP's were not correlated with spring rainfall (i.e., more rain does not equal more ducks), so it is expected to remain true. Temperature, however, may have an impact as high temperatures can cause nest failure, therefore mallard BPOP is expected to be negatively correlated with higher temperatures.

Generalized linear models were used to model each covariate against mallard BPOP (Kutner et al. 2005). All analyses were conducted in R Studio (R Studio Team 2019) using packages *AICcmodelavg* (Mazerolle 2019) and *ggplot2* for graphics (Wickham 2016). AIC_c was used to rank each model and include adjusted R^2 as a measure of fit for each comparison (Burnham and Anderson 2002). As a conservative measure, all models $\leq 6 AIC_c$ from the top model are discussed (Arnold 2010). Models were not considered valid if ranked below the null (i.e., intercept-only) model.

Results

Sacramento Planning Region

The Sacramento region contributes an average of 41% of all mallards observed in the CVJV area, not including Suisun. This composition has ranged from 53% in the early 2000's to a low of 25% currently. Mallards have declined at a rate of 3,368 per year and 69% overall since 1992 (Appendix G-6A).

A total of nine models were to assess land use changes in relation to mallard BPOP in the Sacramento region (Appendix G-1). A total of five models fit within the ranking criteria (i.e., $\leq \Delta 6 AIC_c$ from top model, ranked above the null model). This indicated most support for change in Rangeland, followed by Tree Crops ($\Delta AIC_c = 4.3$), Urban area ($\Delta AIC_c = 5.1$), Row Crops ($\Delta AIC_c = 5.7$) and Irrigated Pasture ($\Delta AIC_c = 6.1$). Fits (i.e., adjusted R^2) for each of these models were strong at 0.61, 0.54, 0.52, 0.51 and 0.50. Slopes for Rangeland, Row Crops and Irrigated Pasture were positive at 0.34 (95% CI = 0.24 – 0.45), 0.47 (CI = 0.29 – 0.64) and 1.69 (CI = 1.04 – 2.33), indicating mallard BPOP's were higher with these land use types (Appendix G-7). Model slopes for Tree Crops and Urban were negative at -0.39 (CI = -0.52 – -0.25) and -1.62 (CI = -2.23 – -1.02), indicating mallard BPOP's are lower when these land use types are higher.

Four models were contrasted to assess habitat conservation efforts in the Sacramento region (Appendix G-1). Governmental Type A (i.e., actively managed) ranked highest, followed by Type C (i.e., unmanaged; $\Delta AIC_c = 0.1$) and then CRP (i.e., private easement; $\Delta AIC_c = 5.9$). Fits for each of these models were: 0.31, 0.31 and 0.14. Models slopes for Type A and Type C were

negative at -40.17 (CI = -62.68 – -17.66) and -8.89 (CI = -13.89 – -3.88; Appendix G-8A and B) respectively, indicating BPOP has decreased as acres have been acquired. Slope of CRP acres was positive at 3.24 (80% CI = -1.36 – 5.11) indicating that mallard BPOP was higher when there was more set aside upland (Appendix G-8C).

Maximum temperature (i.e., TMAX) was the only climatic model with more support than the null (Appendix G-1). Model fit was poor at 0.15. The model slope was negative and predicts that for every 1-degree F increase in TMAX, the mallard BPOP decreases by 5,042 (80% CI = -9,827.2 – -257.7; Appendix G-8D). No support was found for precipitation ($\Delta AIC_c = 4.0$), which had uninformative parameter estimates (i.e., confidence intervals overlapped zero) indicating precipitation, at the level analyzed, has no influence on mallard BPOP in the Sacramento region.

Yolo–Delta Planning Region

The Yolo–Delta region contributes an average of 25% of the mallard BPOP surveyed in the CVJV. Since 1992 the range has been 13%–41%. Estimates of breeding mallards in Yolo–Delta have declined by 1,178 birds per year since 1992, a 49% decline over the 1992–2017 period (Appendix G-6B).

Of the nine models used to contrast mallard BPOP against gross land use, Urban was the highest ranked model, followed by Row Crops ($\Delta AIC_c = 2.3$), Tree Crops ($\Delta AIC_c = 4.0$) and Irrigated Pasture ($\Delta AIC_c = 5.4$; Appendix G-2). Fits for each of these models were: 0.37, 0.31, 0.26 and 0.23. Slopes for Urban and Tree Crops were negative at 0.40 (CI = -0.59 – -0.20) and -0.22 (CI = -0.35 – -0.08; Appendix G-9A and C). Slopes for Row Crops and Irrigated Pasture were positive at 0.14 (CI = 0.06 – 0.22) and 1.07 (CI = 0.35 – 1.78; Figure 5A and C) mallards per acre, respectively.

Of the four models used to contrast Yolo–Delta mallard BPOP with conservation activities; Type A area had overwhelming support (i.e., other models were $\geq 6 \Delta AIC_c$; Appendix G-2). Model fit was moderate at 0.34. Model slope was negative indicating a decline of -0.99 (80% CI = -1.51 – -0.47) mallards per acre of Type A gained (Appendix G-9E).

Of the four models used to contrast Yolo–Delta mallard BPOP with climatic conditions; TMAX was the only model that performed better than the null model, however fit was poor (adj. $R^2 = 0.14$ and parameter estimates overlapped zero (Appendix G-2). The model slope was negative and indicates that for every 1-degree F increase in TMAX the mallard BPOP decreases by 2,121 (CI = -4,461.8 – 219.4, Appendix G-9F). No support was found for precipitation ($\Delta AIC_c = 3.1$), which was ranked below the null model, had uninformative parameter estimates

(i.e., confidence intervals overlapped zero) and essentially no fit (i.e., adj. $R^2 = 0.00$); meaning precipitation has no impact on mallard BPOP in the Yolo–Delta region.

San Joaquin Planning Region

The San Joaquin region contributes an average of 21% of the breeding mallard population annually, with a range of 11%–27%. This population has declined at a rate of 1,337 birds per year and has decreased by 57% since 1992 (Appendix G-6C).

Of the nine models used to contrast mallard BPOP with land uses in the San Joaquin; Urban area was the top model (Appendix G-3). This was followed by Field Crops ($\Delta AIC_c = 0.3$), Tree Crops ($\Delta AIC_c = 0.9$) and Irrigated Pasture ($\Delta AIC_c = 2.6$). Model fit was weak amongst all models at 0.22, 0.21, 0.20 and 0.14. Both Urban and Tree Crops had negative slopes indicating mallard BPOP's decreased by -0.79 (CI = -1.33 – -0.25) and 0.10 (CI = -17 – 0.03) with every acre increase of these land uses (Appendix G-10A and C). Field Crops and Irrigated Pasture were both positively correlated with mallard BPOP, increasing by 0.28 (CI = 0.08 – 0.48) and 0.19 (CI = 0.03 – 0.36) birds per acre increase of these land uses (Appendix G-10B and D). Initially Rice was the highest ranked model in this set, however model fit was relatively low with an adjusted of R^2 0.16, so it was separated. Also, rice decreased to zero acres by 2017 and accounted for less than 1% of land uses in the San Joaquin. As a result, it was included in the discussion but not included in competing models (Appendix G-10E). The San Joaquin region is wetland deficient compared to the Sacramento and the Yolo–Delta so it is possible that the decrease in rice here has negatively impacted local mallard BPOP. The annual estimates of Rangeland showed an irregular trend and is unclear as to why. Ignoring its presence in the San Joaquin model set is suggested until further assessment can be made.

Of the four models used to assess conservation activity in relation to mallard BPOP in the San Joaquin; Type C and Type A ($\Delta AIC_c = 4.2$) were the only two models ranked above the null model (Appendix G-3). Model fits were moderate at 0.40 and 0.30. Model slopes were both negative showing a decrease of -28.45 (CI = -41.7 – -15.2) and -2.08 (CI = -3.27 – -0.88) for every acre increase of these properties (Appendix G-11A and B).

Of the four models used to assess climate in relation to mallard BPOP in the San Joaquin, minimum temperature (MINT) was the only climatic model that ranked above the null model; however, model fit was poor (adj. $R^2 = 0.14$; Appendix G-3). This model indicates that for every 1-degree F increase in MINT the mallard BPOP increases by 3,719 (CI = 490.0 – 6,947.3) in the region (Appendix G-11C). Like the Sacramento and Yolo–Delta regions, precipitation in the San Joaquin

was not correlated to mallard BPOP and contained uninformative parameter estimates.

Tulare Planning Region

The Tulare region contributes an average of 13% to the mallard BPOP annually, with a range of 5%–21%. The population in this region is declining at a rate of 816 birds per year and has decreased by 57% since 1992 (Appendix G-6D).

Of the nine models used to assess gross land use changes in relation to the Tulare mallard BPOP; Row Crops, Urban ($\Delta AIC_c = 0.8$), Tree Crops ($\Delta AIC_c = 1.3$) and Rangeland ($\Delta AIC_c = 2.3$) were within the ranking criteria (Appendix G-4). Model fits were poor at 0.21, 0.19, 0.17 and 0.15. Slopes of Urban and Tree Crops models were negative, indicating that mallard BPOP decreased by -0.15 (CI = -0.27 – -0.04) and -0.03 (CI = -0.05 – -0.006) per acre increase of these land uses (Appendix G-12B and D). Row Crops and Rangeland had positive slopes, with mallard BPOP increasing by 0.02 (CI = 0.006 – 0.03) and 0.02 (CI = 0.004 – 0.05) birds per acre increase of these land uses (Appendix G-12A and C). Similar to the San Joaquin, Rice initially ranked the highest however it had very poor fit (adjusted $R^2 = -0.04$) and uninformative parameter estimates so was discarded. The lower AIC_c values for Rice was due to zero acres being planted over the past 5 years, skewing the model.

Of the four models used to assess habitat conservation activities in relation to mallard BPOP in Tulare; CRP ranked highest, followed by Type C ($\Delta AIC_c = 0.8$), then Type A ($\Delta AIC_c = 1.4$; Appendix G-4). Model fits were poor at 0.19, 0.16 and 0.14. CRP contained the only positive relationship, indicating that the mallard BPOP increased by 2.34 (CI = 0.58 – 4.10) for every acre increase of set aside upland (Appendix G-12E). Slopes of Type C and Type A properties were negative where mallard BPOP has decreased by -0.85 (CI = -1.55 – -0.16) and -1.10 (CI = -2.05 – -0.14) birds per acre for every acre increase in these acquisition types (Appendix G-12F and G).

None of the four models used to contrast climatic conditions against mallard BPOP in Tulare ranked above the null model indicating neither precipitation nor temperature correlates with mallard breeding population in this region.

Discussion

Mallards require both uplands for nesting and wetlands for brood rearing, thus if either of these habitats are limited – mallard reproduction will be limited (Drilling et al. 2018). Agriculture provides a significant amount of potential nesting habitat in some areas of the Central Valley, however; “reasonably adjacent” wetlands are few and far between, even in areas with rice. The phrase, “reasonably adjacent” is used because the relationship of distance between uplands and wetlands and brood loss has yet to be investigated in the Central Valley. This metric is particularly important in the Sacramento region and Yolo–Delta where

rice can be used as surrogate wetland habitat. The amount of natural wetland habitat in summer is very small throughout the Central Valley and increasing wetlands is unlikely given water demand and habitat management strategies. Thus, using agricultural land as a surrogate may provide a reasonable alternative.

Current estimates from the CVJV indicate the Sacramento region has the most summer wetland habitat with ~5,350 acres, followed by Tulare at ~5,034, Yolo–Delta at 4,010 acres and the San Joaquin at 2,872 acres (CVJV 2019 unpublished data). Management of summer water is problematic for both public and private property for a host of reasons including but not limited to; water supply, noxious weeds and mosquito abatement costs (Olson 2011). Even if wetland managers had unlimited summer water, the amount of flooding necessary to increase mallard populations would significantly reduce food resources for wintering waterfowl. The emphasis on winter management is based on the importance of the Central Valley to the millions of wintering waterfowl and the recreational opportunity they provide (i.e., hunting and viewing), which takes priority over supporting local breeding populations that are far fewer. Therefore, it is not surprising that the majority of public and private wetland habitat are managed for wintering waterfowl. Summer management on these same areas is focused on food production via irrigated moist soil or staged draw down to maximize plant species composition and seed yield. This does provide upland nesting habitat however the success of these uplands (i.e., seasonal or moist soil wetlands) to produce mallards may be dependent on the proximity of adjacent wetlands and the infrastructure (i.e., water delivery canals) to aid movements from uplands to brood rearing wetlands.

Similar to results reported by Coates et al. (2017) regarding pheasants (*Phasianus colchicus*), mallard populations have responded differently to land use changes amongst regions of the Central Valley. Generally, mallards BPOP's have decreased relative to increases in tree crops and urban area and were higher when crops that provide surrogate upland habitat were more abundant. Across all regions, urban development and tree crops were ranked within the top set of models and, as predicted, had negative correlation with mallard BPOP's. In the Sacramento region, tree crops increased by 77% (\bar{x} = 1992–1994 vs \bar{x} = 2015–2017) while urban increased by 37% (Appendix G-13). Tree crops now account for 18% of total land area within the Sacramento region, while urban accounts for 6%. In Yolo–Delta, tree crops have increased by 82% while urban has increased by 32%, each accounting for 12% of total area (Appendix G-14). In the San Joaquin, tree crops have increased by 49%, while urban has increased by 25% (Appendix G-15). Both land types account for 21% and 5%, respectively. In Tulare, tree crops increased by 58% while urban area increased by 31% (Appendix G-16). Tree crops account for 45% of total area, while urban accounts for 15% within the Tulare region. Almonds and walnuts have increased the most

within tree crops, with almonds increasing between 117% (Sacramento region) to 314% (Tulare) and walnuts increasing between 34% (San Joaquin) and 164% (Appendix G-18–21).

Whenever row crops, field crops, pasture or rangeland were in the top set of models, slopes indicated that these habitat types had a positive relationship with mallard BPOP. Data from past studies as well as egg salvage operations indicate certain row crops and field crops can produce significant number of nests in the Sacramento region and Yolo–Delta (California Waterfowl Association unpublished data). While the full effect of these crops as nesting habitat in the San Joaquin and Tulare is not well understood, they must provide some nesting habitat, albeit adjacent to poor quality brood rearing habitat in the form of barren canals. Cattle grazing has shown to have a mixed effect on waterfowl nesting (Carroll et al. 2007, Lapointe et al. 2000, Kirsch 1969). Past study in California has showed that, while nest densities are low in pasture, they do produce mallards in conjunction with adjacent wetland habitat (Carroll et al. 2007). Rangeland above the Central Valley floor often consists of annual grasses and some oak woodland with artificial ponds to provide water for cattle. Waterfowl can and do reproduce in these areas but is assumed to be at low levels. Past studies have attempted to measure the production in these areas (California Waterfowl Association, unpublished data), however no long-terms datasets are available outside of Breeding Bird Survey data which has yet to be investigated (Sauer et al. 2017).

Row crops were found to be important in all but the San Joaquin region. Past research has shown that dry beans (e.g., garbanzo beans) and safflower can serve as high quality (i.e., high densities, high hatch success) nesting habitat (California waterfowl Association unpublished data). These crops have declined by 74% in the Sacramento region, 68% in Yolo–Delta and 65% in Tulare (Appendix G-18–21). Other row crops such as silage, cotton, tomatoes, corn or vegetables are likely to have little to no value based on irrigation schedules, harvest chronology and or habitat structure. Row crops have decreased by 41% in the Sacramento region, 34% in Yolo–Delta and 58% in Tulare. Row crops currently comprise 16% of the Sacramento region, 13% of the Yolo–Delta, 21% of the San Joaquin and 26% of Tulare regions (Appendix G-18–21).

Models indicated that field crops were only important in the San Joaquin however cereal grains (e.g., wheat, barley, oats) are known to provide high quality upland nesting habitat and have been studied in the Sacramento region and Yolo–Delta (Skone et al. 2016, California Waterfowl Association unpublished data). Field crops have decreased by 40% in the San Joaquin with the biggest loss occurring in grain at 62% (Appendix G-18–21). Unpublished data from California Waterfowl Association shows that average mallard nest densities in grain-fields in the Sacramento region is around 0.99 nests per acre (range 0.00–9.50), which is

quite high relative to other more studied regions of North America. The agricultural use of grain in the Central Valley has changed over time from mostly seed-grain in the 1990's to a higher proportion of silage currently. The contrast of these uses is drastic in that seed harvest allows for some nests to hatch while the reduced plant to harvest chronology of silage allows very few, if any, to hatch. Currently there is no information to differentiate the amount of wheat grown for seed or silage uses to compare to changes in mallard BPOP. In total, field crops comprise 12% of the Sacramento region, 16% of the Yolo–Delta, 8% of the San Joaquin and 35% of Tulare (Appendix G-13–16).

Irrigated pasture ranked high within the Sacramento region, Yolo–Delta and San Joaquin model sets. It has decreased by 30%, 19% and 66% in each of these regions since 1992. In terms of total area, irrigated pasture comprises 4% in the Sacramento region, 3% in the Yolo–Delta, 2% in the San Joaquin and 4% in Tulare (Appendix G-13–16). Rangeland was in the top models in the Sacramento region and Tulare. Rangeland has decreased by 11% in the Sacramento region and by 19% in Tulare since 1992 (Appendix G-13–16).

Rice was in the top model set in only two areas, the San Joaquin and Tulare, which have the fewest wetland acres. This should be interpreted with caution as model assessment metrics were not good. Total acreage was likely great enough to have positive effects on mallard production during the 1990's when populations were greater. The amount of rice grown during the 1990's in the San Joaquin and Tulare (i.e., ~8000 acres in the San Joaquin, ~5,000 acres in Tulare) is more than the amount of summer wetland habitat currently provided on refuges in these areas (USDA NASS 2019). Rice is now nonexistent in both regions. Rice was not amongst the top models in the Sacramento region or Yolo–Delta regions however these two areas account for the largest portions of the overall mallard population in the Central Valley. This is likely due to rice agriculture as data indicates rice is an important brood rearing habitat (Yarris 2008, CDFW unpublished data). These two areas have a much larger and consistent rice footprint, suggesting that regional decreases in the mallard BPOP's is more likely related to the loss of upland habitat adjacent to rice. Based on visual assessment using the Cropscape data layer (USDA 2017), much of the rice currently grown in these regions occurs in large contiguous areas with little to no upland habitat intermixed (Appendix G-5). Previously (before 1996 Farm Bill), a portion of rice fields remained fallow each year and provided some undisturbed areas for nesting. Rice comprises 19% of the Sacramento region, 1% of the Yolo–Delta and <1% of the San Joaquin and Tulare regions. While rice has diminished completely from the latter two areas, planting remains steady with 500,000 acres in the Sacramento region and 15,000 acres in Yolo–Delta.

Vine Crops are not considered suitable nesting habitat for mallards and did not occur in the top model set for any region. Most regions have seen a decrease in vine crops, however the Yolo–Delta has had an increase of 136% since 1992. In

total, vine crops comprise 1% of the Sacramento region, 7% of Yolo–Delta, 4% of San Joaquin and 13% of Tulare (Appendix G-13–16).

Our results indicated that habitat acquisition and easement acres did not correlate greatly with mallard BPOP's in most regions. These land use types comprised a very small amount of total area ranging between <1% and 2% of total area in regions of the Central Valley (Appendix G-22). In general, habitats acquired, whether managed or unmanaged, suggest a negative association with mallard BPOP's. Many of the actively managed areas do not provide habitat for breeding waterfowl as the tradeoff to provide summer habitat means less food availability for wintering waterfowl (Naylor 2002, CVJV unpublished data). Further, some are managed for other species (e.g., bluntnose leopard lizard (*Gambelia sila*)) and or contain mostly unsuitable habitat entirely (e.g., desert). Conservation Reserve Program acres indicate positive relationship across all regions however model fits were somewhat poor, thus these relationships should be interpreted with caution. A short-term study conducted by the Department (unpublished data) suggested that the relationship between refuge areas and adjacent rice may be important to nesting mallards as females chose to nest on CRP, then moved their broods to adjacent rice where upland nesting habitat was nearly absent. Since brood water is likely the most limiting factor for mallard reproduction in the Central Valley, estimates of summer water on these properties as well as other conservation programs aimed at providing this resource (e.g., CDFW Presley Program) should be assessed in the future.

Local temperature and precipitation were modeled against regional mallard BPOP trends and indicated a very poor correlation in each case (Appendix G-23). Greater maximum temperature indicated a steeply negative relationship with mallard BPOP in the Sacramento and Yolo–Delta regions, while cooler minimum temperatures had a positive relationship with mallard BPOP in the San Joaquin. The former two relationships seem intuitive as high heat is not compatible with upland nesting birds (Carroll et al. 2018). The latter is strange as minimum temperatures in the San Joaquin are well above freezing. None of the variables used ranked above the intercept-only model in Tulare. As previous assessments indicated, precipitation did not correlate with mallard BPOP (G. Zimmerman, USFWS, personal comm.). This is not surprising as much of the Central Valley floor is covered in agriculture and includes a very effective water delivery and drainage network. This irrigation-drainage network channels water into canals and rivers to be carried away when flooding becomes a problem on ag-fields. Greater precipitation may positively impact microclimate variables associated with successful nesting (e.g. increased plant densities, increase humidity), but the drainage systems do not allow for water to pond in a way that provides additional brood rearing habitat. Further, our methods may be too coarse in this assessment as using a single weather station to determine climate across a relatively large spatial area is somewhat myopic. Other datasets may prove to be

more useful in comparing climatic variables to BPOP over large areas (e.g., PRISM; Daley et al. 2008) and may provide a way of comparing observations on transects to investigate changes along a spatial gradient (Coates et al. 2017).

Management Implications

Since each region has its own unique set of issues, solutions are best thought of on a region by region basis. One of the cheapest solutions in northern areas is to produce upland habitat adjacent to rice which would likely work immediately to increase local mallard numbers. Increasing summer wetlands in the Sacramento or Yolo–Delta regions are also alternatives and is encouraged; however, rice is an extensive crop and uplands are likely more limiting to mallard breeding and cheaper to produce in these areas.

In the San Joaquin and Tulare regions, wetlands are presumably the most limiting factor in mallard recruitment. Bringing back rice agriculture would be very difficult as the cost of water in these regions has likely reduced the capacity to profit. Regardless, incentive programs to increase rice should still be investigated as margins are affected by the dynamic nature of commodity prices and in some years may provide an opportunity. Rice is considered a good alternative to wetlands in these regions, mostly due to the potential to create a large footprint. State and or federal incentive programs (e.g., Presley Program and CRP) for private landowners to provide summer wetlands in the San Joaquin and Tulare have been a traditional approach to increasing mallard breeding with some success (California Waterfowl Association unpublished data). We would encourage to continue or expand these programs, however new water policies (e.g., the Sustainable Groundwater Management Act) may make this difficult in some planning regions over time. Cost-benefit evaluations should be considered periodically to better understand the amount of incentives necessary to offset costs in the San Joaquin and Tulare regions as well as whether a viable approach for conservation.

Opportunities exist in all regions of the Central Valley to improve waterfowl nesting and brood rearing conditions. On private lands, the California Waterfowl Habitat Program (also known as the Presley program) is a statewide program administered by the Department that incentivizes private landowners to manage their land in accordance with management plans cooperatively developed by the Department and the landowner. These plans are designed to implement goals as identified by CVJV's most recent implementation plan and the Department's State Wildlife Action Plan. The Presley program has been in existence for close to 30 years and has remained extremely popular with private landowners. The Department received interest from approximately 200 properties encompassing 50,000 acres in the most recent solicitation (2019). At current funding levels, implementation of the program over the next 10 years will result in a net gain of approximately 3,000 acres of semi-permanent wetlands, and the annual enhancement of over 20,000 acres of seasonal wetlands within the Central Valley.

The Nesting Bird Habitat Incentive Program (NBHIP) was created in 2018 and funding recently acquired which allows the Department to provide payments or other incentives to landowners to cultivate or retain upland cover crops, cereal grains, grasses, forbs, pollinator plants or a combination thereof to provide waterfowl and other game bird nesting cover. The NBHIP is designed to increase the abundance and quality of upland nesting habitat in California. The Department estimates a long-term budget of just over \$2 million annually and expects this will result in an additional 4,000 to 40,000 acres of nesting habitat each year (dependent upon water availability to growers).

Farm Bill funded programs such as the Regional Conservation Partnership Program administered by the Natural Resources Conservation Service, also offer significant potential for enhancing waterfowl nesting habitat in the Central Valley. This program offers incentives to growers to maintain cover crops through the nesting season, and not incorporate until mid-summer. Ensuring funding is available for programs such as these is critical to ensuring the resource needs of waterfowl breeding in the Central Valley are met on private lands. Secure, long-term funding has been the limiting factor to expanding the Presley program in the Central Valley.

Adequate funding for wildlife areas and national wildlife areas is also critical to ensuring habitat is available for nesting hens and ducklings throughout the Central Valley. Annual management costs associated with semi-permanent wetlands are close to double that of seasonal wetlands. If the goal is to improve conditions for waterfowl and other wetland dependent species that utilize semi-permanent wetlands, operating budgets and staffing levels must be adjusted accordingly.

Other habitat enhancement opportunity may exist in the Central Valley as water infrastructure (i.e., canal systems) are extensive and may provide adequate wetland habitat if managed correctly. Research aimed at quantifying success of breeding waterfowl in these systems is necessary to inform policy, however some reasonable assumptions can be made. Vegetation along irrigation canals is most often eliminated using mechanical means, herbicide or burning. Recommendations to avoid vegetation removal from the outside of major levees before July 1st could be made to reduce impacts to nesting waterfowl. Providing vegetation along the inside of canals, particularly of species that do not greatly impede water systems (e.g., hardstem bulrush (*Schoenoplectus acutus*)) is a mitigation strategy that would improve habitat for brood rearing waterfowl. Management of water infrastructure owned by government agencies should be evaluated to ensure activities are not harming potential recruitment of waterfowl or other nesting bird species.

Filling information gaps may be necessary prior to modifying or proceeding with new programs. For instance, we do not fully understand which crops provide the most nesting value and having a diverse set of crop options would increase the success of nesting habitat incentive programs. The relationship between the distance of nesting uplands to brood rearing habitat and associated duckling survival after hatch is poorly understood. This relationship needs to be further investigated in order to better inform scoring criteria and evaluate the success of incentive programs. Additionally, research on waterfowl production in rangelands is required in order to better understand the contribution of these areas to waterfowl populations in the Central Valley.

Cumulative Impacts

Short-term uses and Long-term Productivity

The 2006 analysis was presented on page 97 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento, 95605). The proposed project and existing hunting regulations will result in the temporary reduction of waterfowl, coot and moorhen populations and the use of nonrenewable fuels by hunters and the Department in the assessment of migratory game bird populations and the enforcement of the regulations. On the other hand, the Service concluded (USDI 1975:215) that the issuance of annual hunting regulations contributes significantly to the long-term productivity of the migratory game bird resource and their habitats, because hunting is allowed for only a few species of migratory birds for a limited period of time, and the revenues from hunting are important in the acquisition and management of migratory game bird habitats. Therefore, the project and existing regulations enhances long-term productivity of migratory game birds and results in no significant adverse impact on long-term productivity.

Growth Inducing Impacts

The 2006 analysis was presented on page 98 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento, 95605). Because the hunting of migratory game birds is undertaken for a limited period and generally occurs in sparsely populated regions of the State, it is not likely to add to the growth in population in California or result in large-scale developments in any city or area. Overall numbers of migratory game bird hunters are declining, and because these numbers are declining, there is not likely to be an additional demand for housing in the specific areas in which hunting will occur. Therefore, the project and existing hunting regulations will not result in significant adverse impacts through growth.

Significant Irreversible Environmental Changes

The 2006 analysis was presented on page 98 (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento, 95605). The proposed project and existing hunting regulations would result in the continued commitment of energy resources by biologists and wardens in data collection, regulation promulgation, and law enforcement, and by hunters traveling to hunting areas. Therefore, the project will not result in significant adverse environmental impacts through irreversible changes.

The 2006 analyses and document referenced (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento, 95605) is located and available upon request.

Cultural Resources

The proposed Project would modify current waterfowl hunting regulations for the 2023-24 waterfowl hunting season. The regulations governing the take of migratory game birds in California are selected by the Commission and forwarded to the Service each year. The federal frameworks specify the range of dates, total number of hunting days, bag limits, shooting hours, and methods of take authorized for migratory game birds, statewide. The proposed Project provides continued opportunity for migratory game bird hunting via season lengths and bag limits. The regulations selected by the Commission must be within the frameworks established by the Service.

The proposed Project is statewide on both public and private lands. Hunting on public lands that have identified Tribal Cultural Resources would have restrictions or mitigation measures in place to prevent harm to Cultural Resources. There is no evidence that suggests the Project (modification or issuance of annual waterfowl hunting regulations) would cause any adverse change in the significance of a Tribal Cultural Resource; cause any change in the significance of an historical or archaeological resource; directly or indirectly destroy a unique paleontological resource site or unique geologic feature; or disturb any human remains. No Tribal Cultural Resources assessments have been conducted because the Project is not expected to impact Tribal Cultural Resources. As a result, the proposed Project would have no impact to Tribal Cultural Resources.

CHAPTER 3 – ALTERNATIVES

The three California project alternatives evaluated herein are: (1) no project – no change from the 2023-24 hunting regulations; (2) reduced season lengths and bag limits; (4) and (5) elimination of all mechanical decoys.

Alternative 1. No project – no change from the 2023-24 hunting regulations

This alternative provides identical season and bag limit regulations as the 2023-24 seasons (Appendix A). Under this alternative, the season length would remain at 103 days.

Advantages of This Alternative

Waterfowl regulations are inherently complicated, and any changes may result in confusion for some members of the public. Maintaining the 2023-24 regulations for the 2024-25 season may result in less confusion to some members of the public.

Disadvantages of This Alternative

Retaining the 2023-24 regulations for the 2024-25 season may place the state out of compliance with federal regulations. This alternative was rejected because in prior rulemakings, the Commission preferred the latest possible closing date of January 31 and maintaining a traditional opening Saturday in late October. This results in an annual adjustment to the season length; 98 days rather than 103 days for the 2024-25 season because of calendar progression. In addition, modifying the season length affects available days for falconry-only seasons, and must also be adjusted annually so as not to exceed 107 days.

Conclusion Regarding Alternative 1

It is unlikely that significant irreversible impacts would occur immediately or statewide as a result of selecting the no change alternative. However, this alternative was not recommended because the public has expressed the desire to maintain a Saturday opening day in late October and close as late as possible.

Alternative 2. Reduced Season Lengths, Season Timing and Bag Limits

This alternative provides a suite of restrictions that when taken alone or in combination are expected to reduce harvests. This alternative could be selected by the Commission based on changes in federal frameworks or a conclusion by the Commission that reduced harvests are a better alternative than the project or

existing regulations. Under this alternative, for a generalized analysis, the length of each migratory bird season could be reduced by about 50 percent. For ducks, more conservative Adaptive Harvest Management regulatory alternatives (86 or 60 days) could be used. For brant, the 27-day season would be reduced to 14 days and for most other geese the season would be reduced from between 107 or 101 days to 51 days.

The AHM alternatives for the Pacific Flyway include total duck bag limits that range from 4 to 7 with differing restrictions on mallards and hen mallards. Other bag limit reductions considered in this alternative include a reduction from as many as 20 to as few as 1 goose depending on zone; a reduction in brant from two to one; and a reduction in the coot daily limit from 25 to 12 per day. Additionally, species-specific regulations, for pintail, redheads, canvasback or scaup could be further reduced under this alternative.

Advantages of This Alternative

Selection of Alternative 2, reduced season lengths, timing and bag limits, would reduce total harvest, although the magnitude of this reduction is not precisely predictable. This alternative has advantages only if the levels of harvest are suppressing populations. In 2022-23, the estimated retrieved harvest in California was 726,500 ducks, 193,480 geese and 10,200 coots (Appendix H). If harvest regulation restrictions cause a larger than expected decline in hunter participation, harvests might be reduced by more than 50 percent. If, as experienced in the 1989-90 season, there is a decrease in hunter participation but fall flights are larger or contain higher percentages of juveniles than are expected, harvests would probably not decline by 50 percent. If harvests declined by exactly 50 percent; approximately 564,600 ducks, 96,740 geese, and 5,100 coots would not be harvested in California. If waterfowl, coots and moorhens have access to sufficient quantity and quality habitat and these populations are being suppressed due to the levels of harvest previously experienced, populations might increase in following years as a result of the selection of this alternative. This alternative would provide recreational opportunity for hunters and meet one of the goals of the Conservation of Wildlife Resources Policy (Fish and Game Code, Section 1801), which is to include hunting as part of maintaining diversified recreational uses of wildlife.

Non-hunting opportunities to view migratory birds would not differ substantially from the proposed project, because this would increase viewing days on hunting areas. Reduction in possible conflicts between non-hunters and hunters would likely result of this alternative.

Disadvantages of This Alternative

Harvest restrictions for waterfowl, coots and moorhens would probably be a disincentive for many private landowners that provide habitat through flooding of seasonal wetlands and agricultural lands during the fall and winter. These habitats form the majority of available wintering habitat for waterfowl and wetland dependent wildlife in California (Heitmeyer et al. 1989). Habitat provided only during the hunting season would be available for a shorter time. For many of these private landowners, the short period of time allowed for hunting may be viewed as not worth the high costs associated with providing water and managing this habitat. This would reduce the amount of available habitat and related food for waterfowl and other wetland dependent wildlife. Further, this could lead to overcrowding and likely increase losses to disease.

Conclusion Regarding Alternative 2

Selection of this alternative might lead to a greater decline in participation by hunters. The reductions in the number of days that waterfowl, coots and moorhens could be hunted might not be deemed to be worth the costs of licenses, stamps, travel, and entry fees. A change in season timing is not likely to significantly affect the number of active hunters. A reduction in hunter participation would result in reduced revenues to the Department and the Service which are used to acquire, manage, and maintain vital habitats. If the reduced season length resulted in a lower hunting harvest and hunting mortality was additive to natural mortality, an increase in some populations of waterfowl would be possible. However, the Department concludes that this alternative alone would not result in a significant increase in waterfowl numbers in future years.

Alternative 3. Elimination of all mechanically- and artificially-powered spinning wing decoys as a method of take.

The use of mechanical or electronic duck decoys (also known as spinning wing decoys (SWDs), “rotoducks”, “motoducks”, motion wing decoys, etc.) may lead to increases in harvest beyond those anticipated by existing bag limits and season length. Some hunters and other members of the public are opposed to the use of these devices because they believe that the devices exceed the bounds of “fair chase” and eliminate the emphasis on traditional hunting skills needed to successfully hunt ducks, and the advantages detract from the experience and dedication needed to sustain the hunting tradition.

This alternative would eliminate the use of all mechanical and artificially powered spinning wing decoys as a method of take. The Department analyzed several sources of information relative to the possible effects of spinning wing decoys and these analyses are provided in Appendix I.

Advantages of This Alternative

The evidence seems clear that spinning blade and spinning wing decoys increase harvest at the individual hunt level, and level of observed increases in harvest at the individual hunt level are not reflected in overall estimates of harvest (Appendix H). However, the role of harvest in duck population dynamics is not clearly understood and the effect of reducing harvest success at the individual hunt level may or may not result in observable changes in population parameters. Some members of the hunting public have expressed concerns that continual advances in technology ultimately detract from the traditional hunting experience and potentially may lead to a reduction in the support for waterfowl hunting. This is thought to be due to hunters becoming less dedicated to developing skills and investing in the activity to a level that generates support for conservation and potentially increasing the negative view of hunting by those that are currently not opposed to hunting. As technology continues to improve, debates such as the one over spinning blade and spinning wing devices would continue. A new debate over each new technological advance would seem likely. Resources would continually be re-directed to assess each new technological advance.

Disadvantages of This Alternative

As detailed in Appendix I, existing analyses do not clearly establish an effect of harvest on duck population dynamics. To some unmeasured extent, the use of SWD may influence more hunters to join or remain in hunting, thereby providing support for wetland and waterfowl conservation. Commercial enterprises that develop and market these devices would likely be opposed to their regulation. There is no information regarding other duck attracting devices currently in use and there is no basis to conclude that these devices increase duck harvest. Commercial enterprises exist or may be developed to increase technological improvements for attracting ducks.

Conclusions Regarding Alternative 3

The selection of this alternative would not result in a significant adverse environmental impact. As reported in Appendix I, to date, the Department is unable to scientifically associate observed changes in duck population status, except perhaps for certain cohorts of local mallards, with the use of SWDs. The selection of this alternative would be viewed favorably by those hunters and other members of the public who are opposed to the use of non-traditional methods but would be viewed unfavorably by those hunters who are not opposed to their use. Those commercial enterprises that develop and market these devices would likely be opposed to regulation.

CHAPTER 4 - RESPONSE TO COMMENTS REGARDING THE PROPOSED PROJECT

In accordance with CEQA, public input and agency consultation were encouraged during the environmental review process. An Notice of Preparation (NOP) was provided to the State Clearinghouse, land management agencies having a key role in migratory game bird management, and all individuals and organizations which expressed an interest in migratory game bird management.

The DED was made available for public review on February 26, 2024 and correspondence was mailed to every county clerk for public posting and notice of the availability of the DED. The notice of availability of the DED for public review was also posted on the Commission's website and was provided to the State Clearinghouse. The State Clearinghouse provided notice of availability to interested organizations, including all county governments in California as well as the Native American Heritage Commission. There were no public comments received during the 45-day notice period the DED was available for public review.

A formal notice letter proposing the 2024-25 waterfowl hunting regulations dated October 25, 2023, was also sent on behalf of the Department and the Commission to California Tribes, who requested to be notified for CEQA projects. One California Tribe requested a consultation and that occurred on January 12, 2024.

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**Appendix A. 2023-24 Regulations Related to Migratory Waterfowl,
Coot, Moorhen, (Common Gallinule).**

**§502. Waterfowl, Migratory; American Coot and Common Moorhen
(Common Gallinule).**

(a) Definitions.

(1) Dark geese. Dark geese include Canada geese, cackling geese, Aleutian geese and white-fronted geese (“specklebelly”).

(2) Large Canada geese. Large Canada geese include western Canada geese (“honker”) and lesser Canada geese (“lesser”).

(3) Small Canada geese. Small (about the size of a mallard) Canada geese include cackling geese and Aleutian geese. Both are white-cheeked geese nearly identical in appearance to Large Canada geese. Aleutian geese have a thin white neck ring and Cackling geese have dark breasts. Both species have a high-pitched cackle as opposed to the deeper “honking”.

(4) White geese. White geese include Ross’ geese, snow geese and blue phase of both species.

(b) Waterfowl Hunting Zones.

(1) Northeastern California Zone: In that portion of California lying east and north of a line beginning at the intersection of Interstate 5 with the California-Oregon state line; south along Interstate 5 to its junction with Walters Lane south of the town of Yreka; west along Walters Lane to its junction with Easy Street; south along Easy Street to the junction with Old Highway 99; south along Old Highway 99 to the point of intersection with Interstate 5 north of the town of Weed; south along Interstate 5 to its junction with Highway 89; east and south along Highway 89 to Main Street in Greenville; north and east to its junction with North Valley Road; south to its junction of Diamond Mountain Road; north and east to its junction with North Arm Road; south and west to the junction of North Valley Road; south to the junction with Arlington Road (A22); west to the junction of Highway 89; south and west to the junction of Highway 70; east on Highway 70 to Highway 395; south and east on Highway 395 to the point of intersection with the California-Nevada state line; north along the California-Nevada state line to the junction of the California-Nevada-Oregon state lines west along the California-Oregon state line to the point of origin.

(2) Southern San Joaquin Valley Zone: All of Kings and Tulare counties and that portion of Kern County north of the Southern California Zone.

(3) Southern California Zone: In that portion of southern California (but excluding the Colorado River zone) lying south and east of a line beginning at the mouth of the Santa Maria River at the Pacific Ocean; east along the Santa Maria River to where it crosses Highway 101-166 near the City of Santa Maria; continue north on 101-166; east on Highway 166 to the junction with Highway 99; south on Highway 99 to the junction of Interstate 5; south on Interstate 5 to the crest of the

Tehachapi Mountains at Tejon Pass; east and north along the crest of the Tehachapi Mountains to where it intersects Highway 178 at Walker Pass; east on Highway 178 to the junction of Highway 395 at the town of Inyokern; south on Highway 395 to the junction of Highway 58; east on Highway 58 to the junction of Interstate 15; east on Interstate 15 to the junction with Highway 127; north on Highway 127 to the point of intersection with the California-Nevada state line.

(4) Colorado River Zone: In those portions of San Bernardino, Riverside, and Imperial counties lying east of the following lines: Beginning at the intersection of Nevada State Highway 95 with the California-Nevada state line; south along Highway 95 through the junction with Highway 40; continue south on Highway 95 to Vidal Junction; south through the town of Rice to the San Bernardino-Riverside county line on a road known as "Aqueduct Road" also known as Highway 62 in San Bernardino County; southwest on Highway 62 to Desert Center Rice Road; south on Desert Center Rice Road/Highway 177 to the town of Desert Center; continue east 31 miles on Interstate 10 to its intersection with the Wiley Well Road; south on this road to Wiley Well; southeast along the Milpitas Wash Road to the Blythe, Brawley, Davis Lake intersections; south on the Blythe Ogilby Road also known as County Highway 34 to its intersection with Ogilby Road; south on this road to Highway 8 ; east seven miles on Highway 8 to its intersection with the Andrade-Algodones Road/Highway 186; south on this paved road to the intersection of the Mexican boundary line at Los Algodones, Mexico.

(5) Balance of State Zone: That portion of the state not included in Northeastern California, Southern California, Colorado River or the Southern San Joaquin Valley zones.

(6) Special Management Areas

(A) North Coast. All of Del Norte and Humboldt counties.

(B) Humboldt Bay South Spit (West Side). Beginning at the intersection of the north boundary of Table Bluff County Park and the South Jetty Road; north along the South Jetty Road to the South Jetty; west along the South Jetty to the mean low water line of the Pacific Ocean; south along the mean low water line to its intersection with the north boundary of the Table Bluff County Park; east along the north boundary of the Table Bluff County Park to the point of origin.

(C) Klamath Basin. Beginning at the intersection of Highway 161 and Highway 97; east on Highway 161 to Hill Road; south on Hill Road to N Dike Road West Side; east on N Dike Road West Side until the junction of the Lost River; north on N Dike Road West Side until the Volcanic Legacy Scenic Byway; east on Volcanic Legacy Scenic Byway until N Dike Road East Side; south on the N Dike Road East Side; continue east on N Dike Road East Side to Highway 111; south on Highway 111/Great Northern Road to Highway 120/Highway 124; west on Highway 120/Highway 124 to Hill Road; south on Hill Road until Lairds Camp Road; west on Lairds Camp Road until Willow Creek; west and south on Willow Creek to Red Rock Road; west on Red Rock Road until Meiss Lake Road/Old State Highway; north on Meiss Lake Road/Old State Highway to Highway 97; north on Highway 97 to the point of origin.

(D) Sacramento Valley. Beginning at the town of Willows; south on Interstate 5 to the junction with Hahn Road; east on Hahn Road and the Grimes-Arbuckle Road to the town of Grimes; north on Highway 45 to its junction with Highway 162; north on Highway 45-162 to the town of Glenn; west on Highway 162 to the point of beginning.

(E) Morro Bay. Beginning at a point where the high tide line intersects the State Park boundary west of Cuesta by the Sea; northeasterly to a point 200 yards offshore of the high tide line at the end of Mitchell Drive in Baywood Park; northeasterly to a point 200 yards offshore of the high tide line west of the Morro Bay State Park Boundary, adjacent to Baywood Park; north to a point 300 yards south of the high tide line at the end of White Point; north along a line 400 yards offshore of the south boundary of the Morro Bay City limit to a point adjacent to Fairbanks Point; northwesterly to the high tide line on the sand spit; southerly along the high tide line of the sand spit to the south end of Morro Bay; easterly along the Park boundary at the high tide line to the beginning point.

(F) Martis Creek Lake. The waters and shoreline of Martis Creek Lake, Placer and Nevada counties.

(G) Northern Brant. Del Norte, Humboldt and Mendocino counties.

(H) Balance of State Brant. That portion of the state not included in the Northern Brant Special Management Area.

(I) Imperial County. Beginning at Highway 86 and the Navy Test Base Road; south on Highway 86 to the town of Westmoreland; continue through the town of Westmoreland to Route S26; east on Route S26 to Highway 115; north on Highway 115 to Weist Rd.; north on Weist Rd. to Flowing Wells Rd.; northeast on Flowing Wells Rd. to the Coachella Canal; northwest on the Coachella Canal to Drop 18; a straight line from Drop 18 to Frink Rd.; south on Frink Rd. to Highway 111; north on Highway 111 to Niland Marina Rd.; southwest on Niland Marina Rd. to the old Imperial County boat ramp and the water line of the Salton Sea; from the water line of the Salton Sea, a straight line across the Salton Sea to the Salinity Control Research Facility and the Navy Test Base Road; southwest on the Navy Test Base Road to the point of beginning.

(c) Seasons and Bag and Possession Limits for American Coots, and Common Moorhens.

(1) Statewide Provisions.

<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag and Possession Limits</i>
American Coot and Common Moorhen	Concurrent with duck season(s)	Daily bag limit: 25, either all of one species or a mixture of these species. Possession limit: triple the daily bag limit.

(d) Seasons and Bag and Possession Limits for Ducks and Geese by Zone.

(1) Northeastern California Zone (NOTE: SEE SUBSECTION 502(d)(6) BELOW FOR SPECIAL SEASONS AND CLOSURES.)

<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag and Possession Limits</i>
Ducks (including Mergansers)	From the first Saturday in October extending for 103 days. Scaup: from the first Saturday in October extending for a period of 58 days and from the third Thursday in December extending for a period of 28 days.	Daily bag limit: 7 Daily bag limit may include: <ul style="list-style-type: none"> • 7 mallards, but not more than 2 females. • 1 pintail (either sex). • 2 canvasback (either sex). • 2 redheads (either sex). • 2 scaup (either sex). Possession limit: triple the daily bag limit.

<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag and Possession Limits</i>
Geese	<p>Regular Season: Canada Geese: from the first Saturday in October extending for 100 days.</p> <p>White-fronted and white geese from the first Saturday in October extending for a period of 58 days and from January 4 extending for a period of 14 days.</p> <p>Late Season: White-fronted and white geese White-fronted and white geese from February 7 extending for 33 days.</p> <p>During the Late Season, hunting is only permitted on Type C wildlife areas listed in sections 550-552, navigable waters, and private lands with the permission of the landowner under provisions of Section 2016, Fish and Game Code. Hunting is prohibited on Type A and Type B wildlife areas, the Klamath Basin National Wildlife Refuge Complex, the Modoc National Wildlife Refuge, and any waters which are on, encompassed by, bounded over, flow over, flow through, or are adjacent to any Type A and Type B wildlife areas, the Klamath Basin National Wildlife Refuge Complex, or the Modoc National Wildlife Refuge.</p>	<p>Daily bag limit: 30 Daily bag limit may include:</p> <ul style="list-style-type: none"> • 20 white geese. • 10 dark geese but not more than 2 Large Canada geese (see definitions: 502(a)). <p>Possession limit: triple the daily bag limit.</p>

(2) Southern San Joaquin Valley Zone (NOTE: SEE SUBSECTION 502(d)(6) BELOW FOR SPECIAL SEASONS AND CLOSURES.)

<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag and Possession Limits</i>
Ducks (including Mergansers)	From the third Saturday in October extending for 103 days. Scaup: from November 7 extending for 86 days.	Daily bag limit: 7 Daily bag limit may include: <ul style="list-style-type: none"> • 7 mallards, but not more than 2 females. • 1 pintail (either sex). • 2 canvasback (either sex). • 2 redheads (either sex). • 2 scaup (either sex). Possession limit: triple the daily bag limit.
Geese	From the third Saturday in October extending for 103 days.	Daily bag limit: 30 Daily bag limit may include: <ul style="list-style-type: none"> • 20 white geese. • 10 dark geese (see definitions: 502(a)). Possession limit: triple the daily bag limit.

(3) Southern California Zone (NOTE: SEE SUBSECTION 502(d)(6) BELOW FOR SPECIAL SEASONS AND CLOSURES.)

<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag and Possession Limits</i>
Ducks (including Mergansers)	From the third Saturday in October extending for 103 days. Scaup: from November 7 extending for 86 days.	Daily bag limit: 7 Daily bag limit may include: <ul style="list-style-type: none"> • 7 mallards, but not more than 2 females. • 1 pintail (either sex). • 2 canvasback (either sex). • 2 redheads (either sex). • 2 scaup (either sex). Possession limit: triple the daily bag limit.

<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag and Possession Limits</i>
Geese	From the third Saturday in October extending for 103 days.	Daily bag limit: 23 Daily bag limit may include: • 20 white geese. • 3 dark geese (see definitions: 502(a)). Possession limit: triple the daily bag limit.

(4) Colorado River Zone (NOTE: SEE SUBSECTION 502(d)(6) BELOW FOR SPECIAL SEASONS AND CLOSURES.)

<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag and Possession Limits</i>
Ducks (including Mergansers).	From October 23 extending for 101 days. Scaup: from November 7 extending for 86 days.	Daily bag limit: 7 Daily bag limit may include: • 7 mallards, but not more than 2 females or Mexican ducks. • 1 pintail (either sex). • 2 canvasback (either sex). • 2 redheads (either sex). • 2 scaup (either sex). Possession limit: triple the daily bag limit.
Geese	From October 23 extending for 101 days.	Daily bag limit: 24 Daily bag limit may include: • 20 white geese. • 4 dark geese (see definitions: 502(a)). Possession limit: triple the daily bag limit.

(5) Balance of State Zone (NOTE: SEE SUBSECTION 502(d)(6) BELOW FOR SPECIAL SEASONS AND CLOSURES.)

<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag and Possession Limits</i>
Ducks (including Mergansers).	From the third Saturday in October extending for 103 days. Scaup: from November 7 extending for 86 days.	Daily bag limit: 7 Daily bag limit may include: <ul style="list-style-type: none"> • 7 mallards, but not more than 2 females. • 1 pintail (either sex). • 2 canvasback (either sex). • 2 redheads (either sex). • 2 scaup (either sex). Possession limit: triple the daily bag limit.

<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag and Possession Limits</i>
Geese	<p>Early Season: Large Canada geese only from the Saturday closest to October 1 for a period of 3 days EXCEPT in the North Coast Special Management Area where Large Canada geese are closed during the early season.</p> <p>Regular Season: Dark and white geese from the third Saturday in October extending for 100 days EXCEPT in the Sacramento Valley Special Management Area where the white-fronted goose season will close after December 21.</p> <p>Late Season: Canada geese from the third Saturday in February extending for 2 days.</p> <p>White-fronted and white geese from the third Saturday in February extending for a period of 5 days EXCEPT in the Sacramento Valley Special Management Area where the white-fronted goose season is closed. During the Late Season, hunting is not permitted on wildlife areas listed in sections 550-552 EXCEPT on Type C wildlife areas in the North Central and Central regions.</p>	<p>Daily bag limit: 30</p> <p>Daily bag limit may include:</p> <ul style="list-style-type: none"> • 20 white geese. • 10 dark geese EXCEPT in the Sacramento Valley Special Management Area where only 3 may be white-fronted geese (see definitions: 502(a)). <p>Possession limit: triple the daily bag limit.</p>

(6) Special Management Areas (see descriptions in 502(b)(6))

	(A) Species	(B) Season	(C) Daily Bag and Possession Limits
1. North Coast	All Canada Geese	From October 7 extending for a period of 77 days (Regular Season) and from February 12 extending for a period of 28 days (Late Season). During the Late Season, hunting is only permitted on private lands with the permission of the landowner under provisions Section 2016, Fish and Game Code.	Daily bag limit: 10 Canada Geese of which only 1 may be a Large Canada goose (see definitions: 502(a)), EXCEPT during the Late Season, the bag limit on Large Canada geese is zero. Possession limit: triple the daily bag limit.
2. Humboldt Bay South Spit (West Side)	All Species	Closed during brant season	
3. Klamath Basin	Geese	Small and Large Canada Geese from the first Saturday in October extending for 100 days. White-fronted and white geese from the first Saturday in October extending for 105 days.	Daily bag limit: 30 Daily bag limit may include: <ul style="list-style-type: none"> • 20 white geese. • 10 dark geese but not more than 2 Large Canada geese (see definitions: 502(a)). Possession limit: triple the daily bag limit.

	<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag and Possession Limits</i>
4. Sacramento Valley	White-Fronted Geese	Open concurrently with the goose season through December 21, and during Youth Waterfowl Hunting Days.	Daily bag limit: 3 white-fronted geese. Possession limit: triple the daily bag limit.
5. Morro Bay	All species	Open in designated area only from the opening day of brant season through the remainder of waterfowl season.	
6. Martis Creek Lake	All species	Closed until November 16.	
7. Northern Brant	Black Brant	From November 18 extending for 27 days.	Daily bag limit: 2 Possession limit: triple the daily bag limit.
8. Balance of State Brant	Black Brant	From November 19 extending for 27 days.	Daily bag limit: 2 Possession limit: triple the daily bag limit.
9. Imperial County	White Geese	From November 4 extending for a period of 89 days (Regular Season) and February 1-2, 2024, February 5-9, 2024, and February 12-20, 2024 (Late Season). During the Late Season, hunting is only permitted on private lands with the permission of the landowner under provisions of Section 2016, Fish and Game Code.	Daily bag limit: 20 Possession limit: triple the daily bag limit.

(e) Youth Waterfowl Hunting Days Regulations (NOTE: To participate in these Youth Waterfowl Hunts, youth must be accompanied by a non-hunting adult 18 years of age or older. Federal regulations require that hunters must be 17 years of age or younger.

(1) Statewide Provisions.

<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag Limit</i>
Ducks (including Mergansers), American Coot, Common Moorhen, Black Brant, Geese	<ol style="list-style-type: none"> 1. Northeastern California Zone: The Saturday fourteen days before the opening of waterfowl season extending for 2 days. 2. Southern San Joaquin Valley Zone: The first Saturday in February extending for 2 days. 3. Southern California Zone: The first Saturday in February extending for 2 days. 4. Colorado River Zone: The Saturday following the closing of waterfowl season extending for 2 days. 5. Balance of State Zone: The first Saturday in February extending for 2 days. 	Same as regular season.

(f) Veterans and Active Military Personnel Waterfowl Hunting Days Regulations.

NOTE: Veterans (as defined in Section 101 of Title 38, United States Code) and members of the Armed Forces on active duty, including members of the National Guard and Reserves on active duty (other than training), may participate. Persons participating in this special hunt must possess and present upon demand verification of eligibility to participate in this hunt. Verification includes: Veteran's ID Card, or Military ID Card for active duty, or a State-issued driver's license or Identification Card with Veteran Designation.

(1) *Statewide Provisions.*

<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag Limit</i>
<p>Ducks (including Mergansers), Geese, American Coot, Common Moorhen</p>	<p>1. Northeastern California Zone: The Saturday following the closing of the regular duck season extending for 2 days. Goose hunting in this zone is not permitted during these days.</p> <p>2. Southern San Joaquin Valley Zone: The second Saturday in February extending for 2 days.</p> <p>3. Southern California Zone: The second Saturday in February extending for 2 days.</p> <p>4. Balance of State Zone: The second Saturday in February extending for 2 days.</p> <p>Goose hunting in this zone is not permitted during these days.</p>	<p>Same as regular season.</p>

(g) Falconry Take of Ducks (including Mergansers), Geese, American Coots, and Common Moorhens.

(1) Statewide Provisions.

<i>(A) Species</i>	<i>(B) Season</i>	<i>(C) Daily Bag and Possession Limits</i>
<p>Ducks (including Mergansers), Geese, American Coot and Common Moorhen</p>	<p>1. Northeastern California Zone. Open concurrently with duck season through January 17, 2024.</p> <p>2. Balance of State Zone. Open concurrently with duck season, February 3-4, 2024 and February 17-18, 2024 EXCEPT in the North Coast Special Management Area where the falconry season for geese runs concurrently with the season for Small Canada geese (see 502(d)(6)).</p> <p>3. Southern San Joaquin Valley Zone. Open concurrently with duck season, February 3-4, 2024, and February 17-18, 2024. Goose hunting in this zone by means of falconry is not permitted.</p> <p>4. Southern California Zone. Open concurrently with duck season, February 3-4, 2024 and February 17-18, 2024 EXCEPT in the Imperial County Special Management Area where the falconry season for geese runs concurrently with the season for white geese.</p> <p>5. Colorado River Zone. Open concurrently with duck season and February 1-4, 2024. Goose hunting in this zone by means of falconry is not permitted. Federal regulations require that California's hunting regulations conform to those of Arizona, where goose hunting by means of falconry is not permitted.</p>	<p>Daily bag limit: 3 Daily bag limit makeup: • Either all of 1 species or a mixture of species allowed for take.</p> <p>Possession limit: 9</p>

Appendix B. Possible Effects of Climate Change Impacts on Waterfowl

Over the long-term climate change models suggest temperature increases in many areas, both increases and decreases in precipitation, its timing, sea level rise, changes in the timing and length of the four seasons, declining snow pack and increasing frequency and intensity of severe weather events. Many uncertainties make it difficult to predict the precise impacts that climate change will have on wetlands and waterfowl. The effects of climate change on waterfowl populations, including their size and distribution, will probably be species specific and variable, with some effects considered negative and others considered positive (Anderson and Sorenson 2001). For example, a longer and warmer ice-free season in the Arctic would be expected to result in higher overall reproductive success for Arctic nesting geese (Batt 1998).

Breeding Season

Increasing spring temperatures have led to earlier arrival of waterfowl on northern breeding areas (Murphy-Klassen et al. 2005), yet nest survival has not decreased at this point of time (Drever and Clark 2007). In fact, earlier nest initiations are often more successful (Emery et al. 2005, Sedinger et al. 2008). However, future changes in wetland distribution and type (Johnson et al. 2005) on northern breeding grounds may impact settling patterns (Johnson and Grier 1988), and potentially recruitment for certain species through differences in breeding probability (Krapu et al. 1983), nest survival, and duckling survival. In California, areas with wetland brood habitat may become more limited if precipitation decreases with increasing temperatures, as predicted for the prairie pothole region of the United States and Canada (Sorenson et al 1998). Production of waterfowl that rely on agricultural habitats may be similarly affected if water availability (amounts and or timing) change.

Non-breeding Season

The Central Valley of California has one of the world's largest concentrations of over-wintering waterfowl (Heitmeyer et al. 1989). The primary expected response of waterfowl to climate change is redistribution as birds seek to maintain energy balance. Increased fall and winter temperatures in northern regions would make it unnecessary for waterfowl to migrate as far south and the wintering populations of waterfowl in California may be reduced. Shifting patterns of precipitation and temperatures may cause decreased availability of water for managed wetlands and agricultural production in the Central Valley. Changes in water availability and timing (Miller et al. 2003) would likely have the greatest impact on rice agriculture, an important component of wintering waterfowl habitat in California. Decreasing habitats may cause a decline in body

condition which may impact recruitment and survival in waterfowl populations. Ultimately, this will cause decreased recruitment as birds shift out of optimal nesting habitats (e. g. Ward et al. 2005), and a decrease in over-wintering populations.

Summary of Findings

There is substantial evidence that climate change will cause changes in habitats and other factors that affect waterfowl populations over the long term. Waterfowl populations are assessed in many ways on an annual basis (See pages 38–40 of the 2006 Final Environmental Document for Migratory Game Bird Hunting, SCH #2006042115, incorporated by reference, available at 1010 Riverside Parkway, West Sacramento 95605). In summary, the condition of breeding habitats is assessed annually during the breeding population surveys conducted by the Service with assistance from some states and the Canadian Wildlife Service (CWS) in the spring and summer. The specific methodology of these surveys is provided in Chapter 3, pages 55–57, 2006 Final Environmental Document for Migratory Game Bird Hunting, SCH #2006042115, incorporated by reference, available at 1010 Riverside Parkway, West Sacramento 95605).

Because the effect of regulated harvest is minimal (pages 57–67 of 2006 Final Environmental Document for Migratory Game Bird Hunting, SCH #2006042115, incorporated by reference, available at 1010 Riverside Parkway, West Sacramento 95605) implementation of the proposed project in the current year is not expected to result in significant negative effects to waterfowl populations. The effect is minimal because the weight of historic scientific evidence leans toward the compensatory mortality hypothesis, though there are enough ambiguities to make complete reliance on this hypothesis as a management strategy an unwise approach (USDI 1988a:96). Accordingly, restrictive regulations have been established when populations reached low levels. For example, duck seasons were reduced from 93 days to 59 days, and bag limits were reduced from seven birds per day to four birds per day during the late 1980s in response to declines in duck populations caused by drought (Page 66, 2006 Final Environmental Document for Migratory Game Bird Hunting, SCH #2006042115, incorporated by reference, available at 1010 Riverside Parkway, West Sacramento 95605).

***Appendix C. Western Mallard and California Breeding Population
Status***

Western Mallard Population Status

Year	Alaska Index	Alaska SE	British Columbia Index	British Columbia SE	Washington Index	Washington SE	Oregon Index	Oregon SE	California Index	California SE	Total Index	Total SE
1977	459,778	55,724										
1978	318,842	36,342										
1979	275,779	36,047										
1980	399,102	39,399										
1981	476,251	48,716										
1982	254,727	29,708										
1983	321,687	28,506										
1984	504,182	52,275										
1985	219,055	24,633										
1986	233,539	26,196										
1987	185,802	19,422										
1988	356,711	36,604										
1989	411,507	34,261										
1990	366,933	37,017										
1991	385,319	36,279										
1992	345,708	38,708							375,844	59,873		
1993	282,983	29,533							359,008	50,253		
1994	350,875	37,142					116,430	13,280	311,692	40,362		
1995	524,200	67,975					77,515	7,265	368,526	42,126		
1996	522,006	43,552					102,168	8,886	536,709	79,656		
1997	584,247	51,997					121,155	12,503	511,344	103,580		
1998	836,216	67,284					124,942	10,548	353,901	47,746		
1999	713,054	69,568					125,631	9,255	560,063	106,201		
2000	770,333	52,159					110,854	9,055	347,559	52,463		
2001	718,286	54,127							302,204	44,361		
2002	667,339	50,687					104,481	9,030	265,295	31,385		

Western Mallard Population Status, continued.

Year	Alaska Index	Alaska SE	British Columbia Index	British Columbia SE	Washington Index	Washington SE	Oregon Index	Oregon SE	California Index	California SE	Total Index	Total SE
2003	843,497	66,823					89,032	8,047	337,056	49,485		
2004	811,135	63,878					82,461	6,900	262,424	34,483		
2005	703,140	54,748					74,115	6,379	317,869	46,930		
2006	515,821	46,935	90,404	8,628			81,108	6,775	399,436	57,229		
2007	581,493	55,053	98,840	7,900			92,461	7,425	388,324	54,106		
2008	532,414	46,797	81,124	5,914			75,363	6,725	297,129	47,349		
2009	502,970	44,896	72,505	5,287			72,616	5,867	301,960	63,641		
2010	605,556	53,070	81,131	6,121	92,911	11,680	66,762	5,657	367,891	55,412	1,214,251	78,056
2011	415,825	38,767	69,726	6,872	71,375	9,456	61,556	4,637	314,715	44,975	933,197	60,694
2012	505,583	51,067	75,561	8,401	89,468	8,203	88,803	7,505	387,061	54,532	1,146,476	75,998
2013	338,379	38,215	82,944	7,613	74,406	8,917	84,336	6,431	298,636	52,290	878,701	66,132
2014	500,879	57,351	82,633	6,805	86,344	10,250	85,259	8,572	238,666	54,606	993,781	80,597
2015	470,915	50,867	81,377	6,873	86,417	9,041	87,361	8,611	173,865	28,175	899,935	59,870
2016	584,200	65,389	73,991	6,216	59,864	4,681	87,346	8,038	263,774	35,602	1,069,175	75,289
2017	538,451	51,882	70,903	6,944	103,384	9,770	71,720	6,138	198,392	31,863	982,850	62,356
2018	450,750	45,061	79,309	5,697	124,935	10,013	97,148	11,407	272,859	42,037	1,025,001	63,722
2019	361,060	35,347	74,535	7,495	126,243	12,114	83,867	6,992	239,831	32,223	885,535	50,393
2020												
2021	641,300	59,100					76,259	8,574				
2022	614,400	69,800	80,883	5,872	87,374	7,408	79,388	8,645	179,393	29,275	1,041,500	76,800
2023	380,917	42,110	70,757	6,058	102,011	10,547	68,587	7,026	202,108	28,506	824,380	101,519
Averages	Alaska Index	Alaska SE	Brit. Col. Index	Brit. Col. SE	Washington Index	Washington SE	Oregon Index	Oregon SE	California Index	California SE	Total Index	Total SE
LTA*	486,591	46,544	79,164	6,793	92,061	9,340	88,883	8,078	324,451	50,024	991,230	70,951
3-yr	545,554	57,009	75,392	6,475	105,209	10,023	74,745	8,082	207,111	30,001	917,113	76,231

% Change from	Alaska Index	Alaska SE	Brit. Col. Index	Brit. Col. SE	Washington Index	Washington SE	Oregon Index	Oregon SE	California Index	California SE	Total Index	Total SE
LTA*	-22.1	-9.7	-11.2	-11.5	11.9	14.3	-23.5	-13.4	-38.5	-43.8	-18.1	48.9
3-yr	-30.2	-26.1	-6.1	-6.4	-3.0	5.2	-8.2	-13.1	-2.4	-5.0	-10.1	33.2
2019	-38	-39.7	-12.5	3.2	16.8	42.4	-13.6	-18.7	12.7	-2.6	-20.87	32.2

LTA= Long-term average, 1977-2022

California Waterfowl Breeding Population Estimates with Standard Errors

Species	2023	SE	2022	SE	LTA ¹	% Change 2022	% Change LTA
Mallard	202,108	28,506	179,393	29,275	324,241	13%	-38%
Gadwall	88,251	21,369	76,391	21,855	86,215	16%	2%
American Wigeon	5,097	1,576	3,344	1,189	4,493	52%	13%
Green-winged Teal	11,845	5,274	10,125	6,510	4,145	17%	186%
Cinnamon Teal	33,477	8,229	23,028	6,317	42,123	45%	-21%
Northern Shoveler	107,490	30,790	46,015	10,885	34,531	134%	211%
Northern Pintail	6,056	2,080	4,177	1,609	6,961	45%	-13%
Wood Duck	4,032	1,790	3,855	2,148	8,079	5%	-50%
Redhead	9,852	5,704	891	830	4,053	1006%	143%
Canvasback	4,145	1,927	433	454	1,148	857%	261%
Lesser Scaup	489	469	3,394	1,231	4,537	-86%	-89%
Ring-necked Duck	239	245	2,348	1,088	977	-90%	-76%
Goldeneye	338	315	0	0	291	-	16%
Bufflehead	2,024	880	5,510	1,756	3,376	-63%	-40%
Ruddy Duck	19,996	17,529	20,609	16,149	15,366	-3%	30%
Common Merganser	0	0	361	385	502	-	-
TOTAL DUCKS	495,438	126,681	379,872	48,803	541,269	30%	-8%
Canada Geese ²	60,353	14,900	46,359	10,039	44,457	30%	36%
Goslings ^{2,3}	2,119	1,305	3,235	2,469	2,979	-34%	-29%
American Coot	209,078	78,337	188,668	71,127	244,927	11%	-15%
Sandhill Crane ^{2,3}	2,691	3,723	3,338	2,006	1,982	-19%	36%
Mute Swan ^{3,4}	4,045	1,205	1,153	753	712	251%	468%

¹Long-term average (LTA); 1992 – 2022 for ducks and coots.

²Northeastern stratum estimates only, LTA for Canada geese = 1993 – 2022, LTA for goslings and Sandhill cranes = 2003 – 2022

³VCF = 1, due to insufficient data.

⁴LTA = 2003 – 2022.

**Appendix D. Mallard, Pintail, Canvasback and Scaup Breeding Population
Estimates from the Traditional Survey Area.**

Year	Mallard	Pintail	Canvasback	Scaup
1955	8,777,294	9,775,075	589,257	5,620,130
1956	10,452,690	10,372,801	698,509	5,994,080
1957	9,296,888	6,606,886	626,072	5,766,942
1958	11,234,244	6,037,921	746,830	5,350,372
1959	9,024,288	5,872,740	488,684	7,037,610
1960	7,371,652	5,722,160	605,698	4,868,569
1961	7,329,954	4,218,159	435,251	5,380,045
1962	5,535,905	3,623,524	360,238	5,286,098
1963	6,748,828	3,846,015	506,235	5,438,402
1964	6,063,865	3,291,227	643,636	5,131,798
1965	5,131,702	3,591,918	522,120	4,639,964
1966	6,731,878	4,811,934	663,114	4,439,240
1967	7,509,548	5,277,693	502,576	4,927,671
1968	7,089,238	3,489,395	563,691	4,412,682
1969	7,531,615	5,903,888	503,530	5,139,780
1970	9,985,873	6,391,987	580,100	5,662,477
1971	9,416,373	5,847,204	450,674	5,143,262
1972	9,265,550	6,978,954	425,912	7,996,967
1973	8,079,202	4,356,220	620,451	6,257,416
1974	6,880,153	6,598,182	512,842	5,780,464
1975	7,726,878	5,900,370	595,098	6,460,024
1976	7,933,588	5,475,644	614,389	5,818,746
1977	7,397,061	3,926,093	664,042	6,260,238
1978	7,424,968	5,108,179	373,174	5,984,411
1979	7,883,440	5,376,133	582,004	7,657,943
1980	7,706,483	4,508,077	734,570	6,381,655
1981	6,409,701	3,479,479	620,843	5,990,883
1982	6,408,475	3,708,758	513,265	5,531,964
1983	6,456,007	3,510,642	526,612	7,173,798
1984	5,415,271	2,964,801	530,129	7,024,320
1985	4,960,868	2,515,493	375,929	5,097,956
1986	6,124,236	2,739,747	438,350	5,235,304
1987	5,789,776	2,628,344	450,109	4,862,729
1988	6,369,341	2,005,522	435,048	4,671,351
1989	5,645,440	2,111,902	477,439	4,342,050
1990	5,452,385	2,256,630	539,318	4,293,141
1991	5,444,580	1,803,385	491,151	5,254,899
1992	5,976,077	2,098,139	481,529	4,639,232
1993	5,708,293	2,053,418	472,055	4,080,144

Mallard, Pintail, Canvasback and Scaup Breeding Population Estimates from the Traditional Survey Area, continued.

Year	Mallard	Pintail	Canvasback	Scaup
1994	6,980,066	2,972,266	525,604	4,529,044
1995	8,269,415	2,757,866	770,593	4,446,443
1996	7,941,315	2,735,862	848,487	4,217,405
1997	9,939,695	3,557,991	688,754	4,112,349
1998	9,640,364	2,520,649	685,862	3,471,916
1999	10,805,682	3,057,888	716,039	4,411,723
2000	9,470,212	2,907,559	706,754	4,026,322
2001	7,903,955	3,295,994	579,826	3,694,010
2002	7,503,707	1,789,710	486,597	3,524,142
2003	7,949,743	2,558,229	557,575	3,734,444
2004	7,425,314	2,184,602	617,227	3,807,191
2005	6,755,268	2,560,530	520,574	3,386,893
2006	7,276,538	3,386,425	691,013	3,246,663
2007	8,307,296	3,335,302	864,924	3,452,233
2008	7,723,809	2,612,841	488,667	3,738,349
2009	8,512,378	3,224,957	662,135	4,172,097
2010	8,430,138	3,508,558	585,164	4,244,429
2011	9,182,591	4,428,650	691,560	4,319,289
2012	10,601,516	3,473,083	759,935	5,238,630
2013	10,371,890	3,334,993	786,978	4,165,678
2014	10,899,822	3,220,296	685,262	4,611,054
2015	11,643,321	3,043,012	757,281	4,395,305
2016	11,792,529	2,618,468	736,472	4,991,714
2017	10,488,461	2,889,231	732,531	4,371,725
2018	9,255,153	2,365,322	686,084	3,989,325
2019	9,423,411	2,268,466	651,925	3,590,799
2020	No Survey			
2021	No Survey			
2022	7,223,440	1,782,760	584,669	3,598,631
2023	6,129,215	2,218,818	619,385	3,519,037

Appendix E. Effects of Adding Up to Five Additional Days to the General Duck and Goose Season by Closing on January 31.

Introduction

Traditionally, federal frameworks mandated that general duck and goose seasons closed on the last Sunday in January; weekend open and close dates were most common to ensure hunting opportunities existed for those who work Monday through Friday and hunt on public hunt areas. Federal frameworks were changed prior to the 2019-20 season to allow a closing date of no later than January 31 (regardless of the day it occurred).

Members of the public requested a later closing date while still opening on a Saturday in late October. Depending on the year, an additional 5 days would be used to achieve the January 31 closing option. In most California waterfowl hunting zones, only 100-day seasons were used (Southern Joaquin Valley, Southern California, and Balance of State zones), even though 107 days are allowed for ducks while in the AHM liberal regulatory package. Most goose populations that winter in California are at or above population goals allowing season lengths of 107 days (based on harvest strategies described in management plans) for most populations.

Closing on January 31 while maintaining a Saturday opener for the subsequent four seasons (through 2023-24) requires an annual adjustment to season length for both general and falconry seasons. Depending on the season, between 0 and 5 additional weekdays would be added to the general duck and goose seasons.

Department Analysis on Using Five Additional Days

The Department analyzed harvest data to estimate the potential increase in duck harvest. The analyses focused on dabbling duck harvest because the sample size and the amount of data available. Goose harvest was not analyzed because most goose populations are at or above population objectives, and bag limits have been liberalized commensurate with population status.

The Department conducted a regression analysis of harvest (dabbling ducks and mallards) and season length to estimate the potential increase in duck harvest. Harvest data was obtained from the Cooperative Waterfowl Parts Collection Survey (PCS) from 2004 to 2017. The Northeastern Zone harvest data was excluded from the query because of differences in both weather and season timing. Harvest data was arranged by date and the cumulative total harvest by day for each season was calculated. Harvest data was then aggregated to derive a mean and variance for each day. A regression equation was generated to predict cumulative harvest by additional hunt day for both total dabbling ducks and mallards.

Total dabbling ducks followed a curvilinear trend ($R^2 = 0.99$; Figure E-1). A 5-day increase in season length is predicted to increase total dabbling duck harvest to 1,262,690 (95% CI 1,139,790 – 1,385,696), an additional 72,193 ducks representing a 5.7 percent increase.

Total mallard harvest and season length was best fit by a linear relationship with an R^2 of 0.99 (Figure E-2). A 5-day increase in season length is predicted to increase the average daily mallard harvest by 2,083 (95% CI 1,665 – 2,502), similar to the previous analysis presented on page 68 in the 2006 Final Environmental Document (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 95605). The previous analysis estimated an increase of 2,500 per day (95% CI = 2,200 – 2,800). The slight reduction in the new analysis is a result of the overall decline in mallard harvest over time. A 5-day increase in season length would increase total mallard harvest to 218,734 (95% CI 174,810 – 262,657), an additional 11,916 ducks. This represents a 5.4 percent increase.

Analyses for predicting the increase in goose harvest were not conducted because most wintering goose populations in California are at or above their population goals (Appendix F). Bag limits have been raised considerably during the past 10 years to provide: hunting opportunities commensurate with population status, a tool to minimize depredation on private lands and to reduce population size. One-hundred day goose seasons were maintained in the Southern San Joaquin Valley and the Southern California zones to mimic duck seasons (minimize regulation complexity) because goose hunting opportunity in those zones is negligible, especially that late in the season. Increasing the goose season length in the Southern San Joaquin Valley and Southern California zones will not affect those goose populations who have season and or bag limit restrictions (Tule greater white-fronted geese in the Sacramento Valley Special Management Area and Large Canada geese in Northeastern California).

Figure E–1. California Mean Season Cumulative Dabbling Duck Harvest, 2004–2017

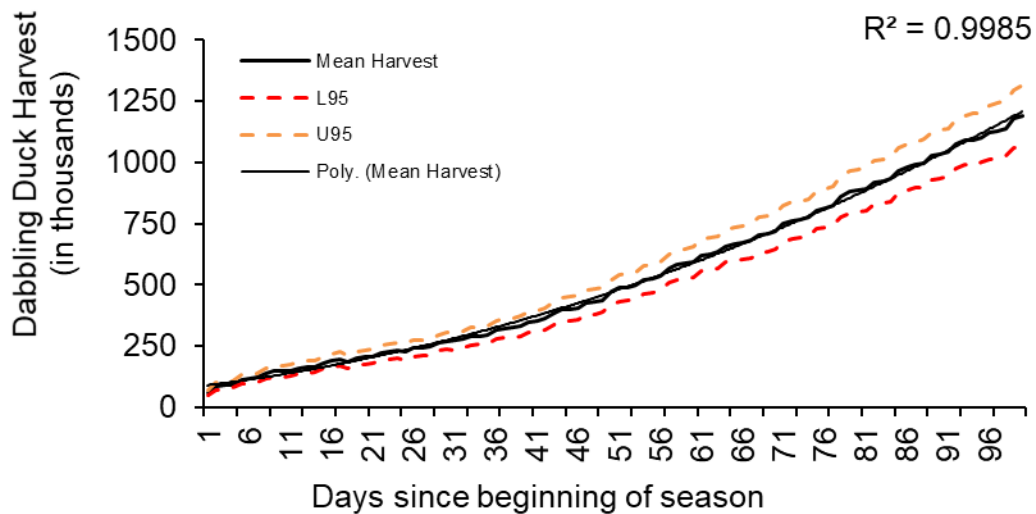
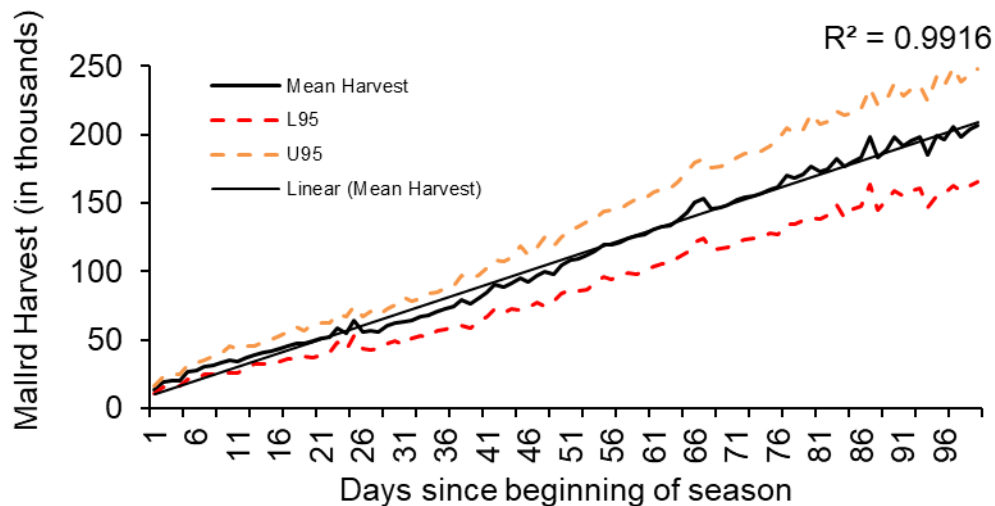


Figure E–2. California Mean Season Cumulative Mallard Harvest, 2004–2017



Discussion

As described in Chapter 3 of the 2006 Final Environmental Document (incorporated by reference, State Clearinghouse Number 2006042115, available at 1010 Riverside Parkway, West Sacramento 95605), all measures of the status and harvest of waterfowl have unmeasured degrees of uncertainty. These uncertainties are inherent due to annual changes in the system (weather, agricultural practices, predation), limitations in

monitoring programs (sampling error), and the variable effort and success of hunters. An estimated harvest increase of 5% by selecting 107-day seasons will not likely negatively impact duck populations. Most hunters in California, especially those in drier and more southerly portions of the State, feel that hunting opportunity is best late in the hunting season and the later closing date will provide better hunting. Many hunters feel that better hunting serves as an incentive to own and manage wetland habitats for ducks and other wildlife.

Closing on January 31 rather than on the last Sunday in January, has not been fully vetted by the hunting public or local county commissions and communities. Traditionally, most waterfowl opening and closing days occur on the weekend to allow hunting opportunities for hunters who work Monday through Friday and hunt on public hunt areas. In addition, closing January 31 for the 2019-20 season would eliminate the falconry-only season; the extended falconry season would have to be eliminated because the season length would exceed what is allowed under the frameworks. Falconers prefer a small number of days dedicated to falconry-only to avoid conflicts with the general (gun) seasons. Lastly, closing January 31 while maintaining the traditional Saturday opener for the subsequent seasons requires an annual adjustment to season length for both general and falconry seasons.

For example:

Season	Traditional Saturday Opening Day	Closing Day	General Season Length	Falconry-only Season Length
2019-20	October 19	Friday, January 31	105-days	Zero
2020-21	October 24	Sunday, January 31	100-days	5-days*
2021-22	October 23	Monday, January 31	101-days	4-days
2022-23	October 22	Tuesday, January 31	102-days	3-days
2023-24	October 21	Wednesday, January 31	103-days	2-days
2024-25	October 26	Friday, January 31	98-days	5-days
2025-26	October 25	Saturday, January 31	99-days	4-days
2026-27	October 24	Sunday, January 31	100-days	3-days

* Veteran and Active Military Personnel Waterfowl Hunt Days implemented, reducing the total days available for the general season

Making annual adjustments to season length and closing on a fixed date rather than the last Sunday in January may not be preferred by hunters and considered confusing.

Conclusion

Closing January 31 and using up to five additional days would not result in a significant adverse environmental impact and would be viewed favorably by those hunters who prefer to use the maximum allowable days. However, selecting this alternative would eliminate the 5-day falconry-only season as requested by the public for the 2019-20 season but allow up to 5-days in subsequent seasons (changes annually). This

alternative would be viewed unfavorably by those hunters who prefer an established set of days and closing on the last Sunday of January.

Appendix F. Pacific Flyway Goose Status

Aleutian Canada Goose abundance indices from direct count and mark-resight methods, 1975–current.

Year	Estimate	SE	L95% C.I.	U95% C.I.	Method
1975	790				Direct count
1976	900				Direct count
1977	1,280				Direct count
1978	1,500				Direct count
1979	1,590				Direct count
1980	1,740				Direct count
1981	2,000				Direct count
1982	2,700				Direct count
1983	3,500				Direct count
1984	3,800				Direct count
1985	4,200				Direct count
1986	4,300				Direct count
1987	5,000				Direct count
1988	5,400				Direct count
1989	5,800				Direct count
1990	6,300				Direct count
1991	7,000				Direct count
1992	7,680				Direct count
1993	11,680				Direct count
1994	15,700				Direct count
1995	19,150				Direct count
1996 ^a	21,420				Direct count
1997 ^a	22,800				Direct count
1998 ^a	27,600				Direct count
1999 ^a	15,451	558	14,357	16,544	Mark-resight
2000 ^a	20,392	763	18,898	21,887	Mark-resight
2001 ^a	32,440	1,070	30,343	34,536	Mark-resight
2000	34,182	1,339	31,557	36,806	Mark-resight
2001	88,292	18,736	51,570	125,014	Mark-resight
2002	65,211	12,822	39,963	90,459	Mark-resight
2003	73,030	2,761	67,618	78,441	Mark-resight
2004	111,091	4,375	102,517	119,666	Mark-resight
2005	87,841	4,841	78,353	97,329	Mark-resight
2006	97,224	4,524	88,358	106,091	Mark-resight
2007	117,347	9,797	98,144	136,550	Mark-resight
2008	116,119	7,438	101,539	130,698	Mark-resight
2009	81,766	13,347	55,605	107,926	Mark-resight
2010	106,691	8,986	89,078	124,305	Mark-resight
2011	105,271	8,405	88,797	121,745	Mark-resight
2012	135,915	10,925	114,501	157,328	Mark-resight
2013	166,292	15,857	135,213	197,371	Mark-resight
2014	149,968	13,087	124,318	175,618	Mark-resight

Aleutian Canada Goose abundance indices from direct count and mark-resight methods, 1975–current, continued.

Year	Estimate	SE	L95% C.I.	U95% C.I.	Method
2015	197,725	17,822	162,794	232,656	Mark-resight
2016	154,659	13,368	128,459	180,860	Mark-resight
2017	168,548	20,345	128,671	208,424	Mark-resight
2018	171,334	16,229	139,526	203,142	Mark-resight
2019	199,539	27,750	145,149	253,929	Mark-resight
2020	118,388	12,698	93,500	143,277	Mark-resight
2021	186,100	19,304	148,263	223,936	Mark-resight
2022	215,236	28,974	158,447	272,026	Mark-resight
2023	212,113	35,203	143,114	281,111	Mark-resight
Averages:	Estimate	SE	L95% C.I.	U95% C.I.	
Long-term	65,032	10,760	96,903	139,081	
3-yr	201,010	26,313	149,436	252,584	
% Change from:	Estimate	SE	L95% C.I.	U95% C.I.	
Long-term	241.9	259.9	50.6	110.7	
3-yr	5.5	33.8	-4.2	11.3	
2022	-3.3	26.6	-13.2	2.6	

Pacific Brant population indices from the Mid-winter Waterfowl Survey, 1936-current.

Year	CA	Other PF	Mexico	Total	3-yr Avg	Izembek
1936*	19,910	11,287		31,197		
1937*	13,460	19,385		32,845		
1938*	38,200	35,035		73,235		
1939*	16,890	35,097		51,987		
1940*	35,050	40,870		75,920		
1941*	31,785	29,100		60,885		
1942*	28,983	60,800		89,783		
1943*	18,000	37,575		55,575		
1944*	20,250	41,200		61,450		
1945*	30,100	35,650		65,750		
1946*	60,452	25,517		85,969		
1947*	39,640	28,450		68,090		
1948*	32,750	23,510		56,260		
1949*	66,515	21,453		87,968		
1950*	57,792	19,174		76,966		
1951**	48,131	23,749	93,200	165,080		
1952**	43,840	19,778	102,945	166,563		
1953**	37,557	28,982	87,905	154,444		
1954**	28,750	16,936	86,316	132,002		
1955**	34,070	23,601	76,679	134,350		
1956**	38,510	17,987	52,743	109,240		
1957**	35,848	22,194	73,380	131,422		
1958**	26,560	27,997	71,309	125,866		
1959**	10,750	11,936	72,705	95,391		
1960	3,771	18,266	114,202	136,239		
1961	6,853	18,005	142,980	167,838		
1962	23,510	28,081	118,645	170,236	158,104	
1963	2,388	23,039	114,815	140,242	159,439	
1964	8,353	36,169	140,760	185,282	165,253	
1965	3,372	21,263	142,265	166,900	164,141	
1966	3,284	22,973	135,106	161,363	171,182	
1967	3,824	22,758	153,070	179,652	169,305	
1968	1,729	16,611	136,000	154,340	165,118	
1969	166	10,445	132,475	143,086	159,026	
1970	207	9,879	131,600	141,686	146,371	
1971	130	12,289	136,800	149,219	144,664	
1972	0	5,375	119,400	124,775	138,560	
1973	950	8,455	115,600	125,005	133,000	
1974	470	6,881	123,300	130,651	126,810	

Pacific Brant population indices from the Mid-winter Waterfowl Survey, 1936-current, continued.

Year	CA	Other PF	Mexico	Total	3-yr Avg	Izembek
1975	480	7,670	115,280	123,430	126,362	
1976	680	9,309	112,056	122,045	125,375	
1977	0	16,211	130,756	146,967	130,814	107,784
1978	560	19,210	143,117	162,887	143,966	116,298
1979	10	9,333	120,070	129,413	146,422	
1980	135	8,680	137,550	146,365	146,222	128,204
1981	540	15,168	181,760	197,468	157,749	127,667
1982	485	7,157	113,402	121,044	154,959	180,734
1983	565	3,831	104,918	109,314	142,609	146,945
1984	700	9,638	124,703	135,041	121,800	147,933
1985	800	12,717	131,568	145,085	129,813	120,122
1986	706	18,796	114,725	134,227	138,118	122,673
1987	736	23,259	86,913	110,908	130,073	116,131
1988	947	27,378	116,696	145,021	130,052	136,765
1989	1,033	26,811	107,721	135,565	130,498	123,822
1990	992	20,864	129,865	151,721	144,102	135,041
1991	1,340	22,816	108,555	132,711	139,999	123,551
1992	2,424	22,228	93,185	117,837	134,090	128,784
1993	9,415	22,861	92,724	125,000	125,183	119,531
1994	2,299	26,768	100,265	129,332	124,056	143,768
1995	3,987	32,683	96,815	133,485	129,272	142,701
1996	2,008	18,497	107,485	127,990	130,269	150,946
1997	3,598	20,971	130,738	155,307	138,927	118,188
1998	6,091	20,642	112,105	138,838	140,712	130,252
1999	4,296	27,236	100,760	132,292	142,146	116,512
2000	3,389	23,740	108,440	135,569	135,566	131,134
2001	4,197	29,936	91,860	125,993	131,285	151,216
2002	4,092	29,089	105,050	138,231	133,264	112,554
2003	3,124	20,792	82,226	106,142	123,455	115,839
2004	6,372	29,945	84,955	121,272	121,882	135,944
2005	5,224	27,956	74,028	107,208	111,541	134,474
2006	5,069	34,150	101,737	140,956	123,145	152,712
2007	7,387	44,025	79,182	130,594	126,253	124,189
2008	4,827	48,831	103,299	156,957	142,836	140,897
2009*	6,392	54,122		60,514	142,836	130,294
2010***	13,553	54,841	95,077	163,471	150,341	144,594
2011***	15,610	66,808	80,050	162,468	160,965	130,091
2012	2,227	63,670	111,444	177,341	167,760	126,028

Pacific Brant population indices from the Mid-winter Waterfowl Survey, 1936-current, continued.

Year	CA	Other PF	Mexico	Total	3-yr Avg	Izembek
2013	7,448	60,679	95,173	163,300	167,703	154,481
2014	7,916	68,240	97,159	173,315	171,319	157,781
2015	4,906	63,144	68,432	136,482	157,699	171,635
2016	5,105	62,530	72,390	140,025	149,941	160,984
2017	8,765	64,859	82,096	155,720	144,076	203,735
2018	2,466	60,123	68,114	132,450	142,732	154,811
2019	5,353	55,927	99,879	161,159	149,776	155,724
2020	5,788	60,151	76,945	142,884	145,388	157,087
2021	4,646	68,480	77,461	150,587	151,543	
2022	5,167	80,848	72,665	158,680	150,717	
2023	6,023	63,080	50,785	119,888	143,052	

Averages:	CA	Other PF	Mexico	Total	3-yr Avg	Izembek
LTA	12,076	29,596	105,089	127,673	142,738	138,350
1936-53	35,517	29,812	94,683	81,109		
1954-63	21,101	20,804	92,377	134,283	158,772	
1964-73	2,202	16,622	134,308	153,131	155,662	
1974-83	393	10,345	128,221	138,958	140,129	134,605
1984-93	1,909	20,737	110,666	133,312	132,373	127,435
1994-03	3,708	25,035	103,574	132,318	132,895	131,311
2004-13	7,411	48,503	91,661	138,408	141,526	137,370
2014-23	5,614	64,738	76,593	147,119	150,635	164,823

Wintering Flyway Objective: 160,000

*No survey in Mexico

**Baja Mexico only

***No survey in Oregon

Pacific White-fronted Goose abundance indices from breeding pair surveys in Alaska (Yukon-Kuskokwim Delta Coastal Zone Survey and Alaska-Yukon Waterfowl Breeding Population and Habitat Survey) and fall counts in California, 1979–current.

Year	YK Delta	YK Interior	Bristol Bay	Total	Projected Fall Population	Fall Survey ^a
1979						73,100
1980						93,500
1981						116,500
1982						91,700
1983						112,900
1984						100,200
1985	17,384	9,563	6,241	36,046	163,249	93,900
1986	12,710	8,984	5,273	27,685	141,930	107,100
1987	13,618	6,665	4,520	26,938	140,026	130,600
1988	23,761	12,365	4,842	45,254	186,728	124,690
1989	27,229	9,853	6,672	49,709	198,087	263,350
1990	36,246	14,973	2,475	58,307	220,010	237,050
1991	30,399	11,205	5,596	49,075	196,470	215,655
1992	33,287	11,012	8,716	57,833	218,802	230,675
1993	39,838	19,320	1,614	63,844	234,128	253,820
1994	56,600	8,694	5,058	73,571	258,930	298,930
1995	77,929	8,501	3,228	90,537	302,190	251,970
1996	77,948	27,241	5,380	118,928	374,582	350,850
1997	83,334	20,286	4,520	117,324	370,492	318,954
1998	81,680	18,643	2,367	124,177	387,966	413,100
1999	90,405	25,107	4,304	126,323	393,437	285,514
2000	85,601	16,080	2,045	110,363	352,743	284,044
2001	110,471	23,414	7,533	144,158	438,913	337,848
2002	87,611	16,644	6,564	113,105	359,734	402,565
2003	115,843	16,644	2,690	137,515	421,975	424,900
2004	97,898	15,891	2,260	119,051	374,895	337,971
2005	103,758	17,772	8,071	146,113	443,898	508,890
2006	138,145	27,739	5,811	171,748	509,262	426,300
2007	165,250	27,269	2,690	209,180	604,706	476,009
2008	162,076	53,025	1,291	217,937	627,035	602,699
2009	143,955	31,313	6,349	182,527	536,746	457,802
2010	173,094	42,503	9,792	226,881	649,840	783,648
2011	169,455	32,535	7,533	209,009	604,270	646,501
2012	181,750	45,229	4,627	232,513	664,201	831,955
2013	163,896	28,869	6,779	199,452	579,902	No Survey

Pacific White-fronted Goose abundance indices from breeding pair surveys in Alaska (Yukon-Kuskokwim Delta Coastal Zone Survey and Alaska-Yukon Waterfowl Breeding Population and Habitat Survey) and fall counts in California, 1979–current, continued.

Year	YK Delta	YK Interior	Bristol Bay	Total	Projected Fall Population	Fall Survey ^a
2014	203,369	16,268	1,184	220,820	698,860	663,257
2015	155,980	18,315	1,399	175,694	556,042	634,478
2016	205,398	23,884	2,260	231,542	732,794	727,419
2017	212,303	28,869	450	241,622	764,694	743,488
2018	187,264	11,284	1,291	199,840	632,460	646,965
2019	144,365	14,105	1,076	159,546	504,937	647,040
2020	NS	NS	NS	NS	NS	NS
2021	128,628	28,586	2,152	159,366	504,367	NS
2022	171,091	37,989	861	209,941	664,428	NS
2023	120,293	13,165	0	133,458	422,372	570,391

Averages:	YK Delta	YK Interior	Bristol Bay	Total	Projected Fall Population	Fall Survey ^a
Long Term	108,544	21,033	4,092	133,669	423,042	420,867
3-yr	139,834	26,580	1,004	167,418	529,850	621,465

% Change from:	YK Delta	YK Interior	Bristol Bay	Total	Projected Fall Population	Fall Survey ^a
Long Term	11.1	-38.0	-100	-0.2	-0.2	34.7
3-yr	-14.0	-50.5	-100	-20.3	-20.3	-16.0
2022	-29.6	-65.3	-100	-36.4	-36.4	-11.8

^aFall surveys were initiated in 1979 and guided management actions until 1998. Management actions after 1998 were based on total indicated birds (AK Total) from the breeding ground survey and a factor derived from the historic relationship between the fall survey and breeding ground survey (1985–1998). Timing of the Fall survey is as follows: 1979–1988 (November) and 1989–2015 (October).

^bProjected fall population = (Alaska total * 2.5498) + 71,339.

White goose abundance indices in the Pacific Flyway December Survey, 1979–current.

Year	Skagit-Fraser	Washington/ Oregon	California	Total
1979	35,600		492,500	528,100
1980	22,400		181,800	204,200
1981	48,600		711,300	759,900
1982	26,100		328,000	354,100
1983	24,500		523,100	547,600
1984	26,600		439,700	466,300
1985	46,200		503,600	549,800
1986	39,900		481,800	521,700
1987	47,700		477,600	525,300
1988	43,800		397,200	441,000
1989	32,200		431,700	463,900
1990	31,700		676,800	708,500
1991	39,100		651,000	690,100
1992	34,300		605,000	639,300
1993	49,100		520,100	569,200
1994	42,600		435,600	478,200
1995	37,000		464,400	501,400
1996	45,800		320,500	366,300
1997	47,000		369,400	416,400
1998	47,100		307,200	354,300
1999	28,600		550,400	579,000
2000	56,300		600,500	656,800
2001	52,000		396,200	448,200
2002	73,100		523,700	596,800
2003	66,800		521,000	587,800
2004	68,141		682,128	750,269
2005	80,040		630,686	710,726
2006	79,891		719,810	799,701
2007	94,859		978,622	1,073,481
2008	57,000		900,403	957,403
2009	73,964		827,055	901,019
2010	63,641		800,156	863,797
2011	69,964		1,027,887	1,097,851
2012	56,973		824,432	881,405
2013	75,313		1,275,890	1,351,203
2014	58,007		1,141,579	1,199,586
2015	66,501	19,866	No Survey	Incomplete

White goose abundance indices from the Pacific Flyway December Survey, 1979–current, continued.

Year	Skagit-Fraser	Washington/ Oregon	California	Total
2016	103,617	29,678		
2017	86,553	51,354	1,217,295	1,355,202
2018	109,993	71,108	1,232,663	1,413,764
2019	No Survey	185,249	1,414,392	Incomplete
2020	133,306	153,690	No Survey	Incomplete
2021	120,725	155,795	No Survey	Incomplete
2022	91,608	84,192	1,093,828	1,269,628

Averages:	Skagit/Fraser	Washington/ Oregon	California	Total
Long Term	58,935	93,867	693,913	745,401
3-yr	115,213	131,226	1,246,961	1,346,198

% Change from:	Skagit/Fraser	Washington/ Oregon	California	Total
Long Term	55.4	-10.3	57.6	72.2
3-yr	-20.5	-35.8	-12.3	-5.7
2021	-24.1	-46.0	-22.7	-10.2

Snow Goose population and productivity indices from Wrangel Island, Russia, 1966–current.

Year	Adults	Breeding Adults	% Juvenile	Total Spring
1966				
1967				
1968				
1969		114,000		
1970	120,000	120,000	20.0	150,000
1971	120,000	24,000	9.1	132,000
1972	106,000	36,000	0.6	107,000
1973	85,900	12,000	0.0	86,000
1974	69,500	32,000	0.7	70,000
1975	56,000	56,000	0.0	56,000
1976	46,000	46,000	20.7	58,000
1977	57,200	10,000	16.1	68,200
1978	64,900	42,000	0.8	65,400
1979	62,100	60,000	26.5	84,500
1980	80,300	20,000	11.5	90,700
1981	86,200	78,000	3.2	89,000
1982	81,000	28,000	18.5	100,000
1983	92,800	3,400	2.4	95,000
1984	85,000	42,000	0.0	85,000
1985	80,000	50,000	5.4	85,000
1986	70,000	58,000	20.4	90,000
1987	85,000	47,000	15.0	100,000
1988	80,000	13,000	17.7	80,000
1989	70,000	60,000	1.4	70,000
1990	60,000	53,000	0.0	60,000
1991	56,000	41,600	6.6	60,000
1992	56,000	46,200	20.0	70,000
1993	64,500	52,200	0.8	65,000
1994	52,500	30,000	25.0	70,000
1995	64,000	8,800	0.8	65,000
1996	75,000	75,400	0.0	75,000
1997	70,000	55,200	15.0	85,000
1998	80,000	31,800	10.0	90,000
1999	85,000	20,800	5.6	90,000
2000	87,400	49,600	8.0	95,000
2001	92,400	48,000	12.0	105,000

Snow Goose population and productivity indices from Wrangel Island, Russia, 1966–current, continued.

Year	Adults	Breeding Adults	% Juvenile	Total spring
2002		60,600		110,000
2003		55,000		115,000
2004	111,700	56,800	4.9	117,500
2005		95,800		117,500
2006	100,800	93,200	23.9	132,500
2007		79,000		140,000
2008		35,000		140,000
2009		108,800		132,500
2010	127,000	25,000		150,000
2011	144,800	143,000	3.5	155,000
2012 ^a				
2013				160,000
2014 ^a				
2015	228,500	215,400	4.8	240,000
2016	251,000	237,000	20.0	300,000
2017	294,800	201,500	14.8	346,000
2018	297,000	281,800	3.2	306,000
2019		313,200	29.1	442,000
2020	256,920	428,200	22.3	685,120
2021	624,870	356,600	11.5	706,068
2022	750,00	502,000		750,000
2023	NS	NS	NS	NS

Averages	Adults	Breeding Adults	% Juvenile	Total Spring
Long-term	128,995	93,175	10.0	154,019
3-yr	516,823	428,933	18.0	686,390

% Change from	Adults	Breeding Adults	% Juvenile	Total Spring
Long-term	556.7%	490.6%		427.8%
3-yr	45.1%	17.0%		9.3%
2021	38.0%	40.8%		20.2%

Estimated Retrieved Harvest of Geese in California, 1962–2022.

Year	CAGO	GWFG	SNGO	ROGO	BRAN	TOTAL
1962	53,532	50,088	28,826	0	9,433	141,879
1963	99,888	56,694	66,810	0	8,008	231,400
1964	77,920	51,735	55,151	0	3,748	188,554
1965	49,685	42,211	33,771	0	10,735	136,402
1966	72,415	65,321	155,543	1,022	7,155	301,456
1967	8,756	62,819	72,413	533	6,929	151,450
1968	72,935	47,345	53,308	0	8,298	181,886
1969	72,613	68,443	72,545	2,514	10,056	226,171
1970	95,112	70,639	112,614	5,114	393	283,872
1971	74,008	34,216	94,123	3,646	2,524	208,517
1972	148,888	51,813	41,998	0	13,698	256,397
1973	69,701	44,615	106,721	4,398	2,161	227,596
1974	72,166	40,682	50,764	8,464	1,693	173,769
1975	62,002	30,193	81,993	6,968	0	181,156
1976	58,444	44,044	127,678	7,726	515	238,407
1977	42,610	33,572	77,771	3,395	9,700	167,048
1978	46,530	34,719	28,578	2,360	674	112,861
1979	31,373	21,399	26,179	4,419	0	83,370
1980	26,950	18,693	28,459	2,795	0	76,897
1981	52,089	21,781	28,591	6,316	0	108,777
1982	46,418	15,004	26,263	7,298	0	94,983
1983	56,384	16,157	43,223	6,789	3,573	126,126
1984	38,004	6,686	49,609	8,373	0	102,672
1985	40,313	15,157	65,085	8,913	0	129,468
1986	21,999	7,542	31,839	3,477	0	64,857
1987	1,348	9,634	28,601	2,375	0	41,958
1988	26,296	4,707	30,571	884	0	62,458
1989	24,486	9,519	30,263	5,106	566	69,940
1990	32,691	7,003	8,104	2,438	475	50,711
1991	9,474	9,828	25,839	3,253	211	48,605
1992	28,546	11,705	26,407	3,076	1,810	71,544
1993	21,066	12,311	46,461	7,430	2,368	89,636
1994	28,469	12,597	21,847	7,476	2,774	73,163
1995	21,119	11,476	30,679	4,833	328	68,435
1996	25,487	16,530	46,849	12,405	2,639	103,910
1997	23,659	22,448	27,628	8,058	4,029	85,822
1998	23,299	21,984	38,371	6,049	12,097	101,800
1999	14,017	23,925	35,563	23,545	2,639	99,689
2000	25,877	21,184	31,721	6,749	1,800	87,331
2001	30,228	27,080	33,167	13,015	4,100	107,590
2002	37,762	31,497	30,279	15,662	1,100	116,300
2003	41,946	24,685	32,851	16,333	2,300	118,115

Estimated Retrieved Harvest of Geese in California, 1962–2022, continued.

Year	CAGO	GWFG	SNGO	ROGO	BRAN	TOTAL
2004	44,492	39,924	35,355	10,329	800	130,900
2005	49,182	42,156	46,653	7,729	900	146,620
2006	41,381	52,492	43,296	5,875	2,900	145,944
2007	50,484	59,416	52,038	7,961	1,800	171,699
2008	49,252	110,523	70,946	13,779	1,000	245,500
2009	53,865	56,101	30,693	8,740	900	150,299
2010	68,666	67,810	54,548	14,974	541	206,539
2011	51,870	55,760	43,718	14,635	750	166,733
2012	47,877	41,842	45,261	14,886	1,093	150,959
2013	44,071	65,071	38,747	13,310	952	162,151
2014	52,735	74,976	66,492	18,343	3,080	215,626
2015	40,431	62,484	51,947	12,007	2,238	169,107
2016	41,280	34,885	56,979	6,977	4,786	144,907
2017	52,876	64,098	91,867	25,017	3,200	237,058
2018	83,139	57,589	48,059	8,922	500	198,209
2019	59,936	46,221	61,720	12,207	1,200	181,284
2020	54,616	101,598	115,337	17,979	900	290,430
2021	30,406	59,693	88,421	19,773	1,200	199,493
2022	32,113	44,423	82,958	29,169	600	193,479

Averages:	CAGO	GWFG	SNGO	ROGO	BRAN	TOTAL
LTA*	46,806	38,799	52,624	8,128	2,752	149,164
1962-72	75,068	54,666	71,555	1,166	7,362	209,817
1973-82	50,828	30,470	58,300	5,414	1,474	146,486
1983-92	27,954	9,794	33,954	4,468	664	76,834
1993-02	25,098	20,103	34,257	10,522	3,387	93,368
2003-12	49,902	55,071	45,536	11,524	1,298	163,331
2013-22	49,160	61,104	70,253	16,370	1,866	199,084

% Change from:	CAGO	GWFG	SNGO	ROGO	BRAN	TOTAL
2021	5.6%	-25.6%	-6.2%	47.5%	-50.0%	-3.0%
LTA*	-31.4%	14.5%	57.6%	258.9%	-78.2%	29.7%

	CAGO	GWFG	SNGO	ROGO	BRAN
Species Composition	16.6%	23.0%	42.9%	15.1%	0.3%

*LTA=Long-term average 1962-2021

Appendix G. Effects of Habitat Change Analyses

Table G-1. Model Akaike's Information Criterion corrected for small sample size (AIC_c), model relative differences (ΔAIC_c), Log likelihood (LogLik), measure of model fits (Adjusted R^2), Akaike weight (w_i) and model coefficients with 95% confidence Intervals contrasting Sacramento Valley mallard breeding population estimates within three model sets. Models are divided into sets by variable types: Land use (i.e., agriculture and urban), Habitat conservation (i.e., governmental land acquisitions and Conservation Reserve Program) and Climatic (i.e., precipitation and temperature measured at one station per stratum). Type A = managed governmental habitat, Type C = unmanaged governmental habitat, CRP = Conservation Reserve Program, TMAX = maximum daily temperature, TMIN = minimum daily temperature, TOBS = average hourly temperature.

Model Formula	AIC_c	ΔAIC_c	LogLik	Adj. R^2	w_i	E.R.	Variable Coeff. and CI	Intercept Coeff. and CI
Land Use Models								
Rangeland	598.1	0.0	-295.5	0.61	0.77	0.1	0.342 (0.236– 0.449)	-629663.7 (-851472.5407854.9)
Tree Crops	602.3	4.3	-297.6	0.54	0.09	1.0	-0.385 (-0.524– -0.247)	205724.0 (159911.2– 251536.8)
Urban	603.2	5.1	-298.0	0.52	0.06	1.5	-1.625 (-2.226– -1.024)	309838.3 (224608.5– 395068.2)
Row Crops	603.7	5.7	-298.3	0.51	0.05	2.0	0.467 (0.291– 0.644)	-13208.2 (-49780.1– 23363.7)
Irrigated Pasture	604.2	6.1	-298.5	0.50	0.04	2.5	1.687 (1.040– 2.333)	-96191.3 (-164579.4– 27–803.3)
Vine Crops	614.1	16.0	-303.5	0.27	0.00	353.8	3.690 (1.433– 5.946)	16339.3 (-24581.4– 57260.0)
Field Crops	615.2	17.2	-304.1	0.24	0.00	625.2	0.355 (0.120– 0.589)	-48155.7 (-134026.7– 37715.3)
Intercept	620.8	22.7	-308.1	0.00	0.00	10034.7		80608.8 (6707.6– 93910.0)
Rice	623.3	25.3	-308.1	-0.04	0.00	36254.7	0.002 (-0.307– 0.310)	79688.2 (-79012.5– 238388.9)
Habitat Conservation Models								
Type A	612.6	0.0	-302.8	0.31	0.49	1.0	-40.168 (-62.67517.661)	1746797.0 (813133.2680460.0)
Type C	612.7	0.1	-302.8	0.31	0.47	1.0	-8.885 (-13.887– -3.883)	405456.7 (222243.8– 588669.5)
CRP	618.5	5.9	-305.7	0.14	0.03	18.9	3.237 (0.372– 6.102)	28900.8 (-18508.2– 76309.8)
Intercept	620.8	8.1	-308.1	0.00	0.01	58.6		80608.8 (6707.6– 93910.0)
Climatic Models								
TMAX	619.1	0.0	-306.0	0.12	0.54	1.0	-5042.5 (-9827.2–257.7)	407418.9 (97058.7– 717779.1)
Intercept	620.8	1.7	-308.1	0.00	0.23	2.3		80608.8 (6707.6– 93910.0)
TOBS	622.8	3.7	-307.9	-0.02	0.08	6.4	3187.5 (5577.511952.4)	-72046.6 (-49035.0– 347941.9)
PRCP	623.1	4.0	-308.0	-0.03	0.07	7.4	499.1 1–485.8–2–483.9)	74059.6 (44718.4– 103400.9)
TMIN	623.3	4.2	-308.1	-0.04	0.07	8.3	-548.4 (-0712.6–9615.9)	1040740.1 (-31090.3–539238.5)

Table G-2. Model Akaike's Information Criterion corrected for small sample size (AIC_c), model relative differences (ΔAIC_c), Log likelihood (LogLik), measure of model fits (Adjusted R^2), Akaike weight (w_i) and model coefficients with 95% confidence Intervals contrasting Yolo – Delta mallard breeding population estimates within three model sets. Models are divided into sets by variable types: Land use (i.e., agriculture and urban), Habitat conservation (i.e., governmental land acquisitions and Conservation Reserve Program) and Climatic (i.e., precipitation and temperature measured at one station per stratum). Type A = managed governmental habitat, Type C = unmanaged governmental habitat, CRP = Conservation Reserve Program, TMAX = maximum daily temperature, TMIN = minimum daily temperature, TAVG = average daily temperature.

Model Formula	AIC_c	ΔAIC_c	LogLik	Adj. R^2	w_i	E.R.	Variable Coeff. and CI	Intercept Coeff. and CI
Land Use Models								
Urban	566.5	0.0	-279.7	0.37	0.64	0.3	-0.396 (-0.593– -0.199)	139741.5 (92987.9–186495.0)
Row Crops	568.9	2.3	-280.9	0.31	0.20	1.0	0.138 (0.060– 0.215)	-6466.7 (-36350.7– 23417.2)
Tree Crops	570.5	4.0	-281.7	0.26	0.09	2.3	-0.217 (-0.351– -0.082)	86950.7 (61097.3–112804.0)
Irrigated Pasture	571.7	5.1	-282.3	0.23	0.05	4.0	1.066 (0.350– 1.782)	-34278.9 (-88486.2–19928.4)
Vine Crops	573.8	7.2	-283.3	0.17	0.02	11.5	-0.240 (-0.432– -0.047)	74210.6 (51018.5– 97402.7)
Field Crops	575.5	8.9	-284.2	0.11	0.01	27.0	-0.096 (-0.190– -0.003)	82714.5 (46657.7– 118771.3)
Intercept	577.0	10.4	-286.2	0.00	0.00	57.2		46040.3 (40310.4– 51770.2)
Rangeland	578.1	11.6	-285.5	0.01	0.00	102.4	0.096 (-0.067– 0.260)	-11835.7 (-110249.4– 86578.1)
Rice	578.6	12.1	-285.8	-0.01	0.00	131.2	-3.14 (-3.14 – 1.13)	61597.4 (28123.7 – 95071.2)
Habitat Conservation Models								
Type A	567.7	0.0	-280.3	0.34	0.95	1.0	-0.988 (-1.509– -0.467)	67142.9 (55084.3– 79201.5)
Type C	574.0	6.3	-283.5	0.16	0.04	23.6	-3.201 (-5.838– -0.564)	66662.3 (48877.1– 84447.5)
Intercept	577.0	9.3	-286.2	0.00	0.01	102.5		46040.3 (40310.4– 51770.2)
CRP	578.6	10.9	-285.7	0.00	0.00	227.2	1.919 (-2.002– 5.839)	34982.2 (11667.7– 58296.6)
Climatic Models								
TMAX	576.3	0.0	-284.6	0.08	0.40	1.0	-2121.2 (-4461.8–219.4)	181185.8 (31959.5–330412.0)
Intercept	577.0	0.6	-286.2	0.00	0.29	1.4		46040.3 (40–310.4–51770.2)
TAVG	578.3	2.0	-285.6	0.01	0.15	2.7	-1910.0 (-5405.5– 1585.5)	148007.7 (-38691.3– 334706.8)
PRCP	579.5	3.1	-286.2	-0.04	0.08	4.8	162.7 (-1044.6– 1370.1)	44232.0 (29600.300– 58863.8)
TMIN	579.5	3.1	-286.2	-0.04	0.08	4.8	430.2 (-2994.7– 3855.1)	27507.0 (-120169.2– 175183.1)

Table G-3. Model Akaike's Information Criterion corrected for small sample size (AICc), model relative differences (Δ AICc), Log likelihood (LogLik), measure of model fits (Adjusted R²), model weight (w_i) and model coefficients with 95% confidence Intervals contrasting San Joaquin mallard breeding population estimates within three model sets. Models are divided into sets by variable types: Land use (i.e., agriculture and urban), Habitat conservation (i.e., governmental land acquisitions and Conservation Reserve Program) and Climatic (i.e., precipitation and temperature measured at one station per stratum). Type A = managed governmental habitat, Type C = unmanaged governmental habitat, CRP = Conservation Reserve Program, TMAX = maximum daily temperature, TMIN = minimum daily temperature.

Model Formula	AIC _c	Δ AIC _c	LogLik	Adj.R ²	w _i	E.R.	Variable Coeff. and CI	Intercept Coeff. and CI
Land Use Models								
Rice	543.3	0.0	-268.0	0.16			3.442 (0.535– 6.350)	21108.3 (1482.9– 40733.7)
Urban	585.3	0.0	-289.1	0.22	0.34	1.0	-0.789 (-1.329– -0.249)	136004.4 (71027.7– 200981.1)
Field Crops	585.6	0.3	-289.3	0.21	0.29	1.2	0.283 (0.084– 0.482)	-41634.3 (-100409.4– 17140.8)
Tree Crops	586.2	0.9	-289.6	0.20	0.21	1.6	-0.097 (-0.168– -0.026)	81294.9 (51255.9– 111334.0)
Irrigated Pasture	587.9	2.6	-290.4	0.14	0.09	3.7	0.194 (0.026– 0.362)	19796.6 (-200.3– 39793.6)
Intercept	590.4	5.1	-292.9	0.00	0.03	12.8		41490.6 (34080.8– 48900.4)
Vine Crops	590.7	5.4	-291.8	0.04	0.02	14.9	0.405 (-0.143– 0.953)	-14034.1 (-89549.1– 61480.9)
Rangeland	592.5	7.2	-292.7	-0.02	0.01	36.6	-0.061 (-0.249– 0.127)	128927.0 (-139061.0– 396915.0)
Row Crops	592.9	7.6	-292.9	-0.04	0.01	44.7	-0.033 (-0.353– 0.287)	61012.4 (-126399.3– 248424.1)
Habitat Conservation Models								
Type C	578.5	0.0	-285.7	0.40	0.89	1.0	-28.5 (-41.7– -15.2)	470199.3 (271064.6– 669333.9)
Type A	582.7	4.2	-287.8	0.30	0.11	8.2	-2.077 (-3.273– -0.881)	125421.2 (76707.2– 174135.2)
Intercept	590.4	11.9	-292.9	0.00	0.00	383.8		41490.6 (34080.8– 48900.4)
CRP	591.8	13.3	-292.3	0.00	0.00	772.8	-0.926 (-2.669– 0.817)	47297.0 (34099.2– 60494.8)
Climatic Models								
MINT	587.9	0.0	-290.4	0.14	0.66	1.0	3718.6 (490.0– 6947.3)	-123787.7 (-267454.0– 19878.7)
Intercept	590.4	2.5	-292.9	0.00	0.19	3.5		41490.6 (34080.8– 48900.4)
PRCP	591.9	4.0	-292.4	0.00	0.09	7.4	1073.0 (-1020.7– 3166.7)	33149.9 (15267.9– 51032.0)
MAXT	592.8	4.9	-292.8	-0.04	0.06	11.6	-594.3 (-3801.5– 2612.8)	80185.4 (-128760.8– 289131.7)

Table G-4. Model Akaike's Information Criterion corrected for small sample size (AIC_c), model relative differences (ΔAIC_c), Log likelihood (LogLik), measure of mode fits (Adjusted R^2), Akaike weight (w_i) and model coefficients with 95% confidence Intervals contrasting Tulare breeding mallard population estimates within three model sets. Models are divided into sets by variable types: Land use (i.e., agriculture and urban), Habitat conservation (i.e., governmental land acquisitions and Conservation Reserve Program) and Climatic (i.e., precipitation and temperature measured at one station per stratum). Type A = managed governmental habitat, Type C = unmanaged governmental habitat, CRP = Conservation Reserve Program, TMAX = maximum daily temperature, TMIN = minimum daily temperature, TAVG = average daily temperature.

Model Formula	AIC_c	ΔAIC_c	LogLik	Adj. R^2	w_i	E.R.	Variable Coeff and CI	Intercept Coeff and CI
Land Use Models								
Rice	464.7	0.0	-228.7	-0.04			1.100 (-3.557– 5.757)	23546.9 (3076.0– 44017.8)
Row Crops	566.1	0.0	-279.5	0.21	0.36		0.019 (0.006– 0.033)	3968.2 (-11824.2– 19760.7)
Urban	566.9	0.8	-279.9	0.19	0.24	1.5	-0.153 (-0.267– -0.038)	75387.7 (37645.0– 113130.4)
Tree Crops	567.4	1.3	-280.2	0.17	0.19	1.9	-0.028 (-0.051– -0.006)	46090.9 (29362.3– 62819.4)
Rangeland	568.1	2.0	-280.5	0.15	0.13	2.7	0.024 (0.004– 0.045)	-57315.0 (-126889.1– 12259.1)
Intercept	570.9	4.8	-283.2	0.00	0.03	10.8		25543.4 (20449.9– 30636.8)
Irrigated Pasture	572.3	6.2	-282.6	0.00	0.02	22.5	-0.089 (-0.259– 0.082)	36838.3 (14509.7– 59166.8)
Field Crops	572.5	6.4	-282.7	0.00	0.01	24.4	-0.015 (-0.048– 0.017)	40302.6 (9049.2– 71556.0)
Vine Crops	572.8	6.7	-282.8	-0.02	0.01	28.1	0.093 (-0.141– 0.327)	-5935.0 (-85071.6– 73201.6)
Habitat Conservation Models								
CRP	567.0	0.0	-279.9	0.19	0.38	1.0	2.34 (0.58– 4.10)	14201.1 (4491.7– 23910.5)
Type C	567.8	0.8	-280.4	0.16	0.38	1.0	-0.852 (-1.545– -0.159)	43470.1 (28156.7– 58783.4)
Type A	568.4	1.4	-280.7	0.14	0.12	3.1	-1.10 (-2.05– -0.14)	62181.9 (29995.2– 94368.5)
Intercept	570.9	3.9	-283.2	0.00	0.12	3.2		25543.4 (20449.9– 30636.8)
Climatic Models								
Intercept	570.9	0.0	-283.2	0.00	0.43	1.0		25543.4 (20449.9– 30636.8)
MINT	572.8	2.0	-282.9	-0.02	0.16	2.7	-1070.4 (-3888.5– 1747.6)	73288.0 (-52510.1– 199086.1)
TAVG	573.0	2.1	-283.0	-0.02	0.15	2.9	-828.0 (-3424.2– 1768.1)	71868.4 (-73466.0– 217202.8)
PRCP	573.1	2.3	-283.0	-0.03	0.14	3.1	721.5 (-1888.8 3331.8)	22620.8 (10852.1– 34389.4)
MAXT	573.2	2.3	-283.0	-0.03	0.13	3.2	-529.5 (-2682.6– 1623.6)	61177.9 (-83808.4– 206164.2)

Figure G-5. Land use types based on Cropscape 2017 (U.S. Department of Agriculture) within Central Valley Joint Venture Planning regions and California counties. Panel A: Sacramento Valley, Panel B: Yolo–Delta, Panel C: San Joaquin, Panel D: Tulare.

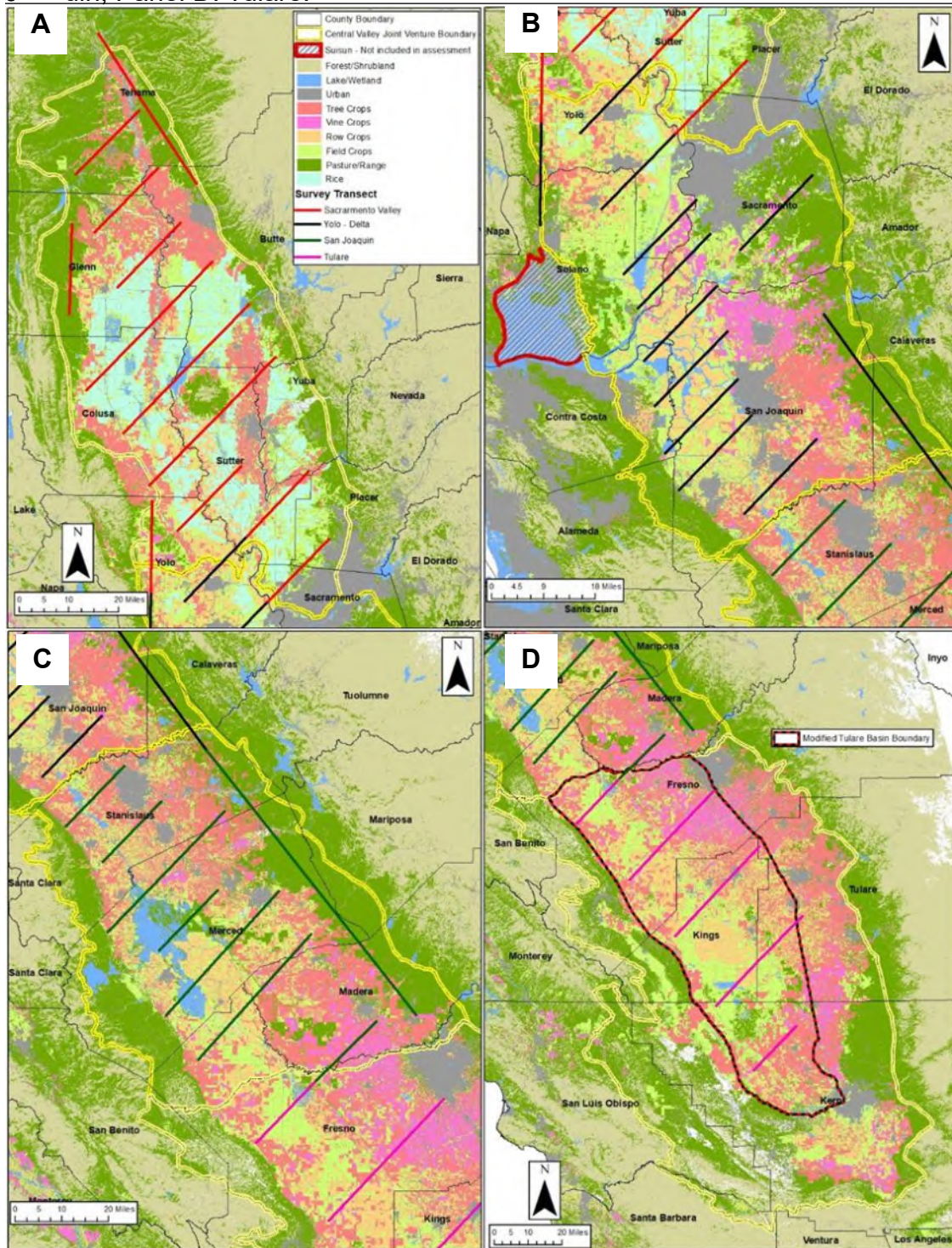


Figure G-6. Central Valley mallard breeding population trends 1992–2017 by Central Valley Joint Venture Planning Region. Panel A: Sacramento, Panel B: Yolo–Delta, Panel C: San Joaquin, Panel D: Tulare. Estimates are adjusted from Department of Fish and Wildlife surveys. Graphs include regression formulas, fit (R^2) and regression lines.

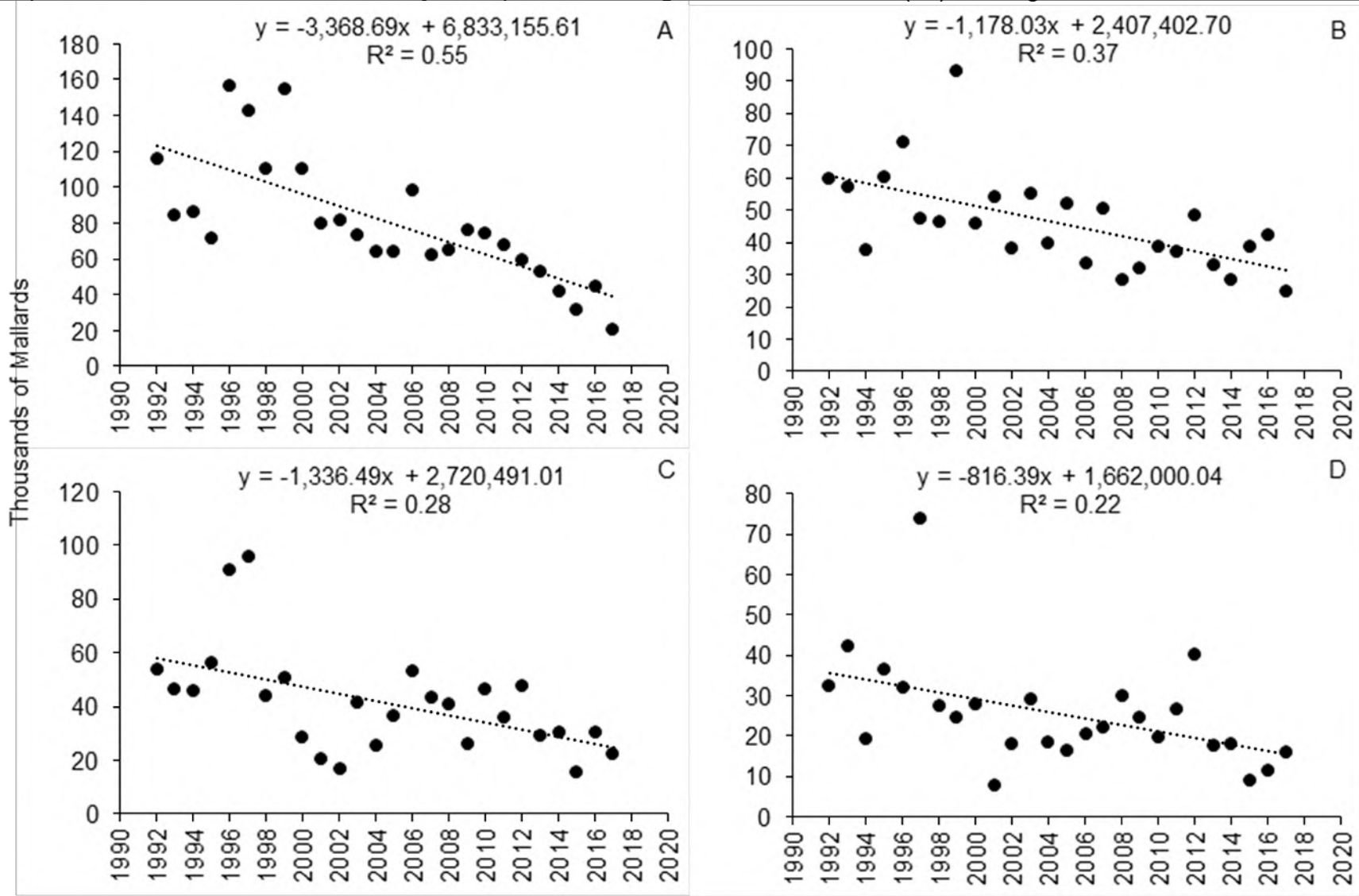


Figure G-7. Effects plots of top models contrasting Sacramento Valley mallard breeding population (svbpop) against land use acreage 1992–2017. This analysis used nine models, each graph is listed from lowest AIC_c to highest. Blue shading = confidence interval.

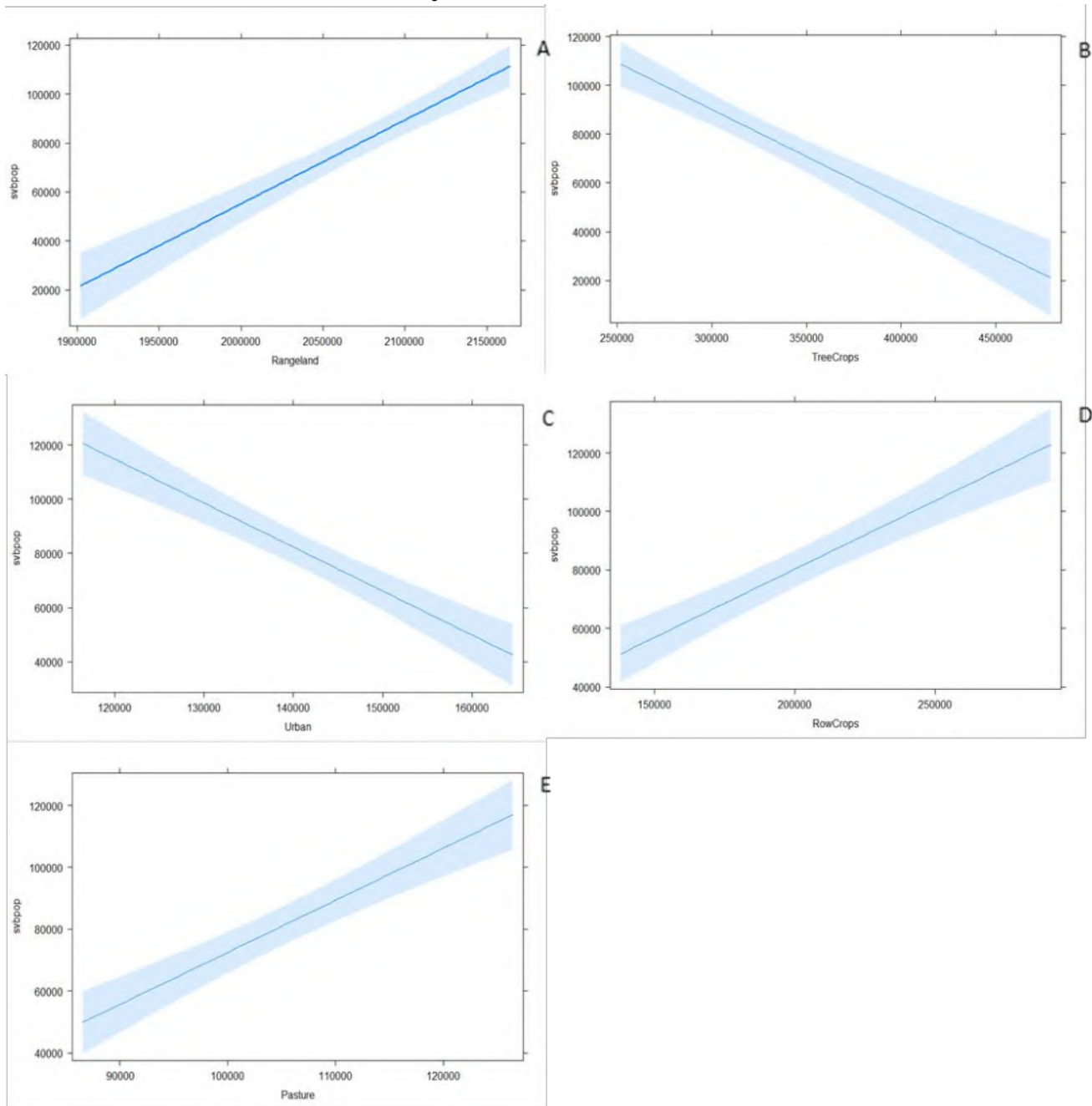


Figure G-8. Effects plots of top models contrasting Sacramento Valley mallard breeding population (svbpop) against habitat conservation acreages (panels A–C) and climactic variables (panel D) 1992–2017. The habitat assessment used four models and the climactic analysis used five. Each graph is listed from lowest AIC_c to highest for each model set. TypeA = managed governmental habitat, TypeC = unmanaged governmental habitat, CRP = Conservation Reserve Program easement acreage. Maximum temperature (TMAX) was the only model ranked above the null model in the climactic set. Blue shading = confidence interval.

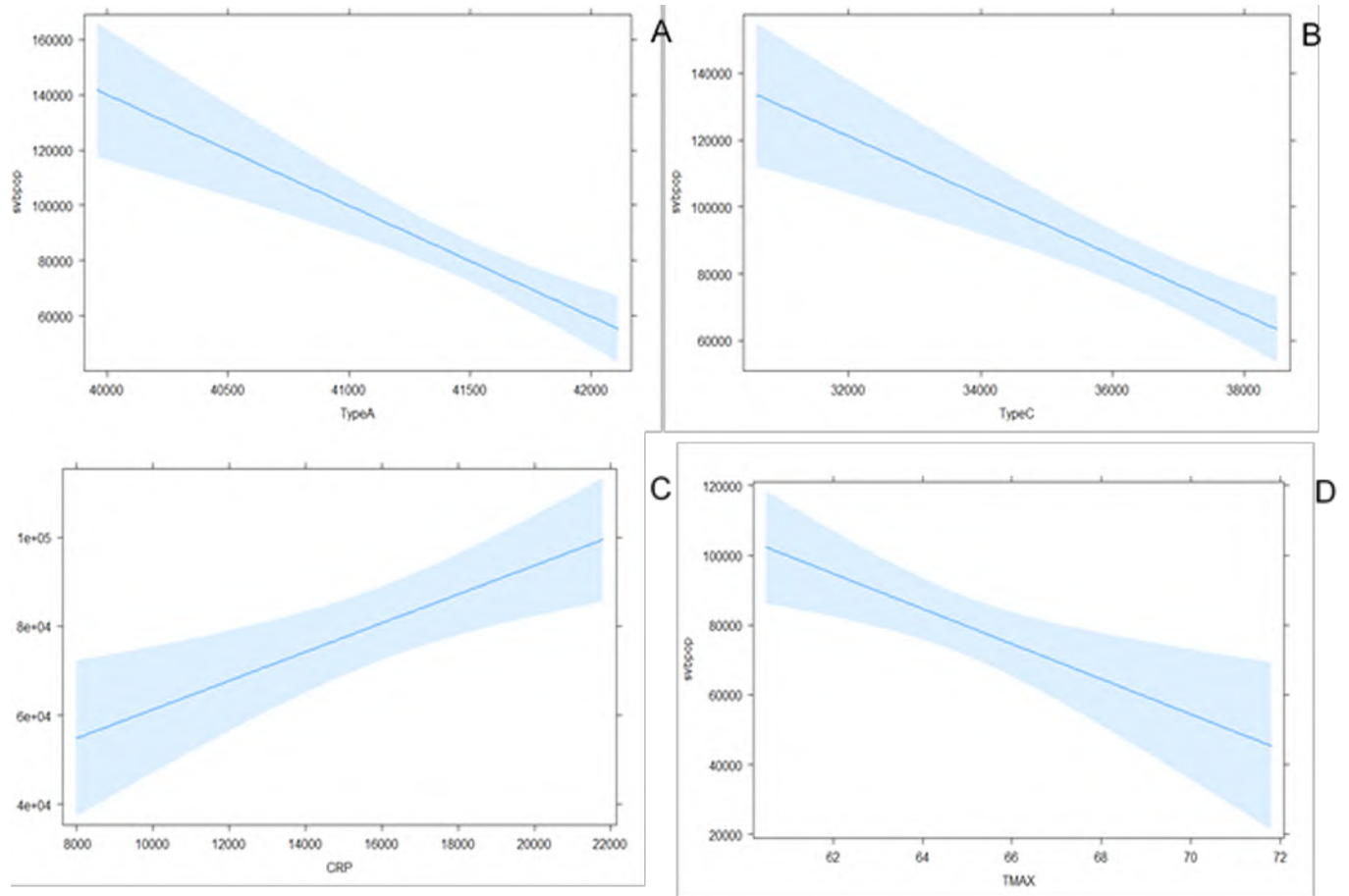


Figure G-9. Effects plots of top models contrasting Yolo–Delta mallard breeding population (dybpop) against changes in land use (panels A–D), habitat conservation acreages (panel E) and climactic variables (panel F) 1992–2017. The land use analysis used nine models, the habitat conservation analysis used four models and the climactic analysis used five. Each graph is listed from lowest AIC_c to highest for each model set. TypeA = managed governmental habitat. Blue shading = confidence interval.

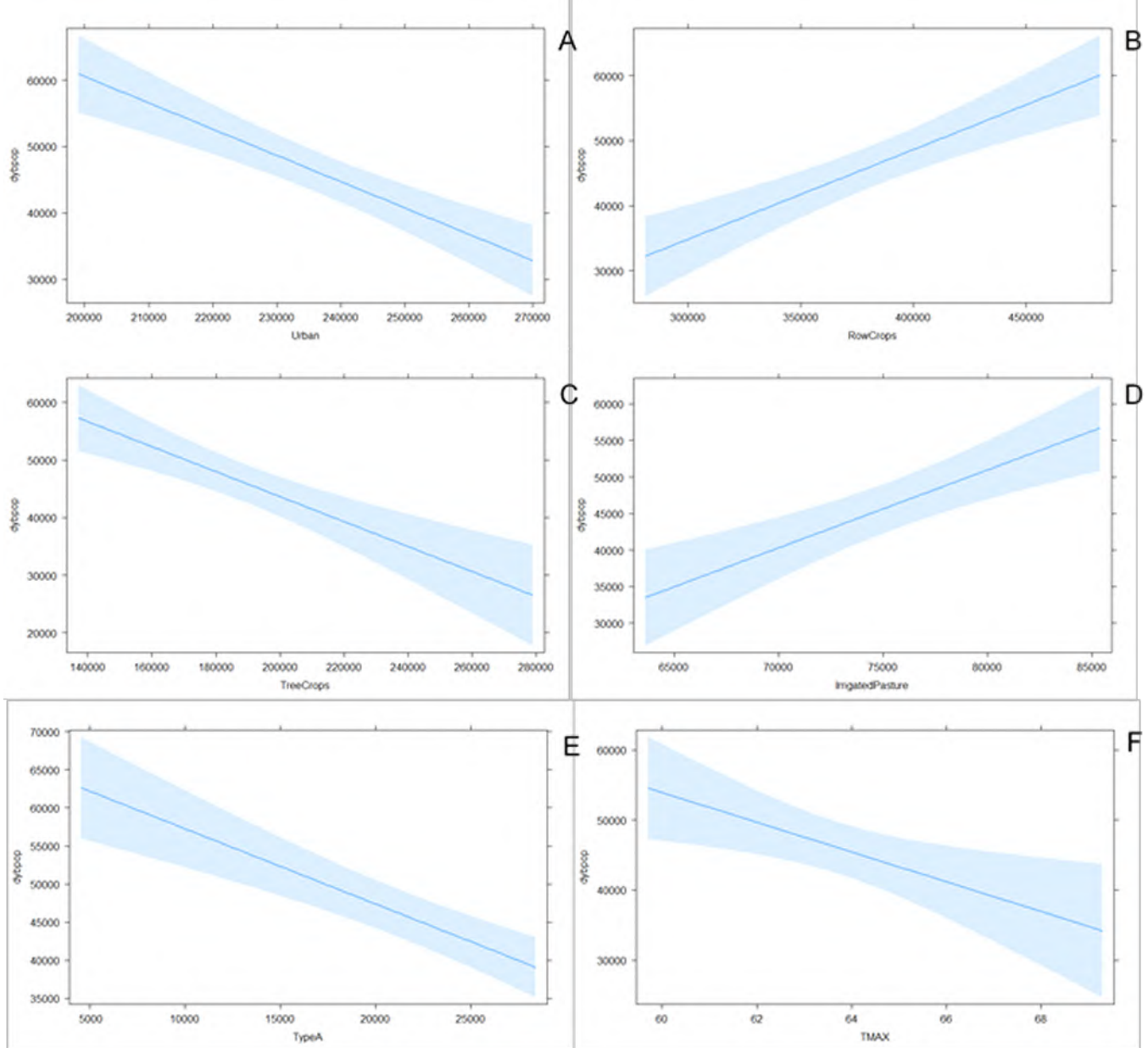


Figure G-10. Effects plots of top models contrasting San Joaquin mallard breeding population (sjbpop) against changes in land use acreage 1992–2017. This analysis used nine models. Each graph is listed from lowest AIC_c to highest. Blue shading = confidence interval.

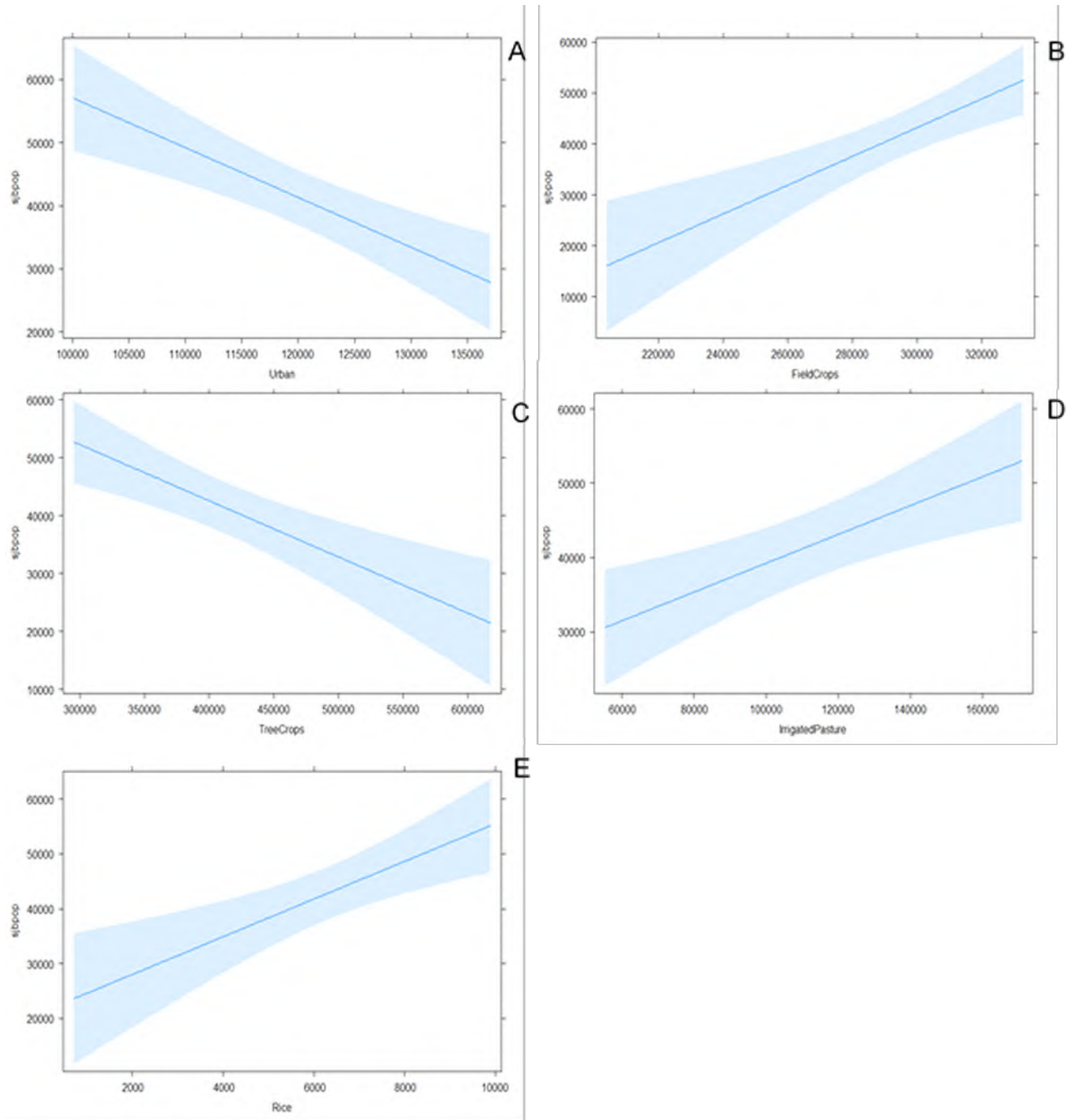


Figure G-11 Effects plots of top models contrasting San Joaquin mallard breeding population (sjbpop) against habitat conservation acreages (panels A–B) and climactic variables (panel C) 1992–2017. The habitat conservation assessment used four models and the climactic analysis = used five. Each graph is listed from lowest AIC_c to highest for each model set. TypeA = managed governmental habitat, TypeC = unmanaged governmental habitat. Blue shading = confidence interval.

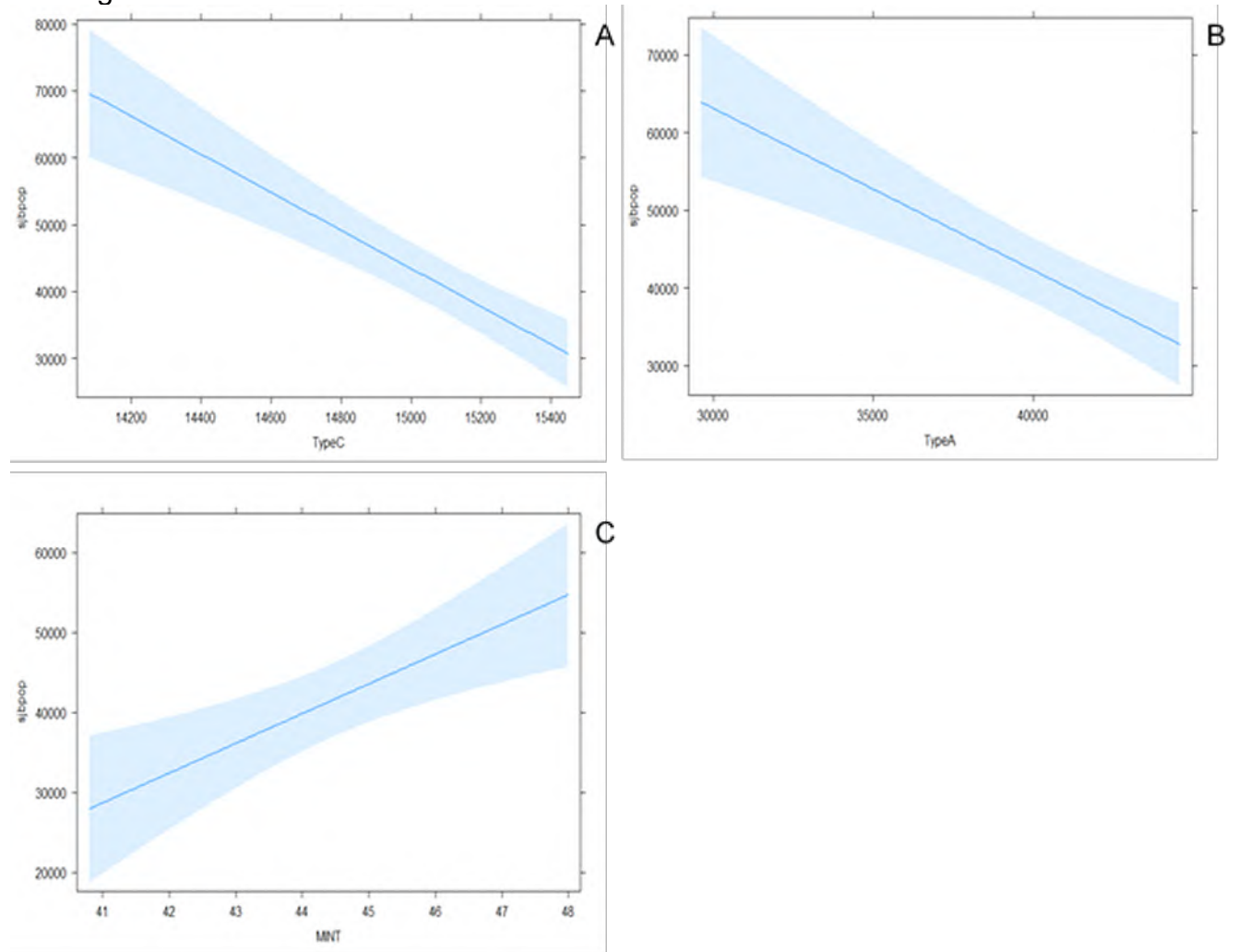


Figure G-12. Effects plots of top models contrasting Tulare mallard breeding population (tubpop) against changes in land use (panels A–D) and habitat conservation acreages (panel E–G), 1992–2017. The land use analysis used nine models, while the habitat conservation analysis used four. Each graph is listed from lowest AIC_c to highest for each model set. TypeC = unmanaged governmental habitat, CRP = Conservation Reserve Program easement acreage TypeA = managed governmental habitat. Blue shading = confidence interval.

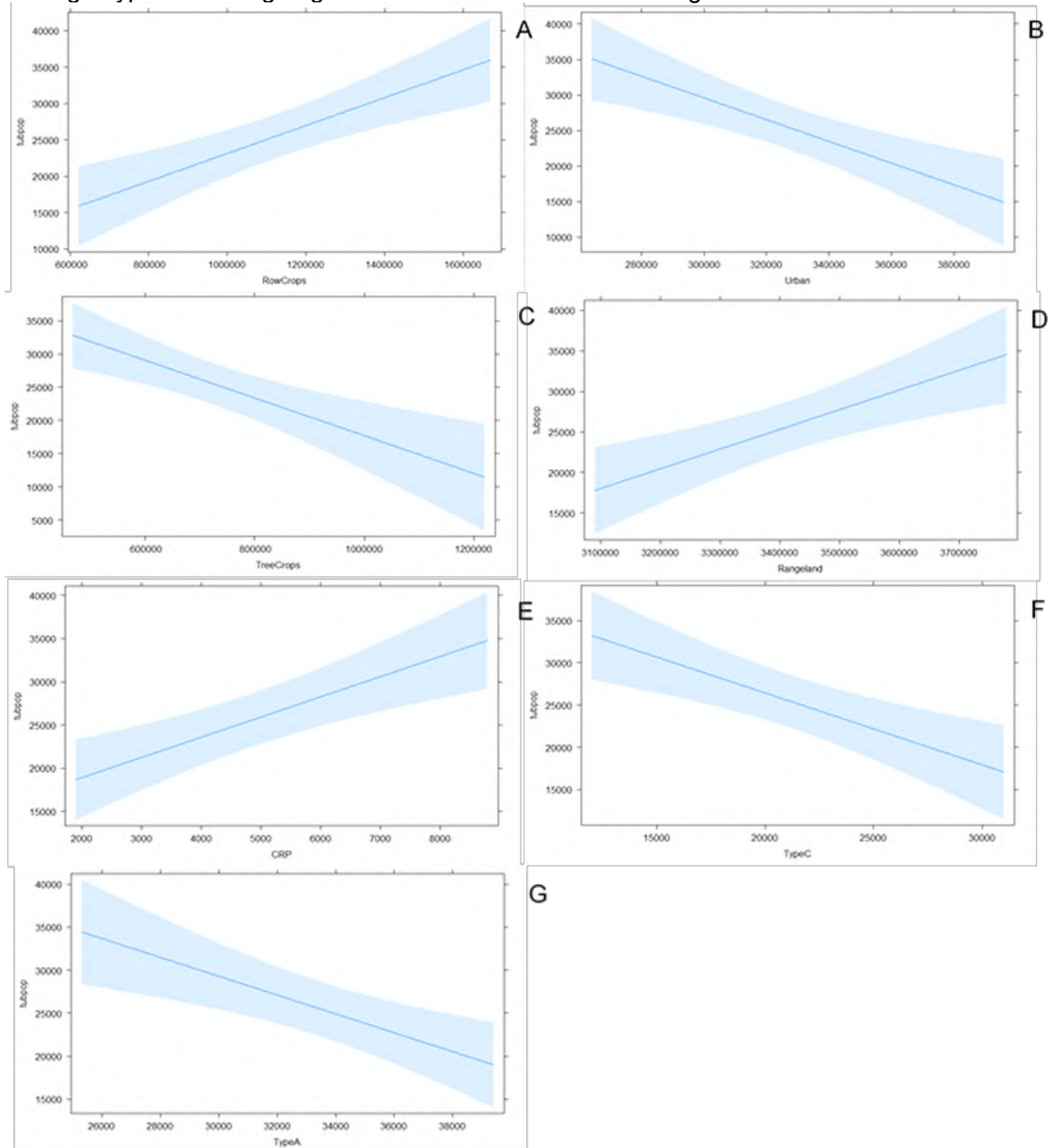


Figure G-13. Composition of land use types (Panel A) derived from adjusted U.S. Department of Agriculture data and acres of rangeland (Panel B) in the Sacramento Valley 1992–2017. Most rangeland occurs outside of the Central Valley, thus estimates used in this analysis are an overestimate but considered an index. Counties: Tehama, Butte, Glenn, Colusa, Yuba, Sutter, Placer, Yolo and Sacramento. See appendix table G17 for adjustments.

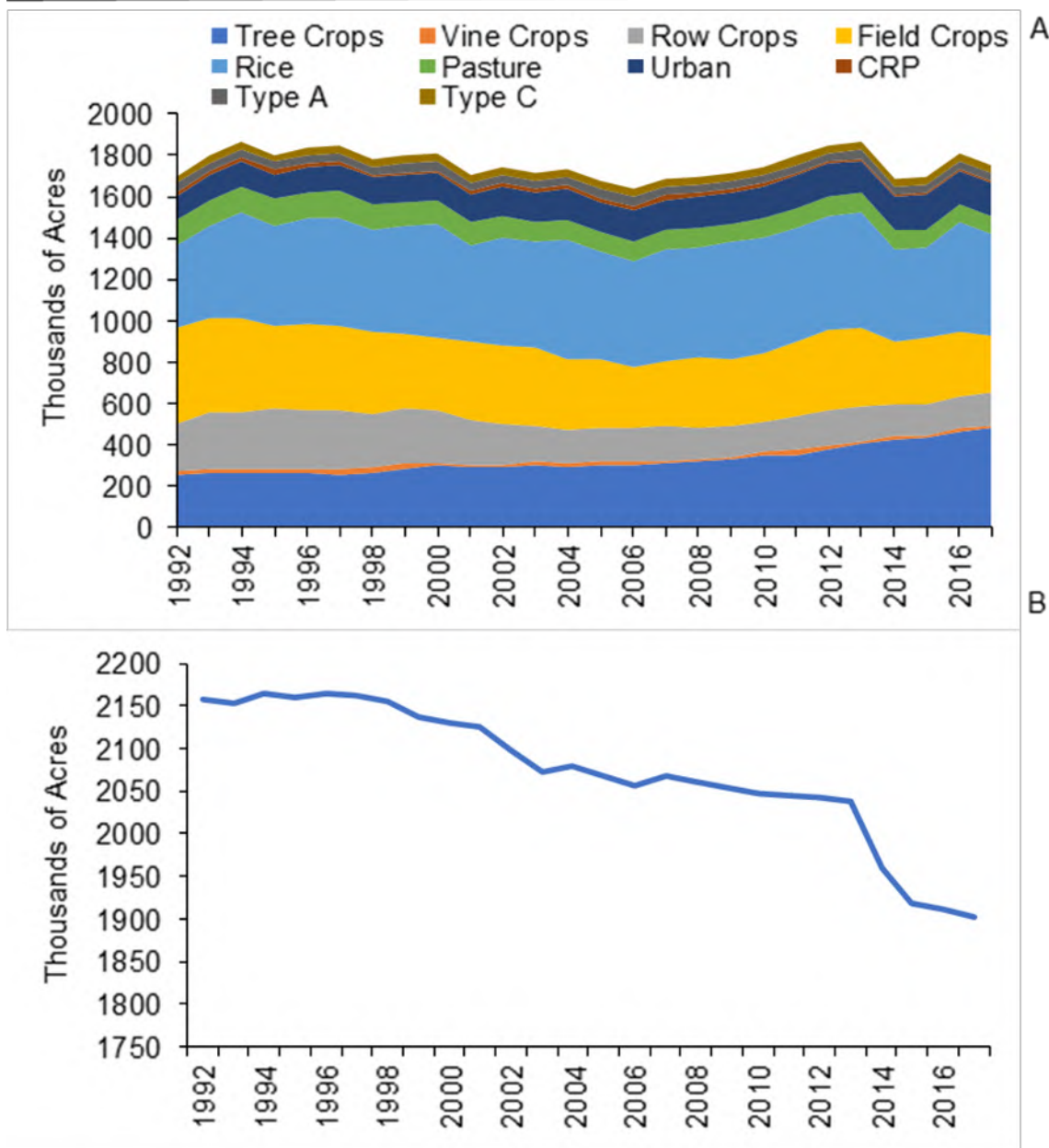


Figure G-14. Composition of land use types (Panel A) derived from adjusted U.S. Department of Agriculture data and acres of rangeland (Panel B) in the Delta–Yolo 1992–2017. Most rangeland occurs outside of the Central Valley, thus estimates used in this analysis are an overestimate but considered an index. Counties: Yolo, Sacramento, Solano, Contra Costa, San Joaquin and Stanislaus. See appendix Table G-17 for adjustments.

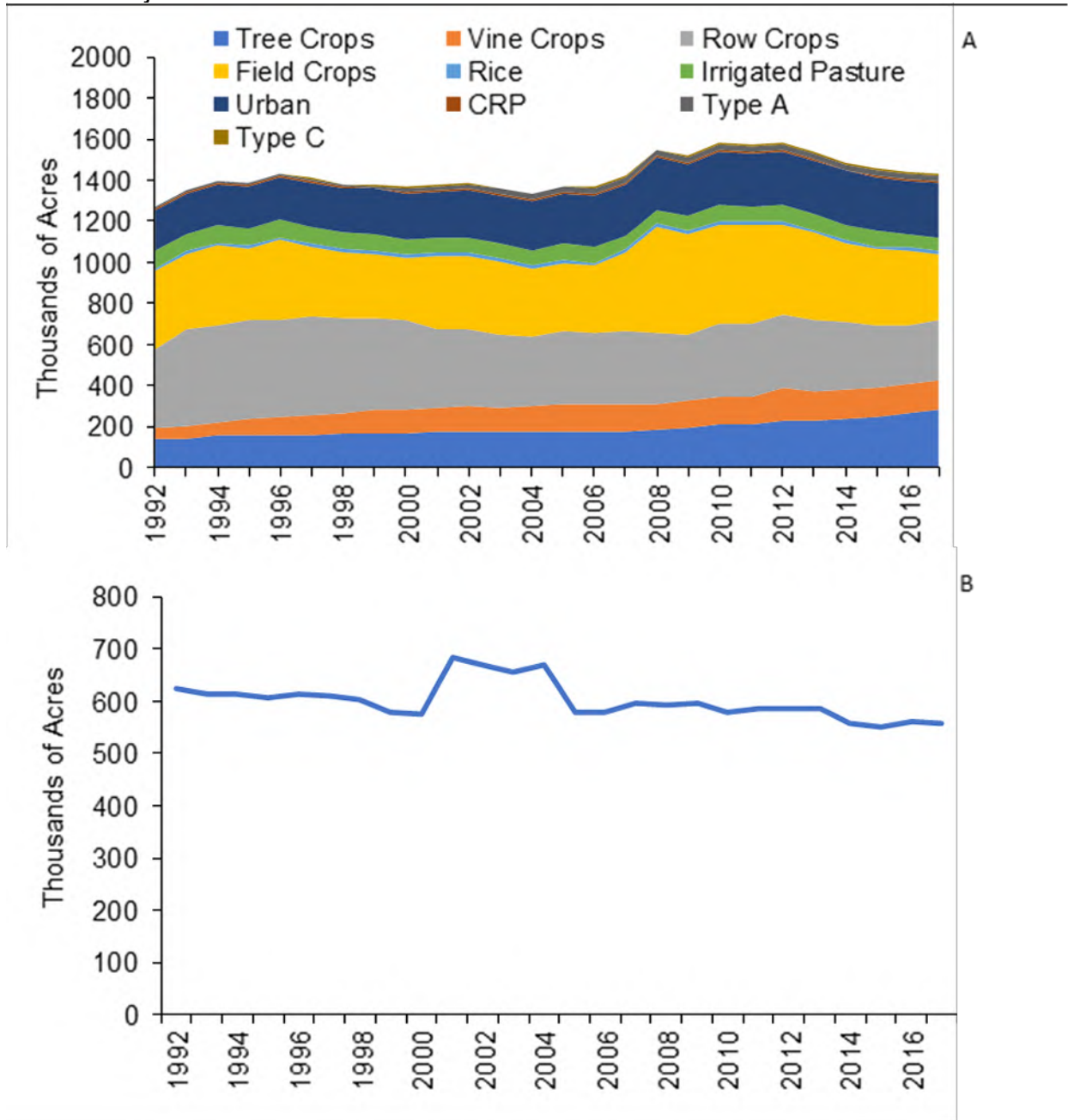


Figure G-15. Composition of land use types (Panel A) derived from adjusted U.S. Department of Agriculture data and acres of rangeland (Panel B) in the San Joaquin, 1992–2017. Most rangeland occurs outside of the Central Valley, thus estimates used in this analysis are an overestimate but considered an index. Counties include: San Joaquin, Stanislaus, Merced, Madera and Fresno. See appendix table G17 for adjustments.

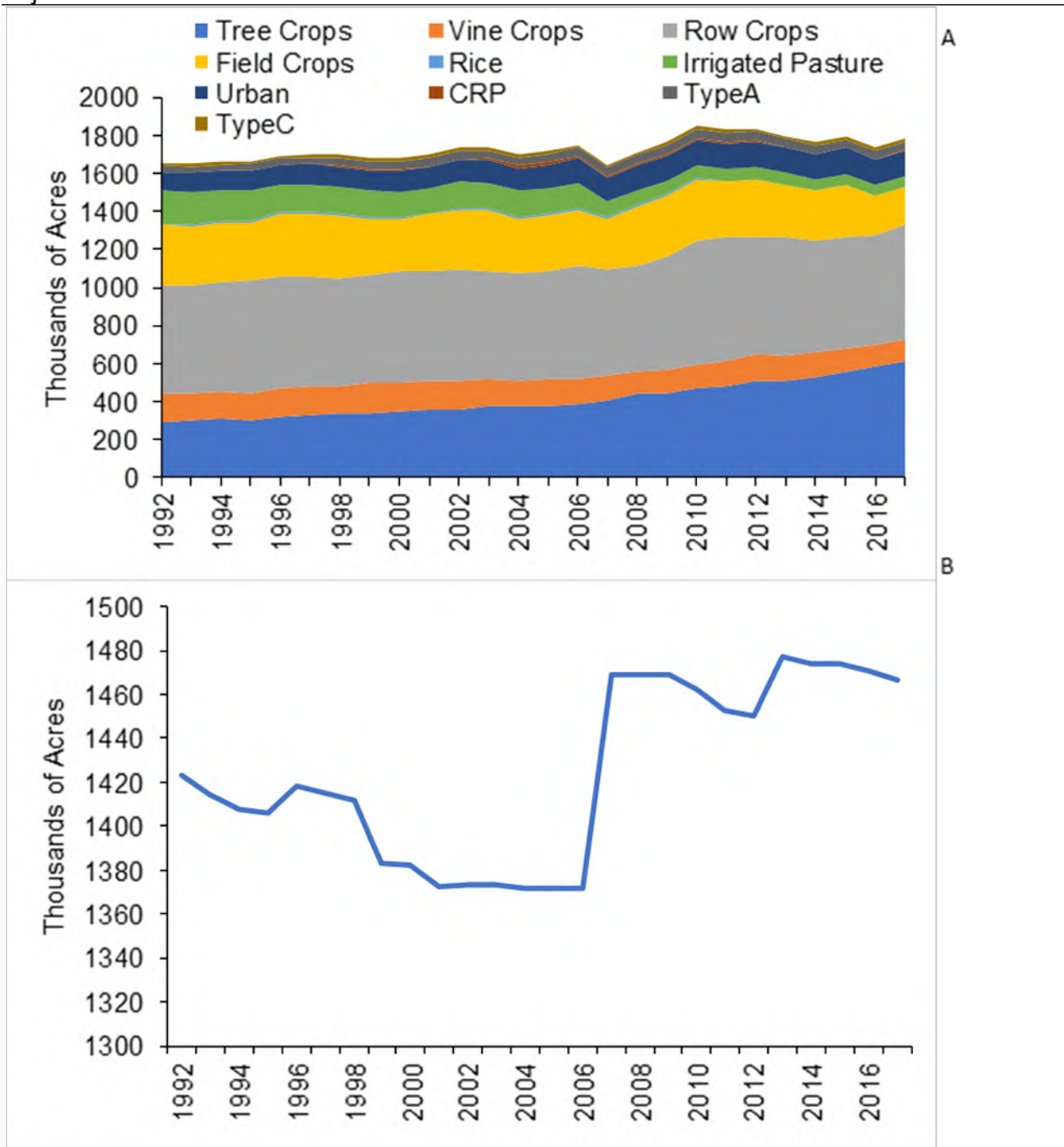


Figure G-16. Composition of land use types (Panel A) derived from adjusted U.S. Department of Agriculture data and acres of rangeland (Panel B) in Tulare, 1992–2017. Most rangeland occurs outside of the Central Valley, thus estimates used in this analysis are an overestimate but considered an index. Counties: Fresno, Kings, Tulare and Kern. See appendix table G17 for adjustments.

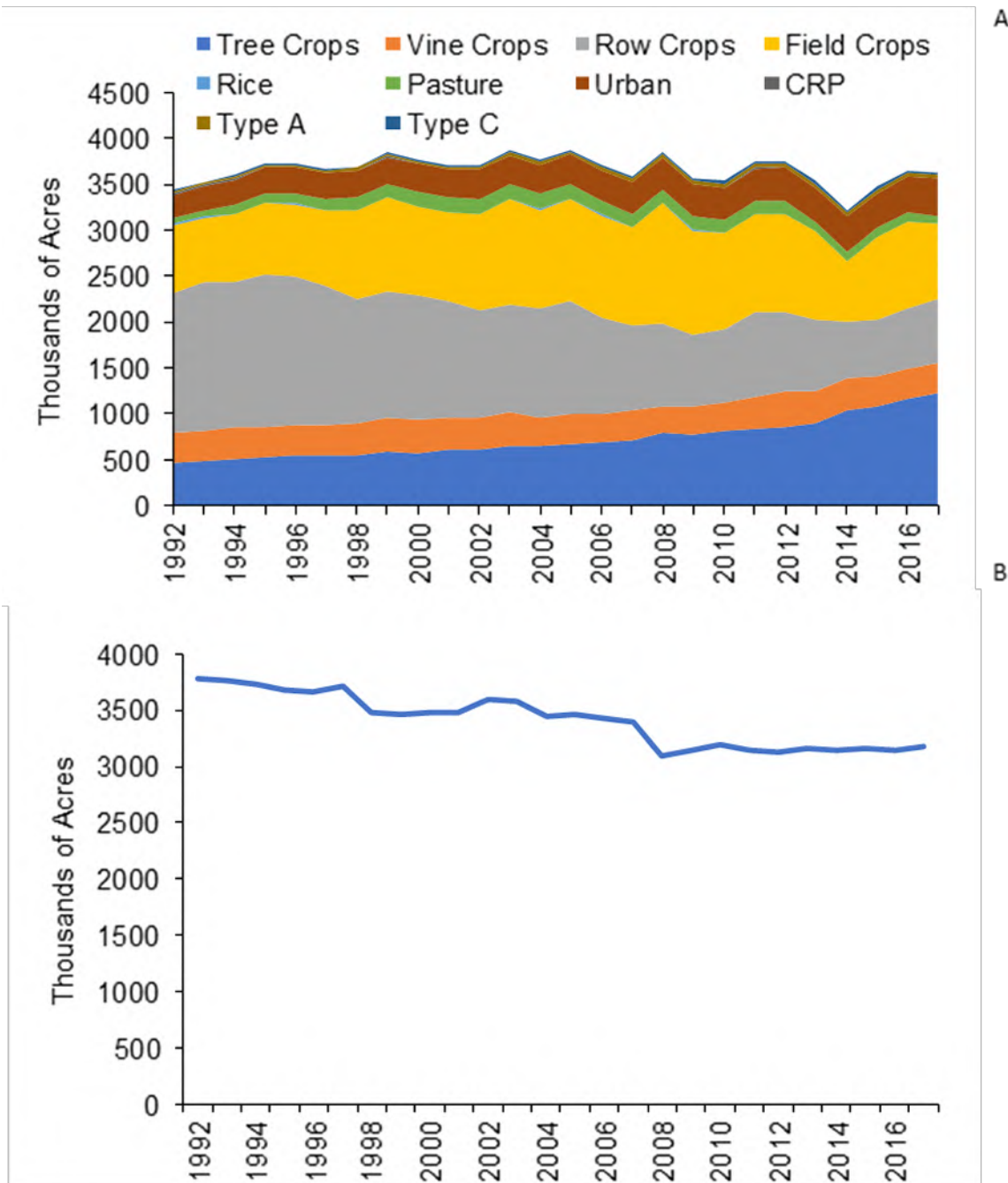


Table G-17. Adjustments to cropland and urban based on spatial assessment and overlap of Central Valley Joint Venture Planning regions and California counties.

County	Basin 1	Basin 2	Adjustment	Adjustment Notes
Tehama	100% SV		Urban	Most crops inside, city of Red Bluff outside of JV. 80.9% of urban in Tehama County lies within JV, satellite trace estimate used. Cropscape estimates higher than reported by county.
Butte	100% SV		Urban	Some of Oroville and Chico outside of JV. 62.9% of urban in Butte County lies within JV
Placer	100% SV		Urban	Much of Placer lies outside JV but most crops are inside. 39% of urban in Placer in the SV.
Yolo	69% YD	31% SV	Both	All urban to YD, everything else proportional breakdown. 69% of crops go to YD, 31% to SV, all urban goes to YD.
Sacramento	87% YD	13% SV	Both	95% of rice to SV, 29.7% of urban to SV, 53.2% to YD Region, remainder is outside JV. 86.8% of ag lands fall in YD, 13.2% in SV.
Solano	45% YD	55% SU	Urban	Include all crops in YD. Mostly range and urban outside JV, 26% of urban in YD, 35% in SU. 48.5% of county lies in YD, 26.3 lies in SU.
Contra Costa	10% YD		Urban	No adjustment for crops, 16% of urban to YD.
Fresno	85% TU	15% SJ	Both	All urban to TU, 14.9% of crops to SJ, 85.1% TU.
Glenn	100% SV		No	Mostly range and trees outside of JV.
Colusa	100% SV		No	Chunk of almonds between Dunnigan and Arbuckle west of I-5 not in JV. Not a small chunk, ~36000 acres including Arbuckle, too difficult to handle so left in SV.
Sutter	99% SV	1% YD	No	Small area in YD but left in SV.
Yuba	100% SV		No	Most crops and urban inside JV, some rangeland outside JV.
San Joaquin	99% YD	1% SJ	No	All crops and urban to YD.
Stanislaus	95% SJ	5% YD	No	Vast majority of crops to SJ, YD area is largely range.
Merced	100% SJ		No	Most ag and urban fit within SJ, very little rangeland outside.
Madera	100% SJ		No	All ag in Madera in SJ, rangeland extends eastward over Sierra.
Tulare	100% TU		No	Most ag and urban in TU, everything outside of JV is rangeland.
Kings	100% TU		No	Kings is almost entirely in TU.
Kern	100% TU		No	Most ag and urban in TU, everything outside JV is rangeland.
San Benito	3% TU		Exclude	Not enough to use, all rangeland.
Mariposa	5% SJ		Exclude	Just a little rangeland in JV.
Santa Clara	2% YD		Exclude	Not enough to use, all rangeland.
Alameda	2% YD		Exclude	Not enough to use, all rangeland.

SV = Sacramento Valley, YD = Yolo-Delta, SJ = San Joaquin, SU = Suisun, TU = Tulare, JV = Joint-Venture

Figure G-18. Crop specific trends by category in the Sacramento Planning Region, 1992–2017. Panel A: Tree Crops, Panel B: Vine Crops, Panel C: Row Crops, Panel D: Field Crops. Other Fruit Trees = Apples, Apricots, Cherry's, Citrus, Nectarines, Oranges, Pears, Persimmons, Pomegranates and Tangerines. Fruit and Nut trees are unknown crops. Miscellaneous crops are also unknown.

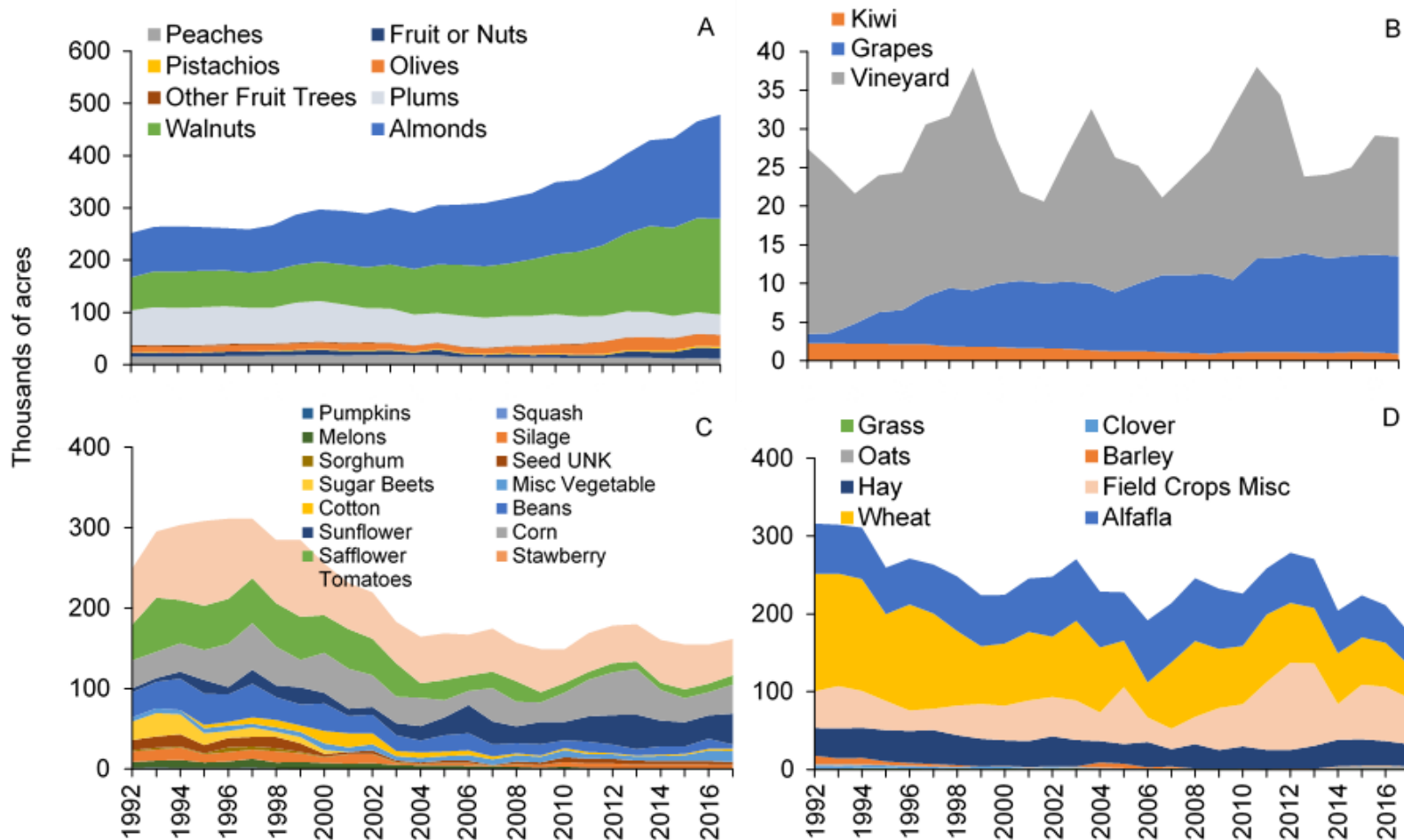


Figure G-19. Crop specific trends by category in the Yolo–Delta Planning Region, 1992–2017. Panel A: Tree Crops, Panel B: Vine Crops, Panel C: Row Crops, Panel D: Field Crops. Other Trees = Citrus, Olives, Persimmons, Pistachios and unknown fruit and nut trees. Miscellaneous Row Crops = Broccoli, Cabbage, Cauliflower, Fresh Bean, Herbs, Lettuce, Snap Bean, Snow peas, Spinach, Strawberry's and Sweet Potatoes. Some Miscellaneous crops are unknown. Berries = Blueberries, Boysenberries and Loganberries.

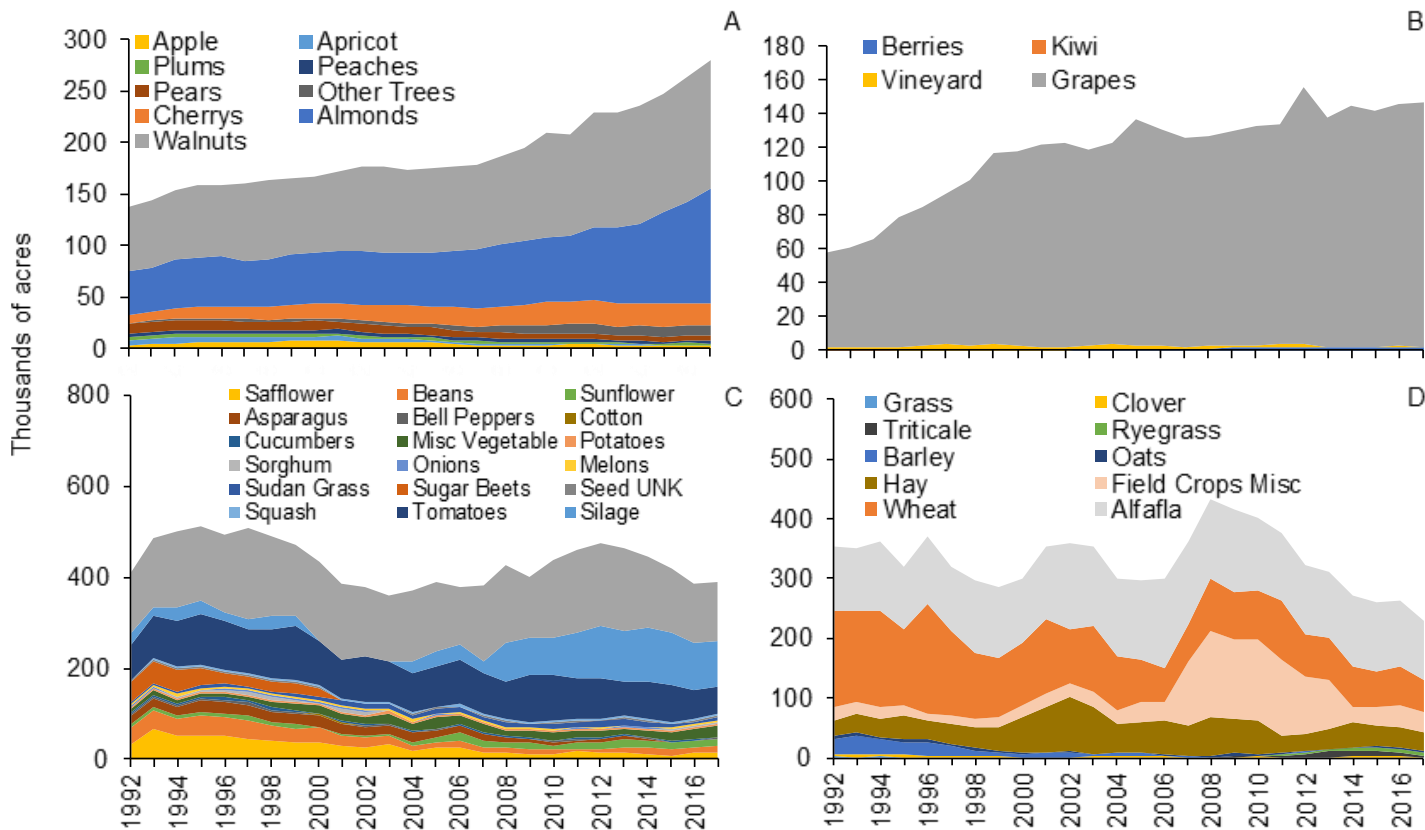


Figure G-20. Crop specific trends by category in the San Joaquin Planning Region, 1992–2017. Panel A: Tree Crops, Panel B: Vine Crops, Panel C: Row Crops, Panel D: Field Crops. Other Trees = Citrus, Lemons, Pears, Pecans, Persimmons, Plumcots, Pomegranates, Tangerines, and unknown fruit and nut trees. Miscellaneous Field Crops = unknown, Misc. Row Crops = Asparagus, Bell Peppers, Carrots, Cherry Tomatoes, Chili Peppers, Eggplant, Fresh Beans, Herbs, Snap Bean, Snow Pea, Sorghum, Spinach, Pumpkins, Squash, Strawberry. Miscellaneous vegetables are unknown. Berries = Blueberry and Boysenberry.

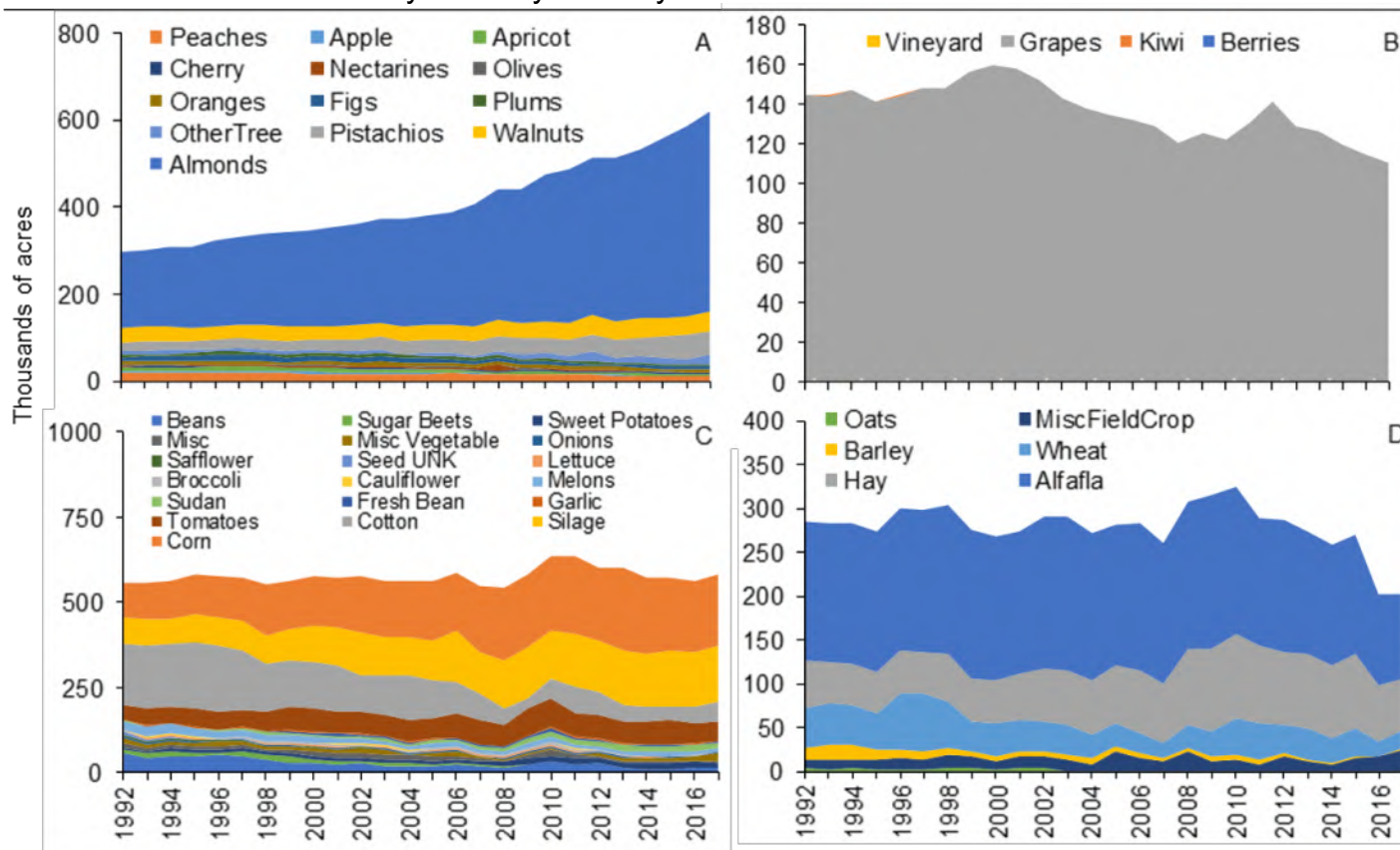


Figure G-21. Crop specific trends by category in the Tulare Planning Region, 1992–2017. Panel A: Tree Crops, Panel B: Vine Crops, Panel C: Row Crops, Panel D: Field Crops. Other Trees = Citrus, Lemons, Pears, Pecans, Persimmons, Plumcots, Pomegranates, Tangerines, and unknown fruit and nut trees. Misc. Row Crops = Asparagus, Cauliflower, Cherry Tomatoes, Chili Peppers, Cucumbers, Eggplant, Unknown Vegetable Seed, Snap Bean, Squash, Strawberry, Sweet Potatoes and Turnips. Miscellaneous vegetables are unknown. Berries = Blueberry and Loganberry.

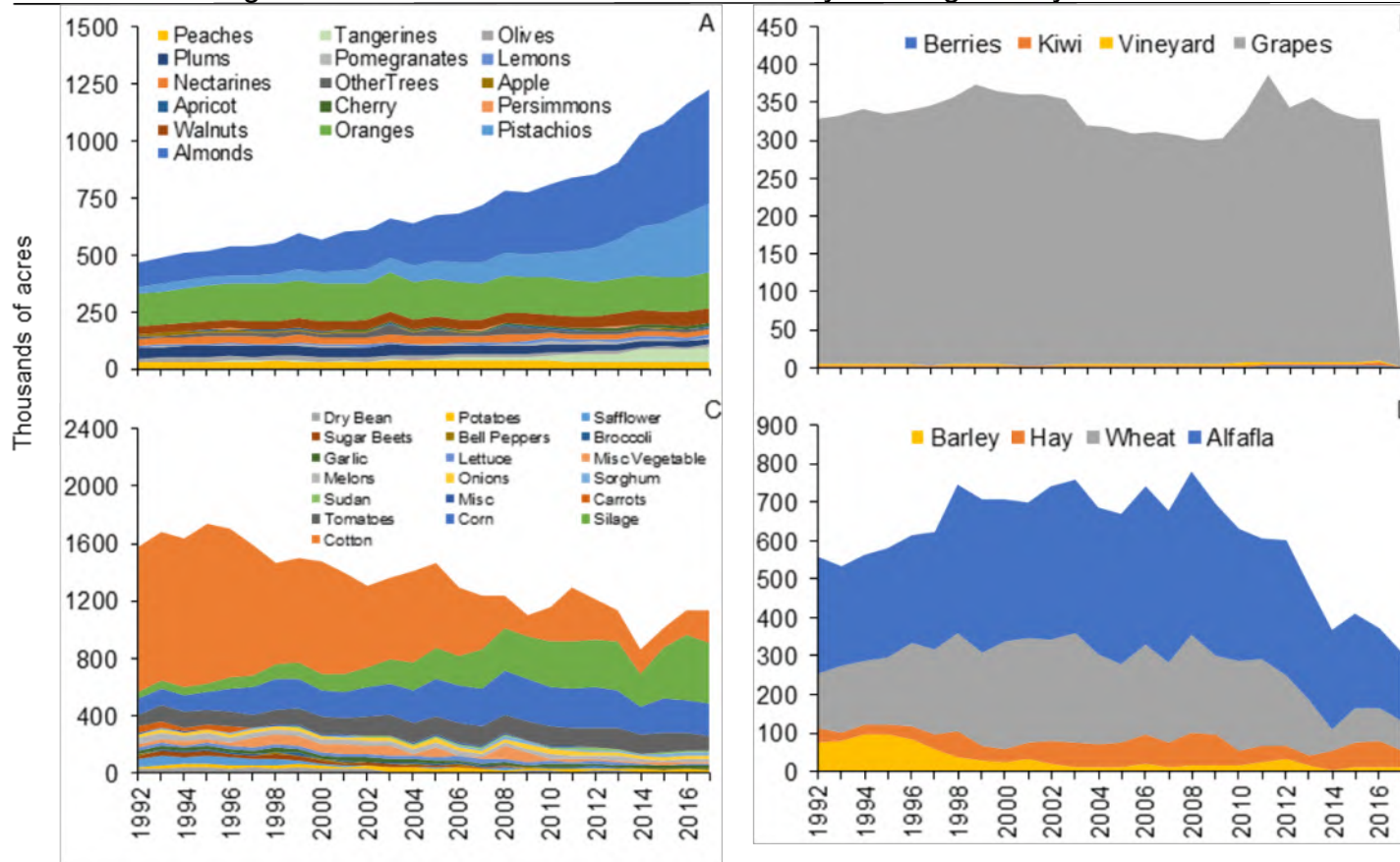


Figure G-22. Habitat conservation by way of managed governmental habitat acquisitions (i.e., Type A) unmanaged governmental habitat acquisitions (i.e., Type C) and Conservation Reserve Program acres (i.e., CRP) in the Central Valley Joint Venture Planning Region 1992–2017, by Cent Panel A : Sacramento, Panel B: Yolo–Delta, Panel C: San Joaquin, Panel D: Tulare. Type A and Type C are U.S. Fish and Wildlife Service and California Department of Fish and Wildlife properties.

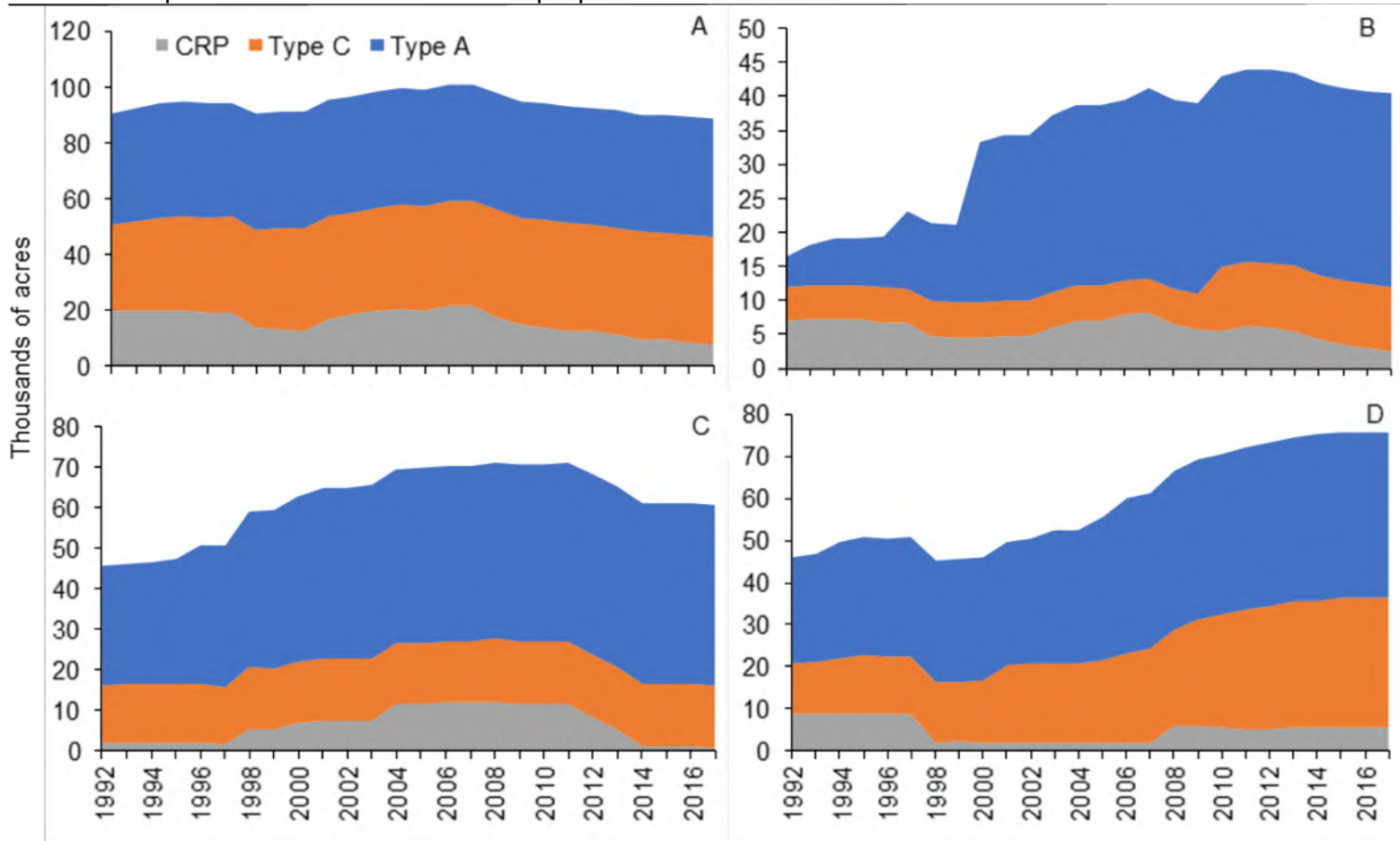
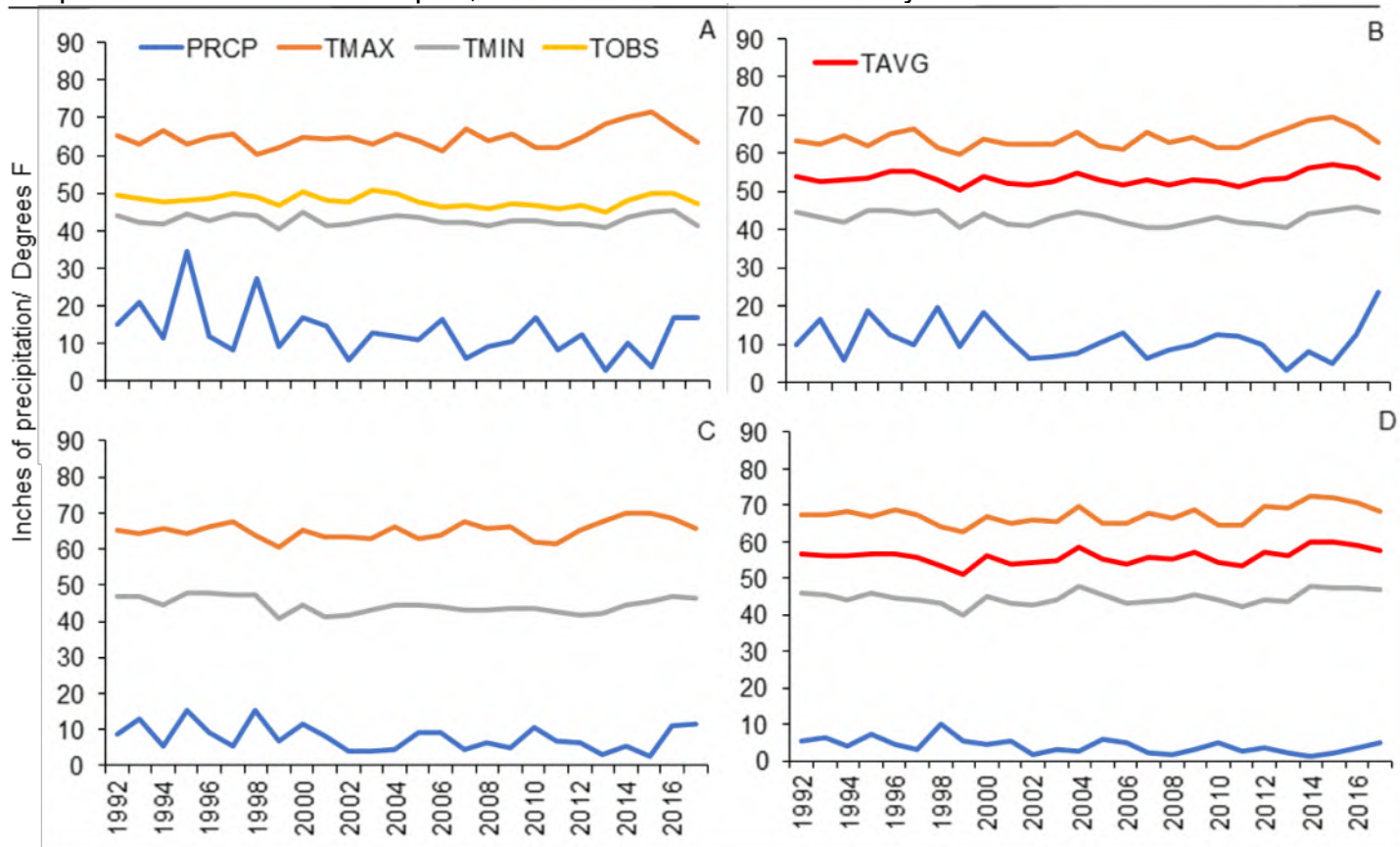


Figure G-23. Climactic data at one weather station by Central Valley Joint Venture Planning Region, California, 1992–2017. Panel A: Sacramento, Panel B: Yolo–Delta, Panel C: San Joaquin, Panel D: Tulare. PRCP = precipitation, TMAX = average maximum daily temperature, TMIN = average minimum daily temperature, TOBS = average daily temperature taken each hour, TAVG = average of average daily temperature. Precipitation is sum-total January–April, Temperature is average of January–April. Sacramento station = Marysville, Yolo – Delta station = Stockton Airport, San Joaquin Station = Modesto Airport, Tulare Station = Kettleman City.



Appendix H. Estimated Retrieved Harvest of Certain Ducks in California, 1962–2022.

Year	Mallard	Gadwall	American Wigeon	Green-wing Teal	Blue-winged/Cinnamon Teal	Northern Shoveler	Northern Pintail	Wood Duck	Redhead	Canvas-back	All Other Species	Total
1961	197.0	19.2	183.9	153.3	28.9	108.4	299.3	7.3	0.8	0.4	49.3	1,047.8
1962	167.0	17.5	128.5	145.1	48.8	86.8	285.3	12.1	1.0	0.0	70.1	962.2
1963	267.5	42.3	159.2	242.5	59.5	182.3	415.7	14.7	4.3	0.0	72.0	1,460.0
1964	249.0	40.5	166.3	214.6	49.4	77.2	342.0	17.0	7.8	9.2	74.2	1,247.3
1965	295.0	41.7	202.2	216.2	59.1	139.6	373.0	34.7	10.6	8.3	79.9	1,460.3
1966	288.4	51.5	215.2	267.1	36.6	162.3	563.0	13.1	8.6	39.9	97.5	1,743.2
1967	446.0	85.3	311.8	363.1	73.1	194.2	798.5	24.3	9.8	15.5	133.6	2,455.2
1968	236.2	34.2	169.6	262.5	42.6	111.5	381.1	11.3	5.5	10.5	68.3	1,333.4
1969	331.7	43.3	229.9	332.2	49.2	197.4	900.5	18.8	6.0	12.3	94.4	2,215.8
1970	371.0	43.5	264.0	361.3	38.2	201.8	1,032.9	21.4	12.9	26.9	77.7	2,451.5
1971	313.4	66.0	255.3	295.9	44.6	189.3	752.1	14.2	13.2	34.4	96.6	2,075.0
1972	321.8	49.3	231.5	332.6	64.9	157.4	715.3	21.2	5.8	0.9	90.2	1,991.0
1973	219.4	32.4	145.6	245.2	94.8	101.1	477.0	32.7	9.5	13.8	79.5	1,451.0
1974	292.3	60.2	194.3	319.6	59.8	167.4	712.4	21.7	8.9	27.1	59.4	1,923.0
1975	293.1	46.5	193.9	344.7	47.7	184.5	746.9	19.3	5.4	28.1	49.5	1,959.6
1976	305.6	37.6	278.7	403.0	42.5	185.6	680.6	23.4	6.6	34.2	82.9	2,080.6
1977	229.7	27.4	162.4	306.4	44.8	115.3	350.8	24.3	7.1	22.4	82.9	1,373.5
1978	294.3	39.2	179.4	405.1	64.9	161.0	596.0	29.0	8.2	14.1	66.0	1,857.2
1979	260.7	47.9	168.3	292.0	42.4	112.6	641.5	12.4	6.6	14.8	63.1	1,662.3
1980	238.6	64.2	165.6	259.1	27.1	108.4	410.0	40.2	10.8	10.3	67.6	1,401.8
1981	239.0	33.6	125.8	211.8	28.9	120.4	261.0	23.8	7.9	14.3	73.8	1,140.3
1982	284.2	53.8	122.8	266.5	50.3	140.2	327.9	26.2	10.9	10.6	59.6	1,353.1
1983	298.6	59.2	103.7	203.7	58.9	112.4	334.3	23.1	14.8	6.9	71.4	1,287.0

Estimated Retrieved Harvest of Certain Ducks in California, 1962–2022, continued.

Year	Mallard	Gadwall	American Wigeon	Green-wing Teal	Blue-winged/Cinnamon Teal	Northern Shoveler	Northern Pintail	Wood Duck	Redhead	Canvas-back	All Other Species	Total
1984	265.1	43.3	94.6	178.2	52.6	91.9	194.9	15.7	6.6	12.2	50.8	1,005.9
1985	261.8	53.6	106.0	180.7	28.6	99.6	200.3	9.5	6.7	27.5	52.7	1,027.0
1986	257.6	57.7	113.9	176.8	19.0	86.6	194.5	20.2	4.4	16.3	43.2	990.2
1987	228.4	50.4	124.3	214.1	29.4	113.1	243.8	11.8	5.3	12.6	49.8	1,083.0
1988	139.7	23.2	62.7	122.1	16.0	44.1	70.3	9.6	2.3	0.1	23.7	513.8
1989	175.8	42.1	71.8	185.0	31.9	64.2	91.6	15.9	4.6	7.2	33.3	723.3
1990	179.7	45.2	80.1	149.9	19.4	69.5	80.3	11.4	2.5	4.2	28.7	671.0
1991	161.2	40.4	94.3	169.7	13.7	49.4	81.3	14.3	1.8	4.7	23.0	653.9
1992	182.7	33.3	72.9	183.9	18.4	74.1	75.0	16.4	3.5	8.8	39.2	708.1
1993	228.4	63.1	77.3	219.2	25.7	60.2	90.5	31.9	5.6	10.2	37.1	849.2
1994	197.4	68.7	97.6	183.0	14.7	106.0	92.0	20.8	5.8	14.4	51.0	851.3
1995	259.8	85.4	159.2	291.2	35.4	101.5	162.7	28.8	9.0	10.2	59.6	1,202.8
1996	374.4	104.1	175.6	306.5	39.4	164.1	182.0	26.4	10.8	12.7	66.4	1,462.4
1997	312.2	79.4	162.0	311.6	36.9	172.6	188.2	22.5	11.7	17.1	67.3	1,381.5
1998	452.6	129.6	166.5	352.4	62.0	217.1	146.3	33.4	15.9	21.4	55.2	1,652.4
1999	328.2	69.4	153.9	285.5	66.8	116.1	123.3	25.6	5.0	13.8	47.9	1,235.5
2000	309.5	62.4	113.1	207.2	31.3	87.5	85.4	32.0	4.7	10.6	39.6	983.3
2001	307.9	65.4	146.9	200.5	36.1	111.6	89.7	32.5	4.3	6.6	51.5	1,053.0
2002	191.3	83.7	134.4	239.7	35.6	103.9	79.9	24.7	4.9	0.7	52.4	951.2
2003	288.1	79.7	112.8	218.0	46.2	96.2	79.2	25.2	8.2	7.0	51.5	1,012.1
2004	359.7	132.6	196.8	348.7	57.3	147.7	98.8	22.5	9.6	11.5	94.1	1,479.3
2005	349.8	105.0	176.8	297.6	58.2	128.8	115.7	39.4	7.8	4.8	43.3	1,327.2
2006	349.1	124.2	165.7	331.3	56.9	224.6	123.2	31.3	9.1	17.5	47.9	1,480.8
2007	270.3	122.2	218.8	402.9	43.4	275.3	137.9	33.7	9.5	32.6	86.4	1,632.9

Estimated Retrieved Harvest of Certain Ducks in California, 1962–2022, continued.

Year	Mallard	Gadwall	American Wigeon	Green-wing Teal	Blue-winged/Cinnamon Teal	Northern Shoveler	Northern Pintail	Wood Duck	Redhead	Canvas-back	All Other Species	Total
2008	255.9	110.2	271.8	468.5	39.9	209.5	169.4	36.3	7.0	0.6	64.2	1,633.7
2009	262.4	117.9	195.3	387.5	35.3	157.7	177.1	27.1	6.6	9.8	63.6	1,591.4
2010	332.0	124.4	226.2	394.9	48.2	220.8	242.6	34.1	7.7	17.6	85.6	1,734.1
2011	308.1	106.2	169.8	311.9	36.9	253.9	201.6	21.0	14.3	15.9	47.2	1,489.1
2012	243.5	95.3	193.7	371.2	31.9	291.5	201.1	21.9	14.6	23.4	25.0	1,738.1
2013	127.9	60.7	152.5	258.8	22.0	197.3	130.5	5.5	7.7	30.0	67.9	1,062.3
2014	106.3	56.4	161.5	240.5	18.1	155.1	115.6	9.3	3.8	15.5	66.7	948.8
2015	119.3	83.4	221.1	327.5	19.2	233.0	161.5	8.0	4.4	25.3	62.2	1,266.3
2016	143.6	71.2	158.7	381.9	33.7	139.4	135.4	11.9	4.1	17.7	55.7	1,115.3
2017	209.3	112.4	185.4	356.7	45.0	169.3	119.4	23.8	8.3	15.6	60.3	1,305.5
2018	144.5	61.7	157.4	316.9	30.6	141.5	138.7	12.3	7.2	14.9	57.5	1,083.2
2019	147.7	53.5	141.2	288.9	25.5	122.7	99.5	13.6	6.7	12.4	49.5	962.2
2020	136.2	60.4	196.8	294.8	33.9	160.9	102.4	12.6	8.8	21.5	60.8	1,089.6
2021	87.5	43.4	141.3	291.9	14.7	166.8	76.7	13.3	4.3	15.8	73.3	929.0
2022	96.1	46.7	112.8	181.0	16.1	149.4	59.2	68.4	29.5	59.1	35.3	726.5

% Change From :	Mallard	Gadwall	American Wigeon	Green-wing Teal	Blue-winged/Cinnamon Teal	Northern Shoveler	Northern Pintail	Wood Duck	Redhead	Canvas-back	All Other Species	Total
2021	9.8%	7.6%	-20.2%	-38.0%	9.5%	-10.4%	-22.8%	414.3%	586%	274.1%	-51.8%	-21.8%
LTA*	-61.8%	-27.7%	-30.9%	-34.3%	-59.8%	4.2%	-79.1%	211.7%	282.9%	291.9%	-42.8%	-45.2%

% State's Total Duck Harvest:	Mallard	Gadwall	American Wigeon	Green-wing Teal	Blue-winged/Cinnamon Teal	Northern Shoveler	Northern Pintail	Wood Duck	Redhead	Canvas-back	All Other Species
2022	13.2%	6.4%	15.5%	24.9%	2.2%	20.6%	8.1%	9.4%	4.1%	8.1%	4.9%
LTA*	19.0%	4.9%	12.3%	20.8%	3.0%	10.8%	21.4%	1.7%	0.6%	1.1%	4.7%

*LTA = Long-term Average, 1961-2021.

Appendix I. Possible Effects of Spinning Wing Decoys in California

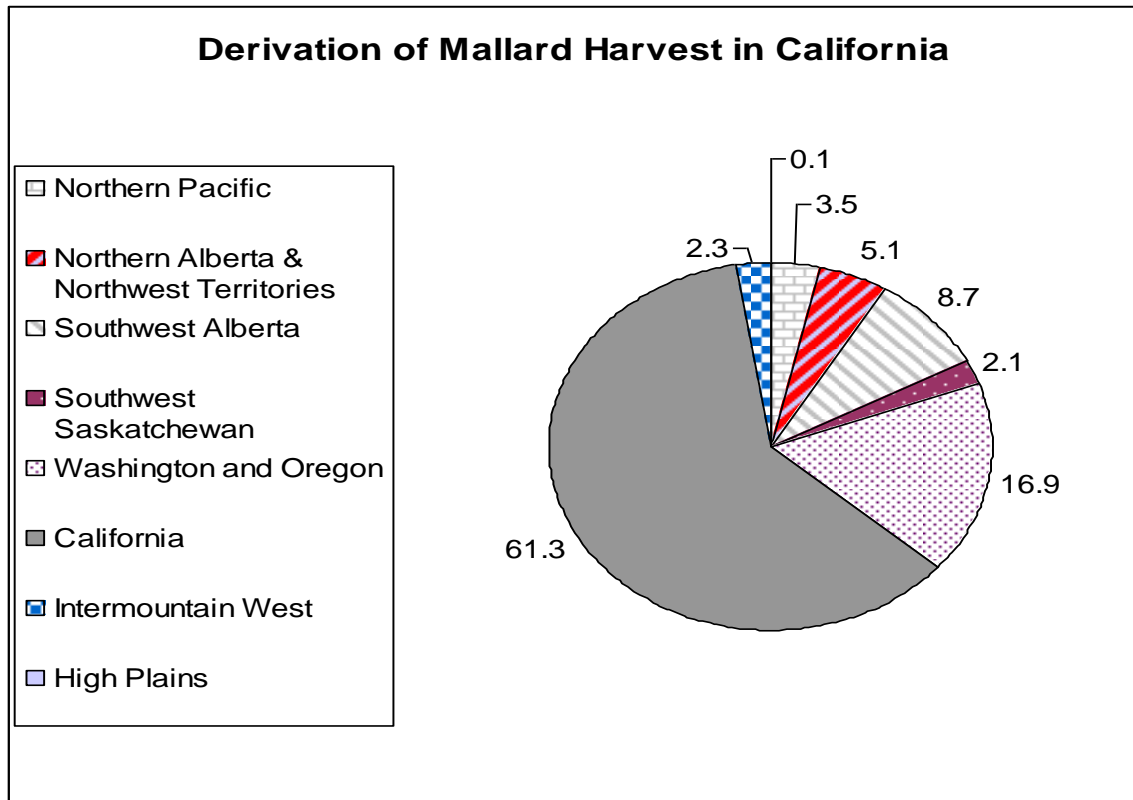
Introduction

The use of mechanical or electronic duck decoys (also known as spinning wing decoys (SWDs), “rotoducks”, “motoducks”, motion wing decoys, etc.) may lead to increases in harvest beyond those anticipated by existing bag limits and season length. Some hunters and other members of the public are opposed to the use of these devices because they believe that the devices may lead to excessive harvest or exceed the bounds of “fair chase” and eliminate the emphasis on traditional hunting methods.

The Department examined the results of studies, existing monitoring programs, and initiated additional analyses to assess the potential effects of SWDs on the harvest of ducks. Monitoring programs (i.e. estimates of breeding populations, total harvests) are not designed to measure the effectiveness of a single harvest method, such as a SWD.

These analyses mostly focus on mallards because mallards are the most abundant breeding duck in the State, are the most frequently occurring duck species in the harvest (Appendix H) and, unlike other species of ducks, are mostly derived from within California (62%; J. Dubovsky, USFWS, unpub data, Figure I-1).

Figure I-1. Derivation of Mallard Harvest in California.



Department Surveys on the Use and Effectiveness of SWDs

The widespread use of SWDs in California began in 1998. The Department compared the daily harvest of hunters on public hunting areas who said they used SWDs to those that said they did not during the 1999-00 to 2001-02 seasons.

Hunters were sampled on five public hunting areas (Delevan National Wildlife Refuge, Upper Butte Basin Wildlife Area, Grizzly Island Wildlife Area, Los Banos Wildlife Area, and Mendota Wildlife Area) on 10 randomly-selected dates during the 1999-00 hunting season and again on five areas (Sacramento National Wildlife Refuge, Upper Butte Basin Wildlife Area, Grizzly Island Wildlife Area, Los Banos Wildlife Area, and Mendota Wildlife Area) on 14 random days during the 2000-01 hunting season. During the 2001-02 hunting season, sampling occurred on 10 days picked at random on the Delevan National Wildlife Refuge, Upper Butte Basin Wildlife Area, Grizzly Island Wildlife Area, Los Banos Wildlife Area, and Mendota Wildlife Area.

The results from nearly 23,000 hunter-days from the three-year survey are summarized in Table I-1. Use of SWDs generally increased in the second year of study, especially in the Sacramento Valley, but use declined on some areas during the third year of study on some areas. SWD use varied from 16 to 59 percent of hunters. There were no other differences between years. Total ducks harvested was significantly greater for hunters using SWDs on all five areas, and the overall average increase was about 1 bird per hunter.

Although the average number of mallards taken by hunters using mechanical duck decoys trended higher, harvest on only one of the five areas was higher at a statistically significant level in one year. The overall average increase in mallards bagged for hunters using SWDs was about 0.5 mallards per hunter-day.

Although average numbers of ducks taken by hunters using SWDs were higher than the averages by hunters that did not use the devices, and use of the devices was common, overall duck harvest on the public hunting areas in 1999 (201,000); 2000 (165,000); and 2001 (157,000); was lower than in 1998 and the overall ducks per hunter per day was essentially unchanged.

Effectiveness of December 1st Regulation

Beginning in 2001, the Commission adopted a prohibition on the use of electronic or mechanically operated spinning-wing decoys from the beginning of the waterfowl season until November 30th. Before and after the regulation change, a variety of changes have occurred with mallard harvest regulations (i.e. opening days, bag limits, season length). The Department analyzed public hunt results to see if any changes have occurred with mallard harvest in relation to the regulation change. Mallards were chosen for this analysis, since the December 1st regulation was created when the breeding population of mallards in California was declining. Beginning in December, a larger percentage of migrant mallards start appearing in the harvest.

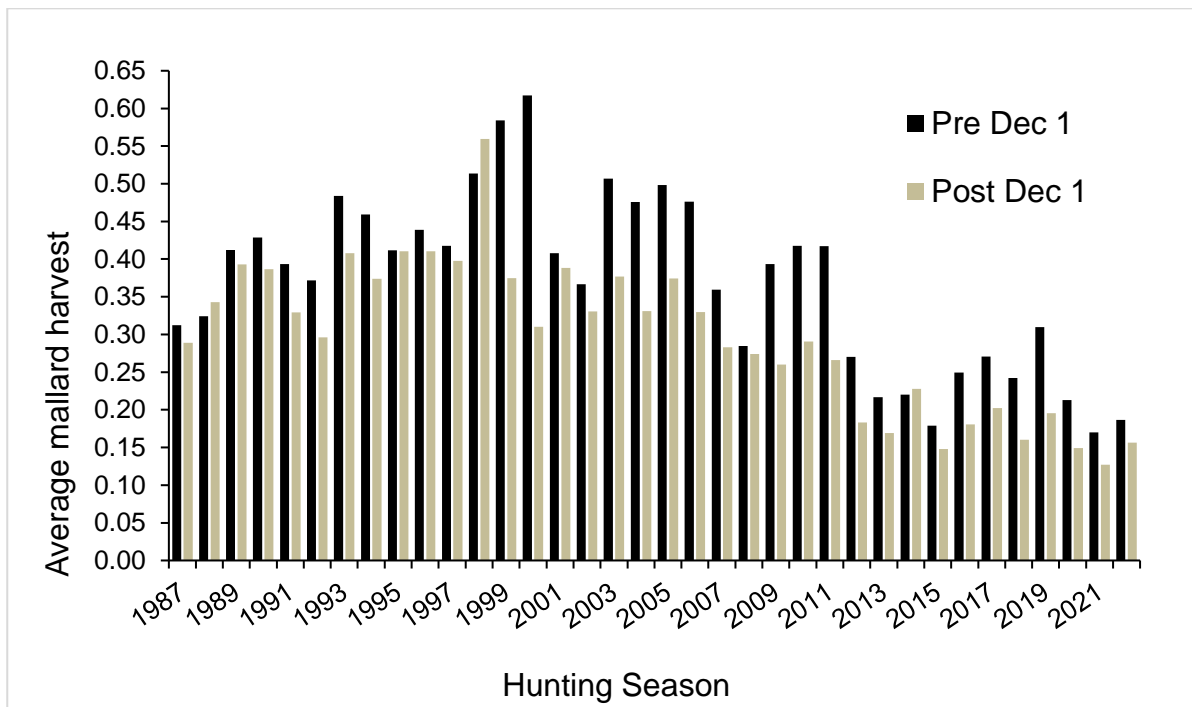
Table I-1. Use and success of hunters using SWD on selected public hunting areas.

Area/Year	% Who Used Decoy	Total Duck Harvest	% Mallard	Avg Mallards per Hunter	Avg Ducks per Hunter	Sample Size	Total Hunter Visits
Little Dry Creek 1999-00	52 – YES 48 - NO	2431 1610	36 34	1.4 1	3.9 2.8	1197	5030
Little Dry Creek 2000-01	59 – YES 41 - NO	2707 1006	47 51	1.4 0.8	2.9 1.6	1550	4650
Little Dry Creek 2001-02	52 – YES 47 - NO	2697 1553	42 47	1.86 1.32	4.42 2.79	1165	4188
Delevan 1999-00	52 – YES 48 - NO	1643 1177	17 18	0.5 0.4	2.6 2	1210	7061
Delevan 2000-01	not sampled						
Delevan 2001-02	45 – YES 54 - NO	1831 1251	30 30	1.09 0.6	3.55 2.02	1132	5941
Sacramento 1999-00	not sampled						
Sacramento 2000-01	57 – YES 43 - NO	1271 904	24 32	0.5 0.6	1.8 1.7	1212	8656
Sacramento 2001-02	not sampled						
Grizzly Island 1999-00	29 – YES 71 - NO	1129 1998	14 18	0.3 0.3	2 1.4	1978	8658
Grizzly Island 2000-01	36 – YES 64 - NO	1508 1852	28 26	0.5 0.3	1.8 1.2	2305	7176
Grizzly Island 2001-02	39 – YES 60 - NO	699 652	17 17	0.24 0.14	1.42 0.85	1250	5880
Los Banos 1999-00	24 – YES 76 - NO	416 786	31 28	0.6 0.3	1.8 1.1	981	4314
Los Banos 2000-01	41 – YES 59 - NO	802 448	31 35	0.7 0.3	2.1 0.9	914	4698
Los Banos 2001-02	34 – YES 65 - NO	454 502	16 23	0.32 0.26	2 1.17	654	4427
Mendota 1999-00	16 – YES 84 - NO	790 3179	16 13	0.4 0.2	2.4 1.8	2133	9886
Mendota 2000-01	24 – YES 76 - NO	1224 2716	29	0.6	2 1.3	2638	10196
Mendota 2001-02	28 – YES 71 - NO	1842 3056	12 12	0.33 0.22	2.59 1.71	2497	11132

A mallard per hunter visit was calculated for all public hunt areas. Although waterfowl zones and other issues exist (e.g. delay due to rice harvest), these were controlled for by computing an average mallard take per hunter day on all areas before and after December 1st (including this date). Additionally, for analysis, data from 1992–2006 was partitioned into three categories: 1992–1997, 1998–2000, and 2001–2006). Use of SWDs began during the 1998-1999 hunting season in California and continued without limitations until the December 1st restriction starting with the 2001-02 waterfowl hunting season. Therefore, we have a five-year buffer (before and after restriction) on each side of their uncontrolled use on public hunting areas (Figure I-2). Also Included are past years (2007–2022) average mallard take per day on public areas.

Based on statistical tests (ANOVAs), there was no difference in mallard harvest per hunter day during the three time periods after December 1st ($P = 0.617$). However, there were significant differences in hunter harvest per day among the three time periods before December 1st ($P = .005$). On average, the mallard harvest per hunter-day was 33% larger from 1998–2000 than 1992–1997 before December 1st. The mallard harvest per hunter day was 26% larger for the same period when compared to 2001–2006 seasons. Based on public hunt results, it appears that the December 1st restriction has significantly decreased harvest on mallards on public hunt areas (on a hunter-day basis).

Figure I-2. Average mallard harvest on the public hunting areas relative to December 1, 1992-2022 hunt seasons.

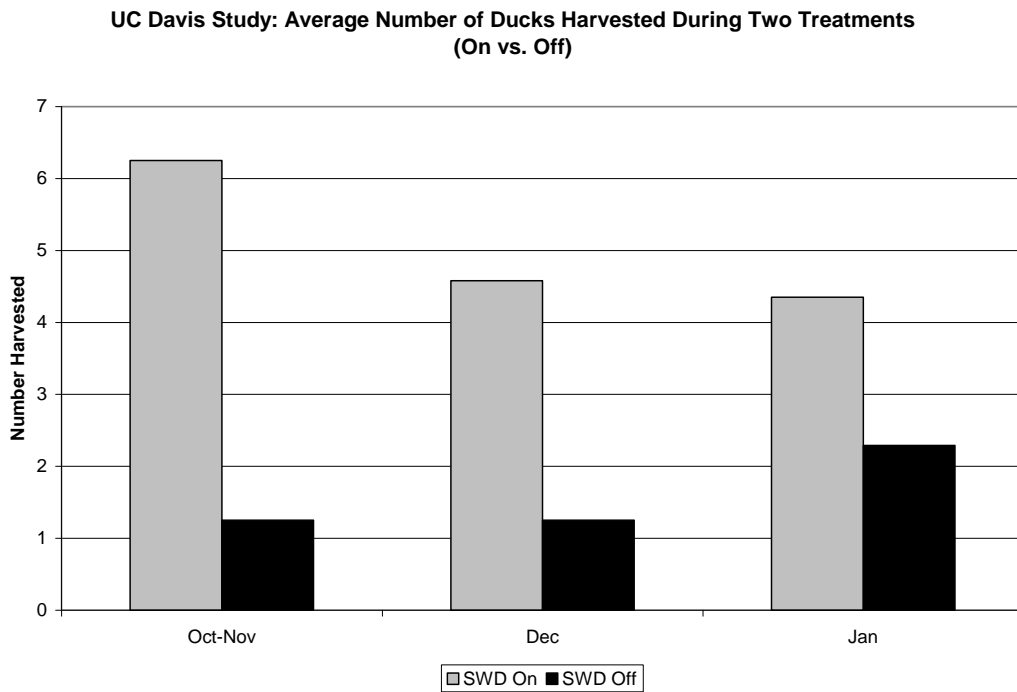


Studies and Scientific Literature on Spinning Wing Decoys (SWDs)

University of California Davis Study

A more rigorous study during the 1999-00 hunting season by the University of California, Davis, also indicated an increase in harvest, particularly early in the season. In this study, hunters were observed during alternating 30-minute periods with SWDs in use and not in use. A total of 37 hunts were conducted. Overall, when hunters used a mechanical duck decoy, they shot about 2.5 times as many ducks as when they didn't use one. Early in the season, hunters using the device shot nearly 7 times more ducks than when the same hunters didn't use the device (Eadie et al. 2001). Summary information from this study is provided in the Figure I-3.

Figure I-3. Summary results from University of California, Davis Study



Arkansas Study

In Arkansas, as study was conducted for 2 years (2001-02 and 2002-03) to evaluate their effectiveness. Overall, 272 hunters killed 537 ducks during 101 hunts. Mallards comprised 57% of the harvest. Of ducks taken, 64 percent were harvested during periods when decoys were on and only 36 percent when off. Results of paired observations indicate that kill per hunter was 1.8 times greater with decoys on versus off. Similarly, 1.3 times as many flocks were seen per hunt, 1.8 times as many shots were fired per hunter and 1.2 times as many cripples were lost during periods when SWDs were on versus off. Age ratios of harvested mallards were similar with decoy use (Imm./Adult ratio = 0.26 when ON and Imm./Adult ratio = 0.23 when OFF), however, adult mallards were 2 times more likely to be shot during periods with a

robo" decoy on than off. Body mass was similar for mallards shot and retrieved during both treatments (ON and OFF) (M. Checkett, Arkansas Game & Fish Commission, unpub. data).

Manitoba, Canada, Study

In Manitoba, Canada, during the falls of 2001 and 2002, 99 experimental marsh and 55 experimental field hunts were conducted. Each hunt consisted of a series of equal and alternating 15-minute experimental (SWD on) and control (SWD off) periods, separated by a 3-minute buffer. Duration of total hunts ranged from 1.0 to 3.0 hours with an average of 1.4 ± 0.5 hours. Experimental marsh hunts indicated that mallards were 1.9 times more likely to fly within gun range, the kill rate was 5.0 times greater, size adjusted body mass of harvested mallards was greater, and the crippling rate was 1.6 times lower in experimental than control periods. Field hunts indicated that mallards were 6.3 times more likely to fly within gun range, kill rate was 33 times greater, and crippling rate was 2.2 times lower in experimental than control periods. A SWD activity*age interaction indicated that adult males harvested during experimental periods had higher size adjusted body mass than that of juvenile mallards harvested during experimental periods. However, body condition of harvested adult and juvenile mallards did not differ significantly during control periods (Caswell and Caswell 2004).

Minnesota study

In Minnesota, due to concerns about the potential increased harvest of local mallards, 219 experimental hunts with 367 volunteer hunters were conducted during 1,556 sampling periods (both ON and OFF treatments) during the 2002 waterfowl season. When using a SWD, mallards were 2.91 times more likely to respond to the decoy (within 40 m) as compared to when off. Flock size was larger when the decoy was on, as compared to off. The number of mallards killed/hour/hunter was 4.71 times higher when the SWD was on. There was no difference in crippling loss in treatment types (ON vs. OFF). Age ratios of mallards were 1.89 (HY/AHY birds) versus 0.61 when ON and OFF, respectively. Overall, the study predicted an increase in mallard harvest, if SWDs became widely used in Minnesota (Szymanski and Afton 2004).

Missouri Study

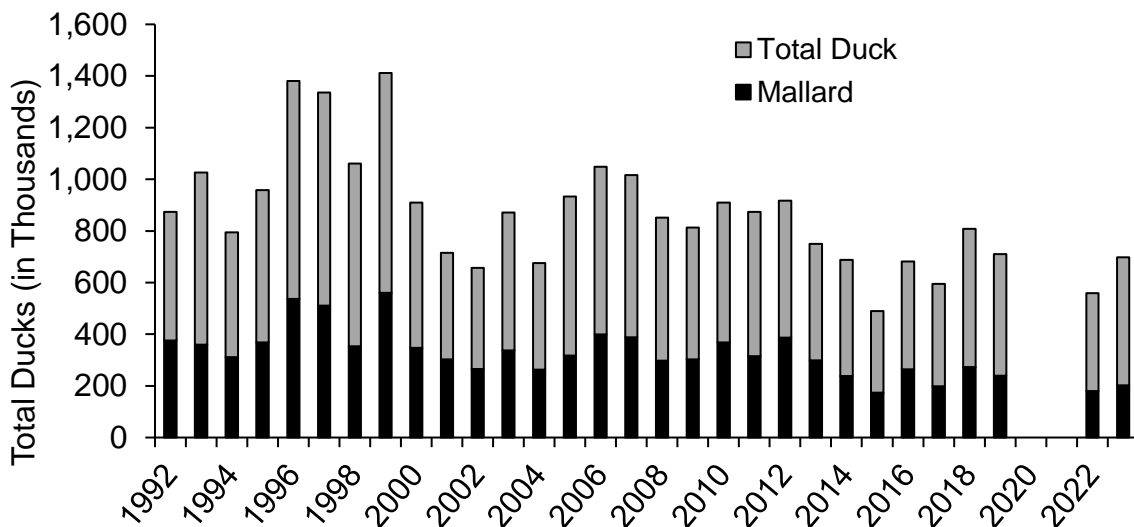
In Missouri, efforts to evaluate the use and attitudes regarding SWD were completed in 2000 and 2001. Hunters using SWDs shot and retrieved 1.28 more total ducks per hunting party (2-3 hunters) and 0.82 more male mallards than when not using a SWD. Missouri waterfowl hunters hunting on public areas were more successful in 2000 when using SWDs than hunters who did not use SWDs. The overall difference in success rate between users and non-users was 0.78 ducks per hunter trip; however, about half of this difference was attributed to factors other than SWDs, such as greater hunting skills. The remaining increase in hunting success, between 0.32 and 0.45 ducks/ hunter trip (13%-19% increase in success rate), was attributed to SWDs (A. Raedecke, Missouri Department of Conservation, unpub. data).

These brief summaries of the additional results and other studies (Nebraska) were summarized in Ackerman et al (2006). Overall, 70.2% of all ducks were harvested when the SWDs were used, as compared to 29.8% when the decoy was not in use. Significant results indicated that the probability of being shot increased with latitude (study location) and annual survival rates of species. These results support that fact that ducks may be more naïve at the beginning of migration (i.e. Manitoba), as compared to late in migration (i.e. Arkansas). Ackerman et al. (2006) suggested that these studies “only measured the effect of SWDs on kill rates of ducks and these rates will not necessarily translate into overall changes in population harvest rates.”

California breeding populations

The Department annually estimates the breeding population of ducks in California (CDFW 2022). Results of the current year breeding population survey are not usually available until June of each year. Based on the mallard breeding population, a decline was observed following the 1999 waterfowl season, but this trend was not statistically significant because the annual estimates have large confidence intervals. More recent mallard breeding population levels are similar to the mid-1990s levels when SWDs were not being used for duck hunting. Furthermore, breeding populations of mallards and total ducks have remained relatively stable since 2008 (Figure I-4).

Figure I-4. California Duck Breeding Population Estimates, 1992–2023



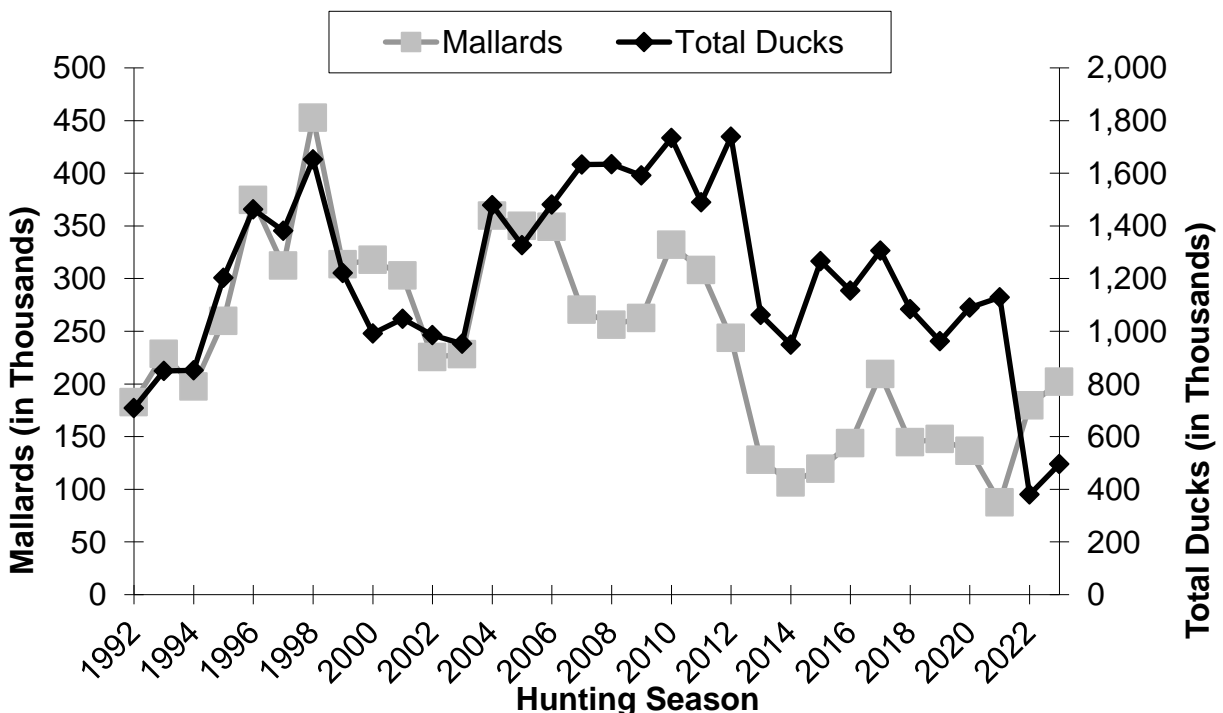
Total estimated duck harvest

The Service annually estimates the harvest of ducks in California and throughout the United States. However, the most recent year of harvest is not available until July of the following year. For example, at this time, harvest information from the 2022-23 season is available but harvest estimates from 2023-24 will not be available until July, 2024. There remain many factors (e.g., regulations, weather, hunter participation, age ratios in duck populations, etc.) besides the use of SWDs that may impact hunter success on an individual hunt, which may transfer to decreased or increased total statewide duck harvest.

Relationships Among Survival & Harvest in Mallards: Issues in Findings

The studies cited above indicate that the use of SWDs increases harvest at the individual hunt level, however, despite the widespread use of SWDs (at least when last measured) overall estimates of harvest have not changed at the same magnitude as indicated in the individual hunt studies (Figure I-5). To have a biological effect at the population level, SWDs would have to be shown to lead to increased harvests and those increased harvests would have to be shown to lead to decreased annual survival rates. Other unmeasured variables act on populations during and after hunting seasons and it is not possible to unequivocally attribute potential population level effects due to SWDs through existing monitoring programs. However, banding data are the most likely of these monitoring programs that provide any inference on the role of SWDs on population parameters of ducks.

Figure I-5. Mallard and Total Duck (all species combined) Harvest in California.



Numerous scientific studies have attempted to improve the understanding of the relationship among harvest rates and annual survival rates of waterfowl (Anderson and Burnham 1976, Nichols et al. 1984, Nichols and Hines 1982, Burnham and Anderson 1984, Johnson et al. 1986, Trost 1987, Raveling and Heitmeyer 1989, Nichols 1991, Smith and Reynolds 1992, Conn and Kendall 2004). Most of these studies have relied on banding data. As an example, Smith and Reynolds (1992) concluded that survival rates increased in response to restrictive regulations, and they rejected the completely compensatory model of population dynamics. Conversely, Sedinger and Rextad (1994) contested those conclusions because Smith and Reynolds pooled data and their analyses had low statistical power. Thus, there is still debate whether existing harvest levels affect survival rates in mallard populations. Partially due to this debate and uncertainty, the Service implemented Adaptive Harvest Management in 1995 to help reduce the uncertainty about the role of harvest and survival rates in population dynamics of mid-continent mallards.

The ability to detect significant changes in estimates of mallard recovery and survival rates in California and relate these changes solely to the use of SWDs, is difficult if not impossible for several reasons.

First, survival and recovery rates are calculated through modeling using data from banded ducks. The data from these banded ducks consists of the number of birds banded (categorized by age, sex, date and location of banding) and reports of encountered bands (usually through hunting for game birds). The number of birds encountered divided by the number of birds banded is the recovery rate. However, not all bands encountered are reported, and an estimate of reporting rate is needed. The product of the recovery rate and the reporting rate is the harvest rate.

Reporting rates have been estimated because this rate is necessary to estimate the harvest rate and harvest rate is necessary to understand the relationship between harvest and population dynamics. Reporting rates vary widely due to band type and even geography (Nichols et al. 1991, 1995, Royle and Garretson 2004). Band types (i.e. their inscriptions) have changed over time. Before the 1990s, "avise" bands were used. These bands were inscribed with "AVISE BIRD BAND, WRITE WASHINGTON DC USA". Later, "address" bands were introduced with the inscription "WRITE BIRD BAND LAUREL MD 20708". These bands were replaced beginning in 1995, but not entirely until about 1999, with "toll-free" bands that were inscribed with "CALL 1 800 327 BAND and WRITE BIRD BAND LAUREL MD 20708 USA". The adoption and widespread advertising of this new reporting method greatly increased reporting rate and apparent recovery rates. Due to the overlap of band types and the timing and duration of research into reporting rates, harvest rates cannot be calculated for all areas in all years.

Secondly, changes in basic hunting regulations (e.g. season length and bag limits) occurred before and after the use of SWDs began. For instance, in 2001 (the first year of the December 1 regulation), the season was 100 days long with a 7 mallard (2 hen) daily bag limit whereas in 2002, the season was 74 days long with a 5 mallard (1 hen)

daily bag limit. Thus, changes in harvest and survival rates due to basic regulations could be confounded with any changes to these parameters due to the use of SWDs. More inferences could be made from the standard monitoring programs with stabilized regulations over a period of time.

Third, duck (and presumably mallard) harvest varies annually due to non-regulatory effects (weather, hunter participation, etc.) and survival rates vary due to variation in natural mortality (disease, etc.) (Miller et al. 1988).

With these caveats in mind, the Department calculated recovery rates and survival rates for mallards banded in California between 1988 and 2005. These ducks were banded by the Department, the California Waterfowl Association, and the U.S. Fish and Wildlife Service. Only normal, wild mallards banded from June to September with standard USFWS bands were used in this analysis. The Department examined the data by age class (adult and hatch-year or immature) and sex. Survival and recovery rates were calculated using Brownie models (Brownie et al. 1985) in Program MARK (White and Burnham 1999). Harvest rates were calculated from recovery rates by incorporating reporting rates (Nichols et al. 1995, Royle and Garretson 2004). For comparison purposes, the Department summarized harvest rates for mid-continent mallards during liberal seasons (1979–1984) (Smith and Reynolds 1992) and for mallards from eastern Washington (1981–1998) (Giudice 2003).

For data from mallards banded in California, the data were portioned into 4 time periods (Table I-3): Period 1 (Restrictive season lengths and bag limits, no SWD); Period 2 (Liberal season lengths and bag limits, no SWD); Period 3 (Liberal regulations with SWD, but no December 1 regulation) and, Period 4 (Liberal regulations with December 1 regulation). If SWD affected harvest and survival rates, harvest rates should be highest and survival rates lowest during Period 3. If regulations by themselves change these parameters, harvest rates should be higher and survival rates lower in Period 2 compared to Period 1. If SWD had an effect, survival rates should be lower and harvest rates higher in Period 3 compared to Period 2. If the December 1 regulation had an effect, harvest rates should be lower and survival rates higher during Period 4 compared to Period 3.

Table I-3. Time periods used to summarize basic regulations, SWD use, and the December 1 regulation.

Time Period	Starting Season	Ending Season	Regulations	Pre or Post-SWD	Dec 1st Restrictions
1st	1988	1994	Conservative	Pre-SWD	No
2nd	1995	1997	Liberal	Pre-SWD	No
3rd	1998	2000	Liberal	Post-SWD	No
4th	2001	2004	Liberal	Post-SWD	Yes

Unfortunately, due to the introduction of “toll-free” bands and the increasing and changing reporting rates, harvest rate estimates are only available for Periods 1 and 4. Harvest rates for adults between Period 1 and Period 4 were unchanged and lower than those rates for eastern Washington and mallards from the mid-continent region (Table I-4). However, harvest rates of immature mallards banded in California have increased between periods 1 and 4 by 62 and 30 percent for males and females, respectively. Thus, the combination of regulation changes and use of SWD did not change harvest rates of adults, but the combination of more liberal regulations and the use of SWD did change harvest rates of immature mallards. The combination of liberalized regulations and SWD appears to have increased the harvest rate of mallards banded in California to higher levels than occurred in the mid-continent region or eastern Washington (Table I-4).

Table I-4. Harvest rates for mallards banded in California (restrictive and liberal periods), eastern Washington (liberal period) and the mid-continent region (liberal period).

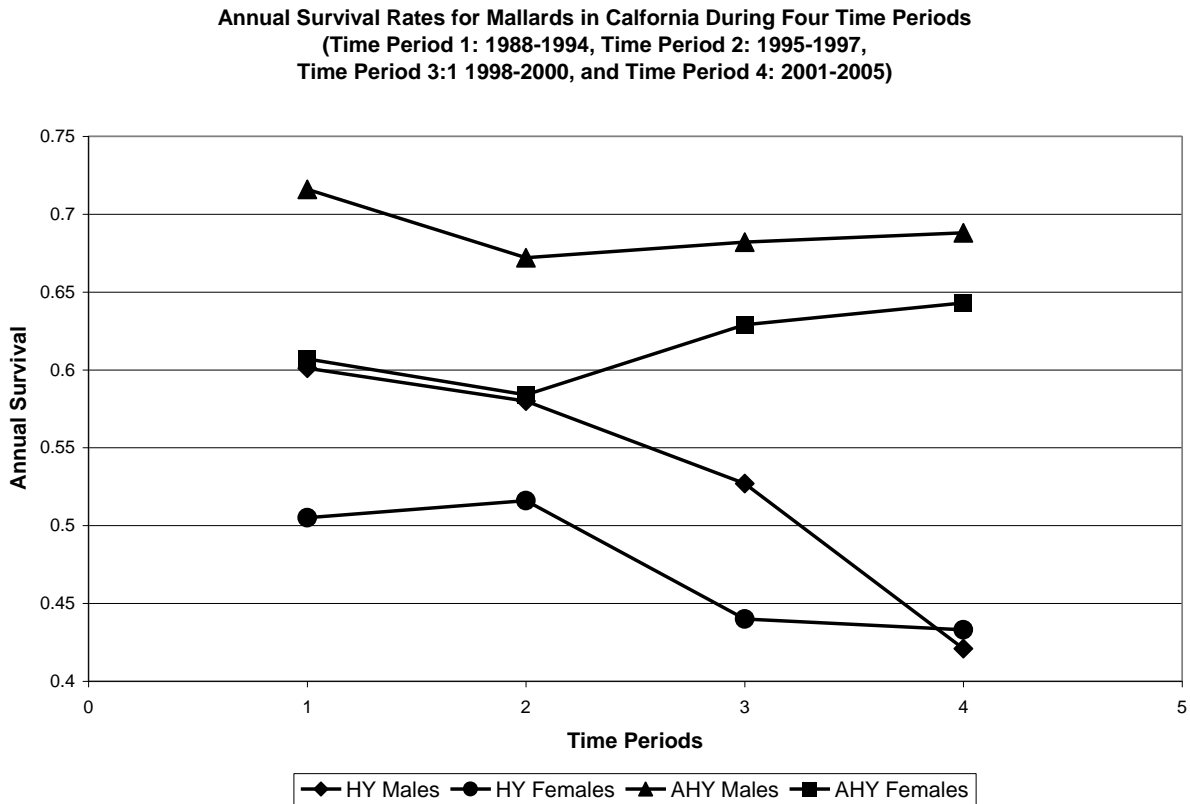
Cohort	California (restrictive)	California (liberal)	Eastern Washington	Mid-Continent (liberal)
Adult Males	0.138	0.138	0.172	0.150
Hatch-Year Males	0.202	0.327	0.286	0.228
Adult Females	0.058	0.058	0.100	0.097
Hatch-Year Females	0.143	0.186	0.172	0.157

Survival rates could be calculated for each cohort (age and sex) for each period (Figure I-6) since recovery and survival rate are not conditional on each other. Covariance among recovery and survival rates must be addressed to understand the impact of harvest on survival rates. Although recovery rates may have increased during these periods, it would not have as large an impact on survival rates, as compared to computed harvest rates. Furthermore, the grouping into time periods also correlates with the introduction of different band types.

Survival rates were constant for adult birds of sexes irrespective of harvest regulations, the use of SWD or the December 1 regulation (Figure I-6). However, survival rates for immature birds declined but only for males was the decline statistically significant ($P=0.048$).

From these analyses, it appears that adult mallard recovery, harvest and survival rates have not changed despite changes in regulations, the use of SWDs, or the imposition of the December 1 regulation. In contrast, immature mallard harvest rates have increased and survival rates have declined, but these changes may have been due to changing basic regulations, the use of SWDs, both, or other unmeasured variables.

Figure I-6. Annual survival rates of Mallards banded in California.



Public Perception of SWDs

The findings of this section have concentrated on biological information as related to the SWD in California. However, since past public views to the Commission has demonstrated different views on “fair chase”, public opinion information has been added to this review of this topic. In 2005, D. J. Case & Associates, as commissioned by the Association of Fish and Wildlife Agencies, released the findings of the National Duck Hunter Survey. According to this study, 55% of California duck hunters stated that SWDs should be allowed, whereas 26% opposed their use and 19% had no opinion on the subject. Other surveys have shown a wide variety of responses to their opinions on SWDs. For instance, California Waterfowl Association’s (CWA) 2006 survey indicated that a majority of hunters opposed electronic decoys, but accepted wind driven decoys (CWA, pers. comm.).

Summary of Findings

There is substantial evidence that SWDs can/have increased harvest and harvest potential on an individual hunt basis. Although SWDs have been shown to increase potential harvest, total harvest estimates have not increased at the same magnitude. Furthermore, SWDs have not increased harvest rates nor decreased survival rates on adult mallards. In hatch-year mallards, harvest rates have increased over 60 percent

on males, and survival rates have significantly declined. However, this is not a cause-and-effect relationship because other unmeasured variables were likely occurring simultaneously. The implementation of the December 1 regulation appears to have reduced daily harvest rates of mallards on public hunt areas when compared to unrestricted use of SWDs (1998–2000).

There is no clearly explicit link detectable through existing monitoring programs (or population level measures) between the introduction of SWDs and changes in measured population parameters. There remains no substantial evidence either for or against their large-scale effect on waterfowl populations. There are strongly held opposing positions on the “fair-chase” and other aspects of SWDs. For this reason, the Department has provided an alternative in Chapter 3.

From: Ryan Forsyth/USA
Sent: Wednesday, April 10, 2024 02:29 PM
To: FGC <FGC@fgc.ca.gov>
Subject: Junior Hunt dates Modification - Waterfowl season

Hi there,

I hope this email finds you well. I've been told that the waterfowl season dates are nearing completion and that this year the season is likely to end on January 31st with the Junior Hunt to start the following day, February 1st and 2nd with no rest days between balance of state season and the junior hunt while the Vet hunts gets a full week of rest for their hunt.

In my opinion this would be a very big mistake to help with hunter recruitment and enjoyment for the kids. A minimum of a week of rest is really needed to have a good hunt for the kids as end of season birds are tough to hunt given the season long pressure. I've been taking kids for years on junior hunts and have created new hunters as a result of those experiences. I now have kids of my own I am trying to assist with the traditional and a having a good hunt is a part of that experience. There is no doubt that the kids will be robbed of that if the current proposed framework remains with no rest days.

I strongly request a modification to either move up the BOS to October 19-January 26th to allow at least 1 week of rest or allow Junior Hunting on the Veterans weekend (either by allowing juniors to hunt vets weekend or combining the two) in an effort to give the kids the best experience possible (which is what this weekend should be about). Frankly I'm sure if you tallied hunters, they would say that given the current proposed framework they would rather the kids have the week of rest versus the veterans and to flip it this year for the kids.

I know it's a lot to ask and of course impossible to make everyone happy but for kids that have no voice in the say it is our duty to care about their interest and what is best for them and the sport.

Thank you for your consideration.

Ryan Forsyth
Vice Chairman

Yuras | Aicale | Forsyth | Crowle Team
www.YAFteam.com

Direct: (415) 413-3005 Cell: (916) 320-2541
ryan.forsyth@cushwake.com



From: Kevin Layne <
Sent: Wednesday, April 10, 2024 03:04 PM
To: FGC <FGC@fgc.ca.gov>
Subject: Waterfowl Season Opener

For many years I have mentored a junior hunter on the youth weekend following the regular season closing. It has been a wonderful time to get young kids involved because the season has been closed for a week which makes for incredible opportunities for the kids. If you open the season this year on the 26 as recommended then there will be zero rest days and the hunting will be terrible compared to past years. Our kids deserve better. Please open the season on October 19 this year so there is a week of closed season before the junior hunt.

Thank you,
Kevin



Kevin Layne Vice President - Key Relationship Manager/Business Development
200 E. Cartmill Avenue Tulare, CA 93274
P. 559 366 1683 | AgWestFC.com

From: Richard Schussel <rfschus@pacbell.net>

Sent: Wednesday, April 10, 2024 12:27 PM

To: FGC <FGC@fgc.ca.gov>

Subject: Urgent Comments for April 18th Commission Meeting - Item 20 Waterfowl Hunting

I write to ask the Commission to Change the Proposed 2024-25 Hunt Start and End Dates. Without a change, the After Season Youth Hunt will have ZERO rest days between the regular season ending Jan 31, and the Youth hunt opening the Next day. Zero rest days will negatively impact the entire youth program.

Background:

YOUTH Hunts were established years ago, with the goal of introducing them to ethical hunting, and to provide them with the opportunities to be successful. The program is a key part of the Nationwide 3R campaign to RECRUIT, RETAIN and REACTIVE citizens to the outdoor sports.

For some reason, this year, the Proposed Regulations came with a change for ZERO days of hunting rest before the youth hunt. In the past, seasons ended on the last Sunday in January, giving a full week's rest before the Youth hunt occurred on the first weekend in Feb. In more recent years, a change was made to hunt until January 31st...regardless of day of week. This set the stage for a huge 'hit' against the youth program.

In trying to understand why we have only one option being presented by DFW – for ZERO rest days for youth hunters this year, I did some research and found this proposal: (<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=219775&inline>)

In part – it shows this:

~~From the third Saturday in October extending for 103 days.~~
~~Scaup: from November 7 extending for 86 days.~~ [Opening no earlier than the fourth Saturday in October and closing no later than January 31. Season may be split into two segments and no longer than 98 days except for scaup season can be no longer than 86 days.]

So, somehow, someone crossed out the option of starting from the third Sat in October. The third weekend had been the 'normal' for quite some time. Yet, the option to start the third weekend in October and end the last Sunday in January was REMOVED from consideration. If we opened the 3rd weekend in October and ended that last Sunday in January, we WOULD be able to provide a full week's rest before the youth hunt. And a full week rest for the Veteran hunt. AS it is now, the kids get no rest and the Vets still get a full week. That's unacceptable.

This begs the question: Why was that option (which I think has been there a long time), get 'stricken'. And why was only one option for the 4th weekend used??????

Why wasn't the option to provide rested days for the youth removed from consideration?

We are told the start date can not be changed because the documents have already been submitted. That doesn't make sense?

While the 2024 proposal document is the DFW proposal, why can't the department ask to remove that stricken language and provide for another option ?

I ask the commission to right this wrong to the youth hunt program. **Please request the department change their recommendation for a start date of the third weekend in October ending on the last Sunday in January: Oct 10 to January 26.** This would allow the youth hunts and veteran hunts to each have a week's rest, with the Youth hunts on Feb 1-2, and the Vet hunt Feb 8-9.

Rick Schussel

CA Waterfowl Hunter

From: Joel Sibley

Sent: Wednesday, April 10, 2024 04:09 PM

To: FGC <FGC@fgc.ca.gov>

Subject: Youth waterfowl hunt

I'm am disgusted that a fish and game commission who pushes R3. Has concluded that not giving a rest period prior to the balance of state youth weekend would be a good idea ..

I can personally speak to this as hunter ed instructor and a father of 5 license holders who have come through the experience of youth weekend with rest periods ..

The opportunity of being able to see and shoot at working birds for the first few seasons has cemented there commitment and enthusiasm to continue to hunt .

These hunts provide the chance to understand what hunting can be like.

If a youth goes out and experiences lots of birds that don't provide a shot at all.

They might as well go to the refuge to watch birds fly .

I have had multiple non hunting families out for youth weekend. And have seen the follow up by the new hunter and the parents. After experiencing success .

This commission has failed last year and once again this year to remedy your mistake. And are making it clear. You truly are not interested in Recruit, Retain, and Reactivate ..

Please consider allowing the badly needed week long rest period. That has been proven to recruit new hunters .

Joel Sibley



Mendocino County Farm Bureau

303-C Talmage Road • Ukiah, CA. 95482 • (707) 462-6664 • Fax (707) 462-6681 • Email: admin@mendofb.org
Affiliated with the California Farm Bureau and the American Farm Bureau Federation

April 12, 2024

CA Fish and Game Commission
PO Box 944209
Sacramento, CA 94224-2090

VIA EMAIL: FGC@dfg.ca.gov

RE: Fish and Game Commission Notice of Proposed Changes in Regulations Amend Sections 364 and 364.1 Title 14, California Code of Regulations Re: Elk Hunting Mendocino SHARE Roosevelt/Tule Elk Section 364.1(k)(1)

Dear Commissioners,

The Mendocino County Farm Bureau (MCFB) is a non-governmental, non-profit, voluntary membership, advocacy group whose purpose is to protect and promote agricultural interests throughout the county and to find solutions to the problems facing agricultural businesses and the rural community. MCFB would like to provide comments on the proposed amendments to mammal hunting regulations, specifically the updates to elk hunting in Mendocino County.

Tule Elk have been established in Mendocino County for a number of years especially in the areas of Potter Valley, in the adjoining Lake Pillsbury area of Lake County as well as in Long Valley (Laytonville). Currently there are also herds that are established in the Little Lake Valley area in Willits as well as in Round Valley (Covelo). There are also Roosevelt Elk present on the upper Northwest side of Mendocino County.

As much as the people and communities of Mendocino County enjoy these magnificent animals, their exponential population growth has created an ongoing tension with landowners in the areas where the elk are inhabiting. In the Potter Valley area, it is estimated that there are 300+ Tule Elk that are now established in the valley. Rough counts in the Laytonville area indicate roughly 200 Tule Elk. There are also herds in Covelo and Willits that lead to negative interactions with landowners.

In 2020, the California Department of Fish and Wildlife (CDFW) did a helicopter survey in Mendocino County, which reported a total of 536 Tule elk in 16 groups were detected. This count is believed to be a low estimate and conservative numbers for Mendocino County, with the population continuing to grow in more recent years.

The main issues with the interactions between landowners and elk include:

- Impacts and competition to forage availability for livestock.
- Impacts to hay and other crops such as vineyards and orchards
- Destruction of livestock and property fencing
- The increased costs associated with crop loss and maintaining infrastructure due to elk damage.

- Very little to no compensation to property owners that are subject to dealing with elk on a regular basis.

Additional concerns include:

- Public safety concerns from elk/automobile interactions on local roadways. The Highway 101 corridor in Laytonville is especially prone to high-speed auto accidents involving elk.
- The impacts to native deer species from the large increase in the Tule Elk population
- Impacts to the health (starvation, disease) of the existing elk herds if private properties are forced to install elk fencing to fence out the elk to avoid additional property damage.

With these issues and concerns in mind, it is encouraging to see that the proposed amendments recommended to the Commission included increasing the number of elk hunt draw tags available including public hunt opportunities on private property through the Shared Habitat Alliance for Recreational Enhancement (SHARE) tags as well as an increase in the available landowner tags (LO). The proposed amendments would increase CDFW administered SHARE Roosevelt/Tule Elk hunts, increasing available bull tags from 2 to 20, and antlerless tags from 4 to 30. The proposed increase in the number of tags in Mendocino County would assist in resolving some of the elk/landowner conflicts and other concerns listed above. In addition, the increase in the SHARE program tags would also provide some incentive and compensation for private landowners that are impacted by elk.

Currently, the number of tags for private land programs are minimal and without consideration for increasing the number of tags, there will continue to be tension with property owners that are impacted by elk and receive no compensation to assist in the cost of mitigating losses and damage. MCFB encourages the Commission to approve the increase in SHARE elk hunt tags for Mendocino County.

According to the 2023 elk tag drawing statistics (the most recent statistics in the 2024 CDFW Big Game California Hunting Digest) there were 408 applicants for two general methods bull tags which demonstrates that there is a significant public demand to consider an increase in the general elk hunting tag quota in Mendocino County. MCFB encourages the Commission to also explore an increase in general draw elk hunt tags for Mendocino County in addition to SHARE tag expansion.

The proposed regulations up for consideration align with the 2018 Elk Management Plan (EMP) established by CDFW, which emphasizes objectives such as maintaining diversified recreational uses, providing economic contributions and alleviating economic losses. The Mendocino Tule Elk Management Unit within the 2018 EMP lists Action 1.7.1 *Provide bull and antlerless hunting opportunities at levels that allow for long-term expansion of the elk population and provide landowners with incentives to support having elk on their properties.* It also details Action 3.1.2 *Utilize SHARE to increase elk hunting opportunities and address human-elk conflicts on private property.* The proposed increase in SHARE tag availability aligns with the Mendocino County needs and objectives outlined in the EMP.

MCFB appreciates the efforts by CDFW to work toward improved management of the elk herds in Mendocino County. Please consider the comments and suggestions listed above as this process moves forward.

Sincerely,



Estelle Clifton
President

From: Pat Wood <PWOOD@dpw.lacounty.gov>
Sent: Monday, April 8, 2024 11:21 AM
To: FGC
Cc: Charlton.Bonham@wildlife.ca.gov; Adam Arika; Sterling Klippel
Subject: Comment Letter: Final Consideration of Petition to list Southern California Steelhead (Oncorhynchus mykiss) as Endangered
Attachments: LA County & LACFCD Comments on Petition for SoCal Steelhead Listing as Endangered under CESA.pdf
Importance: High

Good Morning:

Los Angeles County Public Works submitted comments to your agency in 2022, when the potential listing of the Southern California Steelhead was first being considered. Attached for the Administrative Record for this April 2024 Final Listing action is our 2022 Comment Letter, in case it is not already part of the Administrative Record for the upcoming action.

Thank you.

Patricia M. Wood, P.E.
Senior Civil Engineer
Los Angeles County Public Works
Office: (626) 458-6131



MARK PESTRELLA, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: **SWP-7**

February 3, 2022

Via E-Mail (fgc@fgc.ca.gov)

The Honorable Peter Silva
President
California Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090

COMMENTS CONCERNING PETITION TO LIST SOUTHERN CALIFORNIA STEELHEAD (*ONCORHYNCHUS MYKISS*) AS ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT

Dear President Silva:

The enclosed comments are being submitted on behalf of the County of Los Angeles and the Los Angeles County Flood Control District regarding Agenda Item 20 for the Commission's meeting on February 17, 2022, whether listing of the Southern California Steelhead, *Onchorhynchus mykiss*, as endangered under the California Endangered Species Act may be warranted.

February 3, 2022
Page 2

The County and the LACFCD appreciate this opportunity to provide comments. If you or Commission members have any questions, please contact Carolina T Hernandez at (626) 458-4300 or chernandez@pw.lacounty.gov or staff may contact Frank Wu at (626) 458-4358 or fwu@pw.lacounty.gov.

Very truly yours,

MARK PESTRELLA, PE
Director of Public Works



for

PHIL K. DOUDAR, PE
Assistant Director

FW:yg

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Enc.

bc: County Counsel (Yanai)
Stormwater Engineering (Wood)

COMMENTS OF THE COUNTY OF LOS ANGELES AND THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT REGARDING POTENTIAL LISTING OF THE SOUTHERN CALIFORNIA STEELHEAD AS ENDANGERED PURSUANT TO THE CALIFORNIA ENDANGERED SPECIES ACT

The County of Los Angeles (County) and the Los Angeles County Flood Control District (LACFCD) appreciate the opportunity to provide comments concerning the potential listing of the Southern California steelhead (*Oncorhynchus mykiss*) as endangered under the California Endangered Species Act, Fish & Game Code §§ 2150 *et seq.* (CESA).

Executive Summary

The County and the LACFCD are committed to environmental protection and are taking no position on the merits of the Caltrout petition. We also are not commenting whether any channel operated in whole or in part by the LACFCD provides suitable habitat for *O. mykiss*. At the same time, the proposed listing under CESA could have potential significant impacts to critical public services provided by the County and LACFCD, particularly in flood risk management, water conservation, and water quality improvement. These comments are intended to alert the Commission to these critical public works activities and the potential impact the listing could have on public health and safety. Specifically, this listing could lead to:

- Increased pressures to modify/remove flood infrastructure for fish passage;
- Requirements to maintain channel flows to support listed species, limiting the use of captured stormwater to increase local water supply and/or implementation of water quality/infiltration BMPs;
- Impacts to critical maintenance activities within channels (ie. extent and timing of work in soft bottom channels) during fish migratory periods;
- New water quality standards (temperature, turbidity, nutrients);
- Increased permitting challenges related to potential species-specific mitigation measures;

The County and LACFCD encourage the Commission, if it determines that *O. mykiss* should be a candidate for listing as endangered pursuant to Fish & Game Code § 2074.2(2), to accommodate those activities pursuant to an incidental “take” regulation issued under Fish & Game Code § 2084.

If the Commission ultimately decides to list Southern California steelhead as endangered under the CESA, the County and the LACFCD request the opportunity to work with California Department of Fish and Wildlife (CDFW) staff, other stakeholders, and the Commission to adopt a rule authorizing incidental takes pursuant to Fish & Game Code § 2081(d) which protects not only *O. mykiss* but also the vital public health and safety operations described in this letter.

I. Background

Los Angeles County, the most populous county in the nation, encompasses 88 cities, 125 unincorporated communities, and over 10 million residents. LACFCD, the largest flood control district in the nation, operates flood risk mitigation and water conservation infrastructure including 14 dams and reservoirs, 183 debris basins, 500 miles of open channels, 3,400 miles of underground storm drains, 27 groundwater recharge facilities (also known as spreading grounds), 3 seawater intrusion barriers, and numerous other facilities. Today, the work of the LACFCD is undertaken by personnel in Los Angeles County Public Works. The elected governing board of both the County and the LACFCD is the Los Angeles County Board of Supervisors.

II. Flood Protection and Water Conservation Activities

LACFCD was created by the California Legislature in 1915 to protect the residents of Los Angeles County from flood waters and also to conserve those waters for beneficial use. This section provides a brief overview of how these dual tasks are accomplished.

A. Flood Protection

The highly engineered nature of Los Angeles County urbanized waterbodies is a direct result of geography and climate. Los Angeles County's densely populated watersheds are located directly downstream of coastal mountain ranges. During and following storms, debris-laden stormwater runoff traverse steep mountain slopes into downstream dams, debris basins and channels. This network of flood control infrastructure is designed to protect the urban population from flooding by capturing and efficiently conveying the fast-moving stormwater and mud flows.

Rainfall in Los Angeles County is highly variable. For example, the rainfall measured in downtown Los Angeles ranged from 19 inches in 2016-17 to 4.79 inches in 2017-18. Rain also often arrives in short, intense storms. In 2004-05, when downtown Los Angeles recorded over 37 inches of rainfall, most rain fell in October 2004 and January-February 2005. These intense storms put tremendous pressure on the flood control infrastructure to handle very large flows in a very short amount of time. Furthermore, climate scientists warn of less frequent but more extreme storm events in the coming decades as result of climate change.

The rivers and creeks in urbanized areas of the County, and in much of urban southern California, consist of engineered channels with concrete, earthen or riprap banks and concrete or earthen bottoms. These channels in turn are fed by municipal storm drains known as a "municipal separate storm sewer system" or "MS4." The MS4 extends from street gutters and catch basins to pipes, culverts and other infrastructure and is designed, like the larger channels, to safely convey stormwater. In Los Angeles County, the MS4 operated by more than 80 separate agencies, including the LACFCD, is subject to the terms and conditions of a Clean Water Act National Pollutant Discharge Elimination System permit ("MS4 Permit") issued by the Los Angeles Regional Water Quality Control Board (LARWQCB).

The engineered channels were constructed in the wake of major flooding events early last century. The first was in 1914, which caused an estimated \$260 million in property damage (in 2021 dollars) in a County whose population at the time was less than 800,000. That flooding and ensuing public demand for action prompted the California Legislature to establish the LACFCD, which is required to “provide for the control and conservation of the flood, storm and other waste waters of said district, and to conserve such waters for beneficial and useful purposes by spreading, storing, retaining or causing to percolate into the soil within said district, or to save or conserve in any manner, all or any of such waters, and to protect from damage from such flood or storm waters, the harbors, waterways, public highways and property in said district.” Los Angeles County Flood Control Act, California Water Code App. 28-2 (West).

LACFCD’s early efforts in carrying out this charge involved the construction of 14 dams in foothill areas in the 1920s and 1930s. After more catastrophic floods in 1934 and 1938, which killed more than 150 people, destroyed thousands of homes and businesses, and caused more than \$1.4 billion in property losses (in 2020 dollars), the USACE undertook an extensive program over several decades to construct five additional dams and channelize major waterways within the County. Today, LACFCD and USACE share the responsibility for operating and maintaining these dams and channels.

An important aspect of flood protection is the routine clearing of earth-bottom channels to maintain flow capacity. These earth-bottom channels were constructed by USACE either because of shallow bedrock that precluded concrete bottoms (such as in the Los Angeles River channel in the Glendale Narrows area) or to accommodate infiltration (such as in portions of the San Gabriel River). Routine clearing of these channels of non-native vegetation and trash/debris and periodic re-grading is necessary to maintain their originally designed function, as well as for certification under the National Flood Insurance Program to ensure that adjacent residents are not subject to federally mandated flood insurance.

In Los Angeles County, many of the communities through which engineered channels flow are economically impacted. For example, cities in the lower Los Angeles River watershed tend to have significantly higher poverty rates relative to the overall poverty rate for Los Angeles County of 13.2%. These include the Cities of Bell (24%), Bell Gardens (28.3%), Compton (20.5%), Long Beach (16.8%) and Maywood (24%). In the lower San Gabriel River Watershed, such communities include the cities of El Monte (19.5%), Hawaiian Gardens (23.9%), and South El Monte (19.3%).

Thus, the ability to perform regular maintenance of this vast flood infrastructure network within a balanced regulatory framework is necessary to protect the life and property of the millions of residents in the County including some of its most vulnerable communities.

B. Water Conservation

While rainfall in California can be intense, much of the state, including Los Angeles County, is currently in a state of severe or moderate drought, which makes the capture and reuse of stormwater exceptionally important. The annual rainfall amounts (as

measured in downtown Los Angeles) have been below average for 10 out of the last 15 years. Many climate scientists believe that the entire Southwest may be facing a future of prolonged drought. If so, Los Angeles County, which has historically relied largely on water imported from other areas, including northern and central California and the Colorado River, will have to rely even more on local water resources, including through the retention of stormwater runoff and the recycling of treated wastewater.

For over 100 years, surface water resources in Los Angeles County have been collected and infiltrated into groundwater aquifers through infiltration facilities known as “spreading grounds.” These facilities consist of basins which have been specially prepared to enable rapid infiltration into underground aquifers of water conveyed to the basins. In Los Angeles County, spreading ground operation enables an average of 310,000 acre-feet of water per year to enter groundwater aquifers, providing enough water to meet the annual needs of more than 2.4 million residents. The spreading grounds infiltrate stormwater runoff (which otherwise would be lost to water supply through discharge into the Pacific Ocean), imported water from such sources as the California Water Project and the Colorado River, and highly treated recycled water from water reclamation plants (WRPs).

The oldest of LACFCD’s spreading grounds was established in 1917. The LACFCD continued building new spreading grounds into the 1960s. Modernization and operational enhancement of those facilities continues with funding from the LACFCD, local water purveyors, and the California Department of Water Resources. Typically, spreading grounds receive water from an adjacent watercourse through a diversion structure to an infiltration basin which has been newly constructed for that purpose or has been converted from a pre-existing facility, such as a gravel pit.

These groundwater recharge facilities are in areas where the underlying soils are composed of permeable formations and are in hydraulic connection with the underlying aquifer. The aquifers being recharged vary in depth, and in many cases are more than 100 feet below the surface. Water is conveyed to the basins at a rate to match the infiltration rate and storage capacity of the basins. In addition to infiltration through spreading grounds, groundwater recharge is also done in earth-bottom reaches of the San Gabriel River through the use of inflatable rubber dams to temporarily hold the water in the river for percolation into the streambed.

These groundwater recharge facilities form an increasingly important element in the County’s efforts to conserve and recycle local water as an alternative to importing water from outside sources. On a regional scale, Los Angeles County gets about one-third of its water supply from groundwater. However, many local communities get the majority of their water from groundwater. Decreasing reliance on imported water also decreases the environmental impacts of importing water.

Especially important in drought years is the infiltration of highly treated recycled water generated by WRPs operated by the Los Angeles County Sanitation Districts (LACSD). More than 60,000 acre-feet of recycled water generated by three LACSD WRPs were infiltrated during the 2020-2021 rain year (October 1-September 30). The operation of

these water recycling efforts is described in more detail in comments filed separately by the LACSD.

In addition to these existing efforts, the Metropolitan Water District, in partnership with LACSD, are planning significant future drinking water aquifer augmentation through recycled water deliveries to spreading grounds for infiltration, as is the City of Los Angeles.

The conservation of water through infiltration and recycling is not only a voluntary effort but is part of requirements in the MS4 permit issued by the LARWQCB. That permit requires that municipalities prohibit the discharge of non-stormwater runoff into the MS4. MS4 Permit, Part III.A.1. It also prioritizes the use of infiltration “best management practices” over treatment BMPs, which allow continued surface flow, for “priority development projects.” MS4 Permit, Part III.F.1.d.

In addition to infiltration BMPs installed at private development projects, a number of MS4 permittees operate regional BMPs designed to infiltrate stormwater runoff in Los Angeles County watersheds, including by diverting runoff into infiltration areas. These BMPs serve multiple purposes, including reducing flooding, providing additional green spaces in underserved neighborhoods, and increasing groundwater supply.

III. Southern California Steelhead in Los Angeles County Urban Watersheds

The County and LACFCD understand that to the extent Southern California steelhead were present in Southern California waters in the past, the presence of *O. mykiss* in those waters today has been substantially reduced by urbanization. Various documents cited in the “Report to the Fish and Game Commission” prepared by CDFW staff concerning the Petition identify flood control infrastructure and water diversions as a factor in reducing or eliminating habitat. The reality, however, is that such activities are necessary, not optional, to protect the public health and safety of millions of Los Angeles County residents. Removal or modification of flood control infrastructure could undermine flood risk management and leave County residents vulnerable to the devastating floods that necessitated that infrastructure in the first place. Given climate change (another factor identified by CDFW staff in their report, at 15), both flood control and water conservation and recycling activities are even more crucial.

The County and LACFCD acknowledge that their operations are subject to both the federal ESA and CESA, where applicable. The earth-bottom channel maintenance WDR, for example, requires that the LACFCD retain biologists to survey for protected species prior to maintenance operations. That condition, however, potentially restricts the timing of the maintenance, not its scope. As previously discussed, the scope of maintenance has been determined based on flooding risk to neighboring communities, many of them economically impacted.

The County and the LACFCD also note the comments of the United Water Conservation District in Ventura County (UCWD) regarding the existing impacts of steelhead mitigation measures on jurisdictions served by UCWD. UCWD’s comment letter dated January 26,

2022, outlines real impacts on economically disadvantaged residents in their service area. The County and the LACFCD are concerned that similar mitigation requirements could potentially affect far more residents in highly populated counties like Los Angeles County.

Given the importance of the issues discussed in these comments, and the comments from the Association of California Water Agencies (ACWA) and other water supply stakeholders, if the Commission determines that listing of *O. mykiss* may be warranted and thus applies incidental “take” restrictions to the steelhead as a candidate species, the County and LACFCD request that the Commission adopt a regulation under Fish & Game Code § 2084 that allows the County and LACFCD to continue to undertake their public health and safety missions of operating and maintaining flood control infrastructure and augmenting groundwater resources through infiltration of water resources.



Protecting and restoring natural ecosystems and imperiled species through
science, education, policy, and environmental law
via email

April 9, 2024

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

RE: Support for Listing the Southern California Steelhead Rainbow Trout (*Oncorhynchus mykiss*) as Endangered.

Dear Commissioners,

The Center for Biological Diversity is pleased to support the California Department of Fish and Wildlife's recommendation to your Commission that listing the Southern California Steelhead Rainbow Trout (SH/RT) as endangered under CESA is warranted at this time. With adult steelhead declining to "precariously low levels, particularly over the past five to seven years" and "resident populations indicates a sharp decline over this same time period" (CDFW 2023) protecting the Southern SH/RT as an endangered species should help to stop the ongoing declines, stabilize this genetically unique and important population, and start on the long-needed path to recovery.

Please support endangered status for the Southern California Steelhead Rainbow Trout (SH/RT).

Sincerely,

Ilene Anderson
Senior Scientist/California Desert Director
Center for Biological Diversity

Reference:

California Department of Fish and Wildlife (CDFW). 2023. Report to the California Fish and Game Commission. California Endangered Species Act Status Review for Southern California Steelhead (*Oncorhynchus mykiss*). California Department of Fish and Wildlife, 1416 Ninth Street, Sacramento CA 95814, Sacramento CA 95814. 186 pp., with appendices.

PETITION TO LIST SOUTHERN CALIFORNIA STEELHEAD UNDER STATE ENDANGERED SPECIES ACT (CESA)

**Fish and Game Commission Meeting –
April 18, 2024**

California Trout, Inc.

Sandra Jacobson, Ph.D.
Director - South Coast Region

Russell Marlow
Senior Project Manager - Ventura



Credit: Mark Capelli, National Marine Fisheries Service; Mission Creek steelhead (2008) Santa Barbara

SOUTHERN STEELHEAD ON THE BRINK OF EXTINCTION

- Danger of extinction: Est. 25-50 yr.
- Federally ESA Listed in 1997
- Only **177** adult steelhead documented in the past 25 years compared to historical runs of 10,000+ in major SoCal rivers (Dagit et al 2020)



Matilija Dam, Matilija Creek
Ventura River watershed



Upper Ventura River, circa 1920

IMMEDIATE ACTION NEEDED

- Immediate action is needed to reverse the precariously low population numbers and declining trend of this iconic species.
- The species is experiencing an alarming rate of habitat loss and barriers to anadromy, compounded by climate crisis impacts.



Santa Felicia Dam, Piru Creek, Ventura County – Total Passage Barrier

CALTROUT CESA PETITION MILESTONES

July 2021 - CalTrout submitted on petition

November 2021 - Petition reviewed by CDFW as deemed to contain sufficient information to warrant action by Fish and Game Commission (FGC)

May 2022 – FGC list as candidate species and approved 2048 – temp take allowance for projects with Fed take clearances

January 2024 – CDFW submits Species Status Report to FGC

February 2024 – FGC issues Notice of Final Consideration for April 18th, 2024, Meeting

CDFW SPECIES STATUS REVIEW

The Department recommends that the Commission find the petitioned action to list Southern SH/RT as an endangered species under CESA **to be warranted**.

State of California
Natural Resources Agency
Department of Fish and Wildlife

REPORT TO THE FISH AND GAME COMMISSION
CALIFORNIA ENDANGERED SPECIES ACT STATUS REVIEW OF
SOUTHERN CALIFORNIA STEELHEAD (ONCORHYNCHUS MYKISS)

January 2024



Southern California Steelhead Rainbow Trout, CDFW photo

Prepared by
California Department of Fish and Wildlife



CDFW SPECIES STATUS REVIEW — DEFINITIONS

- CDFW Status Review (January 2024) – utilizes best scientific information available to the Department regarding each of the components listed under Section 2072.3 of the Fish and Game Code and Section 670.1 of Title 14 of the California Code of Regulations.
- Southern California steelhead: “all *O. mykiss* below manmade and natural complete barriers to anadromy, including anadromous and resident life histories, from and including the Santa Maria River (San Luis Obispo and Santa Barbara counties) to the U.S.-Mexico Border.”
- Southern California steelhead rainbow trout (Southern SH/RT) describes the proposed CESA listing unit
- Southern SH/RT key CESA listing drivers: long-term declining trend of Southern SH/RT and low range-wide abundances, compounded with habitat loss, predation, climate change
- CDFW Status Review lists management recommendations and recovery measures.

CDFW SPECIES STATUS REVIEW – COMPARISON WITH PETITION

Comparison CalTrout Petition and CDFW Species Status Assessment –

Top Four Likely Factors of Significance to Cause Extinction

CalTrout



✓
Significant
Threat to
Existence

1. Threatened Modification or Destruction of Habitat

2. Predation

3. Competition

4. Other Natural Occurrences or Human Related Activities

CDFW



Study
warranted



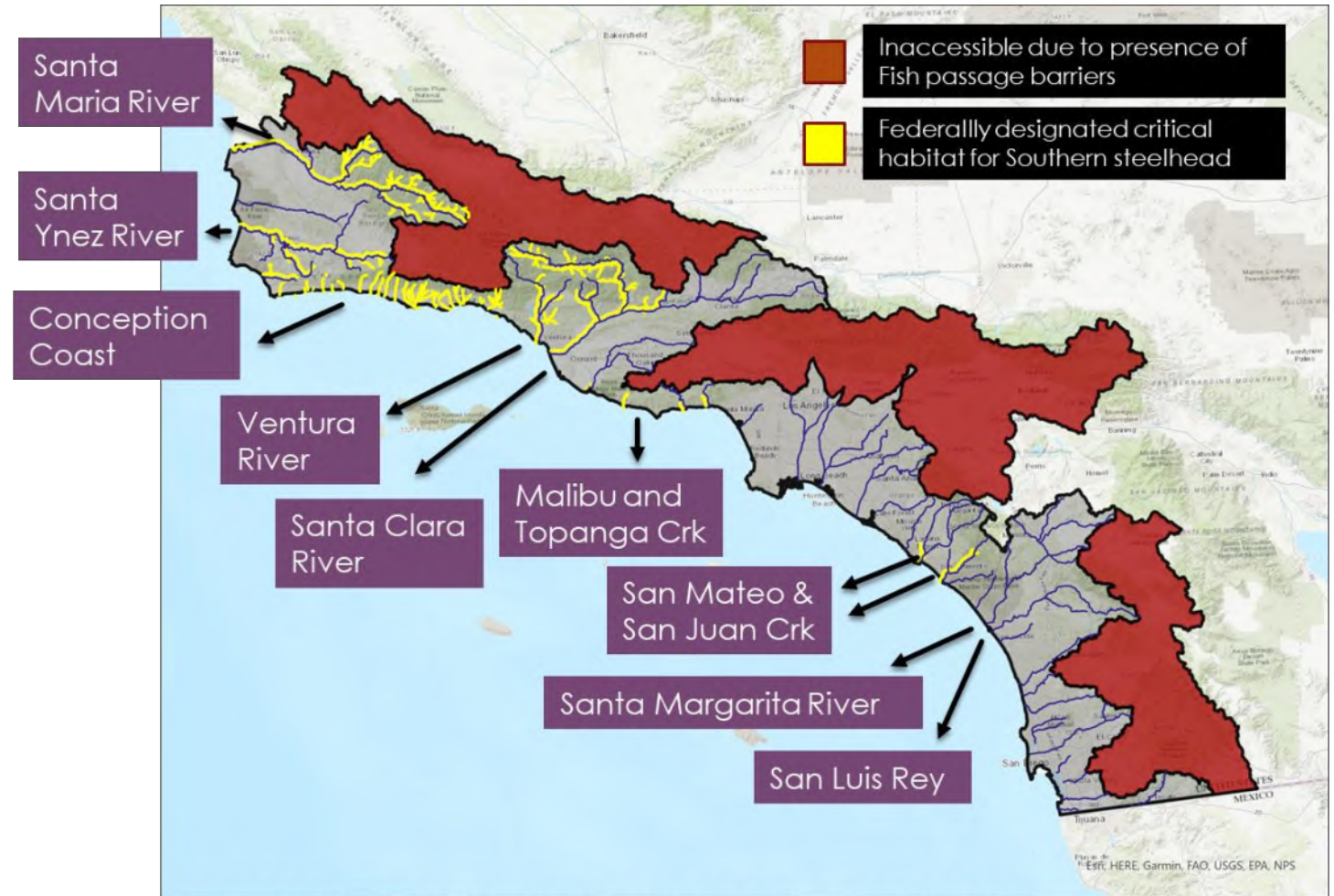
Study
warranted



CDFW SPECIES STATUS REVIEW — LIFE HISTORY EXPRESSION IS ESSENTIAL

All *O. mykiss* below any natural or man-made barrier be fully protected under CESA

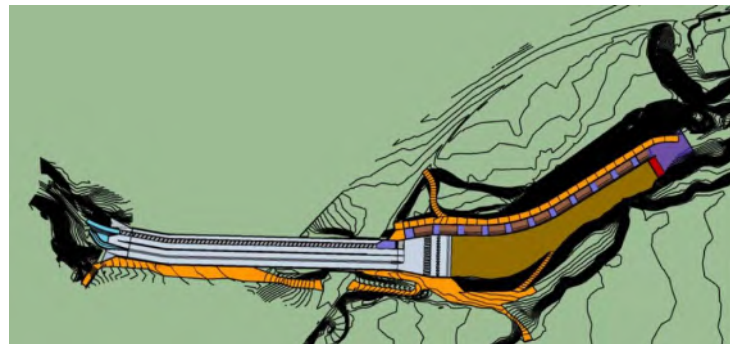
- *O. mykiss* cannot be unambiguously identified as adult anadromous form vs resident form without sacrificing fish for otolith analysis
- Precariously low numbers of both anadromous and resident forms of *O. mykiss* below first total barrier.
- Resident freshwater form have ability to produce offspring that express anadromy



Core 1 Priority Watersheds and Critical Habitat that fall within recommended area for Endangered listing.

CESA LISTING - BENEFITS

- **Modernize infrastructure** - water and transportation
- **Streamline compliance with ESA** and accelerate project completion by utilizing state permit process for species protections
- **Benefit Disadvantaged Communities** and promote Environmental Justice by increasing access to clean water while reducing design cost and legal fees
- **Deliver on historic cultural significance** for tribal nations; State Water Board Tribal Beneficial Use



I-5 Bridge Array Barrier, Trabuco Creek tributary to San Juan Creek River, Orange County

SOUTHERN STEELHEAD ARE AN ICONIC SPECIES ON THE SOUTHERN CALIFORNIA COAST



“There is a long history of the steelhead being a source of food and of cultural practice for the Chumash people. We have elders that talked about remembering seeing the river flow backwards because of the steelhead migration up and down the river.” (Ecology Law Quarterly Volume 46 (2019) Issue 4 : Panel I: What We Are Up Against)



CalTrout is partnering with tribes along the coast of Southern California to address the challenges facing Southern steelhead and restore this cultural resource to these lands.

HOW ESA LISTING BOLSTERS FEDERAL LISTING

- **Species integrated** into state agency strategic planning, appropriations
- **Incidental Take Permit** - protection of species
- **Stronger legal basis** for Public Trust Doctrine
- **Legislation** that averts extinction
- **Implementation Coastal Monitoring Program** – South Area
- **Secure funding** for Monitoring, Project Implementation



SOUTHERN STEELHEAD ARE AN ICONIC SPECIES OF CULTURAL AND ECOLOGICAL SIGNIFICANCE ON THE SOUTHERN CALIFORNIA COAST

Steelhead are a key indicator of total watershed health.

Watershed processes translate to ecosystem services for communities.

More fish



Healthy watershed



Water security



San Mateo Creek, San Diego County

IMMEDIATE ACTION NEEDED

Immediate action is needed by CA Fish & Game Commission to prevent extinction of this iconic species through listing Southern steelhead as a state endangered species under ESA.



Santa Ynez watershed, March 22, 2024. COMB

THE NEWHALL LAND AND FARMING COMPANY
25124 SPRINGFIELD COURT, SUITE 300 | VALENCIA, CALIFORNIA 91355

April 11, 2024

VIA E-MAIL

California Fish and Game Commission
715 P Street, 16th Floor
Sacramento, CA 95814
E-Mail: fgc@fgc.ca.gov

Re: Consideration of Petition to List Southern California Steelhead (*O. mykiss*) as Endangered Under the California Endangered Species Act

Dear Commissioners:

The Newhall Land and Farming Company (**Newhall**), a subsidiary of FivePoint Holdings, LLC, submits these comments for consideration by the California Fish and Game Commission (**Commission**) in connection with its evaluation of the petition by California Trout to list the Southern California steelhead distinct population segment (*Oncorhynchus mykiss*, or **steelhead**) as endangered under the California Endangered Species Act (**CESA**). Our comments pertain primarily to the information on steelhead distribution contained in the status review report prepared for the Commission by the California Department of Fish and Wildlife (**CDFW**).

1. Introduction and Summary

Since 1883, Newhall has owned and managed substantial landholdings in the western Santa Clarita Valley portion of the upper Santa Clara River watershed, originally covering about 48,000 acres. Until around 1964, the property was used primarily for agricultural purposes, but after the State of California bisected Newhall's property through construction of Interstate 5, creating incentives for residential and commercial development, the company planned and developed the new town of Valencia, which included about 20,000 homes and 25 million square feet of commercial uses. Development of Valencia involved construction of major regional and local infrastructure such as roads, utilities and bridges across the Santa Clara River.

Today, Newhall owns approximately 31,000 acres along a 14-mile stretch of the Santa Clara River in western Los Angeles County and eastern Ventura County, including approximately 12,000 acres in Los Angeles County subject to the Newhall Ranch Specific Plan and the Newhall Ranch Resource Management and Development Plan (**RMDP**). The RMDP establishes a landscape-level strategy for balancing development and conservation of natural resources, including fish, in and adjacent to a roughly 6-mile stretch of the Santa Clara River, and Newhall has spent decades planning and implementing this strategy in collaboration with CDFW and other resource agencies.

Through its stewardship and management of the land for 140 years, Newhall is intimately familiar with the natural resources and species inhabiting the Santa Clara River. Its activities in the River have included

installing and removing seasonal road crossings and water diversions, building major road bridges and flood protection projects in and across the River, and implementing habitat mitigation projects. These activities involve extensive biological surveys, monitoring, and fish exclusion efforts in the River and its tributaries. Throughout this extensive history, Newhall has never observed any steelhead or resident rainbow trout (*O. mykiss*) in the upper Santa Clara River, and it is unaware of any substantiated observations of the species there, either currently or historically.

Newhall takes no position on whether the steelhead should be listed under the CESA. However, any listing must be based on the best available science and supported by evidence in the record. Newhall is concerned that the information concerning steelhead distribution in the upper Santa Clara River that is found in the Report to the Fish and Game Commission – California Endangered Species Act Review of Southern California Steelhead (CDFW, January 2024) (**Status Review**) is not based on the best available science and does not reflect the available information concerning current and historical steelhead presence.

This letter summarizes the best available information concerning the current and historical presence of steelhead in the upper Santa Clara River, which includes a determination by the National Marine Fisheries Service (**NMFS**) that the Santa Clara River upstream of Piru Creek is not occupied by steelhead (see **Figure 1**), and an intensive review of the scientific literature performed by fisheries biologist Joel Mulder of Catalyst Environmental Solutions (**Attachment 1**). Based on this information, we request that the Commission direct CDFW to revise the Status Review to reflect that the current distribution of the steelhead does not include the Santa Clara River upstream of the “Piru dry gap,” approximately 3.5 miles west of the Ventura – Los Angeles County line, and that there is no substantiated evidence that even the historical distribution included this part of the River (see **Figure 2**). Correcting the Status Review is necessary to ensure that conservation and recovery efforts, including incidental take permitting if the steelhead is listed under the CESA, are appropriately prioritized and directed toward areas where the species may be found, and to avoid unnecessary regulatory burdens on activities that do not have the potential to cause take of steelhead.

2. Petition and Status Review

a. Petition

The listing petition submitted by California Trout on June 7, 2021 (**Petition**), characterizes the range of the steelhead as comprised of the coastal watersheds extending from the Santa Maria River system south to the U.S. border with Mexico, while acknowledging that “not all stream miles within this [purported] range are equally habitable.” Petition, pp. 3-5. The Petition characterizes the current distribution of steelhead as “all anadromous waters below total natural barriers or man-made structural barriers (NMFS 1997)” and requests the Commission to list the species under the CESA “accepting the current limits of anadromy as established by the ESA listing for this species (NMFS 2002, 2012).” Petition, pp. 6, 15. The Petition contains no depiction of the steelhead’s current distribution, but a figure labeled “Limits of Anadromy” depicts the

Santa Clara River, from the coast nearly as far east as Palmdale, as “Accessible,” implying that the current distribution includes the entire length of the River as shown. Petition, p. 15.

b. Status Review

The Status Review contains a discussion of each watershed within the Monte Arido “biogeographic population group,” which encompasses the Santa Clara River. In discussing the Santa Clara River watershed, the Status Review states in part, “Numerous instream water diversions have impeded anadromous migration since the 1950s,” and includes an extensive discussion of the Vern Freeman Diversion Dam, located on the River about 10 miles upstream from the Pacific Ocean. Status Review, pp. 48-49. The remainder of the discussion pertains to tributaries upstream of the Vern Freeman Diversion Dam, which “historically provided most of the suitable [steelhead] spawning and rearing habitat in the watershed,” Status Review, p. 49. The Status Review contains no discussion of the approximately 65 stream miles of the Santa Clara River upstream (east) of the Vern Freeman Diversion Dam. See Status Review pp. 48-50. It also does not mention the “Piru dry gap” located approximately 3.5 miles west of the Ventura County – Los Angeles County line, where surface flows are lost to groundwater infiltration for 2.5 miles, and it does not discuss habitat conditions in the River or upper River tributaries.

Nonetheless, Figure 7 of the Status Review, depicting the “known and suspected current and historical distribution” of steelhead within the Monte Arido Highlands biogeographic population group, shows the upper Santa Clara River and tributaries as far east as upper Soledad Canyon, near Acton in Los Angeles County, as part of the “Current” distribution of the species. Status Review, p. 43; see **Figure 2** attached to this letter. Some tributaries to the River as far east as Aliso Canyon are depicted as part of the “Suspected Current” distribution. Figure 7 also depicts the entire Santa Clara River as “Accessible” to steelhead – *i.e.*, within the limits of anadromy. The Status Review does not point to any direct observation data to support characterizing this area as part of the current distribution of steelhead.

c. Distribution and Range Versus Limits of Anadromy

In ecology, the “distribution” of a species is generally understood to refer to the spatial arrangement of the individuals or populations making up the species, while “range” refers to the geographic limits of that distribution, or the collective geographic area in which the individuals or populations of the species are found during their lifetimes. Both the Petition and the Status Review appear to assume, to some extent, that any stream segment within the “limits of anadromy” – *i.e.*, not located upstream of any “total barrier” to fish passage – is also within the distribution of steelhead. This is incorrect both conceptually and factually.

The limits of anadromy provide a useful way of distinguishing anadromous populations of steelhead, *if present* below those limits, from genetically identical populations of freshwater rainbow trout that may be located upstream of total barriers. This limit marks the outer extent of NMFS’ authority under the federal Endangered Species Act, because NMFS has jurisdiction over marine and anadromous fish but not over freshwater fish. See 50 CFR §§ 402.01(b), 224.101(h). In listing the steelhead as endangered under the

Endangered Species Act, NMFS has thus defined the federally listed “species” as all steelhead originating below the limits of anadromy. See 50 CFR § 224.101(h); 71 FR 834 (Jan. 5, 2006).

Newhall does not object to the Petition’s proposal that any CESA listing should likewise be limited to steelhead located below the limits of anadromy. See Petition, p. 15. Nor do we dispute that any steelhead that *are in fact present* below the limits of anadromy should be considered part of the species described in the Petition. But the limits of anadromy are not equivalent to the distribution of steelhead. Being within the limits of anadromy is a necessary, but not sufficient, condition for a stream segment to be within the current distribution of the species. For a stream to be part of the distribution, anadromous steelhead must actually be present there based on recent, documented observations. As discussed below, the available information does not show that steelhead are present in the upper Santa Clara River, even assuming the entire River is within the limits of anadromy.

3. Best Available Science

a. Literature Review

Catalyst Environmental Solutions conducted a review of current and historical steelhead occurrences in the upper Santa Clara River watershed in Los Angeles County, which is included as **Attachment 1** to this letter. The review compiles information from biogeographic databases, state and federal documents, peer reviewed publications, historical source compilations, non-governmental organization information and survey data, including relevant sources cited in the Status Review. The conclusions of the review include:

- Despite extensive fish sampling in the area over the last several decades, there is no record of current steelhead presence in the upper Santa Clara River watershed (east of the Piru Creek confluence) and thus no evidence that the area is part of the steelhead’s current distribution. Suitable habitat for steelhead does not appear to be present in this area currently.
- There are no verifiable or concrete historical observations of native steelhead in the upper Santa Clara River watershed, and historical descriptions of habitat conditions do not suggest suitable, perennial habitat for steelhead was present in the area.
- Potential migration opportunities through the Piru dry gap (east of the Piru Creek confluence and 3.5 miles west of the Ventura County line) for both upstream migrating steelhead adults and downstream migrating smolts are limited to high flow events that are typically brief.
- Federally designated critical habitat for steelhead in the Santa Clara River watershed extends only as far upstream (east) as Piru Creek. In the 2023 5-Year Review for steelhead (NMFS 2023), there is no mention of areas of the Santa Clara River watershed upstream of the Piru Creek confluence. The steelhead recovery plan prepared by NMFS does not

mention the upper Santa Clara River watershed except to note that the Castaic Dam on Castaic Creek further impacts fish passage.

- Becker et al. (2008) and Titus et al. (2003) (2010) (*In prep.*) appear to be the basis for some historic and current distribution maps for steelhead in the Santa Clara River, but observations of “fish” documented in these sources do not specifically mention steelhead or native trout and could be references to other native fish (stickleback, dace, chub, etc.) and/or to planted trout.
- For unknown reasons, the U.C. Davis PISCES model classifies the upper Santa Clara River watershed as historically occupied, ostensibly based on expert opinion, despite the absence of steelhead observations and poor habitat conditions.

In summary, the available information does not support the assertion that the upper Santa Clara River watershed is part of the current distribution of steelhead. Even accepting the assertion that the upper watershed is within the limits of anadromy, despite the barriers imposed by the Piru dry gap and various dams and water diversion facilities, there simply is no evidence that steelhead is present there, and only very marginal evidence that it may have been present historically.

b. RMDP Environmental Review by CDFW

Although not prepared for the purpose of evaluating the potential listing of steelhead, the environmental analysis for the RMDP represents an authoritative review of conditions in the relevant reach of the Santa Clara River by the expert agency charged with protecting fish and wildlife resources, CDFW. That analysis is consistent with, and confirms, the findings of the Catalyst review discussed above.

The RMDP area includes an approximately 6-mile stretch of the upper Santa Clara River, from approximately one mile upstream of the River’s confluence with Castaic Creek, westward to the lower limits of the upper Santa Clara River basin at Blue Cut, near the confluence with Salt Canyon, west of the Ventura – Los Angeles County line. CDFW issued a master streambed alteration agreement and a multi-species incidental take permit for the RMDP in 2010 after conducting an exhaustive environmental review of the project in partnership with the U.S. Army Corps of Engineers (**Corps**) and preparing a joint Environmental Impact Report/Environmental Impact Statement in compliance with the California Environmental Quality Act and National Environmental Policy Act (Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan Joint Environmental Impact Statement and Environmental Impact Report, SCH No. 2000011025 [EIS/EIR]). The EIS/EIR Biota section, which alone comprised thousands of pages of analysis, concluded that the RMDP reach of the Santa Clara River does not support steelhead and thus implementation of the RMDP would not affect the species.

The EIS/EIR discussed the current and historical presence of steelhead in the Santa Clara River watershed, concluding that there is no historical record of steelhead use of the Santa Clara River or tributaries upstream (east) of Piru Creek and the Piru dry gap, which is located approximately five miles downstream

of the RMDP area. Final EIS/EIR, pp. 4.5-661 – 4.5-665. The EIS/EIR stated that the RMDP reach of the Santa Clara River “does not include requisite aquatic habitat to support steelhead life history and no utilization has been documented within the [RMDP] reach of the Santa Clara River nor is any utilization expected to occur in the future.” Final EIS/EIR p. 4.5-668. The EIS/EIR also stated that reconnaissance surveys conducted along the Santa Clara River and tributary drainages within the RMDP area in 2004 and 2005 were negative for southern steelhead, further confirming the absence of the species. Final EIS/EIR, p. 4.5-261. Erring on the side of caution, the analysis assumed it was “possible” that a “vagrant” steelhead could be found in the RMDP reach of the Santa Clara River at some time during the 20-year implementation period of the project, but even this “unlikely” possibility was discussed in the context of “the absence of ... steelhead and their habitat” from the project area. Final EIS/EIR, pp. 4.5-674-675.

CDFW’s analysis noted that the steelhead, though not listed under the CESA, was listed as endangered under the federal Endangered Species Act, and that the NMFS had designated critical habitat for the species in the Santa Clara River watershed. However, the designated critical habitat extends upstream only as far as the Piru dry gap, because NMFS did not consider the portion of the River upstream of the dry gap to be occupied by steelhead. Final EIS/EIR, pp. 4.5-661 – 4.5-665. **See Figure 1.** As NMFS stated in its final rule designating critical habitat for steelhead: “One commenter questioned why critical habitat was not proposed in the Santa Clara River upstream from its confluence with Piru Creek. *Response:* [NMFS] did not consider that portion of the Santa Clara to be occupied, and we did not make a determination that it was essential for the conservation of the ESU; thus it was not considered further in the critical habitat analysis.” 70 FR 52510 (Sept. 2, 2005) (italics in original).

Taking into account the absence of steelhead from the RMDP reach of the Santa Clara River, and the lack of suitable habitat for the species, the EIS/EIR concluded that the RMDP was not expected to impact steelhead. Final EIS/EIR, p. 4.5-666 – 4.5- 670. CDFW reached these conclusions after extensive input from its expert fisheries biologists, many of whom had worked in the watershed for years. Consistent with the EIS/EIR findings and the NMFS conclusion, the Corps also determined that its issuance of a Clean Water Act permit for the RMDP would have no effect on steelhead for purposes of the federal Endangered Species Act. The Corps’ determination was upheld by a federal district court and the Ninth Circuit Court of Appeals in litigation challenging the Corps’ permit action. *Friends of the Santa Clara River v. U.S. Army Corps of Engineers*, 887 F.3d 906 (9th Cir. 2018).

The Final EIS/EIR was certified in 2010, but CDFW performed additional analysis of certain environmental impacts in a 2017 Final Additional Analysis, after which it recertified the EIS/EIR and reaffirmed its permit decisions for the RMDP. Despite conducting extensive additional analysis of potential impacts to the unarmored threespine stickleback, a fish species that is present in the RMDP reach of the Santa Clara River, CDFW did not find it necessary to revisit or revise its analysis of steelhead in any way.

4. Conclusion

In summary, a comprehensive review of the available data and literature reveals no evidence that the current distribution of steelhead includes the upper Santa Clara River, upstream of the Piru dry gap. NMFS,

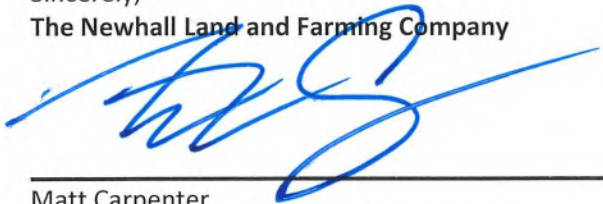
Newhall Comments to California Fish and Game Commission
Re: Consideration of Petition to List Southern California Steelhead (*O. mykiss*) as Endangered Under the California
Endangered Species Act
April 11, 2024
Page 7

the federal agency responsible for protecting steelhead under the Endangered Species Act, has determined that this portion of the River is not occupied by steelhead. CDFW's own analysis for the RMDP confirms that neither steelhead nor suitable habitat for the species is present in the RMDP reach of the Santa Clara River, which is located about five miles upstream of the Piru dry gap. In this context, the Status Review's characterization of the upper Santa Clara River watershed as part of the current distribution of steelhead is not supported by the record or by the available scientific and technical information. **Figure 2** shows the portion of the Santa Clara River watershed that Newhall believes is inaccurately depicted in the Status Review as part of the steelhead's current distribution.

Newhall requests that the Commission direct CDFW to revise its Status Review to correct these errors and defer its final decision on the Petition until CDFW has done so, to allow the Commission to base its decision on the best available science as the law requires. Alternatively, if the Commission makes a decision on the Petition before CDFW has corrected the Status Review, the Commission should direct CDFW to conduct additional analysis and publish a revised Status Review or other document accurately reflecting the distribution of the species before the listing takes effect. Doing so will avoid unnecessary confusion and regulatory burdens for activities occurring in areas where steelhead is not present, and will allow the State to focus recovery efforts in areas having the greatest potential to benefit the species.

We appreciate the Commission's consideration of these comments. Please contact me at 661-305-7546 with any questions.

Sincerely,
The Newhall Land and Farming Company



Matt Carpenter
Vice President, Environmental Resources

4891-5608-0562.7

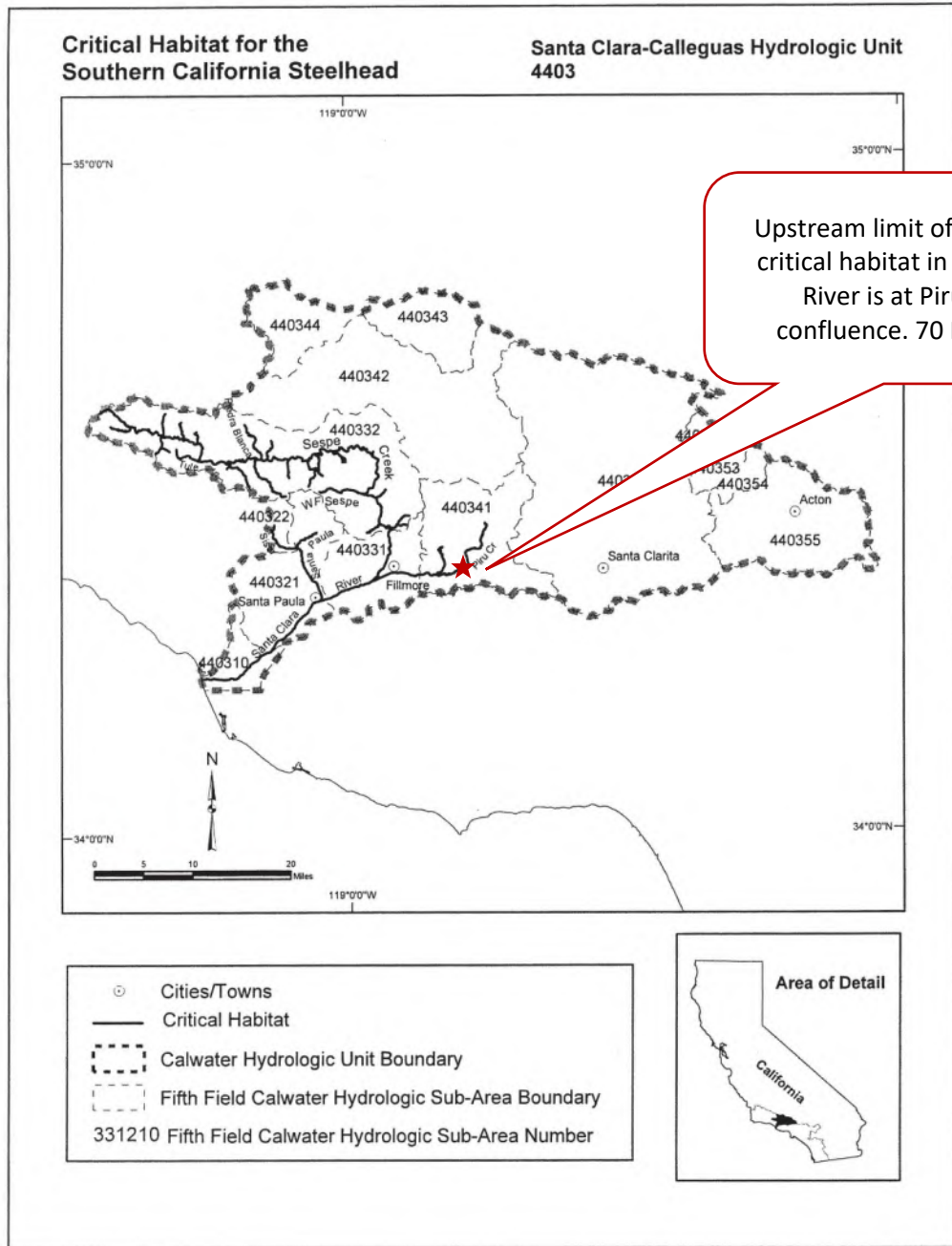
Attachments:

Figure 1: NMFS Critical Habitat Designation for Steelhead – Santa Clara River

Figure 2: CDFW Status Review Map of Steelhead Distribution, Monte Arido Highlands BPG

Attachment 1: Catalyst Environmental Solutions Technical Memorandum

Figure 1: NMFS Critical Habitat Designation for Steelhead – Santa Clara River



NMFS: “One commenter questioned why critical habitat was not proposed in the Santa Clara River upstream from its confluence with Piru Creek. **Response:** [NMFS] did not consider that portion of the Santa Clara to be occupied, and we did not make a determination that it was essential for the conservation of the ESU; thus it was not considered further in the critical habitat analysis.” 70 FR 52510 (Sept. 2, 2005).

Figure source: 70 FR 52586.

Figure 2: CDFW Status Review Map of Steelhead Distribution, Monte Arido Highlands BPG

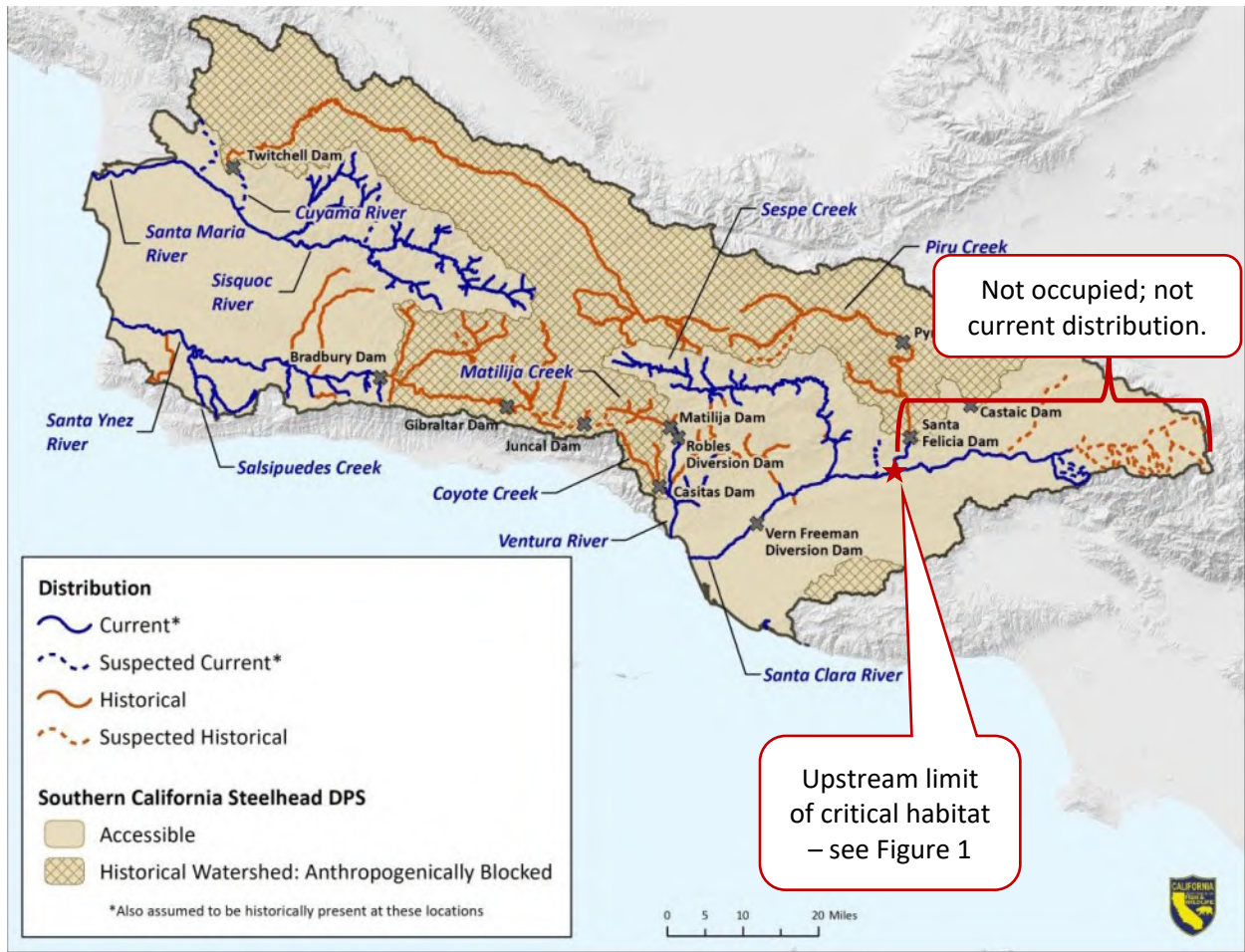


Figure source: CDFW Status review, p. 43, Figure 7.

Attachment 1: Catalyst Environmental Solutions Technical Memorandum

Technical Memorandum

Date:	April 2, 2024
To:	The Newhall Land and Farming Company
From:	Joel Mulder – Catalyst Environmental Solutions
RE:	Review of Current and Historical <i>Oncorhynchus mykiss</i> Occurrences in the Upper Santa Clara River Watershed Los Angeles County, California

Introduction

Catalyst Environmental Solutions Corporation (Catalyst) has prepared this technical memorandum (memo) for The Newhall Land and Farming Company, a subsidiary of FivePoint Holdings, LLC, to review and document available information on the current and historical distribution of *Oncorhynchus mykiss* (*O. mykiss*), including both the anadromous (southern California steelhead, referred to as steelhead herein) and resident (rainbow trout) life history forms of the species, in the upper Santa Clara River watershed within Los Angeles County (i.e., the watershed upstream of the Piru Dry Gap¹). Information from a variety of sources is summarized in this memo, including biogeographic datasets, state and federal documents, peer-reviewed publications, historical source compilations, non-governmental organization information, and survey data.

Biogeographic Datasets

A query of California Department of Fish and Wildlife (CDFW) California Natural Diversity Database data (both processed and unprocessed data) found no documented occurrence of steelhead in the Santa Clara River watershed upstream of the Piru Creek confluence.

The CDFW Biogeographic Information and Observation System online mapping tool (BIOS) layers for steelhead range and distribution offer conflicting mapping of southern Steelhead distribution, as described below.

Winter Steelhead Range (ds699)

This dataset, developed by CDFW, contains all CalWater 2.2.1 Planning Watersheds where CDFW has documented winter run steelhead to be present (representing planning watersheds intersecting the known distribution, which is based on where the species has been observed and reported) during or after 1990. This dataset does not show winter steelhead range as occurring in the Santa Clara River watershed upstream of the Piru Creek confluence.

¹ Beginning about 3.5 river miles downstream of the Los Angeles - Ventura County line, the Santa Clara River surface flow is infiltrated into the underlying eastern Piru groundwater basin. Surface flow reappears approximately 6 miles downstream, past the confluence of Piru Creek. The river is dry through this reach most of the year, with water present only when rainfall events create sufficient stormwater runoff into the river (GSI 2008, LARWQCB 2007). This dry ephemeral reach of the river is informally known as the “Piru dry gap” in the Santa Clara River.

Winter Steelhead Distribution (ds340)

This dataset, developed by CDFW, depicts observation-based stream-level geographic distribution of anadromous winter-run steelhead in California. It was developed for the express purpose of assisting with steelhead recovery planning efforts. The distributions reported in this dataset were derived from a subset of the data contained in the Aquatic Species Observation Database (ASOD), a Microsoft Access multi-species observation data capture application. Data source contributors, as well as CDFW fisheries biologists, have been provided the opportunity to review and suggest edits or additions during a recent review. Data contributors were notified and invited to review and comment on the handling of the information that they provided. The distribution was then posted to an intranet mapping application, and CDFW biologists were provided an opportunity to review and comment on the dataset. During this review, biologists were also encouraged to add new observation data. The dataset does not show steelhead distribution as occurring in the Santa Clara River watershed upstream of the Piru Creek confluence.

Southern California Steelhead Range (ds1290)

This dataset, developed by the University of California at Davis (U.C. Davis), shows a species extant range layer for steelhead by HUC12 watersheds based on datasets and interpreted by PISCES, which is software and data describing the best-known ranges for California's 133 native fish and numerous non-native fish. PISCES "models" presence, with corresponding probabilities if appropriate, based on expert opinion and observation data. PISCES biogeographic modeling outcomes reflect environmental and anthropogenic variables that "predict" where a given species may occur (Santos et al. 2014). The metadata for the layer describes the references for the datasets interpreted by PISCES as Moyle, Quinines and Bell (expert opinion) and NMFS Southern California Steelhead ESU Current Stream Habitat Distribution Table.pdf. It is not clear what the source is for the NMFS current stream habitat distribution table.

There are two primary layers in the PISCES model for steelhead. One is HUC12 watersheds with observations of *O. mykiss*. No HUC12 watersheds upstream of the Piru Creek confluence are shown as having positive observations. The other layer is a "historical expert" layer, which depicts HUC12 watersheds where steelhead occurred historically based on expert opinion. This expert opinion layer shows steelhead occurring in the HUC12 watersheds containing the mainstem from Piru Creek upstream to about Soledad Canyon, and Castaic Creek.

Coastal Steelhead Trout Watersheds (ds962)

This dataset, developed by CDFW, provides a minimal set of watershed fields used to identify coastal steelhead management units. This data set is an extract of the California Watershed (CalWater) dataset. It has been generalized to hydrologic sub-areas for those watersheds that are considered part of the coastal steelhead range. However, the source data for the inclusion of hydrologic units in the "coastal steelhead trout range" is not cited or referenced in the dataset metadata. The dataset depicts hydrologic units in the upper Santa Clara River basin (upstream of the Piru Creek confluence) as coastal steelhead watersheds.

Federal and State Documents

Federal Endangered Species Act designated critical habitat for southern California steelhead in the Santa Clara River watershed extends from the Pacific Ocean, upstream the main Santa Clara River to the confluence with Piru Creek; critical habitat in the Santa Clara River does not extend beyond the confluence with Piru Creek (70 FR 52487).

In the NMFS population characterization for steelhead recovery planning, the discussion of the Santa Clara River states “The available evidence suggests that steelhead have been limited to the western part of the Santa Clara basin (Kelley 2004)” (Boughton et al. 2006). The document uses Boughton and Goslin’s (2006) over-summering habitat model (described below) as the basis for its findings.

Boughton and Goslin (2006) developed a model of potential steelhead over-summering habitat using the method of environmental envelopes. Under the envelope method, predicted habitat is the set of stream segments falling within the same range of conditions that encapsulate the known occurrences of the species. In the discussion of results from the Los Angeles Basin, the authors note “The model predicted a distinct patch of potential habitat in the far eastern end of the Santa Clara basin (upper right quadrant, east of Newhall). This did not conform to expectations. Reports from the area suggested that steelhead were confined to the western end of the Santa Clara system. Visits to the eastern area between Newhall and Palmdale indicated that this area is drier than implied by the model, due to a rain-shadow effect from the San Gabriel Mountains (C. Swift, personal communication, Entrix). It probably did not contain potential habitat in reality”. In their discussion of the model’s environmental envelope outputs, the authors note that the Southern California Coast ESU² may have more false positives (warm areas with no potential for thermal refugia), but that these false positives may occur at a finer resolution than addressed by the model. In other words, the model may indicate suitable habitat in some areas of Southern California where in reality temperatures and lack of thermal refugia preclude steelhead occurrence.

In NMFS’ 2023 5-Year Review for the species, there is no mention of areas of the Santa Clara River watershed upstream of the Piru Creek confluence (NMFS 2023). In the Southern California Steelhead Recovery Plan (NMFS 2012) discussion of current watershed conditions the only mention of the Santa Clara River watershed upstream of the Piru Creek confluence is that “Fish passage is further impacted by the operation of Castaic Dam on Castaic Creek”. Table 2-1 of the Recovery Plan lists the Santa Clara River watershed as historically occupied by steelhead, citing Becker et al. 2009, Boughton et al. 2005, and Titus et al. 2010 (NMFS 2012). A discussion of those sources is provided below, with a focus on historical occurrences in the upper watershed.

Boughton et al. (2005) assessed the current occurrence of anadromous *O. mykiss* in each coastal basin of southern California in which it occurred historically. While the current and historical occurrences in the Santa Clara River are not described specifically in the memorandum, Figure 4 shows the historic distribution of spawning and rearing basins for steelhead in southern California. The figure shows the Santa Clara River basin up to approximately the Ventura-Los Angeles County line as historically occupied. The figure notes that shading of entire basins implies only that steelhead occurred somewhere, not necessarily everywhere, in a basin. The source for the historical occurrence data for the figure is noted as Titus et al. 2003, Stoecker et al. 2002, and a third source which was omitted from the figure description (text is cut off). Further discussion of Titus et al. is provided below. Stoecker et al. (2002) is a report on steelhead assessment and recovery opportunities in southern Santa Barbara County as is not relevant to the Santa Clara River.

The Titus et al. 2003 in preparation document cited in Boughton et al. 2005 and Titus et al. 2010 in preparation document cited in the species recovery plan (NMFS 2012) is cited as several sources under different publication years as the document has been in draft form with various updates for some time. As of April 2, 2024, the

² Listed steelhead are now referred to as a “distinct population segment” (DPS), which is not recognized in the scientific literature. In 1991, NMFS issued a policy for delineating Pacific salmon DPS (56 FR 58612; November 20, 1991). Under this policy a group of Pacific salmon populations is considered an “evolutionarily significant unit” (ESU) if it is substantially reproductively isolated from other conspecific populations, and it represents an important component in the evolutionary legacy of the biological species. Further, an ESU is considered to be a DPS (and thus a “species”) under the ESA.

manuscript is still a draft³. The report provides stream-specific information on steelhead in central and southern California gathered from three main sources: (1) A literature search of pertinent journal articles, CDFW (known as California Department of Fish and Game until 2013) administrative reports and fish bulletins, and other resource agency, university, and consultant publications; (2) Resource agency files, especially CDFW stream survey files; (3) Interviews conducted with professional biologists, academicians, and representatives of sportfishing organizations and other special interest groups for information from personal files, and anecdotes based on personal observations. The report's description of the Santa Clara River Headwater Tributaries in Los Angeles County states no historical evidence of steelhead runs. San Francisquito Canyon and Soledad Canyon are noted as two streams for which there are CDFW records for rainbow trout presence and/or stocking dating back to circa 1930.

Non-Governmental Organization Resources

Becker et al. (2009) summarizes historical accounts of *O. mykiss* in streams south of San Francisco Bay based on thousands of documents in public and private collections, and interviews with biologists. Only three areas in the upper Santa Clara River watershed are described in the report as having fish observations. It is important to note that these observations are for fish in general, and not specifically steelhead.

- **Elizabeth Lake Canyon, tributary to Castaic Creek** - Field notes from US Forest Service staff from 1947 indicate that “some fish” were caught in Elizabeth Lake Canyon Creek in the previous season (CDFG 1952). The author noted that the creek was unlikely to support fish life throughout the year, presumably due to low flow.
- **Fish Canyon, tributary to Castaic Creek** - A 1956 CDFW stream inventory for Fish Canyon Creek states, “...some native fish reported in upper reaches” (CDFG 1956b). It adds, “This is definitely a marginal water...”
- **Bouquet Canyon** - According to CDFW records, rainbow trout fry from the Shasta hatchery were planted in Bouquet Canyon Creek in 1943 (CDFG 1943). A 1947 stream survey indicates that *O. mykiss* including a “few fingerlings” were observed in the creek but notes, “Fishing maintained only be frequent plantings” (CDFG 1947b).

In a previous document, Becker et al. (2008) appears to acknowledge the unreliable nature of these observations in Figures 24 and 25 of the report, describing the historic and current, respectively, status of *O. mykiss* in coastal streams of southern Ventura County. In the figures, Castaic Creek and its tributaries, as well as San Francisquito and Bouquet Canyon creeks, are shown as “unknown or insufficient data”. Paradoxically, the mainstem Santa Clara River upstream of the Piru Creek confluence is shown as “definite run or population” despite no documentation in the report of any observations currently or historically in that section of river. CalTrout, an organization focused on healthy waters and resilient wild fish, provides on The Southern Steelhead page of their website⁴ as well as their publication “SOS II: Fish in Hot Water: Status, threats and solutions for California salmon, steelhead, and trout” a map of current and historical steelhead range. The source of the map

³ Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=10194>

⁴ Available at: <https://caltrout.org/sos/species-accounts/steelhead/southern-steelhead#:~:text=Southern%20Steelhead%20Distribution&text=They%20are%20most%20abundant%20in,Ventura%2C%20and%20San%20Clara%20rivers>

is noted as PISCES (2017). See the discussion above under Biogeographic Datasets - Southern California Steelhead Range (ds1290) for PISCES.

The conservation group Trout Unlimited's website⁵ provides maps of the historical and current status of *O. mykiss* in coastal streams of southern Ventura County, California. Both maps show the mainstem of the upper Santa Clara River from the Piru Creek confluence up to about the N3 Angeles Forest Highway as historically and currently having a "definite run or population". However, the cited source for these maps is Becker et al. 2009, described above, which does not appear to substantiate the steelhead historical and current distribution depicted on these figures.

Other Sources

Stoecker and Kelley (2005) analyzed the habitat conditions, population status and barriers to migration for steelhead in the lower Santa Clara River watershed from the Piru Creek tributary downstream, including significant drainages. There is no mention of steelhead resources upstream of the Piru Creek confluence.

Bowers (2008) compiled historical steelhead accounts in Ventura County, primarily from newspaper accounts, personal fishing logs, books, pamphlets, and Ventura County Board of Supervisors' Minutes. Because the report looked at Ventura County, little mention is made of the upper Santa Clara River watershed in Los Angeles County except two articles from the Santa Paula Chronicle. The first, in 1925, noted five thousand "trout" were planted in Bouquet Canyon. The second, in 1943, described Bouquet Canyon as being "in good shape with plenty of good-sized fish left over from last year's plant", presumably referring to planted *O. mykiss*.

Bell (1978) described the fishes of the Santa Clara River and made collections at 46 stations from the river mouth upstream as far as water existed. In the upper watershed, this included San Francisquito Creek, Castaic Creek, Arrastre Canyon, and the mainstem river. No *O. mykiss* were encountered. Bell cites Hubbs (1946) as reporting large and consistent runs of *Salmo gairdneri* (the former scientific name for *O. mykiss*) in the Santa Clara River. However, Bell notes that at the time of his survey, *Salmo* were abundant in Sespe Creek, but Piru Creek and the Santa Clara mainstem were much less suitable habitat, and trout were restricted to a few deep holes in Piru Creek and as escapees to the mainstem from Fillmore fish hatchery. No mention is made of trout in the upper watershed.

Numerous fish sampling events have been conducted in the upper Santa Clara River, particularly the mainstem, in more recent years. Table 1 below presents a list of the sources examined. No *O. mykiss* were encountered in any of the surveys.

⁵ Available at: <https://www.tu.org/california-coastal-steelhead-data/>. Figure 24 — Historical and current status of *Oncorhynchus O. mykiss* in coastal streams of southern Ventura County, California; Figure 25 - Current status of *Oncorhynchus mykiss* in coastal streams of southern Ventura County, California.

Table 1. Summary of Fish Species Presence in the Upper Santa Clara River Watershed Based on Literature Review

Santa Clara River Reach ^a and Location		Unarmored Three spine Stickleback	Santa Ana Sucker	Arroyo Chub	Prickly Sculpin	Common Carp	Mosquitofish	Black Bullhead	Fathead Minnow	Green Sunfish	Largemouth Bass	Goldfish	Sailfin Molly	Convict cichlid	Source
SCR	SCR Watershed	X	X	X			X		X	X	X				Bell 1978, Swift et al. 1993
6	Bouquet Canyon area			X	X		X							X	Compliance Biology 2010
6	SWRP outfall channel													X	Dellith Pers. Comm. 2023
6	Iron Horse Bridge area	X													CDFW 2021
6	Iron Horse Bridge area		X	X											CDFW 2022
6	Iron Horse Bridge to VWRP	X	X	X											Haglund & Baskin 2000
6	McBean Parkway area	X					X								Hovore et al. 2008
5/6	Bouquet Cyn. to Castaic Ck.	X	X	X											Haglund & Baskin 1995
5/6	Bouquet Cyn. to Castaic Ck.	X	X	X											Impact Sciences Inc. 2003c
5/6	Saugus to Castaic Ck.	X		X			X								Haglund 1989
5	I5 to Castaic Ck.	X		X											Aquatic Consulting Services 2002a
5	Old Road to VWRP	X	X												CDFW 2015
5	Old Road to VWRP	X	X	X			X								Pareti Pers. Comm. 2003
5	VWRP to Salt Ck.		X	X		X	X	X			X				Cardno 2015
5	VWRP to Salt Ck.	X	X	X											ENTRIX Inc. 2006a
5	Commerce Center Dr. to Salt Ck.	X	X	X	X	X					X				ENTRIX Inc. 2010
5	Commerce Center Dr. to Salt Ck.	X	X	X											Dudek 2010
5	Castaic Ck. to U/S 7.2mi	X	X	X	X		X				X	X	X		Impact Sciences Inc. 2003b

Santa Clara River Reach ^a and Location		Unarmored Three spine Stickleback	Santa Ana Sucker	Arroyo Chub	Prickly Sculpin	Common Carp	Mosquitofish	Black Bullhead	Fathead Minnow	Green Sunfish	Largemouth Bass	Goldfish	Sailfin Molly	Convict cichlid	Source
5	Commerce Center Dr. to Castaic Ck.	X	X	X											Aquatic Consulting Services 2002b
5	Commerce Center Dr. to Co. Line	X		X			X				X				Aquatic Consulting Services 2002c
5	Castaic Ck. to D/S 7mi	X	X	X	X		X				X				Impact Sciences Inc. 2003a
5	Castaic Creek to Long Cyn.	X	X	X			X								ENTRIX Inc. 2006b
5	Castaic Ck. to Long Cyn.	X	X	X											Impact Sciences Inc. 2010
5	U/S of San Martinez Grande Cyn.	X													USFWS 1980
5	U/S of San Martinez Grande Cyn.	X	X	X			X	X		X					USFWS 1985

NOTES:

Blue shading = Native species, native to study area

Grey shading = Native to Southern California

No shading = Not native to California (introduced)

a. Reaches delineated according to LARWQCB water body names

Discussion

In review of the available information, no verifiable or concrete observations of native *O. mykiss* in the upper Santa Clara River watershed have been described or recorded historically or currently. Observations that potentially could have been native *O. mykiss* are described in Becker et al. 2009. However, observations of “some fish” or “some native fish” in Elizabeth Canyon and Fish Canyon do not specifically mention *O. mykiss*. The references could be to other native fish in the upper watershed such as threespine stickleback (*Gasterosteus williamsoni*) which were formerly more common in the upper headwater tributaries (Bell 1978). Titus et al. (*In preparation*) also notes San Francisquito Canyon and Soledad Canyon as two streams for which there are CDFW records for rainbow trout presence and/or stocking dating back to circa 1930.

These observations may all well have been planted trout. As described in Titus et al. (*In preparation*) above and in newspaper accounts (Bowers 2008), extensive stocking was occurring in the upper watershed as early as 1925, and it would have been impossible to distinguish native resident trout or steelhead from stocked trout.

Given these unreliable historic accounts and lack of any other verifiable observations, it is of concern that Becker et al. 2008 and Titus et al. (*In preparation*) appear to be the basis for some historic and current distribution maps for southern California steelhead in the upper Santa Clara River (e.g., Boughton et al. 2005, Trout Unlimited), particularly since Becker et al. 2008 itself shows occurrence maps in upper watershed tributaries where there are questionable fish observations as “unknown or insufficient data”. It is also not apparent why the upper watershed is considered to have been historically occupied by experts for the U.C. Davis PISCES model, and historically and currently occupied in Figures 24 and 25 of in Becker et al. 2008 despite the absence of observations. Perhaps the underlying assumption is that because the lower Santa Clara River had a well-documented and robust steelhead run (Hubbs 1946, Stoecker and Kelley 2005, Bowers 2008), fish would have inevitably made their way all the way up the river to the upper basin headwaters. However, an examination of habitat conditions in this area suggests that the habitat in the upper basin may have precluded or greatly limited steelhead migration in most years, and that even in particularly wet years when migration was possible, available upstream spawning and over-summering habitat was and is extremely limited or of poor quality.

The Santa Clara River is a perennial stream from Interstate 5 downstream to just west of the Los Angeles - Ventura County line. Beginning about 3.5 river miles downstream of the county line the entire surface flow is infiltrated into the underlying eastern Piru groundwater basin. Surface flow reappears approximately 6 miles downstream, past the confluence of Piru Creek. The river is dry through this reach most of the year, with water present only when rainfall events create sufficient stormwater runoff into the river (GSI 2008, LARWQCB 2007). This dry ephemeral reach of the river is informally known as the “Piru dry gap” in the Santa Clara River. Flood flows in the Upper Santa Clara River increase, peak, and subside rapidly in response to high-intensity rainfall. The “flashy” hydrograph produced by these conditions shows a rapid increase in discharge over a short time period with a quickly developed peak discharge compared to normal baseflow (Kennedy/Jenks 2014). Thus, migration opportunities through the dry gap for upstream migrating steelhead adults and downstream migrating smolts would have historically been limited to typically brief high flow events. The same is true under current conditions, though flows through the dry gap may be artificially altered in duration due to releases from or withholding in upstream reservoirs (e.g., Castaic Lake).

Habitat conditions in the upper watershed tributaries are described in historic accounts as generally poor for *O. mykiss*. For example, field notes from US Forest Service staff from Elizabeth Lake Canyon Creek in 1952 note that the creek was unlikely to support fish throughout the year “presumably due to low flow”, and in 1956 regarding Fish Canyon “This is definitely a marginal water...”, and in Bouquet Canyon Creek, 1943, “Fishing

maintained only by frequent plantings” (Becker et al. 2009). Boughton and Goslin (2006) acknowledge that the watershed between Newhall and Palmdale is subject to a rain-shadow effect from the San Gabriel Mountains and “probably did not contain potential habitat in reality”. No current information or surveys reviewed suggest that suitable habitat for *O. mykiss* is extant in the upper basin tributaries. Becker et al. (2010) analyzed information on rearing habitat to identify regionally significant watersheds, which are those offering the greatest potential for producing steelhead smolts, including over-summering opportunities and conditions favoring high growth rates. Within these watersheds the report identifies “essential” streams or reaches that offer the best habitat resources. Within the upper Santa Clara River watershed, portions of the mainstem and several tributaries are identified as “essential” stream, but no waterbodies in the upper watershed are identified as “available” or “suitable” *O. mykiss* habitat (see Figure 14 in the report).

In conclusion, there is no record of current *O. mykiss* occupation in the upper Santa Clara River watershed (east of the Piru Creek confluence) on which to support any determination of species “presence”. Despite extensive fish sampling in the area over the last few decades, no *O. mykiss* have been encountered. Habitat conditions currently do not suggest suitable habitat is present for this species in the area.

There are no verifiable or concrete historical observations of native *O. mykiss* in the upper Santa Clara River watershed, and historical descriptions of habitat conditions do not suggest suitable, perennial habitat was present for *O. mykiss* in the area.

References

- Aquatic Consulting Services Inc. 2002a. Aquatic Surveys along the Santa Clara River; Part I: Castaic Junction Project Area, Los Angeles County, California. Report prepared for Newhall Land and Farming Company.
- Aquatic Consulting Services Inc. 2002b. Aquatic Surveys along the Santa Clara River; Part II: Commerce Center Bridge Project Area, Los Angeles County, California. Report prepared for Newhall Land and Farming Company.
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1215 K Street, Suite 1200
Sacramento, CA 95814
(916) 443-7933
fax (916) 443-1960
www.cbia.org

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Home Builders
Association of
Kern County

North State Building
Industry Association

April 12, 2024

Samantha Murray
President
California Fish and Game Commission
715 P Street, 16th Floor
Sacramento, CA 95814

Electronically Submitted To:
fgc@fgc.ca.gov

**Re: California Fish and Game Commission, April 17-18, 2024
Meeting Agenda #22 – Southern California steelhead**

Dear President Murray:

The California Building Industry Association (CBIA) appreciates the opportunity to provide additional comments on the petition to list the Southern California steelhead (steelhead) and the accompanying California Department of Fish and Wildlife (Department) Status Review Report. These comments are in addition to the comments submitted on April 4, 2024.

CBIA is a statewide trade association based in Sacramento representing thousands of member companies including homebuilders, trade contractors, architects, engineers, designers, suppliers and industry professionals in the homebuilding, multi-family and mixed-use development markets.

After further review of the petition and the Department's status review report, we believe there are several fundamental issues with the Department's report that require further clarification so that the Commission and interested stakeholders can accurately determine the impact of a decision to list the steelhead as endangered. These issues involve several of the figures contained in the Department's report that are maps used to identify "current, suspected current, historical, and suspected historical" distribution of steelhead in a particular watershed.

For example, Figure 11 (page 58 of the Department's report) purports to illustrate the distribution of steelhead within the Santa Catalina Gulf Coast Biogeographic Population Group. However, the depiction of major waterways is not accurate. According to Section 4.3.5.2 of the status report, Devil Canyon Creek is a major tributary of San Mateo Creek and in 2004 Hovey documented a small population of steelhead in this tributary. There is one tributary to San Mateo Creek depicted on Figure 11 that is labeled "current", presumably this is supposed to be Devil Canyon Creek if one considers 20-year-old data to be "current". However, this tributary is not Devil Canyon Creek, it is Cristianitos Creek that can be readily identified on a map.

This one example of misidentification of a geographic region that is supposed to be used to demonstrate historical and current populations of steelhead begs the question:

- What criteria was used by the Department to determine what data is to be labeled as “current?” It is important to note that the Department acknowledged that data limitations and uncertainties associated with historical accounts for Southern SH/RT limits their ability to understand complete historical abundance and distribution in its range. However, the Department has yet to provide what it considers to be “historical” or “current” data.
- How are landowners and other stakeholders supposed to rely on maps which contain gross errors in basic geography such as those found in Figure 11?
- The Department states that the data constraints may limit the power of statistical analyses to assess trends in viability criteria. How do such constraints affect the Department’s determination in identifying a stream as supporting a suspected historical population, historical population, suspected current population, or a current population of steelhead.

Based on the concerns with the maps contained in the Department’s Report, CBIA believes that if such types of maps are necessary then the Department should utilize the data developed by the U.S. Fish and Wildlife Service in order to provide a level of consistency instead of relying on information and data that is at its core limited and full of uncertainty.

Sincerely,



Nick Cammarota
Senior Vice President & General Counsel
California Building Industry Association
ncammarota@cbia.org

From: Kam Bezdek <kbezdek@caltrout.org>
Sent: Friday, April 12, 2024 2:38 PM
To: FGC
Cc: Analise Rivero
Subject: Support Letters for Southern Steelhead CESA Petition
Attachments: 4.8.24 Southern Steelhead listing LOS fv.pdf; 4.04.24 FGC - Southern Steelhead Endangered Listing.pdf

Good afternoon,

Attached are two legislative letters of support for California Trout's petition for the listing of southern steelhead as endangered under the California Endangered Species Act, which is on the FGC meeting agenda for April 17-18. These letters are from the offices of Asm. Steve Bennett and Senator John Laird.

Please let me know if you have any questions.

Thank you,

Kam Bezdek
Policy Associate



+1 (443) 823-6651 m

1225 8th St. Suite 340
Sacramento, CA 95816

Read about CalTrout's work in
thecurrent
CalTrout's e-magazine

CAPITOL OFFICE
1021 O STREET, SUITE 8720
SACRAMENTO, CA 95814
TEL (916) 651-4017
FAX (916) 651-4917

MONTEREY DISTRICT OFFICE
99 PACIFIC STREET, SUITE 575-F
MONTEREY, CA 93940
TEL (831) 657-6315
FAX (831) 657-6320

SAN LUIS OBISPO DISTRICT OFFICE
1026 PALM STREET, SUITE 201
SAN LUIS OBISPO, CA 93401
TEL (805) 549-3784
FAX (805) 549-3779

SANTA CRUZ DISTRICT OFFICE
701 OCEAN STREET, SUITE 318A
SANTA CRUZ, CA 95060
TEL (831) 425-0401
FAX (831) 425-5124

SANTA CLARA COUNTY SATELLITE OFFICE
TEL (408) 847-6101

California State Senate

SENATOR
JOHN LAIRD

SEVENTEENTH SENATE DISTRICT



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NATURAL RESOURCES & WATER
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JOINT LEGISLATIVE
AUDIT COMMITTEE

April 4, 2024

Samantha Murray, President
California Fish and Game Commission
P.O. Box 944209
Sacramento, California 94244-2090

RE: Support for California Trout, Inc.'s Petition to list Southern California Steelhead (*Oncorhynchus mykiss*) as Endangered

President Murray and Commissioners,

I am writing to express my support for the designation of the Southern California steelhead as endangered under California's Endangered Species Act (CESA) by the Fish and Game Commission. This petition was upheld in state courts as containing sufficient information to warrant further review, and was further reaffirmed by the California Department of Fish and Wildlife's peer-reviewed species status report.

Recent research indicates Southern steelhead populations are in danger of extinction within the next 25 to 50 years if current trends persist. The rivers and streams in Southern California once saw Southern steelhead adults return in the tens of thousands. In the past 25 years, only 177 adult Southern steelhead were documented in their native range. Since their listing as endangered under the federal Endangered Species Act in 1997, Southern steelhead numbers have continued to decline to dangerously low levels as a result of human activities, which has drastically reduced these species' critical habitat. This degradation will be further exacerbated by the climate crisis and future projections of intensified storms, droughts, and extreme heat. The current status and continued decline of the Southern steelhead requires immediate and swift action, as well as further protection under California law.

These fish play a key role in our ecosystems and watersheds, and are culturally significant to indigenous populations. These aquatic ecosystems and species provide countless environmental, social, and economic benefits for the entire state. The Southern steelhead's continued survival and recovery will reflect the resilience of our communities in the face of growing climate crisis challenges.

For these reasons, I urge the Fish and Game Commission designate the Southern Steelhead as an endangered species and further protections for these critically endangered fish.

Sincerely,

A handwritten signature in black ink that reads "John Laird".

John Laird
Senator, 17th District

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0038
(916) 319-2038
FAX (916) 319-2138
DISTRICT OFFICE
300 E. ESPLANADE DRIVE, SUITE 1790
OXNARD, CA 93036
(805) 485-4745
FAX (805) 485-4779
E-MAIL
Assemblymember.Bennett@assembly.ca.gov



COMMITTEES
CHAIR: BUDGET SUBCOMMITTEE NO. 4 ON
CLIMATE CRISIS, RESOURCES, ENERGY,
AND TRANSPORTATION
BUDGET
ELECTIONS
EMERGENCY MANAGEMENT
WATER, PARKS AND WILDLIFE

April 8, 2024

Samantha Murray, President
California Fish and Game Commission
P.O. Box 944209
Sacramento, California 94244-2090

RE: California Trout, Inc.'s Petition to list Southern California Steelhead (*Oncorhynchus mykiss*) as Endangered Office - Administrative Law's Notice ID #Z2021-0702-02 and Z2022-0426-01

President Murray and Commissioners,

I am writing to express my full support for the designation of the Southern California steelhead as endangered under California's Endangered Species Act (CESA) by the Fish and Game Commission.

Recent research tells us that Southern steelhead populations are in danger of extinction within the next 25 to 50 years if current trends persist. The rivers and streams in Southern California once saw Southern steelhead adults return in the tens of thousands. Since their listing as endangered under the federal Endangered Species Act in 1997, Southern steelhead numbers have continued to decline to dangerously low levels as a result of continued urbanization, agriculture, and water development. In the past 25 years, only 177 adult Southern steelhead were documented in their native range.

These activities have compromised and drastically reduced these species critical habitat. This degradation will only be exacerbated in the coming years by climate crisis projections of intensified floods, droughts, and extreme heat.

The current status and continued decline of the Southern steelhead requires immediate and swift action, as well as further protection under California law. I fully support CalTrout's petition, which was defended in State courts as containing sufficient information to warrant a decision, and reaffirmed by the California Department of Fish and Wildlife's (CDFW) peer-reviewed species status report. CalTrout's original petition, and the resulting CDFW confirmation presents the best available science and a clear mandate to make the decision to fully list this species immediately.

These fish play a key role in our ecosystems on which we all depend. They are a crucial part of the integrity of watersheds in which they swim, are culturally significant to Tribal nations, and their continued survival and recovery will reflect the resilience of our communities in the face of growing climate crisis challenges. These aquatic ecosystems, extending from summits to the seabed, provide countless environmental, social, and economic benefits for the entire state. We believe that we prosper, now and in the future, when Southern steelhead are thriving in our rivers.

For all these reasons, I urge the Fish and Game Commission to choose further protections for these critically endangered species by listing Southern steelhead as endangered in all waters within historic range below natural or man-made barriers.

Respectfully,

A handwritten signature in black ink that reads "Steve Bennett". The signature is written in a cursive, flowing style with a prominent initial "S".

Steve Bennett

Assemblymember, 38th District

SANTA MONICA MOUNTAINS CONSERVANCY

LOS ANGELES RIVER CENTER & GARDENS
570 WEST AVENUE TWENTY-SIX, SUITE 100
LOS ANGELES, CALIFORNIA 90065
PHONE (323) 221-8900
FAX (323) 221-9001
WWW.SMMC.CA.GOV



March 25, 2024

Samantha Murray, President
California Fish and Game Commission
Post Office Box 944209
Sacramento, California 94244

**Full Support for Expedited Listing of Mojave Desert Tortoise and
Southern California Steelhead as Endangered Species**

Dear President Murray and Commissioners:

The Santa Monica Mountains Conservancy (Conservancy) fully supports the California Fish and Game Commission (Commission) listing of Mojave Desert tortoise (*Gopherus agassizii*) and Southern California steelhead (*Oncorhynchus mykiss*) as endangered under the California Endangered Species Act (CESA). The Conservancy's jurisdiction encompasses the coastal Santa Monica Mountains Zone and expands inland with the Rim of the Valley Trail Corridor Zone and includes habitat types historically populated by Mojave Desert tortoise and Southern California steelhead.

Mojave Desert Tortoise

The Conservancy's jurisdiction includes the western extent of the Western Mojave Recovery Unit in the upper watershed of the Santa Clara River at the transition of coastal influenced woodland and shrubland ecotypes with desert influenced basin, foothill, and montane ecotypes where Mojave Desert tortoise habitat is under increased threat of development, habitat fragmentation, and habitat type conversion.

Southern California Steelhead

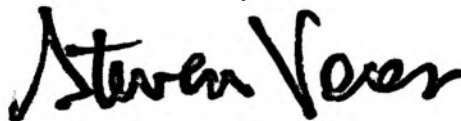
The Conservancy's jurisdiction includes four watersheds – Santa Clara River, Arroyo Sequit, Malibu Creek, and Topanga Creek – that support exceedingly fragile populations of steelhead. This species' unique genetic capability among all salmonid species to tolerate a higher range of water temperatures is vital to compensate for global warming as stream temperatures irreversibly increase throughout coastal California. Consecutive winters of exceptional rainfall following prolonged and severe drought conditions

Samantha Murray, President
California Fish and Game Commission
Mojave Desert Tortoise and Southern California Steelhead
March 25, 2024
Page 2

necessitate the increased listing status of Southern California steelhead populations to preserve adequate genetic diversity in extant populations.

The Conservancy urges the Commission to expedite listing of Mojave Desert tortoise and Southern California steelhead and support the recovery of these endangered species.



Sincerely,

A handwritten signature in black ink that reads "Steve Veres". The signature is written in a cursive, flowing style.

STEVE VERES
Chairperson

Attachments: A – Mojave Desert Tortoise & Conservancy Zone Map
 B – Southern California Steelhead & Conservancy Zone Map



-  Mojave Desert Tortoise Range
-  Rim of the Valley Trail Corridor Boundary



- Southern California Steelhead Range
- Rim of the Valley Trail Corridor Boundary



April 11, 2024

Samatha Murray, Fish and Game Commission-President
California Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090
Submitted via email to fgc@fgc.ca.gov



Dear President Murray and Members of the Fish and Game Commission,

We at CalWild (formerly the California Wilderness Coalition), thank you for the opportunity to provide comments towards two of the agenda items for the April 17-18 meeting.

- Agenda Item 22: listing southern California steelhead (*Oncorhynchus mykiss*) as Endangered under CESA – **SUPPORT**

Based on scientific evidence, including that of the California Department of Fish & Wildlife, we believe there is a compelling case that the southern California steelhead (*Oncorhynchus mykiss*) be listed as Endangered under CESA.

CalWild has been promoting conservation on federal public lands in California streams through several of our efforts on Wild and Scenic Rivers (under both the Federal and State Wild and Scenic Rivers Act) throughout the state, including in Southern California. For example, protecting the *O. mykiss* is an essential part of ongoing and potential new restoration efforts on such important Southern California streams as the Arroyo Seco River in Los Angeles County, Piru Creek in Ventura County, and San Mateo Creek in Orange and San Diego counties, to name but three.

- Agenda Item 23: Mohave desert tortoise CESA status change – **SUPPORT**

Since our founding in 1976, CalWild has been promoting conservation on federal public lands in the California desert, including at this moment through the proposed [Chuckwalla National Monument](#) campaign sponsored by Rep. Ra. As you know, the desert tortoise is a true icon of our desert ecosystems. We are increasingly concerned that this iconic species is threatened by development, climate change, the invasion of non-native species (especially grasses that increase the frequency and severity of fire), off-highway vehicle use and other factors.

Unfortunately, despite listing by both the federal and state governments, the species has continued to decline in recent years. We therefore support the petition to list the Mohave Desert tortoise as Endangered under the CESA.

We strongly urge the California Fish and Game Commission to grant the protections under the CESA. Thank you once again for your consideration.

Sincerely,

André Sanchez

André Sanchez
Community Engagement & Conservation Policy Manager
CalWild (formerly the California Wilderness Coalition)
asanchez@calwild.org
559-975-5097



*Protecting and restoring natural ecosystems and imperiled species through
science, education, policy, and environmental law*

via email

April 9, 2024

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

RE: Support for uplisting the Mojave Desert Tortoise from Threatened to Endangered Status.

Dear Commissioners,

The Center for Biological Diversity is pleased to support the California Department of Fish and Wildlife's recommendation to your Commission that listing the Mojave Desert Tortoise as endangered under CESA is warranted at this time. The ongoing significant declines of the Mojave Desert Tortoise throughout California despite being listed as threatened by both State and federal Endangered Species Acts indicates that much stronger conservation of its population and habitat is needed. We sincerely hope that elevating the Mojave Desert Tortoise to endangered status will help to stop the ongoing declines, stabilize the population, and start on the long-needed path to recovery.

Please support uplisting the Mojave Desert Tortoise to endangered status.

Sincerely,

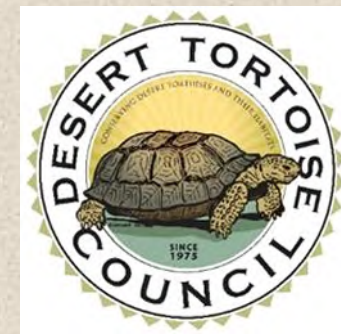
Ilene Anderson
Senior Scientist/California Desert Director
Center for Biological Diversity

Petition to Change Listing Status of Mojave Desert Tortoise Under the California Endangered Species Act



California Fish and Game Commission
April 18, 2024

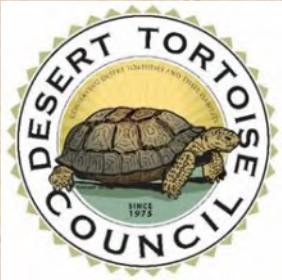
Pamela Flick, Defenders of Wildlife
Michael Tuma, PhD, Desert Tortoise Council
Roger Dale, Desert Tortoise Preserve Committee



Long History of Working to Conserve Desert Tortoise and Its Habitat



Defenders of Wildlife, founded in 1947, is dedicated to all native plants and animals in their natural communities.



The Desert Tortoise Council, established in 1975, works to assure the perpetual survival of viable populations of desert tortoises throughout their historical ranges.



The Desert Tortoise Preserve Committee, founded in 1974, is dedicated to the recovery and conservation of the desert tortoise and other protected species inhabiting the Mojave and western Sonoran deserts.

Threats to Desert Tortoises



Desert tortoise populations face a myriad of threats to their long-term survival.

Threats often appear in suites or in combinations or otherwise interact with each other.

Human Developments

Urbanization

Large-scale solar

Roads

Railroads

Utilities

Landfills

Anthropogenic water sources

Land Uses/Human Activities

OHV recreation

Livestock grazing

Agricultural practices

Mineral extraction

Military activities

Illegal dumping

Firearm shooting

Pollutant and toxicant deposition

Climate change

Collection/poaching of tortoises

Biological & Environmental

Disease

Subsidized predators

Invasive plants

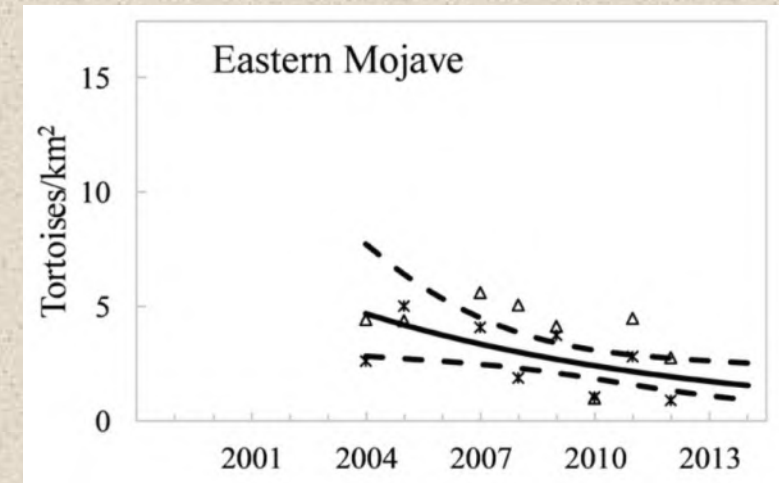
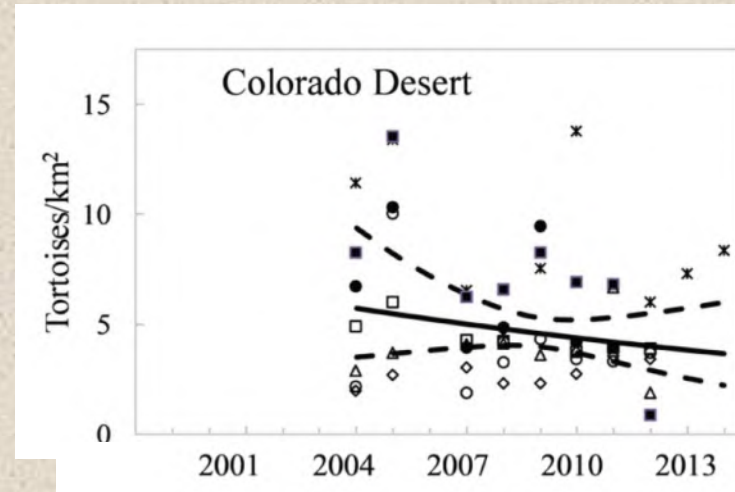
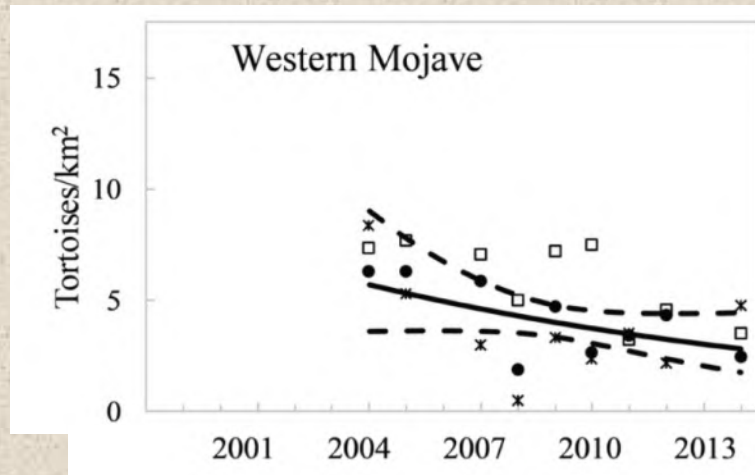
Drought

Wildfire

Desert Tortoise Population Decline



Desert tortoise populations have been declining steadily since the 1970s.



Long-term study plots monitored in the 1970s, 1980s, and 1990s indicated population declines during this period.

Population Response to Threats



Life history traits make tortoise populations vulnerable:

- slow growth and delayed maturity
- low reproduction rates
- low survival of eggs and juveniles
- high survival of adults



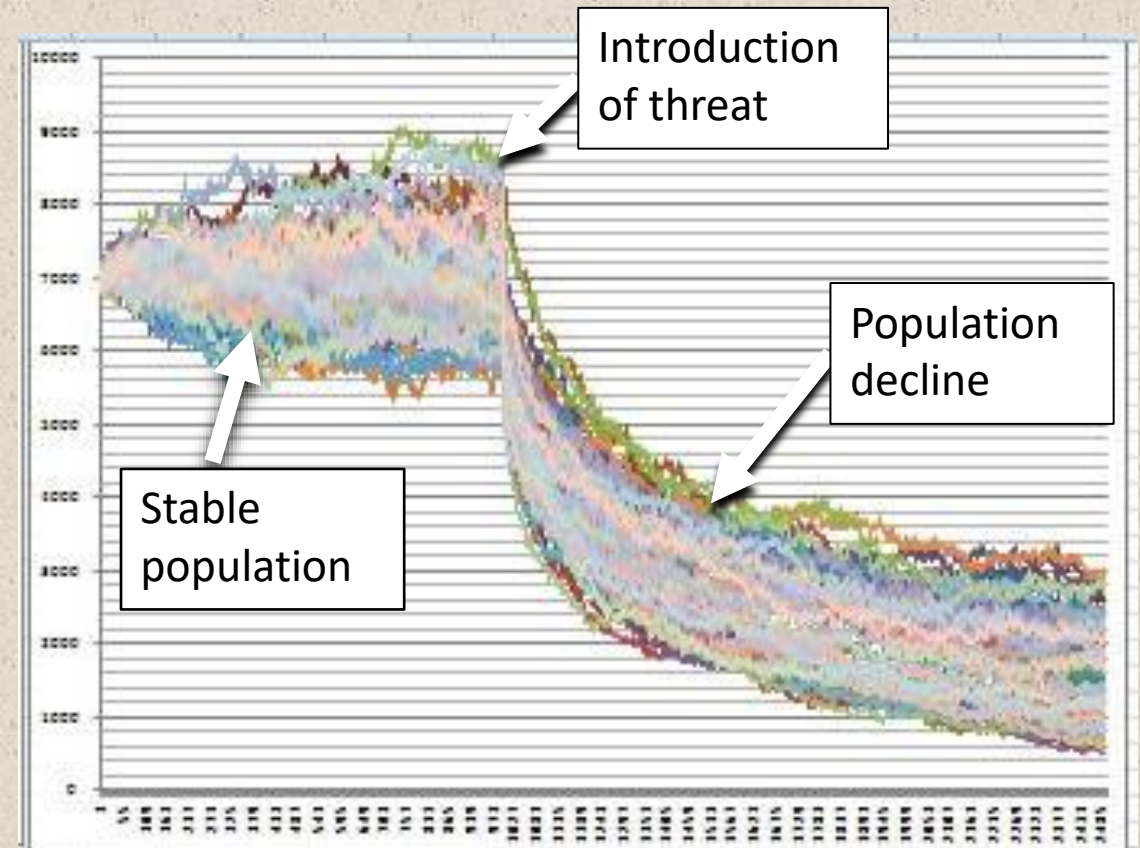
Photo: Michael Tuma

Population Response to Threats



Long-term field-based population studies and population modeling studies show that increases in adult mortality cause precipitous population declines.

- A slight increase in mortality can cause a population to crash
- Populations recovery very slowly
- Recovery after elimination of threats may take many decades



Managing Threats




Threats can be eliminated or their effects mitigated:

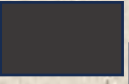

- Make tortoise conservation areas more remote; reduce humans uses
- Fencing of tortoise conservation areas
- Conserve connections between populations; facilitate gene flow
- Manage subsidized predator populations (common ravens)
- Educating the general public

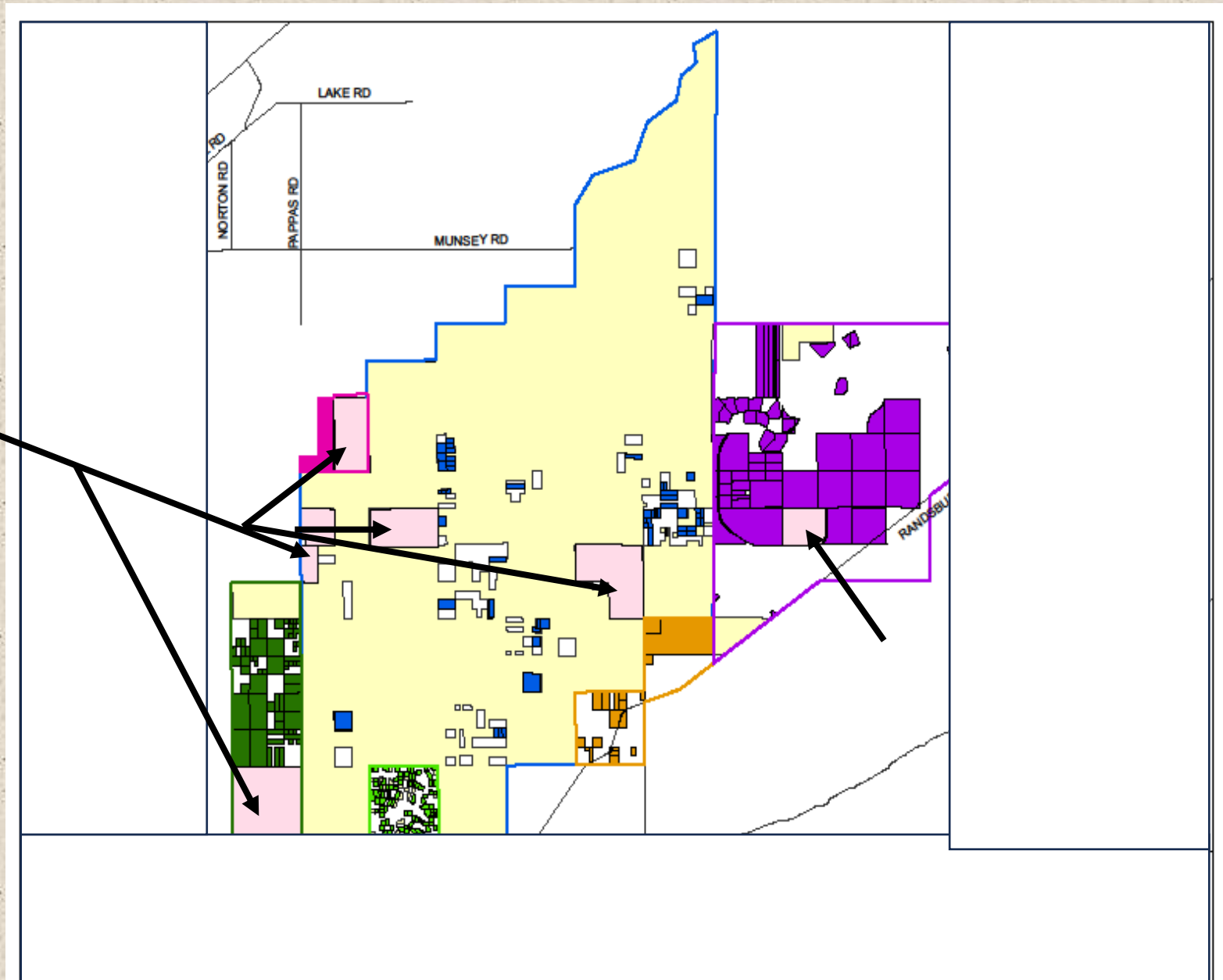
Funding and other resources to support these efforts in California will be made more available if the species is uplisted to Endangered under CESA.

Desert Tortoise Research Natural Area: Land Ownership (2022)

 BLM, primarily original boundaries, 100 km², fenced 1979-80

 CDFG & CDFW

  Expansion areas, acquired via mitigation



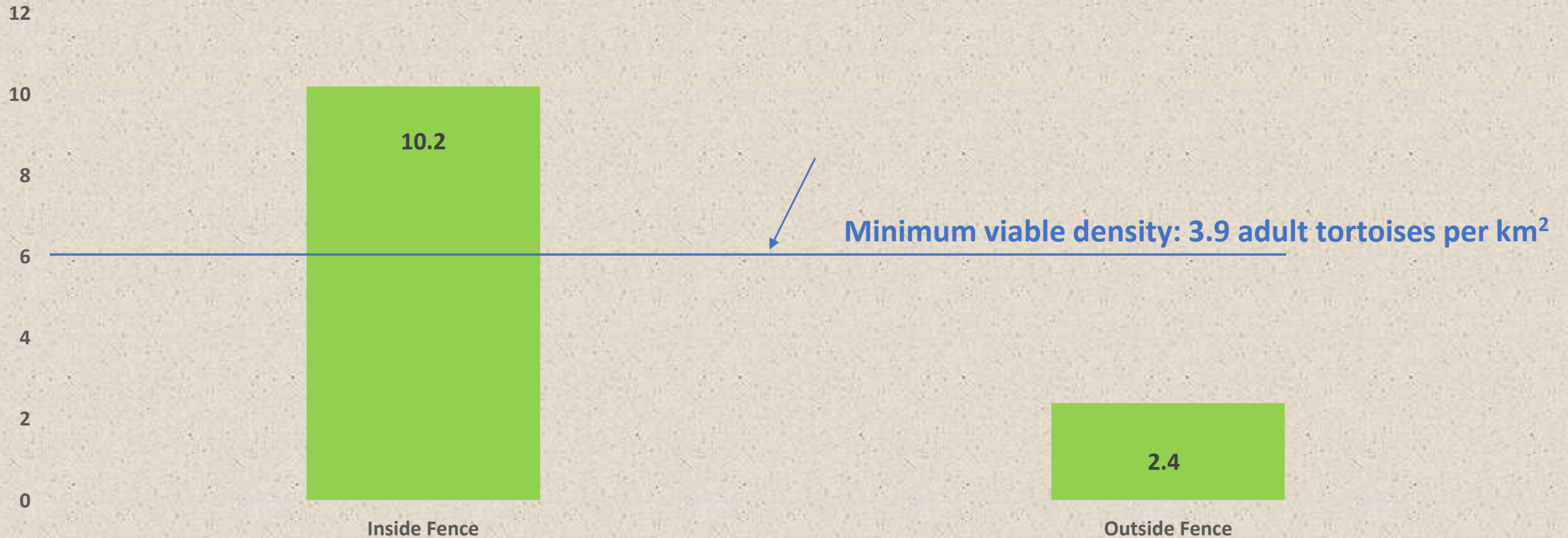
Fencing Protects Tortoises from Adjacent Impacts



Stewardship and Protective Fencing Work!



Adult tortoise densities per square kilometer DTRNA and adjacent critical habitat



Source: Berry et al. (2014). Protection benefits desert tortoise (*Gopherus agassizii*) abundance: the influence of three management strategies on a threatened species. Herpetological Monographs 28:66-92.

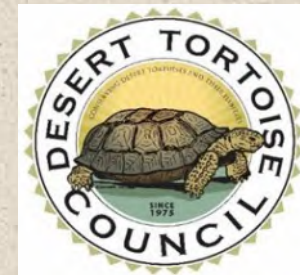
Thank You – Any Questions?



Pamela Flick, Defenders of Wildlife

Michael Tuma, PhD, Desert Tortoise Council

Roger Dale, Desert Tortoise Preserve Committee





Ballona Wetlands Land Trust

April 12, 2024

Melissa Miller-Henson
Executive Director
California Fish and Game Commission
715 P Street, 16th Floor
Sacramento, CA 95814455

Via email at: Melissa.Miller-Henson@fgc.ca.gov

Re: Fish and Game Commission Determination of Compatibility for Land Uses in the Ballona Wetlands Ecological Reserve

Dear Executive Director Miller-Henson,

The Ballona Wetlands Land Trust is in its 30th year of advocating for policies that benefit the largest remaining coastal wetland ecosystem in Los Angeles County. For over seven years, we have been asking the California Fish and Game Commission to assess the compatibility of two atypical land uses in the Ballona Wetlands Ecological Reserve, which the Commission and public was told in 2005 would occur as part of the environmental analysis for the Ballona Wetlands Restoration Project.

After the Commission repeatedly refused to issue a determination, we filed suit in Los Angeles Superior Court and received a favorable ruling from the trial court, ordering the Commission to finally make this long overdue determination. Substantial public funding and other resources were squandered by the Commission and Department by refusing to make this simple determination voluntarily when first requested in 2017, and any time since. On March 8th of this year, I emailed you to offer to speak by phone to discuss how this issue could be resolved in a matter that would avoid additional litigation. In your response on April 10th, over a month later, you declined my offer, noting that Commission staff had already published the staff recommendation for the Commission to determine that both land uses at issue, namely parking lots in Area A that are leased to the County of Los Angeles for specific uses unrelated to the operation of the Reserve and a local Little League operation, are compatible with the purpose of the Reserve.

Below are our organization's comments on the staff recommendation and the California Department of Fish and Wildlife memorandum upon which the staff recommendation is exclusively based:

Summary

The Department's April 2nd memorandum is not itself a compatibility determination, nor does it provide any basis for the adoption of the motion proposed in the Commission staff recommendation. No other basis was cited in the staff recommendation to support the proposed motion. The memorandum largely consists of the Department's explanation as to why it is still in the planning phases of a large-scale restoration project that has been ongoing for roughly twenty

years, which is not relevant to whether the land uses in question are compatible with the purpose of the ecological reserve.

Both the staff recommendation and memorandum seem to confuse two different provisions of 14 CCR 630, specifically 630(a) and 630(h)(3). As the trial court's ruling unambiguously noted:

“Subsection (a) of section 630 makes clear that respondent has an obligation to determine whether parking and baseball fields—the visitor uses at issue here—are compatible with the purpose of the Reserve. It states in relevant part: “Visitor uses are dependent upon the provisions of applicable laws and upon a determination by the commission that opening an area to such visitor use is compatible with the purposes of the property.” (14 C.C.R. § 630(a).)”

However, the Commission and Department have ignored the language of 630(a) and focused only on the language of 630(h)(3), which focused on a Department determination as to whether alternative land uses, such as restoration, were more “appropriate”. The Department's memorandum, upon which the Commission's recommended motion is entirely based, does not make any mention of Section 630(a) and does not even use the word “compatible” anywhere in its five pages. Thus, remarkably, the Commission is failing to even comply with the most basic aspect of the trial court's order, which is for the Commission to make a compatibility determination pursuant to Section 630(a).

Even if the Department's determination that “restoration or other uses of the little league baseball fields or parking lots is not more appropriate at this time” could be argued to satisfy the Commission's obligation to make a compatibility determination pursuant to Section 630(a), the Department's memorandum also fails to support its own findings. Rather than a reasoned analysis of substantial evidence, the Department has provided the Commission with an incoherent and convoluted explanation of its never-ending restoration planning process, and is full of unsupported and immaterial conclusions, with no explanation whatsoever as to how Little League baseball fields or parking lots leased to the County of unrelated purposes could be credibly argued to be compatible with the purposes of an ecological reserve.

The Purpose of Ecological Reserves Generally

Remarkably absent from the Department's memorandum or the Commission's recommendation is any discussion of the general purposes of ecological reserves. It is unclear how the Commission could make a determination as to whether the land uses at issue could be compatible with the purpose of the Ballona Wetlands Ecological Reserve without such a basic discussion.

The Commission's own legal filings¹ correctly note that:

“The State's declared policy “is to protect threatened or endangered native plants, wildlife, or aquatic organisms or specialized habitat types, both terrestrial and nonmarine aquatic, or large heterogeneous natural gene pools for the future use of mankind through the establishment of ecological reserves.” (Id. § 1580.) Ecological reserves are areas “that are to be preserved in a natural condition, or which are to be provided some level of protection

¹ See California Fish And Game Commission's Opposition To Petitioner's Opening Brief (20STCP03035)

as determined by the commission, for the benefit of the general public to observe native flora and fauna and for scientific study or research.” (Id. § 1584.)”

Fish and Game Code Section 1585 (underlining added) provides that:

“Notwithstanding Section 1580, which sets forth the primary purposes of ecological reserves, the department may construct facilities and conduct programs in ecological reserves it selects to provide natural history education and recreation if those facilities and programs are compatible with the protection of the biological resources of the reserve.”

It is clear from this language that a compatibility requirement pursuant to 14 CCR 630(a) requires a discussion of how a facility or program relates to “the protection of the biological resources of the reserve” not merely a cursory discussion of the Department’s prioritization of its resources.

Further, the Commission and Department have expressly acknowledged² that:

“The purposes of ecological reserves are to conserve threatened or endangered plants and/or animals, and/or specialized habitat types, provide opportunities for the public to observe native plants and wildlife, and provide opportunities for environmental research. Recreation on ecological reserves must be compatible with the conservation of the property’s biological resources.”

It is notable that the Commission and Department are choosing to ignore this unambiguous language in attempting to accommodate the land uses in question.

The Purpose of the Ballona Wetlands Ecological Reserves Specifically

The Department asserts in its memorandum that “restoration” was the “purpose for acquisition” of the land that was subsequently designated as an ecological reserve in 2005. The Department is confusing a means with an end. Like acquisition of the land, any planned restoration activities must be in furtherance of the larger purpose of the property, which is the conservation of special natural resources found in the Reserve.

As the Department itself communicated to the California Coastal Commission in 2006³:

“The primary management objective for this property is the preservation and enhancement of coastal salt marsh and freshwater marsh habitat and associated species. Other objectives include preservation and restoration of habitats supporting other species, protection of sensitive species, providing for appropriate public access and use, and assuring continued movement of wildlife between the state property and publicly owned lands in the vicinity of the wetlands. The property supports important species including the state listed endangered Belding’s savannah sparrow.”

We are confident that the Department’s memorandum will be found to be deficient as a supporting document for the Commission’s proposed motion because the memorandum confuses restoration as **the purpose** of the property, rather than as **a means** to further the purposes described above, which all relate to the conservation of the many important natural resources that exist on site.

² See April 2020 Final Statement of Reasons for Regulatory Action at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=180666&inline>

³ See Administrative Permit at <https://documents.coastal.ca.gov/reports/2006/10/Th4a-10-2006.pdf>

No Discussion of Sensitive Species

Remarkably, the Department, as a trustee agency for the state's natural resources, claims that it cannot think of any better use of land within an ecological reserve than to provide that land to the County of Los Angeles to help alleviate the County's parking needs in Marina del Rey and to the Culver Marina Little League for baseball. Nowhere in the Department's analysis does the Department discuss the sensitive biological resources of the site.

There are numerous examples of species for which potentially suitable foraging or other habitat is immediately adjacent to or very close to the land uses at issue. Perhaps the most obvious example is the California Gnatcatcher. In the Department's recently decertified Environmental Impact Report, Figure 3.4-13 shows potentially suitable foraging habitat immediately adjacent to the two parking lots in Area A and to the east of the ballfields in South Area C. Thus, one alternative use for the parking lot areas would be to incrementally create more habitat for that species of special concern. Other species for which potential habitat has been identified in the vicinity of the land uses in question are the San Bernardino Ringed-necked Snake and Burrowing Owl.

Even setting aside those special species, the Department's memorandum is alarmingly devoid of any discussion of how the land uses at issue further restrict habitats in area that has been acknowledged to be constrained by its relatively small size. This is indicated in the 2008 Feasibility Study that the Department included as Attachment 4 to its memorandum, in which it states that: "Because the size of the site is limited, it may not be possible to incorporate large enough patches of all historic habitat types to ensure their viability" and "Site may too small and isolated to support some species." It is deeply concerning that, 14 years after these size limitations were acknowledged, the Department is still "not aware" of any uses of this land that would be compatible with the purpose of the Reserve.

No Discussion of Potential for Educational Access, Community Stewardship or Scientific Research

In addition to omitting any discussion of sensitive biological research, the Department's memorandum also omits any discussion of how additional land could further the ecological reserve purposes of providing wildlife-dependent recreational opportunities, educational opportunities, and opportunities for scientific research. It is quite troubling that both the Fish and Game Commission and Department of Fish and Wildlife are persisting in viewing this land through a lens that ignores the unambiguous purpose of ecological reserves to justify avoiding its obligation to make a compatibility determination.

No Actual Plan for Large-Scale Restoration

The Department's memo is entirely premised on the flawed assertions that: 1) the purpose of the Reserve is to implement the proposed large-scale restoration project that the Department acknowledges has been ongoing for "approximately two decades; 2) that leaving the two land uses at issue in place with no changes does not in any impede the Department's management of the Reserve or its planned restoration of the land; and 3) that making any changes to these land uses would require the Department to "shift its focus and limited resources towards an interim, or different, use of the areas which could be a distraction and impediment to furthering the planned for restoration."

However, the Department cannot currently articulate any actual schedule for the implementation of this ever elusive “planned for restoration” and extensive record evidence shows that the Department has drastically scaled back its restoration plans for the Reserve to include only a small fraction of the original project description affecting only South and Southeast Area B and possibly a small segment of West Area B.

The Department was informed in March of 2017 that its consultant had designed the entire project on the wrong flood control standard. The consultant relied on an obscure figure in a US Army Corps of Engineers manual and did not conduct any due diligence to confirm that figure before spending millions of dollars over multiple years to develop the engineering designs for modification of the flood control levees along the Ballona Creek. In April of 2019, the Corps informed the Department that it would not issue a Section 408 permit for the project or approve a federal Environmental Impact Statement until additional engineering information was provided. Director Bonham vaguely alluded to this new requirement when addressing the Fish and Game Commission the day following the Corps’ notice, but did not explain the flood control issue. In September of 2019, the Corps officially informed the Department that its application for federal approvals of the project was considered withdrawn and that the Department had communicated an estimated timeline of two years to provide the requested additional information and to submit a new application.

Notably, the Department’s April 2, 2024 memorandum in support of the Commission’s proposed motion makes no reference whatsoever to the status of the federal EIS which is required for the project. The Department refuses to discuss the status of federal permits and approvals, presumably because they have stopped pursuing them and are instead attempting to commence only portions of the project with the Department believes do not require those same permits and approvals.

Setting aside the dubious and troubling assertion that the Department is unable to provide basic management of the reserve and plan for large-scale restoration at the same time, there is no substantial evidence that the Department is making any discernible progress on planning and permitting for its large-scale project. Whatever continues to plague the Department’s ability to move forward on the planning and permitting for the large-scale project, it has nothing to do whether the existing parking lot uses and ballfields are compatible with the purpose of protecting the Reserve’s sensitive biological resources.

Given that the Department is claiming that implementation of their proposed restoration project is the purpose of the ecological reserve, and given that the Department has acknowledged the two-decade long process to date, it is essential that the Commission’s staff recommendation be amended to provide the Fish and Game Commissioners with the status of that planning process, including when the Department currently anticipates publishing a revised EIR and when it anticipates the Corps publishing a revised federal EIS, both of which are required for any project to commence.

No Support for Contention that Compatible Land Uses Would Cause the Department to Divert Resources Away from Restoration

Setting aside the Department’s inability to show that it is actually on a path to implementing any large-scale restoration project, the Department’s memorandum provides no evidence or explanation as to how the Commission addressing the compatibility of the land uses in question would divert resources away from the planning effort for that project. What additional resources

would the Department be required to expend if it allowed nature education and stewardship in the area of the baseball fields, as envisioned 14 years ago in the feasibility report, but never acted on.

Likewise, what additional resources would be required of the Department if the Commission determines, as it is legally required to do, that parking for non-reserve purposes is not compatible with the purpose of the reserve?

No Support for the Contention that the Land Uses at Issue do not Impede the Department

The Department asserts that the land uses in question “do not hinder or impede the planned restoration or the Department’s day-to-day management of the Reserve.” This conclusory assertion is premised on the Department’s fundamental misunderstanding of the purpose of the Reserve, as discussed above.

No Support for the Contention that it is not Feasible to Restore the Land in Question

The Department offers a purely circular argument that because the parking lots and ballfields are near development, there is no impact to their remaining as developed areas themselves. The restoration plans show that the edge of the Department’s proposed tidal restoration was moved inward to accommodate the Area A parking lots, and that grading plans for Area C were designed to accommodate the ballfields in the preferred and selected alternative. The Department’s plans call for a mosaic of different habitat types at Ballona. More available land allows for a more optimal mix of those habitat types, whether tidal or seasonal marsh, transitional or upland habitat.

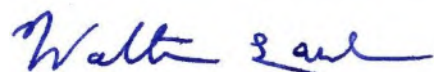
Not Exhaustive

The Land Trust is a small, volunteer-led not-profit organization with very limited resources. The staff recommendation was published on April 10th with a deadline for the submission of comments at noon on April 12th. This letter is a good-faith effort by the Land Trust to broadly communicate fundamental deficiencies in the Commission’s staff recommendation and the Department’s memorandum. The Land Trust preserves its right to raise additional concerns and to reference additional record evidence in the future.

Conclusion

The Commission has an obligation to act responsibly and to safeguard the natural resources of the state under its jurisdiction in accordance with the provisions of the Fish and Game Code and its own regulations. The Commission does not have the discretionary authority to ignore the plan language of these legal authorities by adopting a compatibility determination that is lacking in both substantial evidence and basic common sense.

Regards,



Walter Lamb
Ballona Wetlands Land Trust
310-384-1042

CC: Erinn Wilson-Olgin, Region 5 Manager, CA Department of Fish and Wildlife



Ballona Wetlands
Compatibility Determination:

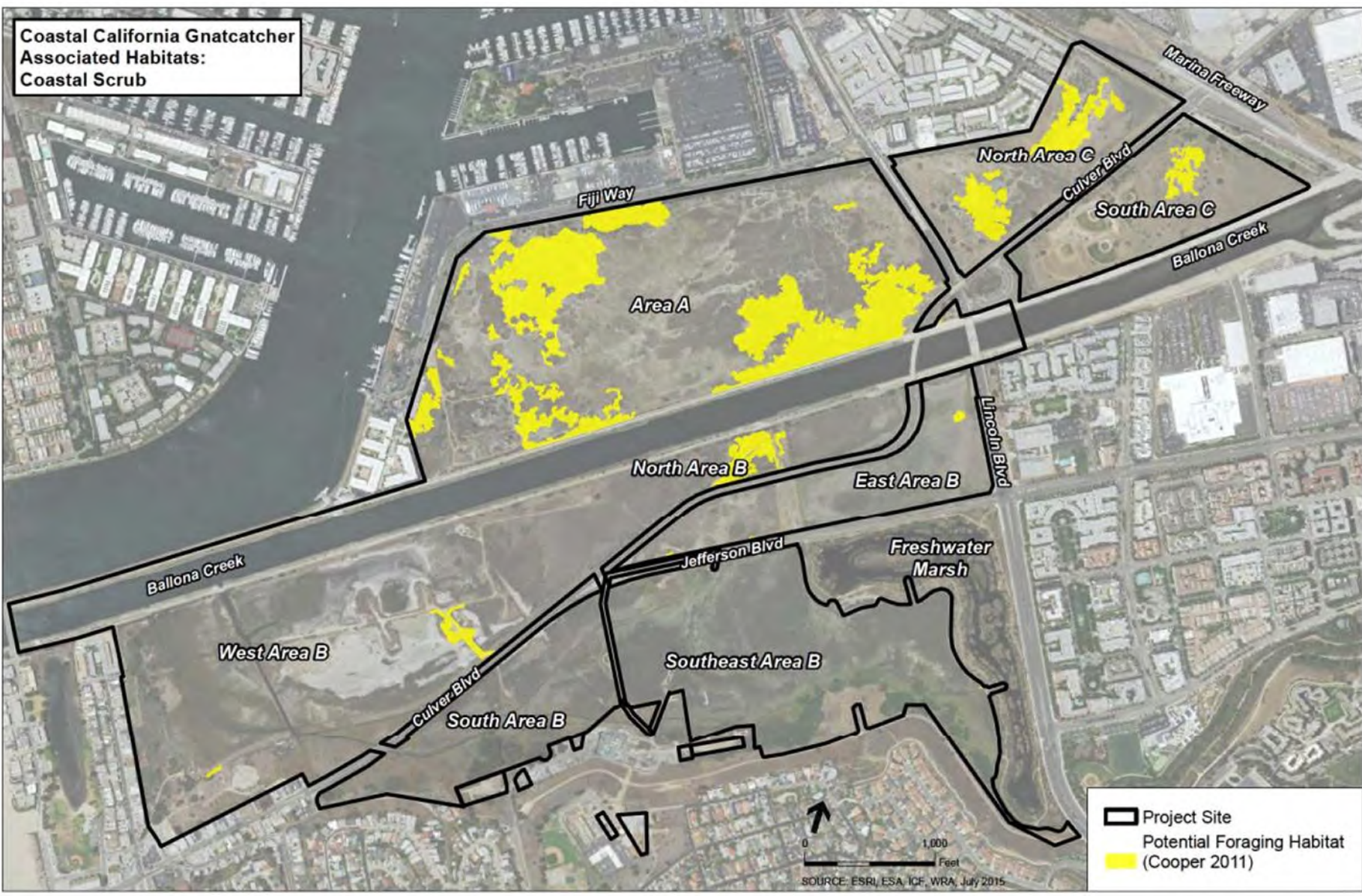
- Area A Parking Lots
- Area C Baseball Fields

Fish and Game Commission:
April 18, 2024

Agenda Item 24

Photo: Native *Cressa truxillensis*
growing in cracks in County
parking lot in Area A

Coastal California Gnatcatcher
Associated Habitats:
Coastal Scrub



Analysis is based on wrong provision if 14 CCR 630

Inadequate discussion of:

- Purpose of the ecological reserves (FGC § 1580 et seq.)
- Sensitive biological resources
- Size constraint of reserve
- Missed opportunities for compatible access, stewardship, scientific research
- Status of restoration planning

Key assertions entirely lacking in substantial evidence

Deeply troubling reflection of how Commission and Department think of the Reserve

California Code, Fish and Game Code - FGC § 1584

Current as of January 01, 2023 | Updated by [FindLaw Staff](#)

As used in this article, “ecological reserve” means land or land and water areas that are designated as an ecological reserve by the commission pursuant to [Section 1580](#) and that are to be preserved in a natural condition, or which are to be provided some level of protection as determined by the commission, for the benefit of the general public to observe native flora and fauna and for scientific study or research.

California Code, Fish and Game Code - FGC § 1585

Current as of January 01, 2023 | Updated by [FindLaw Staff](#)

Notwithstanding [Section 1580](#), which sets forth the primary purposes of ecological reserves, the department may construct facilities and conduct programs in ecological reserves it selects to provide natural history education and recreation if those facilities and programs are compatible with the protection of the biological resources of the reserve. As provided in [Sections 1764](#) and [1765](#), the department may control access, use, and collect fees for selected ecological reserves.

California Code, Fish and Game Code - FGC § 1580

Current as of January 01, 2023 | Updated by [FindLaw Staff](#)

The Legislature hereby declares that the policy of the state is to protect threatened or endangered native plants, wildlife, or aquatic organisms or specialized habitat types, both terrestrial and nonmarine aquatic, or large heterogeneous natural gene pools for the future use of mankind through the establishment of ecological reserves. For the purpose of establishing those ecological reserves, the department, with the approval of the commission, may obtain, accept on behalf of the state, acquire, or control, by purchase, lease, easement, gift, rental, memorandum of understanding, or otherwise, and occupy, develop, maintain, use, and administer land, or land and nonmarine water, or land and nonmarine water rights, suitable for the purpose of establishing ecological reserves. Any property obtained, accepted, acquired, or controlled by the department pursuant to this article may be designated by the commission as an ecological reserve. The commission may adopt regulations for the occupation, utilization, operation, protection, enhancement, maintenance, and administration of ecological reserves. The ecological reserves shall not be classified as wildlife management areas pursuant to [Section 1504](#) and shall be exempt from [Section 1504](#).


Opportunities	Constraints
<p>Preserve, restore, enhance, and create multiple habitats historically associated with both the Ballona Wetlands and the region.</p>	<p>Because the size of the site is limited, it may not be possible to incorporate large enough patches of all historic habitat types to ensure their viability.</p>
<p>Strategically design habitat to ensure recruitment and survival of targeted species</p>	<p>Site may too small and isolated to support some species</p>

Coastal Conservancy Rescinds its CEQA Findings; CDFW-Ballona FEIR DeCertifide ; Ballona Wetlands CDFW's Ruling per Decertification of the FEIR

patriciamcpherson1@verizon.net <patriciamcpherson1@verizon.net>

Sat 04/13/2024 12:11 PM

To:FGC <FGC@fgc.ca.gov>;Miller-Henson, Melissa@FGC <Melissa.Miller-Henson@fgc.ca.gov>;Cornman, Ari@FGC <Ari.Cornman@FGC.ca.gov>

 1 attachments (961 KB)

Initial return to writ (21STCV03657 for filing).pdf;

WARNING: This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Re: FGC April Meeting Item 24-- Inconsistency of parking lot and ball field on an ecological reserve.

Please note the history provided by FGC Staff in the Report for Item 24, continues to assert allegiance to a Plan of CDFW's for full tidal inundation of Ballona Wetlands. This Plan (FEIR) has been decertified and a NEW EIR MUST BE PREPARED.

Such promotion of the FEIR CDFW Plan is inconsistent with protection of Ballona Wetlands.

Thank you,
Patricia McPherson, Grassroots Coalition



Rescission of CEQA Findings Related to the Ballona Wetlands Restoration Project


On December 30, 2020, the California Department of Fish and Wildlife ("CDFW") certified a final Environmental Impact Report ("EIR") under the California Environmental Quality Act (Pub. Resources Code, § 21000 *et seq.*; "CEQA") for the Ballona Wetlands Restoration Project ("Project"), and made CEQA findings as the lead agency regarding the Project and the EIR.

On May 27, 2021, the State Coastal Conservancy ("Conservancy") made CEQA findings as a responsible agency regarding the Project and the EIR.

On July 13, 2023, the Los Angeles Superior Court entered judgment against CDFW in a challenge to the legal adequacy of the EIR under CEQA.

On September 28, 2023, in compliance with the court judgment, CDFW decertified the EIR and rescinded its CEQA findings regarding the Project, among other actions.

In recognition of the CDFW's decertification of the EIR and rescission of its CEQA findings for the Project, the Conservancy hereby also rescinds its May 27, 2021 CEQA findings regarding the Project.



Amy Hutzel
Executive Officer

1/23/24

Date

A new EIR has been ordered by the judge per the California Environmental Quality Act requirements.

Thank you for your time,
Patricia McPherson, Grassroots Coalition

1 ROB BONTA
Attorney General of California
2 GARY E. TAVETIAN
Supervising Deputy Attorney General
3 JOHN S. SASAKI
Deputy Attorney General
4 State Bar No. 202161
300 South Spring Street, Suite 1702
5 Los Angeles, CA 90013-1230
Telephone: (213) 269-6335
6 Fax: (916) 731-2128
E-mail: John.Sasaki@doj.ca.gov
7 *Attorneys for Respondent California*
Department of Fish & Wildlife
8

9
10 SUPERIOR COURT OF THE STATE OF CALIFORNIA
11 COUNTY OF LOS ANGELES

12
13 **GRASSROOTS COALITION, et al.,**

14 Petitioners,

15 v.

16 **CALIFORNIA DEPARTMENT OF FISH**
17 **& WILDLIFE, et al.**

18 Respondents.

Case No. 21STCV03657

Assigned for all purposes to the:
Hon. James C. Chalfant, Dept. 85

**INITIAL RETURN TO PEREMPTORY
WRIT OF MANDATE**

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Trial Date: May 9, 2023
Action Filed: January 28, 2021

1 In accordance with paragraph 7 of the Peremptory Writ of Mandate (Writ) issued by this
2 Court on September 27, 2023, Respondent California Department of Fish and Wildlife hereby
3 submits this initial return specifying the actions taken to comply with the terms of the Writ.

4 1. On September 28, 2023, and in accordance with paragraph 1 of the Writ, CDFW
5 decertified the Environmental Impact Report (EIR) for the Project entitled “Ballona Wetlands
6 Restoration Project” adopted on December 30, 2020, State Clearinghouse Number 2012071090.
7 See Exhibit 1 attached hereto.

8 2. On September 28, 2023, and in accordance with paragraph 2 of the Writ, CDFW
9 rescinded the Project’s CEQA Findings. See Exhibit 1 attached hereto.

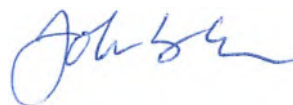
10 3. On September 28, 2023, and in accordance with paragraph 3 of the Writ, CDFW
11 invalidated all approvals of the Project. See Exhibit 1 attached hereto.

12 4. On September 28, 2023, and in accordance with paragraph 5 of the Writ, CDFW
13 suspended any Project activity that could result in an adverse change or alteration to the physical
14 environment until CDFW fully complies with the requirements of CEQA. See Exhibit 1 attached
15 hereto.

16 5. On September 28, 2023, and in accordance with paragraph 6 of the Writ, CDFW
17 notified all responsible agencies that, to CDFW’s knowledge, have relied or may have relied on
18 the EIR to implement the Project that the EIR has been decertified. See Exhibits 2-3 attached
19 hereto.

20
21 Dated: October 19, 2023

ROB BONTA
Attorney General of California



JOHN S. SASAKI
Deputy Attorney General
*Attorneys for Respondent
Department of Fish & Wildlife*

EXHIBIT 1



State of California – Natural Resources Agency
 DEPARTMENT OF FISH AND WILDLIFE
 South Coast Region
 3883 Ruffin Road
 San Diego, CA 92123
 (858) 467-4201
wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



Compliance with Peremptory Writ of Mandate
 Related to the Ballona Wetlands Restoration Project

On May 17, 2023, the Los Angeles County Superior Court issued its decision on the petitions for writ of mandate for the following related cases ("Decision"):

- The Ballona Wetlands Land Trust v. California Department of Fish and Wildlife, case no. 21STCP00242
- Grassroots Coalition, et al. v. California Department of Fish and Wildlife, case no. 21STCV03657
- Defend Ballona Wetlands, et al v. California Department of Fish and Wildlife, case no. 21STCP00240
- Protect Ballona Wetlands v. California Department of Fish and Wildlife, case no. 21STCP00237

In its Decision, the Court granted in part the petitions for writ of mandate concluding that the California Department of Fish and Wildlife ("CDFW") was required to disclose and analyze a 68,000 cfs levee flood control design in CDFW's Environmental Impact Report ("EIR") for the Ballona Wetlands Restoration Project ("Project"). The Court also concluded that the EIR's project description does not adequately commit CDFW to specific performance criteria to the extent it provides CDFW with authority to modify restoration goals without any supplemental environmental review. The Court denied the petitions in all other respects.

On July 13, 2023, judgment was entered in the four cases which contemplated issuance of a peremptory writ of mandate directing CDFW to take certain actions ("Writ"). On September 20, CDFW's counsel accepted electronic service of the Writ, as issued by the Court in case no. 21STCP00242.

In response to the Writ, CDFW hereby:

1. Decertifies the EIR for the Project entitled "Ballona Wetlands Restoration Project" adopted on December 30, 2020, State Clearinghouse Number: 2012071090;
2. Rescinds the Project's CEQA Findings;
3. Invalidates all CDFW approvals of the Project; and
4. Suspends any Project activity that could result in an adverse change or alteration to the physical environment until CDFW fully complies with the requirements of CEQA.

DocuSigned by:

5991E19EE8094C3

9/28/2023

Victoria Tang
 South Coast Regional Manager (Acting)

Date

EXHIBIT 2

From: [Burg, Richard@Wildlife](mailto:Burg.Richard@Wildlife)
To: [Cooper, Megan@SCC](mailto:Cooper.Megan@SCC)
Subject: Ballona Wetlands Restoration Project EIR Decertification notice
Date: Thursday, September 28, 2023 3:39:28 PM
Attachments: [CDFW's Writ Compliance.2023.09.28.pdf](#)

Megan,

On September 20, 2023, CDFW was served with a peremptory writ of mandate issued by the Los Angeles County Superior Court related to four CEQA lawsuits pertaining to the Ballona Wetlands Restoration Project. Among other actions, the Court's writ directs CDFW to decertify its EIR for the Ballona Wetlands Restoration Project that CDFW adopted on December 30, 2020, rescind its CEQA finding, and invalidate its approval of the project. The Court's writ also directs CDFW to notify all responsible agencies that have relied on the EIR to implement the Project that the EIR has been decertified. It is not clear whether the Conservancy is a responsible agency that has relied on the EIR to implement the Project, but in an abundance of caution, CDFW hereby notifies the Conservancy that on September 28, 2023 CDFW decertified its EIR for the Ballona Wetlands Restoration Project.

CDFW appreciates the Conservancy's continued support for the Ballona Wetlands Restoration Project. Please contact me with any questions about this message.

Sincerely,

Rich

Richard Burg (He/Him)
Environmental Program Manager
California Department of Fish and Wildlife
South Coast Region 5
3883 Ruffin Road
San Diego, CA 92123
T: (858) 467-4209
F: (858) 467-4239

"Only when the last tree has died and the last river poisoned and the last fish caught will we realize that we cannot eat money".
-North American Cree Indian

EXHIBIT 3

From: Burg, Richard@Wildlife
To: Revell, Mandy@Coastal
Subject: Ballona Wetlands Restoration Project EIR Decertification notice
Date: Thursday, September 28, 2023 4:03:59 PM
Attachments: [CDFW's Writ Compliance.2023.09.28.pdf](#)

Mandy,

On September 20, 2023, CDFW was served with a peremptory writ of mandate issued by the Los Angeles County Superior Court related to four CEQA lawsuits pertaining to the Ballona Wetlands Restoration Project. Among other actions, the Court's writ directs CDFW to decertify its EIR for the Ballona Wetlands Restoration Project that CDFW adopted on December 30, 2020, rescind its CEQA finding, and invalidate its approval of the project. The Court's writ also directs CDFW to notify all responsible agencies that have relied on the EIR to implement the Project that the EIR has been decertified. It is CDFW's belief that the Coastal Commission never acted as a responsible agency that relied on the EIR to implement the Project, but in an abundance of caution, CDFW hereby notifies the Coastal Commission that on September 28, 2023 CDFW decertified its EIR for the Ballona Wetlands Restoration Project."

Sincerely,

Rich

Richard Burg (He/Him)
Environmental Program Manager
California Department of Fish and Wildlife
South Coast Region 5
3883 Ruffin Road
San Diego, CA 92123
T: (858) 467-4209
F: (858) 467-4239

"Only when the last tree has died and the last river poisoned and the last fish caught will we realize that we cannot eat money".

-North American Cree Indian

PROOF OF SERVICE VIA E-MAIL

Case Name: **Protect Ballona Wetlands v. California Department of Fish & Wildlife and Related Actions**

Case Nos.: **21STCP00237, 21STCP00240, 21STCP00242, and 21STCV03657**

I declare:

I am employed in the Office of the Attorney General, and a member of the California State Bar. I am 18 years of age or older and not a party to this matter; my business address is 300 South Spring Street, Suite 1702, Los Angeles, CA 90013.

On October 19, 2023, pursuant to Code of Civil Procedure section 1010.6, I served the attached **INITIAL RETURN TO PEREMPTORY WRIT OF MANDATE** by e-mailing a true and correct copy thereof to the attorneys listed below, addressed as follows:

Jamie T. Hall (via email to jamie.hall@channellawgroup.com)
Channel Law Group, LLP
8383 Wilshire Blvd., Suite 750
Beverly Hills, CA 90211
Attorneys for Protect Ballona Wetlands

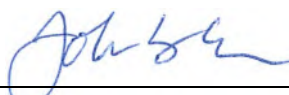
Bryan W. Pease (via email to bryan@bryanpease.com)
Law Offices of Bryan W. Pease
302 Washington St. #404
San Diego, CA 92103
Attorneys for Defend Ballona Wetlands et al.

Sabrina D. Venskus (via email to venskus@lawsv.com)
Venskus & Associates, A.P.C.
1055 Wilshire Blvd., Suite 1996
Los Angeles, CA 90017
Attorneys for Petitioner Ballona Wetlands Land Trust

Todd T. Cardiff (via email to todd@tcardifflaw.com)
Law Office of Todd T. Cardiff
1901 First Avenue, Ste. 219
San Diego, CA 92101
Attorneys for Petitioners Grassroots Coalition et al.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration was executed on October 19, 2023, at Los Angeles, California.

John S. Sasaki
Declarant


Signature

April FGC 2024 Item 24- Ballfields and parking lot NOT COMPATIBLE WITH BALLONA HABITAT/WILDLIFE ;Ballona Consistency Approval..... Status Update-FGC Petition 2021-026

patriciamcpherson1@verizon.net <patriciamcpherson1@verizon.net>

Sat 04/13/2024 12:44 PM

To:FGC <FGC@fgc.ca.gov>;Miller-Henson, Melissa@FGC <Melissa.Miller-Henson@fgc.ca.gov>;Cornman, Ari@FGC <Ari.Cornman@FGC.ca.gov>
Cc:jeanette vosburg <saveballona@hotmail.com>

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Attention FGC Commissioners and Ms. Miller-Henson, Ari Cornman,

This is the second of two Grassroots Coalition responses to Item 24- Ballona Consistency with OAL of the April 17-18 2024 FGC Meeting.

1. Grassroots Coalition supports the comments by the Ballona Wetlands Landtrust for Item 24.
2.. FGC has yet to agendize Petition 2021-026 from Grassroots Coalition and yet includes elements of our Petition as part of the response on Item 24. Namely, setting forth regulations of FGC that have been challenged in Petition 2021-026 and have yet to be heard publicly and that FGC staff have thus far, failed to be responsive to documents provided by Grassroots Coalition that demonstrate the Ballona Channel and its levee components that are OUTSIDE the fenceline of Ballona Wetlands Ecological Reserve(BWER) are NOT PART OF THE BWER. Regulations of CDFW and/or FGC that pertain to fishing regulations of no barbed hooks for use in the Ballona Channel are not disputed by Grassroots Coalition as regulations set forth for enforcement by CDFW HOWEVER, these regulations are NOT properly placed as being BWER Special Regulations 10(b,c,d). The County of LA places its own regulations on this County /USACE owned/ operated property per boating, biking, pedestrian use and while FGC may have additional regulations in concert with the County of LA, the BWER placement of 10 (b,c,d) are misplaced as part of the Reserve's boundaries' regulations.

3. FGC has gone 'off the charts' in its responses per the Landtrust's lawsuit against FGC per its failure to make a determination as to the consistency of allowing a continued parking lot on Area A of BWRC and continued Ballpark usage on Area C of BWER. By, 'Off the Charts' , Grassroots Coalition(GC) finds that FGC is acting in bad faith to the public and in particular with GC regarding their abandoned discussions with GC, as to the future of Ballona Wetlands, especially as the Staff Report fails to inculcate any information that FGC knows exists and pertains directly to the restoration of Ballona Wetlands. Namely, the boundary issues that are promoted by FGC as greater than exists for the BWER and the need to revisit those boundaries for potential inclusion of the freshwater marsh system as was discussed back in 2005 by FGC. The Staff Report includes extensive misinformation that FGC has been given documentation to demonstrate how highly misleading and false the narrative they are providing to the public. This includes but is not limited to the fact that:

a. the so-called public meetings on Ballona were highly superficial with no meaningful inculcation of public, stakeholder input and new scientific information. And that this was mainly due to,

b. the so-called Science Advisory Committee SAC - was contracted for only one outcome-- namely a full tidal saltwater embayment to be created. No alternatives were investigated and

no attention was given to the later scientific studies that proved Ballona was a predominantly freshwater driven ecosystem. And, [Ballona Wetlands Freshwater Power-Point Presentation prepared by Patrica McPherson, President of Grassroots Coalition | Grassroots Coalition](#)

Ballona Wetlands Freshwater Power-Point Presentation prepared by Patrica...

c. There was no adherence to the FGC approved Title 14, Section 630 Ballona specific Purpose and Goals as stipulated and approved by FGC in 2005 and sent to the Office of Administrative Law and approved also in 2005.

The Staff report--to the contrary, misleadingly cites to a County Summary for any reference to Ballona restoration to include tidal influence as much as feasible.

The FGC Title 14, Section 630 Ballona specific Approval of the Purpose and Goals of Ballona in 2005, included no such language and neither did/does the OAL approval in 2005. Staff FAILS TO PROVIDE THE EXACT LANGUAGE OF THE FGC APPROVAL AND OAL APPROVAL.

This appears to be a deliberate attempt to mislead the public. Similarly, CDFW throughout its old, stale, defunct FEIR never cites to the specific Purposes and Goals cited by FGC's approval forwarded and approved by OAL. In fact, CDFW never even performed per its own FGC created protocols of Fish & Game Code Section 1019, namely the performance of a Land Management Plan that per protocol of CDFW would have necessitated evaluation of Ballona's plentiful, natural freshwater resources. It still has been done. Fish & Game Code 1745..which essentially states that any/all agreements by CDFW must comport with the FGC approved Purpose and Goals of Ballona Wetlands Ecological Reserve. The Dept. has not adhered to this as the Dept. essentially handed over the planning of Ballona to the Ca. Coastal Conservancy who hadnt a clue as to CDFW protocol --including T. 14, Section 630 and Ballona Specific Purpose and Goals. Instead CDFW fell asleep and the State Coastal Conservancy proceeded to use the public's financing at their own whimsy of converting Ballona Wetlands into a fully tidal saltwater bay.

California Regulatory Notice Register 2005, Volume No. 20-Z, Starting on page 663 Ballona Wetlands Ecological Reserve https://www.dhcs.ca.gov/services/medical/Documents/AB1629/ZREG/ZREG%2020-Z_5.20.05_notice.pdf

Since, 2014 there has been the Sustainable Groundwater Management Act (SGMA). A legislative Act / Law pointedly created to protect California's freshwater resources. Further, SGMA carries protocol for Groundwater Dependent Ecosystems to which CDFW has a protocol for evaluation recommended by the Department of Water Resources. CDFW has failed to acknowledge SGMA/GDE--in anything--as this Staff Report fails also to acknowledge--SGMA and its component Groundwater Dependent Ecosystem(GDE) evaluation.

No mention in the FGC Staff Report that the Department of Water Resources has acknowledged Ballona as a freshwater dependent ecosystem. And, that evaluations to protect this resource are required. Evaluations CDFW never did and still resists performing contrary to its own Mission Statement.

In 2023 meetings with Ms. Henson, Mr. Ari Cornman we discussed SGMA/ GDE issues yet this 2024, Staff Report for Item 24 fails to reveal any of the groundwater protective components, and that CDFW has failed to embrace any of them. This despite that there is a division of Fish and Game that is solely devoted to the ensuring that GDE evaluation takes place on lands administered by CDFW. The gross indifference to adherence to FGC created regulations by CDFW is only heightened by the fact that FGC hides behind statements that THEY DO NOT ENFORCE their own regulations to ENSURE their created regulations are adhered to by CDFW. FGC however, DOES STATE in its Strategic Plan that FGC ASSURES COMPLIANCE. WHAT DOUBLESPEAK! and what a travesty that FGC does not ensure compliance from the Dept of Fish & Wildlife.

It is the wild west and the public is sick of CDFW's failure and now FGC's failure to adhere to their mission statements of protection of our California habitat and wildlife.

The Staff Report provides false and misleading statements to the public and its commissioners regarding the history of Ballona Wetlands.

The Staff Report argues in favor of allowing destruction to continue--namely disallowing the native plants of Ballona, to recover and offer habitat rather than an unnecessary parking lot that was supposed to have been restored to nature after Olympics from years ago gave rise to it becoming paved. Once a parking lot, always a parking lot--is now the motto of FGC protecting our California habitat.

The Staff Report argues, for continued destruction of habitat, rather than allowing for Mother Nature to restore Ballona as it has done in Area B. It took a Grassroots Coalition lawsuit against CDFW and its partner- Playa Vista to stop the unpermitted DRAINAGE OF THE WETLANDS in portions of Ballona that now POND WITH FRESHWATER --a condition CDFW argued would not happen if the illegal drains were sealed. Now, after just a few short years the area is blanketed by pickleweed, the very saltmarsh plants targeted by FGC in 2005 to be restored as the endangered Belding's Savannah Sparrow places preference on this vegetation for nesting.

Grassroots Coalition has recovered more freshwater that was being pumped and drained away from for Ballona, simply by asking LARWQCB to end an NPDES PERMIT of Playa Vista that sent the clean groundwater to the sanitary sewer system ---wasting away Ballona's freshwater. LARWQCB agreed it was not a best management practice and the water has been restored to flow into Ballona.

CDFW's whole argument for digging out Ballona to turn it into a saltwater bay---because Ballona is dying due to lack of water is a lie. **Ballona has plentiful freshwater that requires no heavy handed construction projects to simply let it flow into and across Ballona as falsely opined by Director Bonham --without any substantiation.**

Director Bonham has been wrong and has been proven to be wrong over and over again. His shooting range on the parking lot was Wrong. His lack of management on Ballona exposed the public to a grand fire with cascading bullets firing off all across the parking lot, Ballona and the adjacent public at Fisherman's Village. His lack of management on the ball fields has allowed for nighttime parties and disruption of wildlife movement in Area C---which has rare and endangered vegetation that one can hardly walk without stepping on it --depending the time of year, He has promoted draining the wetlands and was found guilty of violating the Coastal Act. He continues to promote drainage and allows for drainage in areas without permits for such drainage. **It's all he's got---drain Ballona's freshwater so we can pretend it doesn't exist.**

The failures of other wetland sites, namely Bolsa Chica in areas that saltwater inundation has led to drowning of the saltmarsh habitat...FGC has been alerted to the Bolsa Chica Sustainability Report which recommends immediate closure of the manmade opening to stop

the destruction of habitat. Elkhorn Slough--millions are being approved by the Wildlife Conservation Board to STOP the saltwater intrusion that drowns salt marsh habitat and threatens to destroy their salt pans. **Here, at Ballona , Director Bonham promotes the destruction of the rare salt pans, to inundate it with tidal saltwater.**

It is quite obvious the change in mission for FGC, to promote and allow continued, piecemealed destruction rather than protection of Ballona.

It is time for all the false narratives to end.

A new EIR must be done and it must include all the new information including the need to perform SGMA/ GDE evaluations as cited by the Department of Water Resources. Director Bonham has steered away from the truth and his false narratives have caught up with him.

[CDFW's Nefarious Scheme to Destroy Ballona, a Rare Coastal Wetlands | Grassroots Coalition](#)

CDFW's Nefarious Scheme to Destroy Ballona, a Rare Coastal Wetlands | Gr...

[Ballona Wetlands Ecological Reserve/Ballona Wetlands Needs SGMA/ GDE Protective Evaluation of its Freshwater Resources | Grassroots Coalition](#)

Ballona Wetlands Ecological Reserve/Ballona Wetlands Needs SGMA/ GDE Pro...

*"Two additional special regulations will allow licensed recreational use of a portion of an area of the proposed reserve known as Area C , and leased parking use under existing agreements, **unless it is determined that***

other uses are more appropriate for these areas. Because these licensed recreational and parking uses are not normally allowed on ecological reserves, these two special regulations are necessary when the department has determined these activities are appropriate and will cause no impacts to protected species and habitats .

FGC has absolutely nothing to support there is no ongoing negative impacts to protected species and habitat.

There is only evidence of harm, wilful negligence and destruction of habitat by the current uses and CDFW failure to protect.

There appears to be NO actual good faith by FGC. It is the environment that loses.

No approval for compatibility of the parking lot, ball field should be given by the FGC.

Patricia McPherson, Grassroots Coalition

Below is evidence of continued request for a Petition hearing and to work with FGC on issues of Ballona., both requests have no response from FGC Staff.

----- Forwarded Message -----

From: patriciamcpherson1@verizon.net <patriciamcpherson1@verizon.net>

To: Miller-Henson, Melissa@FGC <melissa.miller-henson@fgc.ca.gov>; Cornman <ari.cornman@fgc.ca.gov>

Cc: jeanette vosburg <saveballona@hotmail.com>; kathy knight <kathyknight66@gmail.com>; Margot Griswold <mgriswold@landiq.com>

Sent: Wednesday, November 8, 2023 at 03:23:33 PM PST

Subject: Re: Status Update-FGC Petition 2021-026



Grassroots Coalition

Good morning Melissa and Ari,

We would like to continue with our discussion of Petition 2021-026. We last provided you with data as to the ownership of the Ballona Channel, namely documents of the eminent domain action that was taken by the federal government (USACE) and the LA County's involvement in this ownership/management of the Ballona Channel and its levees. The recent CDFW language attached as a screen shot is from CDFW's Scoping (Nov. 7, 2023) invitation. The language also simply reiterates that the Ballona Channel is federally/ county owned and operated.

Hence, the Petition of 2021-026 we continue to request the removal of Fish & Game Code application that are specific to the Ballona Channel as part of the Ballona Wetland Ecological Reserve boundaries. The ER is outside the Ballona Channel boundaries. <https://wildlife.ca.gov/Regions/5/Ballona-EIR> this link provides the NOP information that contains :

The Los Angeles County Department of Public Works–Flood Control District (collectively, LACFCD) owns and operates the Ballona Creek channel and levee system, which are features of the Los Angeles County Drainage Area (LACDA) project authorized by Congress in 1990. The U.S. Army Corps of Engineers (Corps), in cooperation with the LACFCD, constructed the Ballona Creek channel and levees within the Ballona Reserve as part of the LACDA project.

The LACFCD and the Corps have jurisdiction over the Ballona Creek channel and levee system within the project site. As a result, authorization from the Corps under Section 404 of the Clean Water Act and Sections 10 and 14 of the Rivers and Harbors Act would be needed to carry out the Project. Corps approval also would be required to modify the Operation, Maintenance, Repair, Replacement and Rehabilitation Manual (OMRR&R) to reflect any approved changes to existing LACDA project infrastructure within the project site.

Additionally, as you cited below, we'd very much like to address with you the future of Ballona and in particular discuss its past and current FGC approval as a Title 14, Section 630 Terrestrial, NonMarine Ecological Reserve. (as also registered by OAL)

Our vision embraces California State Law of the Sustainable Groundwater Management Act and the Department of Water Resources acknowledgement of Ballona as a Groundwater Dependent Ecosystem. Ballona has plentiful fresh surface and groundwater that is readily available to remain upon Ballona. There is only a need for ending the wasteful, harmful drainage away from Ballona that is and has been occurring. Grassroots has gotten unpermitted

drains capped via prevailing litigation against CDFW, with the assistance of the California Coastal Commission. Rainwater ponding now occurs again and the Section 630, targeted pickleweed (saltmarsh vegetation) has grown back to support the endangered (and targeted) Belding's Savannah Sparrow. As we discussed earlier, the simple task of requesting permits (npdes) not be renewed that would throw away Ballona's clean freshwater to the sea or the sanitary sewer. Grassroots Coalition recently asked LARWQCB to disallow Playa Vista from extending one of their NPDES permits to send clean groundwater to the sanitary sewer as wasteful. LARWQCB agreed and the water is now sent to the freshwater marsh system. This system is designed to overflow into Ballona but instead CDFW allows for it to be sent to the ocean. This simply needs to stop. Numerous old agricultural drainage ditches also are allowed by CDFW to drain Ballona's ponding rainwater to the ocean via outlets to the Ballona Channel that, according to county online records reveal have no permit information. All the while certain CDFW persons claim Ballona is 'starved for water'.

In the meantime, let us please get back to addressing the Petition by Grassroots Coalition.
Thank you for your time in review of this letter,
Patricia McPherson, Grassroots Coalition

April 2024 FGC Meeting Item 24, Inconsistencies and Missed Opportunities, Ballona Wetlands Ecological REserve

patriciamcpherson1@verizon.net <patriciamcpherson1@verizon.net>

Sun 04/14/2024 10:07 AM

To:FGC <FGC@fgc.ca.gov>;Miller-Henson, Melissa@FGC <Melissa.Miller-Henson@fgc.ca.gov>;Cornman, Ari@FGC <Ari.Cornman@FGC.ca.gov>

Cc:Margot Griswold <mgriswold@landiq.com>;jeanette vosburg <saveballona@hotmail.com>;patricia mcpherson <patriciamcpherson1@verizon.net>;Walter Lamb <landtrust@ballona.org>;Rex Frankel <rexfrankel@yahoo.com>

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[Inconsistencies and Missed Opportunities Ballona Wetlands Ecological Reserve — Los Angeles Audubon Society](#)

Inconsistencies and Missed Opportunities Ballona Wetlands Ecologica...

The facts remain that the areas of the Ballona Wetlands were designated as a State Ecological Reserve with speci...

Agenda Item 24 Ballona Wetlands Ecological Reserve Land Use

Kathy Knight <kathyknight66@gmail.com>

Mon 04/15/2024 09:18 AM

To:FGC <FGC@fgc.ca.gov>;FGC <FGC@fgc.ca.gov>;Miller-Henson, Melissa@FGC <Melissa.Miller-Henson@fgc.ca.gov>;
Cornman, Ari@FGC <Ari.Cornman@FGC.ca.gov>

Some people who received this message don't often get email from kathyknight66@gmail.com. [Learn why this is important](#)

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April 15, 2024

TO: Melissa Miller-Henson, Executive Director
and Commissioners
California Fish & Game Commission
715 P Street, 16th Floor
Sacramento, CA 95814455

FROM: Ballona Ecosystem Education Project
1122 Oak St., Santa Monica, CA 90405

To California Fish & Game Commission:

Re: Agenda Item 24 Fish & Game Commission Determination of Compatibility for Land Uses in the
Ballona Wetlands
Ecological Reserve - at the April 17, 2024 meeting .

The Ballona Ecosystem Education Project has been working to protect, save, acquire and restore the
Ballona Wetlands
Ecological Reserve (BWER) for over 30 years.

We are concerned about the land use issues in your hearing on April 17th about Compatibility for
Land Uses in the BWER.

You are using a **DE-CERTIFIED EIR** for approving land use compatibility in the BWER. You cannot be
depending on
an EIR that has been decertified. A **NEW EIR** needs to be done.

See below the Coastal Conservancy acknowledgement of their Rescission of CEQA findings based on
the decertification
of the CDFW EIR.

We support the issues raised by Grassroots Coalition and the Ballona Wetlands Land Trust, except as it
relates to the
Little League Field, and ask that you pay close attention to them, and respond to them.

Thank you for your time to read this letter
Sincerely,
Kathy Knight, Board Member
Ballona Ecosystem Education Project
kathyknight66@gmail.com
(310) 450-5961



Rescission of CEQA Findings Related to the Ballona Wetlands Restoration Project

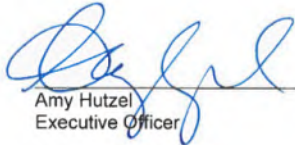
On December 30, 2020, the California Department of Fish and Wildlife ("CDFW") certified a final Environmental Impact Report ("EIR") under the California Environmental Quality Act (Pub. Resources Code, § 21000 *et seq.*; "CEQA") for the Ballona Wetlands Restoration Project ("Project"), and made CEQA findings as the lead agency regarding the Project and the EIR.

On May 27, 2021, the State Coastal Conservancy ("Conservancy") made CEQA findings as a responsible agency regarding the Project and the EIR.

On July 13, 2023, the Los Angeles Superior Court entered judgment against CDFW in a challenge to the legal adequacy of the EIR under CEQA.

On September 28, 2023, in compliance with the court judgment, CDFW decertified the EIR and rescinded its CEQA findings regarding the Project, among other actions.

In recognition of the CDFW's decertification of the EIR and rescission of its CEQA findings for the Project, the Conservancy hereby also rescinds its May 27, 2021 CEQA findings regarding the Project.



Amy Hutzler
Executive Officer

1/23/24

Date

Staff Summary for April 17-18, 2024

27A. Administrative Items – Legislation**Today's Item**Information Action

Receive updates on legislative activity and consider providing direction to staff on potential actions.

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

Staff has identified state legislation that may affect the Commission's resources and workload, or may be of interest to commissioners, and provides the status of those bills during this legislative session as of April 7, 2024. The Department has provided a report on active bills it is tracking during the legislative session (Exhibit 1).

At any meeting, the Commission may direct staff to provide information to, or share concerns with, bill authors. Today is an opportunity for the Commission to provide direction to staff concerning proposed legislation.

Legislative Calendar Highlights

The legislature reconvened for the second half of the 2023-2024 session on January 3, 2024. February 16 was the last day for new bills to be introduced for the session. Other calendar highlights include:

- April 26: Last day for policy committees to hear and report to fiscal committees those fiscal bills introduced in their house
- May 24: Last day for bills to be *passed out of the house of origin*
- May 28: Committee meetings may resume
- June 15: Budget Bill must be passed by *midnight*
- July 3: Last day for *policy committees* to meet and report bills
- July 3: *Summer recess* begins at the end of this day's session if the budget bill has been passed

Bills Introduced during the 2023-2024 Session

Staff has identified two senate bills (SB) and ten assembly bills (AB) that may affect the Commission's workload or are of potential interest to the Commission:

- SB 1085 (Nguyen) – Offshore energy production: wildlife impacts: report
- SB 1402 (Min) – 30 x 30 goal: state agencies: adoption, revision, or establishment of plans, policies, and regulations
- AB 1272 (Wood) – State Water Resources Control Board: drought planning
- AB 1284 (Ramos) – Tribal ancestral lands and waters: co-governance and co-management agreements

Staff Summary for April 17-18, 2024

- AB 1797 (Wood) – State crustacean: This bill would make Dungeness crab the official state crustacean of California
- AB 2196 (Connolly) – Beaver Restoration
- AB 2220 (Bennett) – Fish: commercial fishing
- AB 2252 (Mathis) – California Department of Fish and Wildlife: beaver translocation
- AB 2443 (Carillo, Juan) – Western Joshua Tree Conservation Act: agreements with counties or cities: industrial and commercial projects
- AB 2552 (Friedman) – Pesticides: anticoagulant rodenticides
- AB 2558 (Hart) – Department of Transportation projects: fish passage
- AB 3220 (Papan) – Marine resources: California Department of Fish and Wildlife: authority: mariculture

The most current version of individual bills, their history and their status, may be found at www.leginfo.legislature.ca.gov.

Significant Public Comments

Two comments express opposition to AB 2220 and request the Commission to take a position. The proposed legislation would remove incidental take exceptions for giant seabass and white sharks using gill nets or roundhaul nets, make all gill and trammel nets non-transferable, close remaining state waters where these nets are currently allowed, and empower the Department to mandate on-board observers.

1. A commercial fisherman with 50+ years' experience opposes AB 2220 and requests the Commissioners oppose the bill. He asserts that the bill harms California fisheries in a multitude of ways, threatening the livelihood of fishermen through economic loss, reducing viable fishing areas, and preventing opportunities for additional revenue. They conclude that AB 2220 sidesteps the Department's and Commission's authority; both are actively working to address bycatch issues within the fishery (Exhibit 2).
2. The Alliance of Communities for Sustainable Fisheries opposes AB 2220 and requests the Commission provide comments opposing the bill to the Legislature. They assert that AB 2220 misrepresents facts and threatens the scientific and public process provided by the Marine Life Management Act and the Department and Commission process for fisheries management (Exhibit 3).

Recommendation (N/A)

Exhibits

1. [Department legislative report, dated April 7, 2024](#)
2. [Email from Gary Burke, received April 4, 2024](#)
3. [Letter from Alan Alward, Co-Chair, Alliance of Communities for Sustainable Fisheries, received April 4, 2024](#)

Motion (N/A)



Department of Fish & Wildlife Legislative Report

April 2024
(As of April 7, 2024)

[AB 828](#)

([Connolly](#) D) Sustainable groundwater management: managed wetlands.

Last Amended: 01/11/2024

Status: 01/29/2024 – Read third time. Passed. Ordered to the Senate. In the Senate. Read first time. To Com. on RLS. for assignment.

Summary: This bill would add the terms "managed wetland" and "small community water system" to the Sustainable Groundwater Management Act. It would prohibit groundwater sustainability agencies from using their power to control how much water is taken by small water systems for disadvantaged communities or for managed wetlands, unless certain conditions are met. This bill would also prohibit a groundwater sustainability agency from imposing a fee upon a small community water system serving a disadvantaged community or managed wetland extractors, provided the water use for each user does not increase above the extractor's average annual extraction from 2015 to 2020. This bill would sunset on January 1, 2028.

[AB 1272](#)

([Wood](#) D) State Water Resources Control Board: drought planning.

Last Amend: 09/01/2023

Status: Withdrawn from Engrossing and Enrolling. Ordered to the Senate. In Senate. Held at Desk.

Summary: This bill would require the State Water Resources Control Board, in consultation with the Department of Fish and Wildlife, to adopt principles and guidelines for diversion and use of water in coastal watersheds, as specified, during times of water shortage for drought preparedness and climate resiliency. The bill would require that the principles and guidelines allow for the development of locally generated watershed-level plans to support public trust uses, public health and safety, and the human right to water in times of water shortage, among other things. The bill also would require the state board, prior to adopting those principles and guidelines, to allow for public comment and hearing, as provided. The bill would make the implementation of these provisions contingent upon appropriation.

[AB 1284](#)

([Ramos](#) D) Tribal ancestral lands and waters: cogovernance and comanagement agreements.

Last Amend: 01/22/2024

Status: 01/29/2024 - Read third time. Passed. Ordered to the Senate. In Senate. Read first time. To Com. on RLS. for assignment.

Summary: This bill would provide that the Legislature encourages the Natural Resources Agency, and its departments, conservancies, and commissions, to enter into cogovernance and comanagement agreements with federally recognized tribes. The bill would authorize the Secretary of the Natural Resources Agency or a delegate to enter into agreements with federally recognized tribes for the purposes of shared responsibility, decision-making, and partnership in resource management and conservation within a tribe's ancestral lands and waters, and would require the secretary or a delegate to be the signatory for the state for these agreements. The bill would authorize the secretary or a delegate, within 90 days of a federally recognized tribe's request, to begin government-to-government negotiations on cogovernance and comanagement agreements with the tribe.

[AB 1588](#)

([Wilson](#) D) Affordable Internet and Net Equality Act of 2024.

Last Amend: 01/22/2024

Status: 01/29/2024 – Read third time. Passed. Ordered to the Senate. In Senate. Read first time. To Com. on RLS. for assignment.

Summary: This bill would require the Department of Technology, in coordination with the Public Utilities Commission and the Department of General Services, to develop and establish the Net Equality Program. The bill would require the state and state agencies to only enter into a procurement contract with an internet service provider offering affordable home internet service, which costs no more than \$40 per month and meets specified minimum speed requirements, to households participating in certain public assistance programs, or with an internet service provider participating in the federal Affordable Connectivity Program, or any other state or federal program that offers broadband affordability assistance for households that qualify for that program, and that offers to households that qualify for those programs internet service that costs no more than \$40 per month and meets specified minimum speed requirements.

[AB 1797](#)

([Wood](#) D) State crustacean.

Last Amend: 02/08/2024

Status: 04/01/2024 - Read third time. Passed. Ordered to the Senate. (Ayes 72. Noes 0.) In Senate. Read first time. To Com. on RLS. for assignment.

Summary: This bill would make the Dungeness crab the official state crustacean of California.

[AB 1828](#)

([Waldron](#) R) Personal income taxes: voluntary contributions: Endangered and Rare Fish, Wildlife, and Plant Species Conservation and Enhancement Account: Native California Wildlife Rehabilitation Voluntary Tax Contribution Fund: covered grants.

Introduced: 03/07/2024

Status: 04/04/2024 - Read third time. Passed. Ordered to the Senate. In Senate. Read first time. To Com. on RLS. for assignment.

Summary: Current law, until January 1, 2025, allows an individual taxpayer to contribute amounts in excess of the taxpayer's personal income tax liability for the support of specified funds and accounts, including, among others, to the Endangered and Rare Fish, Wildlife, and

Plant Species Conservation and Enhancement Account, a continuously appropriated account established in the Fish and Game Preservation Fund, or until December 1 of a calendar year that the Franchise Tax Board determines the amount of contributions estimated to be received will not at least equal the minimum contribution amount of \$250,000. This bill would extend the operability of the taxpayer contribution described above until the sooner of January 1, 2032, or until December 1 of a calendar year that the Franchise Tax Board determines the amount of contributions estimated to be received will not at least equal the minimum contribution amount of \$250,000, as provided.

AB 1838

(Jackson D) Wildlife areas: San Jacinto Wildlife Area.

Introduced: 04/03/2024

Status: 04/04/2024 – Re-referred to Com. on W., P., &W.

Summary: The bill would require the Department of Fish and Wildlife, beginning January 1, 2025, and every 15 years thereafter, to prepare an update to the management plan for the San Jacinto Wildlife Area, as provided. The bill would require the department to develop partnerships with community-based organizations, including environmental organizations, for purposes of fundraising for, maintaining the habitat of, engaging in conservation projects for, and providing recreational programs in, the San Jacinto Wildlife Area. The bill would require the department, on or before December 31, 2025, and annually thereafter, to hold a public hearing relating to the San Jacinto Wildlife Area, as provided.

AB 1889

(Friedman D) General plan: wildlife connectivity element.

Last Amend: 04/01/2024

Status: 04/02/2024 - Re-referred to Com. on L. GOV

Summary: This bill would require a city or county's general plan to include a wildlife connectivity element, or related goals, policies, and objectives integrated in other elements, that considers the effect of development within the jurisdiction on fish, wildlife, and habitat connectivity, as specified. The bill would require the wildlife connectivity element to, among other things, identify and analyze connectivity areas, permeability, and natural landscape areas within the jurisdiction, incorporate and analyze specified guidelines and standards, incorporate and analyze relevant information from specified sources, and incorporate and analyze relevant best available science. The bill would require a city or county subject to these provisions to adopt or review the wildlife connectivity element, or related goals, policies, and objectives integrated in other elements, upon the adoption or next revision of one or more elements on or after January 1, 2025.

AB 1951

(Fong, Vince R) California Environmental Quality Act: exemption: roadside wildlife prevention projects.

Last Amend: 03/21/2024

Status: 04/01/2024 - Re-referred to Com. on NAT. RES.

Summary: The California Environmental Quality Act (CEQA) requires a lead agency to prepare a mitigated negative declaration for a project that may have a significant effect on the environment if revisions in the project would avoid or mitigate that effect and there is no

substantial evidence that the project, as revised, would have a significant effect on the environment. This bill would exempt from CEQA a project for wildfire prevention within 50 feet of either side of a roadway. Because a lead agency would be required to determine whether a project qualifies for this exemption, the bill would impose a state-mandated local program.

[AB 1992](#)

([Boerner](#) D) Coastal resources: coastal resources development permits: blue carbon demonstration projects

Introduced: 01/30/2024

Status: 03/20/2024 - From committee: Do pass and re-refer to Com. on APPR. Re-referred to Com. on APPR.

Summary: This bill would authorize the California Coastal Commission to authorize blue carbon demonstration projects, as defined, in order to demonstrate and quantify the carbon sequestration potential of these projects to help inform the state's natural and working lands and climate resilience strategies. The bill would, among other things, authorize the commission to require an applicant with a project that impacts coastal wetland, subtidal, intertidal, or marine habitats or ecosystems to build or contribute to a blue carbon demonstration project.

[AB 1998](#)

([Mathis](#) R) California Environmental Quality Act: Department of Fish and Wildlife: review of environmental documents: revenue and cost tracking and accounting.

Introduced: 01/30/2024

Status: 02/12/2024 - Referred to Com. on W., P., & W.

Summary: The California Environmental Quality Act (CEQA) requires a lead agency, as defined, to prepare, or cause to be prepared, and certify the completion of an environmental impact report on a project that it proposes to carry out or approve that may have a significant effect on the environment or to adopt a negative declaration if it finds that the project will not have that effect. CEQA requires the lead agency to consult with a public agency that is a responsible agency or a trustee agency during the environmental review process. Current law authorizes the Department of Fish and Wildlife to impose and collect filing fees in specified amounts to defray the costs of managing and protecting fish and wildlife trust resources, including, but not limited to, consulting with other public agencies, reviewing environmental documents, recommending mitigation measures, developing monitoring requirements for purposes of CEQA, and other activities protecting those trust resources identified in a review pursuant to CEQA. This bill would require the department to separately track and account for all revenues collected under the above filing fee provision and all costs incurred in its role as a responsible agency or trustee agency under CEQA.

[AB 2042](#)

([Jackson](#) D) Police canines: standards and training.

Last Amend: 03/21/2024

Status: 04/01/2024 - Re-referred to Com. on PUB. S

Summary: This bill would require the Commission on Peace Officer Standards and Training, on or before January 1, 2026, to develop guidelines for the appropriate use of dogs by law enforcement. By 2027, all law enforcement agencies in California would be required to have a policy in place for the use of dogs that meets these standards. Additionally, regular training for

both the dogs and their handlers must cover the guidelines set by the Commission. This bill would impose a state mandated local program.

[AB 2060](#)

([Soria](#) D) Lake and streambed alteration agreements: exemptions.

Introduced: 02/01/2024

Status: 04/04/2024 – In committee: Hearing postponed by committee.

Summary: Current law prescribes various requirements for lake and streambed alteration agreements and establishes various exemptions from these provisions, including, until January 1, 2029, the diversion of flood flows for groundwater recharge. This bill would indefinitely exempt from these provisions the temporary operation of existing infrastructure or temporary pumps being used to divert flood stage flows, as identified by the California Nevada River Forecast Center or the State Water Resources Control Board, or near-flood stage flows, as defined, for groundwater recharge as long as certain conditions are met.

[AB 2091](#)

([Grayson](#) D) California Environmental Quality Act: exemption: public access: nonmotorized recreation.

Last Amend: 03/21/2024

Status: 04/01/2024 - Re-referred to Com. on W., P., & W.

Summary: Would exempt from the California Environmental Quality Act (CEQA) a change in use approved by a public agency to allow public access, as provided, exclusively for nonmotorized recreation, as defined, in areas acquired or managed by a public agency for open space or park purposes. The bill would require the lead agency, if the lead agency determines that an activity is not subject to CEQA pursuant to this provision and determines to approve or carry out the activity, to file a notice with the State Clearinghouse in the Office of Planning and Research and with the county clerk of the county in which the land is located, as provided. By imposing duties on public agencies related to the exemption, this bill would create a state-mandated local program. The bill would repeal these provisions on January 1, 2030.

[AB 2196](#)

([Connolly](#) D) Beaver Restoration

Last Amend: 03/19/2024

Status: 03/20/2024 - Re-referred to Com. on W., P., & W.

Summary: Current law, except as provided, authorizes any owner or tenant of land or property that is being damaged or destroyed or is in danger of being damaged or destroyed by certain animals, including, among others, the beaver, to apply to the Department of Fish and Wildlife for a permit to kill the animals. Under current law, it is unlawful for any person to trap any fur-bearing mammal for purposes of recreation or commerce in fur. Under existing law, a violation of the Fish and Game Code, or of any rule, regulation, or order made or adopted under that code, is a crime. This bill would require the department to, through consultation with beaver restoration program partners, develop a program to promote beaver restoration across California, as provided.

[AB 2220](#)

([Bennett](#) D) Fish: commercial fishing

Last Amend: 02/07/2024

Status: 02/26/2024 - Referred to Com. on W., P., & W.

Summary: Current law generally regulates commercial fishing. Under current law, any violation of the Fish and Game Code, or of any rule, regulation, or order made or adopted under the code, is a crime. This bill would authorize the Department of Fish and Wildlife to adopt and enforce regulations to require any commercial fishing vessel operating with a validly issued permit from the state to carry an independent third-party observer onboard the vessel while operating within state fisheries. By expanding the scope of a crime, the bill would impose a state-mandated local program.

[AB 2252](#)

(Mathis R) Department of Fish and Wildlife: beaver translocation

Introduced: 02/08/2024

Status: 02/26/2024 - Referred to Com. on W., P., & W.

Summary: Current law, except as provided, authorizes any owner or tenant of land or property that is being damaged or destroyed or is in danger of being damaged or destroyed by certain animals, including, among others, the beaver, to apply to the Department of Fish and Wildlife for a permit to kill the animals. This bill would require the department to develop a program to facilitate the translocation of beavers across California for conservation purposes, as provided. Because a violation of any rule, regulation, or order related to the beaver translocation program would be a crime, the bill would impose a state-mandated local program.

[AB 2285](#)

(Rendon D) Natural resources: equitable outdoor access: 30X30 goal: urban nature-based projects

Last Amend: 03/21/2024

Status: 04/01/2024 - Re-referred to Com. on W., P., & W

Summary: This bill would provide that, to advance and promote environmental and conservation policies and budget actions, the Governor's office, state agencies, and the Legislature, when distributing resources, shall aspire to recognize the coequal goals and benefits of the 30x30 goal and Outdoors for All, and would require consideration to include, among other things, higher land value acquisition and development costs per acre, the acute health needs of a local population due to historic lack of greenspace access and development externalities, local park needs assessment plans, and the availability of mobility options near a proposed land conservation site. The bill would encourage regulatory agencies, including the Department of Toxic Substances Control, to work with local communities to restore degraded lands that could contribute to a more equitable strategy for meeting the state's goals. The bill would require state funding agencies, including certain state conservancies and the Wildlife Conservation Board, when programming and awarding funds to revise, modify, or amend guidelines as necessary to meet the state's goals, to allow for urban nature-based projects on degraded lands to be eligible and competitive for state funds.

[AB 2320](#)

(Irwin D) Wildlife Connectivity and Climate Adaptation Act of 2024: wildlife corridors

Introduced: 02/12/2024

Status: 02/26/2024 - Referred to Coms. on W., P., & W. and NAT. RES.

Summary: Current law requires the Natural Resources Agency, in implementing actions to achieve the goal to conserve at least 30% of the state's lands and coastal waters by 2030

established by executive order, to prioritize specified actions. Current law requires the Secretary of the Natural Resources Agency to prepare and submit an annual report to the Legislature on the progress made during the prior calendar year toward achieving that goal, as provided. Current law requires that annual report to include certain information, including, among other information, the progress made in the prior calendar year to address equity as part of the above-described goal. This bill, the Wildlife Connectivity and Climate Adaptation Act of 2024, would additionally require the agency, as part of that report, to identify key wildlife corridors, as defined, in the state, connections between large blocks of natural areas and habitats, progress on protecting additional acres of wildlife corridors, and goals for wildlife corridor protection in the next 5 years, as provided.

[AB 2322](#)

(Hart D) Grant programs: administration

Introduced: 02/12/2024

Status: 04/04/2024 – From committee: Do pass and re-refer to Com. on APPR. With recommendation: To Consent Calendar. Re-referred to Com. on APPR.

Summary: Current law establishes various grant programs. The Grant Information Act of 2018 requires the California State Library to create an internet web portal to provide a centralized location for grant seekers to find state grant opportunities and requires the California State Library to report to the Legislature on the effectiveness of the portal, including, among other things, the utilization rate by state agencies. This bill would impose minimum requirements for the administration of covered grants that meet maximum size and duration requirements and are available to nonprofit organizations, as defined. The bill would require administrators, as defined, to perform specified duties, including, among others, posting eligibility, application, and other information for covered grants on their internet website and the above-described grant portal created by the California State Library.

[AB 2330](#)

(Holden D) Endangered species: incidental take: wildfire preparedness activities

Last Amend: 04/01/2024

Status: 04/02/2024 - Re-referred to Com. on W., P., & W.

Summary: This bill would authorize a city, county, city and county, special district, or other local agency to submit to the department a locally designed voluntary program to conduct wildfire preparedness activities on land designated as a fire hazard severity zone, as defined, that minimizes impacts to wildlife and habitat for candidate, threatened, and endangered species, and meets specified criteria. The bill would require the department to approve or deny the application and notify the local agency of the approval or denial within 90 days of receipt of the application, and would allow for resubmission of a denied application, as specified. The bill would require the department to provide an approved applicant with the terms and conditions within 30 days of approval to initiate the locally designed voluntary program, in lieu of an incidental take permit, as provided. The bill would require the department, commencing January 1, 2026, to annually post a summary of the locally designed voluntary program submissions on its internet website, as specified.

[AB 2404](#)

(Lee D) State and local public employees: labor relations: strikes.

Last Amend: 03/21/2024

Status: 04/01/2024 - Re-referred to Com. on P.E. & R.

Summary: The Meyers-Milias-Brown Act and the Ralph C. Dills Act regulate the labor relations of employees and employers of local public agencies and the state, respectively. The acts grant specified employees of local public agencies and the state the right to form, join, and participate in the activities of employee organizations of their choosing. This bill would provide, except as specified, that it is not unlawful or a cause for discipline or other adverse action against a public employee for that public employee to refuse to enter property that is the site of a primary strike, perform work for a public employer involved in a primary strike, or go through or work behind a primary strike line. The bill would prohibit a public employer from directing a public employee to take those actions. The bill would authorize a recognized employee organization to inform employees of these rights and encourage them to exercise those rights.

AB 2409

(Papan D) Office of Planning and Research: permitting accountability transparency dashboard.

Introduced: 02/12/2024

Status: 04/03/2024 – In committee: Hearing postponed by committee.

Summary: Would require the Office of Planning and Research, on or before January 1, 2026, to create and maintain, as specified, a permitting accountability transparency internet website (dashboard). The bill would require the dashboard to include a display for each permit to be issued by specified state agencies for all covered projects. The bill would define various terms for these purposes. The bill would also require the dashboard to include, but not be limited to, information for each permit to be issued by a state agency that is required for the completion of the project, including, among other requirements, the permit application submission date. The bill would require each state agency with a responsibility for issuing a permit for a covered project to provide information in the appropriate time and manner as determined by the office.

AB 2443

(Carrillo, Juan D) Western Joshua Tree Conservation Act: agreements with counties or cities: industrial and commercial projects.

Introduced: 02/13/2024

Status: 02/26/2024 - Referred to Com. on W., P., & W.

Summary: The Western Joshua Tree Conservation Act would prohibit any person or public agency from importing into the state, exporting out of the state, or taking, possessing, purchasing, or selling within the state, a western Joshua tree or any part or product of the tree, except as provided. Pursuant to that act, the Department of Fish and Wildlife is authorized to enter into an agreement with any county or city to delegate to the county or city the ability to authorize the taking of a western Joshua tree associated with developing single-family residences, multifamily residences, accessory structures, and public works projects concurrent with its approval of the project if certain conditions are met. This bill would additionally authorize the department to enter into an agreement with any county or city to delegate to the county or city the ability to authorize the taking of a western Joshua tree associated with commercial and industrial projects, as provided.

AB 2465

(Gipson D) Equity: socially disadvantaged groups and organizations: nonprofit organizations: grants.

Introduced: 02/13/2024

Status: 03/11/2024 - Referred to Coms. on NAT. RES. and W., P., & W.

Summary: Existing law establishes the Wildlife Conservation Board, the Department of Conservation, the Director of Forestry and Fire Protection, the Department of Parks and Recreation, the State Coastal Conservancy, the Sacramento-San Joaquin Delta Conservancy, the Sierra Nevada Conservancy, the California Environmental Protection Agency, and the Department of Water Resources. This bill would require the above entities, until January 1, 2031, when awarding those grants, to prioritize the awarding of grant funding to socially disadvantaged organizations, as defined. This bill would also expand the definition of socially disadvantaged group to include descendants of enslaved persons in the United States.

[AB 2552](#)

(Friedman D) Pesticides: anticoagulant rodenticides.

Last Amend: 04/04/2024

Status: 04/04/2024 – From committee chair, with author’s amendments: Amend, and re-refer to Com. on E.S. & T.M. Read second time and amended.

Summary: This bill would expand an existing moratorium on second-generation anticoagulant rodenticides and diphacinone to include first-generation anticoagulant rodenticides. The bill would additionally prohibit the use of a second-generation anticoagulant rodenticide within 2,500 feet of a wildlife habitat area, and prohibit the use of first-generation anticoagulant rodenticide, defined as a pesticide product containing the active ingredients diphacinone, chlorophacinone, or warfarin, in a wildlife habitat area or within 2,500 feet of a wildlife habitat area, as specified.

[AB 2558](#)

(Hart D) Department of Transportation projects: fish passage.

Introduced: 02/14/2024

Status: 04/02/2024 - From committee: Do pass and re-refer to Com. on W., P., & W. Re-referred to Com. on W., P., & W.

Summary: Current law, through the year 2025, requires the Department of Transportation to prepare an annual report to the Legislature describing the status of the department’s progress in locating, assessing, and remediating barriers to fish passage. Current law requires the department to pursue development of a programmatic environmental review process with appropriate state and federal regulatory agencies for remediating barriers to fish passage that will streamline the permitting process for projects. This bill would extend this annual reporting requirement until the year 2030 and would require the reports to include other specified information. The bill would impose a deadline of January 1, 2026, for the department to implement the programmatic environmental review process.

[AB 2572](#)

(Muratsuchi D) Ocean carbon dioxide removal projects

Last Amend: 03/21/2024

Status: 04/01/2024 – Re-referred to Coms. on NAT. RES.

Summary: Existing law requires the State Air Resources Board to establish a Carbon Capture, Removal, Utilization, and Storage Program to capture, remove, and store carbon dioxide, as provided. Existing law requires the program, among other things, to evaluate the efficacy, safety, and viability of specified technologies and to facilitate the capture and

sequestration of carbon dioxide from these technologies, where appropriate. This bill would require the state board, among other things, to develop criteria to determine whether an ocean carbon dioxide removal project is environmentally safe and sustainable, and to qualify environmentally safe and sustainable projects for inclusion in carbon credit programs, including, but not limited to, the Low Carbon Fuel Standard regulations and the market-based compliance mechanism, as provided. The bill would require the state board and any agency with a relevant financial incentive program, as specified, to consider an ocean carbon dioxide removal program to the extent the program achieves similar or better climate and environmental policy goals.

[AB 2610](#)

([Garcia](#) D) Protected species: authorized take: Salton Sea Management Program: System Conservation Implementation Agreement.

Introduced: 02/14/2024

Status: 03/04/2024 - Referred to Com. on W., P., & W.

Summary: Current law authorizes the Department of Fish and Wildlife, if certain conditions are fulfilled, to authorize the take of species, including fully protected species, resulting from impacts attributable to implementation of the Quantification Settlement Agreement on specified lands and bodies of water, including the Salton Sea. This bill would additionally authorize the department, if certain conditions are fulfilled, to authorize the take of species resulting from impacts attributable to the implementation of the Salton Sea Management Program or implementation of any System Conservation Implementation Agreement between the United States Bureau of Reclamation and the Imperial Irrigation District to implement the Lower Colorado River Basin System Conservation and Efficiency Program, as provided, on the specified lands and bodies of water.

[AB 2643](#)

([Wood](#) D) Cannabis cultivation: environmental remediation.

Last Amend: 03/21/2024

Status: 04/01/2024 - Re-referred to Com. on W., P., & W

Summary: Current law requires the Department of Fish and Wildlife to establish the watershed enforcement program to facilitate the investigation, enforcement, and prosecution of offenses relating to unlawful water diversions and other violations of the Fish and Game Code associated with cannabis cultivation. Current law also requires the department, in coordination with specified state agencies, to establish a permanent multiagency task force to address the environmental impacts of cannabis cultivation. This bill would require the department to conduct a study to create a framework for cannabis site restoration with the goal of providing guidance for the cleanup, remediation, and restoration of environmental damage caused by cannabis cultivation, and to complete the study by January 1, 2027, as specified. The bill would authorize the department to enter into an agreement with a nongovernmental organization or educational institution for that entity to conduct the study.

[AB 2722](#)

([Friedman](#) D) California Endangered Species Act: wolverines.

Introduced: 02/14/2024

Status: 03/04/2024 – Referred to Com. on W.,P., & W.

Summary: This bill would require the department, in any status assessment for wolverines prepared pursuant to the plan described above, to assess the feasibility of a population

reintroduction or supplementation program with the goal of restoring a viable population of wolverines to the state.

[AB 2875](#)

([Freidman](#) D) Wetlands: state policy.

Introduced: 02/15/2024

Status: 03/11/2024 - Referred to Com. on W., P., & W.

Summary: By Executive Order No. W-59-93, former Governor Pete Wilson declared it to be the policy of the state that its Comprehensive Wetlands Policy rests on three primary objectives, including the objective of ensuring no overall net loss and long-term net gain in the quantity, quality, and permanence of wetlands acreage and values, as provided. This bill would declare that it is the policy of the state to ensure no net loss and long-term gain in the quantity, quality, and permanence of wetlands acreage and values in California. The bill would make related legislative findings and declarations.

[AB 3162](#)

([Bennett](#) D) Octopus: aquaculture: sale: prohibition.

Introduced: 04/04/2024

Status: 04/04/2024 – From committee chair with author’s amendments: Amend, and re-refer to Com. on W., P., & W. Read second time and amended.

Summary: This bill would prohibit a person from engaging in the aquaculture, as defined, of any species of octopus for the purpose of human consumption. The bill would prohibit a business owner or operator from knowingly engaging in the sale in the state of any species of octopus that is the result of aquaculture.

[AB 3220](#)

([Papan](#) D) Marine resources: Department of Fish and Wildlife: authority: mariculture

Last Amend: 03/21/2024

Status: 04/01/2024 - Referred to Com. on W., P., & W.

Summary: Current law establishes the Department of Fish and Wildlife and sets forth the duties of that department, which include administering various programs for the protection and conservation of fish and wildlife resources. This bill would require the department to consider and, if appropriate, investigate whether and how to seek state verification authority from the United States Army Corps of Engineers and any other appropriate federal agencies that offer state verification authority in order to streamline the review and approval of federal permits issued by the United States Army Corps of Engineers or another federal agency that may be required by a mariculture project that intends to operate within the state.

[AB 3227](#)

([Alvarez](#) D) California Environmental Quality Act: exemption: stormwater facilities: mitigation

Last Amend: 04/01/2024

Status: 04/02/2024 – Re-referred to Com. on NAT. RES.

Summary: The California Environmental Quality Act (CEQA) requires a lead agency, as defined, to prepare, or cause to be prepared, and certify the completion of an environmental

impact report on a project that it proposes to carry out or approve that may have a significant effect on the environment or to adopt a negative declaration if it finds that the project will not have that effect. CEQA also requires a lead agency to prepare a mitigated negative declaration for a project that may have a significant effect on the environment if revisions in the project would avoid or mitigate that effect and there is no substantial evidence that the project, as revised, would have a significant effect on the environment. Existing law exempts from the requirements of CEQA specific actions necessary to prevent or mitigate an emergency. This bill would specify that this exemption includes routine maintenance of stormwater facilities that are fully concrete or that have a conveyance capacity of less than a 100-year storm event. Because a lead agency would be required to determine whether a project qualifies for this exemption, the bill would impose a state-mandated local program.

AB 3238

(Garcia D) Electrical infrastructure projects: endangered species: natural community conservation plans

Introduced: 02/16/2024

Status: 4/04/2024 – From committee: Amend, and do pass as amended and re-refer to Com. on W., P., & W.

Summary: The California Endangered Species Act (CESA), except as authorized by the Director of Fish and Wildlife, generally prohibits the take of a species determined to be an endangered, threatened, or candidate species under the act. The CESA provides that no further authorization or approval from the director is necessary for a person who obtained an incidental take statement or an incidental take permit under the federal Endangered Species Act if the person provides to the director a copy of the incidental take statement or incidental take permit and the director determines that the incidental take statement or incidental take permit is consistent with the requirements of the act. This bill would, for an electrical infrastructure project, as defined, require the director to publish a determination authorizing the incidental take of a species under the same terms and condition provided under federal law if the public utility undertaking the project has obtained an incidental take statement or incidental take permit under the federal act.

AB 3241

(Pacheco D) Law enforcement: police canines.

Introduced: 02/16/2024

Status: 03/11/2024 Referred to Com. on PUB. S.

Summary: Would require the Commission on Peace Officer Standards and Training (POST) to adopt uniform, minimum guidelines regarding the use of canines by law enforcement, including legal standards established by the bill, and to certify courses of training for all law enforcement canine handlers and those law enforcement supervisors directly overseeing canine programs, as specified. The bill would require, on or before July 1, 2025, each law enforcement agency to maintain a policy for the use of canines by the agency that, at a minimum, complies with the guidelines adopted by POST, and would require law enforcement agencies to establish a training regimen that includes a course certified by the commission. Because the bill would impose additional duties on local law enforcement agencies, the bill would impose a state-mandated local program.

[SB 936](#)

(Seyarto R) California Environmental Quality Act: exemption: road and safety improvement projects.

Last Amend: 02/20/2024

Status: 03/15/2024 - Set for hearing April 17.

Summary: The California Environmental Quality Act (CEQA) requires a lead agency to prepare a mitigated negative declaration for a project that may have a significant effect on the environment if revisions in the project would avoid or mitigate that effect and there is no substantial evidence that the project, as revised, would have a significant effect on the environment. This bill would exempt from CEQA activities or projects undertaken by the Department of Transportation for road and safety improvements at any of the 15 locations in the state highway system with the highest rates of vehicle collisions at any given time, as determined in accordance with data collected by the department.

[SB 1009](#)

(Dahle R) Mount Shasta Fish Hatchery: lease.

Introduced: 02/01/2024

Status: 03/14/2024 – Set for hearing April 9.

Summary: This bill allows for the Director of General Services, with the Department of Fish and Wildlife's approval, to grant a lease at no cost for up to 25 years (with the possibility of renewal) of a portion of the Mount Shasta Fish Hatchery to the Mt Shasta Museum Association. This lease would require the property to be used for education purposes and would include provisions such as allowing public access, obtaining liability insurance, and maintaining the property. The state and the Department of Fish and Wildlife would not be held liable for any actions or omissions of the lessee during the lease agreement. The bill justifies the need for this special statute for the Mount Shasta Fish Hatchery.

[SB 1085](#)

(Nguyen R) Offshore energy production: wildlife impacts: report

Introduced: 02/12/2024

Status: 02/21/2024 - Referred to Com. on N.R. & W.

Summary: Would require the Department of Fish and Wildlife to prepare and submit a report to the Legislature on or before January 1, 2029, regarding the environmental impact on marine mammals and wildlife from offshore energy production off the California coast.

[SB 1157](#)

(Hurtado D) State contracts: certification process.

Introduced: 02/14/2024

Status: 03/26/2024 - Set for hearing April 9.

Summary: Current law requires a contract entered into by any state agency for the procurement or laundering of apparel, garments, or corresponding accessories, or the procurement of equipment, materials, or supplies, other than procurement related to a public works contract, to require that a contractor certify that nothing furnished to the state pursuant to the contract has been laundered or produced by certain types of labor. Current law makes any person who falsely certifies pursuant to these provisions guilty of a misdemeanor. This bill would revise the above contracting requirements to also require a contractor to certify, under

penalty of perjury, that the contract complies with specified requirements relating to human trafficking, including certain prohibitions on contractors, contractor employees, subcontractors, subcontractor employees, and their agents. The bill would require contractors and subcontractors to notify employees of specified prohibited activities and the actions that may be taken against them for violations. The bill would provide that a contractor is ineligible for, and shall not bid on, or submit a proposal for, a contract under these provisions if the contractor has failed to certify its compliance. The bill would also require a contractor to exercise due diligence in ensuring that its subcontractors comply with those requirements, including requiring each subcontractor to sign a certification under penalty of perjury. By expanding the scope of a crime, the bill would impose a state-mandated local program.

SB 1159

(Dodd D) California Environmental Quality Act: roadside wildfire risk reduction projects.

Last Amend: 03/20/2024

Status: 04/04/2024 - From committee: Do pass and re-refer to Com. on N.R. & W. Re-referred to Com. on N.R. & W.

Summary: The California Environmental Quality Act (CEQA) requires the Office of Planning and Research to prepare and develop, and the Secretary of the Natural Resources Agency to certify and adopt, guidelines for the implementation of CEQA. CEQA requires the guidelines to include a list of classes of projects that have been determined not to have a significant effect on the environment and are exempt from the requirements of CEQA, commonly known as categorical exemptions. This bill, on or before January 1, 2026, would require the office to evaluate, and the secretary to consider, the inclusion of roadside projects no more than 5 road miles from a municipality or census designated place that are undertaken solely for the purpose of wildfire risk reduction in the classes of projects subject to a categorical exemption. The bill would require the office to consider appropriate eligibility criteria for these projects, as specified.

SB 1163

(Dahle R) Wildlife-vehicle collisions: wildlife salvage permits.

Last Amend: 04/03/2024

Status: 04/03/2024 – From committee with author’s amendments. Read second time and amended. Re-referred to Com. on N.R. & W.

Summary: Current law authorizes the Fish and Game Commission, upon appropriation by the Legislature, to establish a pilot program no later than January 1, 2022, for the issuance of wildlife salvage permits that authorize a person to recover, possess, use, or transport certain mammals that have been accidentally killed as a result of a vehicle collision for purposes of salvaging wild game meat for human consumption. Current law requires the Department of Fish and Wildlife, upon appropriation by the Legislature, to implement the pilot program no later than 6 months after the commission establishes the pilot program. Current law repeals the pilot program provisions on January 1, 2029. This bill would require the commission to establish this previously authorized pilot program by January 1, 2027, and would extend the operation of the pilot program to January 1, 2034. The bill would eliminate the requirement that the establishment and implementation of the pilot program be upon appropriation by the Legislature and would make other related changes.

[SB 1179](#)

(Durazo D) Affordable Internet and Net Equality Act of 2024.

Introduced: 02/14/2024

Status: 03/26/2024 - Set for hearing April 9.

Summary: The Affordable Internet and Net Equality Act of 2024, would require the Department of Technology, in coordination with the Public Utilities Commission and the Department of General Services, to develop and establish the Net Equality Program. The bill would require the state and state agencies to only enter into a procurement contract with an internet service provider offering affordable home internet service to households participating in certain public assistance programs, as specified. The bill would define affordable home internet service to mean internet service costing no more than \$30 per month and that meets specified minimum speed requirements. The bill would require these internet service providers to establish a telephone number to sign up eligible households and would require these providers to advertise the availability of affordable home internet service, among other requirements placed on these providers. This bill contains other related provisions.

[SB 1226](#)

(Cortese D) Hunting: navigable waters.

Introduced: 02/15/2024

Status: 04/02/2024 – Set for hearing April 15.

Summary: Existing law makes it unlawful to enter land for the purpose of discharging a firearm or taking or destroying any mammal or bird, including waterfowl, on that land, without having first obtained written permission from the owner, the owner's agent, or the person in lawful possession of that land, if either of the following applies: (1) the land belongs to, or is occupied by, another person and is either under cultivation or enclosed by a fence, or (2) there are signs forbidding trespass or hunting or both displayed at intervals not less than 3 to the mile along all exterior boundaries and at all roads and trails entering those lands, including land temporarily inundated by water flowing outside the established banks of a waterway. This bill would restrict the application of the provisions regarding land temporarily inundated by water flowing outside the established banks of a waterway to non-navigable waters. The bill would also state that these provisions do not restrict the public's right to use navigable waters for hunting, fishing, or other public purposes under the California Constitution.

[SB 1246](#)

(Limon D) California Prompt Payment Act: nonprofit organizations.

Introduced: 02/15/2024

Status: 03/28/2024 – Set for hearing April 9.

Summary: The California Prompt Payment Act requires a state agency that awards a grant or that acquires property or services pursuant to a contract to make timely payments pursuant to the grant or contract. The act requires, to avoid late payment penalties, a state agency to make payment within 45 days of the receipt of an undisputed invoice, as prescribed. The act provides an exception from those penalty provisions if the grant or contract was awarded to a nonprofit organization in an amount less than \$500,000. The act defines the term "grant" to mean a signed final agreement between any state agency and a local government agency or organization authorized to accept grant funding for victim services or prevention programs administered by any state agency or restoration activities performed by a resource conservation district. This bill would define the term "grant" to additionally mean a signed final

agreement between any state agency and a nonprofit organization and would delete the \$500,000 exception described above.

SB 1325

(Durazo D) Public contracts: best value procurement: equipment.

Introduced: 02/16/2024

Status: 03/14/2024 – Set for hearing April 9.

Summary: Would authorize a state or local agency, as defined, to award contracts through a best value procurement method for the purchase of equipment with a base value of \$250,000 or more. The bill would require the agency to adopt and publish procedures and guidelines for evaluating the qualifications of the bidders to ensure the best value selections are conducted in a fair and impartial manner, as described. The bill would authorize the procedures and guidelines to include the adoption of a high road jobs plan policy that evaluates bidders' high road jobs plan commitments as part of the overall score for the public contract, as specified. This bill would require the solicitation document to include certain information and would direct the agency to use a scoring method based on price and the factors described in the solicitation document, as specified. The bill would require the agency to let any contract for these projects to the selected bidder that represents the best value or reject all bids.

SB 1402

(Min D) 30 x 30 goal: state agencies: adoption, revision, or establishment of plans, policies, and regulations.

Introduced: 02/16/2024

Status: 03/26/2024 - Set for hearing April 9.

Summary: Current law requires the Secretary of the Natural Resources Agency to prepare and submit, on or before March 31, 2024, and annually thereafter, a report to the Legislature on the progress made in the prior calendar year toward achieving the goal to conserve 30% of California's lands and coastal waters by 2030. Current law provides that it is the goal of the state to conserve at least 30% of California's lands and coastal waters by 2030, known as the 30x30 goal. This bill would require all state agencies, departments, boards, offices, commissions, and conservancies to consider the 30x30 goal when adopting, revising, or establishing plans, policies, and regulations.

SB 1486

(Dahle R) Accessibility: internet websites.

Last Amend: 03/20/2024

Status: 04/04/2024 – Set for hearing April 23.

Summary: Current law imposes liability upon a person who denies, aids or incites a denial of, or makes any discrimination or distinction contrary to, rights afforded by law for actual damages suffered, exemplary damages, a civil penalty, and attorney's fees, as specified, to any person who was denied the specified rights. Current law also imposes liability upon a person, firm, or corporation that denies or interferes with admittance to, or enjoyment of, public facilities or otherwise interferes with the rights of an individual with a disability, as specified, for damages and attorney's fees to a person who was denied those rights. This bill would provide that statutory damages based upon the inaccessibility of an internet website under these provisions shall only be recovered against an entity, as defined, if the internet website fails to provide equally effective communication or facilitate full and equal enjoyment of the entity's goods and services to all members of the public. The bill would make statutory damages for

internet website inaccessibility contingent on the plaintiff proving that they had one of 2 sets of experiences. Specifically, the plaintiff may prove that they personally encountered a specific barrier that caused a difference in the plaintiff's access to or use of the internet website as compared to other users, as specified. Alternatively, the plaintiff may prove that they were deterred from accessing all or part of the internet website, as specified, because of the internet website's failure to provide equally effective communication or to facilitate full and equal enjoyment of the entity's goods and services offered to the public.

SB 1520

(Committee on Natural Resources and Water) Public resources.

Introduced: 03/06/2024

Status: 03/19/2024 – Set for hearing April 9.

Summary: This bill would update the name of the Colorado River squawfish to the Colorado pikeminnow.

For more information call:

Clark Blanchard, CDFW Deputy Director at (916) 591-0140

Julie Oltmann, CDFW Legislative Representative at (916) 799-8804

Erika Fiske-Sanders, CDFW Legislative Coordinator at (916) 539-2912

You can also find legislative information on the web at <http://leginfo.legislature.ca.gov/> and follow the prompts from the 'bill information' link.

From: GARY BURKE [REDACTED]

Sent: Thursday, April 4, 2024 1:16 PM

To: FGC <FGC@fgc.ca.gov>

Subject: Commissioners I am writing you today to ask that you oppose assembly...

Commissioners I am writing you today to ask that you oppose assembly bill 2220 being heard on April 23rd in the assembly committee , Water, Parks and Wildlife. We all know that legislation is not the way to go . I think an opposing letter sent to the Stephanie Mitchell who will be writing the analysis of 2220 would be very helpful along with cc the committee's members. Below is my opposing letter . Thank you.

Chair Papan And assembly members. My name is Gary Burke . I was born and raised in California my whole life and have made my life in commercial fishing for more than 50 years. I am writing in opposition to assembly bill 2220. This bill is not only harmful to the California commercial fisheries , it will just increase imports from other countries that have very few regulations and restrictions , something the U.S. is trying to decrease. Every part of this bill is bad.

First eliminating the take of black sea-bass and white shark would just be an increase in bycatch and a waste of food product. Both species are not in danger of being overfished and are rarely taken. White sharks when caught are usually used for scientific purposes, many times released alive with trackers attached, and Black Sea bass are delicious eating.

Second , this fishery already has observer coverage and to place observers on state fishery vessels would be extremely expensive. The daily cost is so high the individual boats cannot afford to pay the cost.

Thirdly, moving the fishery outside of 3 miles from the islands would virtually kill what's left of the bottom set net fishery as the islands depth drops off severely after a mile or two and leaves no-place to fish. This bill would also eliminate other types of net fishing, like drift net fishing for sea bass which occurs at night. These nets are not on the bottom but are fished on top of the water thus eliminating the sea floor species like crabs ,skates and rays. The net is always connected to the boat, pulled within hours and have very little bycatch. There is such limited area on the coast for set net fishing, without island access fisherman would not survive. This bill will not only creates a loss of fisherman livelihoods but a loss in revenue that created from the selling of fish to markets and restaurants plus the loss of moneys that comes from the maintenance , haul -outs, repairs, painting and such.

Lastly making the permits non-transferable would render their boats worthless after retirement as they could not convert to anything else. Fisherman rely on transferring the permits with their boats as it becomes their pensions.

The MLMA act passed in 1999 calls for all fisheries to look at bycatch. The fish and wildlife division manages California fisheries and the fish and wildlife commission makes

regulations. They have been working on the bycatch issue for 3 years and have come up with new regulations to help reduce that. This bill side steps their authority and renders their efforts worthless. Assemblyman Bennett press release states there is a better way to catch halibut ie hook and line. A baited hook is one of the most indiscriminate ways to catch fish. Hook and line fisherman can catch up to 30 sub legals before landing one legal halibut. Gillnets seldom catch short halibut. Hook and liners use multiple hooks which can be swallowed by short halibut resulting in large mortality. The Legislation is not the way to manage our fisheries, I respectfully ask no a nay vote.

Gary Burke

Sent from my iPad

Alliance of Communities for Sustainable Fisheries
256 Figueroa Street #1, Monterey, CA 93940
(831) 239-1219

www.alliancefisheries.org

Ms. Samantha Murray

President

California Fish and Game Commission

Sent electronically to: fgc@fgc.ca.gov

RE: Requesting that the FGC provide comments on AB2220 to California legislative bodies

Dear President Murray and Commissioners,

Who we are

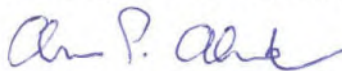
The Alliance of Communities for Sustainable Fisheries (ACSF) is a 23-year-old 501(c) 3 not-for-profit organization, founded for the purposes of educating the public on fisheries issues, connecting fishing men and women ("fishermen") with their communities, and to represent fishing interests in state and federal processes. The ACSF is a regional organization, comprised of commercial fishing leaders representing Monterey, Moss Landing, Santa Cruz, Morro Bay, Pillar Point, Port San Luis, and Santa Barbara, on our Board of Directors. Port communities, several recreational fishing organizations, and the California Wetfish Producers Association (squid, sardines, etc), also have representatives on our Board. Thus, the ACSF represents a large cross-section of fishing and community interests for the Central Coast of California.

AB2220

ACSF members perceive AB2220 as seriously flawed in its presentation of "facts", setting bad state policy, and creating unsettling precedents. Most importantly, it appears it be an "end run" around the science and public process provided by the Marine Life Management Act and the DFW/FGC process for fisheries management.

The Alliance of Communities for Sustainable Fisheries requests that the Commission provide comments on this bill to the legislature. We believe that the first hearing for AB2220 will be April 23, 2024, in the Assembly Water, Parks, and Wildlife Committee.

Thank you for considering this request.



Alan Alward, Co-Chair





Michael Wagner, President
Andria's Seafood Restaurant & Market
1449 Spinnaker Dr A
Ventura, CA 93001

March 29, 2024

Steve Bennett, Assemblymember, District 38
State Capitol
P.O. Box 942849
Sacramento, CA 94249-0038

300 E. Esplanade Dr, Ste. 1790
Oxnard, CA 93036

Re: AB2220

Dear Assemblymember Bennett,

It is with great disappointment that I write to you concerning your sponsorship of AB2220.

This bill subverts the collaborative efforts between California Department of Fish and Wildlife and local fishermen, and by introducing it in Sacramento you are favoring a special interest group over your constituents and sealing the fate of an entire industry which benefits your local community.

Local Ventura fishermen are asking me, "Didn't Bennett award you the Small Business of the Year in 2022, and now he doesn't know that you're in the fish business?"

California Department of Fish and Wildlife officials and local gillnet fishermen have been working on a bycatch management plan for the last two years. By introducing this bill, co-sponsored by Oceana (an international NGO), you have gone around the parties who are actually involved in doing the work every day on the ground and in the water.

The commercial fishermen targeted by this bill don't fish for black seabass or white sharks, but those fish swim and are inadvertently caught in their nets. There are existing laws that prohibit the taking of these animals which were developed by and are enforced by the California Department of Fish and Wildlife. These laws are reasonable and represent a collaborative effort between government and industry. Making incidental bycatch a criminal offense and making fishermen pay for the onboard observers who record each instance is unfairly burdensome.

Steve Bennett, Assemblymember, District 38
State Capitol
P.O. Box 942849
Sacramento, CA 94249-0038

Page 2

AB2220 proposes that independent, third-party observers be present on all trips in California state waters. Most gillnetters are small businessmen that can't afford to pay people to help them fish, let alone pay for independent observers, housing and feeding them, even overnight. Who will pay for this?

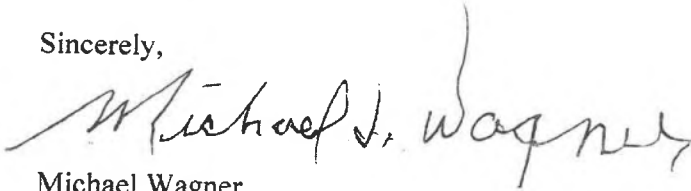
This bill disallows any bycatch from market sale, and instead makes bycatch a crime. If preventing fishermen from profiting from bycatch is the issue, why not find a way to divert the bycatch to local food relief programs and non-profits?

To top it all off, it is the stated goal of Oceana to see these small businesses "dwindling in size" and eventually to go away. By prohibiting the transfer of their fishing permits to anyone, even heirs and family members, these local fishermen will lose their value of their businesses and their contribution to our economy will come to an end.

AB2220 will force fish distributors, seafood restaurants and markets who pride themselves on making local seafood available to their customers (like Andria's Seafood) to import even more fish from faraway sources where fish quality and environmental concerns are not as important as here in California. People come to Andria's Seafood Market just to get the local fish which can't be bought at grocery stores because we buy it right off the boat.

Please reconsider your support of AB2220 and get back in touch with the people in your district. I am proud to have received the 2022 Small Business of the Year award from you and hope that the same spirit can return.

Sincerely,



Michael Wagner
President

Cc: SB Independent, VC Reporter, VTA Chamber of Commerce, Ventura Port District,
City of Ventura Mayor Joe Schoeder, CDFW, CA Fish and Game Commission



April 5, 2024

California State Assembly
Committee on Water, Parks and Wildlife
1020 N Street, Suite 160
Sacramento, CA 95814

Dear Chair Diane Papan, Vice Chair Devon Mathis and Committee Members,

The California Sea Urchin Commission (CSUC) opposes AB 2220.

AB2220 seeks to amend the California Fish & Game Code Sections 8380, 8599, 8610.3, 8681.5, and to add Section 7701.5 without following the customary procedures of first working through the California Fish & Game Commission (CFGC). Bypassing established procedures by first going to the legislature to amend regulations sets a bad policy and perhaps worse, establishing conflicting and bad laws.

The California Sea Urchin Commission (CSUC) represents all permitted sea urchin divers and processors. Our members practice a very targeted and clean fishery. Each harvested sea urchin must meet a minimum size before it can be taken and landed. There are no incidental takes; however AB 2220 may require the California Department of Fish & Wildlife (CDFW) to draft regulations to mandate third party observers on each vessel which is unnecessary, onerous and without merit. This change to the Fish and Game Code that may directly affect members of our fishery, consisting of California Sea Urchin Diver Permit holders, crewmembers, processors, and associated fish support businesses. For this and other reasons, the CSUC opposes AB 2220.

We also oppose AB 2220, because it supersedes the regulatory process of vetting fishery regulations through the CFGC which is an appalling maneuver to say the least. Adding Section 7701.5 to The California Fish and Game Code, with its language will subject all commercial fishermen to third-party observers on board while conducting harvesting activities. Commercial fishermen abide by regulations established by the Fish and Game Commission and with CDFW oversight hold them accountable to adhering to these regulations. Requiring Commercial Fishermen to have third-party observers is demoralizing, suggesting fishermen are unable to comply with established laws and regulations. The cost of funding these third-party observers is not clear in AB 2220, and furthermore it is unclear who will pay for these observers. The financial impacts to our industry can be economically prohibitive and should be reviewed, analyzed, and discussed in the appropriate manner before made into law.

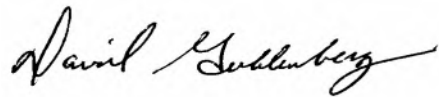
CSUC has no stake, specifically with the named incidental catch species white sharks, or giant sea bass, but is concerned with the process AB 2220 took to suggest these changes.

P.O. Box 2077 | Folsom CA | 95763-2077 | tel 916.933.7054 | fax 916.933.7055 | www.calurchin.org

We are concerned this sets a flawed precedence that our fishery may be subject to similar changes through legislation without proper scientific data analysis. We have a similar concern for the termination of fishery practices based on gear type (set-net and trammel net) using the legislative process, rather than the reviewing it through the decades-proven process of hearings through the California Fish & Game Commission and the California Department of Fish and Wildlife.

Please join us in opposing AB 2220, and advocate for vetting fishery regulations through the proper venues and not superseding California's established regulatory processes.

Sincerely,

A handwritten signature in black ink that reads "David J. Goldenberg". The signature is written in a cursive, flowing style with a long horizontal stroke at the end.

David J. Goldenberg
Executive Director

cc: Senator Mike McGuire, Senate Pro Tem
California Fish & Game Commission