

Final Appendix A Order

**(Order Main Body - Available at California State Water Resources Control Board, 401 Water Quality Certification and Wetlands Program Homepage
https://www.waterboards.ca.gov/water_issues/programs/cwa401/)**

Final Appendix B

Notice of Preparation and Notice of Preparation Comments

State Water Resources Control Board

NOTICE OF PREPARATION AND CALIFORNIA ENVIRONMENTAL QUALITY ACT SCOPING MEETING

ORDER FOR CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND WASTE DISCHARGE REQUIREMENTS FOR IMPLEMENTATION OF LARGE HABITAT RESTORATION PROJECTS STATEWIDE

NOTICE IS HEREBY GIVEN that State Water Resources Control Board (State Board) staff will hold a California Environmental Quality Act (CEQA) scoping meeting to receive public input on the content and scope of an Environmental Impact Report (EIR) that will be prepared to assess the potential environmental effects of a proposed project, Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Implementation of Large Habitat Restoration Projects Statewide (General Order). The scoping meeting will include a brief presentation about the proposed General Order followed by public comments.

The scoping meeting will be:

Tuesday, October 22, 2019 – 1:00 p.m.
Joe Serna Jr. - Cal/EPA Headquarters Building
Byron Sher Auditorium
1001 I Street, Second Floor
Sacramento, CA 95814

The State Water Board will accept both written and oral comments regarding scoping elements. Written comments may be submitted in accordance with the instructions set forth below by 12:00 p.m. noon on November 22, 2019.

Information about the scoping meeting is located on the [State Water Board web site](http://www.waterboards.ca.gov/board_info/calendar/) at: http://www.waterboards.ca.gov/board_info/calendar/ and the [State Water Board 401 Water Quality Certification and Wetlands Program webpage](https://www.waterboards.ca.gov/water_issues/programs/cwa401/) at: https://www.waterboards.ca.gov/water_issues/programs/cwa401/.

WEBCAST INFORMATION

[Video and audio broadcast of the scoping meeting](https://video.calepa.ca.gov/) will be available via the internet and can be accessed at: <https://video.calepa.ca.gov/>.

PARKING AND ACCESSIBILITY

For directions to the Joe Serna, Jr. (CalEPA) Building and public parking information, please refer to the [map on the State Water Board website](http://www.calepa.ca.gov/headquarters-sacramento/location/) at: <http://www.calepa.ca.gov/headquarters-sacramento/location/>.

The CalEPA Building is accessible to persons with disabilities. Individuals requiring special accommodations are requested to call (916) 341-5254 at least five working days prior to the meeting. Telecommunications Device for the Deaf (TDD) users may contact the California Relay Service at (800) 735-2929 or voice line at (800) 735-2922.

All visitors to the CalEPA Building are required to sign in and obtain a badge at the Visitor Services Center located just inside the main entrance (10th Street entrance). Valid picture identification may be required. Please allow up to 15 minutes for receiving security clearance.

Notice of Preparation

TO: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044

FROM LEAD AGENCY: State Water Resources Control Board
P.O. Box 2000, Sacramento, CA 95812-2000
Attention Jessica Nadolski

SUBJECT: **ORDER FOR CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND WASTE DISCHARGE REQUIREMENTS FOR IMPLEMENTATION OF LARGE HABITAT RESTORATION PROJECTS STATEWIDE**

INTRODUCTION

The State Water Board proposes to develop a General Order establishing an authorization process to improve permitting efficiency for specific types of environmentally beneficial restoration activities statewide. Pursuant to CEQA, the State Water Board will be the Lead Agency and will prepare an EIR for the proposed General Order.

BACKGROUND

The State Water Board has previously authorized a General Water Quality Certification (General WQC) for small habitat restoration projects that (a) shall not exceed five acres or a cumulative total of 500 linear feet of stream bank or coastline and (b) qualify for the CEQA Class 33 Categorical Exemption (CEQA Guidelines Section 15333). Restoration projects that fall outside the project size limits of the General WQC for small habitat restoration must obtain individual WQCs and/or waste discharge requirements (WDRs) from the State Water Board or Regional Water Quality Control Boards (Regional Boards). The process of obtaining individual authorization can be time consuming and

increase the cost of regulatory compliance as compared to obtaining authorization under a General Order that provides programmatic coverage. Restoration proponents seeking authorization for larger projects beyond the scale of the General WQC for small habitat restoration often do not have the funding to seek individual permits. This indicates the need for a General Order that will expedite the regulatory approval process for large habitat restoration projects. The proposed General Order for large habitat restoration projects is intended as a companion, not a replacement, to the General WQC for small habitat restoration.

GENERAL ORDER (PROJECT) DESCRIPTION

This proposed General Order considers a variety of aquatic and riparian restoration types that take place throughout the State. The following proposed types of restoration are included:

1. **Stream Crossing and Fish Passage Improvements** – for upstream and downstream movement by fish and other species, and to improve functions of streams.
2. **Small Dam, Tide Gate, Flood Gate, and Legacy Structure Removal** – to improve fish and wildlife migration, tidal and freshwater circulation and flow, and water quality.
3. **Bioengineered Bank Stabilization** – to reduce fine sediment input, enhance aquatic and riparian habitat, and improve water quality.
4. **Off-Channel/Side-Channel Habitat Restoration and Enhancement** – to improve aquatic and riparian habitat for fish and wildlife and/or to restore hydrologic, hydraulic, and biogeochemical functions and processes of streams.
5. **Water Conservation Projects** – to reduce low-flow stream diversions, such as off-stream storage tanks and ponds and necessary off-channel infrastructure.
6. **Floodplain Restoration** – to improve ecosystem function through hydrological connection between streams and floodplains, including levee breaching and removal, berm and dike setback breaching and removal, and hydraulic reconnection and revegetation.
7. **Piling and Other In-Water Structure Removal** – to improve water quality and aquatic habitat for fish and wildlife.

8. **Non-native Invasive Species Removal and Native Plant Revegetation** – to improve watershed functions, such as aquatic and riparian habitat for fish and wildlife.
9. **Tidal, Subtidal, and Freshwater Wetland Establishment, Restoration, and Enhancement** – to create or improve wetland ecological functions.
10. **Stream and Riparian Habitat Establishment, Restoration, and Enhancement** – to create or restore functions of streams and riparian areas

Restoration projects must incorporate specified protection measures (as applicable), such as design guidelines or avoidance and minimization techniques, or other criteria into their project descriptions to qualify within the scope of the proposed General Order.

GENERAL ORDER (PROJECT) LOCATION

The proposed General Order addresses future activities that may occur statewide upon notification and permitting authority review. The proposed General Order would be administered, in part, within the jurisdiction of each Regional Board.

ENVIRONMENTAL BASELINE

California Code of Regulations, title 14, section 15125 states that an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation (NOP) is published from local, regional, and, in this case, state perspectives (existing conditions). The environmental setting will constitute the baseline physical conditions that State Water Board, the Lead Agency, will use to determine whether an impact is significant. In general, the environmental baseline is the same as existing conditions.

PROJECT ALTERNATIVES

A reasonable range of potentially feasible project alternatives, in addition to the no project alternative, will be addressed, following the scoping process and will consider the views of responsible and trustee agencies and the public.

POTENTIAL ENVIRONMENTAL EFFECTS

The EIR will analyze resources that may be affected by the proposed General Order. Resource topics to be considered for analysis in the EIR include the following:

- Aesthetics
- agriculture and forestry resources
- air quality
- biological resources
- land use and planning
- mineral resources
- noise
- population and housing

- cultural resources
- energy
- geology and soils
- greenhouse gas emissions
- hazards and hazardous materials
- hydrology and water quality (surface and groundwater resources)
- public services
- recreation
- transportation
- tribal cultural resources
- utilities/service systems
- wildfire

SUBMISSION OF WRITTEN COMMENTS

The State Water Board will accept written public comments regarding scoping. Written comment letters must be received no later than **12:00 p.m. noon on November 22, 2019**. Written comments must be addressed to:

State Water Resources Control Board
Division of Water Quality
Attention: Jessica Nadolski
P.O. Box 100, Sacramento, CA 95812-2000 (mail)
1001 I Street, 15th floor, Sacramento, CA 95814 (hand-delivered)

Comment letters may be submitted electronically, in pdf text format (if less than 15 megabytes in total size), to the [Wetlands Permitting and Enforcement Unit via e-mail](mailto:jessica.nadolski@waterboards.ca.gov) at jessica.nadolski@waterboards.ca.gov. Please indicate in the subject line: **“Comment Letter – Proposed Statewide Restoration General Order.”**

Couriers delivering hard copies of comment letters must check in with lobby security personnel, who can contact Ms. Nadolski at (916) 341-5290.

All comments received will become part of the official administrative record and may be made available for public review.

FUTURE NOTICES

Any change in the date, time, and place of the scoping meeting will be publicly noticed on the State Water Board website and through Lyris e-mail list. Any person desiring to receive future notices concerning the proposed General Order must sign up on the Lyris e-mail list. To sign up for a Lyris list, access the [email List Subscription Form](#) at the web address listed below, click the “Water Quality” tab, and check the box for “CWA401 – Certification and Wetlands Program”:
http://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.shtml.

Please direct questions about this notice to [Jessica Nadolski](#) at (916) 341-5290 or jessica.nadolski@waterboards.ca.gov.

10/8/19
Date


Karen Mogus, Deputy Director
Division of Water Quality
State Water Resources Control Board

November 19, 2019

Via Email



Jessica Nadolski
State Water Resources Control Board
Attn: Jessica Nadolski
P.O. Box 100
Sacramento, CA 95812-2000

Re: Comment Letter – Proposed Statewide Restoration General Order

Dear Ms. Nadolski,

The Santa Clara Valley Open Space Authority (Authority) has reviewed the Notice of Preparation (NOP) for the State Water Board proposed General Order for large habitat restoration projects and appreciates the opportunity to provide input during the scoping process.

The Authority is a public land conservation agency and special district created by the California Legislature in 1993 to balance growth with the protection of open space, natural resources, greenbelts and agricultural land. To date, the Authority has worked with farmers, ranchers, public agencies and non-profit partners to conserve and steward over 25,000 acres of open space and agricultural land in Santa Clara County through voluntary acquisition of land and conservation easements.

As part of the Authority's mission to steward lands, we plan and implement voluntary restoration projects on our lands that have multiple benefits for habitat, water quality, endangered species, and flood protection. Oftentimes these projects are located in aquatic and riparian habitats. As noted in the NOP, the process of obtaining individual authorization can be time consuming and increase the cost of regulatory compliance compared to obtaining authorization under a General Order that provides programmatic coverage.

The streamlining provided through a General Order will save the Authority time and cost which will increase the ability for us to implement large scale aquatic and riparian habitat restoration projects. The Authority supports the types of restoration included in the proposed General Order and appreciates the efforts of the State Water Board to streamline coverage.

If you have any questions regarding this letter, please contact me at mfreeman@openspaceauthority.org or (408) 224-7476.

Sincerely,

A handwritten signature in blue ink, appearing to read "Matt Freeman". The signature is stylized and includes a large loop at the end.

Matt Freeman
Assistant General Manager

33 Las Colinas Lane
San Jose, CA 95119
408.224.7476 T
408.224.7548 F
openspaceauthority.org

Memorandum

Date: November 19, 2019

To: State Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, California 95812-2000
Attention: Jessica Nadolski

From: Department of Water Resources

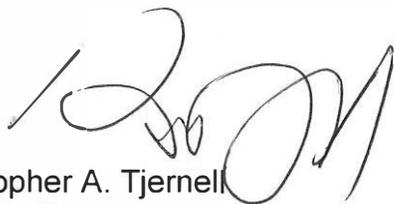
Subject: Comments on Notice of Preparation General Order for Clean Water Act Section 401

The California Department of Water Resources' (DWR) mission is to sustainably manage the water resources of California, in cooperation with other agencies, to benefit the state's people and protect, restore, and enhance natural and human environments. DWR is a proponent of habitat restoration and enhancement efforts across the State to increase ecosystem function and support endangered and threatened species recovery. Under the California EcoRestore initiative, DWR funds and implements projects pursuing 30,000 acres of habitat restoration in the Sacramento-San Joaquin Delta region.

DWR commends the State Water Resources Control Board (SWRCB) for its effort to develop a General Order for the Clean Water Act Section 401 that establishes an authorization process to improve permit efficiency for specific types of environmentally beneficial restoration activities statewide. DWR strongly supports SWRCB's proposed action and acknowledges the General Order will help expedite regulatory approval for large restoration projects while ensuring appropriate protection measures are in place.

The current process for obtaining individual authorization can be time consuming. A more efficient permitting process, such as that proposed by the General Order for implementation of large habitat restoration projects, will directly support DWR's efforts to implement aquatic and riparian habitat restoration and related environmental protection measures in a timely and more cost-effective manner. DWR encourages a broad environmental analysis to ensure comprehensive coverage of a wide-array of essential restoration projects throughout the State.

If you have any questions, you may contact Bill Harrell, EcoRestore Branch Chief at (916) 651-0711 or Bill.Harrell@water.ca.gov.



Kristopher A. Tjernell
Deputy Director

cc: Bill Harrell, Chief EcoRestore

San Francisco Bay Conservation and Development Commission

375 Beale Street, Suite 510, San Francisco, California 94105 tel 415 352 3600 fax 888 348 5190

State of California | Gavin Newsom – Governor | info@bcdc.ca.gov | www.bcdc.ca.gov

November 22, 2019

Jessica Nadolski
State Water Resources Control Board
P.O. Box 100
Sacramento, California 95812-2000

SUBJECT: Comments on the Notice of Preparation for the Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Implementation of Large Habitat Restoration Projects Statewide

Dear Ms. Nadolski:

On October 24, 2019, the Commission received a Notice of Preparation (NOP) for the Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Implementation of Large Habitat Restoration Projects Statewide Draft Environmental Impact Report (draft EIR). Thank you for the opportunity to comment.

Although the San Francisco Bay Conservation and Development Commission (Commission) has not reviewed the NOP, the following staff comments are based on the McAteer-Petris Act, the Suisun Marsh Preservation Act (Suisun Marsh Act), the Commission's *San Francisco Bay Plan* (Bay Plan), the *Suisun Marsh Protection Plan* (Suisun Marsh Plan), the Commission's federally-approved coastal management program for the San Francisco Bay, and the federal Coastal Zone Management Act (CZMA).

Jurisdiction

The Bay Area and the Suisun Marsh support a substantial portion of the state's wetlands and also contain diked historic baylands that could support large restoration projects. The Commission's permit jurisdiction includes all tidal areas of the Bay up to the line of mean high tide or, in areas of tidal wetlands, the upland edge of tidal marsh up to five feet above mean sea level, including all areas formerly subject to tidal action that have been filled since September 17, 1965; and the shoreline band that extends 100 feet inland from and parallel to the Commission's Bay jurisdiction. The Commission also has jurisdiction over certain managed wetlands adjacent to the Bay, salt ponds, certain waterways, and the Suisun Marsh.

Commission permits are required for placement of fill, construction, dredging, and substantial changes in use within its jurisdiction, which includes wetland restoration projects. Permits are issued when the Commission finds proposed activities to be consistent with its laws, policies, and coastal zone management program. In addition, federal actions (including plans), permits, projects, licenses and grants affecting the Commission's coastal zone jurisdiction are subject to review by the Commission, pursuant to the federal CZMA, for their consistency with the Commission's federally-approved coastal management program for the Bay.



The Suisun Marsh Act grants the Commission regulatory authority to issue marsh development permits, which include restoration projects, in the primary management area of the Suisun Marsh, defined as water-covered areas, tidal marshes, diked wetlands, seasonal marshes, and certain lowland grasslands specified on the Marsh Plan Map. The Suisun Marsh Act also established a secondary management area composed principally of upland grasslands and cultivated lands, also specified on the Suisun Marsh Plan Map, to serve as a buffer between the primary management area and developed lands outside the Suisun Marsh. Within the secondary management area, local governments issue marsh development permits pursuant to a local protection program certified by the Commission, and these permits can be appealed to the Commission. Therefore, large restoration projects within the Commission’s jurisdiction will require approval by the Commission.

Programmatic Permits for Large Restoration Projects

The proposed General Order would provide for large habitat restoration projects to be issued a 401 Water Quality Certification under a programmatic permit, which could reduce costs and timelines for habitat restoration. The Commission recognizes the need for fostering and expediting large-scale Bay restoration, particularly in light of rising sea level. If wetlands are not restored soon so that they can establish marsh vegetation before sea level rise accelerates, they may not be able to restore successfully. BCDC recently adopted an amendment to the Bay Plan to address fill for habitat projects, which is now pending administrative law review and is likely to be in place by the time a draft EIR is prepared for the General Order. This amendment includes policy revisions to allow larger volumes of fill for habitat projects and proposes amendments to the Bay Plan policies on Fish, Other Aquatic Organisms, and Wildlife; Tidal Marshes and Tidal Flats; Subtidal Areas; Dredging; and Shoreline Protection. Many of these policies explicitly address requirements for habitat restoration, enhancement, creation, and sea level rise adaptation projects within BCDC’s jurisdiction, including specific issues that are mentioned below. As part of the Bay Plan amendment process, the Commission recognized that expediting restoration also needs to ensure that projects are designed, constructed and managed properly to ensure that they will provide anticipated benefits and not result in significant unintended adverse impacts. The draft EIR should discuss the impacts addressed by these Bay Plan policies.

While a programmatic permit for large restoration projects would encourage more restoration of Bay habitats and could potentially streamline the permitting process, large restoration projects, if not properly designed, analyzed, mitigated, and managed, could potentially pose substantial risk to Bay and Suisun Marsh natural resources. The NOP states that “restoration projects must incorporate specified protection measures (as applicable), such as design guidelines or avoidance and minimization techniques, or other criteria into their project descriptions to qualify within the scope of the proposed General Order.” Based on this description, it is not clear what level of review would be required under the General Order to ensure that unintended impacts to natural resources would not occur. Recognizing this potential, it is important that the draft EIR effectively evaluate the suite of impacts that could occur if projects are permitted with expedited/less rigorous review or with less substantive mitigation requirements. The General Order should maintain an adequate review process that

will protect Bay resources and allow for appropriate mitigation of any impacts to these resources. Additionally, since the current NOP proposes the development of a generalized CEQA document, it should be acknowledged in the draft EIR that as projects are fully developed, a supplemental analysis will be necessary for project-level review.

The NOP has identified a broad list of restoration types that take place throughout the state that would be considered under the General Order, including: (1) Stream Crossing and Fish Passage Improvements; (2) Small Dam, Tide Gate, Flood Gate, and Legacy Structure Removal; (3) Bioengineered Bank Stabilization; (4) Off-Channel/Side-Channel Habitat Restoration and Enhancement; (5) Water Conservation Projects; (6) Floodplain Restoration; (7) Piling and Other In-Water Structure Removal; (8) Non-native Invasive Species Removal and Native Plant Revegetation; (9) Tidal, Subtidal, and Freshwater Wetland Establishment, Restoration, and Enhancement; and (10) Stream and Riparian Habitat Establishment, Restoration, and Enhancement. Considering this list, the staff has identified BCDC laws and policies that raise potential issues in large restoration projects that require analysis in the draft EIR. The impacts identified in laws and policies should be considered in all aspects of the draft EIR, as projects considered by the General Order may affect these issues.

Protection of Bay Habitats

The proposed types of restoration projects to be considered under the General Order could include fill placement, such as the beneficial reuse of dredged sediment or placement of upland material to establish, restore, or enhance a wetland. The McAteer-Petris Act places specific restrictions on use of fill within BCDC's jurisdiction, and states in part that fill "should be authorized only when public benefits from fill clearly exceed public detriment from the loss of the water areas and should be limited to water-oriented uses"; "should be authorized only when no alternative upland location is available for such purpose"; and should "minimize harmful effects to the bay area, such as, the reduction or impairment of the volume surface area or circulation of water, water quality, fertility of marshes or fish or wildlife resources, or other conditions impacting the environment". The law also states that "the water area authorized to be filled should be the minimum necessary to achieve the purpose of the fill."

The Bay Plan contains many policies that protect against impacts to living resources and their habitats. Policies in the Fish, Other Aquatic Organisms, and Wildlife section of the Bay Plan state:

"To assure the benefits of fish, other aquatic organisms and wildlife for future generations, to the greatest extent feasible, the Bay's tidal marshes, tidal flats, and subtidal habitat should be conserved, restored and increased."

"Specific habitats that are needed to conserve, increase or prevent the extinction of any native species, species threatened or endangered, species that the California Department of Fish and Game has determined are candidates for listing as endangered or threatened under the California Endangered Species Act, or any species that provides substantial public benefits, should be protected, whether in the Bay or behind dikes."

Similarly, policies in the Tidal Marshes and Tidal Flats section of the Bay Plan state:

“Tidal marshes and tidal flats should be conserved to the fullest possible extent. Filling, diking, and dredging projects that would substantially harm tidal marshes or tidal flats should be allowed only for purposes that provide substantial public benefits and only if there is no feasible alternative.”

“Any proposed fill, diking, or dredging project should be thoroughly evaluated to determine the effect of the project on tidal marshes and tidal flats, and designed to minimize, and if feasible, avoid any harmful effects.”

“Projects should be sited and designed to avoid, or if avoidance is infeasible, minimize adverse impacts on any transition zone present between tidal and upland habitats. Where a transition zone does not exist and it is feasible and ecologically appropriate, shoreline projects should be designed to provide a transition zone between tidal and upland habitats.”

Policies in the Subtidal Areas section of the Bay Plan state, in part, that “projects in subtidal areas should be designed to minimize and, if feasible, avoid any harmful effects”, and that

“[S]ubtidal areas that are scarce in the Bay or have an abundance and diversity of fish, other aquatic organisms and wildlife (e.g., eelgrass beds, sandy deep water or underwater pinnacles) should be conserved.”

The proposed types of restoration projects to be considered under the General Order, if not permitted and conditioned carefully, could potentially result in detrimental impacts to living Bay resources, including fish, wildlife, plant communities, invertebrate communities, etc; and the habitats of these organisms. For example, the removal of dams, tide gates, flood gates, and other legacy structures could increase water turbidity and have unintended adverse impacts on downstream plant communities, such as eelgrass. Additionally, wetland establishment activities in subtidal or some tidal areas could result in habitat type conversion that inadvertently eliminates or significantly reduces the numbers of certain populations of fish or wildlife (e.g. mudflat conversion to another habitat type could disrupt foraging of certain bird guilds).

To ensure that expedited permitting of restoration projects under the General Order would not adversely impact natural resources that are protected by BCDC’s policies, the draft EIR should assess impacts of the General Order to tidal marshes, tidal flats, subtidal areas, salt ponds, and managed wetlands, both in the Bay and in the Suisun Marsh, and should discuss whether the requirements of the General Order would address the impacts raised in the McAteer-Petris Act requirements related to allowable fill, BCDC’s policies addressing natural resources in the Bay Plan, and the Suisun Marsh Protection Plan. Additionally, staff recommends that the draft EIR specify much more narrowly the types of projects that can be permitted under the General Order, and the criteria for project eligibility, to minimize the possibility of projects with negative impacts on natural resources to be permitted under the General Order.

Protection of Water Resources:

BCDC’s Bay Plan policies state, in part, the following:

In the Water Quality section:



“Bay water pollution should be prevented to the greatest extent feasible. The Bay's tidal marshes, tidal flats, and water surface area and volume should be conserved and, whenever possible, restored and increased to protect and improve water quality. Fresh water inflow into the Bay should be maintained at a level adequate to protect Bay resources and beneficial uses.”

In the Water Surface Area and Volume section:

“The surface area of the Bay and the total volume of water should be kept as large as possible in order to maximize active oxygen interchange, vigorous circulation, and effective tidal action. Filling and diking that reduce surface area and water volume should therefore be allowed only for purposes providing substantial public benefits and only if there is no reasonable alternative.”

The proposed types of restoration projects to be considered under the General Order, if not permitted and conditioned carefully, could result in unintended or unavoidable detrimental impacts to the Bay and its connected water resources, including water quality, water surface area and volume, and freshwater inflow to the Bay. For example, the removal of dams, tide gates, flood gates, and other legacy structures could alter sediment loads entering the Bay at various sites, and could alter certain water quality parameters (e.g. turbidity or nutrient concentration). Additionally, sediment placement to establish tidal wetlands could result in the conversion of open water/subtidal area to tidal marsh, and thus reduce the Bay's surface area and volume.

The Commission's law and policy provides that the policies, decisions, advice, and authority of the State Board and the San Francisco Bay Regional Water Quality Control Board should be the primary basis for the Commission to carry out its water quality responsibilities for the Bay. To ensure that expedited permitting of restoration projects under the General Order would not adversely impact water resources that are protected by BCDC's policies, the draft EIR should assess impacts of projects authorized under the General Order to water quality, water surface area and volume, and freshwater inflows, both in the Bay and in the Suisun Marsh, and should discuss whether the requirements of the General Order address impacts identified in BCDC's Bay Plan and Suisun Marsh Protection Plan policies on water resources.

Restoration Project Design and Evaluation:

Restoration projects within BCDC's jurisdiction that are permitted via the General Order will require sufficiently detailed project design and evaluation, particularly if a proposed project has the potential to adversely impact Bay resources. The Bay Plan lists specific design and evaluation criteria for restoration projects in the Tidal Marshes and Tidal Flats, Subtidal Areas, Salt Ponds, and Managed Wetlands sections of the Bay Plan. The draft EIR should discuss whether the project design and evaluation required by the General Order would provide the necessary specificity to identify and address impacts raised in large restoration projects, as specified in the relevant Bay Plan policies.

Local Setting and Site Suitability

In the Bay, specific local settings are highly variable, and for projects to be successful and minimize impacts, it is important that projects are appropriate to the local context. The Baylands Ecosystem Habitat Goals Update (2015) has highlighted areas that are suitable for restoration, and the importance of designing projects to re-connect natural sediment and hydrology to enhance project sustainability into the future. Additionally, the 2019 Adaptation Atlas highlights the importance of placing natural features in areas where they can be sustained and are appropriate for the site's natural context. Several of BCDC's recently adopted Bay Plan policies reflect the importance of considering local setting in project siting and design. A general review as suggested under the General Order does not appear to have the ability to analyze this issue. To ensure that expedited permitting of restoration projects under the General Order would not impact natural resources that are protected by BCDC's policies, the draft EIR should assess whether and how projects would fit within local setting and how this would be analyzed through the General Order.

Dredging

Projects allowed by General Order may entail the use of dredged sediment to raise the elevation of subsided land, construct necessary berms or levees, construct transition zones, or implement other sea level rise adaptation measures; and could entail dredging for tidal channel creation or enhancement. BCDC's dredging policies regulate the use of dredged sediment for restoration, as well as dredging for these purposes, within the Commission's jurisdiction. The Bay Plan Dredging Policies state, in part, that:

"Dredging should be authorized when the Commission can find: (a) the applicant has demonstrated that the dredging is needed to serve a water-oriented use or other important public purpose, such as navigational safety; (b) the materials to be dredged meet the water quality requirements of the San Francisco Bay Regional Water Quality Control Board; (c) important fisheries and Bay natural resources would be protected through seasonal restrictions established by the California Department of Fish and Game, the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service, or through other appropriate measures; (d) the siting and design of the project will result in the minimum dredging volume necessary for the project; and (e) the materials would be disposed of in accordance with Policy 3"; and

"A project that uses dredged material to create, restore, or enhance Bay or certain waterway natural resources should be approved only if:

1. The Commission, based on detailed site specific studies, appropriate to the size and potential impacts of the project, that include, but are not limited to, site morphology and physical conditions, biological considerations, the potential for fostering invasive species, dredged material stability, and engineering aspects of the project, determines all of the following:
 - a. the project would provide, in relationship to the project size, substantial net improvement in habitat for Bay species;

- b. no feasible alternatives to the fill exist to achieve the project purpose with fewer adverse impacts to Bay resources;
- c. the amount of dredged material to be used would be the minimum amount necessary to achieve the purpose of the project;
- d. beneficial uses and water quality of the Bay would be protected; and
- e. there is a high probability that the project would be successful and not result in unmitigated environmental harm...”

The draft EIR should discuss whether the requirements of the General Order would address impacts identified in BCDC’s Bay Plan policies on acceptable dredging activities.

Climate Change

Restoration projects within BCDC’s jurisdiction that are permitted via the General Order will be required to adhere to BCDC’s climate change policies. An applicable policy in the Bay Plan states, in part, that most projects “within areas that a risk assessment determines are vulnerable to future shoreline flooding that threatens public safety...should be designed to be resilient to a mid-century sea level rise projection. If it is likely the project will remain in place longer than mid-century, an adaptive management plan should be developed to address the long-term impacts that will arise based on a risk assessment using the best available science-based projection for sea level rise at the end of the century.” The draft EIR should discuss whether the General Order would consider sea level rise. Additionally, the draft EIR should consider how climate change may alter the way that allowable restoration projects will impact Bay and marsh natural resources (e.g. how might changing precipitation patterns and sea level rise impact the projects that would be allowed through the General Order).

Public Access

Projects within BCDC’s jurisdiction that are permitted via the General Order and use fill for habitat restoration will also require public access. BCDC’s public access policies state, in part, that:

“A proposed fill project should increase public access to the Bay to the maximum extent feasible, in accordance with the policies for Public Access to the Bay”;

“Public access to some natural areas should be provided to permit study and enjoyment of these areas. However, some wildlife are sensitive to human intrusion. For this reason, projects in such areas should be carefully evaluated in consultation with appropriate agencies to determine the appropriate location and type of access to be provided”; and

“Public access should be integrated early in the planning and design of Bay habitat restoration projects to maximize public access opportunities and to avoid significant adverse effects on wildlife.”

The draft EIR should discuss whether the requirements of the General Order would be consistent and compatible with BCDC's Bay Plan policies on Public Access.

Mitigation

Projects that would be permitted under the General Order could potentially have adverse impacts on natural resources that require mitigation under BCDC's Bay Plan policies. BCDC's Bay Plan states that "[p]rojects should be designed to avoid adverse environmental impacts to Bay natural resources such as to water surface area, volume, or circulation and to plants, fish, other aquatic organisms and wildlife habitat, subtidal areas, or tidal marshes or tidal flats. Whenever adverse impacts cannot be avoided, they should be minimized to the greatest extent practicable. Finally, measures to compensate for unavoidable adverse impacts to the natural resources of the Bay should be required. Mitigation is not a substitute for meeting the other requirements of the McAteer-Petris Act." The draft EIR should discuss whether the General Order would identify and address the need for mitigation for project impacts when appropriate. Additionally, the General Order should recognize that projects will require thorough evaluation to determine whether mitigation is necessary for project impacts.

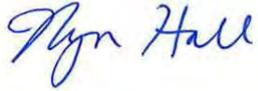
Cumulative Impacts

In allowing large amounts and/or areas of restoration work under a programmatic permit, it is important to consider the cumulative impacts of the authorized projects. While BCDC does not have specific policies or laws on cumulative impacts, the combined effects of multiple restoration projects should not negatively impact Bay resources. In particular, impacts addressed in the Bay Plan that should be considered carefully in the context of multiple projects include invasive species, sediment movement, tidal hydrology, and changes to the Bay's bathymetry. For example, if multiple projects reconfigure hydrology, it is important to consider resulting changes to sediment budget and water flows, which could have implications for ecosystems Bay-wide. Additionally, invasive species control strategies or introduction potential at one site could affect other projects throughout the Bay. Bay Plan policies state, in part, that any tidal marsh or tidal flat restoration project should be designed and analyzed to account for "(b) the impact of the project on the Bay's sediment budget..." and "(e) potential invasive species introduction, spread, and control...". Similarly, "[a]ny proposed filling or dredging project in a subtidal area should be thoroughly evaluated to determine the local and Bay-wide effects of the project on: (a) the possible introduction or spread of invasive species; (b) tidal hydrology and sediment movement;...and (e) the Bay's bathymetry. Projects in subtidal areas should be designed to minimize and, if feasible, avoid any harmful effects." The draft EIR should analyze the cumulative impacts of programmatic permitting of the types of restoration projects to be addressed through the General Order.

The San Francisco Bay Plan and Suisun Marsh Protection Plan encourage the restoration of Bay habitats, and Commission staff supports efforts to streamline permitting processes. However, Commission staff believes it is important to recognize that large restoration projects can have significant impacts to Bay resources. The Commission staff believes that the adoption of a

General Order for large restoration projects should be carefully considered to ensure that these impacts are acknowledged and addressed. Thank you for the opportunity to comment on this NOP. If you have any questions regarding this letter or the Commission's policies, please contact me at (415) 352-3626 or megan.hall@bcdc.ca.gov.

Sincerely,



MEGAN HALL
Coastal Scientist

San Francisco Bay Conservation and Development Commission
375 Beale Street, Suite 510
San Francisco, California 94105
Tel: 415-352-3600
Email: info@bcdc.ca.gov
Website: www.bcdc.ca.gov

MH/gg

Meredith Parkin

From: Nadolski, Jessica@Waterboards <Jessica.Nadolski@Waterboards.ca.gov>
Sent: Tuesday, October 22, 2019 12:00 PM
To: Meredith Parkin; Erika Lovejoy
Cc: Garrison, Paul@Waterboards
Subject: FW: Comment Letter – Proposed Statewide Restoration General Order

From: Betsy Stapleton <5104stapleton@gmail.com>
Sent: Saturday, October 19, 2019 5:48 AM
To: Nadolski, Jessica@Waterboards <Jessica.Nadolski@Waterboards.ca.gov>
Subject: Comment Letter – Proposed Statewide Restoration General Order

Dear Persons,

I strongly support the creation of a Statewide general order for Restoration. My organization, the Scott River Watershed Council, has extensively used the general order for small habitat restoration, the Habitat Restoration and Enhancement Act (HREA), to permit and execute restoration in the Scott Valley of Siskiyou County. Without HREA we would have been very limited in our ability to deploy restoration for the C/ESU listed Coho salmon, and other ecological services. I believe that our HREA permitted projects are starting to be of sufficient scale to support population recovery. However, our efforts have been limited by the project size constraints of HREA, and having similar permitting for larger projects would allow us to accelerate the scale and scope of our restoration efforts.

To meet the many critical problems in front of us, such as climate change, water resilience, groundwater recharge and catastrophic fire, restoration must move beyond the 5 acre/500 linear feet of streambank impact allowed under HREA to a much larger scale. The proposed general order for large scale restoration projects would allow my organization, and many others like mine, to do so. Additionally, having a programmatic Environmental Document, would significantly reduce the cost of individual projects, allowing restoration investments to deliver more on-the-ground-results.

Again, I can not express enough how much having this order would allow the delivery of the scale of restoration projects that are necessary to address the needs of society and the environment.

Betsy Stapleton

Betsy Stapleton
Board Chair
Scott River Watershed Council
707-499-7082
www.ScottRiverWatershedCouncil.com
[Visit us on Facebook](#)



November 14, 2019

State Water Resources Control Board
Attention: Jessica Nadolski
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812-2000

Subject: Comment Letter – Proposed Statewide Restoration General Order

Dear Ms. Nadolski:

Thank you for the opportunity to comment on the proposed General Order for Clean Water Act (CWA) Section 401 Water Quality Certification and Waste Discharge Requirements for Implementation of Large Habitat Restoration Projects Statewide. As a long-time partner and implementing agency of salmonid restoration projects in the Lower American River (LAR), the City of Sacramento and Water Forum are very supportive of development of a General Order that permits larger restoration projects. For over a decade, the Water Forum, Reclamation, U.S. Fish and Wildlife Service (USFWS), and the City have collaborated with stakeholders to implement successful science based salmonid restoration projects on the lower American River. This work has resulted in over 37 acres of restored habitat.

The Water Forum was established in 1993 with the co-equal goals of protecting the fishery and recreational resources of the lower American River and meeting the water needs of the Sacramento region. Water Forum staff and consultants have been working cooperatively with State and Federal fish trustee agencies and the U.S. Bureau of Reclamation to monitor conditions in the river and develop long term management strategies for responding to the declining fishery on the lower American River. The City is responsible for physically implementing the construction of ongoing LAR habitat improvements, is a signatory to the Sacramento Water Forum Agreement, and has served as the local partner on past LAR habitat improvements associated with the Central Valley Project Improvement Act (CVPIA), in coordination with the U.S. Department of the Interior, Bureau of Reclamation (Reclamation). Reclamation provides most of the project funding and is required to implement CVPIA Section 3406(b)(13) under Federal law.¹

In a natural system, sediment is constantly entering a river and moving downstream. Thus, one of the principal needs for salmonids is replacing spawning gravel of an appropriate size and creating

¹ CVPIA, Section 3406 (b)(13), directs the U.S. Department of the Interior to develop and implement a continuing program for the purpose of restoring and replenishing, as needed, salmonid spawning gravel lost due to the construction and operation of Central Valley Project dams and other actions that have reduced the availability of spawning gravel and rearing habitat in the LAR from Nimbus Dam to the confluence with the Sacramento River.

appropriate water depths and velocities at the flows that typically occur during the spawning season. This is currently accomplished by relocating gravel deposits from higher floodplain areas downstream of Folsom Dam and placing the deposits strategically within the river. The City, in association with the Water Forum, currently manages and implements this restoration work with demonstrated success; juvenile fish densities have increased from only 0.1 fish per square meter to 3.25 fish per square meter in some reaches. Additionally, spawning increased approximately 500% from a restoration action. This ongoing gravel augmentation is integral to maintaining legal operation of the Federal Central Valley Project (CVP) and supporting salmonid persistence in the LAR.

The City offers the following comments and suggestions for the State Water Resources Control Board's consideration:

1) **General Order Project Description**

As described in the Notice of Preparation, the proposed General Order considers a variety of aquatic and riparian restoration types that take place throughout the State. The following proposed types of restoration are included:

- a. **Stream Crossing and Fish Passage Improvements** – for upstream and downstream movement by fish and other species, and to improve functions of streams.
- b. **Small Dam, Tide Gate, Flood Gate, and Legacy Structure Removal** – to improve fish and wildlife migration, tidal and freshwater circulation and flow, and water quality.
- c. **Bioengineered Bank Stabilization** – to reduce fine sediment input, enhance aquatic and riparian habitat, and improve water quality.
- d. **Off-Channel/Side-Channel Habitat Restoration and Enhancement** – to improve aquatic and riparian habitat for fish and wildlife and/or to restore hydrologic, hydraulic, and biogeochemical functions and processes of streams.
- e. **Water Conservation Projects** – to reduce low-flow stream diversions, such as off-stream storage tanks and ponds and necessary off-channel infrastructure.
- f. **Floodplain Restoration** – to improve ecosystem function through hydrological connection between streams and floodplains, including levee breaching and removal, berm and dike setback breaching and removal, and hydraulic reconnection and revegetation.
- g. **Piling and Other In-Water Structure Removal** – to improve water quality and aquatic habitat for fish and wildlife.
- h. **Non-native Invasive Species Removal and Native Plant Revegetation** – to improve watershed functions, such as aquatic and riparian habitat for fish and wildlife.
- i. **Tidal, Subtidal, and Freshwater Wetland Establishment, Restoration, and Enhancement** – to create or improve wetland ecological functions.
- j. **Stream and Riparian Habitat Establishment, Restoration, and Enhancement** – to create or restore functions of streams and riparian areas.

The City respectfully requests that the following items be added to the list of proposed restoration activities included in the General Order:

- **Main Channel Gravel Augmentation** – to improve salmon and steelhead spawning habitat.
- **In-channel Grading Activities** – to rework existing bed sediment and/or prepare the channel bed for imported gravel placement.
- **Boulder Placement** – to provide fish cover, create complex flow dynamics (induced scour or reduced velocities adjacent to higher velocities), and improve habitat diversity.
- **Large and Small Woody Habitat Material Placement (rootwads, logs, willow cuttings, etc.)** – to modify flow and velocity, trap sediments, create pools, and provide cover for juvenile fish.

2) **General Order Monitoring Requirements**

Under the existing CWA Section 401 Water Quality Certification for the LAR restoration program (WDID#5A34CR00696), the City is required to abide by the following water quality standards:

In-Water Work or Diversions:

During planned in-water work or during the entire duration of temporary water diversions, any discharge(s) to waters of the state shall conform to the following water quality standards:

a. *Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.*

b. *Activities shall not cause turbidity increases in surface water to exceed:*

I. where natural turbidity is less than 1 Nephelometric Turbidity Units (NTUs), controllable factors shall not cause downstream turbidity to exceed 2 NTU;

II. where natural turbidity is between 1 and 5 NTUs, increases shall not exceed 1 NTU;

III. where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent;

IV. where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs;

V. where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.

In determining compliance with the above limits, appropriate averaging periods may be applied provided that beneficial uses will be fully protected. Averaging periods may only be used with prior permission of the Central Valley Water Board Executive Officer.

For Folsom Lake and American River (Folsom Dam to Sacramento River), except for periods of storm runoff, the turbidity shall be less than or equal to 10 NTUs. To the extent of any conflict with the general turbidity objective, the more stringent applies.

Sampling during in-water work or during the entire duration of temporary water diversions shall be conducted via grab sample, at 4-hour intervals.

Under the existing Water Quality Certification, turbidity monitoring causes periodic difficulties during side-channel creation and gravel placement activities. These activities are necessary for effective habitat

restoration. Despite abiding by Best Management Practices, such as thorough shaking and washing of spawning gravel prior to in-water placement, it may still be difficult for the project to stay below allowed turbidity thresholds in the short-term, due to the volume of material excavation or placement. Exceeding the threshold requires halting all in river work on the project. Minimizing the window of in river work is important to project success because the work window for these projects is constricted, this also minimizes impacts. The team begins work after high summer flows -typically August- and must be done before salmon emigrate back to the system – October 1. These two constraints create a short work window which can be further shortened by a wet water year and higher flows. Stoppage of work can jeopardize the success of the project and efforts should be made to minimize them. Creating higher turbidity thresholds would increase the likelihood of a successful outcome for the project.

Any turbidity created by the project is isolated to a very short window of a few hours and during a life stage unlikely to impact listed species. During natural processes such as rain events and flood events, the NTU are higher than the regulated maximum, and consist of the same sediments that would otherwise enter the river at these times. Disturbances due to turbidity of this sort are necessarily short term and mirror natural processes (as opposed to anthropogenic activities). These disturbances do not persist downstream or after construction has stopped. These near-term disturbances should not impede restoration efforts, which produce long-lasting benefits of the very sort that water quality standards are designed to protect, including healthy populations of native fish. Restoration projects, such as these, are aiming to address the most critical limiting factor for species success, spawning and rearing habitat. Limiting these projects has the potential to harm the species. Accordingly, we request that NTU limits be set to ensure these projects can proceed while remaining protecting these species.

The focus of the proposed General Order is the permitting of larger restoration projects and the City requests that short-term turbidity monitoring thresholds under the proposed General Order be increased to allow for turbidity to temporarily not exceed 20 NTU, or for the sampling interval to be increased to 8 hours, or downstream monitoring to be increased to 3,000 ft downstream. Many of the effects of higher turbidity on salmon result from studies done during sensitive life stages. Though this is important work, this sensitivity does not apply to restoration projects of this nature.

The Water Forum and the City feel that these additions to the 401 Water Quality Certification would significantly increase the ability to implement successful salmon restoration projects in the narrow window of time available to complete the work in the LAR. We thank you again for the opportunity to comment on this exciting General Order. If you have any questions or need additional information, please contact me at (916) 808-1993 or by email at lallen@cityofsacramento.org.

Sincerely,



Lilly Allen
Project Coordinator

cc: Tom Gohring, Executive Director – Sacramento Water Forum
Janice Piñero, U.S. Department of the Interior, Bureau of Reclamation
Michael Voss, Senior Deputy Attorney, City of Sacramento

Jeff TenPas
24 East Main St
Winters, CA 95694
November 22, 2019

State Water Resources Control Board
Division of Water Quality
Attn: Jessica Nadolski
P.O. Box 100
Sacramento, CA 95814
Delivered via email: Jessica.nadolski@waterboards.ca.gov

Re: Comment Letter-Proposed Statewide Restoration General Order

Dear State Water Resources Control Board:

I am submitting written comments regarding the scoping for the proposed statewide restoration general order.

My concern is for the massive earthmoving operations (anthropogeomorphology or diesel geomorphology) that might be allowed under this General Order, and the consequent effects on floodplain structure, groundwater processes, and floodplain ecohydrology. Diesel geomorphology is in general antithetical to fluvial geomorphology in terms of floodplain structure, function, and groundwater flow.

Comments:

1. Diesel geomorphology at any scale is destructive of natural floodplain structure. Flowing waters sort sediments and lays down contrasting strata, earthmovers mix all fill in one homogenous mass.
2. The sorted strata of a fluvially-structured floodplain include sandy and gravelly layers with hydraulic conductivity that is orders of magnitude higher than the interleaved silt layers. Mixing these layers by earthmoving lowers the hydraulic conductivity to the lowest denominator, that of the silt layer. The traffic and compaction by heavy machinery lowers the hydraulic conductivity even further. All this cuts of groundwater flow.
3. A channel and bank built by diesel geomorphology may transmit less than 1/10,000 of the groundwater allowed to flow by a natural fluvially-built channel and bank.
4. Floodplain hydraulic conductivity, groundwater movement, groundwater recharge, and floodplain ecohydrology depend on floodplain structure. Diesel geomorphology should be used sparingly, even surgically, with specific goals in mind, and with knowledge of the consequences.

5. Subsurface floodplain connectivity and diesel geomorphology effects should be included in the EIR analysis. EIR should analyze how Projects will alter affects groundwater processes, pre-project floodplain groundwater elevations and ecohydrology, and groundwater recharge.
6. Knowledge should come before action. The General Order should be limited so that Projects which propose extensive landforming of channels, banks, or floodplains should be required to know the structure of the floodplain and show how the structure affects groundwater processes, pre-project floodplain groundwater elevations and ecohydrology, and groundwater recharge. Project notifications should be required to show how the Project will alter affects groundwater processes, pre-project floodplain groundwater elevations and ecohydrology, and groundwater recharge.
7. The General Order should clearly define the scope of landforming (i.e. earthmoving that is more than surficial) that is allowed under its coverage. The scope definition should include limits to any landforming in terms of surface area of bed and bank alteration, amounts, texture and composition of fill, and amount in cubic volume of earthmoving.
8. The equipment to be used and its ground pressure should be disclosed in the Scope of the General Order, in the EIR, and in the Project Notifications. Earthmoving wheeled scrapers for example have exceedingly high ground pressures (85 lbs/inch²). Land that is formed by a wheeled scraper will have its hydraulic conductivity reduced by a factor of 10 to 100. Track laying dozers or excavators may have ground pressure below 15 lbs/inch²) and still reduce hydraulic conductivity by a factor of 10 but to a lesser depth.
9. Building up a floodplain in a cut and fill operation results in building in lifts with multiple passes, with each lift compacted by traffic, resulting in compaction to great depth, and groundwater blockage to the same depth.
10. As the extent of landforming increases, as structure is altered or obliterated in more of the channel, bank, and floodplain, a threshold may be reached where floodplain groundwater falls too far for riparian forest to grow. Thresholds should be considered in the EIR.
11. The EIR should analyze where, in what circumstances, and at what scale the effects of landforming and diesel geomorphology are the best available alternative.

Case Study: Winters Putah Creek Nature Park

Winters Putah Creek Nature Park is a case in point for the impacts of diesel geomorphology. In Winters, 7900 feet of the floodplain and channel were drastically altered. Nearly all the floodplain was cleared, fill was imported, earthmoving covered over 90% of the area. Over 90% of bed and banks were altered, filled, or reconstructed. The results are becoming clear.

The EIR should consider these impacts:

- Groundwater levels in a nearby monitoring well have fallen below any levels seen since 1930.
- Stream gage data show a drop in water loss in the reach (to groundwater recharge) of 3.9 cfs.
- Groundwater monitoring in the floodplain show water levels too low to support a riparian forest.
- Mature cottonwoods spared during construction have since died.
- Repeated revegetation efforts have failed.

Data and analysis can be provided for consideration in the EIR by contacting myself.

Sincerely,

Jeff TenPas/

Meredith Parkin

From: Nadolski, Jessica@Waterboards <Jessica.Nadolski@Waterboards.ca.gov>
Sent: Friday, November 22, 2019 9:43 AM
To: Erika Lovejoy; Meredith Parkin
Cc: Garrison, Paul@Waterboards
Subject: FW: Statewide Restoration General Order

FYI – I responded to Mr Htain’s questions. Thank you, -Jessica

From: Htain, Eric <ehtain@geiconsultants.com>
Sent: Wednesday, November 20, 2019 11:22 AM
To: Nadolski, Jessica@Waterboards <Jessica.Nadolski@Waterboards.ca.gov>
Subject: RE: Statewide Restoration General Order

Dear Ms. Nadolski,

GEI is a consulting firm that works primarily with local and state water agencies and our services include ecological restoration and mitigation planning and permitting. I discovered the NOP for the CEQA document related to the General Order for 401 Certification for Implementation of Large Habitat Restoration Projects Statewide on your web page. This General Order is very exciting to me as we do a lot of work with agencies in this area of stream restoration and having this streamlined permit will be of benefit to promote agencies to incorporate stream restoration into their projects.

I am very interested in seeing the text of the General Order itself and did not see a link to any text in the NOP. Is this available and can it be shared? Would the public have an opportunity to review and comment on the text of the General Order (or has this already happened)?

Thanks,

Eric

GEI | ERIC HTAIN
Senior Environmental Scientist
916.912.4940 cell: 916.835.9493
2868 Prospect Park Drive, Suite 400, Rancho Cordova, CA 95670



Meredith Parkin

From: Nadolski, Jessica@Waterboards <Jessica.Nadolski@Waterboards.ca.gov>
Sent: Friday, November 22, 2019 12:48 PM
To: Erika Lovejoy; Meredith Parkin
Cc: Garrison, Paul@Waterboards
Subject: FW: Comments on Notice of Preparation and CEQA ScopingMeeting

From: Karen Buhr <karen-buhr@carcd.org>
Sent: Friday, November 22, 2019 12:46 PM
To: Nadolski, Jessica@Waterboards <Jessica.Nadolski@Waterboards.ca.gov>
Subject: Comments on Notice of Preparation and CEQA ScopingMeeting

State Water Resources Control Board
Division of Water Quality
Attention: Jessica Nadolski
P.O. Box 100, Sacramento, CA 95812-2000

RE: Comments on Notice of Preparation and California Environmental Quality Act Scoping Meeting and General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Implementation Of Habitat Restoration Projects Statewide

Dear Ms. Nadolski:

I am writing on behalf of the California Association of Resource Conservation Districts (CARCD). The 96 Resource Conservation Districts around the State implement local on the ground conservation. The CARCD strongly supports State Water Board action to create a more efficient permitting mechanism for habitat restoration. Our organization implements all types of restoration projects to create healthier habitat for species throughout the state. Permitting is by far the greatest barrier to our work. Creating a more efficient permitting process will help us do more on-the- ground work and get environmentally beneficial projects completed more quickly. We are especially interested in seeing stream restoration projects be covered in the permit and be included in the analysis of the environmental document. We encourage a broad environmental analysis, so the permit can comprehensively cover a wide-array of essential restoration projects throughout the State.

Thanks,
Karen Buhr
Executive Director
California Association of Resource Conservation Districts
916-524-2100

RCDs, Your Partner in Local Conservation and Agriculture



FC 1778 (09-05-19)

Project Manager: Rick Callender
Extension: 2017
Date: 12/12/2019

CEO APPROVAL REQUEST

SUBJECT: SWRCB CEQA Scoping Meeting for Large Habitat Restoration Project General Order

RECOMMENDATION:

Recommend CEO sign letter regarding the General Order for Large Habitat Restoration Projects

EL-5 COMPLIANCE:

CEQA COMPLIANCE:

Not a CEQA project.

SUMMARY:

Recommend CEO sign the comment letter to the State Water Resources Control Board regarding the Scoping Meeting for Large Habitat Restoration Project General as approved.

FINANCIAL IMPACT:

None.

ATTACHMENTS:

Letter to SWRCB

APPROVALS:

Citrix approvals attached.

_____, Unit Manager Date

_____, COO/CEA/CFO/CPO
Click to select Business Area Date

_____, DAO/DOO (Name) Division Date



Norma J. Camacho
Chief Executive Officer

Date

December 12, 2019

State Water Resources Control Board
Division of Water Quality
Attention: Jessica Nadolski
P.O. Box 100
Sacramento, CA 95812-2000

Subject: Comment Letter—Proposed Statewide Restoration General Order

Dear Ms. Nadolski:

The Santa Clara Valley Water District (Valley Water) commends the efforts of the State Water Resources Control Board to establish a general order for large habitat restoration projects. In our experience, ecologically meaningful restoration, and achieving economies of scale that reduce the unit cost of restoration often exceeds the five-acre limit for streamlined permitting of small restoration projects. While the comments fall outside of the official California Environmental Quality Act (CEQA) schedule to be entered officially to the record, we hope our submittal can inform State Water Board staff in formulating a General Order that is applicable to a wide set of restoration projects.

Valley Water understands that at this time there are no size (acre or linear feet) limitations that would be placed on projects potentially covered under this General Order. Valley Water supports this approach of not limiting the scale of what is defined as a large restoration project, as a means to more efficiently implement our restoration and stewardship goals.

Valley Water supports the State Water Resources Control Board's intention to allow other agencies to use the Environmental Impact Report (EIR) to undertake similar permit streamlining for large restoration projects. Valley Water encourages the State Water Resources Control Board to partner with the California Department of Fish and Wildlife for development of permit streamlining under Section 1602 of the Fish and Game Code, similar to the Section 1602 streamlining established under the Habitat Restoration and Enhancement Act of 2014 and based on the General Order for Small Habitat Restoration Projects (File No. SB09016GN).

Valley Water contends that multi-benefit projects, which may provide for improved flood protection, hazardous tree removal, or other benefits in addition to stream/riparian restoration, be considered for coverage under the General Order for Large Habitat Restoration Projects. Valley Water would support certain criteria be met for multi-benefit projects to be permitted under the General Order, such as: (1) one of the project's primary objectives is restoration, (2) the project is financed, at least in part, with monies set aside for the explicit purpose of restoration or stewardship, (3) the project does not



permanently impact beneficial uses established in the applicable Basin Plan, and/or (4) the percentage of hardscape (e.g., concrete, un-vegetated rip-rap, etc.) does not exceed more than a certain limited percent of the total footprint (e.g., for each acre of project footprint, a minimum of 0.9 acre of restoration must occur, allowing 0.1 acre of hardscape), among other possible limitations. Criteria for project coverage under the General Order should, at a minimum, provide a clear and reasonable definition of what level of restoration is necessary for projects to qualify for coverage, and how that level can or should be measured. The inclusion of qualifying multi-benefit projects in the General Order is, perhaps, one of the most profound steps the State Water Resources Control Board can make to increase the amount and pace of creek and wetland restoration in California. A streamlined permit process would directly encourage project sponsors to include sufficient levels of habitat restoration in projects with other primary objectives by saving time and decreasing the relative cost of projects that benefit the environment.

Valley Water understands that the project description in the Draft EIR will likely detail the specific activities that would be covered under the General Order. We encourage the State Water Resources Control Board to consider and evaluate project types and implementation methods that can be necessary for restoring habitat in urban and suburban areas. In our experience, such projects and methods may necessitate the removal of mature vegetation; significant excavation or other landscape manipulations; the use of concrete, floodwalls or similar hardscape to sufficiently stabilize restoration features; and design compromises for flood safety and community needs. Such methods, among others, are not inherently inconsistent with habitat restoration, and in densely urbanized areas they are often essential to feasible and ecologically meaningful restoration. Valley Water suggests specifically analyzing the following restoration project types:

- Under “Stream Crossing and Fish Passage Improvements,” please include evaluation of fish ladder removal (when in conjunction with fish passage barrier removal), installation of riffle-pool complexes that bypass passage barriers, installation of fish ladders that bypass passage barriers, removal/replacement of culverts that serve as fish passage barriers, and projects that separate streams from artificial lakes. Valley Water suggests the definition of fish passage barriers extend to both partial and complete passage impediments, and that the potential for wetland-type conversion be analyzed.
- Under “Bioengineered Bank Stabilization,” please include evaluation of buried rip-rap with vegetation planted on top, in addition to other bioengineered bank protections.
- Under “Floodplain Restoration,” please include excavation and fill as a method for hydraulic reconnection. Streams with modified hydrographs, historical incision, and/or adjacent mining features often require removal of existing vegetation and earthwork to establish functional floodplain elevations.
- Under “Tidal, Subtidal, and Freshwater Wetland Establishment, Restoration, and Enhancement,” please include construction of tidal ecotone habitat. Such habitat can require extensive beneficial fill and impact adjacent existing wetland, but is necessary for tidal wetlands to respond to sea level rise, provide refuge for native wildlife, and buffer wetlands from adjacent urban and municipal land uses.
- Under “Stream and Riparian Habitat Establishment, Restoration, and Enhancement,” please include evaluation of replacement of concrete-lined channel with natural materials, and allowing for vertical concrete or sheet pile walls, and separation of streams from artificial lakes/ponds, which may result in wetland-type conversion.

Ms. Jessica Nadolski

Page 3

December 12, 2019

Valley Water recommends that installation of monitoring equipment, such as fish counters, water quality testing devices, soil and geotechnical borings be covered under the General Order so long as they are completed in conjunction with a large habitat restoration project.

Again, Valley Water supports the State Water Resources Control Board to establish a general order for large habitat restoration projects. Thank you for your consideration of the above comments. Please feel free to contact Antonio Alfaro at aalfaro@valleywater.org or by phone at (916) 448-8497.

Sincerely,



Norma J. Camacho
Chief Executive Officer

By e-mail: jessica.nadolski@waterboards.ca.gov

aa:fd

1212a-l

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691 Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: <http://www.nahc.ca.gov>

RECEIVED



OCT 23 2019

DIVISION OF WATER QUALITY

October 15, 2019

Jessica Nadolski
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000

RE: SCH# 2019100230, Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Implementation of Large Habitat Restoration Statewide Project, Statewide

Dear Ms. Nadolski:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. **Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
 - a. A brief description of the project.
 - b. The lead agency contact information.
 - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
 - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).
2. **Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report:** A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subs. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).
 - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).
3. **Mandatory Topics of Consultation If Requested by a Tribe:** The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
 - a. Alternatives to the project.
 - b. Recommended mitigation measures.
 - c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).
4. **Discretionary Topics of Consultation:** The following topics are discretionary topics of consultation:
 - a. Type of environmental review necessary.
 - b. Significance of the tribal cultural resources.
 - c. Significance of the project's impacts on tribal cultural resources.
 - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).
5. **Confidentiality of Information Submitted by a Tribe During the Environmental Review Process:** With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).
6. **Discussion of Impacts to Tribal Cultural Resources in the Environmental Document:** If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
 - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
 - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
 - a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
 - b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
 - a. Avoidance and preservation of the resources in place, including, but not limited to:
 - i. Planning and construction to avoid the resources and protect the cultural and natural context.
 - ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - i. Protecting the cultural character and integrity of the resource.
 - ii. Protecting the traditional use of the resource.
 - iii. Protecting the confidentiality of the resource.
 - c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
 - d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).
 - e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
 - f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
 - a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
 - b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
 - c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
 - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
 - a. If part or all of the APE has been previously surveyed for cultural resources.
 - b. If any known cultural resources have already been recorded on or adjacent to the APE.
 - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
 - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
 - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
 - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
 - b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
 - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
 - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
 - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address:
Andrew.Green@nahc.ca.gov.

Sincerely,



Andrew Green
Staff Services Analyst

cc: State Clearinghouse

Meredith Parkin

From: Nadolski, Jessica@Waterboards <Jessica.Nadolski@Waterboards.ca.gov>
Sent: Thursday, November 7, 2019 12:33 PM
To: Meredith Parkin; Erika Lovejoy (ELovejoy@suscon.org)
Cc: Garrison, Paul@Waterboards
Subject: FW: Stop it

Public comment

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

From: Niz Brown <niz@niz.com>
Sent: Saturday, November 2, 2019 11:25 AM
To: Nadolski, Jessica@Waterboards <Jessica.Nadolski@Waterboards.ca.gov>
Subject: Stop it

there is so much money available out there for restoration.... enough... Our society has many more needs than aquatic species..!



PRUNUSKE CHATHAM, INC.

November 21, 2019

State Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812-2000
Attention: Jessica Nadolski

Re: Comment Letter – Proposed Statewide Restoration General Order

Dear Ms. Nadolski

Thank you for the opportunity to provide comments on the Notice of Preparation (NOP) for the large habitat restoration General Order. Prunuske Chatham, Inc. (PCI) is an ecological science, planning, design, and construction firm based in Sonoma County. We have over 30 years of experience in the design, permitting, and construction of both small- and large-scale habitat restoration project across northern California. We appreciate the efforts by the State Water Resources Control Board to improve efficiencies in permitting large projects through development of a statewide programmatic permit for aquatic and riparian habitat restoration. The addition of a programmatic permitting pathway for large-scale projects will help the restoration community meet larger, more impactful landscape-scale habitat improvement goals. At PCI, we have successfully utilized the existing General Order for small habitat restoration projects and fully intend to use the one developed for large-scale projects.

PCI provides the following comments on the proposed restoration types listed in the NOP and would like to see the ideas and recommendations included in the project description and analyzed in the Environmental Impact Report (EIR).

Programmatic Permitting Examples

The benefits of programmatic authorizations are immense. Restoration specialists in the Pacific Northwest utilize programmatic authorizations and consistence determinations for restoration projects on a scale that is not currently available in California. Permitting hurdles have prevented implementation of such comprehensive and forward-thinking restoration projects in California. Attached are several examples of the scale and nature of the projects implemented under programmatic authorizations in Oregon and Washington. Please consider inclusion of the types of projects illustrated in the examples for the California Restoration General Order (see Attachments A-F) and evaluate the potential benefits and impacts associated with projects of the scale and nature as those presented in the examples.

The General Order should include all activities currently covered in existing programmatic biological opinions issued by NOAA Fisheries Restoration Center (see Att. C) and other agencies to provide consistency within the regulatory community. However, to ensure that our regulatory policy remains consistent with up-to-date science and best practices, allowable restoration activities should not exclude actions that are not currently in existing programmatic authorizations.

Stage 0 Projects

The General Order should include process-based restoration of fluvial systems as a means to create dynamic and self-sustaining riverine environments. The most recent nomenclature for these projects is Stage 0 channels. Projects designed to restore a single-thread channel to a multi-thread, stable channel system can include restoration of whole valley floors as a means to restore the key physical processes that shape alluvial valleys. Methods of design and construction for whole valley floor restoration should range from progressive channel adjustment (multi-year site entry) to wholesale grading to reset valley surfaces. These project types should be explicitly identified under the *Floodplain Restoration or Stream and Riparian Habitat Establishment, Restoration, and Enhancement* restoration categories listed in the NOP. The approval for these types of projects should be based on the potential to improve and enhance hydrologic and biologic functions and not based on the size of the project or the amount of fill within a waters of the State.

Bioengineered Bank Stabilization Projects

Often bank stabilization projects use extensive riprap bank protection. Although use of large boulders may provide a stable streambank, riprap does not provide improved habitat conditions. Consider explicitly eliminating the use of the General Order for bank stabilization projects that depend on the extensive use of rock riprap. An exhaustive list of allowable bioengineering techniques is not necessary if the dependency upon the extensive use of rock is excluded.

Design Manuals and Risk and Uncertainty Analysis

Many of the fish passage habitat restoration design manuals used in California are static in nature and do not include the latest design ideas employed by field professionals; yet, many permits and authorizations are only issued for projects that utilize designs included in a small number of design manuals. The General Order should have fewer rigid requirements and allow for use of designs appropriate for individual sites. These designs may come from manuals or include designs that are not yet included in manuals but are used by restoration professionals. We recommend the General Order include a broad range of design criteria for each of the restoration categories and include a mechanism for use of new design ideas. Allow projects to be permitted using a risk and uncertainty analysis concept to allow for use of new design ideas.

Adaptive Management

The General Order should include means for adaptive management, as restoring degraded stream systems is complex and there are very few unimpaired reference sites available. The adaptive management process and monitoring can be essential for developing the most effective projects. Adaptive management will help improve future restoration projects by allowing management strategies to change based on an

improved understanding of ecological responses to restoration activities. An adaptive management strategy in the General Order could allow for changes in types of restoration activities included.

Size Limitations

Please do not include a maximum upper limit size constraint on projects allowed under the General Order. Project size should be based on the individual restoration goals and objectives. Limitations on size could hamper restoration efforts in some locations or limit the selection of restoration methods. The current limits of <500 feet of dewatering allowed under the small habitat restoration General Order is particularly limiting for large scale restoration projects.

Mandated Protection Measures/Upfront Conditions

The NOP states that restoration projects must incorporate specified protection measures (as applicable), such as design guidelines or avoidance and minimization techniques, or other criteria into project descriptions to qualify within the scope of the proposed General Order. Although this sounds reasonable, it is difficult to provide comments because the potential measures are not listed. It is unclear if the EIR and the General Order will include an exhaustive list or will depend on well-established practices used for restoration.

Knowing the required protection measures improves the project design process. Clear articulation of the requirements results in projects that meet agency expectations without causing numerous design revisions during the authorization process. The NOAA Fisheries Biological Opinions articulate conservation measures and conditions, which can be incorporated into project designs.

The EIR should evaluate potential project impacts with the assumption that required protection measures and upfront conditions are included as part of each project eligible to use the General Order.

Technical Advisory Committee/Technical Working Group

Eligibility for use of the large-project General Order should require use of a technical advisory committee (TAC) or technical working group (TWG) to provide guidance during project development. The State Water Quality Control Board should strongly encourage other state and federal agencies to participate and provide information needed to ensure that projects both meet agency guidelines for approval and satisfy the requirements of the new General Order.

Technical and Regulatory Water Quality Control Board Staff

Staff assigned to review and approve projects under the new General Order should have the design skills necessary to understand project elements and the role they play in attainment of project goals and objectives. Preferably, regulatory staff would participate on the TAC or TWG to provide regulatory guidance during project development and design. It is not uncommon to experience inconsistencies between technical staff and regulatory staff on individual projects.

The SWRCB should strive to have all regional water board staff consistently evaluate and permit projects under the new General Order with no major differences between

regions. It is not uncommon to have seemingly different standards from one regional water board to the next. Consistent application of the General Order is desirable.

Thank you for your consideration of the comments provided on the Notice of Preparation for the General Order for Implementation of Large Habitat Restoration Projects Statewide. If you have any questions about the comments provided, please contact me at carrie@pcz.com.

Sincerely yours,
PRUNUSKE CHATHAM, INC.

**Carrie
Lukacic**

 Digitally signed by Carrie Lukacic
DN: cn=Carrie Lukacic,
o=Prunuske Chatham, Inc., ou,
email=carrie@pcz.com, c=US
Date: 2019.11.21 17:45:33 -08'00'

Carrie Lukacic
Principal Environmental Planner

Attachments: Attachment A – 6 Stage 0 South Fork Lamprey Exchange
Attachment B - Zero Order Channels
Attachment C - SRF 2018 Programmatic Permitting
Attachment D - Stage-0-Pardigm-Shift_Nov2017
Attachment E- RestorationProgrammaticOverview9-14
Attachment F - Permitting Programmatic and MAMPs for Stage 0 1-29-19

Lower South Fork McKenzie River Floodplain Enhancement Project – Stage 0

Lamprey Information Exchange Workshop December 12, 2018



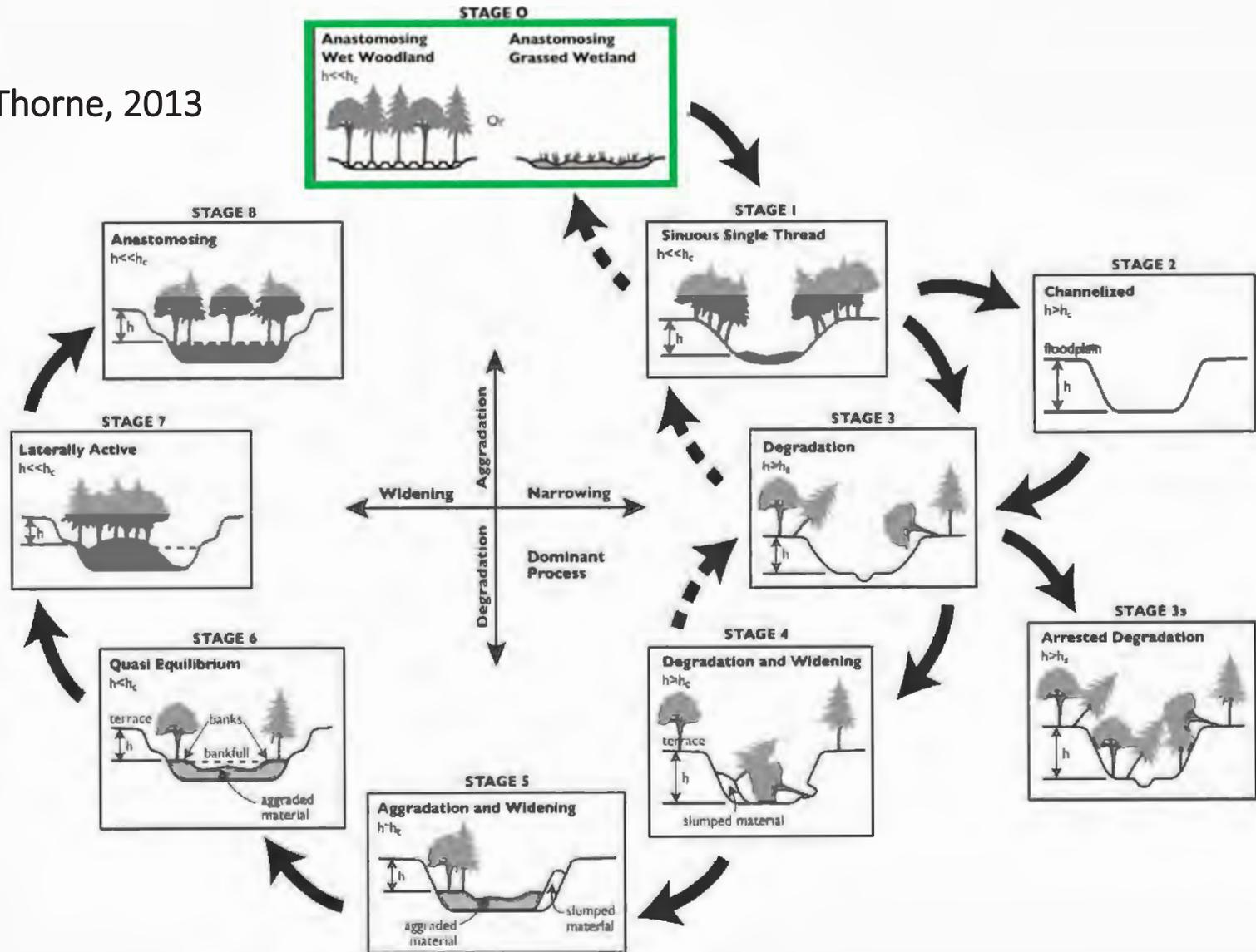
Kate Meyer
Fisheries Biologist
McKenzie River Ranger District
Willamette National Forest

Jared Weybright
Executive Director
McKenzie Watershed Council



What the heck is Stage 0?

Cluer & Thorne, 2013



Historic Floodplain Condition in Depositional Environments

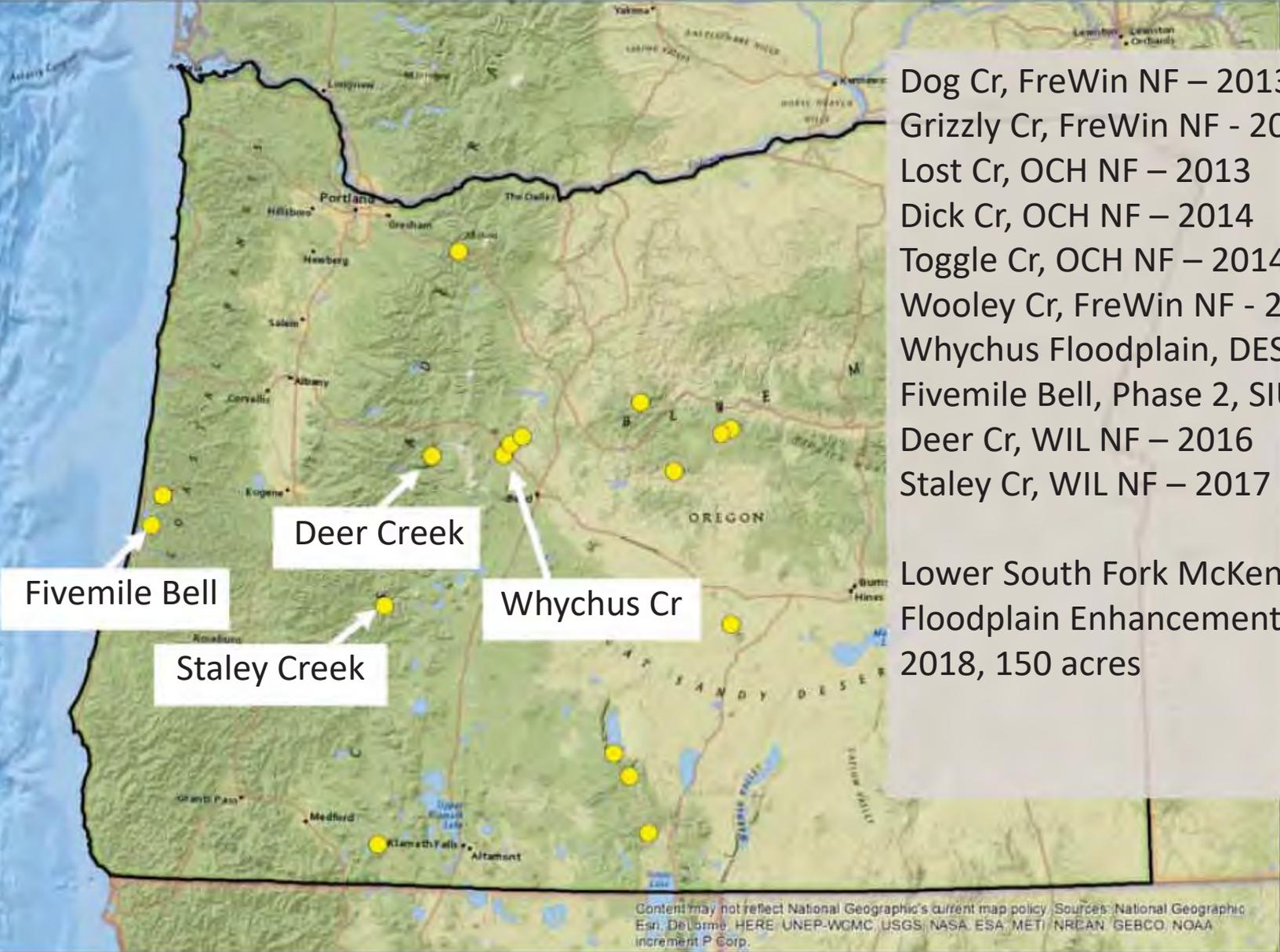
- Vegetation diversity
- Elevational diversity
- Multiple flow paths
- Downed wood
- Future wood supply
- High water table
- Beaver dams
- Frequent floodplain wetting
- Maximum patch complexity





Stream Power Per Unit Width

Locations of Forest Service Stage 0 projects in Oregon



- Dog Cr, FreWin NF – 2013
- Grizzly Cr, FreWin NF - 2013
- Lost Cr, OCH NF – 2013
- Dick Cr, OCH NF – 2014
- Toggle Cr, OCH NF – 2014
- Wooley Cr, FreWin NF - 2014
- Whychus Floodplain, DES NF - 2014
- Fivemile Bell, Phase 2, SIU NF – 2016
- Deer Cr, WIL NF – 2016
- Staley Cr, WIL NF – 2017
- Lower South Fork McKenzie Floodplain Enhancement, Phase 1, 2018, 150 acres

Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Methods Paper Published

Received: 1 May 2018 | Revised: 2 October 2018 | Accepted: 3 October 2018

DOI: 10.1002/rra.3378

RESEARCH ARTICLE

WILEY

A process-based approach to restoring depositional river valleys to Stage 0, an anastomosing channel network

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²United States Forest Service, Willamette National Forest, Middle Fork Ranger District, Westfir, Oregon

³Department of Civil Engineering, Gonzaga University, Spokane, Washington

Correspondence

Paul D. Powers, District Fisheries Biologist, United States Forest Service, Deschutes National Forest, Crescent Ranger District, Crescent, OR.

Email: ppowers@fs.fed.us

Abstract

Stream restoration approaches most often quantify habitat degradation, and therefore recovery objectives, on aquatic habitat metrics based on a narrow range of species needs (e.g., salmon and trout), as well as channel evolution models and channel design tools biased toward single-threaded, and “sediment-balanced” channel patterns. Although this strategy enhances perceived habitat needs, it often fails to properly identify the underlying geomorphological and ecological processes limiting species recovery and ecosystem restoration. In this paper, a unique process-based approach to restoration that strives to restore degraded stream, river, or meadow systems to the premanipulated condition is presented. The proposed relatively simple Geomorphic Grade Line (GGL) design method is based on Geographic Information System (GIS) and field-based analyses and the development of design maps using relative elevation models that expose the relic predisturbance valley surface. Several case studies are presented to both describe the development of the GGL method and to illustrate how the GGL method of evaluating valley surfaces has been applied to Stage 0 restoration design. The paper also summarizes the wide applicability of the GGL method, the advantages and limitations of the method, and key considerations for future designers of Stage 0 systems anywhere in the world. By presenting this ongoing Stage 0 restoration work, the authors hope to inspire other practitioners to embrace the restoration of dynamism and diversity through restoring the processes that create multifaceted river systems that provide long-term resiliency, meta-stability, larger and

Lower South Fork McKenzie River Floodplain Enhancement Phase I

Phase I Summary

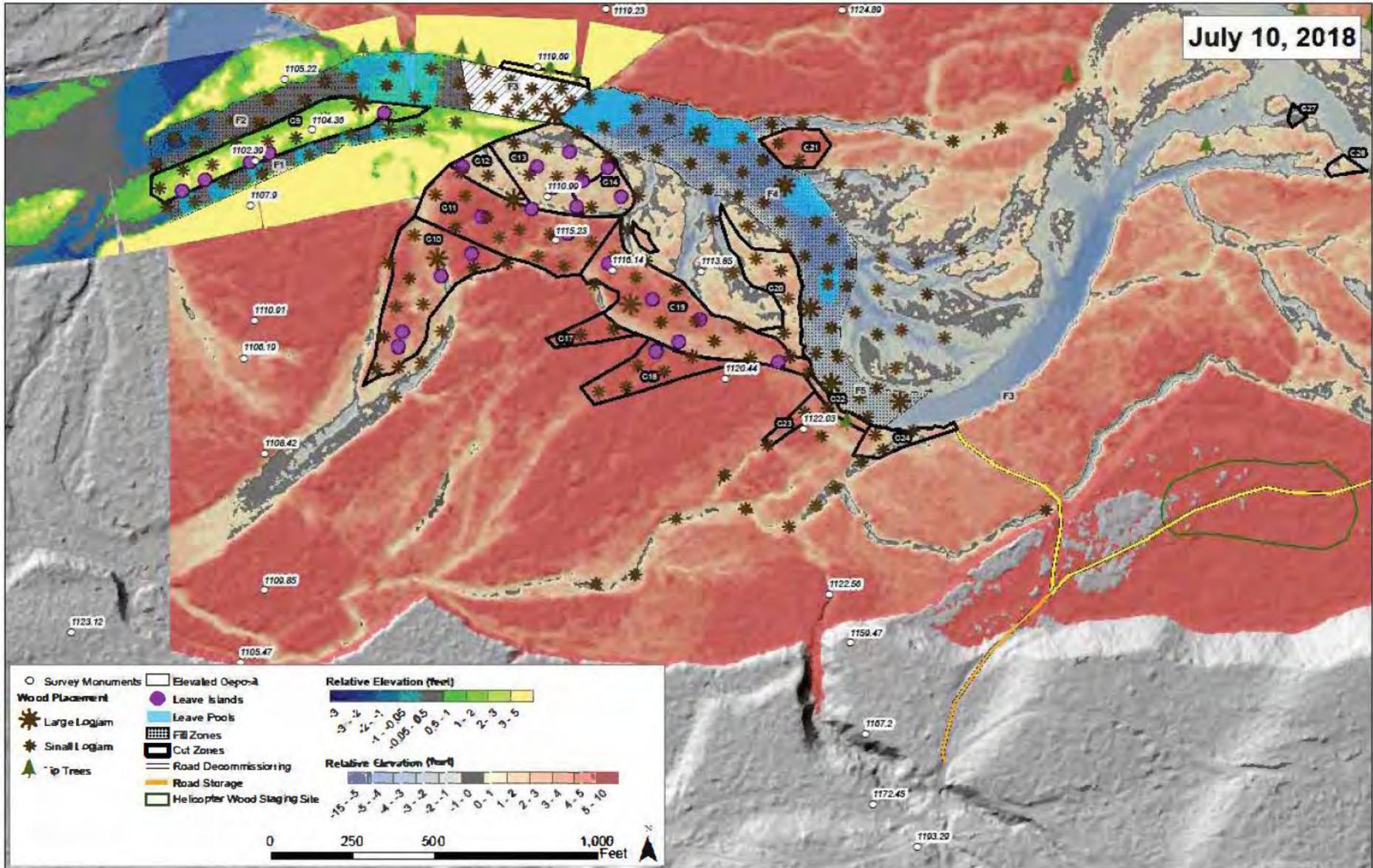
- Phase I - 150 acre project area in lower South Fork floodplain (upstream from confluence)
- Diverted entire South Fork (330 cfs) into relic side channel (USACE flow coordination)
- Significant fish salvage effort with ODFW and volunteers
- Removed ~ 85,000 cubic yards of sediment material from 16 acres of floodplain
- Aggraded 0.7 linear stream miles 1-10 feet with redistributed material
- Placed ~ 3,000 pieces of large wood throughout disturbed areas and relic floodplain channels
- Funders: USFS, OWEB, BPA (PSMFC)
- 12-weeks project period from June 1 – August 15



Partners



Phase I Design Map



Mainstem Diversion



Fish Salvage



Floodplain Cut Area



Filling the Mainstem South Fork



Large Wood Placement



Project Completion



Implementation Sequence 1

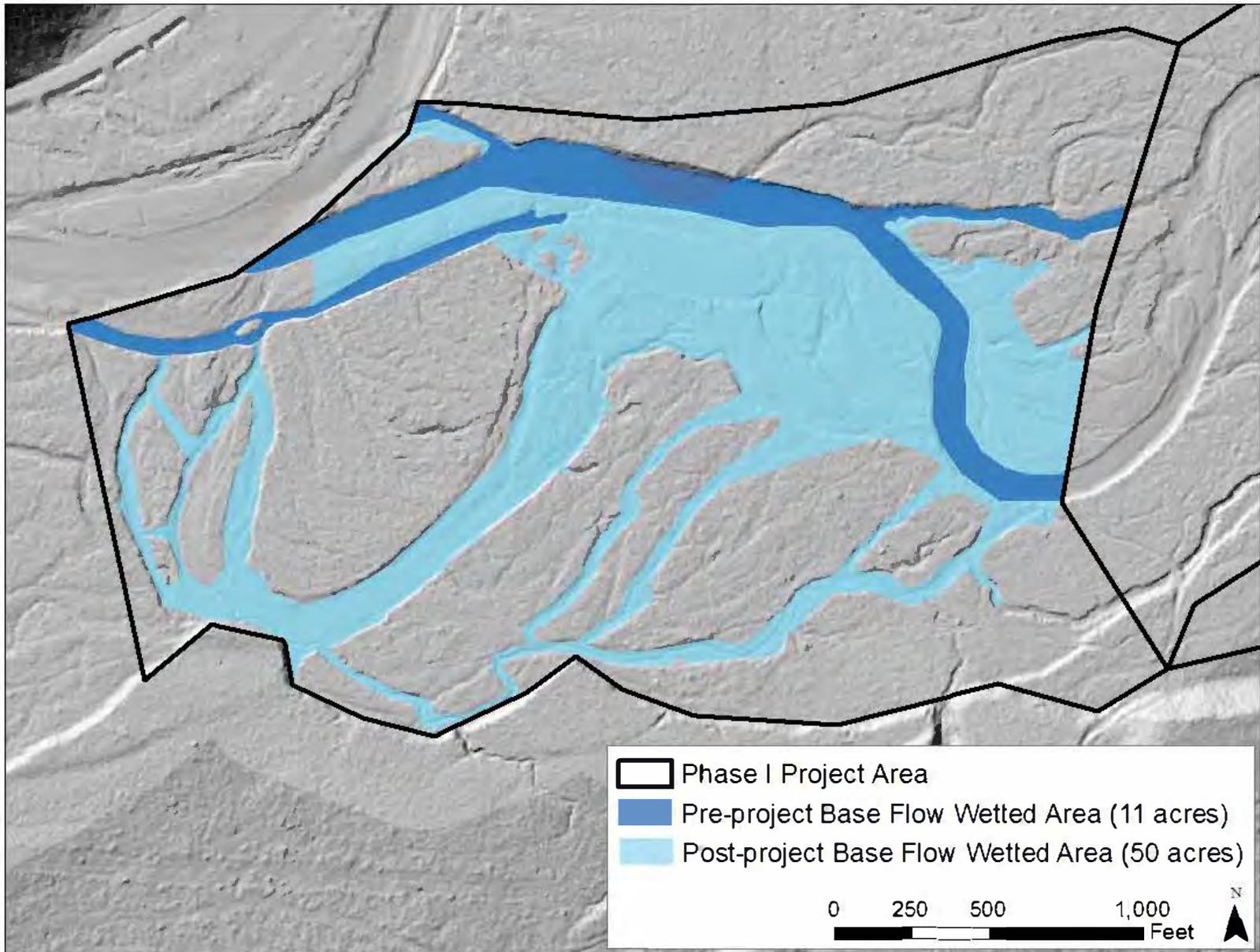


Phase I Project Cost

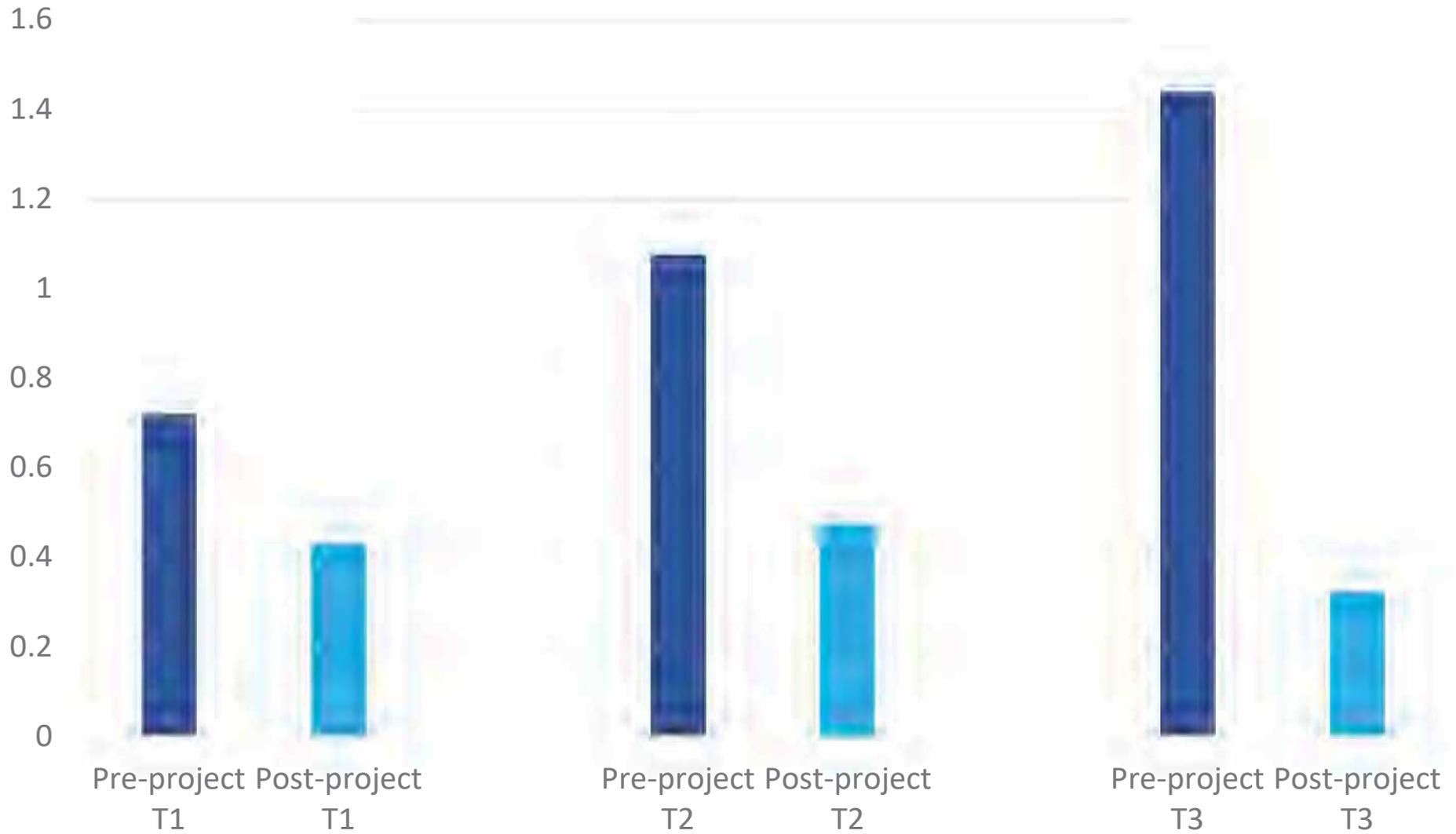
	OWEB	USFS In-kind	USFS	BPA (PSMFC)	MWC	Total
Contracted Services	\$266,840	\$0	\$855,000	\$128,810	\$0	\$1,250,650
Materials (trees)	\$0	\$400,000	\$0	\$0	\$0	\$400,000
Project Management	\$20,500	\$144,596	\$33,000	\$7,000	\$0	\$205,096
Monitoring & Reporting	\$6,200	\$20,000	\$0	\$0	\$0	\$26,200
Travel	\$1,000	\$5,000	\$0	\$554	\$3,350	\$9,904
MWC Indirect	\$30,460	\$0	\$0	\$13,636	\$0	\$44,096
Total Cost	\$325,000	\$569,596	\$888,000	\$150,000	\$3,350	\$1,935,946

Cost per acre ~ \$13,000

350% Increase in Base Flow Wetted Area



Mean Velocity (ft/sec)



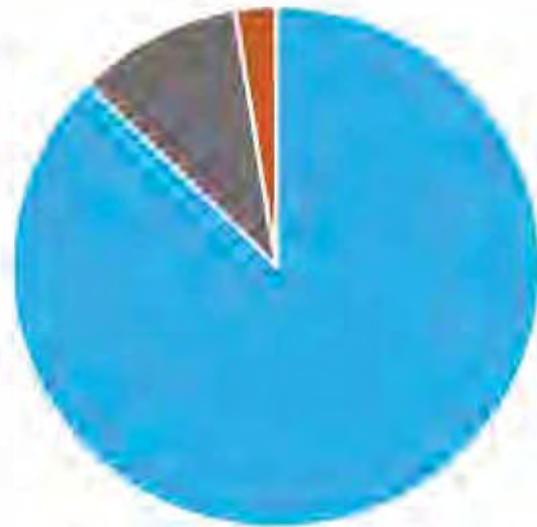
Geomorphic Features

Pre-project T3



■ Pool/Glide ■ Riffle/Rapid ■ Bar

Post-project T3



■ Pool/Glide ■ Riffle/Rapid ■ Bar

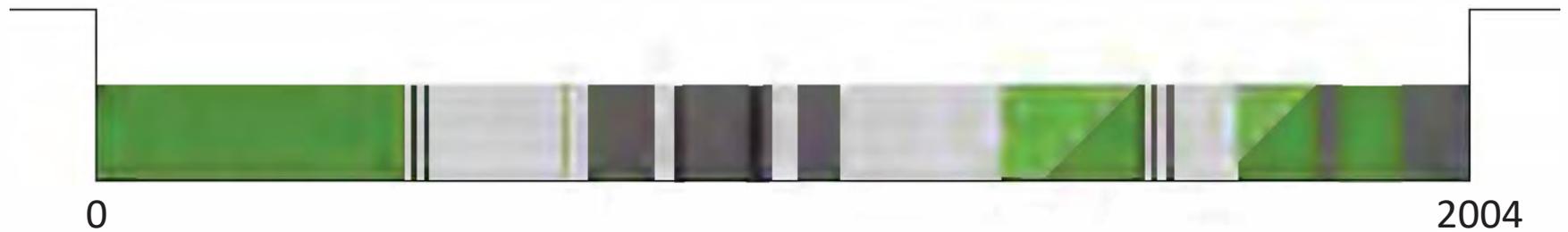
SUBSTRATE SIZE CLASSES

- Vegetation
- Sand
- Gravel
- Cobble
- Boulder
- Bedrock

TRANSECT 3 - Pre-project



TRANSECT 3 - Post-project



QUESTIONS?



2016 PRE-PROJECT



2018 POST-PROJECT

Welcome to the Conservation Lecture Series



<https://www.wildlife.ca.gov/Conservation/Lectures>

Questions? Contact Margaret.Mantor@wildlife.ca.gov



CDFW Conservation Lecture Series

The Conservation Lecture Series is organized by CDFW's Habitat Conservation Planning Branch. The lecture series is designed to deliver the most current scientific information about species that are of conservation concern.

Below is a list of lectures and speakers for the Conservation Lecture Series. Lectures are open to anyone who is interested in participating. Participants may attend in-person or remotely via webinar. Please be sure to register for each class. Lectures are recorded and posted for those unable to attend the day of the event. Visit the [archive page](#) to see recordings of past lectures.

[Subscribe](#) to receive email updates and invitations to upcoming lectures.

Upcoming Lectures

Coming Soon

American Badgers - August 6, 2015, 1:00-3:00 pm. Presented by Dr. Jessie Quinn

The American badger (*Taxidea taxus*) is a Species of Special Concern in California. Funded by a grant from the CDFW Resource Assessment Program (RAP) Dr. Jessie Quinn studied the population distribution, movement behavior, and pathogen and rodenticide exposure in collaboration with the UC Davis Wildlife Health Center, with support from the OSPR Marine Wildlife Veterinary Care and Research Center. She completed a Species Status Report for the American badger for CDFW in 2009, and more recently completed a book chapter on pathogens and parasites in American badgers that will be included in the upcoming text *Badgers of the World*. Dr. Quinn's lecture will discuss the natural history of the species in California, potential threats to populations, and results of her research.



Location: Natural Resources Building, First Floor Auditorium

1416 Ninth Street, Sacramento, 95814

The Wildlife Society (TWS) Upcoming Events

Videos and Past Lectures

- [Design Validation Monitoring Klamath Watershed](#) (D.J. Bandrowski, Aaron Marin, and Rocco Fior)
- [Dogs Moving Conservation Forward](#) (Dr. Deborah (Smith) Woollett and Aimee Hurt)
- [Black Swans, Brown River](#) (Dr. Viers)
- [White-Nose Syndrome in Bats](#) (Wyatt)
- [Invasive Watersnakes](#) (Dr. Todd)
- [Tricolored Blackbird](#) (Dr. Meese)
- [Bighorn Sheep](#) (Dr. Villepique)
- [Vegetation and Flora of a Biodiversity Hotspot](#) (Dr. Ayres)
- [Foothill Yellow-legged Frog](#) (Dr. Kupferberg)
- [Spartina and California Clapper Rails](#) (Dr. Strong)
- [Townsend's Big-eared Bat](#) (Dr. Johnston)
- [California Red-Legged Frog](#) (Alvarez)
- [Salmon in the Yolo Bypass](#) (Jeffres)
- [White Abalone](#) (Dr. Aquilino)
- [Amargosa Vole](#) (Dr. Foley)
- [Desert Tortoise](#) (Jones)



Process-based Restoration to Help Farmers and Fish-

Why California Needs 10,000 More (Ecologically Functional) Dams



Michael M. Pollock NOAA Fisheries-Northwest Fisheries Science Center, Seattle Washington
Brian Cluer NOAA Fisheries Western Regional Office, Santa Rosa, California



Topics

- ▣ **Why dam channels to restore them?**
 - Answer: To create stage zero channels
 - Definitions
 - ▣ Ecologically Functional Dams
 - ▣ Stage Zero Channels or Fluvial Systems
- ▣ **Stage zero channels**
 - Attributes
 - Occurrence on the landscape
 - Ecological Importance
 - Process-based principles for restoring zero order channels and the role of EFDs
 - Examples at multiple scales



Definitions

- **Ecologically Functional Dams**
 - Natural, semi-permeable instream structures (or their human analogues), which slow transport rates of sediment and water and help to create, restore or maintain stage zero channels
 - Consist of natural materials such as wood and other organic matter, live vegetation, rock, and mud
 - Examples: wood jams, beaver dams, rock slides, debris jams, standing live trees and shrubs, emergent vegetation



Definitions

- **Stage Zero Channels**
 - A dynamically meta-stable network of anabranching channels with vegetated islands, which creates physically and biologically complex habitat that provides high levels of ecological goods and services. Occur across a wide range of stream sizes.
 - Typical characteristics include: well connected floodplains with elevated water tables, multithreaded channels, spatially variable hydrologic regimes and structurally complex aquatic and riparian habitat.



Hydrological Regime

- ▣ Floods diffused over the full width of the floodplain so flood peaks are maximally attenuated. Flood pulses diffused and subdued. High water table and close connection between stream flow and ground water ensures reliable base flows and continuous hyporhesis, though flow in smaller anabranches may be ephemeral



Hydraulics and Substrate

- ▣ Multiple channels provide maximum in-channel hydraulic diversity through partition of discharge between branches that widens range of in-channel depth/velocity combinations. Anabranches create multiple slow water margins and channels. Wide range of substrate grain sizes arranged into numerous, well-sorted bed patches.



Dimensions and Morphology

- ▣ Multiple anabranches, islands and side channels. Morphological features abound in-channel and on the extensive and fully connected floodplain, providing a high capacity to store sediment and wood and supporting diverse wetlands and aquatic habitats. Bank heights are low with stability enhanced by riparian margins, but some unvegetated banks are generated by localized erosion. Network and floodplain are highly resilient to disturbance, buffering the system.

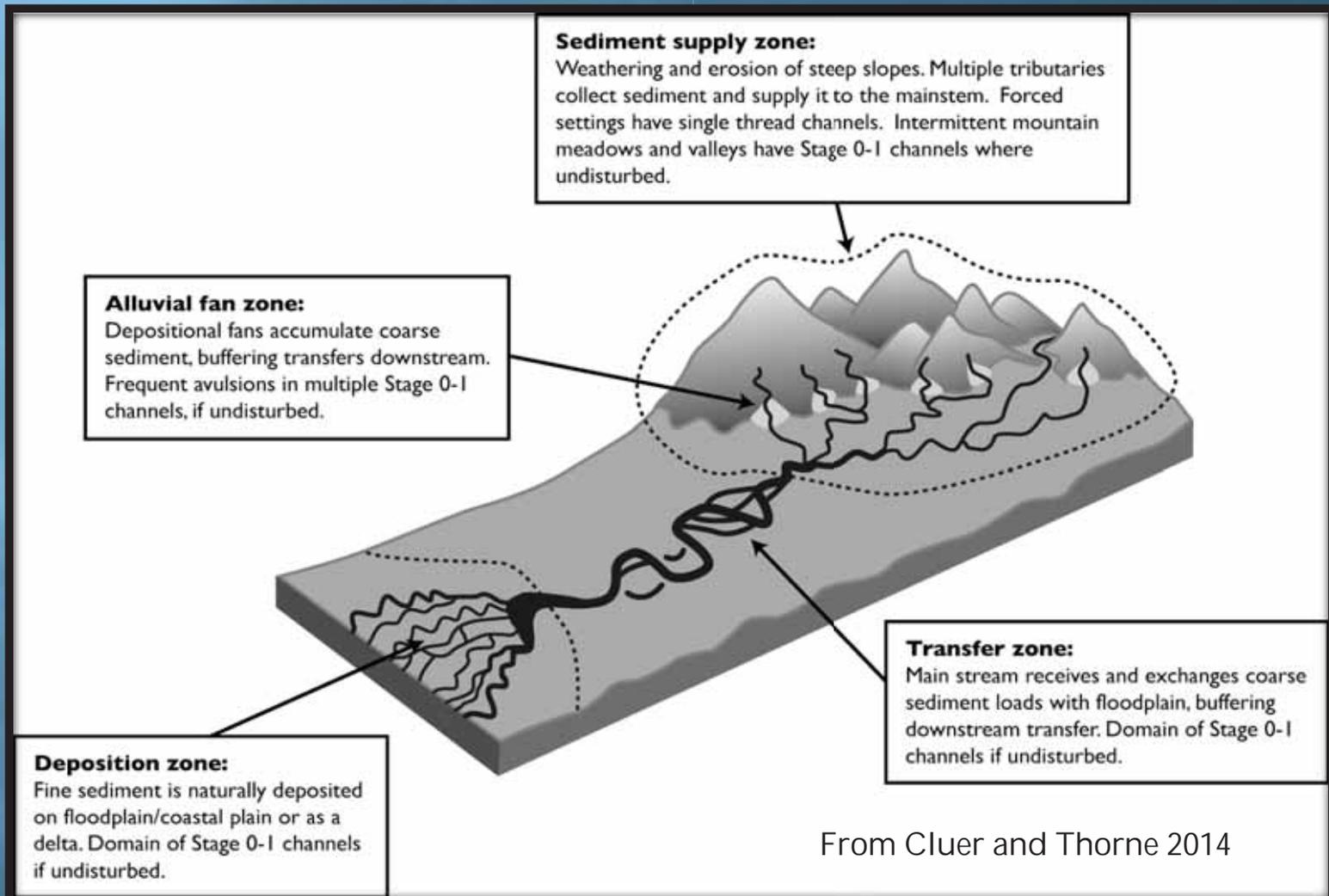


Vegetation

- ▣ Frequent, small channel adjustments and high, reliable water table create ubiquitous settings for proliferation and succession of aquatic, emergent, riparian and floodplain plants. Wet woodlands on islands and floodplain supply and retain wood, and widespread vegetation proximal to channels produces abundant leaf litter. When present, beaver use vegetation to build dams and lodges. Biogenic obstructions such as large wood, beaver dams and live vegetation help to create and retain an anabranching channel pattern.



Where Do Stage Zero Channels Occur?



From Cluer and Thorne 2014



Stage Zero Examples

Salmon River, Idaho





Stage Zero Examples

Lemhi River, Idaho





Stage Zero Examples



Peel River, Canada





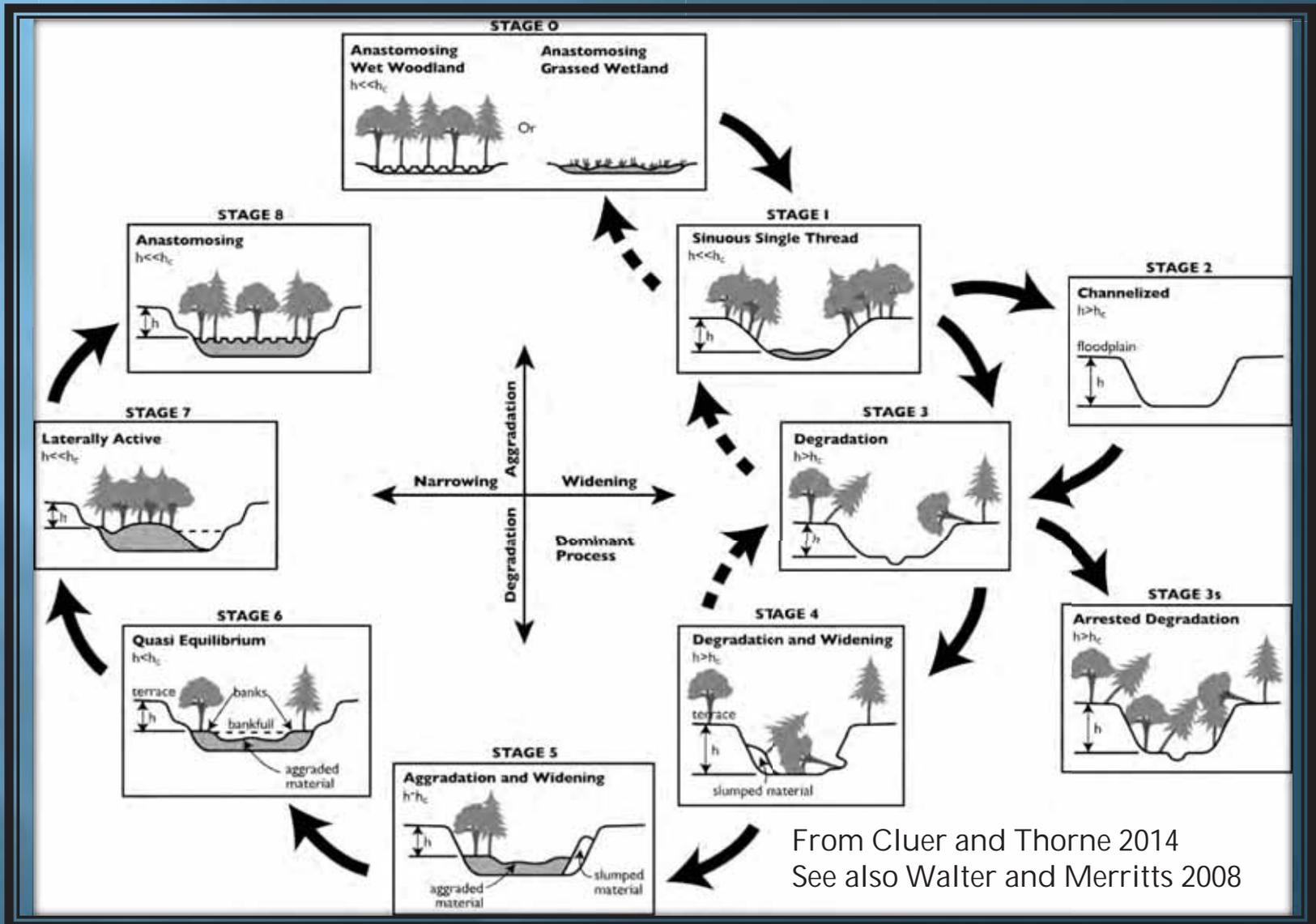
Stage Zero Examples



- ▣ Wenaha River Tributary, Eastern Oregon



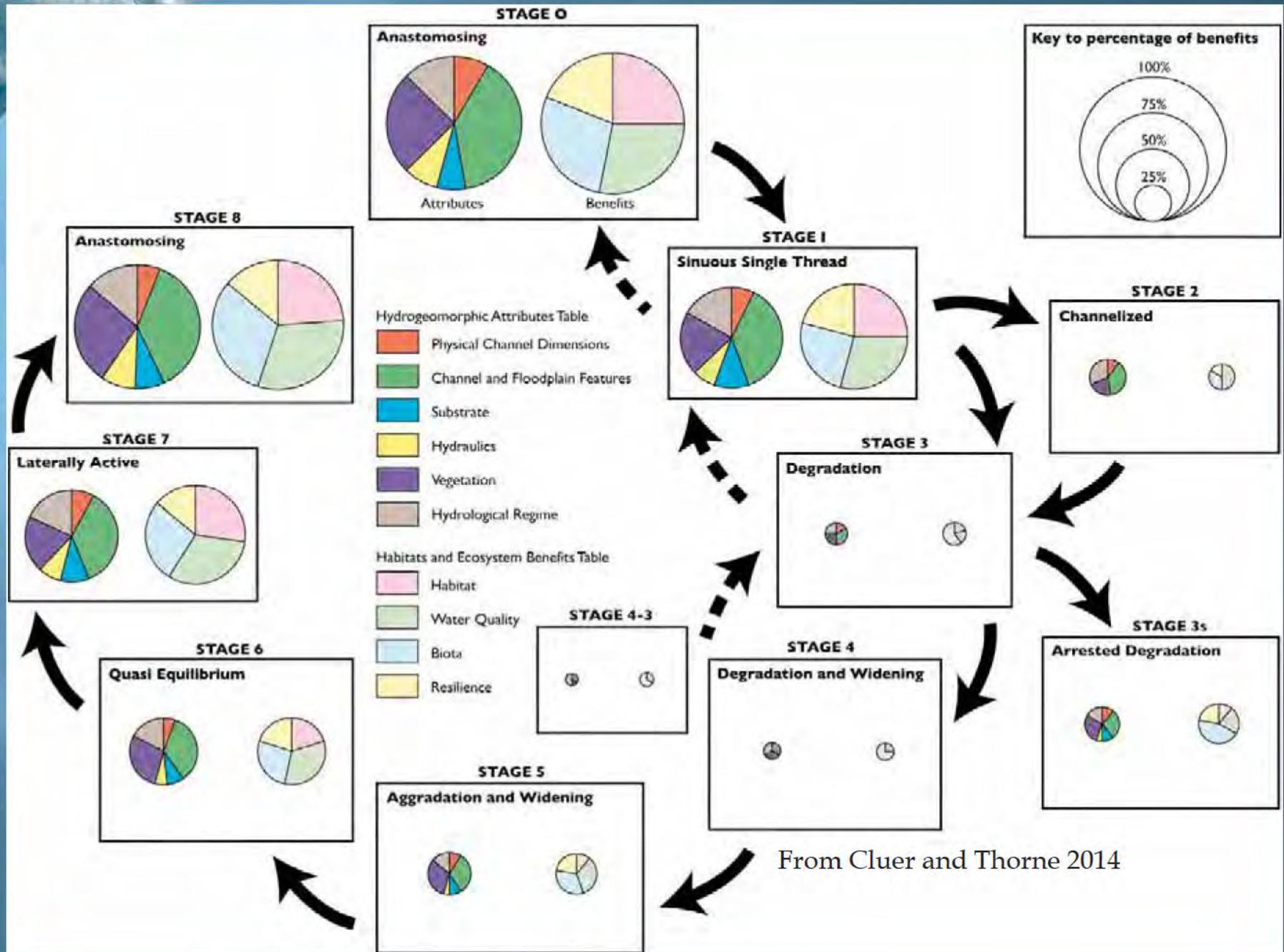
The Stage Zero Channel as a Recovery Goal

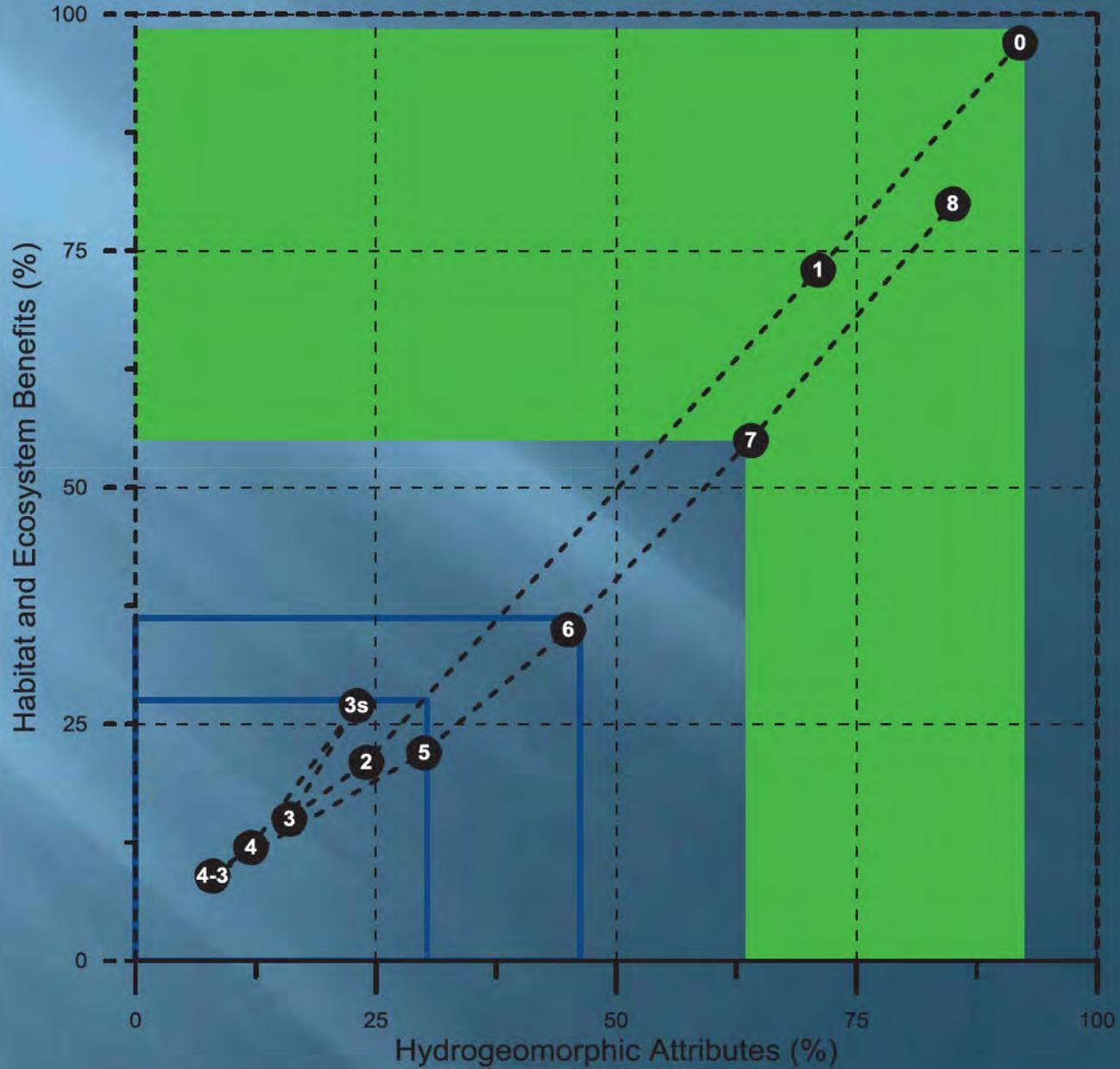




Habitat and Ecosystem Benefits Table

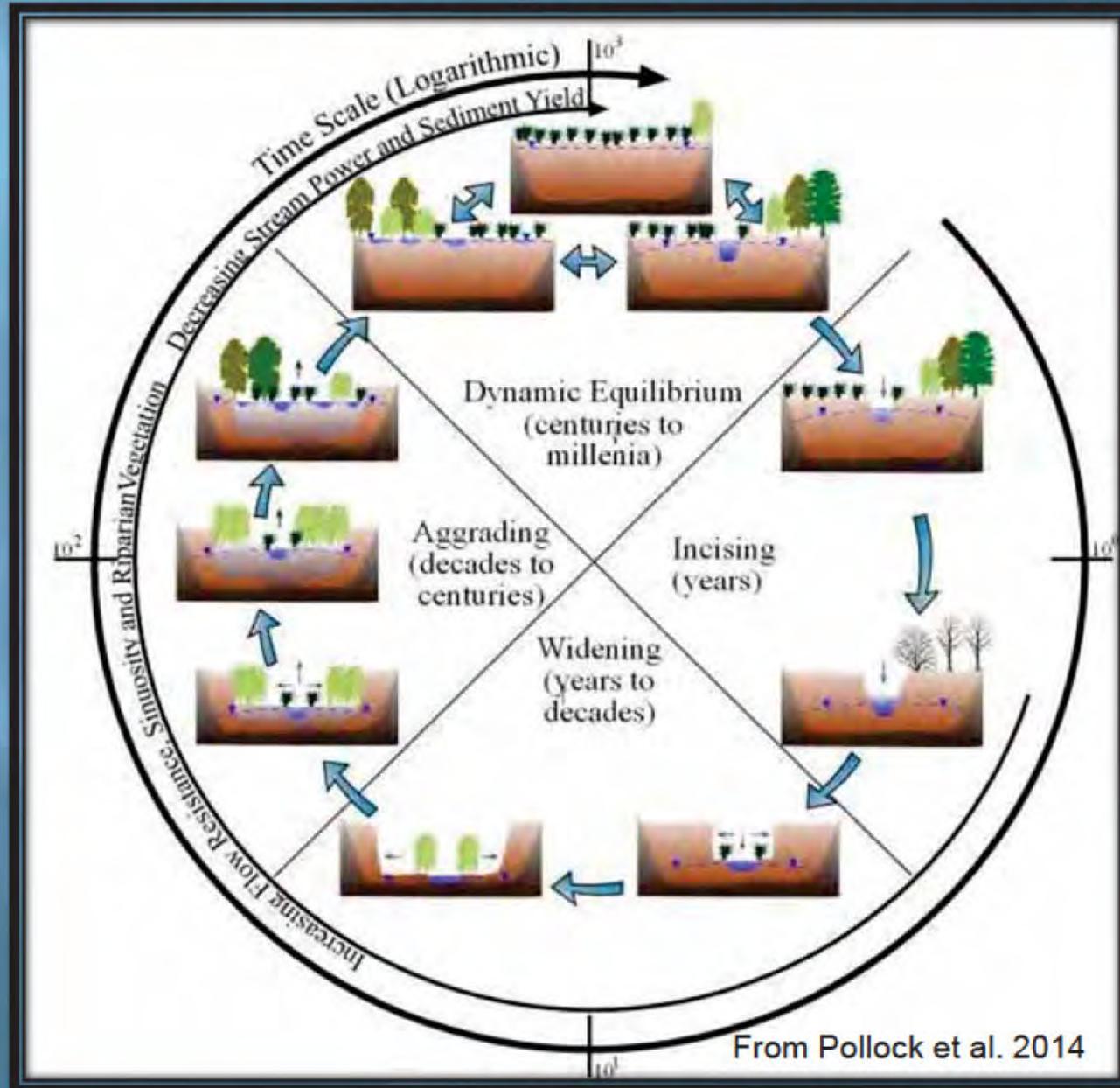
Stage	0	1	2	3	3s	4	4-3	5	6	7	8
Habitat											
Flood Refugia	3	2	0	0	0	0	1	1	1	2	2
Drought Refugia	2	3	0	0	0	0	0	0	1	3	2
Exposed tree roots	3	1	0	1	1	1	0	0	1	1	3
Water Quality											
Clarity	3	2	1	0	0	0	0	1	2	2	3
Temperature amelioration shade and hyporheic flow	3	3	1	1	2	0	0	1	2	3	3
nutrient cycling	3	2	1	0	0	0	0	1	1	2	3
Biota											
Biodiversity species richness and trophic diversity	3	2	0	1	1	1	1	1	1	2	3
Proportion of Native Biota	3	2	1	1	1	1	1	1	1	2	3
1st and 2nd Order Productivity	3	2	1	1	2	1	0	1	2	2	3
Resilience											
Disturbance	3	3	1	0	1	0	0	1	1	2	2
Flood and Drought	3	2	0	0	1	0	0	1	2	1	2
Results											
possible	33	33	33	33	33	33	33	33	33	33	33
sum	32	24	6	5	9	4	3	9	15	22	29
ratio	97%	73%	18%	15%	27%	12%	9%	27%	45%	67%	88%







Natural Recovery Rates Can be Long





Take Home Messages

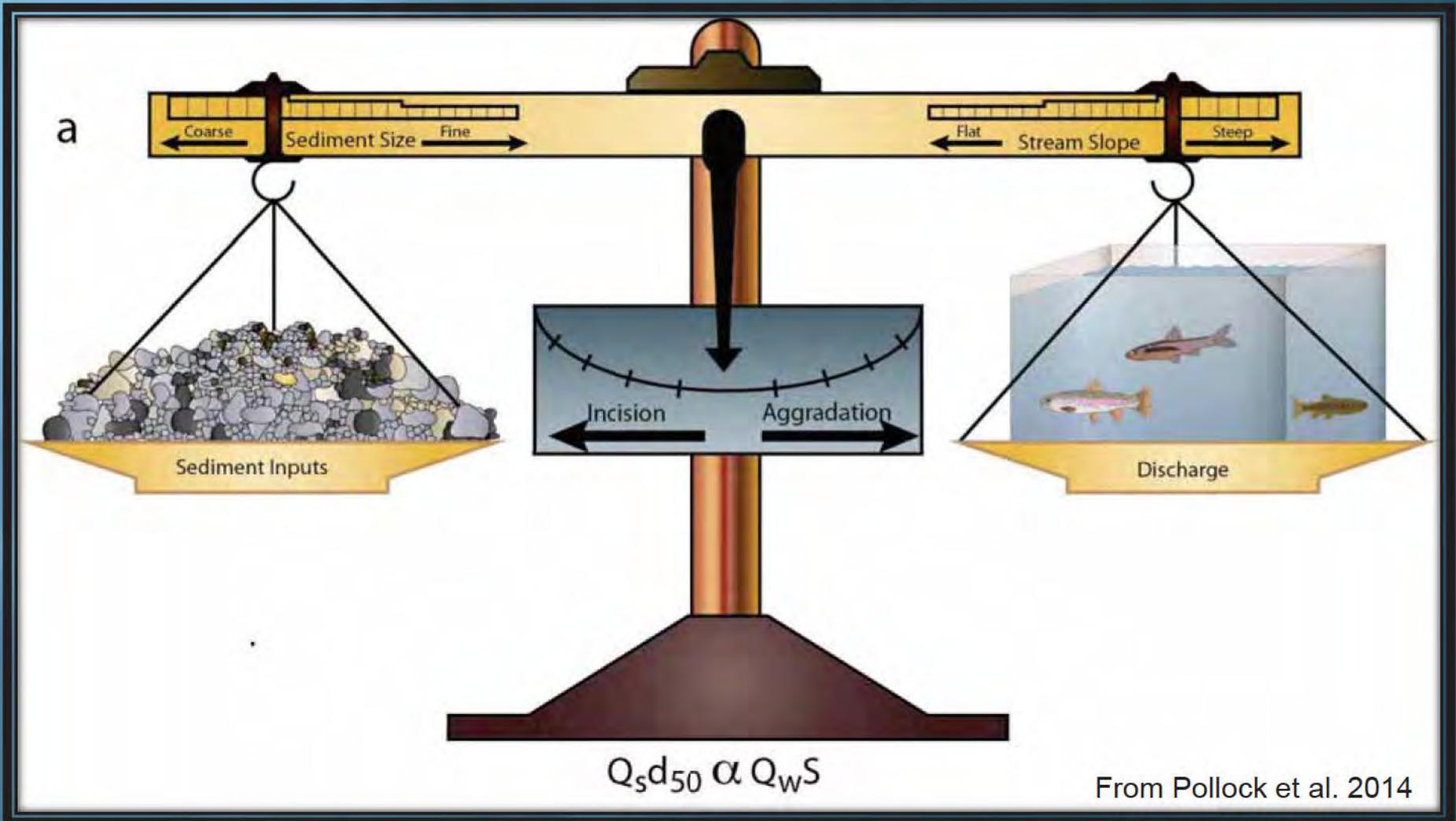


▣ Putah Creek,
California

- ▣ Degraded streams have limited ecological function
- ▣ The scale of restoration needs to be commensurate with the scale of the actions that caused the degradation
- ▣ Meaningful restoration needs to occur on a time frame relevant to recovery time frames for target species (e.g. salmon) so as to avoid extinction

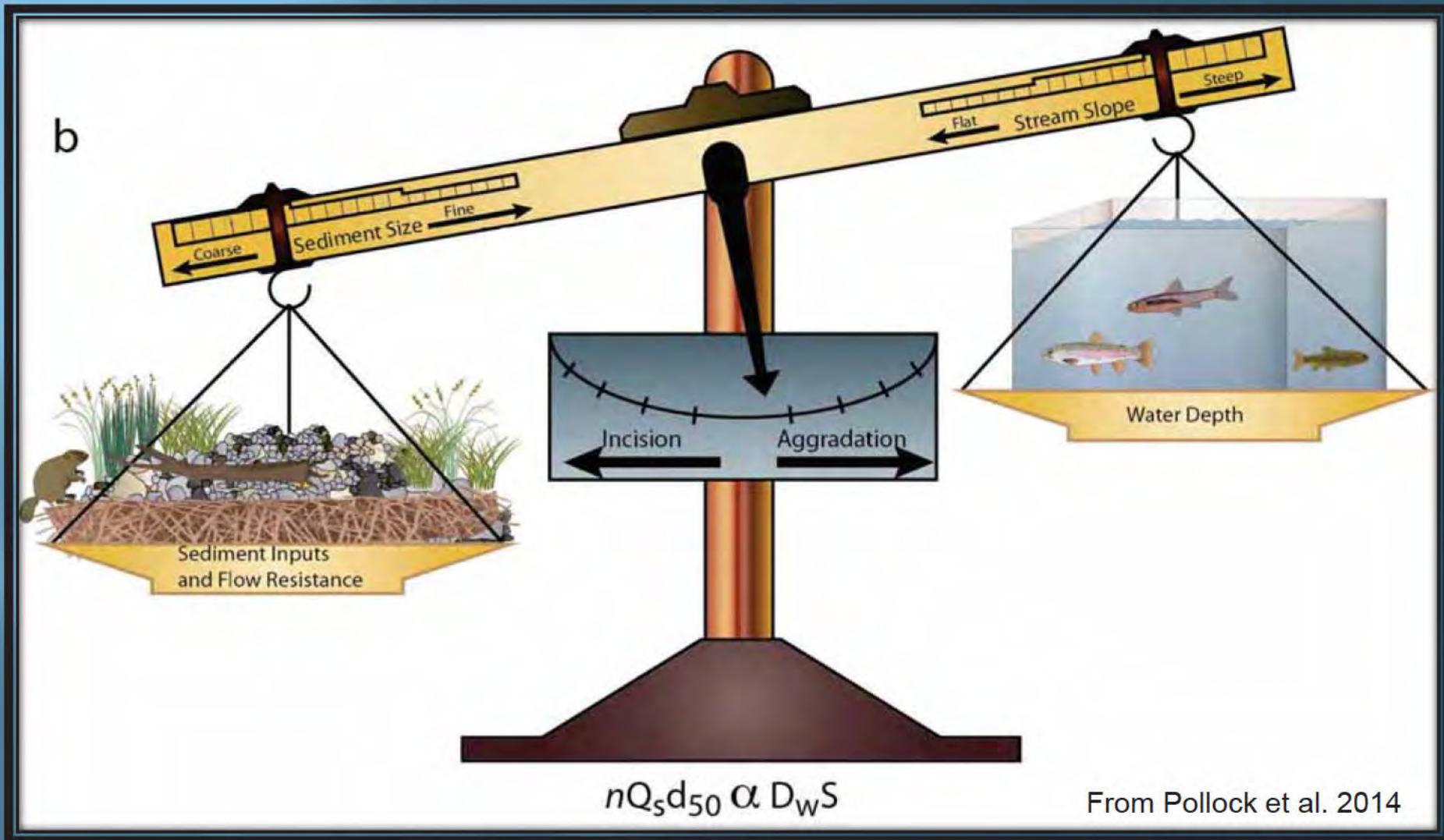


Principles for building Stage Zero System



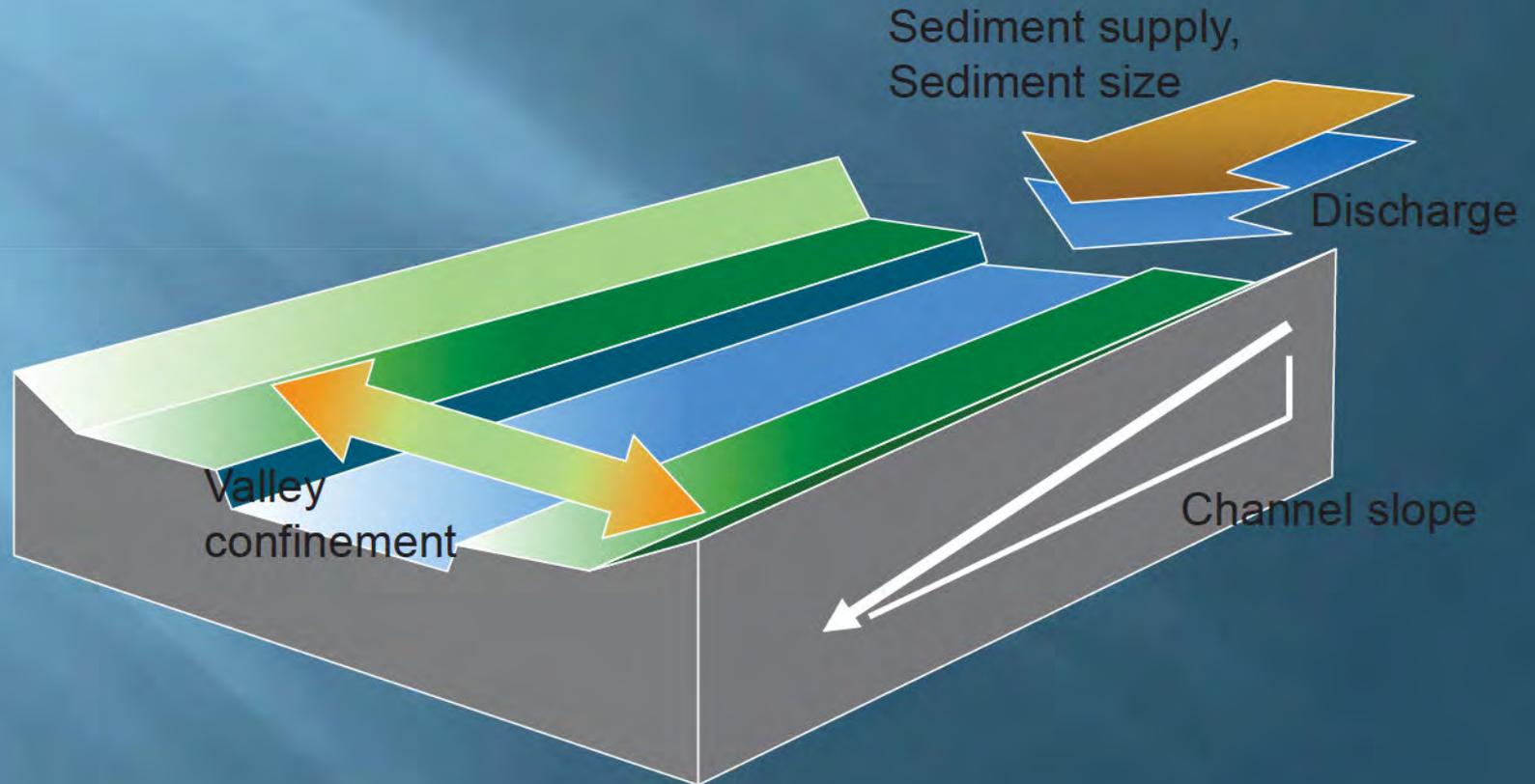


Increased Flow Resistance is Essential



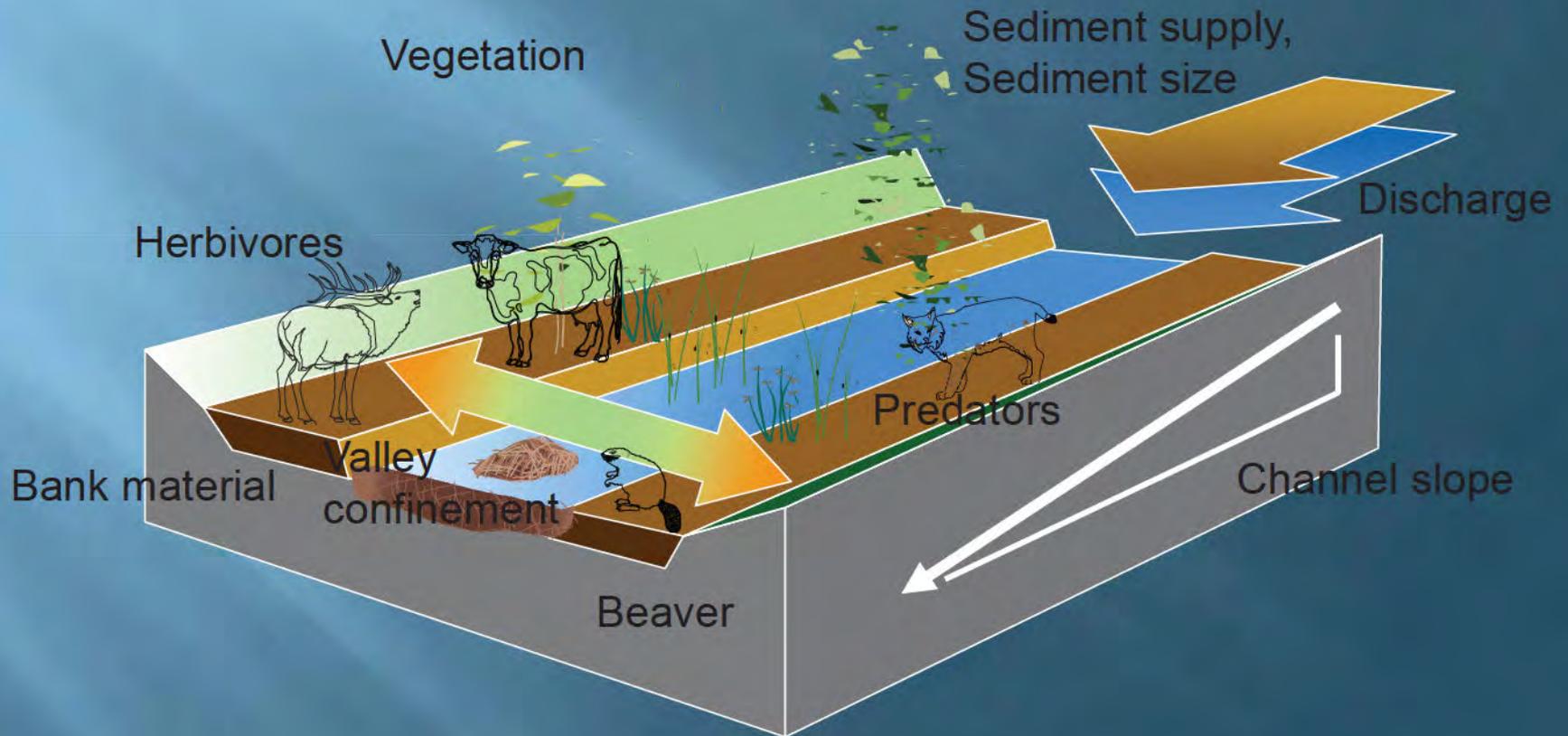


Factors Controlling Stage Zero Channel Formation





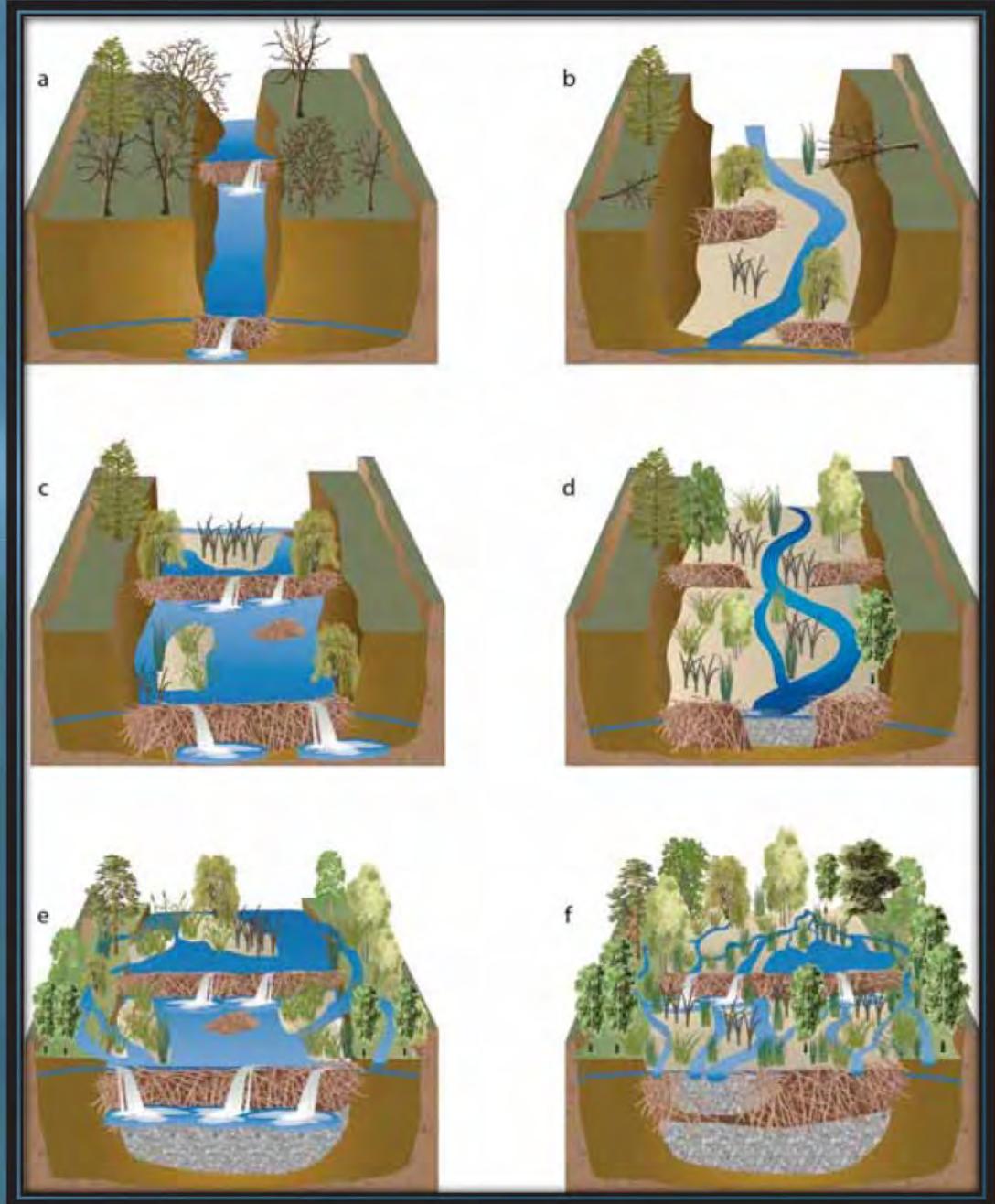
Factors Controlling Stage Zero Channel Formation



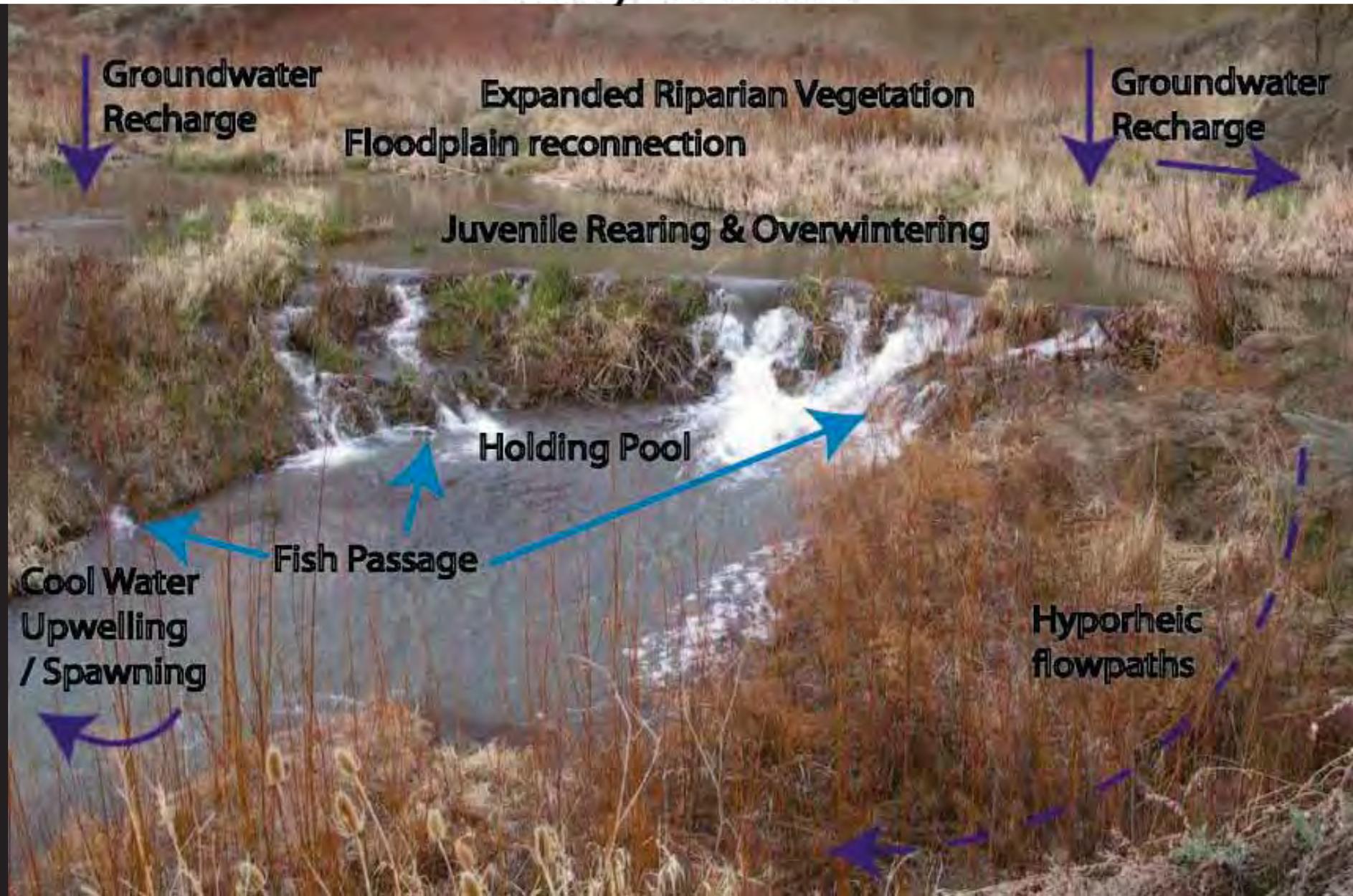


Beaver Dams

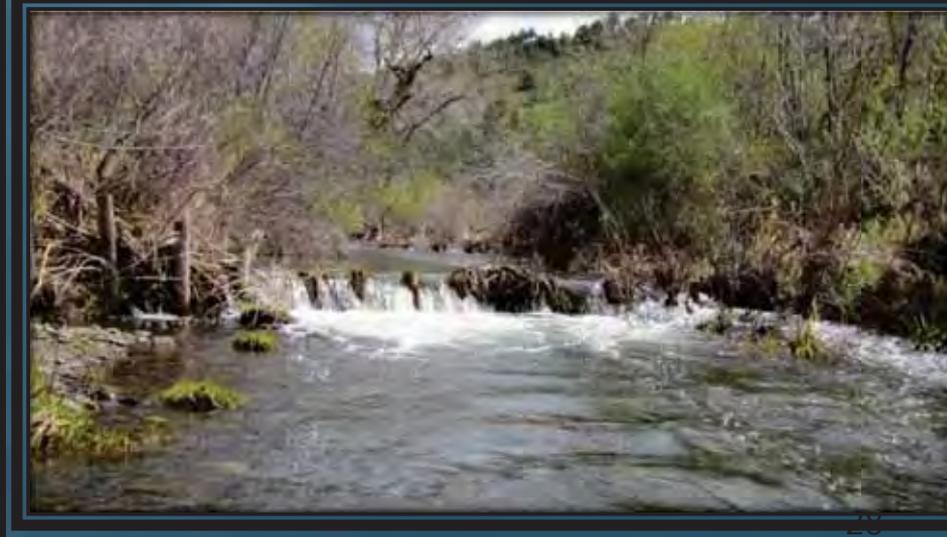
-Can reduce recovery times from Stage 1 to Stage 7-8/0 systems by 1-2 orders of magnitude (year to decades instead of decades to centuries)



Beaver dams create complex habitat that provide many benefits



Beaver Dams and Beaver Dam Analogues



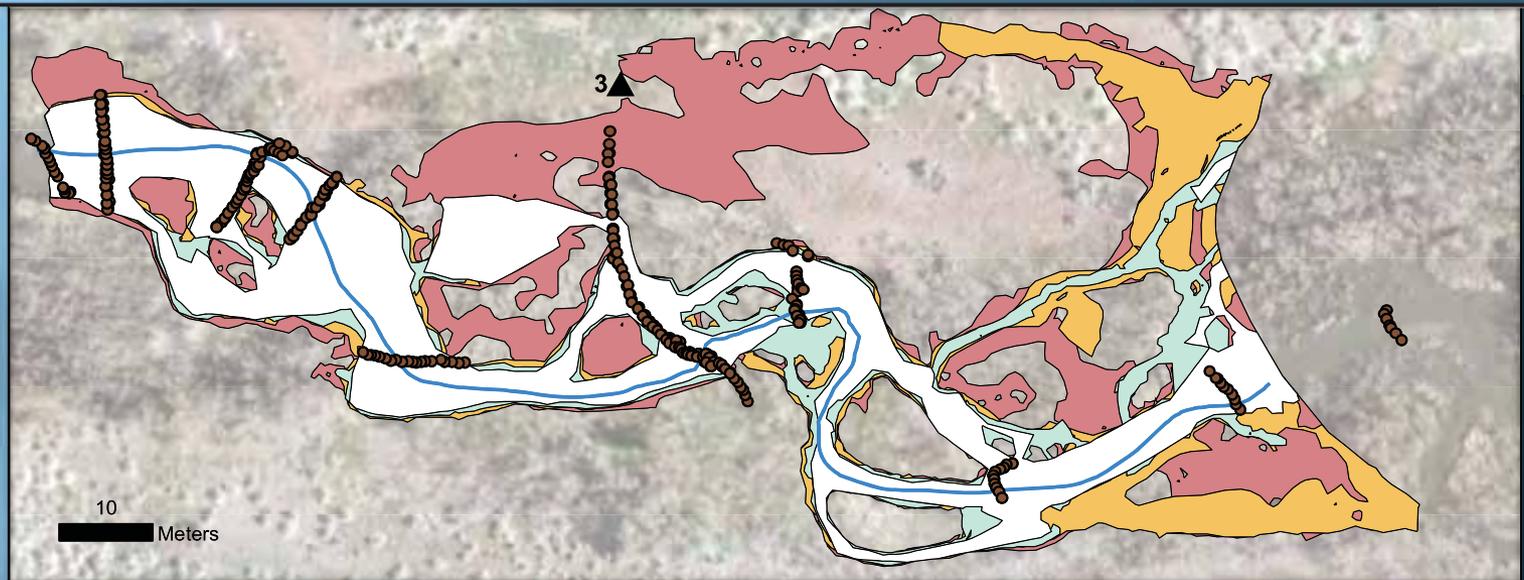


Beaver and BDAs creating a zero order "channel"



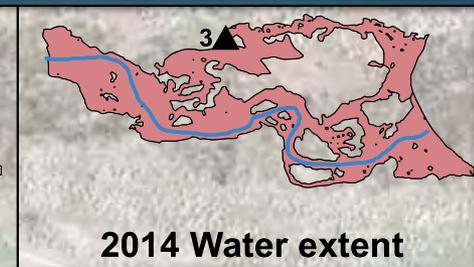
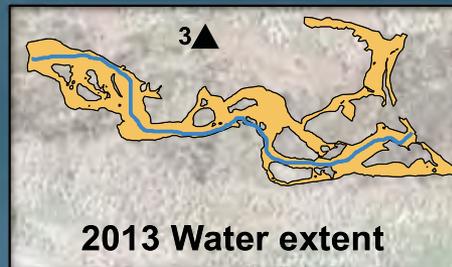


Beaver and BDAs-a 5 year sequence



Carol Volk, Unpublished

Since 2009, a combination of BDAs and beaver turned a narrow single thread channel with an infrequently inundated floodplain into a multi-threaded channel with water levels close to the floodplain surface most of the year

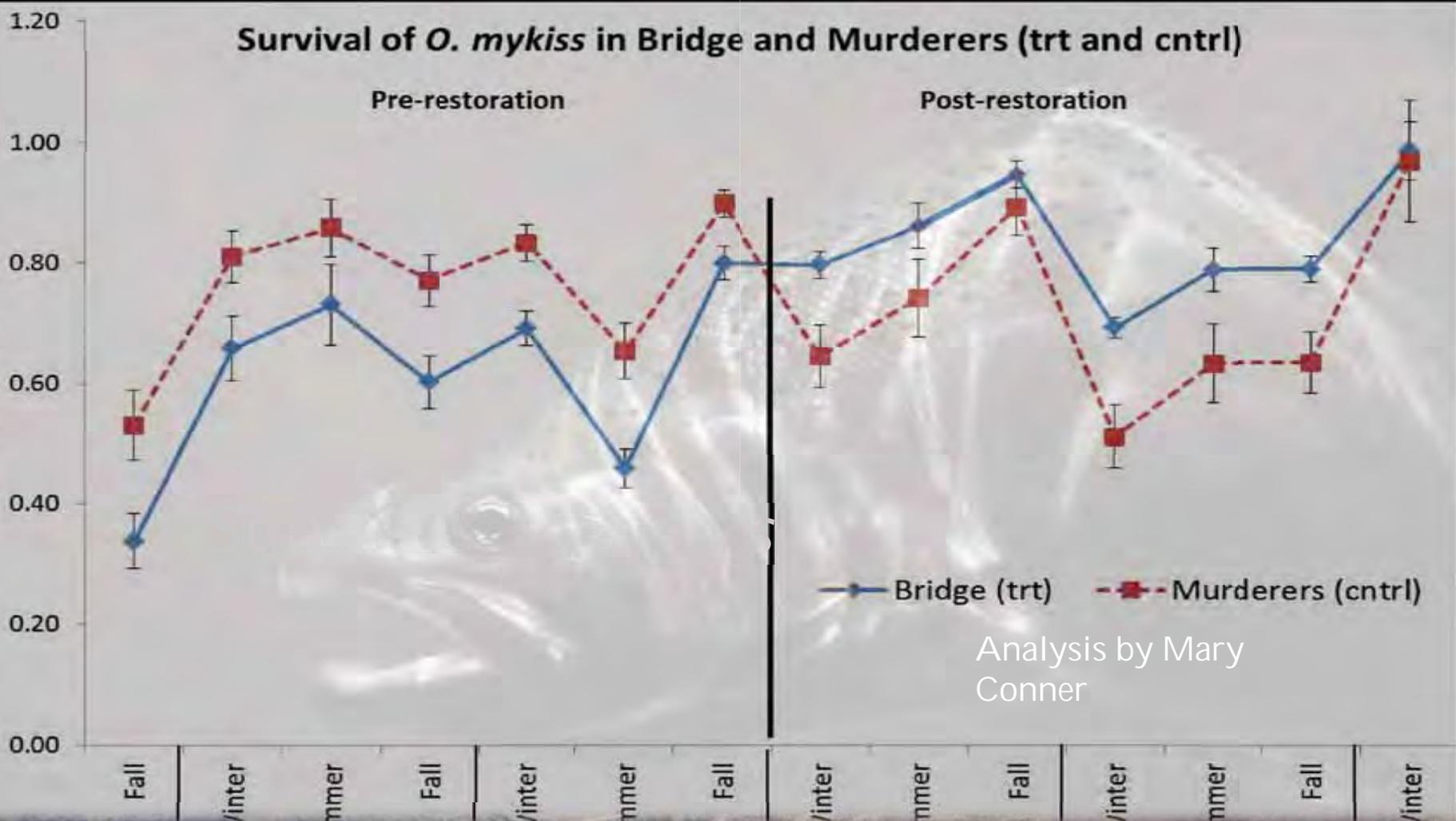


Survival of *O. mykiss* in Bridge and Murderers (trt and cntrl)

Pre-restoration

Post-restoration

O. mykiss survival season



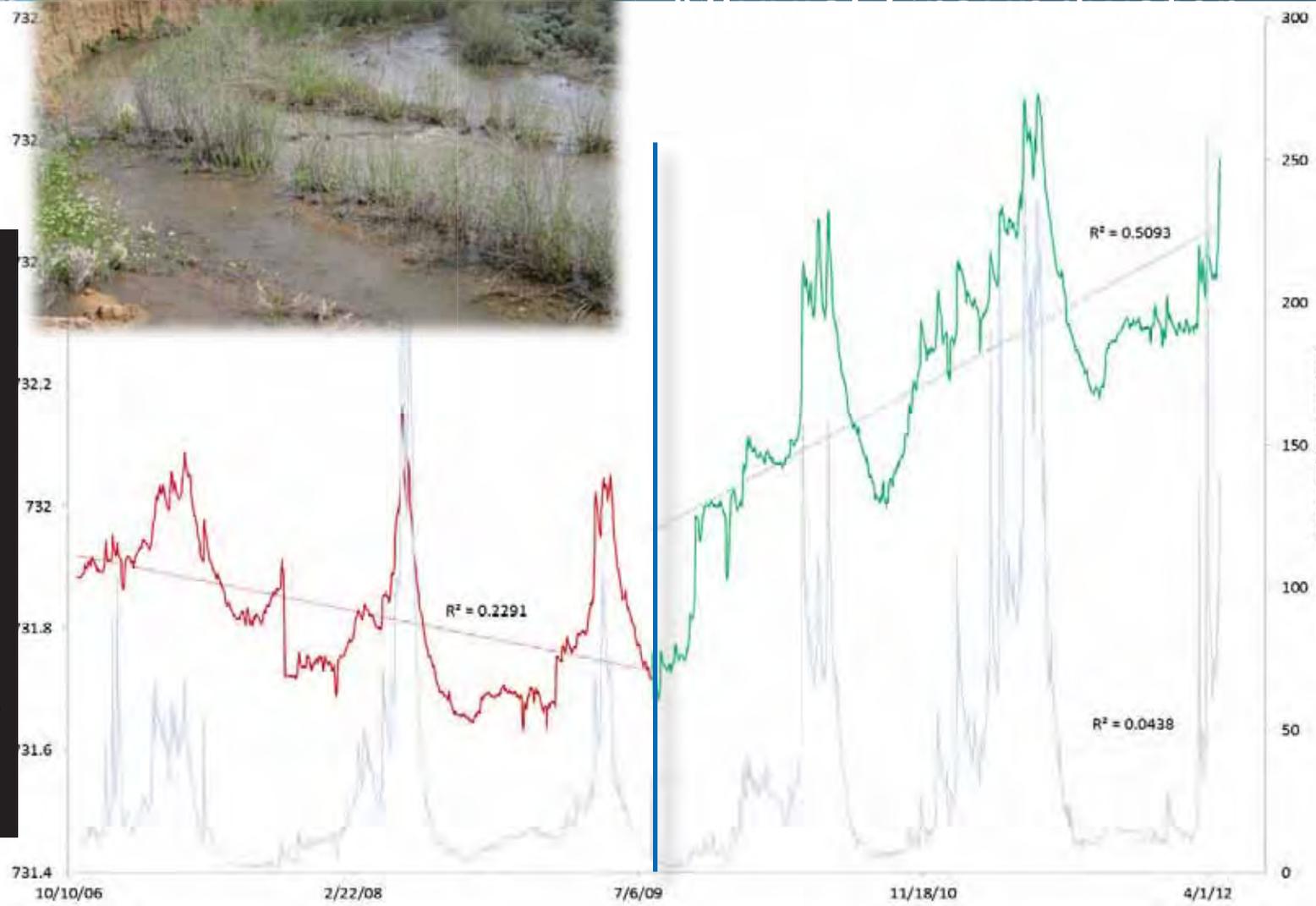
—●— Bridge (trt) -■- Murderers (cntrl)

Analysis by Mary Conner



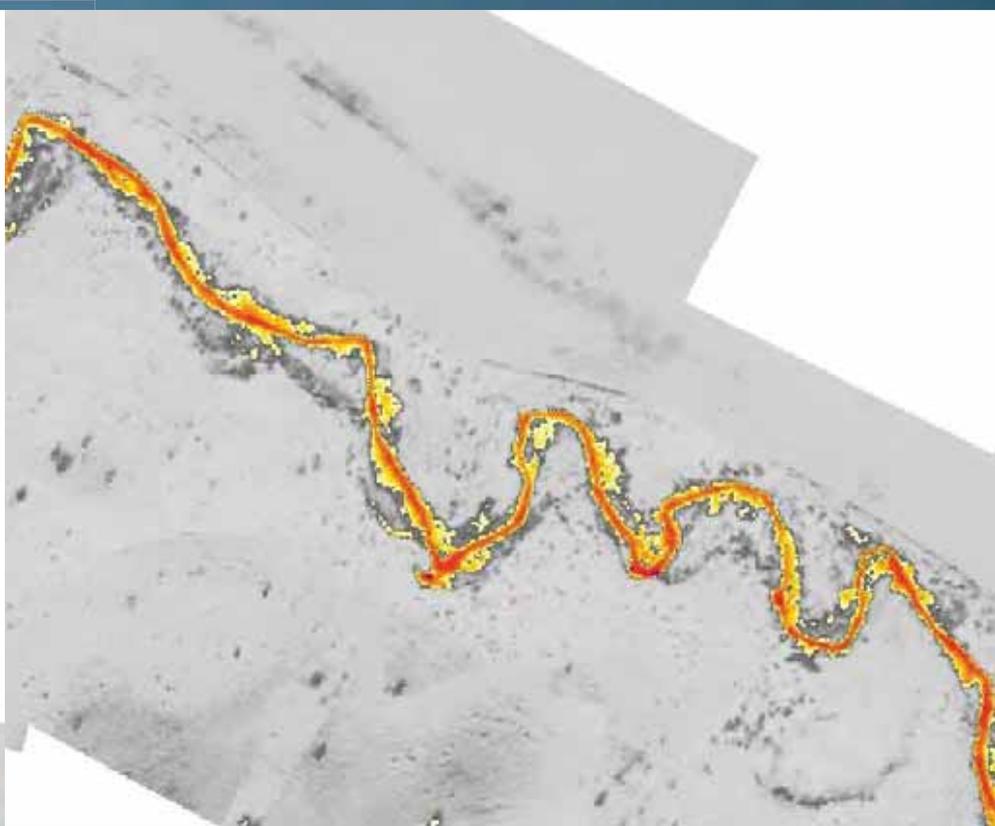
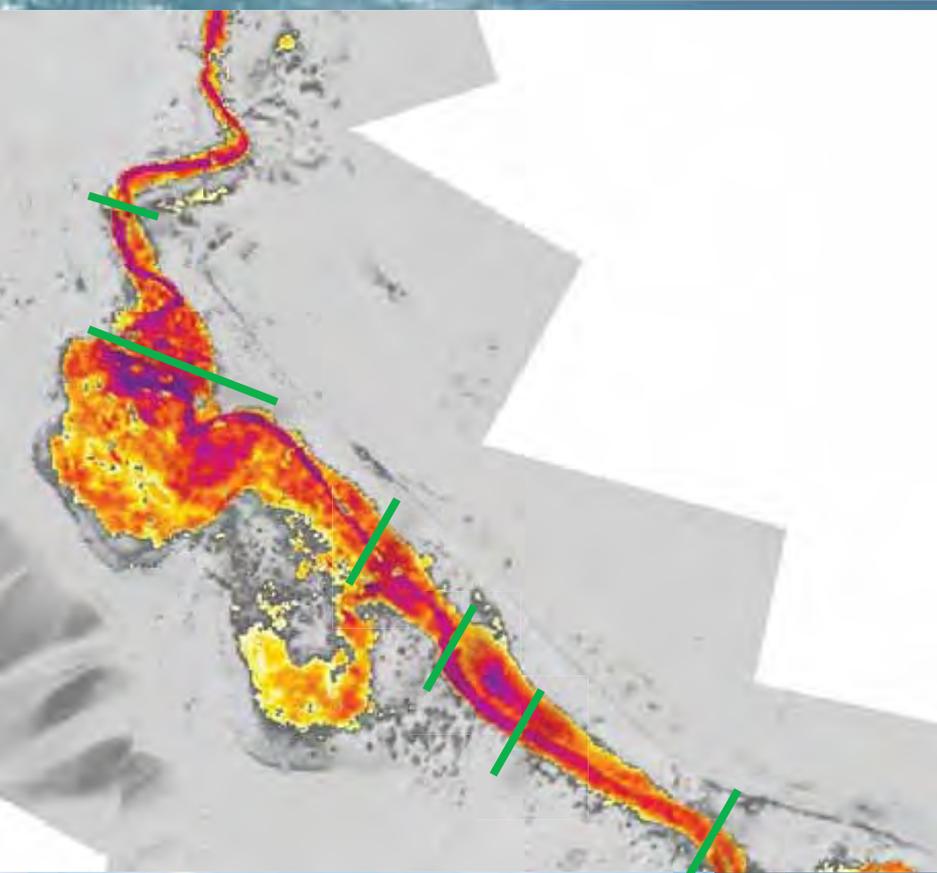


Average Groundwater Elevation (ft)



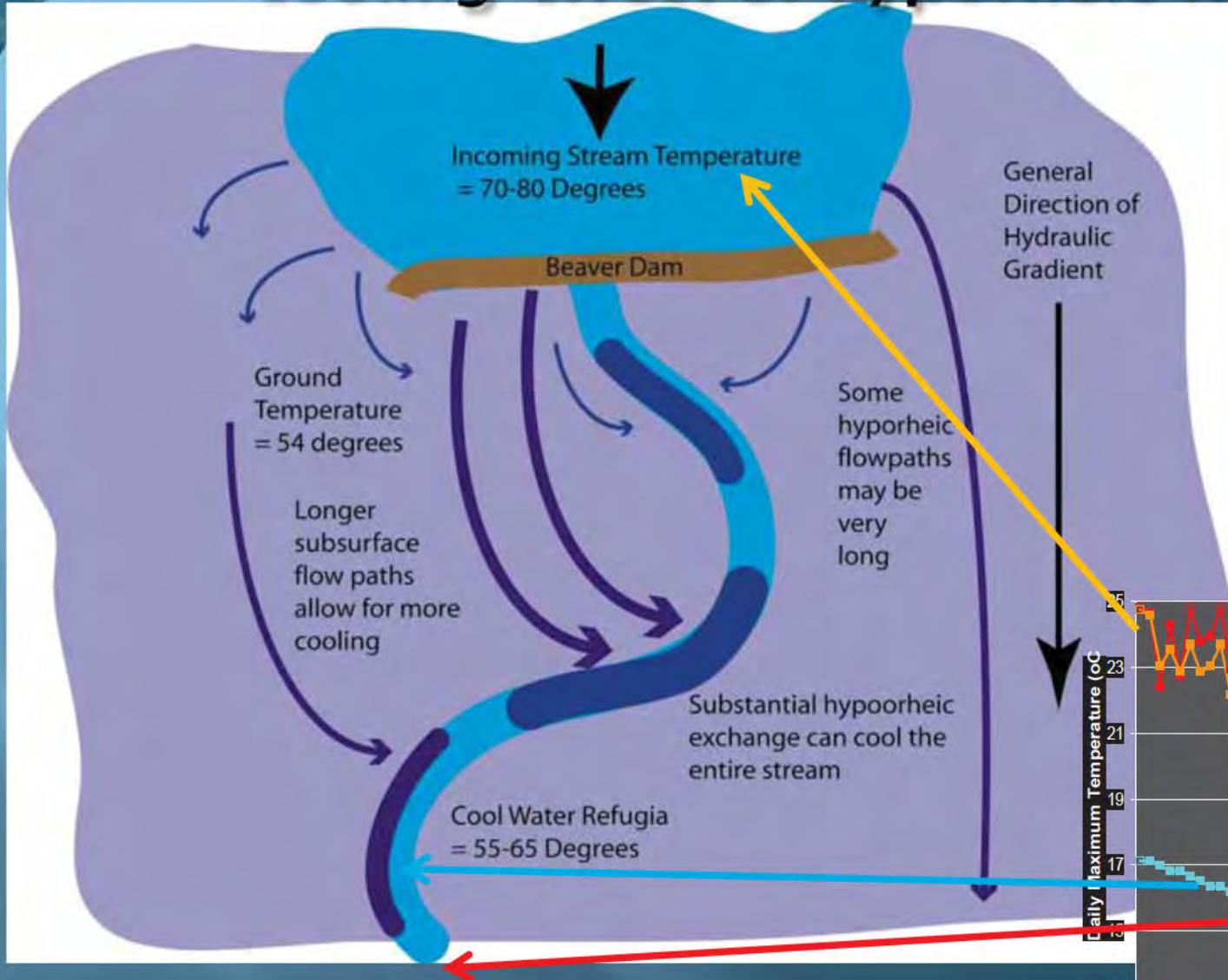
Discharge (CFS)

Time (2006-2012)

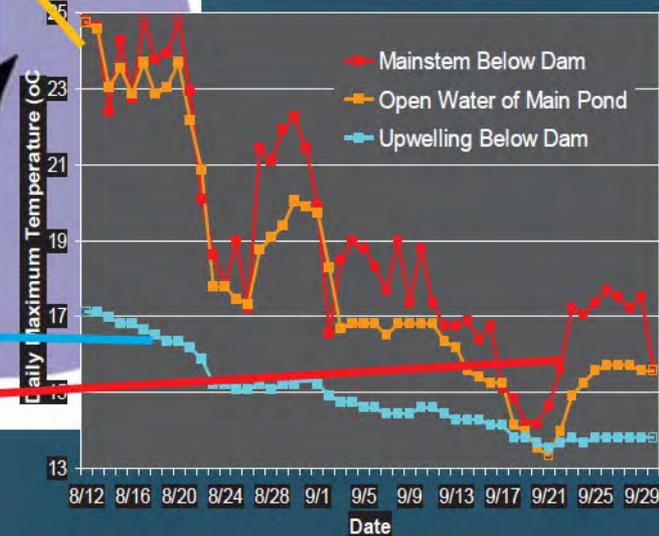




Plan view of a beaver dam showing cooling effect of hyporheic flow paths



Pollock et al. 2007





Wood Jams



Wood Jams



Hunter Ck-First flows 2014



Post 5-yr RI flood WY15

Courtesy of Rocco Fiori



Wood-based Stage Zero Restoration Tools

Log Steps (USFS-many locales, T. McKee-Mattole R., CA)

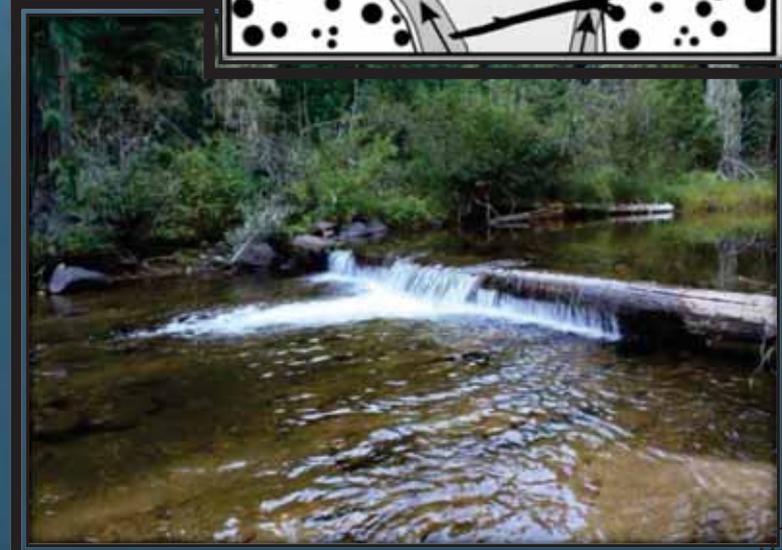
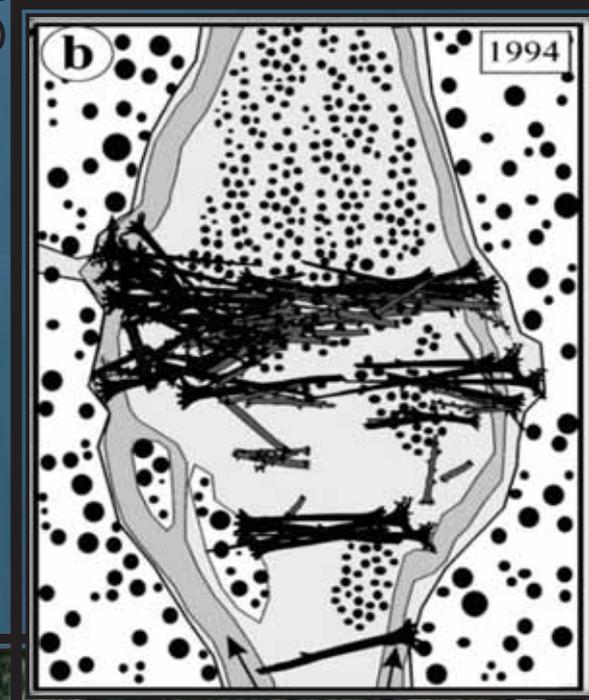
Wood Jams (Many locales, e.g. Rocco Fiori, Klamath River, CA)

Gravel Dams (Campbell Ranch-Silvies R., OR, CDA Tr., ID)

Meander Dams (Quivira Coalition, NM)

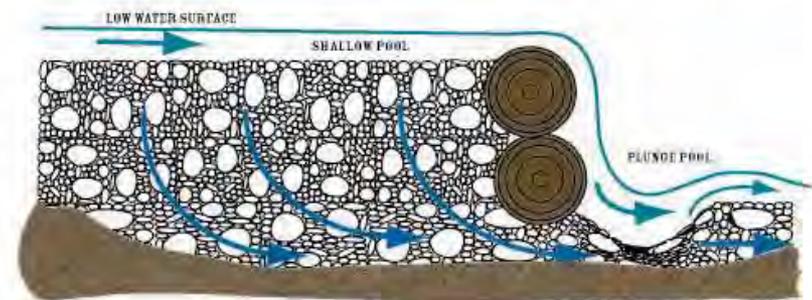
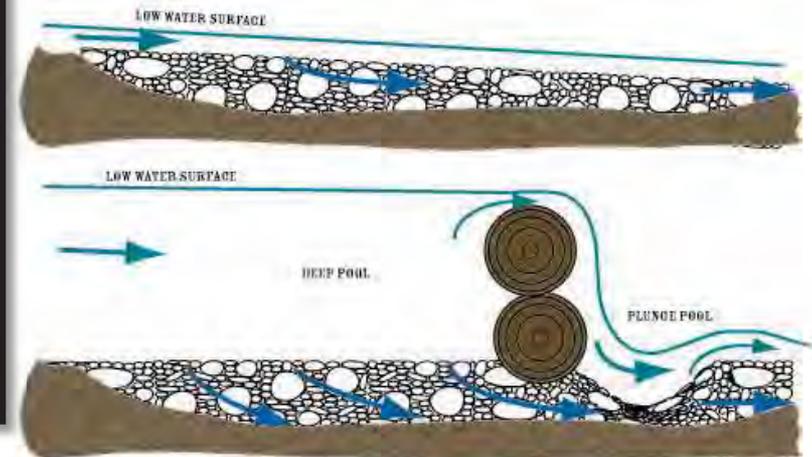
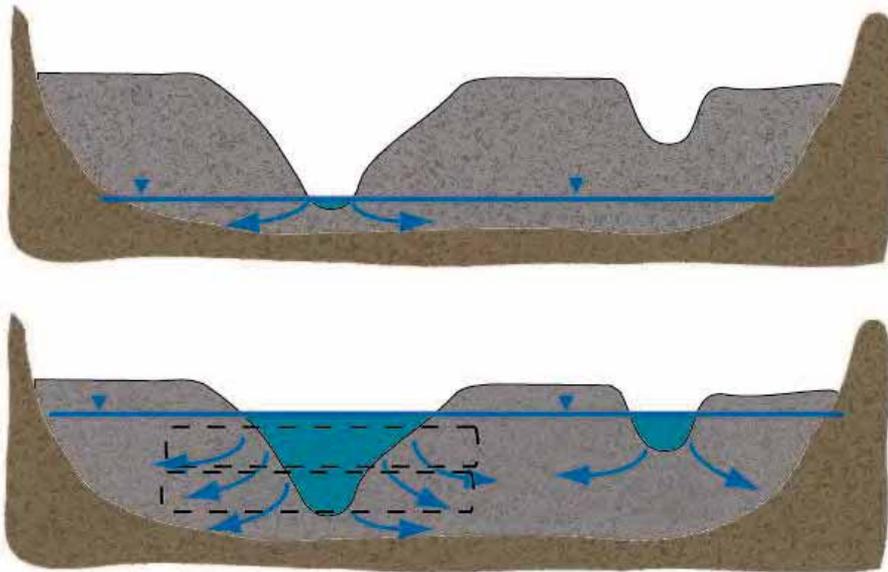
Constriction Dams (N. Bouwes-Asotin R., WA)

Choke Dams (P. Devries-Idaho)





Process-based restoration restores processes, not specific habitat types





What types of structures are appropriate?

Non-mobile-->

Combination- Transport--
-> >

	Off-channel ponds	Beaver Ponds	log steps, Over- flow	Log steps, Under- flow	Bank Input Debris	Valley Jams	Flow Def- lection Jams	un- stable logs	bar- apex jams	mean- der jams	log rafts	Debris flow jams
--	----------------------	-----------------	--------------------------------	---------------------------------	-------------------------	----------------	---------------------------------	-----------------------	----------------------	----------------------	--------------	------------------------

Location

Low-gradient Habitat

Tributary channel, unconfined, unentrenched

X	X	X	X		X	X	X	X				X
---	---	---	---	--	---	---	---	---	--	--	--	---

Tributary channel, confined

		X	X		X	X		X				
--	--	---	---	--	---	---	--	---	--	--	--	--

Tributary channel, entrenched

		X	X		X	X	X	X				X
--	--	---	---	--	---	---	---	---	--	--	--	---

Mainstem channel, unconfined, unentrenched

X	X				X	X	X	X	X	X	X	
---	---	--	--	--	---	---	---	---	---	---	---	--

Mainstem channel, confined

					X	X		X				
--	--	--	--	--	---	---	--	---	--	--	--	--

Mainstem channel, entrenched

					X	X	X	X	X	X	X	
--	--	--	--	--	---	---	---	---	---	---	---	--

Estuary-distributary channels

X	X	X	X				X	X				
---	---	---	---	--	--	--	---	---	--	--	--	--

Estuary-main channel

								X	X	X	X	
--	--	--	--	--	--	--	--	---	---	---	---	--

Medium Gradient, confined tributary habitat

		X	X		X	X		X				
--	--	---	---	--	---	---	--	---	--	--	--	--

High gradient, confined tributary habitat

		X	X		X	X		X				
--	--	---	---	--	---	---	--	---	--	--	--	--



What are your goals? (coho as an example)

	Beaver Ponds	Valley Jams	Log Steps-OF	Log Steps-UF	Bank Input	Flow Deflection Jams	Bar-Apex Jams	Meander Jams	Log Rafts	Bench Jams	Unstable Wood
Stream size	S	<50m BFW, <500m VW	S (< 10 m)	S (< 10 m)	All	S, M	M,L	M,L	L	S	All
Slope	<8%	2-20%	1-70%	1-70%	All	<4%?	<3%	<3%	<2%?	6-20%	
Confined/Unconfined/Entrenched	All	C/U/E	C/U/E	C/U/E	C/U/E	U	U	U	U	C	C/U/E
<u>Geomorphology</u>											
Floodplain reconnectivity		X	X						X		
bedrock to alluvium conversion		X	X						X		
Increased planform complexity	X	X			X	X			X		
Increased spawning gravel depths		X	X	s		s	x	x	X		
Decreased spawning gravel mobility		X	X			X			X		
multichannel formation	X	*				s	x		X		
Sediment storage/aggradation	X	XX	XX				X		X	XX	
<u>Hydrology/Hydraulics</u>											
Extensive slow-water habitat	XX								X		
Increased streamflow/GW recharge	X	X	X						X		
Hyporheic exchange	X	X	X	s		x	x	x	X		
Thermal refugia	X	X	X						X		
Upstream backwater pool	X		s						X		
Downstream scour pool	X	X	X						?		
Under or lateral scour pool				X	X	X	X	X	X		
<u>Biology/Other</u>											
Increase riparian vegetation	X	X	X				X		X	xx	
Improved food production	X	X	X						X		
Cover	X	X	X	X	X	X	X	X	X		X
wetland formation	X								X		



Types of “Dams” that Build Stage Zero Channels/Valleys-Scaling Up

- ▣ Beaver Dams
- ▣ Live Vegetation
- ▣ Large Wood
- ▣ Levee Setbacks
- ▣ Landslides
- ▣ Alluvial Fans
- ▣ Sea Level (Rise)
- ▣ Tectonics



Increasing Time Scales

Key Functions:

- Increase flow resistance,
- Lower slope
- Reduce stream power/unit width



Levee Removal

- ❑ Can (re)create stage zero systems if channel is at grade or perched
- ❑ In incised systems, flow/sediment obstructions can accelerate habitat recovery

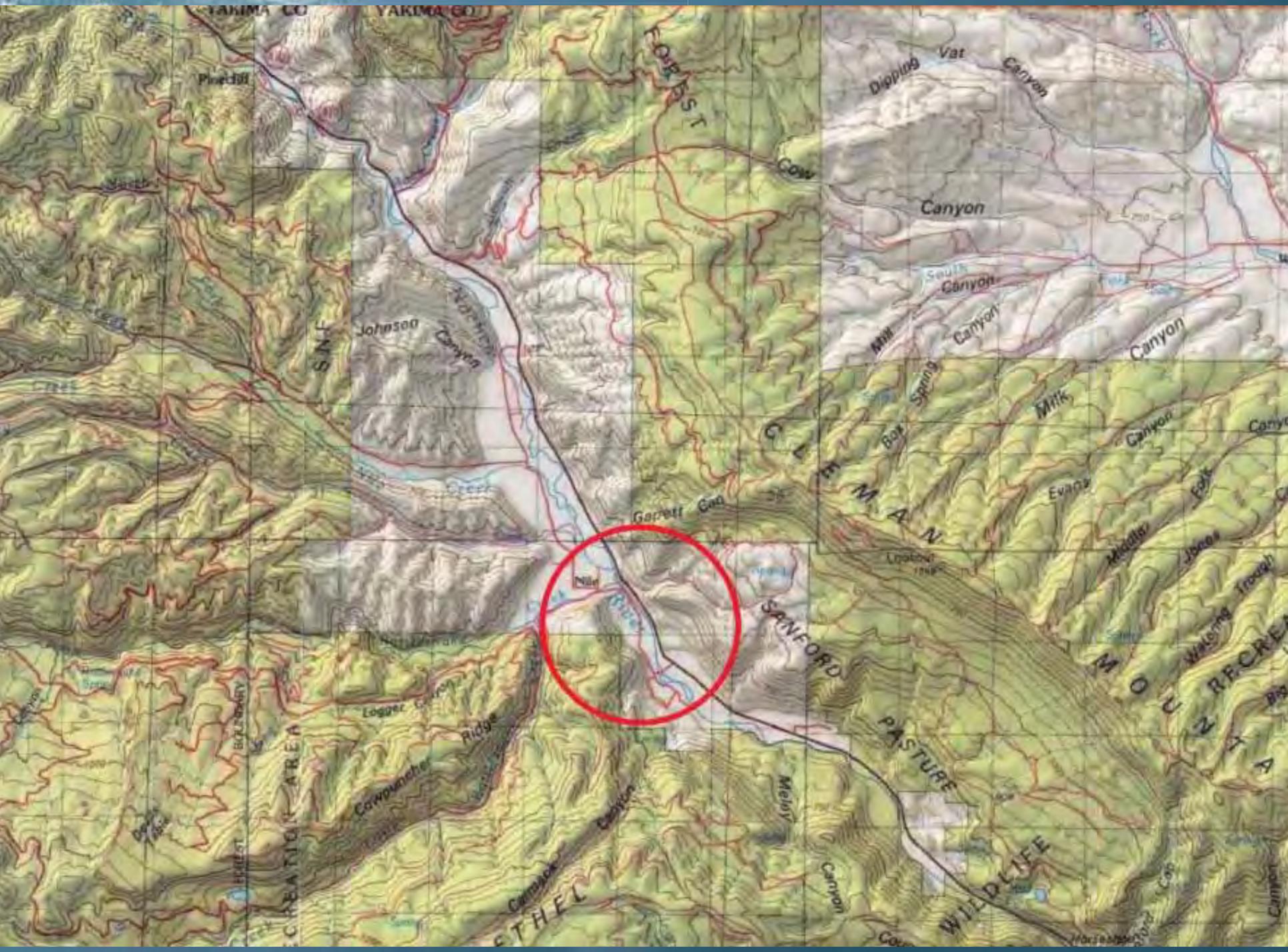


Eel River, California



Landslides-Naches River, WA (Nile Valley)







Landslides Create Good Salmon Habitat

Controls on valley width in mountainous landscapes: The role of landsliding and implications for salmonid habitat

C. May¹, J. Roering², L.S. Eaton³, and K.M. Burnett⁴

¹Department of Biology, James Madison University, Harrisonburg, Virginia 22807, USA

²Department of Geological Sciences, University of Oregon, Eugene, Oregon 97403, USA

³Department of Geology and Environmental Science, James Madison University, Harrisonburg, Virginia 22807, USA

⁴U.S. Forest Service Pacific Northwest Research Station, Corvallis, Oregon 97331, USA

ABSTRACT

A fundamental yet unresolved question in fluvial geomorphology is what controls the width of valleys in mountainous terrain. Establishing a predictive relation for valley floor width is critical for realizing links between aquatic ecology and geomorphology because the most productive riverine habitats often occur in low-gradient streams with broad floodplains. Working in the Oregon Coast Range (western United States), we used airborne lidar to explore controls on valley width, and couple these findings with models of salmon habitat potential. We defined how valley floor width varies with drainage area in a catchment that exhibits relatively uniform ridge-and-valley topography sculpted by shallow landslides and debris flows. In drainage areas >0.1 km², valley width increases as a power law function of drainage area with an exponent of ~ 0.6 . Consequently, valley width increases more rapidly downstream than channel width (exponent of ~ 0.4), as derived by local hydraulic geometry. We used this baseline valley width–drainage area function to determine how ancient deep-seated landslides in a nearby catchment influence valley width. Anomalously wide valleys tend to occur upstream of, and adjacent to, large landslides, while downstream valley segments are narrower than predicted from our baseline relation. According to coho salmon habitat-potential models, broad valley segments associated with deep-seated landsliding resulted in a greater proportion of the channel network hosting productive habitat. Because large landslides in this area are structurally controlled, our findings indicate a strong link between geologic properties and aquatic habitat.

sediment by providing space for the formation of debris flow fans. In addition, low-gradient broad valleys with old-growth forest store the great majority of above-ground and below-ground carbon in mountain streams (Wohl et al., 2012). Understanding the links between hillslope processes and riverine habitat is particularly important for Pacific salmon (*Oncorhynchus* spp.) because these fish are intricately tied to Pacific Rim topography (Montgomery, 2000; Waples et al., 2008).

The goals of this paper are twofold. First, we seek to define an empirical relation between valley width and drainage area (akin to hydraulic geometry for river channels) in a setting with negligible influence from variable rock properties and deep-seated landslide activity. Our approach uses high-resolution topography generated from airborne lidar to define this baseline relation of valley width in a mountainous catch-



Sea level- the ultimate dam



Taku River
(southeast)
Alaska

Kuskokwim
River, Alaska



MacKenzie River, Canada



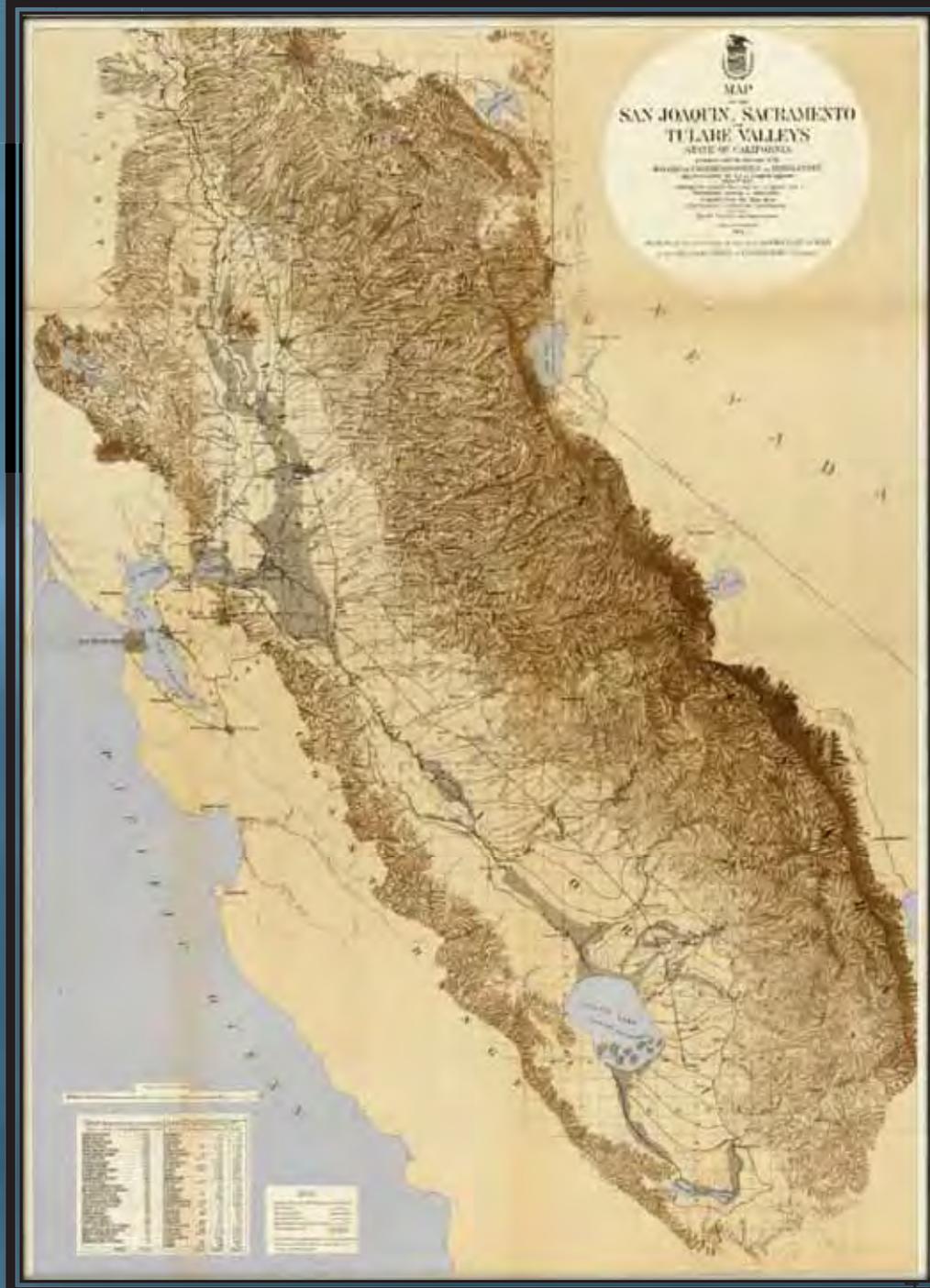


Yukon River, Alaska



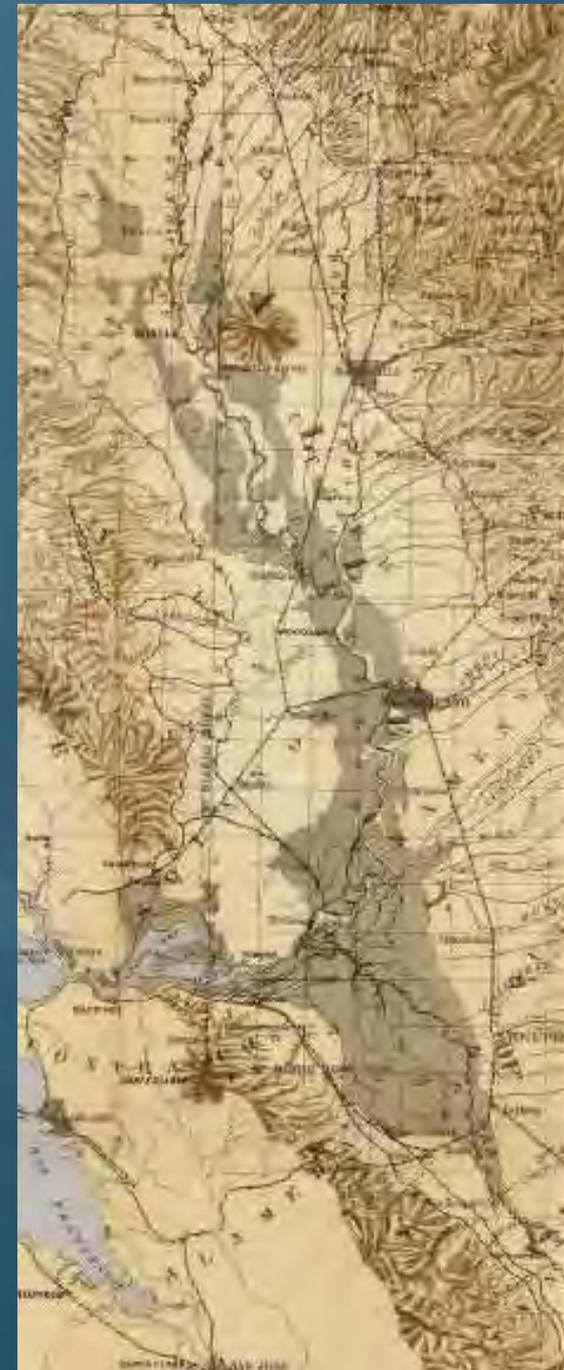


Sacramento-San Joaquin Rivers- 150 ybp



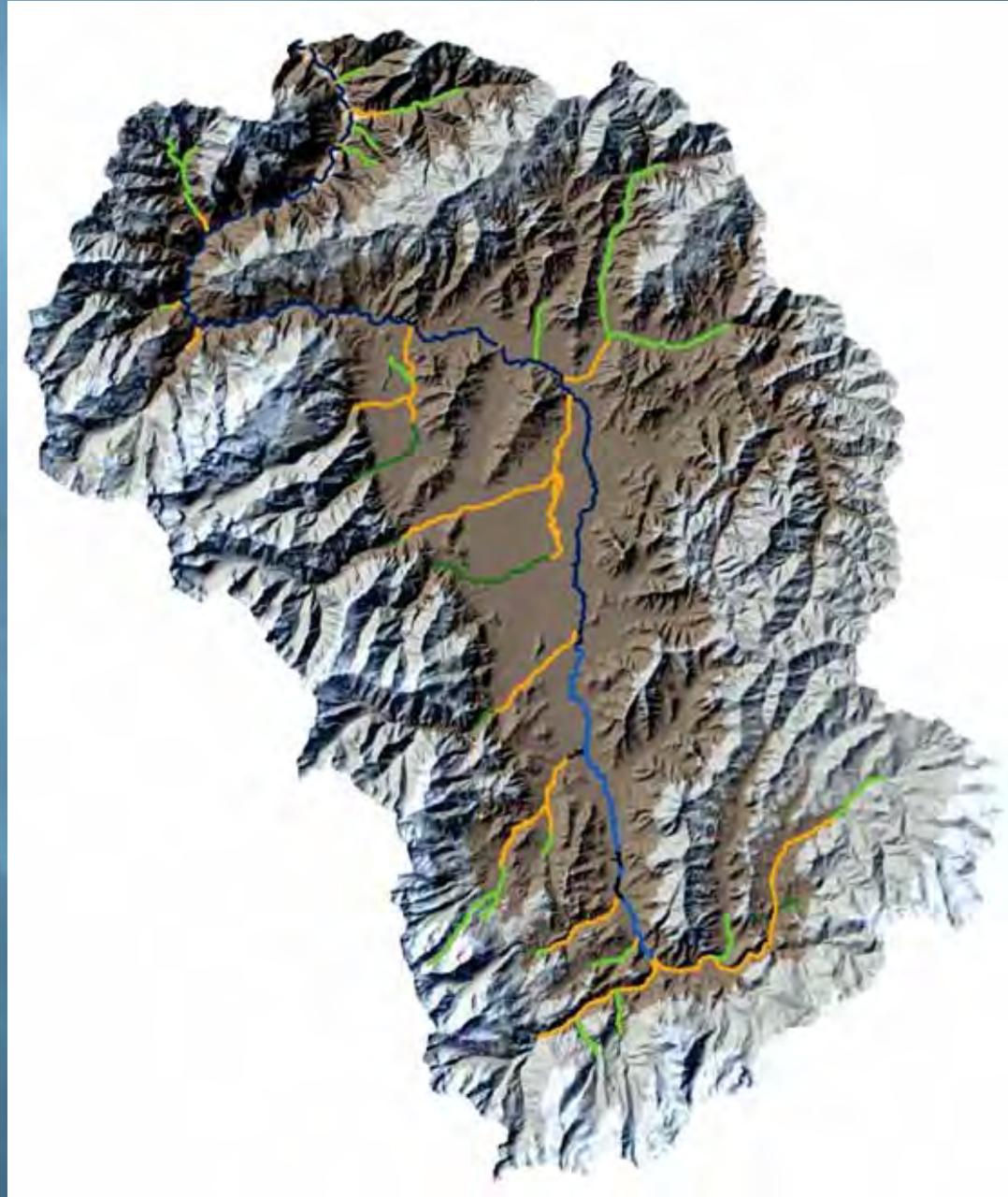


150 years ago, 5% of California was "wetlands", mostly in the Central Valley, really more of a wetland-river complex.





A Tectonic "Dam"-Scott River, Klamath Basin





Okavango River, Botswana





Sudd Swamp, South Sudan





Sea Level Rise- A Grade Changer

If all the ice melts, >200 ft sea level rise

- 1-3 m rise predicted by 2100, but predicted rates keep increasing.
- Circa 5000 yrs for 200 foot rise (big error bars), but on the scale of the rise and fall of civilizations
- Need sediment to counteract rising seas.



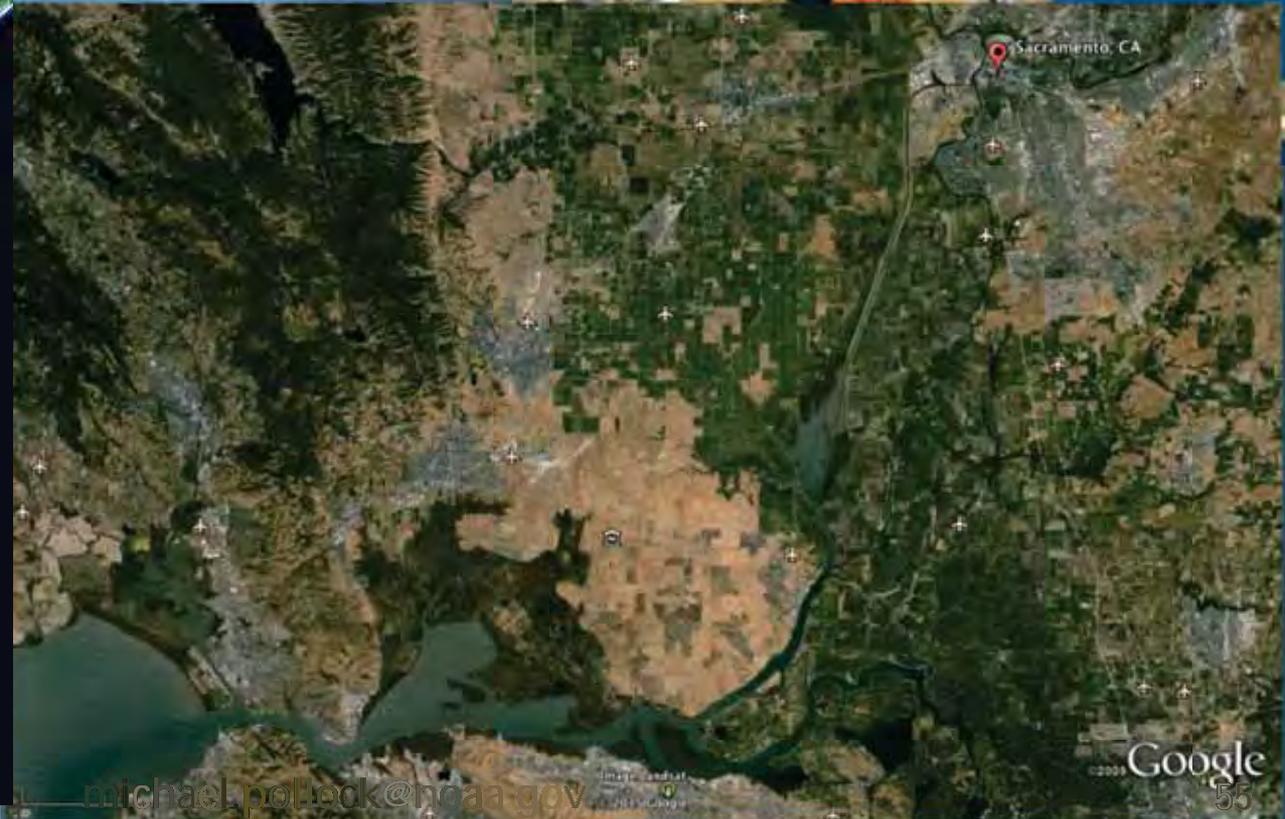


Really Big Low Head Dams as Tide Barriers-

-St Petersburg-16 mi

Venice-1.5 mi (3 openings)

Carquinez Strait? -1 mi





Current Water Management Paradigms are Causing Substantial Long-term Problems

-Is this a map of the past or a blueprint for the future?

-A 150 Year Restoration Plan? (Delta is currently sinking)

-No farms, no food, and...
No water no farms,
No sediment, no farmland

-Floods are inconvenient but droughts destroy civilizations





Conclusions

- ▣ **Sediment is a resource**
 - No sediment = no alluvial valleys
 - Base flow water elevation is key design feature
- ▣ **Three components to stream restoration**
 - Sediment, Water and Biota
- ▣ **These processes play out at multiple spatio-temporal scales to:**
 - Lower stream and valley slopes
 - Lower stream power per unit width
 - Increase retention rates of both sediment and water
 - **Benefit Fish, Benefit Farmers**



Take Home Messages



□ Putah Creek
California

- Degraded streams have limited ecological function
- The scale of restoration needs to be commensurate with the scale of the actions that caused the degradation
- Restoration needs to occur on a time frame relevant to recovery time frames for target species (e.g. 100 years for salmon) so as to avoid extinction



Regulatory Issues

- ▣ In terms of adverse effects-spatial and temporal scales of effects needs to be reconsidered
 - Short-term v. long-term
 - Fine-scale v. coarse scale
 - Individual v. population



Regulatory Scenarios-BDs/BDA

1. Unknown what is in pond above BD nonC/ESA adult Chinook in pool below, no “human visible” fish passage
2. C/ESA juvenile coho in pond above BD C/ESA adult coho in pool below, no “human visible” fish passage.
3. C/ESA juvenile coho abundant in pond above BD C/ESA juvenile coho in pool below, no “human visible” fish passage.
4. Scenario 3 but below BDA, stream is drying up, and the last remaining wet reach is just below the beaver dam.



Regulatory Scenarios-BDs/BDAs

1. C/ESA juvenile coho in pond above BDA nonC/ESA adult Chinook in pool below, no “human visible” fish passage
2. C/ESA juvenile coho in pond above BDA C/ESA adult coho in pool below, no “human visible” fish passage.
3. C/ESA juvenile coho abundant in pond above BDA C/ESA juvenile coho in pool below, no “human visible” fish passage.
4. Scenario 3 but below BD, stream is drying up, and the last remaining wet reach is just below the beaver dam.
5. BD increases total amount of good habitat, but also increases total habitat that that is less good (e.g. temp, DO issues)





Stage Zero Restoration:
= Process discontinuity management
= habitat management,
Does not = continuity management

- ▣ **Sediment = Essential ingredient**
 - Deposition and sorting
 - Aggradation
 - Erosion and avulsions
 - Sediment = a resource
 - No Sediment = No Valley floor
- ▣ **Water**
 - Flow diffusion
 - Groundwater recharge
 - Hyporheic exchange
 - Long inundation periods
 - Less distinction between wetlands and channels and floodplains

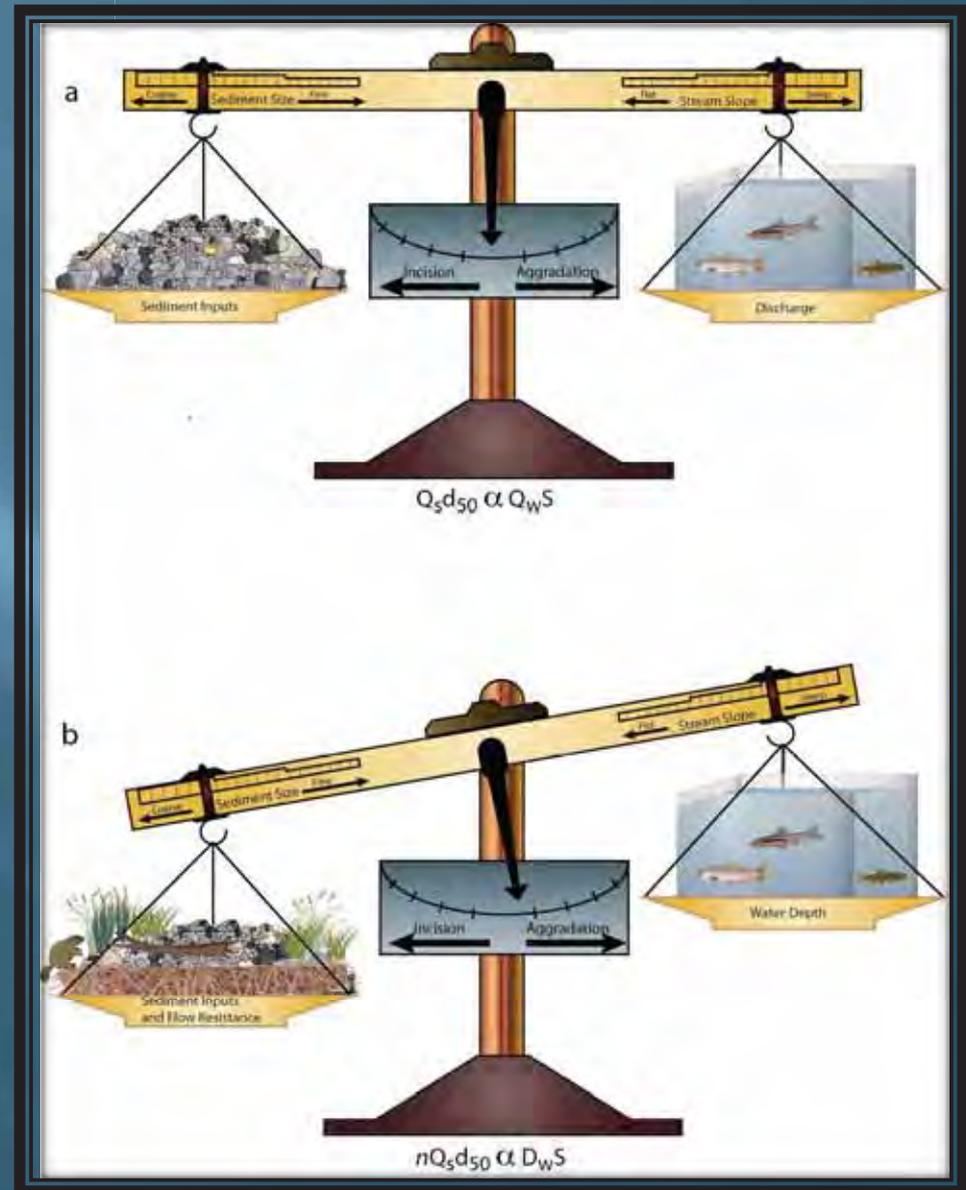


Stage Zero Attributes or Tendencies

- ❑ Multi-threaded or no definable channels (vegetation)
- ❑ Common in unconfined, low-gradient valleys
- ❑ Low stream power/unit width
- ❑ Wide range of hydrologic conditions
- ❑ Abundant off-channel habitat w/long inundation periods
- ❑ Elevated water tables
- ❑ Wide range of Velocity/Depth combinations
- ❑ Blurred line between wetlands and channels
- ❑ Biological flow resistance in channels, on banks and on stream adjacent surfaces (e.g. floodplains and mid-channel islands)
 - Aquatic vegetation
 - Emergent vegetation
 - Live trees and shrubs
 - Dead trees
 - Beaver dams-dead trees and shrubs (N. Hemisphere)



Continuity of Sediment Transport or Habitat formation?





Restoration “Toolkit” for Building Stage Zero Channels/Valleys

- ▣ Beaver Dams
- ▣ Live Vegetation
- ▣ Large Wood
- ▣ Levee Setbacks
- ▣ Landslides
- ▣ Alluvial Fans
- ▣ Sea Level Rise
- ▣ Tectonics



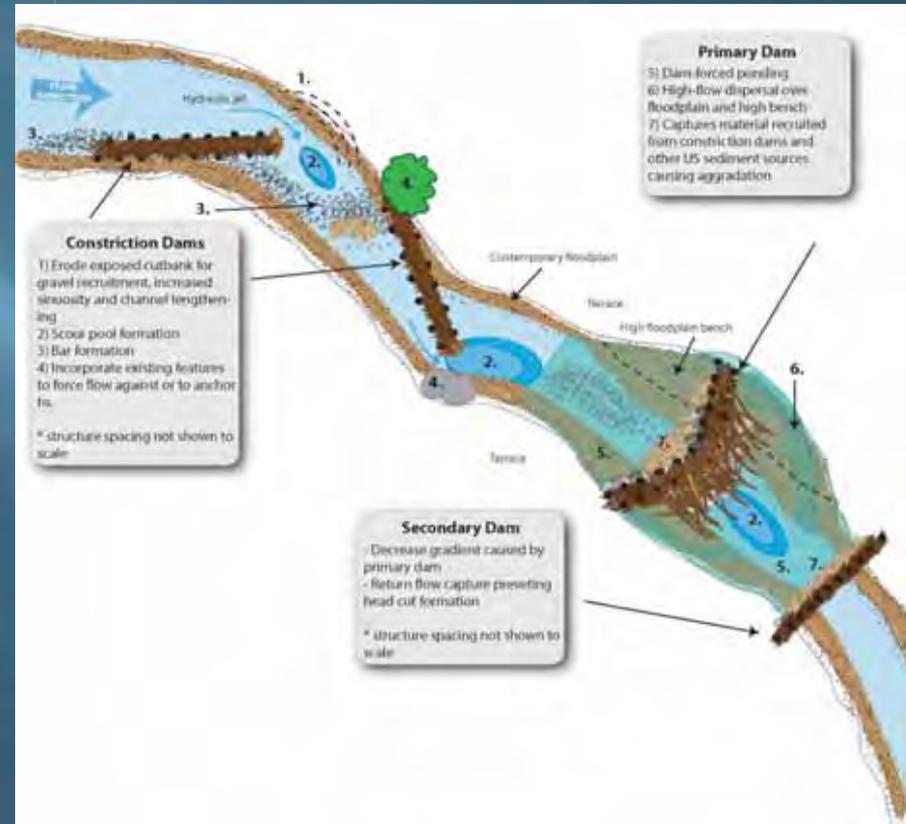
Increasing Time Scales

These Tools:

- Increase Flow Resistance,
- Lower Slopes
- Reduce Stream Power/Unit Width

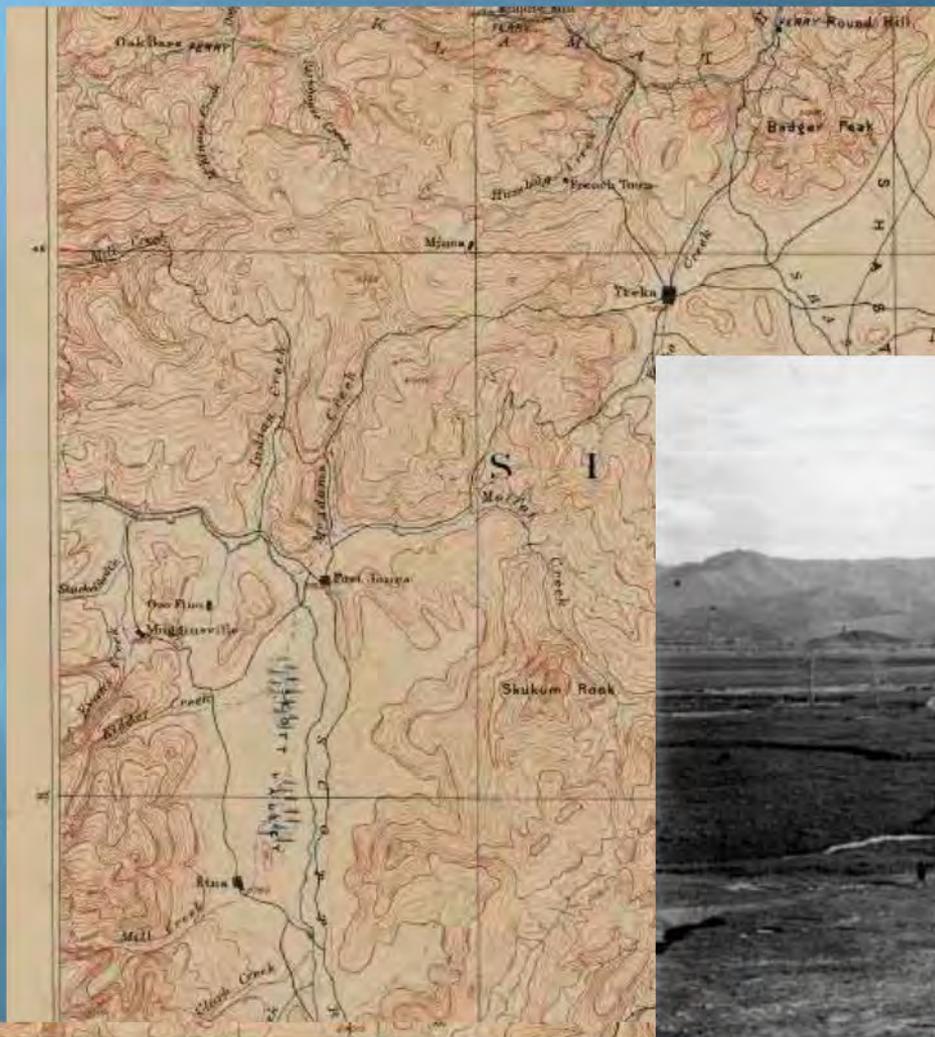


BDAs work together





Historical data helpful: e.g. extensive wetlands and beaver dams in Scott Valley



Henry Gannett, Chief Geographer
 A.H. Thompson, Geographer in charge
 Triangulation by Mark B. Kerr
 Topography by M. B. Kerr and Eugene Hickenlocher
 Surveyed in 1883-4

Scale: 1:250,000
 Contour Interval 200 feet
 2141241216

CALIF. 470
 SHASTA

MAPS PRE-1945 TOPO CA SHASTA 1885
 PCL MAP 0082



Beaver and riparian vegetation have been part of stream ecosystems for a long-time, so we are currently in a somewhat unique situation

Photos Courtesy of Carol Evans
BLM



Where are you in the network?



Small "Mountain" Channels
Montgomery and Buffington (1997)

Large Unconfined Channels
Beechie and Imaki (in review)



Step Pool



Braided



Cascade



Confined





NOAA
FISHERIES

Restoration
Center

Saving Taxpayer Dollars While Protecting Natural Resources

An Overview of the NOAA Restoration Center's
Programmatic Biological Opinions and Coastal
Commission Consistency Determinations in CA

Bob Pagliuco, NOAA Restoration Center

Salmon Restoration Federation Conference, April 14, 2018

Co-Authors

Erik Schmidt - Sustainable Conservation
Erika Lovejoy - Sustainable Conservation
Katie Haldeman – Sustainable Conservation
Joe Pecharich – NOAA Restoration Center
Stacie Smith – ERT-NOAA Restoration Center
Ruth Goodfield - ERT-NOAA Restoration Center



National Marine Fisheries Service's Mission Statement:

“Stewardship of living marine resources for the benefit of the nation through science-based conservation and management and promotion of the health of their environment.”

National Marine Fisheries Service





2/3 of assessed waterways
in California are impaired



90% of California's wetlands
and riparian areas have been lost



350+ species of wildlife
and plants in California are
considered threatened or
endangered

ESA and Incidental Take of Listed Species



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Endangered Species Act of 1973 - provides for the conservation of species that are endangered or threatened throughout all or a significant portion of their range, and the conservation of the ecosystems on which they depend.

DEFINITION of TAKE: To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct (Section 3)

CIVIL PENALTIES: Fines up to \$25,000 per violation (Section 11)

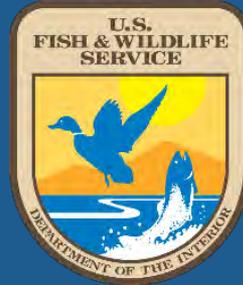
CRIMINAL PENALTIES: Fines up to \$50,000 or imprisoned for up to one year, or both (Section 11)



Permits and Authorizations needed for Restoration Projects in CA



**US Army Corps
of Engineers®**



CEQA

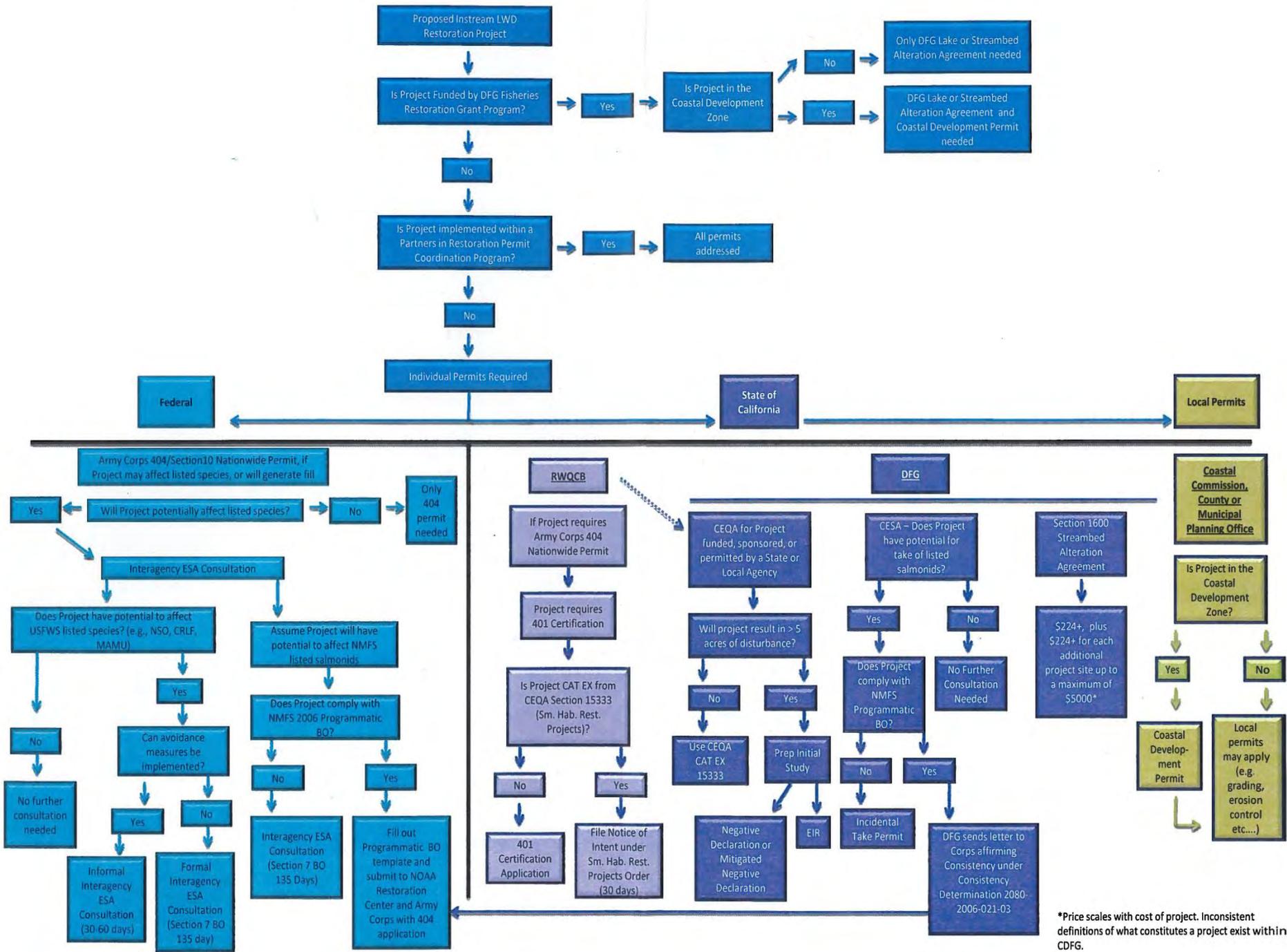


County

NEPA



NOAA FISHERIES



*Price scales with cost of project. Inconsistent definitions of what constitutes a project exist within CDFG.



**NOAA
FISHERIES**

Programmatic or “Simplified” *Permitting*

*A more efficient regulatory process for
qualifying projects that:*

- ✓ Covers specific project types and habitat
- ✓ Lays out conditions up front
- ✓ Saves time and resources
- ✓ Protects T and E Species



Traditional ESA Section 7 Permit Process

versus

Programmatic ESA Section 7 Process

- Develop and define project
 - Construction approach
 - Timing and sequencing
- Prepare BA
 - Conservation measures
 - Effects analysis
- Initiate consultation, agency review, and interaction
- Potential changes in approach, new measures added
- Up to 135 day review

- Develop project by reviewing PBO sideboards to inform best approach to:
 - Construction, timing
 - Conservation measures
- No BA preparation
- Effects analysis is prescribed
- Consultation and agency review accelerated
- Shorter review time

NOAA RC Programmatic Biological Opinions



NOAA
FISHERIES

- Santa Rosa – 2006 and 2016
- Northern CA/Arcata – 2012 (2.5 year consultation w/o SusCon)
- Southern CA/Long Beach – 2015
- Central Valley/Sacramento – 2018

Federal Nexus

- NOAA Restoration Center funding
- US Army Corps Issuance of Section 404 (CWA) or Section 10 (HRA)

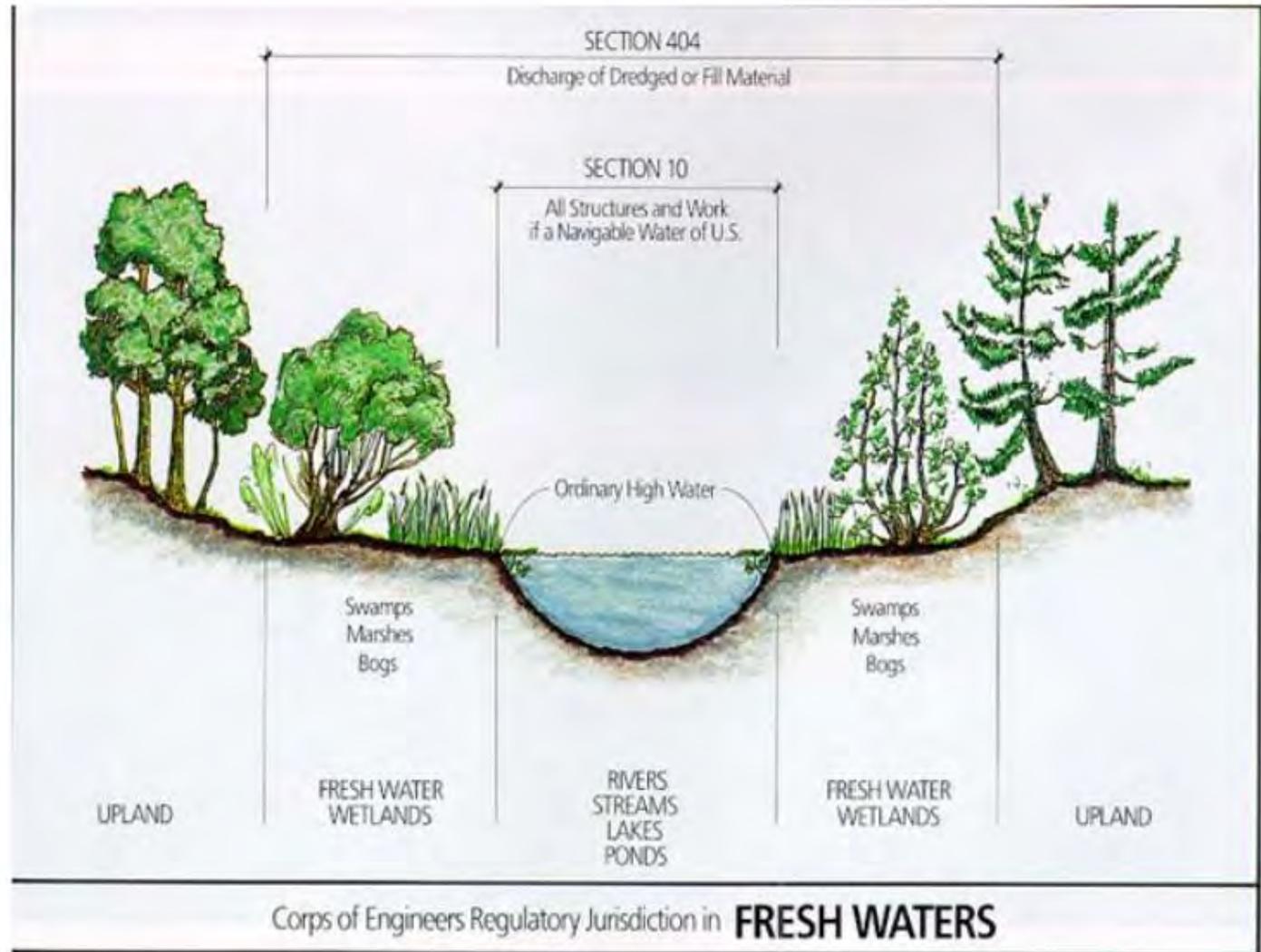
NOAA RC Programmatic is not a blanket permit (i.e., it is not a Regional General Permit) and only provides Federal ESA coverage



US Army Corps of Engineers Jurisdiction



**NOAA
FISHERIES**



Central Coast-Mendocino/Santa Rosa PBO



- PBO Duration 2016-indefinite
- Coverage - all coastal anadromous streams and estuaries (excluding the San Francisco Bay) from San Luis Obispo County (Salinas River and tributaries) north to, but not including, the Mattole River.
- Species Covered
 - Endangered CCC coho salmon ESU
 - Threatened NC steelhead Distinct Population Segment (DPS)
 - Threatened CCC steelhead DPS
 - Threatened S-CCC steelhead DPS
 - Threatened CC Chinook salmon ESU
 - Critical Habitat and EFH

Covered Activities – Santa Rosa



**NOAA
FISHERIES**

- Instream Habitat Improvements
- Instream Barrier Modification/Passage Improvement
- Stream Bank and Riparian Habitat Restoration
- Upslope Watershed Restoration
- Creation of Off-channel/Side-channel Habitat Features
- Removal of Small Dams
- Water Conservation Projects
- Beaver Dam Analogues



Santa Rosa PBO Limitations



NOAA
FISHERIES



- Maximum of 40 projects per year to be authorized under the Program
- Construction window is from June 15 Through October 31.
- Dewatered area \leq 1000 feet
- \leq 1 acre disturbed for staging area
- Any stream crossing removals in a salmonid bearing stream must be 1500 meters apart.
- Crossings in a non-fish bearing stream must be 100 feet apart.
- Overstory canopy cannot be reduced by more than 20%
- Removal of native trees with defects, cavities, leaning toward the stream channel, nest, late seral characteristics, and large snags $>$ 16 in diameter at breast height (dbh) will be retained.*
- Downed trees (logs) $>$ 24 in. dbh and 10 ft. long will be retained on upslope sites or used for instream habitat improvement projects.

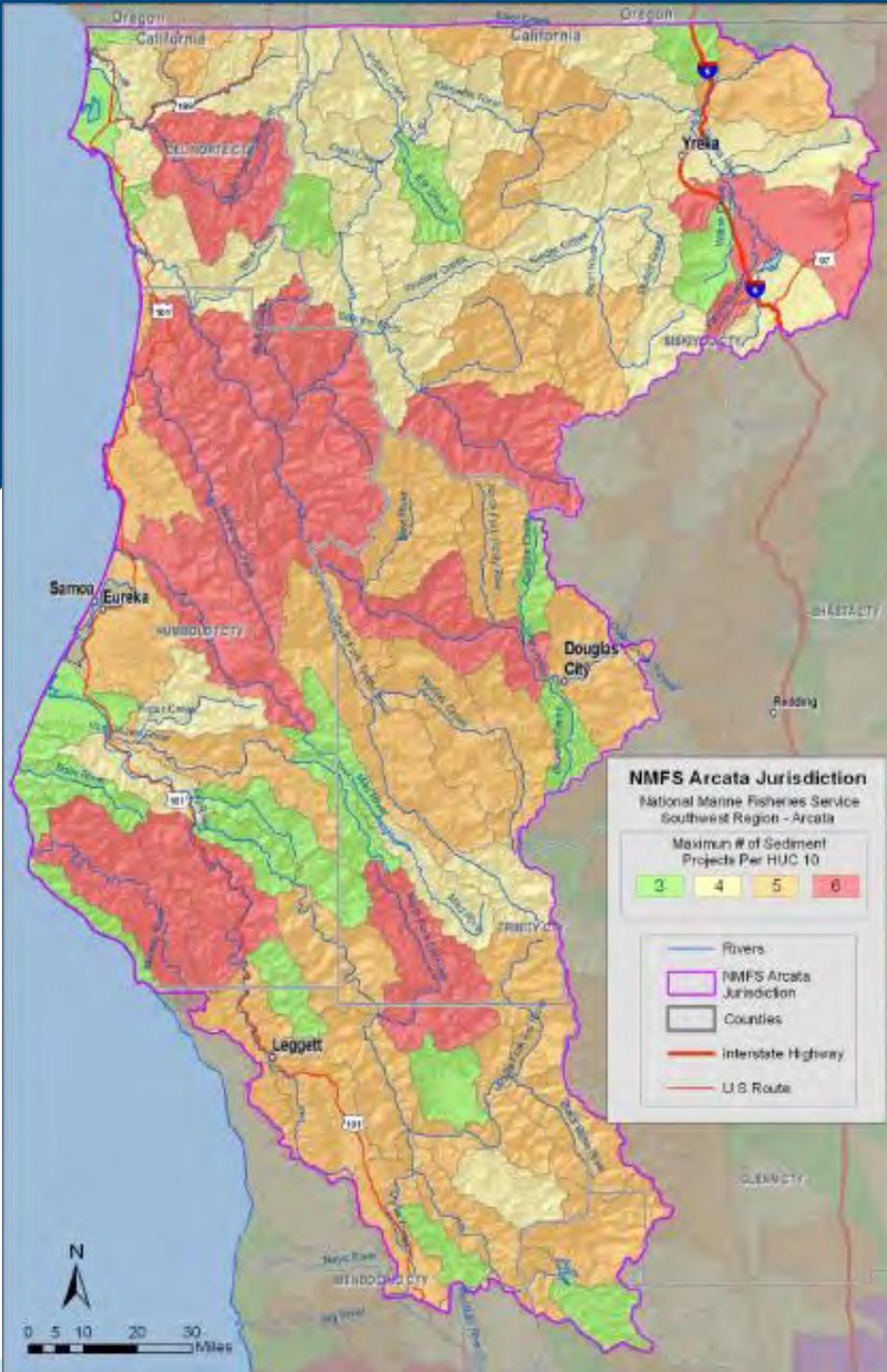
Northern CA/Arcata PBO

PBO Duration 2012-2022

Coverage from the Mattole River to the OR border

Species Covered

- Threatened Southern Oregon/Northern California Coast (SONCC) coho salmon ESU
- Threatened California Coastal (CC) Chinook Salmon ESU
- Threatened Northern California (NC) steelhead DPS
- Threatened Southern DPS of Pacific Eulachon
- Endangered Southern Resident Killer Whales DPS
- Threatened Southern DPS of North American Green Sturgeon
- Critical Habitat and EFH



Covered Activities - Arcata



NOAA
FISHERIES

- Instream Enhancement/Restoration
- Instream Barrier Modification/Passage Improvement
- Bioengineering/Riparian Habitat Restoration
- Upslope Watershed Restoration
- Removal of Small Dams (permanent and flashboard)
- Creation of Off-channel/Side Channel Habitat
- Developing Alternative Stockwater Supply
- Tailwater Collection Ponds
- Water Storage Tanks
- Piping Ditches (need a 1707)
- Fish Screens
- Headgates and Water Measuring Devices



Arcata PBO Limitations

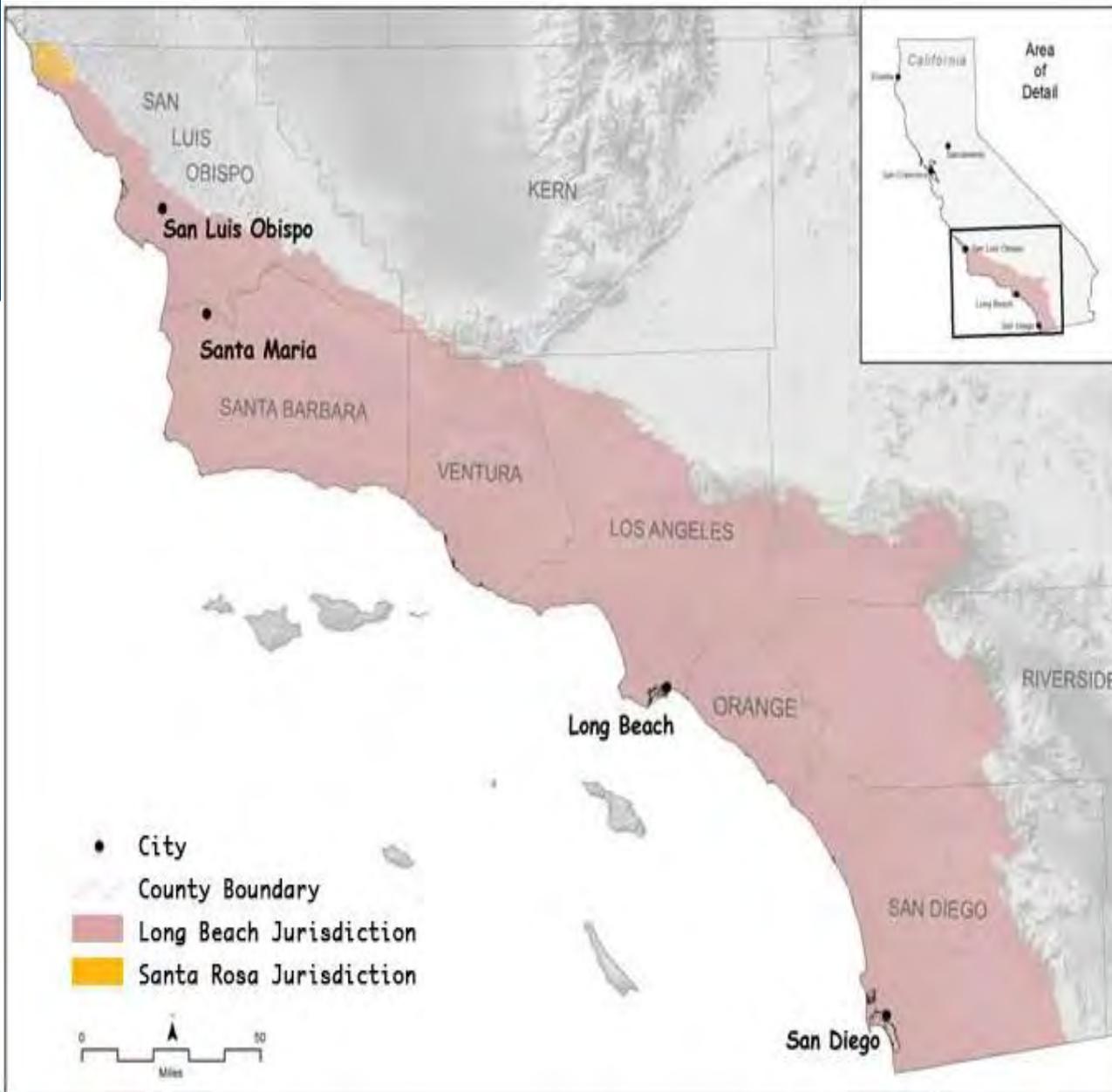


**NOAA
FISHERIES**

- Maximum of 60 projects per year to be authorized under the Program
- Dewatered area \leq 1000 feet
- \leq 0.25 acre disturbed for staging area
- The general construction season will be from June 15 to November 1.
- *Buffer Between Projects Implemented in the Same Year* - 800 ft downstream buffer from any other sediment producing projects



Southern CA/Long Beach PBO



- PBO Duration - 2015-2025
- Northern San Luis Obispo County line to the U.S.-Mexico border.
- Species Covered
 - Threatened South-Central California Coast Steelhead DPS
 - Endangered Southern California Coast Steelhead DPS

Covered Activities – Long Beach



**NOAA
FISHERIES**

- Instream Habitat Improvements
- Instream Barrier Modification/Passage Improvement
- Bioengineering/Riparian Habitat Restoration
- Upslope Watershed Restoration
- Creation of Off-channel/Side Channel Habitat
- Water Conservation Projects
- Fish Screens
- Removal of Small Dams (explosives allowed)



Southern CA/Long Beach PBO Limitations

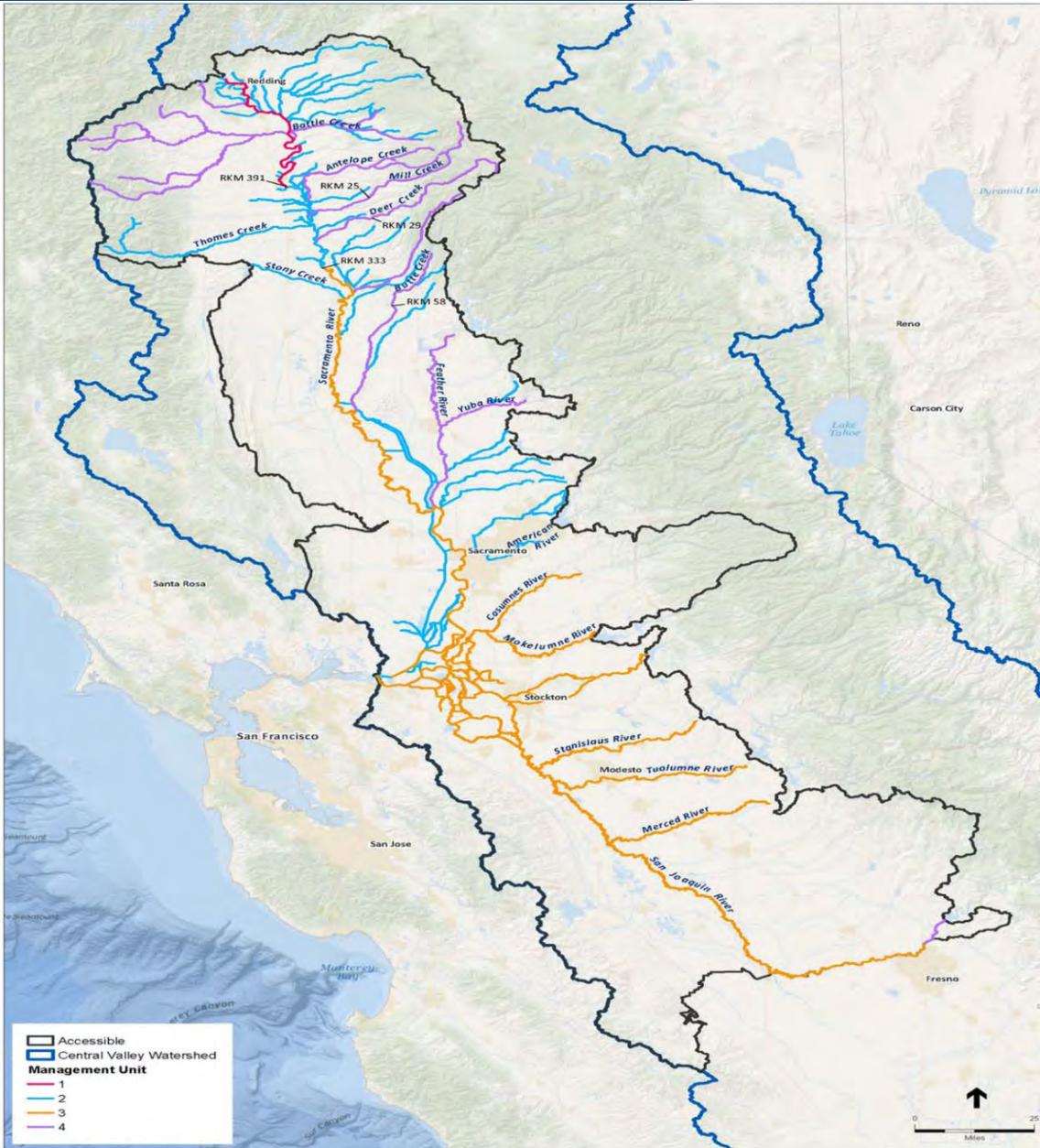


**NOAA
FISHERIES**

- Maximum of 15 projects per year to be authorized under the Program
- Dewatered area \leq 500 feet
- No dam removal projects that impound more than 900-cubic yards of sediment
- No riprap bank protection, other than bridge installation projects where the minimum amount of riprap needed to protect against scour is permitted
- No construction of new or retrofitting of older fish ladders/fish ways
- \leq 0.5 acre disturbed for staging area
- The general construction season is from June 1 to November 30.
- *Downed trees (logs) > 24-in. dbh and 10-ft. long will be retained on upslope sites or used for instream habitat improvement projects.*



Central Valley/Sacramento PBO



- PBO Duration 2018-2028
- USFWS just signed on
- Covered Species:
 - Sacramento River winter-run Chinook salmon ESU
 - Central Valley spring-run Chinook salmon ESU
 - Central Valley steelhead DPS
 - Southern DPS of North American Green sturgeon
 - Critical Habitat and EFH

Proposed Covered Activities - Sacramento



**NOAA
FISHERIES**

- Levee setback/breaching & floodplain restoration
- Wetland restoration & enhancement
- Creation of off-channel/side-channel habitat
- In-stream habitat improvements
- Bio-engineered streambank stabilization & riparian restoration
- In-stream barrier removal/modification
- Fish screens/diversion screening
- In-stream flow enhancement/ water conservation
- Upslope watershed restoration
- Invasive spp. removal & riparian revegetation (Includes Herbicides)
- Piling and Other Instream Structure Removal to Benefit Water Quality and Habitat
- Seasonal inundation of active ag land for primary productivity
- Fish monitoring



Sacramento PBO Limitations (Proposed)



NOAA
FISHERIES

- Maximum of 60 projects per year to be authorized under the Program
- No use of undersized riprap (100 yr flow)
- No managed surrogate floodplain projects that require manual ingress and egress of juvenile salmonids.
- Dewatered area \leq 1000 feet
- \leq 0.5 acre disturbed for staging area
- The general construction season will be from June 1 to October 31.





NOAA FISHERIES



NOAA

APPLICATION FOR INCLUSION IN THE NOAA RC
ARCATA OFFICE PROGRAMMATIC BIOLOGICAL OPINION

INSTRUCTIONS

- Read through the Programmatic Biological Opinion (BO) to determine if the project fits under the described activities.
- Fill out an [online application from the U.S. Army Corps of Engineers](#), if necessary.
- Fill out the application below.
- Review the list of specific "Minimization and Mitigation measures" on the last pages of this application.
- Sign and date the application.
- Attach a map of the project site, project site photos, a dewatering plan, and any other documents as necessary, then submit the completed form to the NOAA Restoration Center by e-mailing it to bob.pagliuca@noaa.gov.

General Information

Applicant Name _____

Landowner Name _____

Project Name _____

Project Location _____

Project Start Date _____

Stream _____

Latitude _____

Project End Date _____

Watershed Select _____

Longitude _____

Project Description

How is your project expected to fit under the Programmatic BO?

This project is applying for / has received funding from the NOAA Restoration Center.
This project is expected to require / has received a permit from the U.S. Army Corps of Engineers.

Which salmonid species are present at your project site?

Southern Oregon / Northern California Coho Salmon
Central California Chinook Salmon
Upper Klamath / Trinity River Chinook Salmon
Northern California Steelhead Trout
Klamath Mountains Province Steelhead Trout

What is the current problem addressed by this project? What is the context of this issue in the watershed?

What solution are you proposing? What are the goals, objectives, and proposed benefits of your project?



**NOAA
FISHERIES**



NOAA

APPLICATION FOR INCLUSION IN THE NOAA RC
ARCATA OFFICE PROGRAMMATIC BIOLOGICAL OPINION

PROJECT INFORMATION (continued)

Please indicate the type(s) of techniques your project is likely to involve.

Check all that apply.

- Bioengineering and/or riparian habitat restoration
- Upslope watershed restoration
- Instream habitat structures and/or improvements
- Barrier modification for fish passage improvement
- Removal of small dam(s), permanent and/or flashboard
- Creation of off-channel/side-channel habitat

- Development of alternative stockwater supply
- Creation of tailwater collection pond(s)
- Construction/use of water storage tank(s)
- Construction/use of piping ditch(es)
- Installation of fish screen(s)
- Use of headgate(s)/water measuring device(s)

Will construction occur between Jun 15 - Nov 1? _____

Will riparian vegetation (>2 inches dbh) removal exceed 0.25 acres? _____

Will native trees >16 inches dbh and 20 feet high with cavities, trees with nests, or trees > 36 inches dbh be removed? _____

Will dewatering and/or fish relocation be required? _____

Will mechanized equipment be working in the stream channel or within 25 feet of a wetted channel? _____

Will the project involve activities not described as a part of the Proposed Action section (Section II) in the Biological Opinion?
If so, please explain.

Please describe the specific construction elements of your project, including dimensions, timing, equipment used, and any staging area / access roads needed.

What minimization and avoidance measures are already planned as a part of this project?

Please attach photos and a map of the project site.

Attach photos separately. Pre-project photos should be taken from the four cardinal directions and from established locations for comparison to post-project photos. Post-project photo documentation will be required of all approved projects.



NOAA FISHERIES

GENERAL QUESTIONS (continued)

Please summarize the total number of fish captured, injured, and/or killed across all relocation events:

Species	Captured	Injured	Killed
Southern Oregon / Northern California Coast (SONCC) Coho			
California Coastal (CC) Chinook			
Upper Klamath / Trinity River (UKTR) Chinook			
Northern California (NC) Steelhead			
Klamath Mountains Province (KMP) Steelhead			

Project Terms and Conditions

Overall

- Please describe the activities that occurred during implementation including the problems addressed by the project, timing, restoration techniques, unforeseen issues, restoration metrics (acres/miles restored), and anything else that will describe the work that has been completed during the implementation season.

Construction

- Construction duration: _____ From _____ to _____
- Were all bare areas larger than 10 feet by 10 feet treated for erosion control?
- If no, please explain. _____
- Is photo documentation provided for erosion control?
- If so, please attach. [Attach as a separate file.](#)
- Were there any toxic leaks/spills during implementation (incl. petroleum products)?
- If yes, explain (i) how the leak or spill was contained on site (ii) if any chemicals were directly in contact with surface waters, and (iii) who was informed at the time of the accident. _____
- Please attach a full copy of the as-built drawings. [Attach as a separate file.](#)



INSTRUCTIONS

- Fill out the NOAA RC Arcata Office Programmatic Biological Opinion Post-Project Monitoring Form below.
- Send the completed form to the NOAA Restoration Center at rcb@pacfic.noaa.gov.

General Information

Applicant Name: _____
 Landowner Name: _____
 Project Name: _____
 Project Location: _____
 Project Start Date: _____ Stream: _____ Latitude: _____
 Project End Date: _____ Watershed: Select _____ Longitude: _____

General Questions (applicable to all projects to quantify impacts and benefits to fish)

Target Species (check all that apply) SONCC Coho UKTR Chinook KMP Steelhead CCC Chinook NC Steelhead

Restoration/Disturbance

- Total linear feet of upstream habitat made accessible: _____
- Total linear feet of stream bank stabilized or planted with riparian species: _____
- Total linear feet of stream disturbed: _____
- Total linear feet of stream dewatered: _____

Fish Relocation

- Was NMF's notified at least two weeks prior to relocation activities?
- Name / contact information for the qualified biologists involved in relocation. Include the DFG scientific collection permit number. _____
- Name / contact information for the qualified assistants involved in relocation. Include the DFG scientific collection permit number. _____
- Where were fish relocated? _____
- What (if any) unanticipated circumstances arose during fish relocation activities? _____
- Please attach monitoring data for all relocation events. [Attach as a separate file.](#)

PROJECT TERMS AND CONDITIONS (continued)

Revegetation

- Was revegetation proposed as part of the approved project?
- Revegetation duration: _____ From _____ to _____
- Was revegetation implemented as proposed?
- If no, please explain. _____

Monitoring

- Please attach photo documentation of pre- and post-project conditions. [Attach as a separate file.](#) Photos should be taken from the four cardinal directions and from established photo points for comparison to pre-project photo documentation.

Additional Information for Monitoring Reports

- Fish Passage Improvement Projects**
 - Two annual monitoring reports shall be submitted to the NOAA RC no later than April 30th of each of the 2 years following construction, and shall contain the following information:
 - Photo reference points of barrier remediation sites shall be established following construction. Photos shall be taken under a variety of flow conditions including high winter flows (including at least one bank full event) and summer low flows once a year for a minimum of two years. For culvert projects, photo points shall also include the culvert inlet and outlet to demonstrate the condition of culvert bottom.
 - A design report, including verification of velocity, slope, water depths, and energy dissipation (if used). The purpose of including this report is to ensure design plans were met. The validation report shall include an evaluation of the barrier remediation site for elevations, depth and velocities at the range of design flows and operational configurations.
- Road Projects**
 - Roads shall be assessed by the project manager for 2 years to ensure all drainage facilities are performing as anticipated. At least one monitoring report shall be submitted to the NOAA RC no later than June 1st of the 2nd year following construction, and shall include the following information:
 - Photos of treatment sites.
 - An assessment of the road (a) prior to the start of the winter period (October 15th) and (b) at least once during the rainy season (after 10 inches of rain, or February 15, whichever comes first).
- Off-Channel Habitat Projects**
 - At least one monitoring report shall be submitted to the NOAA RC no later than April 30th of the year following construction, and shall contain the following information:
 - Pre- and post- (after winter flow event) information on the elevation of the inlet and outlet structure relative to the 2-year flood.
 - A description of if and when the off channel feature became disconnected from the main channel and at what flow level (cfs). This will require checking the project site daily when the off channel feature is becoming disconnected from the main channel.
 - A description of any stranded fish observed. If there are salmonids stranded, the applicant will contact Bob Pagliuco (707-825-5166) immediately to determine if a fish rescue action is necessary. CDFG Watershed Biologist Michelle Gilroy (707-445-6493) will also be contacted with fish rescue information and/or mortalities by species.

COST SAVINGS Economic Analysis 2015



**NOAA
FISHERIES**



- Individual Permit (Consultant, USACE, NMFS PRD, NMFS RC)
 - NOAA RC BO & Applicant BA costs: \$25,000 to \$64,000
 - Cost of BA often comes out of grant funding
- Programmatic Permit
 - Under \$300 per project; annual costs less than \$2,000
- Cost savings of \$24,000-\$63,000 per project = more money on the ground for restoration!

NOAA RC PBO Projects



**NOAA
FISHERIES**

Programmatic	Number of Projects	Potential Cost Savings
Santa Rosa 2006	72	\$1,800,000 - \$4,608,000
Arcata 2012	45	\$1,080,000 - \$2,835,000
Southern CA 2015	1	\$24,000 - \$63,000
Santa Rosa 2016	19	\$456,000 - \$1,197,000
Total	140	\$3,360,000 – \$8,703,000





NOAA / California Coastal Commission Consistency Determination

- NOAA RC – funding OR technical assistance
- Alternate pathway for a coastal permit (no \$)
- North, Central and South Coasts

CCC CD Coverage and Benefits



NOAA
FISHERIES



- Northern and Central Coast CD – 2013 – Covers Oregon Border to San Luis Obispo County line.
- Southern CA CD – 2015-Covers Santa Barbara to Mexican Border
- Increased number of environmentally beneficial projects within Coastal Zone to restore coastal resources including listed species and sensitive habitats
- Short application process
- Provide the same regulatory rigor and oversight through a more efficient and collaborative process
- Reduce costs and time for project applicants and Commission staff



**NOAA
FISHERIES**



Covered Project Types

- Riparian planting/fencing
- In-stream habitat enhancement (LWD, boulders, bioengineering)
- Fish passage barrier removal
- Small dam removal
- Restoring tidal flow
- Water conservation projects
- Off channel habitat projects
- SAV restoration
- Native oyster reefs
- Wetland restoration

CCC CD	Number of Projects
Northern CA (2013)	17
Southern CA (2016)	Almost 1



**NOAA
FISHERIES**

Conclusions

- Programmatic ESA Permitting for Restoration Projects are almost available throughout all anadromous waters in CA.
- Coastal Commission Consistency Determinations are available throughout CA.
- As new programmatic BOs are developed, additional project types and more realistic protection measures are included.
- **The Programmatic BO's have saved taxpayer dollars** ranging from \$3.4 - \$8.7 million since 2006.
- We should continue to look for opportunities to develop programmatic statewide (USFWS Programmatic BO in CA)



Questions?

Arcata – bob.Pagliuco@noaa.gov

Santa Rosa – joe.pecharich@noaa.gov

Long Beach – Stacie.smith@noaa.gov

Sacramento – Ruth.goodfield@noaa.gov



Process-based Restoration of Depositional Stream Reaches— A Paradigm Shift to Stage 0

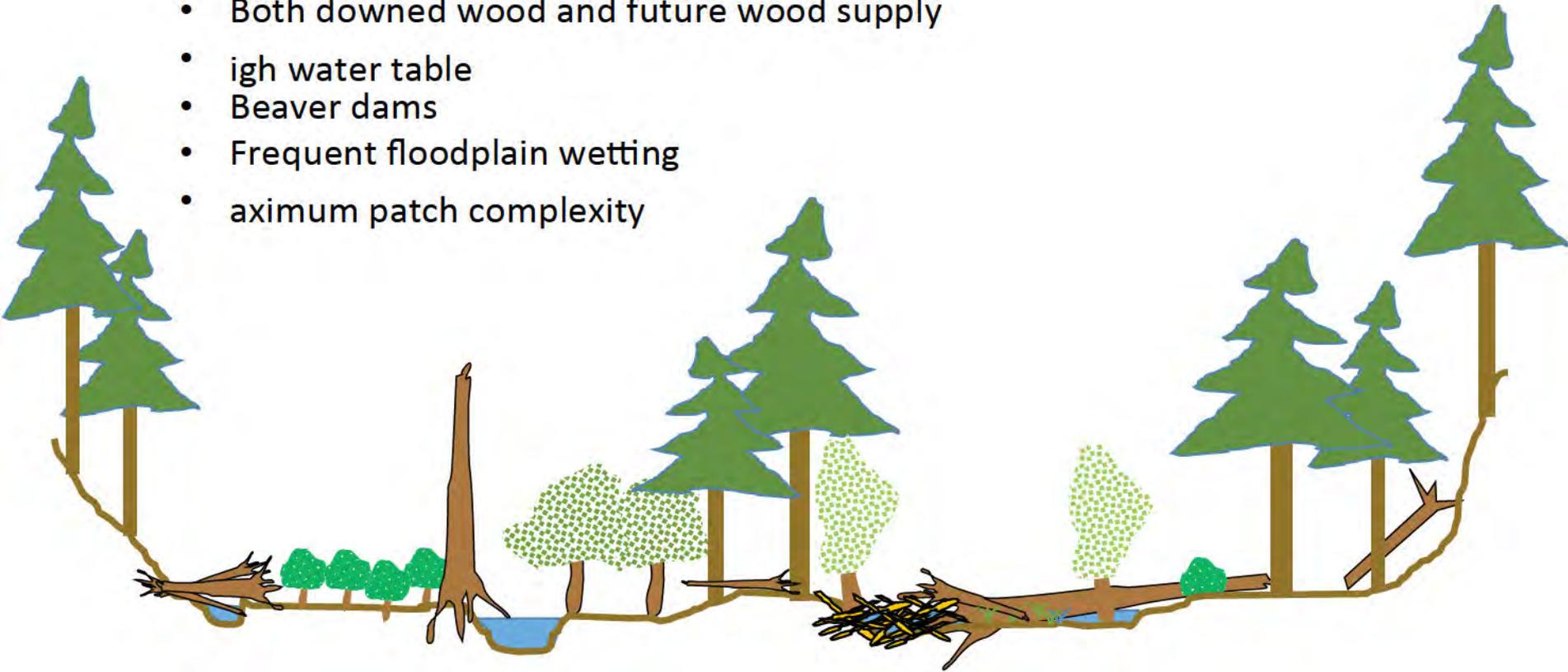


Johan Hogervorst
Forest Hydrologist
Willamette National Forest

- Historical Conditions
- Disturbance History
- Evolution of Restoration in the Pacific Northwest (particularly Oregon)
- Paradigm Shift to Stage 0 projects

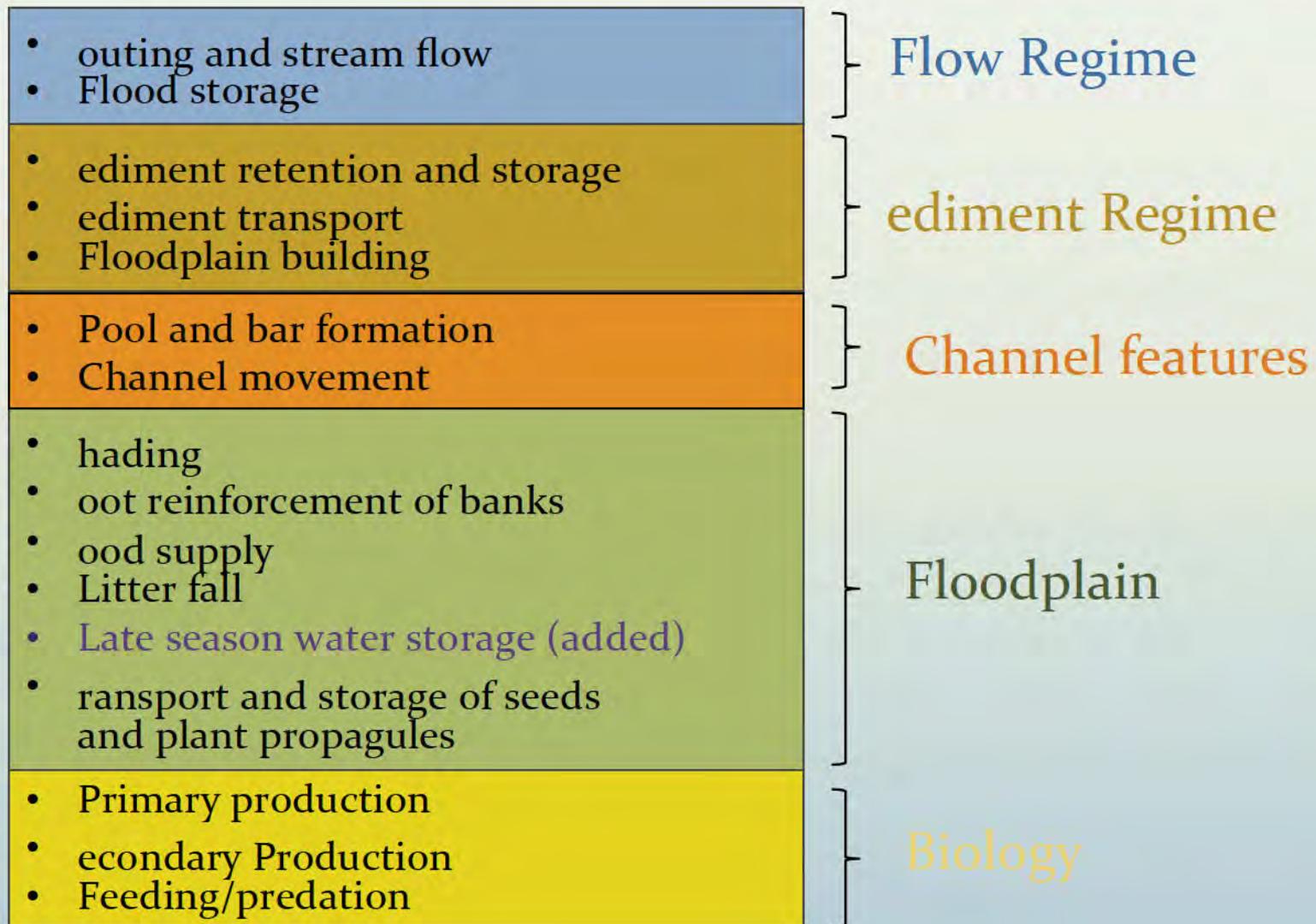
Historic Floodplain Condition in Depositional Environments

- Vegetation diversity
- Elevational diversity
- Multiple flow paths
- Both downed wood and future wood supply
- High water table
- Beaver dams
- Frequent floodplain wetting
- Maximum patch complexity



Cluer and Thorne, 2013 – “STAGE 0” of the Stream Evolution Model

Reach-scale processes from Roni and Beechie, 2013*



* **Stream and Watershed Restoration: A Guide to Restoring Riverine Processes and Habitats**

Copyright © 2013 John Wiley & Sons, Ltd

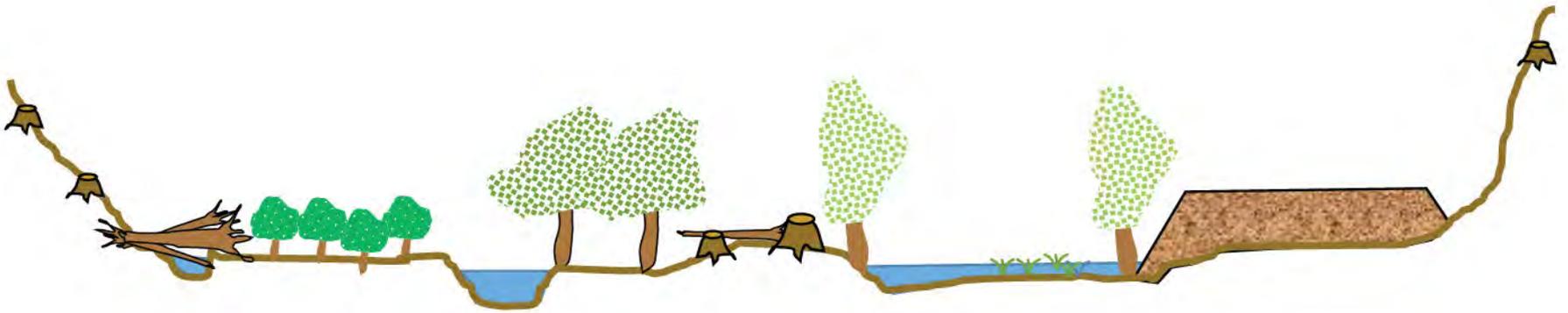
Changed Condition in Depositional Environments

- Road building



Changed Condition in Depositional Environments

- Road building
- Conifer harvest



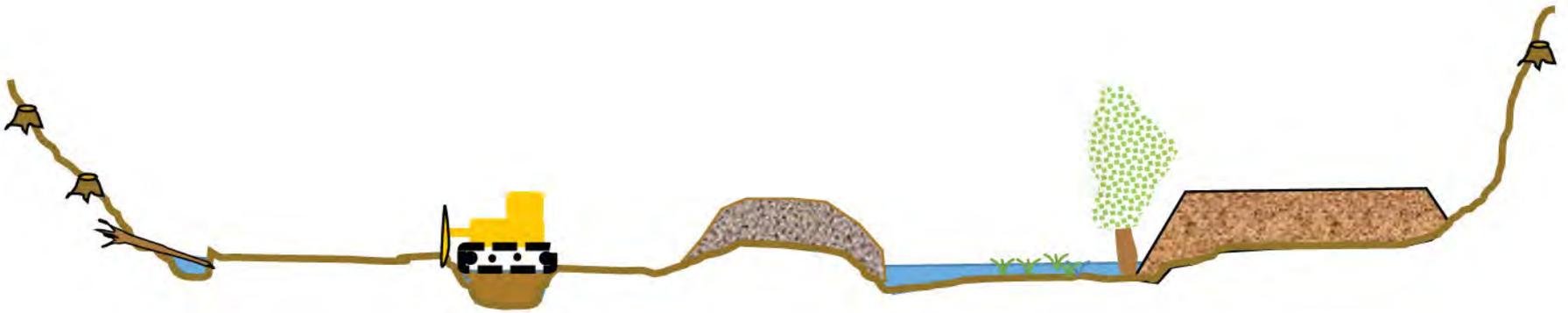
Changed Condition in Depositional Environments

- Road building
- Conifer harvest
- Diking and channelization



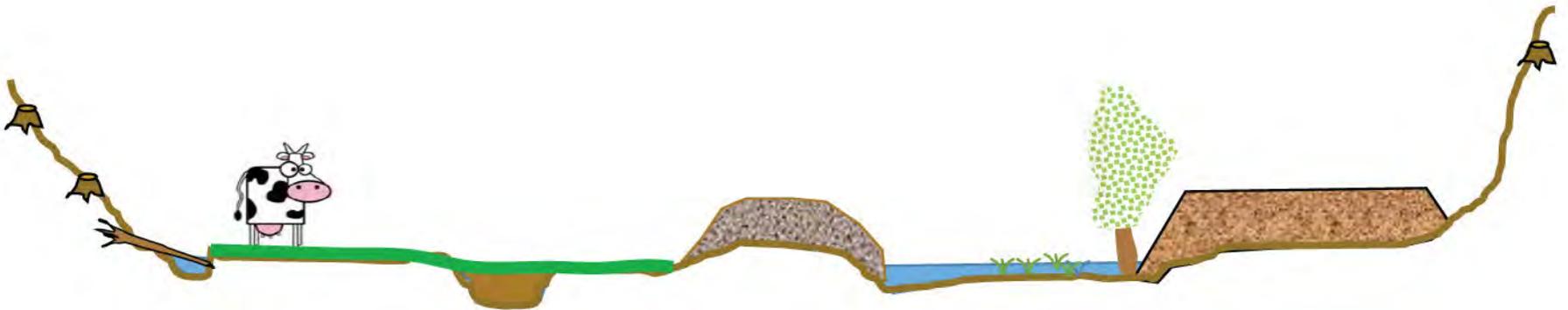
Changed Condition in Depositional Environments

- Road building
- Conifer harvest
- Diking and channelization
- Blocking or filling side channels



Changed Condition in Depositional Environments

- Road building
- Conifer harvest
- Diking and channelization
- Blocking or filling side channels
- Grazing and farming

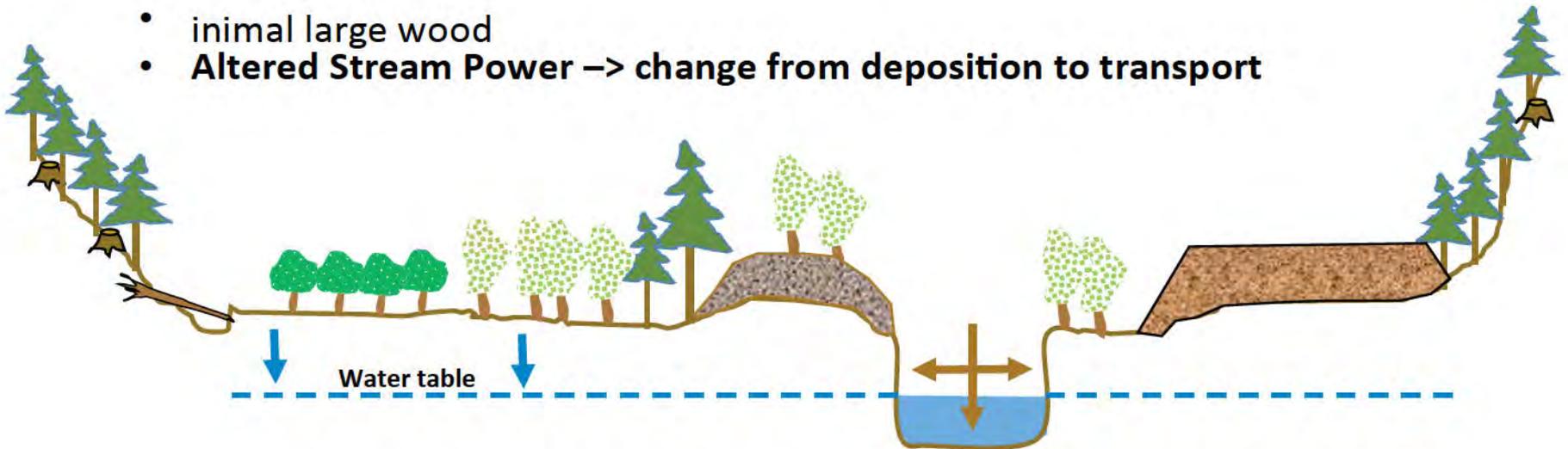


Changed Condition in Depositional Environments

- Road building
- Conifer harvest
- Diking and channelization
- Blocking or filling side channels
- Grazing and farming

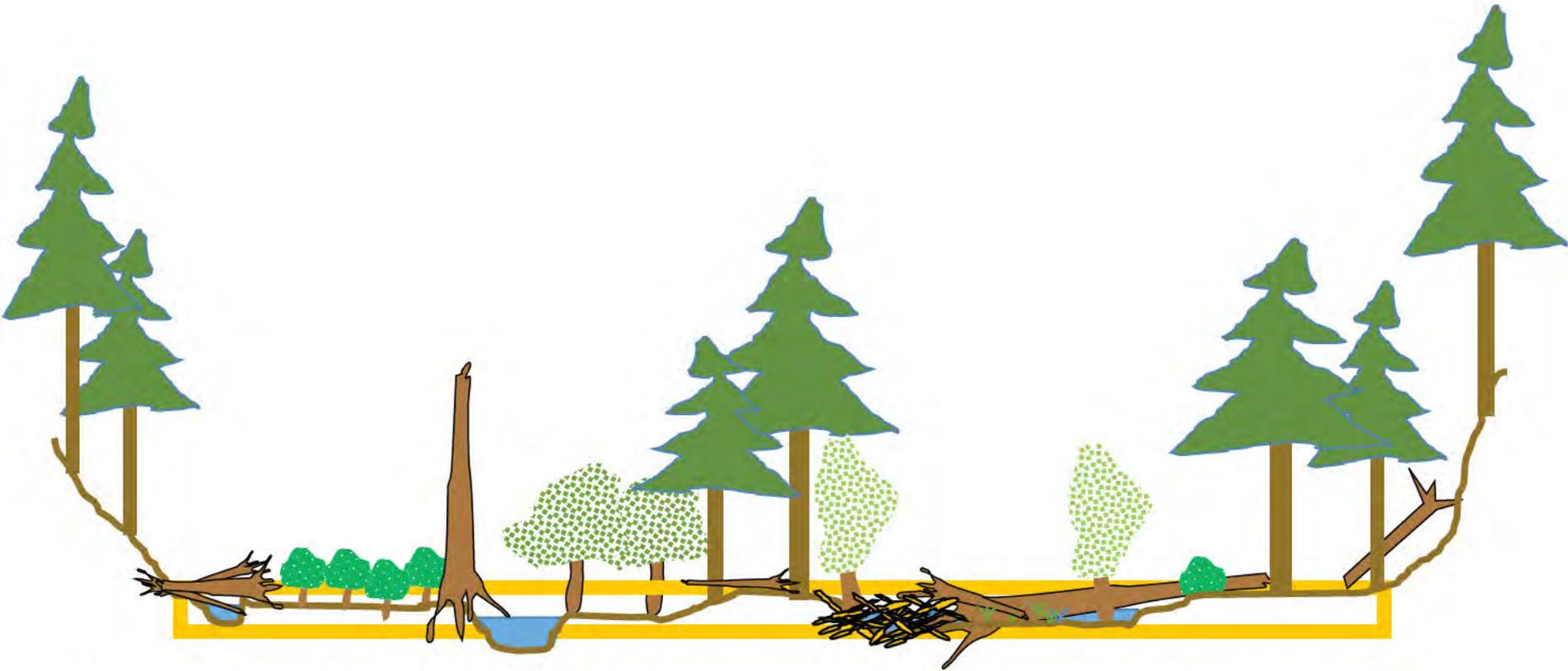
Leads to:

- Single incised channel
- Loss of water table/wetlands
- Altered vegetation types
- Minimal large wood
- **Altered Stream Power → change from deposition to transport**



Stream Evolution Model, Stages 2-4
Cluer and Thorne, 2013

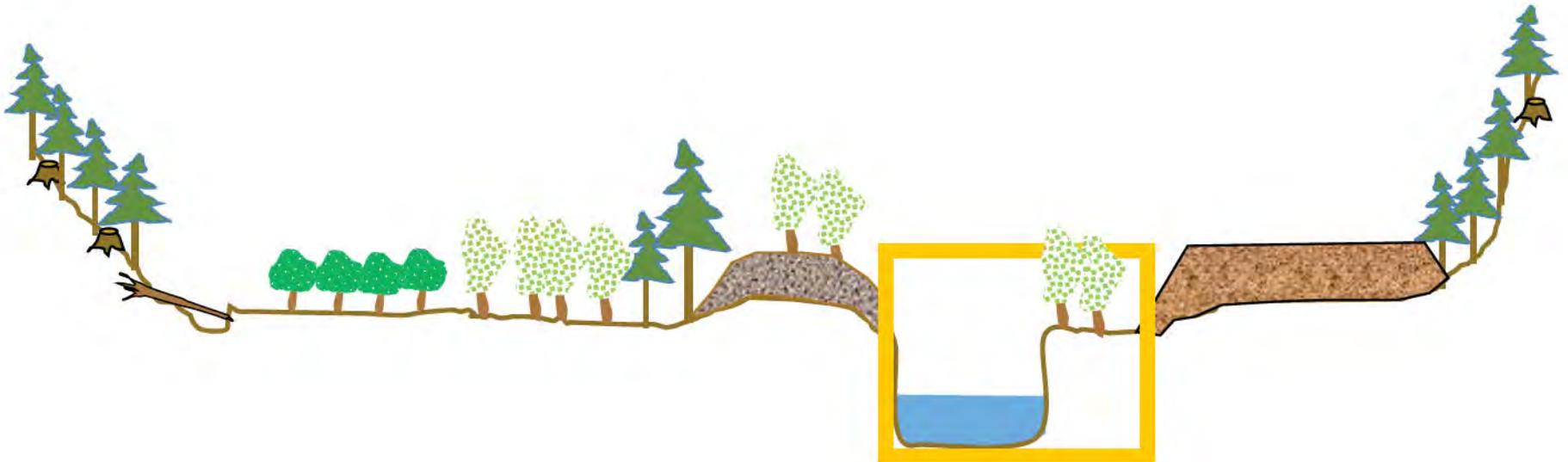
Historic Floodplain Condition in Depositional Environments



Stream Power Per Unit Width - Low

- Flow distributed throughout a roughened surface

Changed Condition from Depositional to Transport Environments

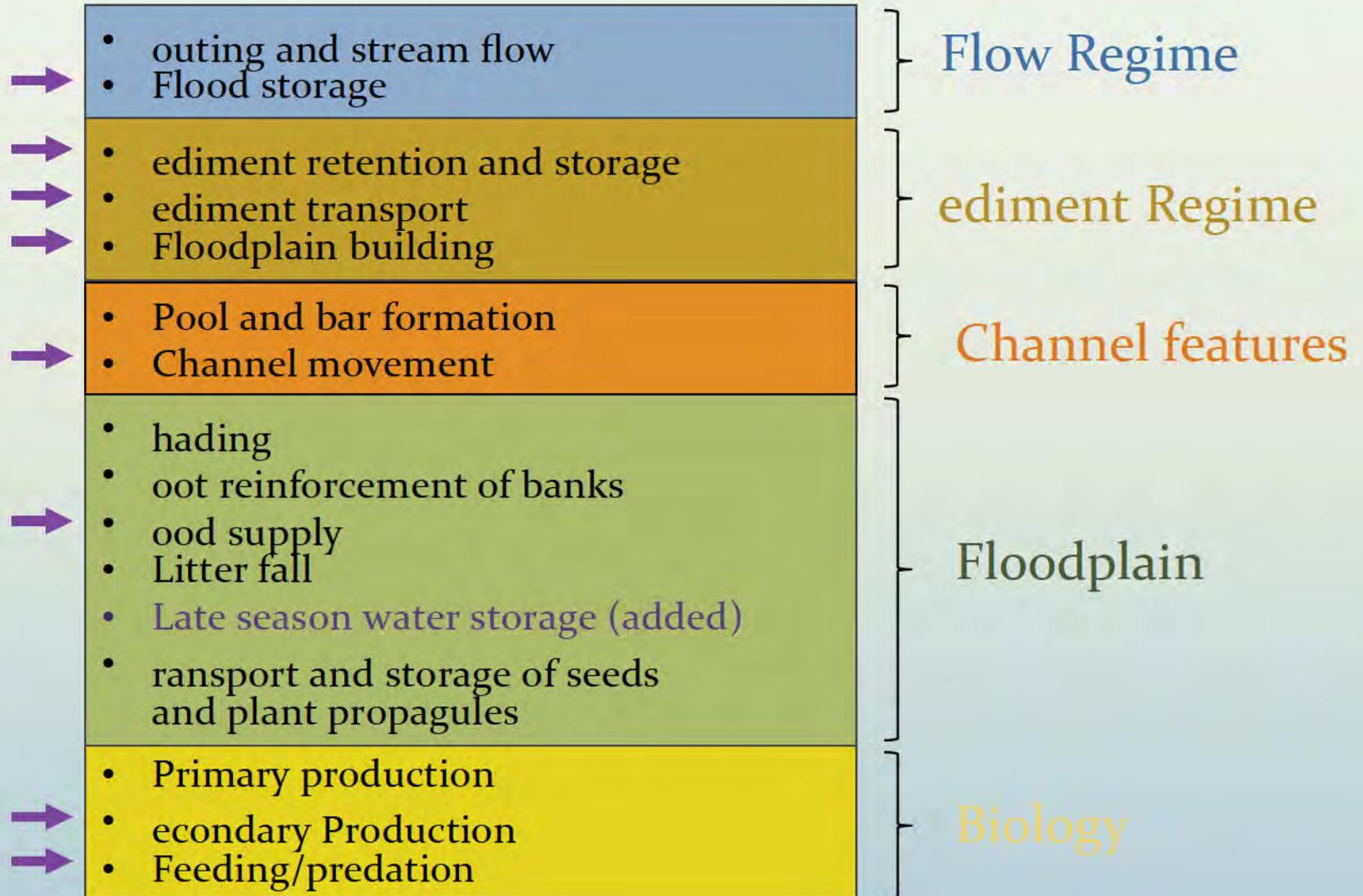


Stream Power Per Unit Width - High
"fire hose effect"

Reach-scale processes from Roll and Beechle,

2013

Critical to Native Aquatic Species



Restoration Solutions

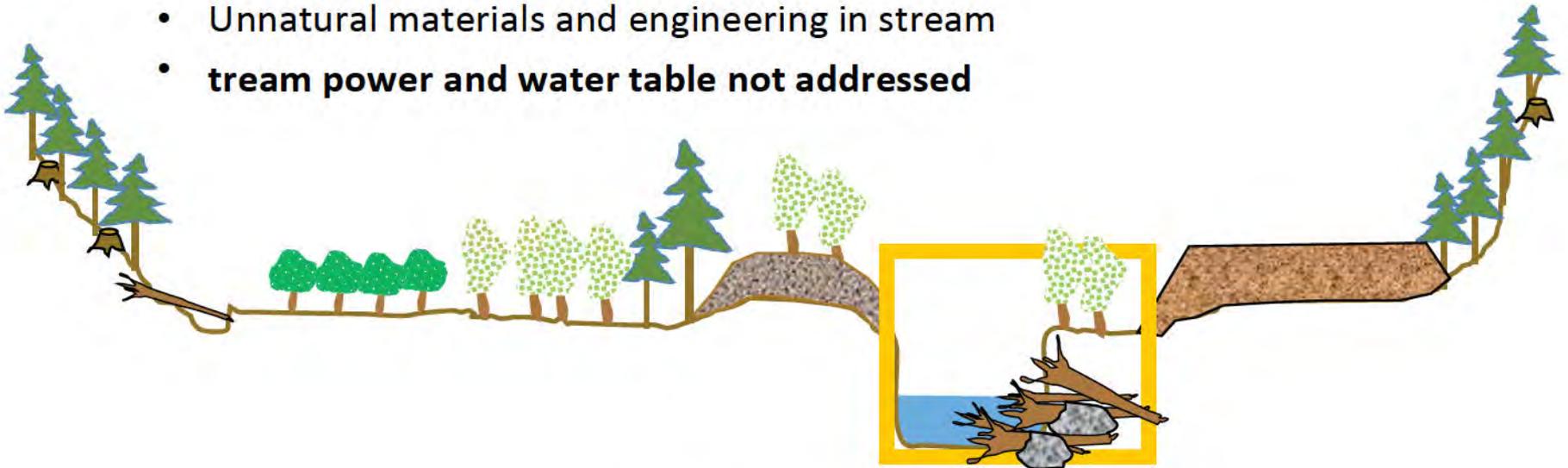
Channel-centric, form-based restoration (1980s to present)

Advantages:

- Easy to count # of structures, pools created and miles treated
- Focused treatment that's relatively inexpensive per site

Disadvantages:

- Process and function minimally addressed
- Blows out in big storms
- Unnatural materials and engineering in stream
- **stream power and water table not addressed**



Stream Power Per Unit Width - High

- Form-based restoration working against a “fire hose”

Restoration Solutions

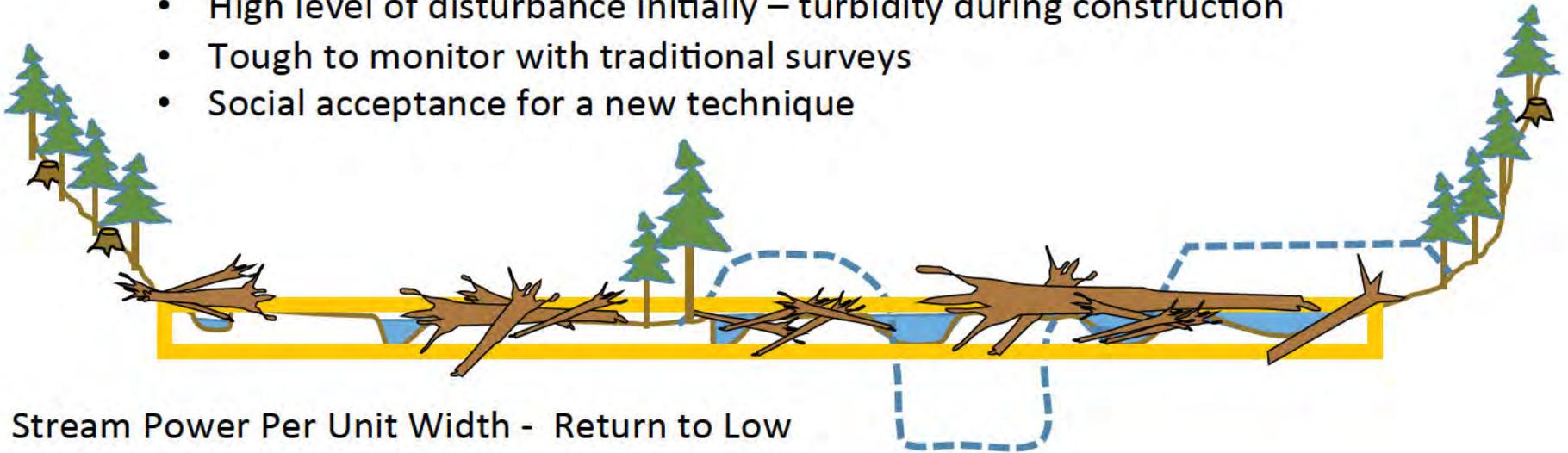
Stage 0 - Valley bottom, process-based restoration (2005 to present)

Advantages:

- Process and function fully addressed for entire floodplain
- Water table restored
- Template created for native vegetation recovery
- Patch complexity maximized with dynamic change anticipated over time
- Large storms welcome (stream energy addressed)

Disadvantages:

- High level of disturbance initially – turbidity during construction
- Tough to monitor with traditional surveys
- Social acceptance for a new technique



Floodplains are good!

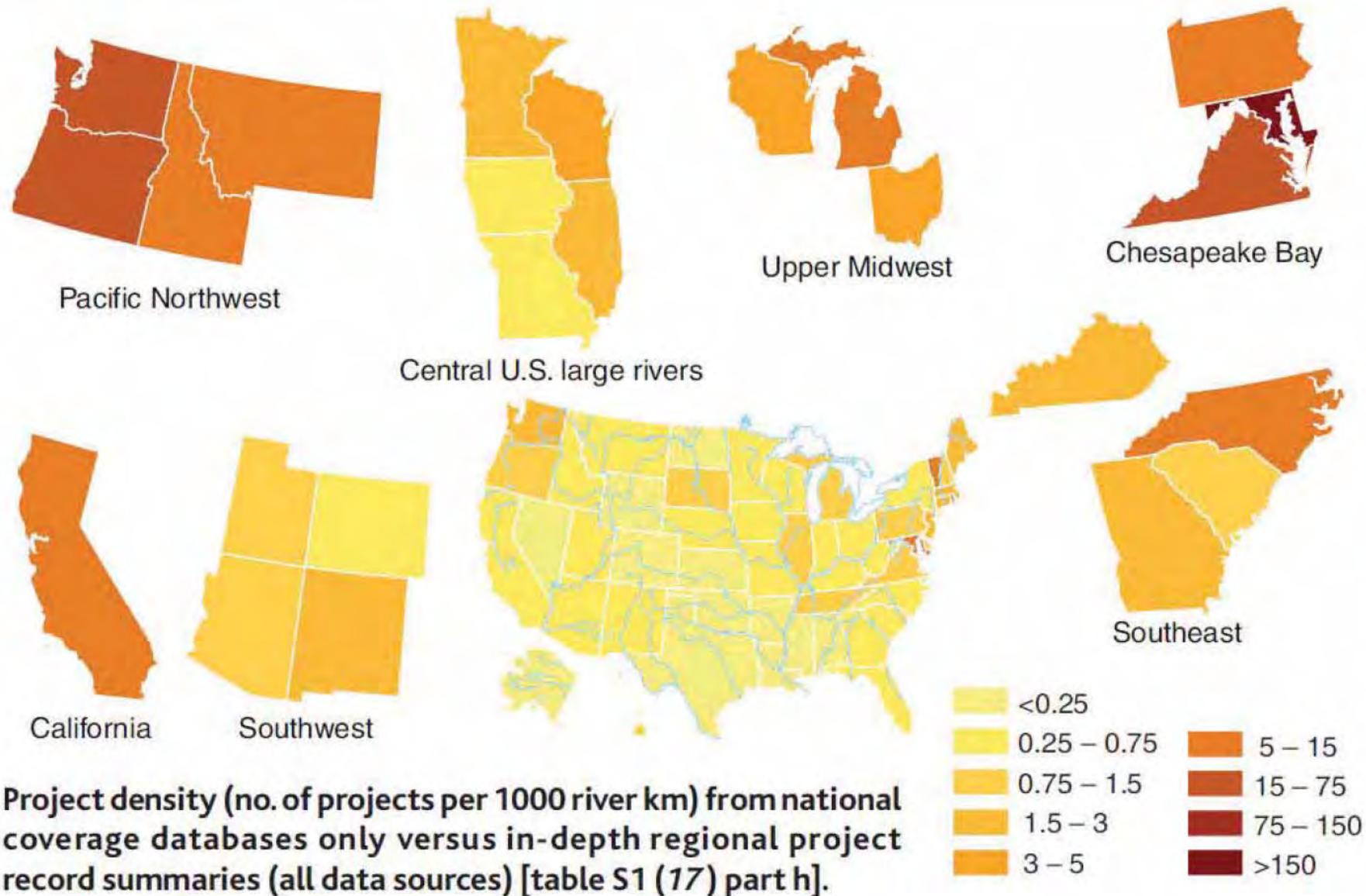




PNW RESTORATION PROGRAMMATICS

HIP III / ARBO II / PROJECTS

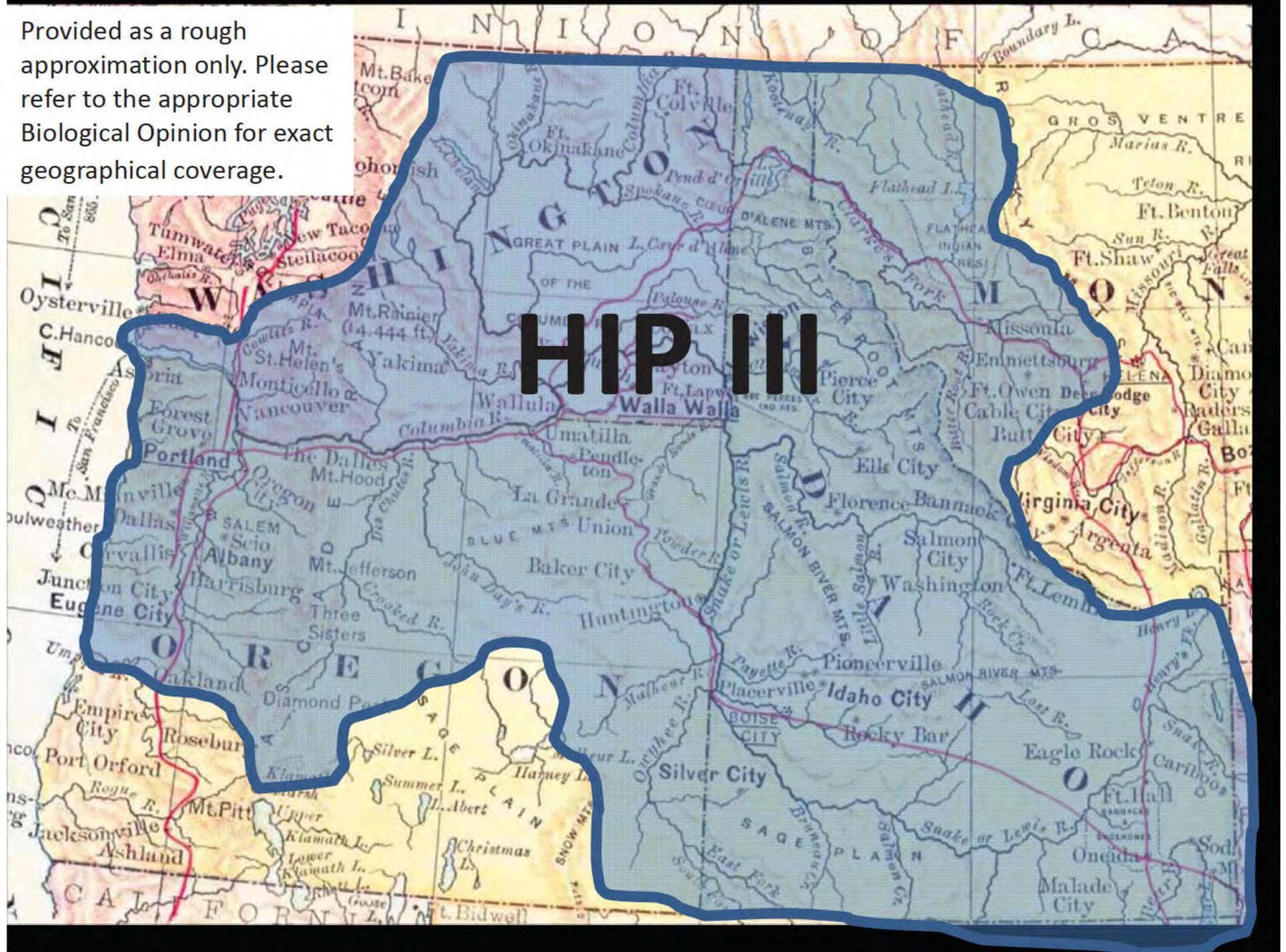
Provided for informational purposes only. Please refer to the appropriate Biological Opinion for specific information and requirements for each of the referenced Biological Opinions:
www.fws.gov/oregonfwo/ToolsForLandowners/OtherResources.asp



Synthesizing U.S. River Restoration Efforts

E. S. Bernhardt,^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100} M. A. Palmer,¹ J. D. Allan,² G. Alexander,³ K. Barnes,⁴ S. Brooks,⁵ J. Carr,⁶ S. Clayton,⁷ C. Dahm,⁸ J. Follstad-Shah,⁹ D. Galat,¹⁰ S. Gloss,¹¹ P. Goodwin,¹² D. Hart,¹³ B. Hassett,¹⁴ R. Jenkinson,¹⁵ S. Kats,¹⁶ G. H. Kendall,¹⁷ P. S. Lake,¹⁸ R. Lave,¹⁹ J. L. Meyer,²⁰ T. R. O'Donnell,²¹ L. Pagano,²² B. Powell,²³ E. Subbuth,²⁴

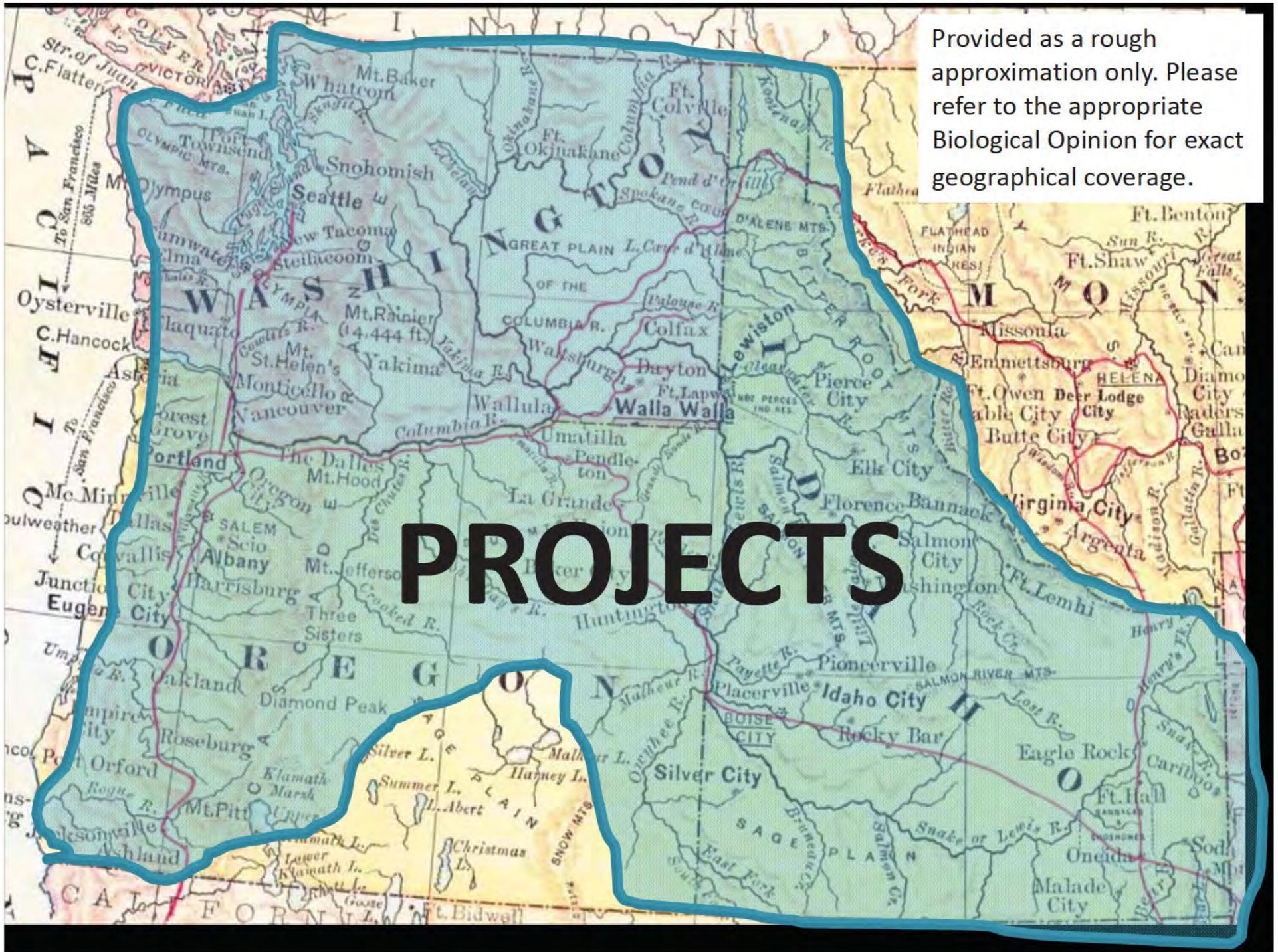
Provided as a rough approximation only. Please refer to the appropriate Biological Opinion for exact geographical coverage.





Provided as a rough approximation only. Please refer to the appropriate Biological Opinion for exact geographical coverage.

ARBO II



Provided as a rough approximation only. Please refer to the appropriate Biological Opinion for exact geographical coverage.

PROJECTS

Biological Opinion Development & Activity Categories

A Little Background

- **HIP – Habitat Improvement Program (2013)**
 - Action Agency: Bonneville Power Administration
- **ARBO – Aquatic Restoration BiOp (2013)**
 - Action Agencies: BLM, USFS, BIA, Coquille Tribe
- **PROJECTS – Programmatic Restoration Opinion for Joint Ecosystem Conservation by The Services (2014)**
 - Action agency: USFWS BO and NOAA Restoration Center

Programmatic Commonalities

- FWS/NMFS joint process -- mirrored BOs
- Aquatic (mostly) driven programmatic
- Reinitiations for HIP (III) and ARBO (II)
 - Added and expanded activity categories
- Living documents – no BO expiration date
- Similar (but not identical) activity categories
- Similar implementation process

1. Fish Passage



Elk Creek by Amy Horstman

2. Large Wood



3. Legacy Structure Removal



Marmot Dam by Janine Castro

4. Channel Reconstruction/Relocation



5. Off- and Side-Channel Habitat Restoration



Necanicum River by Doug Ray

6. Streambank Restoration



Wind River by Janine Castro

7. Set-Back or Removal of Existing Berms, Dikes, and Levees



8. Reduction/Relocation of Recreation Impacts



9. Livestock Fencing, Stream Crossings and Off-Channel Livestock Watering



10. Piling and other Structure Removal



11. In-channel Nutrient Enhancement



12. Road and Trail Erosion Control and Decommissioning





14. Juniper Removal



15. Riparian Vegetation Treatment (controlled burning)



16. Riparian Vegetative Planting



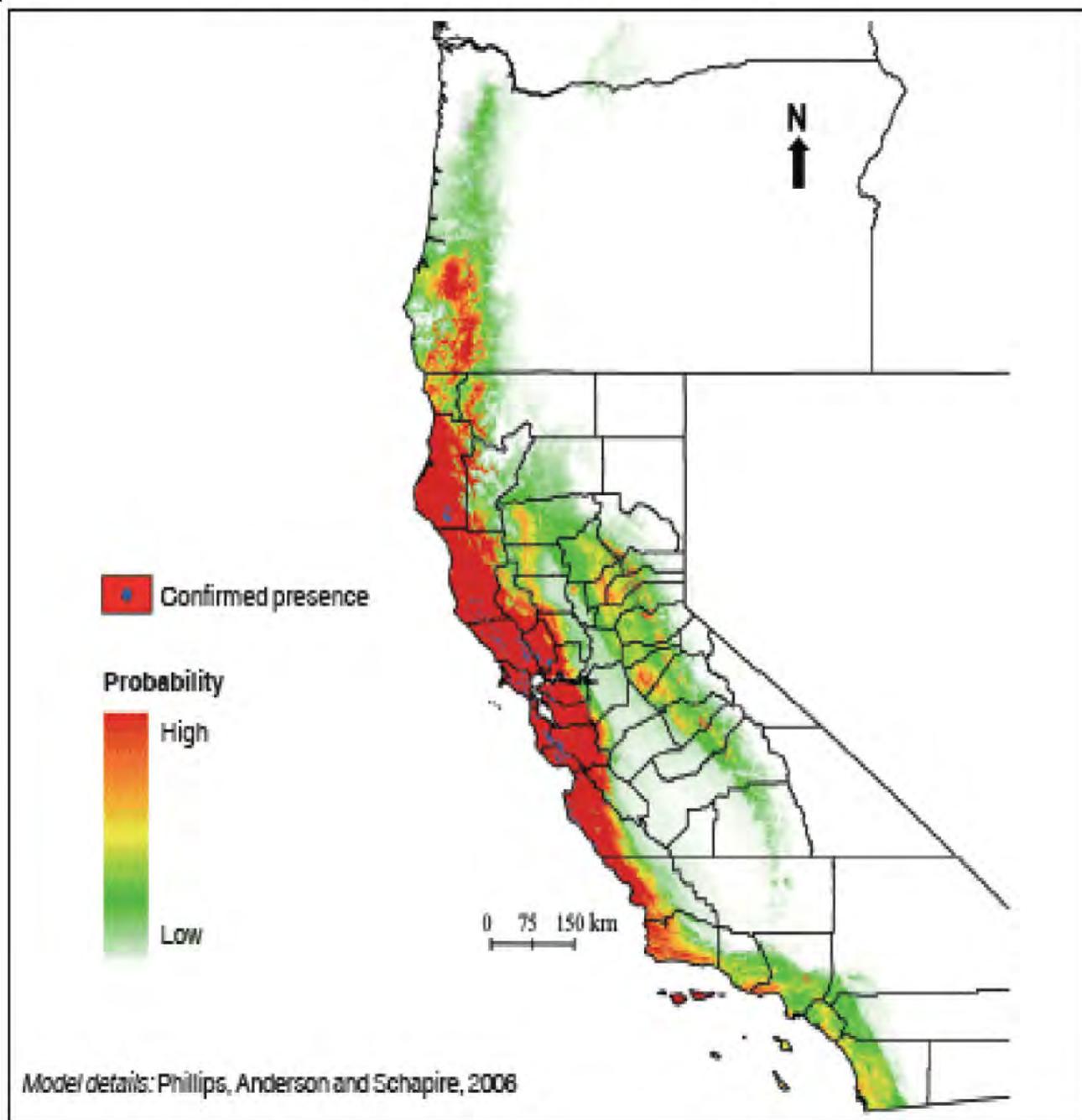
17. Bull Trout Protection



18. Beaver Habitat Restoration



19. Sudden Oak Death (SOD) Treatments



**20. Fisheries, Hydrology, Geomorphology, Wildlife, Botany,
and Cultural Surveys in Support of Aquatic Restoration**



21. Shellfish Bed/Nearshore Habitat Restoration



22. Tide/Flood Gate Removal,



Basic Activity	PROJECTS	ARBO II	HIP III
Fish Passage			
Large Wood			
Legacy Structure Removal (dams, tidegates)			
Channel Reconstruction/Relocation			
Off- and Side-Channel Habitat Restoration			
Streambank Restoration			
Set-back or Removal of Existing Berms, Dikes, and Levees			
Reduction/Relocation of Recreation Impacts			
Livestock Fencing, Stream Crossings and Off-Channel Livestock Watering			
Piling and other Structure Removal			
In-channel Nutrient Enhancement			
Road and Trail Erosion Control and Decommissioning			
Non-native Invasive Plant Control			
Juniper Removal			
Riparian Vegetation Treatment (controlled burning)			
Riparian Vegetative Planting			
Bull Trout Protection			
Beaver Habitat Restoration			
Sudden Oak Death (SOD) Treatments		(aquatic species only)	
Fisheries, Hydrology, Geomorphology Wildlife, Botany, and Cultural Surveys in Support of Aquatic Restoration			
Shellfish Bed/Nearshore Habitat Restoration			
Tide/Flood Gate Removal, Replacement, or Retrofit		(removal only)	(removal only)

= Covered Activity = Activity Not Covered

Provided for comparative purposes only. Please refer to the appropriate Biological Opinion for exact activity coverage.

EXAMPLE General Conservation Measures

“The activities covered under this consultation are intended to protect and restore fish and wildlife habitat with long-term benefits to ESA-listed species. However, project construction may have short-term adverse effects on ESA-listed species.

To minimize these short-term adverse effects and make them predictable for purposes of programmatic analysis, the following general conservation measures are applicable to all projects.”

EXAMPLE Project Design and Site Preparation

- 1) Climate change.
- 2) State and Federal Permits.
- 3) Timing of in-water work.
- 4) Contaminants.
- 5) Site layout and flagging.
- 6) Temporary access roads and paths.
- 7) Temporary stream crossings.
- 8) Staging, storage, and stockpile areas.
- 9) Equipment.
- 10) Erosion control.
- 11) Dust abatement.
- 12) Spill prevention, control, and countermeasures.
- 13) Invasive species control.

EXAMPLE Construction Conservation Measures

- 1) Work Area Isolation & Fish Salvage.
 - Step 1: Isolate
 - Step 2: Salvage
 - Step 3: Electrofishing
 - Step 4: Dewater
 - Step 5: Re-watering
 - Step 6: Salvage Notice
- 2) Fish passage.
- 3) Construction and discharge water.
- 4) Minimize time and extent of disturbance.
- 5) Cessation of work.

EXAMPLE Post-construction Conservation Measures

- 1) Site restoration.
- 2) Revegetation.
- 3) Site access.

Inspections and Monitoring

EXAMPLE Species-Specific Conservation Measures

1.4 General Conservation Measures and Project Design Criteria for All Terrestrial and Fish Species

1. The following CMs apply to all listed terrestrial species for all programmatic activities:

- a. Aquatic restoration actions will not remove or downgrade suitable habitat (on either public or private land) for any listed terrestrial species.
- b. Effects of danger tree removal will be either discountable or insignificant to ESA-listed terrestrial species and their critical habitat.
- c. All restoration activities must have the unit's botanist and terrestrial wildlife biologist input/analysis of the project design and their site-specific species assessment to proceed. This includes a plant survey and nest analysis (or survey if deemed appropriate by the unit biologist, and suitable habitat is known to occur within the project prior to project implementation).
- d. There will be no disturbance allowed from blasting activities as they are not part of the proposed action.
- e. The unit wildlife biologist is responsible for ensuring that the correct effects determination is made for each project. The unit wildlife biologist may increase or decrease disturbance distances according to the best available scientific information and site-specific conditions. Refer to Tables 9-10. For instance, if a known spotted owl site is surveyed to protocol and the owls are determined to be non-nesting, the unit biologist may determine that no disturbance or disruption would occur and lift the associated restrictions on activities within disruption distances during the year of survey.

EXAMPLE Species-Specific Conservation Measures

Canada Lynx

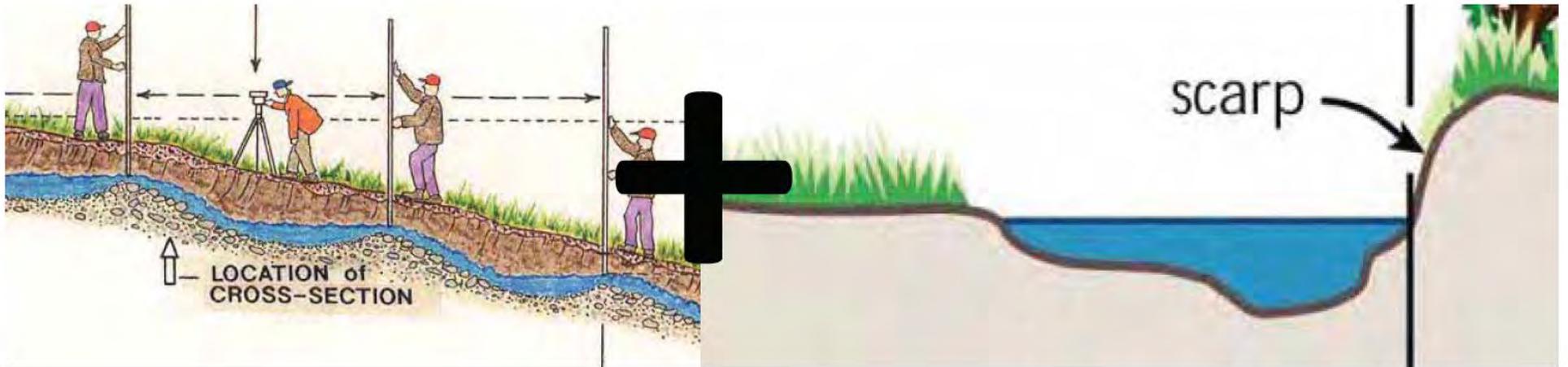
- i. **CL1:** No active lynx dens are located within 270 yards (based on sight distance and attenuation of sound in forested environments) of a project.
- ii. **CL2:** The project will meet the standards and guidelines identified in the Lynx Conservation Assessment and Strategy (LCAS) and are within the LCAS thresholds (suitable, unsuitable, and denning habitat).
- iii. **CL3:** The project will not result in increased off-road vehicle access to lynx habitat during or following implementation.

EXAMPLE Project Design Criteria

1. Fish Passage
2. Large Wood
3. Legacy Structure Removal
4. Channel Reconstruction/Relocation
5. Off- and Side-Channel Habitat Restoration
6. Streambank Restoration
7. Set-Back or Removal of Existing Berms, Dikes, and Levees
8. Reduction/Relocation of Recreation Impacts
9. Livestock Fencing, Stream Crossings and Off-Channel Livestock Watering
10. Piling and other Structure Removal
11. In-channel Nutrient Enhancement
12. Road and Trail Erosion Control and Decommissioning
13. Non-native Invasive Plant Control
14. Juniper Removal
15. Riparian Vegetation Treatment (controlled burning)
16. Riparian Vegetative Planting
17. Bull Trout Protection
18. Beaver Habitat Restoration
19. Sudden Oak Death (SOD) Treatments
20. Fisheries, Hydrology, Geomorphology, Wildlife, Botany, and Cultural Surveys in Support of Aquatic Restoration
21. Shellfish Bed/Nearshore Habitat Restoration
22. Tide/Flood Gate Removal, Replacement, Retrofit

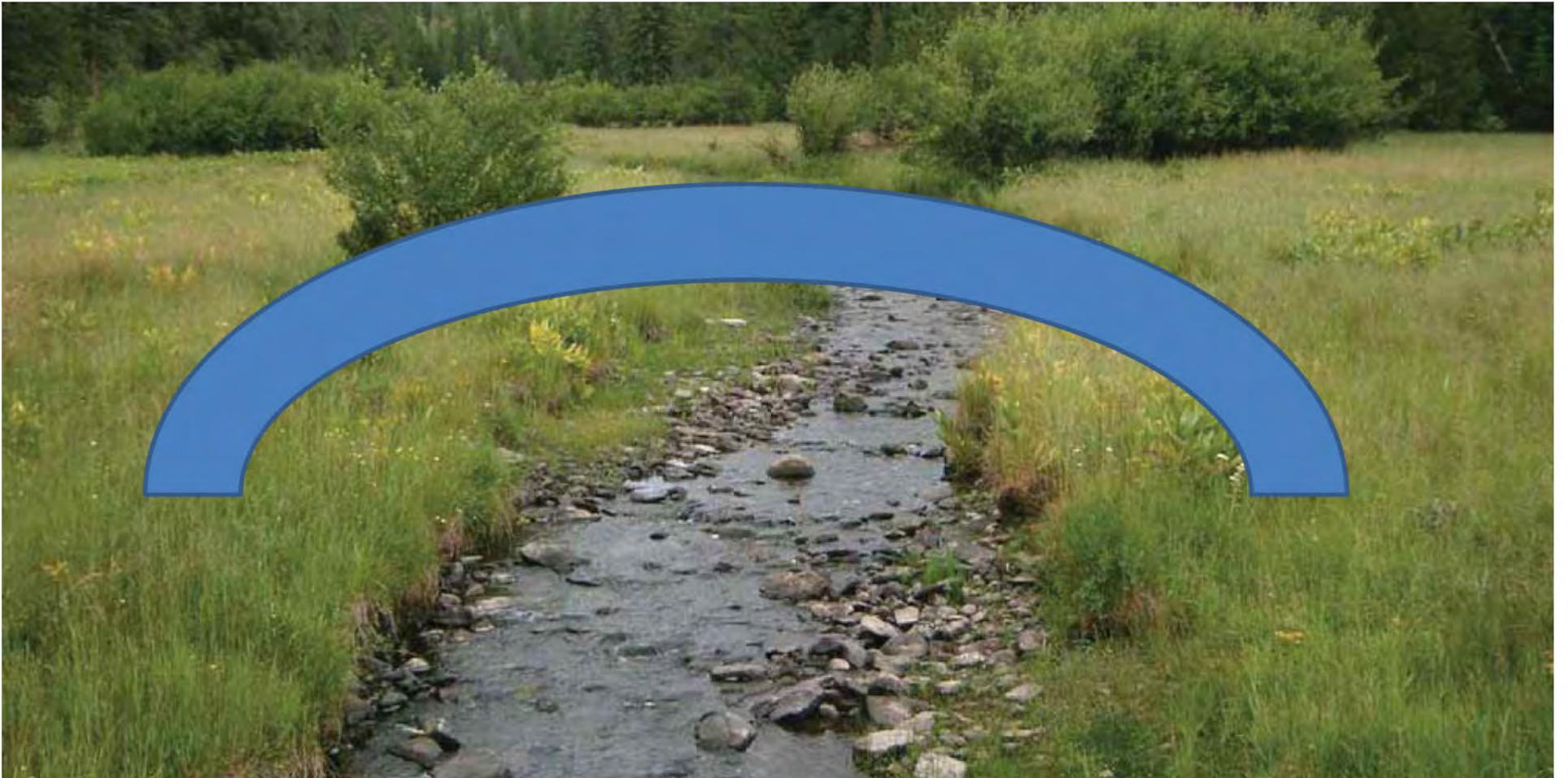


©Dorothy Peterson



A photograph of a stream flowing through a grassy field. The stream is surrounded by green grass and trees in the background. A large white plus sign is on the left, and a large white equals sign is on the right.

Stream
Simulation



EXAMPLE Fish Passage Restoration includes the following: total removal, replacement, or resetting of culverts or bridges; stabilizing headcuts and other channel instabilities; removing, relocating, constructing, repairing, or maintaining fish ladders; and replacing, relocating, or constructing fish screens and irrigation diversions. Such projects will take place where fish passage has been partially or completely eliminated.

Stream simulation culvert and bridge projects. All road-stream crossing structures shall adhere to the most recent version of NMFS fish passage criteria ([NMFS 2011a](#)) located at: <http://www.nwr.noaa.gov/publications/hydropower/ferc/fish-passage-design.pdf> NMFS engineering review, if required, shall occur at the conceptual, post-modeling, and final design phases, which is approximated by 30%, 60%, and 90% designs.

All road-stream crossing structures shall simulate stream channel conditions per industry design standards found in any one of the following:

Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings ([USDA-Forest Service 2008](#)) or the most recent version, located at: http://stream.fs.fed.us/fishxing/aop_pdfs.html
Part XII Fish Passage Design and Implementation, Salmonid Stream Habitat Restoration Manual ([California Department of Fish and Game 2009](#)) or the most recent version, located at:
<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=12512>
Water Crossings Design Guidelines ([Barnard et al. 2013](#)) or the most recent version), located at:
<http://wdfw.wa.gov/publications/01501/>

EXAMPLE General road-stream crossing criteria

Span

Span is determined by the crossing width at the proposed streambed grade.

Single span structures will maintain a clear, unobstructed opening above the general scour elevation that is at least as wide as 1.5 times the active channel width.

Multi-span structures will maintain clear, unobstructed openings above the general scour elevation (except for piers or interior bents) that are at least as wide as 2.2 times the active channel width.

Entrenched streams: If a stream is entrenched (entrenchment ratio of less than 1.4), the crossing width will accommodate the floodprone width. Floodprone width is the channel width measured at twice the maximum bankfull depth ([Rosgen 1996](#)).

Minimum structure span is 6ft.

Scour Prism

Designs shall maintain the general scour prism, as a clear, unobstructed opening (*i.e.*, free of any fill, embankment, scour countermeasure, or structural material to include abutments, footings, and culvert inverts). No scour or stream stability countermeasure may be applied above the general scour elevation.

When bridge abutments are set back beyond the applicable criteria span they may be located above the general scour elevation.

Embedment

All culvert footings and inverts shall be placed below the thalweg at a depth of 3 feet, or the Lower Vertical Adjustment Potential (LVAP) line, whichever is deeper.

LVAP, as calculated in *Stream Simulation: An ecological approach to providing passage for aquatic organisms at road crossings* ([USDA-Forest Service 2008](#))

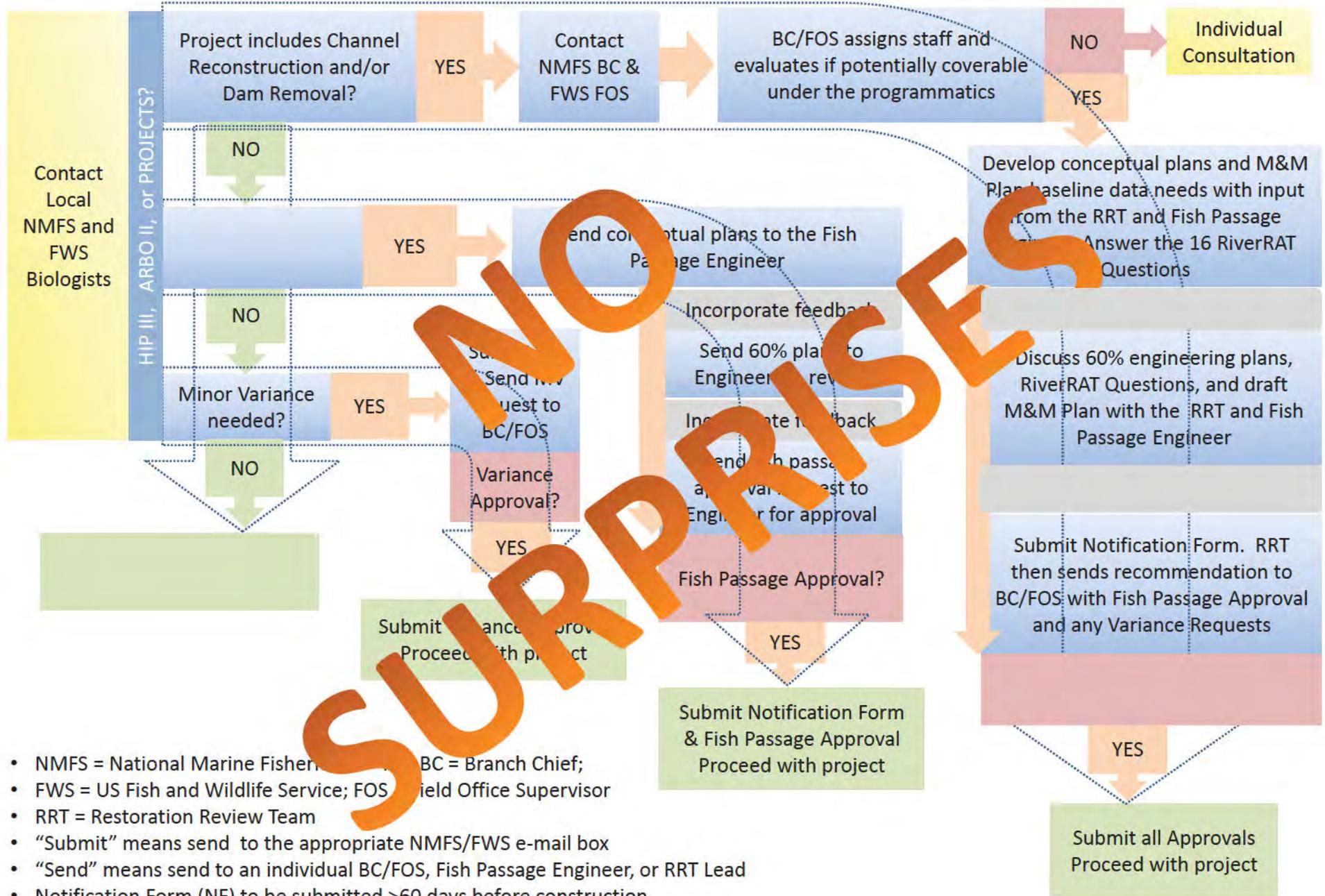
Bridges

Primary bridge structural elements will be concrete, metal, fiberglass, or untreated timber. The use of treated wood for bridge construction or replacement is not allowed under this opinion. Old railroad cars, which are commonly used as bridges, may have treated wood decking. Sample for the presence of treatment chemicals and replace treated elements with untreated wood.

All concrete will be poured in the dry, or within confined waters not connected to surface waters, and will be allowed to cure a minimum of 7 days before contact with surface water as recommended by Washington State Department of Transportation ([2010](#)).

Riprap will not be placed within the bankfull width of the stream. Riprap may only be placed below bankfull height when necessary for protection of abutments and pilings. The amount and placement of riprap will not constrict the bankfull flow. Temporary work bridges will also meet NMFS ([2011a](#)) (or the latest version).

IDEALIZED RESTORATION PROGRAMMATIC REVIEW PROCESS

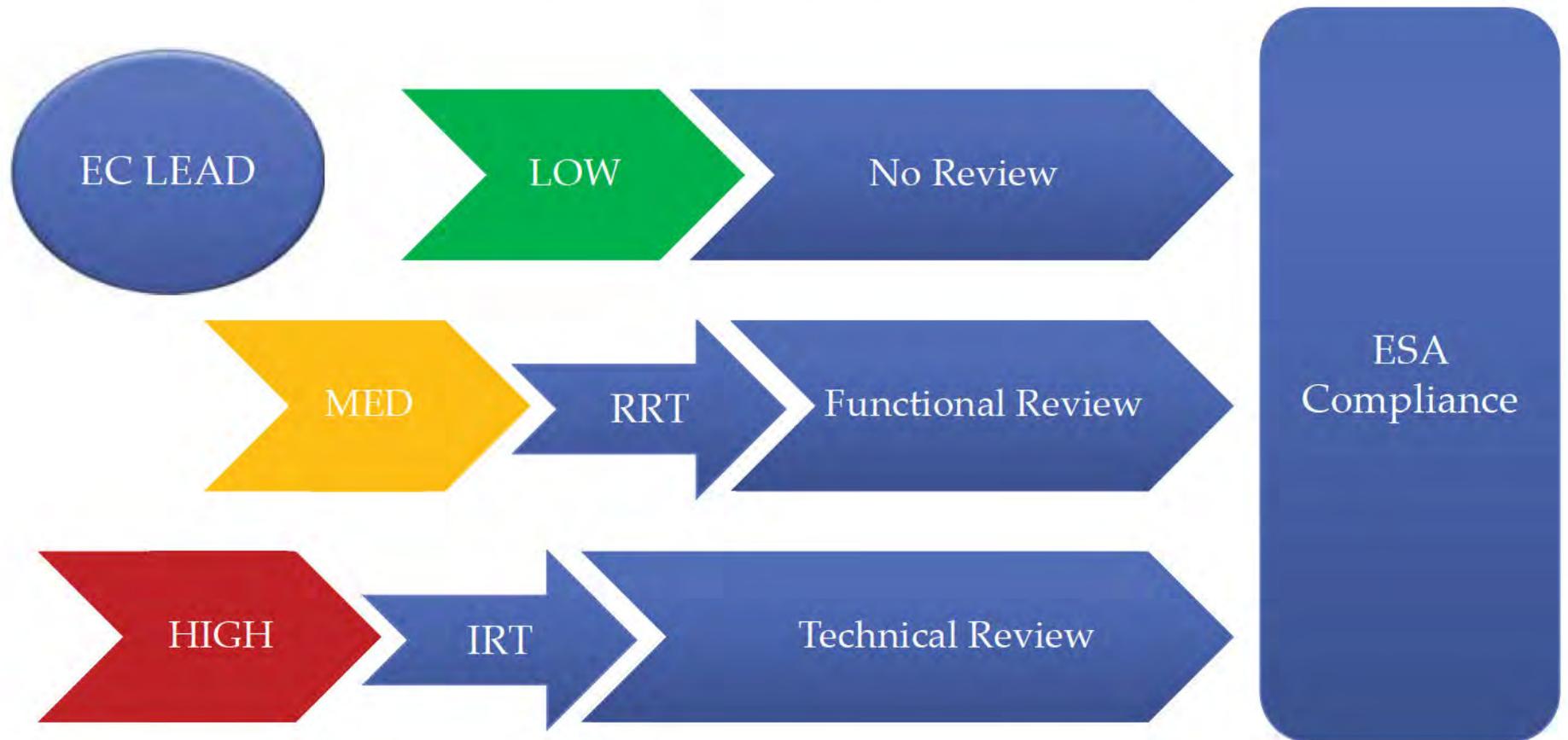


- NMFS = National Marine Fisheries Service; BC = Branch Chief;
- FWS = US Fish and Wildlife Service; FOS = Field Office Supervisor
- RRT = Restoration Review Team
- "Submit" means send to the appropriate NMFS/FWS e-mail box
- "Send" means send to an individual BC/FOS, Fish Passage Engineer, or RRT Lead
- Notification Form (NF) to be submitted >60 days before construction

Restoration Review Teams (RRT)

- A different team for each programmatic
 - HIP III: Dan Gambetta, dagambetta@bpa.gov
 - ARBO II: Scott Peets, speets@fs.fed.us & Scott Lightcap, slightca@blm.gov
 - PROJECTS: Janine Castro, janine_m_castro@fws.gov
- Reviews:
 - Dam removal
 - Channel reconstruction/relocation projects
 - Precedent or policy setting actions, such as application of new technology
- Keeps record of meetings and decisions
- Meets on an as needed basis and annually

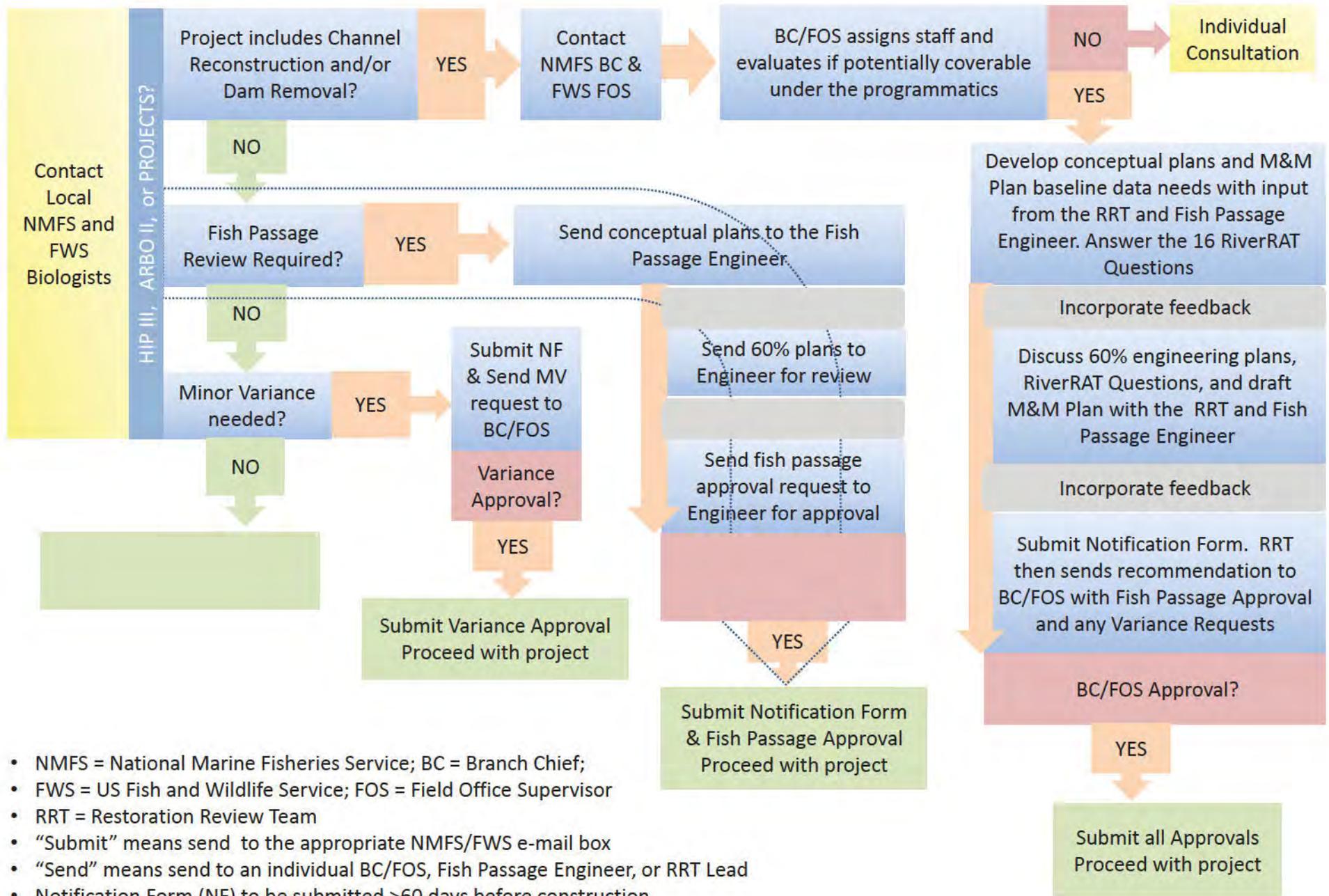
HIP III Restoration Review Team General Process



Fish Passage Approval

- Dewatering construction sites by pumping at a >3 cfs requires fish screen review
- Culverts and bridges that do not meet width standards
- Headcut stabilization and channel spanning non-porous rock structures that create discrete longitudinal drops > 6 inches
- Fish ladders
- Engineered log jams that occupy $>25\%$ of the bankfull area
- Irrigation diversion replacement/relocation
- Fish screen installation/replacement
- Off- and side-channel reconstruction that contain $>20\%$ of the bankfull flow
- Dam removal**
- Channel reconstruction/relocation projects**

IDEALIZED RESTORATION PROGRAMMATIC REVIEW PROCESS



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Minor Variances

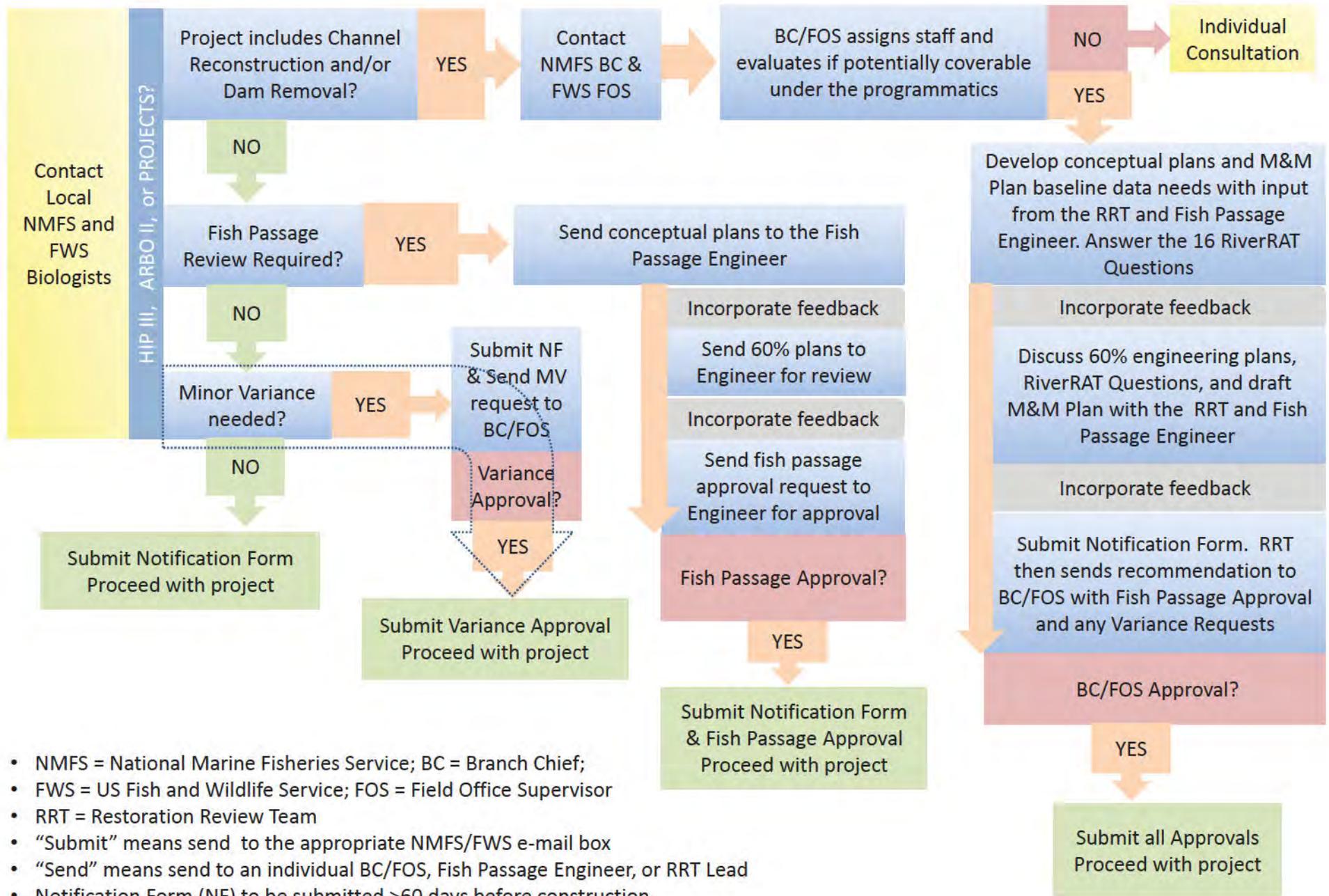
NMFS Branch Chiefs and/or FWS Field Office Supervisors will authorize variance if there is a clear conservation benefit. May be requested as part of the notification process and must:

- a. Cite ARBO II identifying number
- b. Cite the relevant criterion by page number
- c. Define the requested variance
- d. Explain why the variance is necessary
- e. Provide a rationale why the variance will either provide a conservation benefit or, at a minimum, not cause additional adverse effects.
- f. Include as attachments any necessary approvals by state agencies.

**Does not introduce new mechanisms of take or increased take, and it is all context dependent.*

***Requires a biological rationale.*

IDEALIZED RESTORATION PROGRAMMATIC REVIEW PROCESS



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How to use your Action Implementation/Notification Form:

- Project action will determine route
- Assess if you can meet BMP/PDC (fish passage review/variance?)
- Assess your species (special conditions)
- Contact NOAA/USFWS as necessary. *“Consult early, consult often”* ...

Hint: Know what portions of the programmatic apply to your common projects types and species. Bookmark these.

Sequence of Form Submission:

- Submit to appropriate email box, which “invokes” ESA coverage.
 - **NO FORM = NO COVERAGE**
- AIF/PNF – 30 to 60 days before implementation.
- Mailbox will auto-respond w/receipt.
- Start Project, undertake fish salvage, etc.
- Submit Fish Salvage Reporting Form within 60 days of capture/release.
- Submit Action Completion Report within 60 days of work below OHW.

1. Action Notification

***NOTE: UPDATE (5/15/2014) - This form is now available for use with the NMFS PROJECTS Programmatic Biological Opinion, NWR-2013-10221 **AND** can be used with the existing USFWS Oregon Partners/Coastal/Recovery Programmatic BO's (Oregon & Willamette Valley) **AND** the Habitat Restoration Activities Programmatic BO for the Washington Fish & Wildlife Office. Once the USFWS issues the PROJECTS programmatic biological opinion, this form will be used with both PROJECTS BO's.

Date of Request:		BiOp Tracking Numbers:	USFWS (OR): 13420-2010-F-0003 USFWS (WA): 1-3-05-FWF-0167 NMFS: NWR-2013-10221
		Lead Action Agency:	<input type="checkbox"/> USFWS <input type="checkbox"/> NOAA RC
State:	<input type="checkbox"/> Idaho <input type="checkbox"/> Oregon <input type="checkbox"/> Washington		
Nature of habitat:	<input type="checkbox"/> Aquatic <input type="checkbox"/> Upland <input type="checkbox"/> Both		
Type of Request:	<input type="checkbox"/> Approval Required <input type="checkbox"/> No Approval Required		
Statutory Authority (Check all that apply):	<input type="checkbox"/> ESA (USFWS) <input type="checkbox"/> ESA (NMFS) <input type="checkbox"/> EFH (NMFS)		
Action Agency Contact:			
USFWS Database Number:		NOAA RC RCDB Number:	
Project Name (e.g., Hay Cr. culvert replacement):			
6th Field HUC & Name:			
Latitude & Longitude (in signed degrees format: DDD.dddd):	Latitude:	Longitude:	
Proposed Construction Period:	Start Date:	End Date:	
Proposed Length of Channel and/or Riparian Modification (Linear feet):			
Proposed Area of Herbicide Application (Acres):			
Upland acres treated (i.e. Rx burn, mowing, planting, etc.):			

Provided as an example only. Please refer to the appropriate Biological Opinion for applicable forms.

Type of Action: Identify the type of action proposed.

- Fish Passage Restoration (Stream Simulation Culvert and Bridge Projects; Headcut and Grade Stabilization; Fish Ladders; Irrigation Diversion Replacement/Relocation and Screen Installation/Replacement)
- Large Wood (LW), Boulder, and Gravel Placement; Engineered Logjams (ELJ); Constructed Riffles, Constructed Riffles, Porous Boulder Weirs and Vanes; Gravel Augmentation; Tree Removal for LW Projects
- Dam and Legacy Structure Removal
- Channel Reconstruction/Relocation
- Off- and Side-Channel Habitat Restoration
- Streambank Restoration
- Set-Back or Removal of Existing Berms, Dikes, and Levees
- Reduction/Relocation of Recreation Impacts
- Livestock Fencing, Stream Crossings and Off-Channel Livestock Watering
- Piling, Marine Debris, and other Structure Removal
- Shellfish Restoration
- In-channel Nutrient Enhancement
- Road and Trail Erosion Control and Decommissioning
- Juniper Removal
- Riparian Vegetative Planting
- Native Fish Protection
- Beaver Habitat Restoration
- Wetland Restoration
- Tide Gate Removal, Replacement, or Retrofit
- Restore Native Vegetation
- Upland Silvicultural Treatments

USFWS Species/Critical Habitat Present in Action Area: Identify the species and critical habitats present in the action area (N/A means not applicable):

Species	Critical Habitat
Mammals	
<input type="checkbox"/>	<input type="checkbox"/> Canada lynx
<input type="checkbox"/>	N/A Columbian white-tailed deer (Columbia River DPS)
<input type="checkbox"/>	N/A Gray wolf (Coterminous USA DPS – portions of OR and WA, not ID)
<input type="checkbox"/>	N/A Grizzly bear
<input type="checkbox"/>	<input type="checkbox"/> <u>Mazama</u> pocket gopher (Note: Not covered until FWS PROJECTS PBO is issued)
<input type="checkbox"/>	<input type="checkbox"/> North American wolverine
<input type="checkbox"/>	N/A Northern Idaho ground squirrel
<input type="checkbox"/>	N/A Pygmy rabbit (Columbia Basin DPS)
<input type="checkbox"/>	<input type="checkbox"/> Southern Selkirk Mountains woodland caribou

Species	Critical Habitat
Birds	
<input type="checkbox"/>	<input type="checkbox"/> Marbled murrelet
<input type="checkbox"/>	<input type="checkbox"/> Northern spotted owl
<input type="checkbox"/>	<input type="checkbox"/> Streaked horned lark (Not covered until FWS PROJECTS PBO is issued)
<input type="checkbox"/>	<input type="checkbox"/> Western snowy (coastal) plover
Reptiles and Amphibians	
<input type="checkbox"/>	<input type="checkbox"/> Oregon spotted frog (Not covered until FWS PROJECTS PBO is issued)
Fish	
<input type="checkbox"/>	<input type="checkbox"/> Bull trout
<input type="checkbox"/>	N/A Lahontan cutthroat trout
<input type="checkbox"/>	<input type="checkbox"/> Warner sucker
Invertebrates	
<input type="checkbox"/>	<input type="checkbox"/> Fender's blue butterfly
<input type="checkbox"/>	<input type="checkbox"/> Oregon silverspot butterfly
<input type="checkbox"/>	<input type="checkbox"/> Taylor's checkerspot butterfly (Not covered until FWS PROJECTS PBO is issued)
<input type="checkbox"/>	<input type="checkbox"/> Vernal pool fairy shrimp
Species	Critical Habitat
Plants	
<input type="checkbox"/>	N/A Bradshaw's desert parsley
<input type="checkbox"/>	<input type="checkbox"/> Cook's lomatium
<input type="checkbox"/>	N/A Gentner's fritillary
<input type="checkbox"/>	N/A Golden paintbrush
<input type="checkbox"/>	N/A Howell's spectacular thelypody
<input type="checkbox"/>	<input type="checkbox"/> Kincaid's lupine
<input type="checkbox"/>	<input type="checkbox"/> Large-flowered woolly meadowfoam
<input type="checkbox"/>	N/A MacFarlane's four-o'clock
<input type="checkbox"/>	<input type="checkbox"/> Malheur wire-lettuce
<input type="checkbox"/>	N/A Marsh sandwort
<input type="checkbox"/>	N/A Nelson's checker mallow
<input type="checkbox"/>	N/A Spalding's catchfly
<input type="checkbox"/>	N/A Water howellia
<input type="checkbox"/>	N/A Western lily
<input type="checkbox"/>	<input type="checkbox"/> Willamette daisy

Provided as an example only. Please refer to the appropriate Biological Opinion for applicable forms.

NMFS Species/Critical Habitat Present in Action Area: Identify the listed species, critical habitat, and essential fish habitat (EFH) present in the action area (N/A means not applicable):

Species	Critical Habitat	
<input type="checkbox"/>	<input type="checkbox"/>	Lower Columbia River Chinook salmon
<input type="checkbox"/>	<input type="checkbox"/>	Upper Willamette River Chinook salmon
<input type="checkbox"/>	<input type="checkbox"/>	Upper Columbia River spring-run Chinook salmon
<input type="checkbox"/>	<input type="checkbox"/>	Snake River spring/summer-run Chinook salmon
<input type="checkbox"/>	<input type="checkbox"/>	Snake River fall-run Chinook salmon
<input type="checkbox"/>	<input type="checkbox"/>	Puget Sound Chinook salmon
<input type="checkbox"/>	<input type="checkbox"/>	Columbia River chum salmon
<input type="checkbox"/>	<input type="checkbox"/>	Hood Canal summer-run chum salmon
<input type="checkbox"/>	N/A	Lower Columbia River coho salmon
<input type="checkbox"/>	<input type="checkbox"/>	Oregon Coast coho salmon
<input type="checkbox"/>	<input type="checkbox"/>	Southern Oregon/Northern California Coast coho salmon
<input type="checkbox"/>	<input type="checkbox"/>	Lake Ozette sockeye salmon
<input type="checkbox"/>	<input type="checkbox"/>	Snake River sockeye salmon
<input type="checkbox"/>	<input type="checkbox"/>	Lower Columbia River steelhead
<input type="checkbox"/>	<input type="checkbox"/>	Upper Willamette River steelhead
<input type="checkbox"/>	<input type="checkbox"/>	Middle Columbia River steelhead
<input type="checkbox"/>	<input type="checkbox"/>	Upper Columbia River steelhead
<input type="checkbox"/>	<input type="checkbox"/>	Snake River Basin steelhead
<input type="checkbox"/>	N/A	Puget Sound steelhead
<input type="checkbox"/>	<input type="checkbox"/>	Southern DPS eulachon
		<i>EFH Species</i>
<input type="checkbox"/>		Salmon, Chinook
<input type="checkbox"/>		Salmon, Coho
<input type="checkbox"/>		Coastal Pelagics
<input type="checkbox"/>		Groundfish

Terms and Conditions: Check the terms and conditions from the biological opinion that will be included as conditions for any action funded or carried out under this opinion.



Administration

- | | |
|---|---|
| <input type="checkbox"/> USFWS/NOAARC review | <input type="checkbox"/> Site assessment for contaminants |
| <input type="checkbox"/> Restoration Review Team review | <input type="checkbox"/> Funding conditions |
| <input type="checkbox"/> Request for NMFS fish passage review | <input type="checkbox"/> Fish Salvage notice |
| <input type="checkbox"/> Site access | |

General Construction Measures

- | | |
|--|---|
| <input type="checkbox"/> Flagging sensitive areas | <input type="checkbox"/> Temporary erosion controls |
| <input type="checkbox"/> Temporary access roads and paths | <input type="checkbox"/> Fish passage |
| <input type="checkbox"/> In-water work period | <input type="checkbox"/> Work area isolation |
| <input type="checkbox"/> Fish Capture and release | <input type="checkbox"/> Electrofishing |
| <input type="checkbox"/> Construction water | <input type="checkbox"/> Fish screens |
| <input type="checkbox"/> Vehicle staging and use | <input type="checkbox"/> Choice of equipment |
| <input type="checkbox"/> Work from top of bank | <input type="checkbox"/> Stationary power equipment |
| <input type="checkbox"/> Staging, Storage, and Stockpile Areas | <input type="checkbox"/> Site restoration |
| <input type="checkbox"/> Dust Abatement | <input type="checkbox"/> Temporary Stream Crossings |
| <input type="checkbox"/> Surveys | <input type="checkbox"/> Revegetation |

Invasive and non-native plant control

- | | |
|---|--|
| <input type="checkbox"/> Non-herbicide methods | <input type="checkbox"/> Power equipment |
| <input type="checkbox"/> Required herbicide buffer distances | <input type="checkbox"/> Herbicide applicator qualifications |
| <input type="checkbox"/> Herbicide transportation and safety plan | <input type="checkbox"/> Approved herbicides |
| <input type="checkbox"/> Approved herbicide adjuvants | <input type="checkbox"/> Approved herbicide carriers |
| <input type="checkbox"/> Approved dye | <input type="checkbox"/> Herbicide mixing |
| <input type="checkbox"/> Approved herbicide application rates | <input type="checkbox"/> Minimize herbicide drift and leaching |
| <input type="checkbox"/> Approved application methods | |

Types of Restoration Actions

Fish Passage Restoration

- | | |
|---|--|
| <input type="checkbox"/> Stream Crossing | <input type="checkbox"/> Fish Ladder |
| <input type="checkbox"/> Stabilize Headcut | <input type="checkbox"/> Screen Installation/Replacement |
| <input type="checkbox"/> Irrigation Diversion | <input type="checkbox"/> Grade Stabilization |

Large Wood, Boulder, and Gravel Placement

- | | |
|---|--|
| <input type="checkbox"/> Large Wood or Boulders | <input type="checkbox"/> Engineered Logjams |
| <input type="checkbox"/> Constructed Riffles | <input type="checkbox"/> Porous Boulder Structures and Vanes |
| <input type="checkbox"/> Gravel Augmentation | <input type="checkbox"/> Tree Removal for LW Projects |

Dam and Legacy Structure Removal

- | | |
|--------------------------------------|---|
| <input type="checkbox"/> Dam Removal | <input type="checkbox"/> Legacy Structure Removal |
|--------------------------------------|---|

Channel Reconstruction/Relocation

- | | |
|---|--|
| <input type="checkbox"/> Design Guidance | <input type="checkbox"/> Project documentation |
| <input type="checkbox"/> Monitoring and adaptive plan | |

Off- and Side Channel Habitat Restoration

- | | |
|---|--|
| <input type="checkbox"/> Review and approve | <input type="checkbox"/> Data requirements |
| <input type="checkbox"/> Allowable excavation | |

Provided as an example only. Please refer to the appropriate Biological Opinion for applicable forms.

Streambank Restoration

- | | |
|--|--|
| <input type="checkbox"/> Streambank shaping | <input type="checkbox"/> Soil reinforcement |
| <input type="checkbox"/> Large wood | <input type="checkbox"/> Use of rock in streambank restoration |
| <input type="checkbox"/> Planting or installing vegetation | <input type="checkbox"/> Fertilizer |
| <input type="checkbox"/> Fencing | |

Set-Back or Removal of Existing Berms, Dikes, and Levees

- | | |
|--|--|
| <input type="checkbox"/> Floodplains and Freshwater Deltas | <input type="checkbox"/> Estuary Restoration |
|--|--|

Livestock Stream Crossings and Off-Channel Livestock Watering Facilities

- | | |
|---|--|
| <input type="checkbox"/> Livestock stream crossings | <input type="checkbox"/> Off-channel watering facilities |
| <input type="checkbox"/> Livestock Fencing | |

Road and Trail Erosion Control and Decommissioning

- | | |
|---|--|
| <input type="checkbox"/> Road Decommissioning/
Stormproofing | <input type="checkbox"/> Road Relocation |
|---|--|

Juniper Tree Removal

- | | |
|---|--|
| <input type="checkbox"/> Approved juniper tree removal
methods | <input type="checkbox"/> Management of juniper slash |
|---|--|

Beaver Habitat Restoration

- | | |
|--|--|
| <input type="checkbox"/> In-channel structures | <input type="checkbox"/> Habitat Restoration |
|--|--|

Wetland Restoration (type)

- | | |
|--|---------------------------------|
| <input type="checkbox"/> Riparian | <input type="checkbox"/> Bogs |
| <input type="checkbox"/> Vernal pools | <input type="checkbox"/> Swamps |
| <input type="checkbox"/> Wetland meadows | <input type="checkbox"/> Ponds |

Tide/Flood Gate Removal, Replacement, or Retrofit

- | | |
|--|--|
| <input type="checkbox"/> Removal | <input type="checkbox"/> Replacement |
| <input type="checkbox"/> Retrofit | <input type="checkbox"/> Dike breach or setback |
| <input type="checkbox"/> Culvert or bridge | <input type="checkbox"/> Monitoring/Adaptive Management Plan |
| <input type="checkbox"/> Design Approved by NMFS | |

Restore Native Vegetation

- | | |
|---|---|
| <input type="checkbox"/> Site Preparation | <input type="checkbox"/> Planting and Maintaining Vegetation |
| <input type="checkbox"/> Prescribed Fire | <input type="checkbox"/> Control of invasive species (ie. mechanical control
or herbicide application) |

Upland Silvicultural Treatments

- | | |
|---|--|
| <input type="checkbox"/> Forest thinning | <input type="checkbox"/> Limb pruning |
| <input type="checkbox"/> Planting of native species | <input type="checkbox"/> Control of invasive species |

Provided as an example only. Please refer to the appropriate Biological Opinion for applicable forms.

2. Action Completion Report

*****NOTE: UPDATE (5/15/2014)** - This form is now available for use with the NMFS PROJECTS Programmatic Biological Opinion, NWR-2013-10221 **AND** can be used with the existing USFWS Oregon Partners/Coastal/Recovery Programmatic BO's (Oregon & Willamette Valley) **AND** the Habitat Restoration Activities Programmatic BO for the Washington Fish & Wildlife Office. Once the USFWS issues the PROJECTS programmatic biological opinion, this form will be used with both PROJECTS BO's.

A) AQUATIC (INSTREAM-RIPARIAN) PROJECT ACTIVITIES: Within 60 days of completing all work below ordinary high water (OHW) as part of an action completed under PROJECTS, submit the completed Action Completion Form with the following information to NMFS at usfws.biop.nwr@noaa.gov (USFWS projects) or noaarc.biop.nwr@noaa.gov (NOAARC projects), and/or to USFWS at projects@fws.gov (USFWS & NOAARC).

Actual Start and End Dates for the Completion of In-water Work:	Start: [REDACTED]	End: [REDACTED]
Actual Linear-feet of Riparian and/or Channel Modification:	[REDACTED]	
Actual Acreage of Herbicide Treatment	[REDACTED]	
Turbidity Monitoring/Sampling Completed	<input type="checkbox"/> Yes (include details below)	<input type="checkbox"/> No

Please include the following:

1. Photos of habitat conditions before, during, and after action completion.
2. A summary of the results of pollution and erosion control inspections, including any erosion control failure, contaminant release, and correction effort.
[REDACTED]
3. Records of turbidity monitoring (visual or by turbidimeter) including dates, times and location of monitoring. Include any exceedances and steps taken to reduce turbidity observed.
[REDACTED]

Provided as an example only. Please refer to the appropriate Biological Opinion for applicable forms.

3. Fish Salvage Reporting Form

*****NOTE: UPDATE (5/15/2014)** - This form is now available for use with the NMFS PROJECTS Programmatic Biological Opinion, NWR-2013-10221 **AND** can be used with the existing USFWS Oregon Partners/Coastal/Recovery Programmatic BO's (Oregon & Willamette Valley) **AND** the Habitat Restoration Activities Programmatic BO for the Washington Fish & Wildlife Office. Once the USFWS issues the PROJECTS programmatic biological opinion, this form will be used with both PROJECTS BO's.

If applicable: Within 60 days of completing a capture and release as part of an action completed under PROJECTS, the applicant or must submit a complete Salvage Reporting Form, with the following information to NMFS at usfws.bio.nwr@noaa.gov (USFWS projects) or noarc.biop.nwr@noaa.gov (NOAARC projects), or USFWS at projects@fws.gov (USFWS & NOAARC projects).



Date(s) of Fish Salvage Operation(s):

Supervisory Fish Biologist:

Address:

Telephone Number:

Describe methods that were used to isolate the work area and remove fish



Provided as an example only. Please refer to the appropriate Biological Opinion for applicable forms.

+ Fish Salvage Data

Water Temperature:

Air Temperature:

Time of Day:

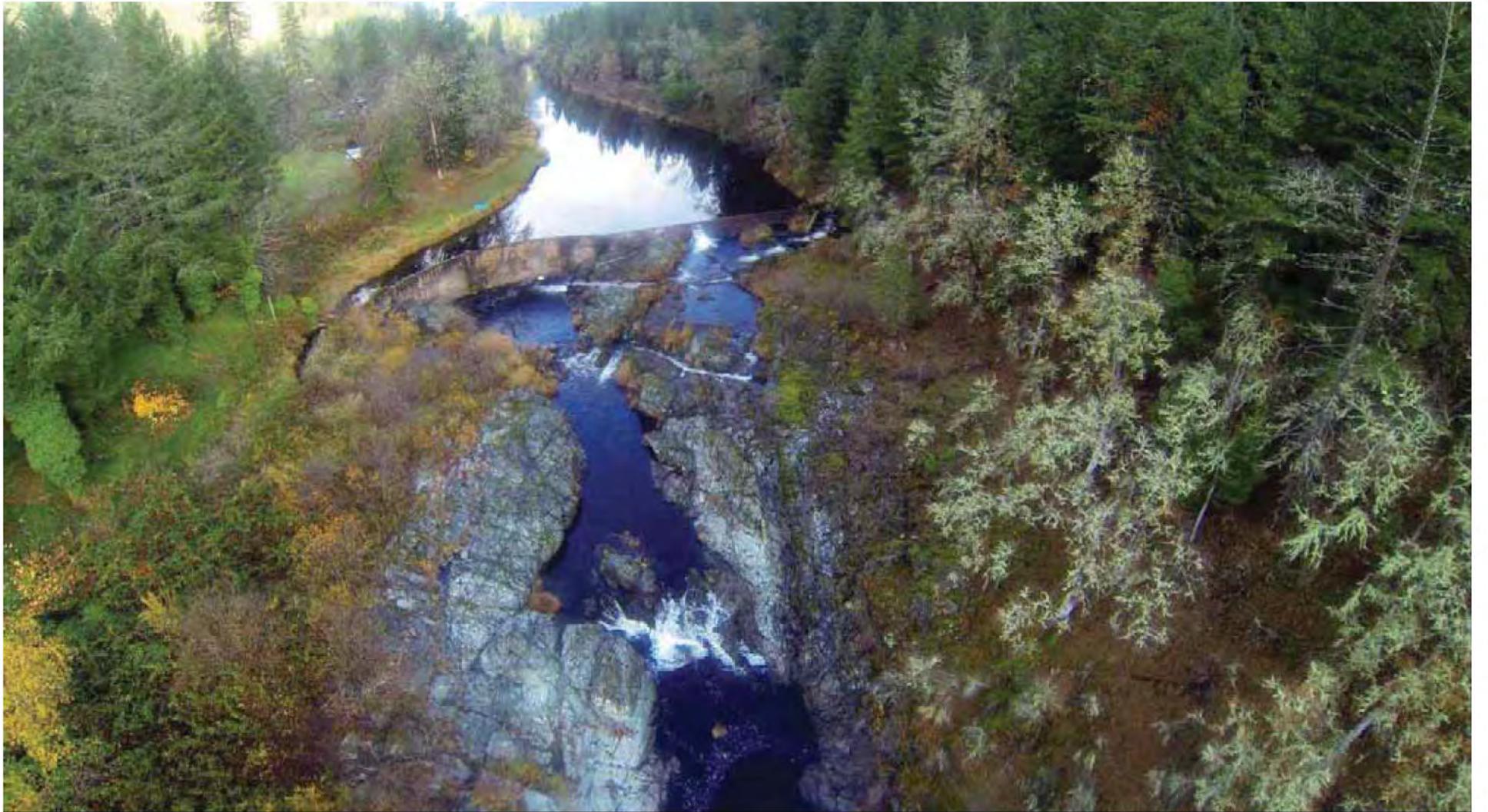
ESA-Listed Species	Number Handled		Number Injured		Number Killed	
	Juvenile	Adult	Juvenile	Adult	Juvenile	Adult
Lower Columbia River Chinook salmon	<input type="text"/>					
Upper Willamette River Chinook salmon	<input type="text"/>					
Upper Columbia R. spring-run Chinook salmon	<input type="text"/>					
Snake River spring/summer-run Chinook salmon	<input type="text"/>					
Snake River fall-run Chinook salmon	<input type="text"/>					
Puget Sound Chinook salmon	<input type="text"/>					
Lake Ozette sockeye salmon	<input type="text"/>					
Columbia River chum salmon	<input type="text"/>					
Lower Columbia River coho salmon	<input type="text"/>					
Oregon Coast coho salmon	<input type="text"/>					
S. Oregon/N. California Coasts coho salmon	<input type="text"/>					
Snake River sockeye salmon	<input type="text"/>					
Lower Columbia River steelhead	<input type="text"/>					
Upper Willamette River steelhead	<input type="text"/>					
Middle Columbia River steelhead	<input type="text"/>					
Upper Columbia River steelhead	<input type="text"/>					
Snake River Basin steelhead	<input type="text"/>					
Eulachon	<input type="text"/>					
Bull trout (FWS)	<input type="text"/>					
Lahontan cutthroat trout (FWS)	<input type="text"/>					
Warner sucker (FWS)	<input type="text"/>					

Provided as an example only. Please refer to the appropriate Biological Opinion for applicable forms.



OREGON
DEPARTMENT OF
FISH AND WILDLIFE
Fielder Dam
Evans Creek, Oregon

Case Study - Use of a programmatic on an actual project that is currently in progress...

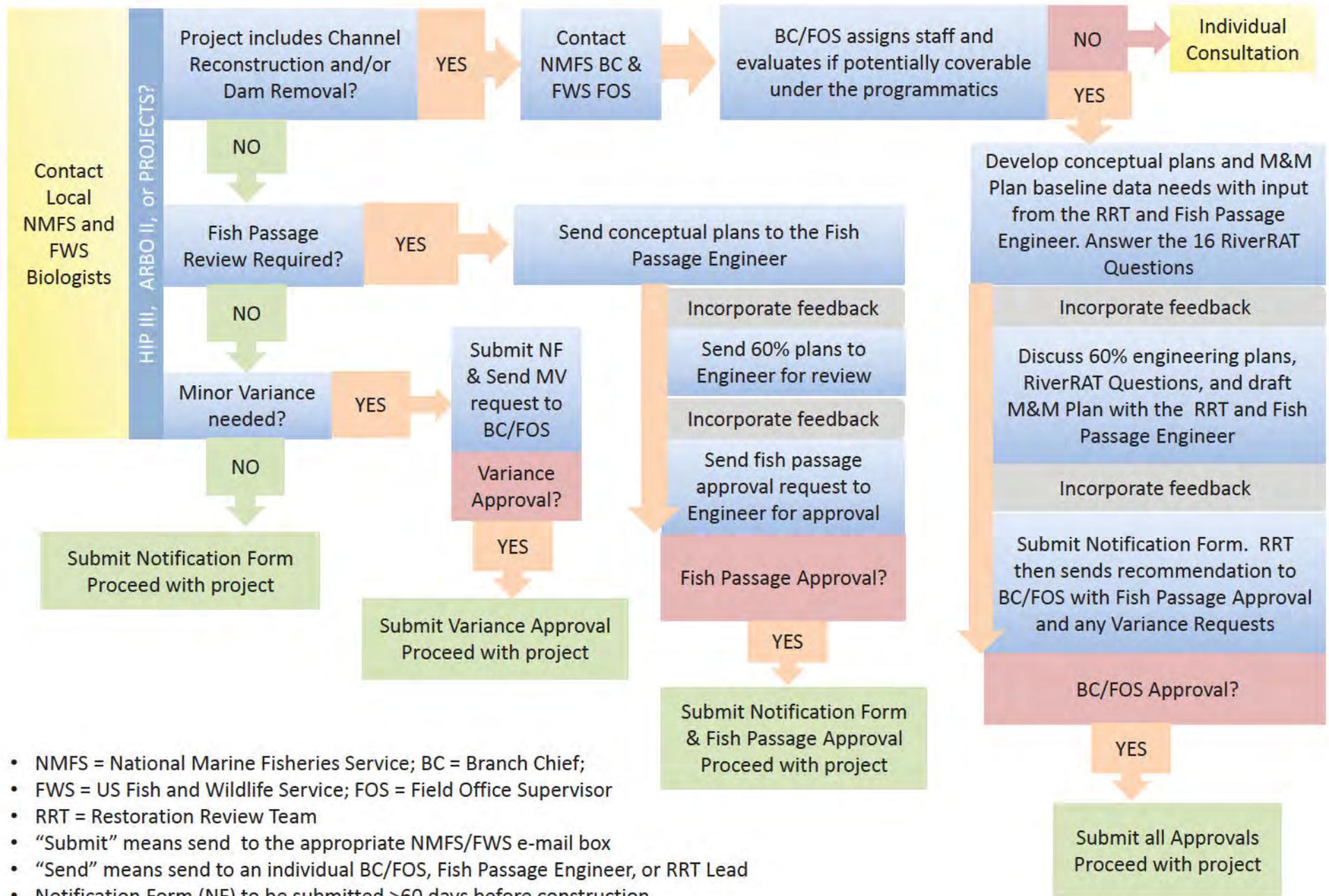




RIVER
DESIGN
GROUP
Wimer Dam
Evans Creek, Oregon



IDEALIZED RESTORATION PROGRAMMATIC REVIEW PROCESS



- NMFS = National Marine Fisheries Service; BC = Branch Chief;
- FWS = US Fish and Wildlife Service; FOS = Field Office Supervisor
- RRT = Restoration Review Team
- “Submit” means send to the appropriate NMFS/FWS e-mail box
- “Send” means send to an individual BC/FOS, Fish Passage Engineer, or RRT Lead
- Notification Form (NF) to be submitted >60 days before construction

Website and Mailboxes:

For the most up-to-date BiOp versions:

www.fws.gov/oregonfwo/ToolsForLandowners/OtherResources.asp

HIP III:

FWS: hip3@fws.gov

NMFS: hip.nwr@noaa.gov

BPA: HIP_Reporting@bpa.gov

ARBO II:

FWS: arbo@fws.gov

NMFS: ARBO.nwr@noaa.gov

PROJECTS:

FWS: projects@fws.gov

NMFS: usfws.biop.nwr@noaa.gov **OR** noaarc.biop.nwr@noaa.gov

Auto-response example: “HIP3 Item Received”

Points of Contact:

HIP III:

FWS: Chris Allen, chris_allen@fws.gov

NMFS: Nancy Munn, nancy.munn@noaa.gov

Fish Passage: Jeff Brown, jeffrey.brown@noaa.gov

RRT: Dan Gambetta, dagambetta@bpa.gov

ARBO II:

FWS: Paul Bridges, paul_bridges@fws.gov

NMFS: Ken Phippen, ken.phippen@noaa.gov

Fish Passage: Aaron Beavers, aaron.beavers@noaa.gov

RRT, FS: Scott Peets, speets@fs.fed.us

RRT, BLM: Scott Lightcap, slightca@blm.gov

PROJECTS:

FWS: Ann Gray, ann_e_gray@fws.gov

NMFS: Ken Phippen, ken.phippen@noaa.gov

Fish Passage: Aaron Beavers, aaron.beavers@noaa.gov

RRT: Janine Castro, janine_m_castro@fws.gov

Washington Fish and Wildlife Office (WFWO)

Lacey (State Office) – Bridget Moran, Division Manager

Central Washington – Jessica Gonzales, FO Supervisor

Eastern Washington – Russ MacRae, FO Supervisor

**Michelle Eames –technical POC for WFWO for HIP III consultation

Oregon Fish and Wildlife Office (OFWO)

Portland (State Office) – ES Division Manager (Jeff Dillon)

Bend FO – Nancy Gilbert, FO Supervisor

La Grande FO – Gary Miller, FO Supervisor

Roseburg FO – Jim Thrailkill, FO Supervisor

Newport FO – Laura Todd, FO Supervisor

** Chris Allen –technical POC for OFWO for HIP III consultation

Idaho Fish and Wildlife Office (IFWO)

Boise (State Office) – Russ Holder, Assistant State Supervisor

Eastern Idaho FO – David Kampwerth, Field Office Supervisor

Northern Idaho FO – Ben Conard, Field Office Supervisor

**Pam Druliner – technical POC for IFWO for HIP III consultation

Montana Fish and Wildlife Office (MFWO)

Helena (State Office) – Jodi Bush, State Supervisor; Brent Esmoil, Assistant State Supervisor

Kalispell – Tim Bodurtha, Field Office Supervisor

http://www.westcoast.fisheries.noaa.gov/about_us/index.html

← → ↻ 🏠 www.westcoast.fisheries.noaa.gov/about_us/index.html ☆ 📧 📅 13h 📄 📍 📧 🌐 IQ ☰

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WEST COAST REGION

NOAA Fisheries West Coast Region

NOAA Fisheries is dedicated to protecting and preserving our nation's living marine resources through scientific research, fisheries management, enforcement, and habitat conservation. The West Coast Region of NOAA Fisheries administers fisheries programs along the coasts of Washington, Oregon and California; and in the vast inland habitats of Washington, Oregon, California and Idaho. We work to conserve, protect, and manage salmon and marine mammals under the Endangered Species Act and Marine Mammal Protection Act, and sustainably manage West Coast fisheries as guided by the Magnuson-Stevens Fisheries Conservation Act. To achieve this mission and advance sound stewardship of these resources, we work closely with tribes, local, state and federal agencies, our stakeholders, and partners to find science-based solutions to complex ecological issues.

Regional Leadership	Oregon & Washington Coastal Area Office
Sustainable Fisheries Division	Interior Columbia River Basin Area Office
Protected Resources Division	California Central Valley Area Office
Operations, Management & Information Services	California Coastal Area Office
Communications & External Affairs Office	Locations & Contact Information

November 18, 2019

State Water Resources Control Board
Division of Water Quality
Attention: Jessica Nadolski
P. O. Box 100
Sacramento, CA 95812-2000

Subject: Comment Letter - Proposed Statewide Restoration General Order

The State Water Resources Control Board has noticed preparation and California Environmental Quality Act Scoping meetings to assess the potential environmental effects of a proposed project, Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for implementing Large Habitat Restoration Projects Statewide (General Order). The General Order intends to improve permitting efficiency for specific types of restoration activities, assumed to be environmentally beneficial, statewide.

The notice offers ten types of aquatic and riparian restoration projects suggested for adoption:

- 1 Stream Crossings and Fish Passage Improvements
- 2 Small Dam, Tide Gate, Flood Gate and Legacy Structure Removal
- 3 Bioengineered Bank Stabilization.
- 4 Off-Channel/Side-Channel Habitat Restoration and Enhancement
- 5 Water Conservation Projects
- 6 Floodplain Restoration
- 7 Piling and other In-Water Structure Removal
- 8 Non-Native Invasive Species Removal and Native Plant Revegetation
- 9 Tidal, Subtidal, and Freshwater Wetland Establishment, Restoration and Enhancement
- 10 Stream and Riparian Habitat Establishment, Restoration and Enhancement

Assuming that all ten of the projects types being considered for this General Order will have a net environmental benefit is wrong. One type in particular, Number 5 - Water Conservation, all too often is undertaken to improve the water rights holder's capability to divert even more water than would occur under baseline (existing licensed) conditions. Therefore the scope of the proposed action should eliminate Number 5 - *Water Conservation Projects - to reduce low-flow stream diversions, such as off-stream storage tanks and ponds and necessary off-channel infrastructure.*

Assuming that all restoration project proponents will be seeking real environmental benefit is also wrong. Many project proponents are seeking a mitigation project for some other environmentally damaging project they are undertaking in which regulators are requiring them to provide mitigation for unavoidable adverse impacts. Therefore the General Order should exclude those applicants that are seeking a restoration project in

any connection with a requirement for a water supply development project requiring any action on the part of the State Water Resources Control Board's Division of Water Rights. Foremost of concern would be those applicants offering a Voluntary Settlement Agreement in lieu of water for a water rights settlement agreement. While these two exclusions, one a type of restoration project and the other a category of applicants, may seem extreme, all other types of restoration projects and project proponents can be considered for a General Order making more efficient certification and permitting. This comment does not preclude those project types from being pursued, it simply requires of them a more careful review.

Making certification and permitting easier, wildly inclusive, and allowing sloppier environmental verification and disclosure of environmental impacts just opens the door to even more costly and ineffective aquatic and riparian restoration projects. Are there examples? Yes. Some of the huge blunders tax payers have been billed for in the past include 1) the Tehama Colusa Canal Fish Facility, 2) the Montezuma Slough Control Structure, and 3) CALFED. All three examples were attempts to do the right thing but sloppy planning and/or political interference resulted in the accomplishments being only a disastrous spending program. While the scope of investment dollars in these three blunders was large, the scope of restoration projects to be considered under the General Order could likewise be cumulatively large. The desire of developers to reduce costs and maximize profits drives them to be cheap and offer a spending program of fixed cost in lieu of accountability to keep the ecosystem healthy.

Progressive government employing reasonable and protective review and permitting of projects that overall are truly beneficial is to be encouraged. However, without reasonable restraints and exceptions some parties will use the open door to steal from the common.

My experiences in working professionally as a biologist on water resource project planning in northern California for thirty-four years (1974 - 2008) and observations both during that work period and in retirement since 2008, has destroyed my confidence in the balancing of protection of beneficial uses that has taken place for decades and continues. The decimation of most of the State's fisheries, especially the Central Valley's riverine and estuarine fisheries, has been monumental. Recent developments at the Federal government level convincingly demonstrate that science is for sale. These experiences compel me to offer these views.

Sincerely,

Richard Morat
2821 Berkshire Way
Sacramento, CA 95864



NCWA
Northern California Water Association

*To advance the economic, social and environmental sustainability of Northern California
by enhancing and preserving the water rights, supplies and water quality.*

November 22, 2019

State Water Resources Control Board
Division of Water Quality
Attention: Jessica Nadolski
P.O. Box 100, Sacramento, CA 95812-2000

RE: Comments on Notice of Preparation and California Environmental Quality Act
Scoping Meeting and General Order for Clean Water Act Section 401 Water Quality
Certification and Waste Discharge Requirements for Implementation of Habitat
Restoration Projects Statewide

Dear Ms. Nadolski:

The Northern California Water Association strongly supports State Water Board action to create a more efficient permitting mechanism for habitat restoration. As the State Water Board knows, the water suppliers and landowners in the Sacramento River Basin are working hard on various restoration projects for salmon, birds and other species. A more efficient permitting process will help advance more on-the-ground work for fish and wildlife and thus get these environmentally beneficial projects completed more quickly. We encourage a broad environmental analysis, so the permit can comprehensively cover a wide-array of essential restoration projects throughout the Sacramento River Basin and throughout the state.

Please call us if you have any questions or if you would like to hear more about these various fish and wildlife programs.

Sincerely yours,

David J. Guy
President



November 22, 2019

State Water Resources Control Board
Division of Water Quality
Attention: Jessica Nadolski
P.O. Box 100, Sacramento, CA 95812-2000
jessica.nadolski@waterboards.ca.gov

Re: Scoping comments – Proposed Statewide Restoration General Order

Dear Ms. Nadolski:

The following comments are submitted on behalf of Trout Unlimited (TU), the nation's oldest and largest conservation organization dedicated to restoring and enhancing our coldwater fisheries and the habitat that supports them. TU currently has 15 full-time staff in California, eight of whom are dedicated primarily to developing and implementing on-the-ground projects to restore habitat for threatened and endangered trout and salmon populations. In the last two decades, we have completed over 100 individual restoration projects. Our North Coast Coho Program alone has installed more than 2100 individual log structures in 120 miles of stream, removed 12 instream migration barriers, and prevented over half a million cubic yards of sediment from entering critical salmon streams. Our California Water Project has, in cooperation with our various partners, implemented over two dozen projects utilizing seasonal storage and forbearance of diversion, direct release of flow, rainwater harvesting, and other methods to enhance streamflow for the benefit of native salmonids. This collective body of work has given us considerable experience with the permitting of habitat restoration projects, including the potential impacts of those projects and the measures designed to control them. Based on that experience, we offer the following scoping comments on the proposed order.

General

As a general comment, we strongly support this effort to develop a statewide general order for large habitat restoration projects. Habitat restoration is a critical component of efforts to recover threatened and endangered fish and wildlife populations statewide. Many of these species, such as coho salmon, are at risk of imminent extinction. In order to prevent extirpation of these species, it will be necessary to implement restoration at a pace and scale commensurate to the scope of the various threats to their habitat. In our experience, environmental permitting – despite the best intentions and efforts of staff for various agencies – is often a limiting factor on both the size and implementation timeline of restoration projects. While we recognize the need to ensure that such projects comply with applicable laws, and to minimize any negative impacts, we also believe that as practitioners and regulators have gained experience with common restoration methods and project types in recent years, and have developed practices to anticipate and control their likely impacts, opportunities have emerged to decrease the time and expense needed to permit restoration measures while maintaining environmental protectiveness. The existing general order for certification of small habitat restoration projects is a successful example of this, and we think the proposed general order covering larger habitat

projects could significantly increase the pace and scale at which restoration measures can be completed on the ground. This would have substantial benefits for the recovery of threatened and endangered species.

Project size

One approach that we hope will not be utilized in developing the proposed order is placing generic limits on the size of projects eligible for coverage. As you know, the existing small habitat order is limited to projects that disturb no more than 500 linear feet of stream. In our experience, this provision has frequently limited the size of individual projects, and therefore the scope of restoration we are able to implement in a given construction season. Again, we recognize the need to control project impacts, and understand the appeal of using size limits as an easily-applied surrogate for impacts such as sediment discharge. However, given the effectiveness of standardized best management practices, we find that in most cases the 500-foot limit is not a good predictor of impacts, and can cite numerous examples of projects that could have been significantly larger without posing a substantial threat to water quality. We hope that in developing the new general order, the Board will avoid the use of categorical size limits as a means of limiting impacts, in favor of more effective requirements that do not needlessly limit the scope of needed restoration.

Project types

The list of ten project types to be covered by the general order appears to cover all of the common types of riparian habitat restoration projects. We support this broad approach, which will tend to maximize the scope of projects that can potentially be covered by the order, which will in turn maximize the benefits to species recovery. We offer the following comments on specific project types.

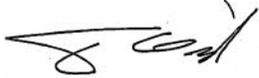
First, we note the list does not specifically identify large woody debris (LWD) projects, one of the most common and effective types of projects to create instream habitat for rearing salmonids and other aquatic species. Our understanding is that LWD projects are intended to be covered by the proposed order, and specifically are included within project type 10, Stream and Riparian Habitat Establishment, Restoration, and Enhancement. Given the increasing interest in implementing LWD projects at a larger scale where opportunities exist, we would like to ensure this project type is made eligible for coverage in the proposed order.

Second, we are glad to see that water conservation and streamflow enhancement projects are included in the list as well. In addition to the off-channel storage projects specifically identified, we propose adding another project type we have had considerable success with in recent years: direct flow releases. These projects involve releasing flow directly to stream channels to augment dry season baseflow in the late summer and early fall months. Two leading examples of this have been the Camp Meeker and Gallo Glass projects in tributaries of the Russian River. The former involved the release of flow from an existing on-stream reservoir on Porter Creek, while the latter involved the release of flow into Dutch Bill Creek from a water pipeline that supplies several local resort facilities. These projects were instigated by the Coho Partnership (of which TU is a member) during the recent drought in cooperation with the North Coast and State Water Boards and the Department of Fish and Wildlife. Both projects included monitoring requirements and other measures to address potential water quality concerns, and monitoring results demonstrate that both projects produced significant streamflow benefits and improved water quality. Additional flow release projects are now in various stages of development.

Given the proven ability of this project type to deliver habitat benefits while protecting water quality, we would encourage the Board to add it to the list of projects eligible for coverage under the proposed order.

Thank you for the opportunity to provide scoping comments regarding this proposed order. Again, we strongly support this effort by the Board, and we look forward to commenting on subsequent stages of the EIR process.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Clifford". The signature is stylized and cursive.

Matt Clifford
California Water Project Attorney



To: State Water Resources Control Board Division of Water Quality
P.O. Box 100, Sacramento, CA 95812-2000
Attention: Jessica Nadolski

Re: Comment Letter – Proposed Statewide Restoration General Order

The Pacific Coast Fish, Wildlife and Wetlands Restoration Association is a nonprofit organization specifically engaged in implementing “on the ground” habitat protection and improvement projects since 1991. Our efforts on the Northcoast region of California over the past couple decades has resulted in the completion of at least a couple hundred projects providing meaningful habitat improvement for native fish and wildlife across a broad swath of both public and private lands. (see www.pcfwwra.org)

At times obtaining 401 Water Quality Certification has been one of the major hurdles to actually being able to implement projects that improve water quality for beneficial uses. The majority of the projects we have completed have been provided CEQA coverage and other permitting through the CA Department of Fish & Wildlife’s *programmatic permitting* for their Fisheries Restoration Grants Program. Even this usually successful streamlining effort of the FRGP *programmatic permitting* has been held up through over half of the limited allowable construction season (June 15-Oct 31) waiting for an annual 401 WQC to be completed. The annual WQC process has created significant projects delays and unanticipated associated costs that at times have resulted in projects not being able to be completed.

Many of the projects we’ve done have simply not fit within the SWRCB’s General Order exemption for small scale restoration projects. We strongly encourage the State Water Resources Control Board to adopt the following: ORDER FOR CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND WASTE DISCHARGE REQUIREMENTS FOR IMPLEMENTATION OF LARGE HABITAT RESTORATION PROJECTS STATEWIDE

We also request specifically that the CDFW’s Fisheries Restoration Grant Program annual 401 WQC be included as covered by this General Order.

If you have any questions please feel free to contact me.

Mitch Farro
Projects Manager, PCFWWRA
(707) 839-5664 or mitch@pcfwwra.org



Trinity River Restoration Program

P.O. Box 1300, 1313 South Main Street, Weaverville, California 96093
Telephone: 530-623-1800, Fax: 530-623-5944

NOV 21 2019

VIA ELECTRONIC MAIL ONLY

Ms. Jessica Nadolski
State Water Resources Control Board

Subject: Support for a General Order to Facilitate Authorization of Large Habitat
Restoration Projects

Dear Ms. Nadolski,

Trinity River Restoration Program (TRRP) staff, who work to implement a restoration strategy to reestablish river function, and subsequently the Trinity River fishery in Northern California, stand firmly with the State Water Board to support your proposed efforts to streamline the permitting process for environmentally beneficial “Large Habitat” restoration activities.

As TRRP scientists work to forestall the impacts of riverine habitat loss, and to offset climate change and its cascading environmental impacts, we need every tool possible to aid large scale restoration project implementation. We need beneficial environmental effects, now.

Development of the State Water Board’s proposed Environmental Impact Report to evaluate the impacts of a General Order that supports large scale restoration projects, is a first step in meeting California legal requirements. We know that the State Water Board’s General Water Quality Certification for small habitat restoration projects has helped get small projects on the ground faster and with less regulatory expenses than would have otherwise been possible. We support your proposed increased scope of environmental coverage to authorize larger projects as well as the list of types of restoration projects that you include.

Habitat restoration, including large projects and integrated ecosystem efforts, is needed to counteract the tremendous scale of human impacts on every ecosystem. Large projects, which assumedly have greater temporary implementation impacts, also provide increased restoration benefits that are needed to restore functional habitats in a time-frame that allows use by dwindling and at risk species.

Our staff have been working with the North Coast Regional Water Quality Control Board as our CEQA Lead in restoration of the Trinity River. As a partner in this effort, we have worked to ensure restoration with no net loss of riparian vegetation, however, we also note the importance of non-vegetated habitat and floodplains along rivers. Consequently, we will be especially interested in your impact analyses for river restoration on hydrology and water quality.

Trinity Management Council

Don Bader, Bureau of Reclamation – Justin Ly, Chair, National Marine Fisheries Service –
Terri Simon-Jackson, USDA Forest Service – Mike Orcutt, Hoopa Valley Tribe – Dave Hillemeier, Yurok Tribe – Keith Groves, Trinity County –
Teresa Connor, California Department of Water Resources – Dan Everson, Vice Chair, US Fish & Wildlife Service –
Mike Dixon, TRRP Executive Director

Ms. Jessica Nadolski

We would appreciate the opportunity to assist in your analyses or to support your analyses by providing rehabilitation sites for monitoring.

Please contact Brandt Gutermuth (fgutermuth@usbr.gov 530.623.1806) of our office with any support needs that you might have in this endeavor. To the extent we can, we will assist.

Sincerely,



Mike Dixon
Executive Director

cc: Gil Falcone
North Coast Regional Water Quality Control Board

Final Appendix C

Existing Programmatic Permits and Processes for Restoration Activities

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER PROGRAM ENVIRONMENTAL IMPACT REPORT
 APPENDIX C – EXISTING PROGRAMMATIC PERMITS AND PROCESSES FOR RESTORATION ACTIVITIES

**Table C-1
 Existing Programmatic Permits and Authorizations for Restoration Activities**

Agency/ Authority	Permit/Approval	Project Size Limits	Activities Covered	Location	Benefits/Details
U.S. Army Corps of Engineers	Clean Water Act Section 404 2017 Nationwide Permits 27, 33, 53, and 541	NWP 13: 500 cumulative linear feet of streambank or coastline (unless waived) NWP 27, 33, and 53: No size limits NWP 54: 500 linear feet of bank, 30 feet channelward of mean low water in tidal waters	NWP 13: Bank stabilization NWP 27: Aquatic habitat restoration NWP 33: Temporary construction access and dewatering NWP 53: Removal of low-head dams NWP 54: Living shorelines	Statewide	<ul style="list-style-type: none"> Efficient way to acquire CWA Section 404 and Rivers and Harbors Act Section 10 permits
	Los Angeles District Regional General Permits 41 and 70	No size limits	RGP 41: Invasive plant removal (expires September 4, 2024) RGP 70: Bioengineered streambank stabilization (expires January 22, 2019)	USACE Los Angeles District	<ul style="list-style-type: none"> Faster approval than NWPs Efficient way to acquire CWA Section 404 and Rivers and Harbors Act Section 10 permits

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 APPENDIX C – EXISTING PROGRAMMATIC PERMITS AND PROCESSES FOR RESTORATION ACTIVITIES

**Table C-1
 Existing Programmatic Permits and Authorizations for Restoration Activities**

Agency/ Authority	Permit/Approval	Project Size Limits	Activities Covered	Location	Benefits/Details
State Water Resources Control Board	CWA Section 401 water quality certification for small habitat restoration projects	≤ 5 acres and 500 cumulative linear feet of stream segment or coastline (length subject to change with updates)	Aquatic and riparian habitat restoration and water quality improvement projects	Statewide	<ul style="list-style-type: none"> • Faster, simpler process than standard Section 401 water quality certification; coordinated with CDFW's HRE (see below) • Must be eligible for CEQA categorical exemption (State CEQA Guidelines Section 15333), although other CEQA compliance methods can be used
California Department of Fish and Wildlife	Habitat Restoration and Enhancement Act	Currently ≤ 5 acres and 500 cumulative linear feet of stream segment or coastline (linked to State Water Board CWA Section 401 permit; see above)	Aquatic habitat restoration and water quality improvement projects	Statewide	<ul style="list-style-type: none"> • Fast and simple process: 30-day approval with State Water Board CWA Section 401, otherwise 60 days • Covers California Endangered Species Act and Fish and Game Code Section 1600 Lake and Streambed Alteration

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 APPENDIX C – EXISTING PROGRAMMATIC PERMITS AND PROCESSES FOR RESTORATION ACTIVITIES

Table C-1
Existing Programmatic Permits and Authorizations for Restoration Activities

Agency/ Authority	Permit/Approval	Project Size Limits	Activities Covered	Location	Benefits/Details
U.S. Fish and Wildlife Service	Programmatic biological opinions for listed species and limited geographic regions	Generally align with USACE NWP	Activities conducted under USACE NWP are typically covered	Regions throughout the state	<ul style="list-style-type: none"> • Saves substantial time/resources because individual BO not needed • Programmatic BOs available for: California red-legged frog (not including western San Mateo County), Central California tiger salamander, East Alameda County Conservation Strategy; Suisun Marsh Habitat Restoration Plan, Upper Sacramento River Habitat Restoration; giant garter snake for the Central Valley, Natural Resources Conservation Service’s Conservation Practices in Alameda County, Santa Rosa Plain, Vernal Pool Crustaceans in USACE Sacramento Field Office jurisdiction

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**Table C-1
 Existing Programmatic Permits and Authorizations for Restoration Activities**

Agency/ Authority	Permit/Approval	Project Size Limits	Activities Covered	Location	Benefits/Details
National Marine Fisheries Service	Biological opinions for the North Coast, Central Coast, and Central Valley	Small to large projects limited to ≤ 1,000 feet of dewatering	Salmonid habitat and related upland restoration	Oregon border to San Luis Obispo County; Delta; San Joaquin and Sacramento Valleys	<ul style="list-style-type: none"> • Faster/lower cost process: Individual BO not needed • Requires USACE permit or NOAA RC funding or technical assistance
	Biological Opinion for the South Coast	Small to large projects limited to ≤ 500 feet of dewatering	Salmonid habitat and related upland restoration	San Luis Obispo County to San Diego County	<ul style="list-style-type: none"> • Faster/lower cost process: individual Biological Opinion not needed • Requires USACE Permit or NOAA RC funding or technical assistance
	Endangered Species Act Section 7(a)(2) Concurrence Letter and Essential Fish Habitat Consultation: 2018 Not Likely to Adversely Affect Determination	Construction of overwater structures limited to 1,500 square feet of overwater surface area; pipeline repair or replacement restricted to no more than 300 feet of streambed or banks disturbance	Bridge removal; culvert repair, replacement, upgrades, or removal; pipeline repair or replacement; geotechnical boring in support of project designs; and aids to navigation in bays, estuaries, and river mouths	USACE San Francisco and Sacramento Districts	<ul style="list-style-type: none"> • Not Likely to Adversely Affect determination for 21 listed species, distinct population segments, or evolutionarily significant units (covered species) or their designated critical habitat • Faster/lower cost process: individual BO not needed • Requires USACE permit (NWP, other forms of general permits, or individual permits) • USACE determined minimal or minor adverse effects to EFH

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**Table C-1
 Existing Programmatic Permits and Authorizations for Restoration Activities**

Agency/ Authority	Permit/Approval	Project Size Limits	Activities Covered	Location	Benefits/Details
California Coastal Commission	Federal consistency determination	Small to large	Salmonid habitat and related upland restoration; estuarine and coastal restoration	Entire California Coastal Zone	<ul style="list-style-type: none"> • Faster, no-cost alternative to obtaining a coastal development permit or individual project consistency determination • Can be used with NMFS programmatic BOs; requires NOAA RC funding or technical assistance • North and Central Coast • South Coast
Resource Conservation District Partners in Restoration Programs	A variety of permits available (e.g., State Water Board, USFWS, NMFS BOs)	Generally ≤ 5 acres	Fish, plant, and wildlife habitat restoration and water quality improvement projects	Mendocino, Marin, San Luis Obispo, Cachuma, Yolo, and Alameda RCDs	<ul style="list-style-type: none"> • Consolidated permitting program managed by RCDs

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER PROGRAM ENVIRONMENTAL IMPACT REPORT
 APPENDIX C – EXISTING PROGRAMMATIC PERMITS AND PROCESSES FOR RESTORATION ACTIVITIES

**Table C-1
 Existing Programmatic Permits and Authorizations for Restoration Activities**

Agency/ Authority	Permit/Approval	Project Size Limits	Activities Covered	Location	Benefits/Details
San Francisco Bay Conservation and Development Commission	Abbreviated Regionwide Permit No. 1; Regionwide Permit No. 3; Regionwide Permit No. 5		<i>Abbreviated Regionwide Permit No. 1:</i> Removal of utilities, boat docks, pilings, and structures <i>Regionwide Permit No. 3:</i> Construction, reconstruction, replacement and maintenance of wildlife habitat improvement structures; and other structures <i>Regionwide Permit No. 5:</i> Removal of multi-family residential and nonresidential structures and paved areas	San Francisco Bay, certain waterways, managed wetlands, and shoreline band	<ul style="list-style-type: none"> Work that qualifies for approval under an existing regionwide or abbreviated regionwide permit can be authorized in a very short period of time by BCDC's Executive Director without BCDC review or a public hearing.

SOURCE: Data compiled by Environmental Science Associates in 2019

¹ CWA Section 404 Nationwide permits expire every 5 years, so the permit numbers and coverage are subject to change during the nationwide permit program renewal process.

NOTES: BCDC = San Francisco Bay Conservation and Development Commission; BO = biological opinion; CWA = Clean Water Act; Delta = Sacramento–San Joaquin Delta; EFH = Essential Fish Habitat; HRE = Habitat Restoration and Enhancement; NMFS = National Marine Fisheries Service; NOAA RC = National Oceanic and Atmospheric Administration Fisheries Restoration Center; NWP = nationwide permit; RCD = resource conservation district; RGP = regional general permit; USACE = U.S. Army Corps of Engineers; USFWS = U.S. Fish and Wildlife Service

Final Appendix D National Marine Fisheries Service Programmatic Biological Opinions

**(Available at the National Oceanic and Atmospheric
Administration Institutional Repository Home
(<https://repository.library.noaa.gov/>) with Related
Documents, including: Northern California
(<https://repository.library.noaa.gov/view/noaa/41674>) and
Central Valley
(<https://repository.library.noaa.gov/view/noaa/26373>))**

Final Appendix E Restoration Projects Statewide Order: Description and Eligibility

**(Order Attachment A - Available at California State Water
Resources Control Board, 401 Water Quality Certification
and Wetlands Program Homepage
[https://www.waterboards.ca.gov/water_issues/programs/
cwa401/](https://www.waterboards.ca.gov/water_issues/programs/cwa401/))**

Final Appendix E Restoration Projects Statewide Order: Description and Eligibility

**(Order Attachment A - Available at California State Water
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cwa401/](https://www.waterboards.ca.gov/water_issues/programs/cwa401/))**

Final Appendix F

Species Protection Measures

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX F – SPECIES PROTECTION MEASURES

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Appendix F Species Protection Measures

F.1 Introduction

The State Water Resources Control Board's (State Water Board) Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (Order) improves the efficiency of regulatory reviews for projects throughout the state that would restore aquatic and riparian resource functions and/or services. The Order establishes an authorization process for environmentally beneficial restoration projects.

The purpose of the Order is to expedite consultation, authorization, and permitting of restoration projects intended to help the State of California achieve its habitat restoration, species recovery, and water quality improvement goals.

As described in the Order, all projects must meet the definition of a restoration project as defined below and be consistent with Regional Water Quality Control Board (collectively Regional Water Boards) Basin Plans. A "restoration project" is defined as one that would result in a net increase in aquatic or riparian resource area, functions and/or services through implementation of the eligible project types, relevant general protection measures and design guidelines, as applicable (Appendix E). In addition, for purposes of the CEQA analysis, the Program Environmental Impact Report (PEIR) has included a suite of species protection measures that would be implemented by project proponents, where applicable. The species protection measures are described below.

F.2 Species Protection Measures

Applicable species protection measures are to be implemented in addition to applicable general protection measures, described in PEIR Appendix E, when suitable habitat exists within the currently occupied range of the species and/or a species is determined to be present. Alternative measures to accommodate site-specific conditions or technological constraints or advances may be proposed by project proponents, subject to approval by National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), and/or California Department of Fish and Wildlife (CDFW) (agency[ies]), as applicable to their authority and jurisdiction.

Measures for special-status species are listed by guild in the following order:

- ◆ general species protections measures (i.e., measures that generally can apply to all or multiple guilds); and
- ◆ species guild protection measures (i.e., subsets of measures that generally can be applied to all species within a given guild):
 - amphibians,
 - reptiles,
 - birds,
 - mammals,

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- invertebrates (shrimp species, beetles, and butterflies),
 - fish, and
 - vernal pool plants and other special-status plants.
- ◆ All measures, including those for a specific guild, are programmatic. Project-specific measures for single or smaller groups of species would need to be further developed, evaluated, and approved by agency(ies), as applicable to their authority and jurisdiction. Project-specific measures would be based on project-specific conditions and the applicability of those measures to avoid and minimize impacts to a specific species (or group of species) on a project-by-project basis.
 - ◆ The protection measures described for species guild are generally listed in chronological order of project implementation activities for ease of implementation (e.g., design, surveys, avoidance, work windows, work restrictions, implementation monitoring, and revegetation monitoring).
 - ◆ Protection measures for plants primarily consist of avoidance measures. When complete avoidance of special-status plant species is not possible, additional protection measures have been included.

F.2.1 General Species Protection Measures

The general species protection measures described in this section are generally applicable to all species and all guilds.

SPM-1: Preconstruction Surveys. If special-status plants are present and/or special-status terrestrial animal species habitat is present (e.g., stationary habitat such as burrows, bird nests, cavities for bats, etc.), where appropriate, based on project-specific requirements, a qualified, agency-approved biologist with experience on the identification of all applicable life stages of the special-status species will conduct reconnaissance-level preconstruction surveys and implement additional measures, as appropriate, to protect the species from construction-related disturbance before work begins. The intent of the survey is to assess current species habitat and use locations in the project area immediately prior to construction. Special-status plant species surveys shall be conducted in the appropriate blooming period, as applicable, prior to the start of construction for proper plant identification. If construction activities cease for more than five consecutive days, and there is potential for special-status species to re-occupy the site, the agency-approved biologist will re-survey the project area and implement measures, as appropriate. A project proponent can choose to assume animal species presence, forgo preconstruction surveys, and implement additional protection measures, as appropriate, to protect special status species from construction-related disturbance. Additional species guild-specific pre-construction requirements are described below and may supersede this general species protection measure, as applicable.

SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion. Monitoring, flagging, and/or fencing will be used to minimize disturbance to environmentally sensitive areas (e.g., waters and wetlands). This measure augments GPM-7 (Appendix E), which applies to sensitive aquatic resources.

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If fencing is used:

- ◆ The agency-approved biologist or resource specialist will determine the location of the fencing prior to the start of construction (e.g., between active work area(s) and sensitive resources).
- ◆ Fencing will remain in place throughout the duration of the construction activities, and will be inspected and maintained regularly by the agency-approved biologist or resource specialist until completion of the project.
- ◆ Repairs to the fencing will be made within 24 hours of discovery.
- ◆ Fencing will be removed when all construction equipment is removed from the site, and the area cleared of debris and trash, and returned to natural conditions.

SPM-3: Species Protection Construction Work Windows. Construction work windows may be required, depending on whether or not the project involves in-water construction and/or whether special-status species have potential to occur onsite.

SPM-4: Species Capture, Handling and Translocation. Special-status species capture, handling, and translocation will only be conducted by an agency-approved biologist(s). Required permitting will be needed prior to any capture, handling, and relocation. If translocation of special-status species is needed, the project proponent will prepare a special-status species translocation plan to be reviewed and approved by the agency(ies), as appropriate, prior to project implementation. The plan will include capture and translocation methods, translocation site, and post translocation monitoring, if applicable. If capture, handling, and translocation is necessary due to dewatering activities, refer to the protective measures for Dewatering Activities, under general protection measure IWW 6 and follow the agency-approved translocation plan.

SPM-5: Special-Status Species Entrapment Prevention. All excavated, steep-walled holes or trenches will be covered with appropriate covers (e.g., thick metal sheets or plywood) at the end of each workday. Covers will be placed so that trench edges are fully sealed with rock bags, sand, or other appropriate material. Alternatively, one or more escape ramps such as fill dirt or wood planking will be installed at an angle no greater than 30 degrees, to allow wildlife to escape. Before holes or trenches are filled, sealed, or collapsed, the holes or trenches will be thoroughly inspected for trapped animals. Any animals discovered will be allowed to escape voluntarily or will be relocated by an agency-approved biologist.

SPM-6: Airborne Noise Reduction. Equipment, including noise abatement systems, will be maintained in good working order. If construction noise has the potential to adversely affect special-status species, the project proponent will include site specific measures for construction activities to minimize impacts. Muffler (or spark arrester) damage must be promptly remedied, to the degree practicable, to meet sound attenuation standards.

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F.2.2 Amphibians – Guild Protection Measures

The general amphibian protection measures described in this section apply to all special-status amphibians, as applicable and appropriate for a project site (i.e., the project site is within the range and has suitable habitat for special-status amphibians and they have been observed).

AMP-1: Wildlife Passage Design. For projects that include the installation, repair, or replacement of permanent or temporary fencing (e.g., security, landscape, or privacy fencing) fencing will be designed to allow for permeability; it will incorporate a minimum 6-inch gap with a one-way ramp or door at regular intervals to allow for special-status amphibian species to disperse between upland and breeding habitat. This measure is not applicable to the Environmentally Sensitive and Wildlife Exclusion Area fencing/flagging specified as part of construction activities to protect habitats or exclude wildlife from the work areas (SPM-2, above). Facilities such as curbs, drainages, culverts, and fence “footers” will be designed with gradually sloped sides or intermittent gaps to facilitate wildlife movement.

AMP-2: Rain Event Limitations. To the maximum extent practicable, construction activities will be restricted to periods of low rainfall (less than 1” per 24-hour period) and periods of dry weather (with less than a 50% chance of rain). During these restricted periods, under no circumstances will construction activities occur between 30 minutes prior to sunset and 30 minutes after sunrise (i.e., no night work during rain events). If rain exceeds 0.5 inch during a 24-hour period, work will cease until no further rain is forecast. Construction activities halted due to precipitation may resume when precipitation ceases and the National Weather Service 72-hour weather forecast indicates less than a 50% chance of 0.5 inch of rain or less during a 24-hour period. Prior to construction activities resuming, an agency-approved biologist will inspect the project area and all equipment/materials for the presence of special-status amphibians.

AMP-3: Pre-Construction Survey. If covered amphibians are known or assumed to be present, no more than 24 hours prior to the date of initial ground disturbance and vegetation clearing, an agency-approved biologist will walk within the project site to investigate all potential areas that could be used by the special-status amphibians for feeding, breeding, sheltering, movement, and other essential behaviors. If a special-status amphibian species is encountered during the survey the project proponent will refer to and follow procedures described below in AMP-11 and AMP-12 for passively allowing the species to move out of the work area or actively relocating the species out of harm’s way. Proposed projects that may need to actively relocate amphibians out of harm’s way will require the project proponent to submit a project-specific species relocation plan for agency review and approval, as described in AMP-12.

AMP-4: Disease Prevention and Decontamination. To prevent disease conveyance among work sites during project implementation, the agency-approved biologist will ensure that the decontamination protocols described in CDFW, Aquatic Invasive Species Disinfection/Decontamination Protocols (CDFW 2016, or latest version) will be implemented prior to gear and equipment arriving at or moving between work sites and will be followed at all times. A copy of the code of practice must be available at the project site.

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AMP-5: Lighting. In addition to GCM-3, Construction Hours (general protection measures in Appendix E), artificial lighting at a project site will be prohibited to the maximum extent practicable during the hours of darkness, except when necessary for driver or pedestrian safety.

AMP-6: Clearing and Grubbing Vegetation. The agency-approved biologist will be present during all vegetation clearing and grubbing activities in areas within the currently occupied range of special-status amphibians where suitable habitat is present. Prior to vegetation removal, the agency-approved biologist will thoroughly survey the area for these species (measure AMP-3). Vegetation in sensitive areas will either be cleared with handheld motorized tools (e.g., weed eaters, chainsaws) or by hand pulling, or an agency-approved biologist will walk in front of vegetation clearing equipment. Where dense brush occurs (e.g., blackberry, periwinkle), the biologist may direct an equipment operator to lift and shake dense vegetation with an excavator or backhoe so that the biologist can look underneath and search for amphibians. Tree stumps and roots will be left in place where possible to avoid any ground disturbance and preserve refugia habitat, with the exception of non-native invasive plants that could propagate from remaining vegetative material. Native branches, leaf litter, mulch, woody debris, and other vegetative trimmings may be retained and spread on site to enhance habitat as appropriate.

AMP-7: Pump Screens. If a water body is to be temporarily dewatered by pumping, intakes will be completely screened consistent with NMFS (1997) and CDFW (2001) screening guidelines, or latest updates to those guidelines. The intake will be placed in a perforated bucket or other method to attenuate suction to prevent special-status amphibians from entering the pump system. Water will be returned to the water body when diversions or coffer dams are removed and flow is restored. If no diversion or coffer dams were used during dewatering, the water body will be allowed to refill naturally from precipitation, runoff, or hydrological processes refilling the water body naturally.

AMP-8: Removal of Non-native Invasive Species. Removal of any individuals of non-native invasive species (e.g., bullfrogs, non-native crayfish, non-native fishes) is encouraged as practicable to facilitate conditions for project success. The project proponent is responsible for ensuring that these activities comply with the California Fish and Game Code. Suspected hybrids will not be removed without specific authorization from appropriate agency(ies).

AMP-9: Placement of Suitable Erosion Control Material. To prevent amphibians from becoming entangled, trapped, or injured, erosion control materials with plastic or synthetic monofilament netting will not be used. This includes products that use photodegradable or biodegradable synthetic netting, which can take several months to decompose. Acceptable materials include natural fibers such as jute, coconut, twine, or other similar fibers. Following site restoration, erosion control materials, such as straw wattles, will not block the movement of special-status amphibians.

AMP-10: Encounters with Species. Each encounter with a special-status amphibian will be treated on a case-by-case basis. If any life stage of the special-status amphibian species is found and these individuals may potentially be killed or injured by work activities, the following will apply:

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- ◆ If a special-status amphibian is detected in the project area, work activities within 50 feet of the individual that may potentially be harmed, injured, or killed will cease immediately and the agency-approved biologist will be notified. Based on the professional judgment of the agency-approved biologist, if project activities can be conducted without harming or injuring the species, it may be left at the location of discovery and monitored by the agency-approved biologist. All project personnel will be notified of the finding and at no time will work occur within 50 feet of a species without agency-approved biologist present.
- ◆ Where practicable, contact with the special-status amphibian will be avoided and it will be allowed to move out of the potentially hazardous situation of its own volition. Allowing a special-status amphibian to move out of the potentially hazardous situation of its own volition may not be appropriate for multi-day projects because they could stay or move back into the project site. If there is an immediate hazard or if there is no suitable, accessible habitat nearby for the amphibian to relocate to, it will be moved following approved handling protocol (AMP-11).

AMP-11: Species Observations and Handling Protocol. If a special-status species does not or cannot leave the work area, the agency-approved biologist will implement the species observation and handling protocols outlined below for the various species' guilds. Separate permits are needed prior to any capture, handling, and relocation of special-status species. Only agency-approved biologists will participate in activities associated with the capture, handling, relocation, and monitoring of a special-status amphibian. In addition to measures described in AMP-5 (which refers to CDFW [2016] decontamination protocols), to prevent the spread of pathogens among sites, special care should be taken to prevent transferring potential pathogens among individual animals.

F.2.3 Reptiles – Guild Protection Measures

The general reptile protection measures described in this section apply to all special-status reptiles, as applicable and appropriate for a project site (i.e., the project site is within the range and has suitable habitat for special-status reptiles or they have been observed).

REP-1: Pre-Construction Survey. An agency-approved biologist will conduct pre-construction surveys for the target reptile species within 72 hours prior to any initial ground disturbance within all suitable habitat within or adjacent to the project site and accessible to the project proponent, to identify locations where special-status reptiles may be present, evaluate current activity status in the project area, and protect the species and its habitat from avoidable construction-related disturbance. The intent of this survey is to assess current special-status reptile habitat and use locations in the project area immediately prior to construction. Preconstruction surveys may be phased across a construction site if construction in different areas will occur at different times; only areas where disturbance is imminent need be surveyed. The project area will be re-inspected by the agency-approved biologist whenever a lapse in construction activity of 5 days or greater has occurred.

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REP-2: Environmentally Sensitive and Wildlife Exclusion Area. Prior to the start of construction, SPM-2, *Environmentally Sensitive and Wildlife Exclusion* will be implemented. In addition, the following applies:

- ◆ For the giant garter snake, fencing and/or monitoring will be implemented in coordination with the agency-approved biologist prior to the start of ground-disturbing activities.

If fencing is used the fencing will be inspected by the agency-approved biologist before the start of each work day and maintained by the project proponent until completion of the project. The fencing will be removed after all construction equipment is removed from those segments of the project. To prevent reptiles from becoming entangled, trapped, or injured, fencing materials that use plastic or synthetic monofilament netting will not be used. Acceptable materials include natural fibers such as jute, coconut, twine, or other similar fibers.

REP-3: Clearing and Grubbing Vegetation. An agency-approved biologist will be present during all vegetation clearing and grubbing activities in areas where the special-status reptiles are confirmed to occur, or where measures are being implemented based on presence of suitable habitat. Prior to vegetation removal, the agency-approved biologist will thoroughly survey the area for these species. Vegetation in sensitive areas will be cleared by handheld motorized tools (e.g., weed eaters, chainsaws) or hand pulling unless alternate methods are proposed by the project proponent and approved by agency(ies). Tree stumps and roots will be left in place where possible to avoid any ground disturbance and preserve refugia habitat, with the exception of non-native invasive plants that could propagate from remaining vegetative material. Native branches, leaf litter, mulch, woody debris, and other vegetative trimmings may be retained and spread on site to enhance habitat as appropriate.

REP-4: Prohibited Use of Rodenticides. No rodenticides will be used at the project site during construction in areas that support suitable habitat for special-status reptiles.

REP-5: Species Observations and Encounters. Each proposed project with the potential to encounter a special-status reptile species will submit a rescue and relocation plan to agency(ies) for review and approval prior to initiating construction. General guidance to be considered during plan development is as follows: 1) leave the uninjured animal if it is not in danger, or 2) move the animal to a nearby location if it is in danger as described in *REP-6, Species Handling and Relocation*, below. These options are further described as follows:

- ◆ When a special-status reptile is encountered in the project area, the priority is to stop all activities in the surrounding area that have the potential to result in the harm, injury, or death of the individual. The agency-approved biologist then needs to assess the situation to select the course of project that will minimize adverse effects to the individual.
- ◆ Avoid contact with the animal and allow it to move out of the project footprint and hazardous situation on its own to a safe location. This guidance only applies to situations where an animal is encountered while moving through habitat and

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under conditions that will allow it to escape. This does not apply to animals that are uncovered or otherwise exposed or in areas where there is not enough adjacent habitat to support the life history of the special-status reptiles if they move outside the construction footprint.

- ◆ Avoidance is the preferred option if the animal is not moving or is within some sort of burrow or other refugia. In this case, the area will be well marked for avoidance by construction and an agency-approved biologist will be assigned to the area when work is taking place nearby. If avoidance is not practicable or safe for the special-status reptile, the project proponent will implement REP-6, below.

REP-6: Species Handling and Relocation. A special-status reptile will only be captured and relocated when it is the only option to prevent its death or injury, and after all attempts to avoid interaction of the species have been exhausted as described in *REP-6, Species Observation and Encounters*. Project-specific rescue and relocation plans will be approved by the agency(ies) prior to starting construction. General guidance for handling and relocation is as follows:

- ◆ If appropriate habitat is located immediately adjacent to the capture location, then the preferred option is short distance relocation to that habitat. A snake will not be moved outside of the area where it could have traveled on its own. Captured snakes will be released in appropriate cover as close to their capture location as possible for their continued safety. Under no circumstances will an animal be relocated to another property without the owner's written permission. It is the project proponent's responsibility to arrange for that permission.
- ◆ The release locations must be pre-identified in the project-specific rescue and relocation plan approved by the agency(ies); they will depend on where the individual was found and the opportunities for nearby release. In most situations the release location is likely to be into the mouth of a small burrow, other suitable refugia, or suitable habitat.
- ◆ Only agency-approved biologists for the project can capture special-status reptiles.

F.2.4 Birds – Guild Protection Measures

The general bird protection measures described in this section apply to all special-status bird species, as applicable and appropriate for a project site (i.e., the project site is within the range and has suitable habitat for special-status birds or they have been observed).

BIRD-1: Habitat Assessment: A habitat assessment will be conducted by a qualified biologist to determine whether suitable habitat (e.g., including foraging, nesting, and dispersal habitat) for the special-status bird(s) occurs in the project area, as applicable. If suitable habitat for special-status species is identified in the project area and the proposed project may affect suitable habitat, the project proponent will implement measures *BIRD-2* through *5* in areas with suitable habitat. Alternatively, the project proponent may propose to conduct surveys and/or monitoring to confirm presence or absence of the species.

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BIRD-2: Nest Protection Work Window. Project activity in known or potentially occupied migratory bird habitat will be conducted outside of the nesting season to the maximum extent practicable. If project activities must occur during the nesting season see BIRD-5.

BIRD-3: Work Area Limits: Work site boundaries in suitable habitat will be clearly marked with flagging or other visible materials, which will be removed at the conclusion of the project.

BIRD-4: Site Access Restrictions: If the site conditions allow, access to work sites in occupied habitat will be by foot travel, otherwise heavy equipment will be allowed within suitable nesting habitats only with the presence of an agency-approved biologist. Access routes and work areas will be limited to the minimum amount necessary to achieve the project goals.

BIRD-5: Monitoring. If project activities must occur during the nesting season, pre-construction nest surveys will be conducted by an agency-approved biologist, buffers will be established to protect active nests, and disturbance in the vicinity of active nests will be monitored to ensure that it does not disrupt an active nest.

F.2.5 Mammals – Guild Protection Measures

The general mammal protection measures described in this section apply to all special-status mammals, as applicable and appropriate for a project site (i.e., the project site is within the range and has suitable habitat for special-status mammals or they have been observed).

MAM-1: Conduct Habitat Assessment. Prior to construction, an agency-approved biologist will conduct a habitat assessment in potentially suitable habitat within the project footprint to determine presence of special-status mammals or their sign (e.g., scat, guano, tail drags and tracks, skeletal remains in owl pellets, etc.). The habitat assessment surveys will be conducted within 2 years, and at least 14 days prior to the start of construction or ground disturbing activities. If no burrows or sign of special-status mammals are detected, no further measures will be required.

MAM-2: Avoidance Areas. Based on the results of the habitat assessment, in areas where special-status mammals are believed to be present based on observations (e.g., signs of presence, burrows), non-disturbance zones will be established prior to construction or ground disturbing activities.

MAM-3: Use of Handheld Tools. If exclusion fencing will be installed, vegetation in active work areas outside of the exclusion areas will be trimmed and cleared to the ground using handheld tools (which can include handheld motorized equipment, such as weed whackers or mowers) to the maximum extent practicable, under the supervision of an agency-approved biologist, to discourage presence of species in the construction area.

MAM-4: Species Trapping and Relocating. If the minimum avoidance zone cannot be maintained and the agency-approved biologist believes activities will disturb or destroy habitat (e.g., collapse burrows) or may otherwise adversely affect these special-status

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mammal species, then an agency-approved biologist may be required to implement a trap and release program at the agency's discretion. Project-specific guidance on trapping, temporary holding, release location, and release method will be required by the agency prior to the start of trapping.

MAM-5: Reporting Requirements. Agencies will be notified within 24 hours if any individual special-status species is captured. The date; time of capture; specific location (GPS coordinates); and approximate size, age, and health of the individual will be recorded and provided in both hard copy and digital format to the agency(ies) within 2 weeks of the conclusion of the protective trap-and-release operation.

The agency(ies) will be notified within 24 hours if any special-status mammal species is found injured or dead. A written notification will also be prepared by the project proponent after verbal notification to the agency(ies). The report will include the date, time, and location of the discovered animal/carcass; cause of injury or death; and any other pertinent information. All dead and preserved specimens will be submitted to the appropriate agency(ies) upon request. Salvaged animals will be kept cooled or frozen until delivered.

F.2.6 Invertebrates – Guild Protection Measures

The general invertebrate protection measures described in this section apply to all special-status invertebrates, as applicable and appropriate for a project site (i.e., the project site is within the range and has suitable habitat for special-status invertebrate or they have been observed).

INVERT-1: Implement California Freshwater Shrimp Measures. Implement the following measures for projects that include suitable habitat that could be occupied by California freshwater shrimp, as applicable.

- ◆ ***Work Window.*** No work is permitted during wet weather or where saturated ground conditions exist; if a 60 percent chance of a 0.5 inch of rain or more within a 24-hour period is forecast, then operations will cease until 24 hours after rain has ceased.
- ◆ ***Site Restrictions.*** New access routes requiring tree removal and grading will be limited to the extent practicable. Access routes will not be along the top of the stream bank but relatively perpendicular (45 to 90 degrees is acceptable) to the bank.
- ◆ ***Pre-Construction Survey.*** Agency-approved biologist will conduct surveys of suitable habitat in the project area for presence of the California freshwater shrimp in the work area 24 hours prior to any vegetative clearing work, dewatering, or ground-disturbing activities.
- ◆ ***Capture and Relocation:*** If California freshwater shrimp must be temporarily excluded from portions of the project area during in-water work, a project-specific capture and relocation plan must be submitted to the agency(ies) for review and approval.

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- ◆ *Habitat Protection*: Design project to achieve no net loss of large woody debris in the active (wetted) channels. Trees may be removed for access routes for construction equipment. If trees need to be removed from other portions of the project site, willows over 3 inches in diameter at breast height will be left in place as is practicable and the canopy cover provided by hardwoods or conifers will not be reduced unless necessary for access or other unforeseen circumstance.
- ◆ *Rehabilitate Disturbed Habitat*: The stream bank will be planted with species which will enhance the year-round habitat value of the stream edge by providing adequate shelter, stability, complexity and food production potential for California freshwater shrimp.
- ◆ *Dewatering*: Minimize the potential for California freshwater shrimp to be entrained during dewatering activities. Pump intakes will be placed away from complex vegetated banks that may contain habitat for California freshwater shrimp. Screens will be used during dewatering in accordance with IWW-6, Dewatering/Diversion, following CDFW (2001) and NMFS (1997) criteria for fry-sized salmonids.

INVERT-2: Implement Vernal Pool Branchiopods Measures. Implement the following measures for projects that are within or adjacent to suitable habitat that could be occupied by vernal pool branchiopods, as applicable.

- ◆ ***Ground Disturbance Adjacent to Vernal Pools.*** Implement the following measures for project sites that include suitable habitat that could be occupied by vernal pool branchiopods, as applicable.
 - *Work Window.* Work within 250 feet of suitable special-status vernal pool branchiopod habitat (e.g., vernal pools, seasonal wetlands) will be performed under dry site conditions, to the extent feasible. If project proponents believe projects must be conducted outside of these work windows due to site specific or other constraints, project proponents may propose alternate work periods for review and approval by the agency(ies).
 - *Work Restrictions During Wet Season.* Work should be planned for the dry season whenever possible. If the proponent determines that construction activities must occur outside of the dry season, Environmentally Sensitive Area fencing and erosion control materials will be placed around vernal pools and other seasonal wetlands, as determined by the agency-approved biologist, to avoid sedimentation into vernal pool habitat or altering site hydrology. If project proponents believe projects must be conducted outside of these work windows due to site specific or other constraints, project proponents may propose alternate work periods for review and approval by the agency(ies).
 - *Biological Monitor:* Agency-approved biologist will monitor construction activities.

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- *Erosion Control*: Any vernal pool, vernal pool grassland, or seasonal wetland will be protected from siltation and potentially contaminated runoff from construction equipment by use of erosion control measures.
- *Dust Control*. Dust control measures will be implemented to prevent the transport of soil from exposed surfaces to vernal pool, swale, and rock pool habitat.
- ◆ ***Ground Disturbance within Vernal Pools***. If the intent of a proposed project is to improve habitat for special-status vernal pool branchiopods (e.g., enlarge, deepen, repair, or otherwise modify suitable aquatic habitat), and would require ground disturbance within suitable habitat, the project proponent will submit detailed project design information for review and approval by the agency(ies). Any ground disturbing activities within 25 feet of the edge of the pool will be conducted consistent with a plan reviewed and approved by the agency(ies), and will be conducted during the dry season. The following measures may also apply and should be considered during development of the plan that will be submitted to the agency(ies):
 - If inoculum from an existing site will be used for restoration/enhancement, the plan will identify any proposed donor pools and include documentation that they are free of versatile fairy shrimp (*Branchinecta lindahli*). No more than 5 percent of the basin area of any donor pool will be used for collection of inoculum.
 - Restoration plans that include grading or re-grading of vernal pools will include all final specifications and topographic-based grading, planting, and watering plans for the vernal pools, watersheds and surrounding uplands (including adjacent mima mounds) at the restoration sites. The grading plans will also show the watersheds of extant vernal pools, and overflow pathways that hydrologically connect the restored pools in a way that mimics natural vernal pool complex topography/hydrology.
 - Restoration plans that include grading or re-grading of vernal pools will include a hydraulic analysis that shows each proposed vernal pool and its watershed, and a calculation showing vernal pool to watershed ratio. The vernal pool to watershed ratio will be similar to extant pools closest to the restoration area.
 - Prior to ground disturbance within suitable habitat, loose substrate, which may include branchiopod cysts, will be collected from the pool area to be disturbed by vacuum and stored in dry conditions until grading is complete.
 - Topsoil will be removed and stockpiled separately.
 - Disturbance of the less permeable, hardpan or claypan soil layer that often helps form vernal pools will be minimized. If the less permeable layer must be removed it will be stockpiled separately.

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- When grading is complete, layers will be replaced in the reverse order, relative to removal, beginning with subsoil, followed by the less permeable layer, then topsoil, and then loose material collected by vacuum. Subsoil and less permeable layers should each be compacted following placement to decrease permeability of restored or modified suitable habitat.

INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol. Implement the following measures for projects that include suitable habitat that could be occupied by valley elderberry longhorn beetle (VELB), as applicable.

- ◆ For the VELB, the project proponent will be required to follow the Protection Measures presented in the *May 2017 FWS Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* or the most updated version of this guideline document (USFWS 2017).

INVERT-4: Implement Butterfly Protection Measures. The following general butterfly protection measures apply to all special-status butterfly species and their habitat, as applicable.

- ◆ ***Site Restrictions:*** Access routes, staging areas, and total project footprint within butterfly habitat will be limited to the minimum necessary to achieve the project goal.
- ◆ ***Biological Monitor:*** Biological monitoring will be overseen by an agency-approved biologist. During the adult flight season of special-status butterfly species, an /agency-approved biologist will be present when construction activities occur in or within 150 feet of suitable habitat (dispersal habitat as well as areas containing the larval host plant and adult food plants).
- ◆ ***Environmentally Sensitive Areas:*** Any larval food or host plants found within 300 feet of the project footprint will be clearly marked and will be avoided to the maximum extent practicable. Prior to any ground-disturbing or vegetation removal activities, the edge of the work area near any larval food or host plants will be clearly marked to prevent workers and vehicles from entering this area.
- ◆ ***Dust Control:*** The agency-approved biologist will ensure that dust is controlled by construction personnel by periodically watering down areas within 100 feet of special-status butterfly habitat, as necessary. Watering down the construction area will prevent dirt from becoming air borne and accumulating on larval host plants and adult food source plants for special-status butterflies.

F.2.7 Fish – Guild Protection Measures

The general fish protection measures described in this section apply to all special-status fish, as applicable and appropriate for a project site (i.e., the project site is within the range and has suitable habitat for special-status fish or they have been observed).

FISH-1: Habitat Disturbance Avoidance and Minimization. Disturbance to aquatic habitat for special-status fish species will be avoided and/or minimized to the maximum extent practicable unless the purpose of the project is to provide overall benefits to the species and the benefits are greater than any temporary impacts to habitat.

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FISH-2: Habitat Assessment and Surveys. For projects that may result in impacts to aquatic habitat within the range of special-status fish species, no less than 30 days prior to construction of the project, the project proponent will evaluate the potential for special-status fish species to be present in the project area. The evaluation may be based on existing information if sufficiently available, or the project proponent may conduct a habitat assessment or focused survey for those species, if appropriate. The habitat assessment and/or survey will be conducted in potentially suitable aquatic habitat within 300 feet of the project area. The agency-approved biologist will conduct the habitat assessment and/or fish survey and will adhere to the standards provided in the CDFW *California Salmonid Stream Habitat Restoration Manual 4th Edition Volume I: Section IV* (CDFW 2010) or most current regulatory agency guidance document. If special-status fish species are observed during the survey or the habitat is otherwise potentially occupied, based on the results of the habitat assessment or existing information, the project proponent will implement *FISH-3, Fish Capture and Relocation*, as described below.

FISH-3: Fish Capture and Relocation. For projects that require dewatering or other work in suitable habitat for the special-status fish species, if fish capture and relocation would be the most protective approach to managing fish during construction, then a fish capture and relocation plan will be developed and submitted to NMFS, USFWS, and/or CDFW, as applicable, for approval. The plan will describe the biologist qualifications, capture methods, capture and relocation work areas, and reporting requirements including details in the list below. If capture and relocation is not feasible or would not be the most protective approach to managing fish in the work area (e.g., if dewatering is not needed or appropriate; or if fish are in a large, unconfined water body), other methods to protect covered fish species (e.g., timing restrictions around season and tide, or bubble curtains) should be detailed in a plan and submitted to FWS for approval.

- ◆ This plan will incorporate the latest agency guidance relating to the capture and relocation of fish, as applicable.
- ◆ Procedures for decontamination of any equipment used in the capture and relocation of fish will be identified.
- ◆ Prior to the implementation of capture and relocation activities, relocation (or release) sites will be identified by the agency-approved biologist based on proximity, access, habitat suitability, and potential to be affected by construction-related disturbance. Suitable habitat for relocation site(s) will be within the same watershed/sub-watershed fish were originally captured.
- ◆ Fish relocation will only be conducted (or led) by an agency-approved biologist. If an agency-approved biologist is needed, the project proponent will submit the biologist's qualifications to the appropriate agency office for approval 30 days prior to project construction. The biologist will have knowledge and experience in fish biology and ecology, fish/habitat relationships, and biological monitoring, and handling, collecting, and relocating fish or other relevant experience.
- ◆ Residual surface water associated with the diverted or dewatered habitat will be monitored or sampled for the presence of fish by an agency-approved biologist

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as soon as the waters are isolated. If a special-status fish is observed in the isolated habitat, they will be immediately captured and relocated to the suitable habitat outside of the construction area, but within the same watershed/sub-watershed, by the agency-approved biologist in accordance with the approved fish capture and relocation plan.

- ◆ The agency-approved biologist will relocate any special-status fish species that may become stranded to an appropriate place depending upon the life stage of the fish, consistent with the approved rescue and relocation plan.
- ◆ The agency-approved biologist will note the number of individuals observed in the affected area, the number of individuals relocated, the approximate size of individuals, the location of capture and release, any instances of injury or mortality, and the date and time of the collection and relocation. The agency-approved biologist will also identify and record the species observed and relocated and the life stage for anadromous species. This information will be reported to the appropriate agency office within 7 days of completion of the fish capture and relocation effort.
- ◆ One or more of the following methods will be used to capture protected fish species: electrofishing, dip net, seine, throw net, minnow trap, and hand capture.

FISH-4: Reporting. An agency-approved biologist will provide a written summary of work performed (including biological survey and monitoring results), protection measures implemented (e.g., use of biological monitor, flagging of work areas, erosion and sedimentation controls) and supporting photographs of each stage to the appropriate agency office. Furthermore, the documentation describing surveys and relocation efforts (if appropriate) will be completed in accordance with the requirements of FISH-3: *Fish Capture and Relocation*.

F.2.8 Plant Species Protection Measures

The general plant species protection measures described in this section apply to all special-status plant species, as appropriate.

PLANT-1: Habitat Assessment and Surveys. If the project area can potentially support special-status plant species, an agency-approved biologist will conduct a survey for special-status plant species within 1 year prior to commencement of ground-disturbing activities. Surveys should follow USFWS's *General Rare Plant Survey Guidelines* (USFWS 2002); and CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (2018) or their most recent equivalents.

PLANT-2: Seasonal Avoidance of Vernal Pool Plant Species and Other Annual and Perennial Species:

- ◆ *For Vernal Pool Plant Species:* Work within 250 feet of suitable special-status vernal pool plant habitat (e.g., vernal pools, seasonal wetlands) will be performed under dry site conditions to the maximum extent possible, to minimize potential adverse impacts to aquatic habitats. If any construction activities must occur

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during the wet period, exclusion fencing and erosion control materials will be placed around vernal pools and other seasonal wetlands as determined by the agency-approved biologist to reduce sedimentation into vernal pool habitat. The fencing will provide a buffer between construction activities and the vernal pools and other seasonal wetlands. The agency-approved biologist will oversee, monitor, inspect and maintain the exclusion fencing.

- ◆ *For Other Annual Plant Species:* To avoid impacts to other annual species, schedule work to occur after plants have set seed and senesced, avoid soil disturbance, and avoid actions that have potential to reduce habitat quality.

PLANT-3: Exclusion Buffer Establishment. An agency-approved biologist will clearly delineate with flagging or other field markers a minimum 50-foot avoidance buffer around all special-status plants or their suitable habitat. A larger exclusion buffer may be established if determined by the agency-approved biologist to be necessary for the protection of the special-status plants. No work activity will occur within the exclusion buffer, except as permitted under Measure *PLANT-4, Work Restrictions in the Exclusion Buffer*. Additionally, a buffer of at least 300 feet from any vernal pool, vernal pool grassland, or seasonal wetland will be established for the protection of special status plants.

PLANT-4: Work Restrictions in the Exclusion Buffer. If agency-approved biologist determines that some work activities can take place within the exclusion buffer described in Measure *PLANT-3* without causing any adverse direct or indirect impacts to special-status plants identified for avoidance, those approved work activities may be conducted within the exclusion buffer. Special-status vernal pool plants will be clearly marked by an agency-approved biologist prior to worker entry into the exclusion buffer. Workers may only enter the exclusion buffer when accompanied by an agency-approved biologist, and all work within the exclusion buffer will be monitored by an agency-approved biologist.

PLANT-5: Biological Monitoring. An agency-approved biologist will monitor all construction activities, and also within the buffers established under *PLANT-3, Exclusion Buffer Establishment*. Any non-disturbance exclusion zones will be established, maintained and monitored. The biologist will ensure that loss of special-status plants or destruction of their habitat does not occur outside of the project footprint.

PLANT-6: Herbicide Application, Clearing, and Ground Disturbance. If mechanical removal is not effective, or could damage sensitive habitats, limited herbicide application may occur as noted below and in accordance with General Protection Measures VHDR-6 through VHDR-8 (Appendix E), wind speed limitations during herbicide application.

- ◆ To avoid impacts to other special-status species (non-vernal pool species), the following protections will be applied:
 - Application of herbicide will occur during dry conditions (no precipitation), to the maximum extent practicable.

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- Backpack and hand-held herbicide application, if applied in dry conditions, is prohibited within 5 feet of any special-status plant. Protect special-status plants from herbicide drift (e.g., cover with plastic when spraying or use a wick applicator).
- Broadcast and power spray herbicide application is prohibited; and
- Ground disturbing activities are prohibited within 5 feet of senesced annual and perennial plants and within 10 feet of perennial plants. Ground disturbance should occur outside of the dripline of any woody species identified for avoidance.

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F.3 References

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Final Appendix G

California Natural Diversity Database

Wildlife

Wildlife		Status				USGS Ecoregions													
Appendix E	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85	
						Coast Range	Cascades	Sierra Nevada	Central California Foothills and Coastal Mountains	Central California Valley	Southern California Mountains	Eastern Cascades Slopes and Foothills	Central Basin and Range	Mojave Basin and Range	Klamath Mountains/California High North Coast Range	Northern Basin and Range	Sonoran Basin and Range	Southern California/Northern Baja Coast	
Common Name	Scientific Name																		
Amphibians																			
arroyo toad	<i>Anaxyrus californicus</i>	FE	--	--	SSC				●		●			●					●
black toad	<i>Anaxyrus exsul</i>	--	CT	--	FP								●	●					
California giant salamander	<i>Dicamptodon ensatus</i>	--	--	--	SSC	●			●										
California red-legged frog	<i>Rana draytonii</i>	FT	--	--	SSC	●		●	●	●	●			●				●	●
California tiger salamander	<i>Ambystoma californiense</i>	FT	CT	--	WL	●			●	●									
Cascades frog	<i>Rana cascadae</i>	--	CCE	--	SSC		●	●				●			●				
Coast Range newt	<i>Taricha torosa</i>	--	--	--	SSC				●		●								●
Couch's spadefoot	<i>Scaphiopus couchii</i>	--	--	--	SSC													●	
Del Norte salamander	<i>Plethodon elongatus</i>	--	--	--	WL	●									●				
desert slender salamander	<i>Batrachoseps major aridus</i>	FE	CE	--	--						●							●	
foothill yellow-legged frog	<i>Rana boylei</i>	--	CCT	--	SSC	●	●	●	●	●	●	●			●				●
Inyo Mountains slender salamander	<i>Batrachoseps campi</i>	--	--	--	SSC								●	●					
Kern Canyon slender salamander	<i>Batrachoseps simatus</i>	--	CT	--	--			●	●										
large-blotched salamander	<i>Ensatina eschscholtzii klauberi</i>	--	--	--	WL						●								
lesser slender salamander	<i>Batrachoseps minor</i>	--	--	--	SSC				●										
limestone salamander	<i>Hydromantes brunus</i>	--	CT	--	FP			●	●										
lowland leopard frog	<i>Lithobates yavapaiensis</i>	--	--	--	SSC													●	
Mount Lyell salamander	<i>Hydromantes platycephalus</i>			--	WL			●					●						
northern leopard frog	<i>Lithobates pipiens</i>	--	--	--	SSC			●		●		●	●			●	●	●	●
northern red-legged frog	<i>Rana aurora</i>	--	--	--	SSC	●									●				
Oregon spotted frog	<i>Rana pretiosa</i>	FT	--	--	SSC							●				●			

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Common Name	Scientific Name																		
Pacific tailed frog	<i>Ascaphus truei</i>	--	--	--	SSC	●	●								●				
red-bellied newt	<i>Taricha rivularis</i>	--	--	--	SSC	●			●						●				
relictual slender salamander	<i>Batrachoseps relictus</i>	--	--	--	SSC			●	●	●									
Santa Cruz black salamander	<i>Aneides niger</i>	--	--	--	SSC	●			●										
Santa Cruz long-toed salamander	<i>Ambystoma macrodactylum croceum</i>	FE	CE	--	FP				●										
Scott Bar salamander	<i>Plethodon asupak</i>	--	CT	--	--										●				
Shasta salamander	<i>Hydromantes shastae</i>	--	CT	--	--				●						●				
Sierra Nevada yellow-legged frog	<i>Rana sierrae</i>	FE	CT	--	WL		●	●					●	●					
Siskiyou Mountains salamander	<i>Plethodon stormi</i>	--	CT	--	--										●				
Sonoran desert toad	<i>Incilius alvarius</i>	--	--	--	SSC									●			●		
southern long-toed salamander	<i>Ambystoma macrodactylum sigillatum</i>	--	--	--	SSC		●	●				●	●		●				
southern mountain yellow-legged frog	<i>Rana muscosa</i>	FE	CE	--	WL			●			●			●			●	●	●
southern torrent salamander	<i>Rhyacotriton variegatus</i>	--	--	--	SSC	●									●				
Tehachapi slender salamander	<i>Batrachoseps stebbinsi</i>	--	CT	--	--			●	●		●								
western spadefoot	<i>Spea hammondi</i>	--	--	--	SSC		●		●	●	●							●	●
yellow-blotched salamander	<i>Ensatina eschscholtzii croceator</i>	--	--	--	WL			●	●		●								
Yosemite toad	<i>Anaxyrus canorus</i>	--	CT	--	SSC			●											
Birds																			
Alameda song sparrow	<i>Melospiza melodia pusillula</i>	--	--	--	SSC				●										
American peregrine falcon	<i>Falco peregrinus anatum</i>	FD	CD	--	FP	●	●	●	●	●		●			●				●
American white pelican	<i>Pelecanus erythrorhynchos</i>	--	--	--	SSC							●							

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	California Ridgway's rail	<i>Rallus obsoletus obsoletus</i>	FE	CE	--	FP	●			●	●								
	Channel Island song sparrow	<i>Melospiza melodia graminea</i>	--	--	--	SSC													●
	coastal cactus wren	<i>Campylorhynchus brunneicapillus sandiegensis</i>	--	--	--	SSC													●
	coastal California gnatcatcher	<i>Polioptila californica californica</i>	FT	--	--	SSC					●							●	●
	Cooper's hawk	<i>Accipiter cooperii</i>	--	--	--	WL	●	●	●	●	●	●		●	●	●		●	●
	Crissal thrasher	<i>Toxostoma crissale</i>	--	--	--	SSC									●			●	
	double-crested cormorant	<i>Phalacrocorax auritus</i>	--	--	--	WL				●	●		●						●
	elf owl	<i>Micrathene whitneyi</i>	--	CE	--	--									●			●	
	ferruginous hawk	<i>Buteo regalis</i>	--	--	--	WL			●	●	●	●			●			●	●
	fulvous whistling-duck	<i>Dendrocygna bicolor</i>	--	--	--	SSC					●								
	Gila woodpecker	<i>Melanerpes uropygialis</i>	--	CE	--	--									●			●	
	gilded flicker	<i>Colaptes chrysoides</i>	--	CE	--	--									●			●	
	golden eagle	<i>Aquila chrysaetos</i>	--	--	--	FP; WL	●		●	●	●	●	●	●	●	●	●	●	●
	grasshopper sparrow	<i>Ammodramus savannarum</i>	--	--	--	SSC	●			●	●	●							●
	gray vireo	<i>Vireo vicinior</i>	--	--	--	SSC			●					●	●				
	gray-headed junco	<i>Junco hyemalis caniceps</i>	--	--	--	WL									●			●	
	great gray owl	<i>Strix nebulosa</i>	--	CE	--	--			●				●			●			
	greater sage-grouse	<i>Centrocercus urophasianus</i>	--	--	--	SSC							●	●			●		
	greater sandhill crane	<i>Antigone canadensis tabida</i>	--	CT	--	FP		●	●		●		●	●		●	●		
	gull-billed tern	<i>Gelochelidon nilotica</i>	--	--	--	SSC												●	
	harlequin duck	<i>Histrionicus histrionicus</i>	--	--	--	SSC			●										
	hepatic tanager	<i>Piranga flava</i>	--	--	--	WL									●			●	

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Common Name	Scientific Name																		
San Pablo song sparrow	Melospiza melodia samuelis	--	--	--	SSC	●			●										
Scripps's murrelet	Synthliboramphus scrippsi	FC	CT	--	--														●
sharp-shinned hawk	Accipiter striatus	--	--	--	WL	●		●	●										
short-eared owl	Asio flammeus	--	--	--	SSC				●	●		●		●					●
song sparrow ("Modesto" population)	Melospiza melodia	--	--	--	SSC					●									
Sonoran yellow warbler	Setophaga petechia sonorana	--	--	--	SSC														●
southern California rufous-crowned sparrow	Aimophila ruficeps canescens	--	--	--	WL				●		●								●
southwestern willow flycatcher	Empidonax traillii extimus	FE	CE	--	--			●	●		●		●	●					●
Suisun song sparrow	Melospiza melodia maxillaris	--	--	--	SSC				●	●									
summer tanager	Piranga rubra	--	--	--	SSC			●					●	●					●
Swainson's hawk	Buteo swainsoni	--	CT	--	--			●	●	●		●	●	●		●			●
tricolored blackbird	Agelaius tricolor	--	CT	--	SSC	●		●	●	●	●	●	●	●	●				●
vermillion flycatcher	Pyrocephalus rubinus	--	--	--	SSC								●	●					●
Virginia's warbler	Oreothlypis virginiae	--	--	--	WL								●	●					
western snowy plover	Charadrius alexandrinus nivosus	FT	--	--	SSC	●			●	●		●	●	●		●			●
western yellow-billed cuckoo	Coccyzus americanus occidentalis	FT	CE	--	--	●	●	●	●	●		●	●	●					●
white-faced ibis	Plegadis chihi	--	--	--	WL					●		●		●					●
white-tailed kite	Elanus leucurus	--	--	--	FP	●			●	●									●
willow flycatcher	Empidonax traillii	--	CE	--	--		●	●		●		●	●		●				
yellow rail	Coturnicops noveboracensis	--	--	--	SSC	●	●	●	●	●			●		●	●			●
yellow warbler	Setophaga petechia	--	--	--	SSC			●	●	●	●		●	●	●				●
yellow-breasted chat	Icteria virens	--	--	--	SSC			●	●	●			●	●	●				●

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Common Name	Scientific Name																		
hardhead	<i>Mylopharodon conocephalus</i>	--	--	--	SSC		●	●	●	●		●			●				
Kern brook lamprey	<i>Entosphenus hubbsi</i>	--	--	--	SSC					●									
Kern River rainbow trout	<i>Oncorhynchus mykiss gilberti</i>	--	--	--	SSC			●											
Klamath largescale sucker	<i>Catostomus snyderi</i>	--	--	--	SSC							●							
Klamath River lamprey	<i>Entosphenus similis</i>	--	--	--	SSC							●			●				
Lahontan cutthroat trout	<i>Oncorhynchus clarkii henshawi</i>	FT	--	--	--			●					●						
Little Kern golden trout	<i>Oncorhynchus mykiss whitei</i>	FT	--	--	--			●											
Long Valley speckled dace	<i>Rhinichthys osculus</i> ssp. 5	--	--	--	SSC								●						
longfin smelt	<i>Spirinchus thaleichthys</i>	FC	CT	--	--	●			●	●									
Lost River sucker	<i>Deltistes luxatus</i>	FE	CE	--	FP							●							
Lower Klamath marbled sculpin	<i>Cottus klamathensis polyporus</i>	--	--	--	SSC	●						●			●				
McCloud River redband trout	<i>Oncorhynchus mykiss</i> ssp. 2	--	--	--	SSC		●								●				
Modoc sucker	<i>Catostomus microps</i>	FD	CE	--	FP							●							
Mohave tui chub	<i>Siphateles bicolor mohavensis</i>	FE	CE	--	FP						●			●			●	●	
Monterey roach	<i>Lavinia symmetricus subditus</i>	--	--	--	SSC				●										
mountain sucker	<i>Catostomus platyrhynchus</i>	--	--	--	SSC			●					●						
Navarro roach	<i>Lavinia symmetricus navarroensis</i>	--	--	--	SSC	●			●										
northern California brook lamprey	<i>Entosphenus folletti</i>	--	--	--	SSC							●							
Owens pupfish	<i>Cyprinodon radiosus</i>	FE	CE	--	FP								●	●					
Owens speckled dace	<i>Rhinichthys osculus</i> ssp. 2	--	--	--	SSC								●	●					
Owens sucker	<i>Catostomus fumeiventris</i>	--	--	--	SSC			●					●						
Owens tui chub	<i>Siphateles bicolor snyderi</i>	FE	CE	--	--								●	●					

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Common Name	Scientific Name																	
steelhead - south-central California coast DPS	<i>Oncorhynchus mykiss irideus</i> pop. 9	FT	--	--	--	●			●									
steelhead - southern California DPS	<i>Oncorhynchus mykiss irideus</i> pop. 10	FE	--	--	--				●		●							●
summer-run steelhead trout	<i>Oncorhynchus mykiss irideus</i> pop. 36	--	CCE	--	SSC	●									●			
tidewater goby	<i>Eucyclogobius newberryi</i>	FE	--	--	SSC	●			●									●
Tomales roach	<i>Lavinia symmetricus</i> ssp. 2	--	--	--	SSC	●			●									
unarmored threespine stickleback	<i>Gasterosteus aculeatus williamsoni</i>	FE	CE	--	FP				●		●						●	●
Upper Klamath marbled sculpin	<i>Cottus klamathensis klamathensis</i>	--	--	--	SSC							●						
Insects																		
Bay checkerspot butterfly	<i>Euphydryas editha bayensis</i>	FT	--	--	--				●									
Behren's silverspot butterfly	<i>Speyeria zerene behrensii</i>	FE	--	--	--	●												
callippe silverspot butterfly	<i>Speyeria callippe callippe</i>	FE	--	--	--				●	●								
Carson wandering skipper	<i>Pseudocopa eodes eunus obscurus</i>	FE	--	--	--								●					
Casey's June beetle	<i>Dinacoma caseyi</i>	FE	--	--	--												●	
Crotch bumble bee	<i>Bombus crotchii</i>	--	CCE	--	--	●		●	●	●	●	●		●	●		●	●
Delhi Sands flower-loving fly	<i>Rhaphiomidas terminatus abdominalis</i>	FE	--	--	--													●
Delta green ground beetle	<i>Elaphrus viridis</i>	FT	--	--	--				●	●								
El Segundo blue butterfly	<i>Euphilotes battoides allyni</i>	FE	--	--	--													●
Franklin's bumble bee	<i>Bombus franklini</i>	--	CCE	--	--		●					●			●			
Hermes copper butterfly	<i>Lycaena hermes</i>	FC	--	--	--						●							●

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	Kern primrose sphinx moth	<i>Euproserpinus euterpe</i>	FT	--	--	--			●	●										
	Laguna Mountains skipper	<i>Pyrgus ruralis lagunae</i>	FE	--	--	--						●								
	Lange's metalmark butterfly	<i>Apodemia mormo langei</i>	FE	--	--	--					●									
	lotis blue butterfly	<i>Plebejus idas lotis</i>	FE	--	--	--	●													
	Mission blue butterfly	<i>Plebejus icarioides missionensis</i>	FE	--	--	--	●			●										
	Mount Hermon (=barbate) June beetle	<i>Polyphylla barbata</i>	FE	--	--	--	●													
	Myrtle's silverspot butterfly	<i>Speyeria zerene myrtleae</i>	FE	--	--	--	●			●										
	Nevaris Spring naucorid bug	<i>Ambrysus funebris</i>	FC	--	--	--									●					
	Ohlone tiger beetle	<i>Cicindela ohlone</i>	FE	--	--	--	●			●										
	Oregon silverspot butterfly	<i>Speyeria zerene hippolyta</i>	FT	--	--	--	●													
	Palos Verdes blue butterfly	<i>Glaucopsyche lygdamus palosverdesensis</i>	FE	--	--	--														●
	quino checkerspot butterfly	<i>Euphydryas editha quino</i>	FE	--	--	--						●							●	●
	San Bruno elfin butterfly	<i>Callophrys mossii bayensis</i>	FE	--	--	--	●			●										
	Smith's blue butterfly	<i>Euphilotes enoptes smithi</i>	FE	--	--	--	●			●										
	Suckley's cuckoo bumble bee	<i>Bombus suckleyi</i>	--	CCE	--	--		●								●				
	valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	FT	--	--	--			●	●	●									
	western bumble bee	<i>Bombus occidentalis</i>	--	CCE	--	--	●	●	●	●	●	●	●		●	●		●		
	Zayante band-winged grasshopper	<i>Trimerotropis infantilis</i>	FE	--	--	--	●													
Mammals																				
	Alameda Island mole	<i>Scapanus latimanus parvus</i>	--	--	--	SSC				●										
	Amargosa vole	<i>Microtus californicus scirpensis</i>	FE	CE	--	--									●					

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Common Name	Scientific Name																		
Los Angeles pocket mouse	<i>Perognathus longimembris brevinasus</i>	--	--	--	SSC						●						●	●	
Marysville California kangaroo rat	<i>Dipodomys californicus eximius</i>	--	--	--	SSC					●									
Mexican long-tongued bat	<i>Choeronycteris mexicana</i>	--	--	--	SSC														●
Mohave ground squirrel	<i>Xerospermophilus mohavensis</i>	--	CT	--	--			●						●					
Mohave river vole	<i>Microtus californicus mohavensis</i>	--	--	--	SSC									●					
Monterey dusky-footed woodrat	<i>Neotoma macrotis luciana</i>	--	--	--	SSC				●										
Monterey shrew	<i>Sorex ornatus salarius</i>	--	--	--	SSC				●										
Morro Bay kangaroo rat	<i>Dipodomys heermanni morroensis</i>	FE	CE	--	FP				●										
Mount Lyell shrew	<i>Sorex lyelli</i>	--	--	--	SSC			●					●						
Nelson's antelope squirrel	<i>Ammospermophilus nelsoni</i>	--	CT	--	--				●	●				●					
northwestern San Diego pocket mouse	<i>Chaetodipus fallax fallax</i>	--	--	--	SSC														●
Oregon snowshoe hare	<i>Lepus americanus klamathensis</i>	--	--	--	SSC		●								●	●			
Owens Valley vole	<i>Microtus californicus vallicola</i>	--	--	--	SSC			●					●	●					
Pacific pocket mouse	<i>Perognathus longimembris pacificus</i>	FE	--	--	SSC														●
pallid bat	<i>Antrozous pallidus</i>	--	--	--	SSC	●	●	●	●	●	●	●	●	●	●	●	●	●	●
pallid San Diego pocket mouse	<i>Chaetodipus fallax pallidus</i>	--	--	--	SSC						●			●			●	●	
Palm Springs pocket mouse	<i>Perognathus longimembris bangsi</i>	--	--	--	SSC									●			●		
Palm Springs round-tailed ground squirrel	<i>Xerospermophilus tereticaudus chlorus</i>	--	--	--	SSC												●	●	
Peninsular bighorn sheep DPS	<i>Ovis canadensis nelsoni</i> pop. 2	FE	CT	--	FP												●		

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Common Name	Scientific Name																		
Santa Catalina Island fox	<i>Urocyon littoralis catalinae</i>	FT	CT	--	--														●
Santa Catalina shrew	<i>Sorex ornatus willetti</i>	--	--	--	SSC														●
Santa Cruz Island fox	<i>Urocyon littoralis santacruzae</i>	FD	CT	--	--														●
Santa Rosa Island fox	<i>Urocyon littoralis santarosae</i>	FD	CT	--	--														●
short-nosed kangaroo rat	<i>Dipodomys nitratoides brevinasus</i>	--	--	--	SSC				●	●									
Sierra Nevada bighorn sheep	<i>Ovis canadensis sierrae</i>	FE	CE	--	FP			●				●							
Sierra Nevada mountain beaver	<i>Aplodontia rufa californica</i>	--	--	--	SSC		●	●	●				●						
Sierra Nevada red fox	<i>Vulpes vulpes necator</i>	FC	CT	--	--		●	●	●			●	●		●				
Sierra Nevada snowshoe hare	<i>Lepus americanus tahoensis</i>	--	--	--	SSC		●	●											
Sonoma tree vole	<i>Arborimus pomo</i>	--	--	--	SSC	●			●						●				
south coast marsh vole	<i>Microtus californicus stephensi</i>	--	--	--	SSC						●								●
southern California saltmarsh shrew	<i>Sorex ornatus salicornicus</i>	--	--	--	SSC														●
southern grasshopper mouse	<i>Onychomys torridus ramona</i>	--	--	--	SSC						●			●			●	●	
southern sea otter	<i>Enhydra lutris nereis</i>	FT	--	--	FP														●
southwestern river otter	<i>Lontra canadensis sonora</i>	--	--	--	SSC									●					
spotted bat	<i>Euderma maculatum</i>	--	--	--	SSC		●	●	●				●	●	●		●	●	
Stephens' kangaroo rat	<i>Dipodomys stephensi</i>	FE	CT	--	--						●								●
Suisun shrew	<i>Sorex ornatus sinuosus</i>	--	--	--	SSC				●	●									
Tehachapi pocket mouse	<i>Perognathus alticola inexpectatus</i>	--	--	--	SSC			●			●			●					
Tipton kangaroo rat	<i>Dipodomys nitratoides nitratoides</i>	FE	CE	--	--				●	●									
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	--	--	--	SSC	●	●	●	●	●	●	●	●	●	●		●	●	

Wildlife		Status				USGS Ecoregions													
Appendix E	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85	
						Coast Range	Cascades	Sierra Nevada	Central California Foothills and Coastal Mountains	Central California Valley	Southern California Mountains	Eastern Cascades Slopes and Foothills	Central Basin and Range	Mojave Basin and Range	Klamath Mountains/California High North Coast Range	Northern Basin and Range	Sonoran Basin and Range	Southern California/Northern Baja Coast	
Common Name	Scientific Name																		
Coachella Valley fringe-toed lizard	<i>Uma inornata</i>	FT	CE	--	--						●						●		
coast horned lizard	<i>Phrynosoma blainvillii</i>	--	--	--	SSC		●	●	●	●	●			●			●	●	
coast patch-nosed snake	<i>Salvadora hexalepis virgultea</i>	--	--	--	SSC				●		●							●	
coastal whiptail	<i>Aspidoscelis tigris stejnegeri</i>	--	--	--	SSC						●						●	●	
Colorado Desert fringe-toed lizard	<i>Uma notata</i>	--	--	--	SSC												●		
Cope's leopard lizard	<i>Gambelia copeii</i>	--	--	--	SSC														●
Coronado skink	<i>Plestiodon skiltonianus interparietalis</i>	--	--	--	WL						●								●
desert tortoise	<i>Gopherus agassizii</i>	FT	CT	--	--			●					●	●			●		
flat-tailed horned lizard	<i>Phrynosoma mcallii</i>	--	--	--	SSC												●		
giant gartersnake	<i>Thamnophis gigas</i>	FT	CT	--	--				●	●									
green turtle	<i>Chelonia mydas</i>	FT	--	--	--														●
island night lizard	<i>Xantusia riversiana</i>	FD	--	--	--														●
Mojave fringe-toed lizard	<i>Uma scoparia</i>	--	--	--	SSC									●			●		
northern California legless lizard	<i>Anniella pulchra</i>	--	--	--	SSC			●	●	●	●			●					●
orange-throated whiptail	<i>Aspidoscelis hyperythra</i>	--	--	--	WL						●						●	●	
Panamint alligator lizard	<i>Elgaria panamintina</i>	--	--	--	SSC								●	●					
red-diamond rattlesnake	<i>Crotalus ruber</i>	--	--	--	SSC						●			●			●	●	
regal ringneck snake	<i>Diadophis punctatus regalis</i>	--	--	--	SSC									●					
San Diego banded gecko	<i>Coleonyx variegatus abbotti</i>	--	--	--	SSC														●
San Francisco gartersnake	<i>Thamnophis sirtalis tetrataenia</i>	FE	CE	--	FP	●			●										
San Joaquin coachwhip	<i>Masticophis flagellum ruddocki</i>	--	--	--	SSC				●	●									
sandstone night lizard	<i>Xantusia gracilis</i>	--	--	--	SSC												●		

Wildlife		Status				USGS Ecoregions												
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Sierra night lizard	<i>Xantusia vigilis sierrae</i>	--	--	--	SSC				●	●								
Sonoran mud turtle	<i>Kinosternon sonoriense</i>	--	--	--	SSC												●	
south coast gartersnake	<i>Thamnophis sirtalis</i> pop. 1	--	--	--	SSC						●							●
southern California legless lizard	<i>Anniella stebbinsi</i>	--	--	--	SSC			●	●	●	●			●			●	●
southern rubber boa	<i>Charina umbratica</i>	--	CT	--	--						●							
southern Sierra legless lizard	<i>Anniella campi</i>	--	--	--	SSC			●	●									
Temblor legless lizard	<i>Anniella alexanderae</i>	--	--	--	SSC				●	●								
two-striped gartersnake	<i>Thamnophis hammondi</i>	--	--	--	SSC			●	●	●	●						●	●
western pond turtle	<i>Emys marmorata</i>	--	--	--	SSC	●	●	●	●	●	●	●		●	●			●

Federal:

- FE = federal endangered
- FT = federal threatened
- FC = federal candidate
- PT = proposed threatened
- PFD = proposed for delisting
- FD = delisted

California:

- CE = California state endangered
- CT = California state threatened
- SSC = California species of special Concern
- WL = California Watch List
- CFP = California fully protected
- CCT = California state threatened candidate
- CCE = California state endangered candidate

Source: CNDDDB 2019; USFWS 2019

Plants

Plants		Status				USGS Ecoregions													
Appendix E	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85	
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Common Name	Scientific Name																		
Anthony Peak lupine	Lupinus antoninus	--	--	1B.2	--										●				
Antioch Dunes buckwheat	Eriogonum nudum var. psychicola	--	--	1B.1	--					●									
Antioch Dunes evening-primrose	Oenothera deltoides ssp. howellii	FE	CE	1B.1	--				●	●									
aphanisma	Aphanisma blitoides	--	--	1B.2	--				●										●
Applegate stonecrop	Sedum oblanceolatum	--	--	1B.1	--										●				
Arburua Ranch jewelflower	Streptanthus insignis ssp. lyonii	--	--	1B.2	--				●										
arctic starflower	Lysimachia europaea	--	--	2B.2	--	●													
arcuate bush-mallow	Malacothamnus arcuatus	--	--	1B.2	--	●			●										
Arizona carlowrightia	Carlowrightia arizonica	--	--	2B.2	--													●	
Arizona desert-thorn	Lycium exsertum	--	--	2B.1	--													●	
Arizona pholistoma	Pholistoma auritum var. arizonicum	--	--	2B.3	--									●				●	
Arizona pussypaws	Calyptridium arizonicum	--	--	2B.1	--													●	
Arizona spurge	Euphorbia arizonica	--	--	2B.3	--													●	
aromatic canyon gooseberry	Ribes menziesii var. ixoderme	--	--	1B.2	--			●	●										
Arroyo de la Cruz manzanita	Arctostaphylos cruzensis	--	--	1B.2	--				●										
Arroyo Seco bush-mallow	Malacothamnus palmeri var. lucianus	--	--	1B.2	--				●										
Ash Creek ivesia	Ivesia paniculata	--	--	1B.2	--							●							
Ash Meadows daisy	Enceliopsis nudicaulis var. corrugata	FT	--	# N/A	--									●					
Ash Meadows gumplant	Grindelia fraxinipratensis	FT	--	1B.2	--									●					
Ash Valley milk-vetch	Astragalus anxius	--	--	1B.3	--							●							
ash-gray paintbrush	Castilleja cinerea	FT	--	1B.2	--						●								
Ashland thistle	Cirsium ciliolatum	--	CE	2B.1	--							●							

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Common Name	Scientific Name																		
Austin's astragalus	<i>Astragalus austiniae</i>	--	--	1B.3	--			●											
Aven Nelson's phacelia	<i>Phacelia anelsonii</i>	--	--	2B.3	--									●			●		
Bailey's greasewood	<i>Sarcobatus baileyi</i>	--	--	2B.3	--								●	●					
Bailey's ivesia	<i>Ivesia baileyi</i> var. <i>baileyi</i>	--	--	2B.3	--			●					●			●			
Baja California birdbush	<i>Ornithostaphylos oppositifolia</i>	--	CE	2B.1	--														●
Baja California ipomopsis	<i>Ipomopsis effusa</i>	--	--	2B.1	--													●	
Baja navarretia	<i>Navarretia peninsularis</i>	--	--	1B.2	--			●			●								●
Baker's goldfields	<i>Lasthenia californica</i> ssp. <i>bakeri</i>	--	--	1B.2	--	●			●										
Baker's larkspur	<i>Delphinium bakeri</i>	FE	CE	1B.1	--	●			●										
Baker's manzanita	<i>Arctostaphylos bakeri</i> ssp. <i>bakeri</i>	--	CR	1B.1	--	●													
Baker's meadowfoam	<i>Limnanthes bakeri</i>	--	CR	1B.1	--				●						●				
Baker's navarretia	<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	--	--	1B.1	--		●		●	●					●				
Bakersfield cactus	<i>Opuntia basilaris</i> var. <i>treleasei</i>	FE	CE	1B.1	--				●	●									
Bakersfield smallscale	<i>Atriplex tularensis</i>	--	CE	1A	--					●									
bald daisy	<i>Erigeron calvus</i>	--	--	1B.1	--								●						
Bald Mountain milk-vetch	<i>Astragalus umbraticus</i>	--	--	2B.3	--	●									●				
Baldwin Lake linanthus	<i>Linanthus killipii</i>	--	--	1B.2	--						●								
bare-stem larkspur	<i>Delphinium scaposum</i>	--	--	2B.3	--													●	
Barneby's beardtongue	<i>Penstemon barnebyi</i>	--	--	2B.1	--								●						
Barneby's phacelia	<i>Phacelia barnebyana</i>	--	--	2B.3	--								●	●					
Barron's buckwheat	<i>Eriogonum spectabile</i>	--	--	1B.2	--		●												
Barstow woolly sunflower	<i>Eriophyllum mohavense</i>	--	--	1B.2	--			●						●					

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	Barton Flats horkelia	<i>Horkelia wilderae</i>	--	--	1B.1	--						●								
	beach goldenaster	<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>	--	--	1B.1	--														●
	beach layia	<i>Layia carnosa</i>	FE	CE	1B.1	--	●			●										
	beach spectaclepod	<i>Dithyrea maritima</i>	--	CT	1B.1	--				●										●
	beaked clarkia	<i>Clarkia rostrata</i>	--	--	1B.3	--			●	●	●									
	beaked tracyina	<i>Tracyina rostrata</i>	--	--	1B.2	--				●						●				
	Bear Lake buckwheat	<i>Eriogonum microthecum</i> var. <i>lacus-ursi</i>	--	--	1B.1	--						●								
	Bear Valley checkerbloom	<i>Sidalcea malviflora</i> ssp. <i>dolosa</i>	--	--	1B.2	--						●								
	Bear Valley pyrrocoma	<i>Pyrrocoma uniflora</i> var. <i>gossypina</i>	--	--	1B.2	--						●								
	bearded popcornflower	<i>Plagiobothrys hystriculus</i>	--	--	1B.1	--				●	●									
	beautiful cholla	<i>Grusonia pulchella</i>	--	--	2B.2	--								●						
	beautiful cinquefoil	<i>Potentilla pulcherrima</i>	--	--	2B.2	--								●						
	beautiful sagebrush bluebells	<i>Mertensia oblongifolia</i> var. <i>amoena</i>	--	--	2B.2	--							●				●			
	Beaver Dam breadroot	<i>Pediomelum castoreum</i>	--	--	1B.2	--									●					
	Bebb's willow	<i>Salix bebbiana</i>	--	--	2B.3	--							●							
	Bellinger's meadowfoam	<i>Limnanthes floccosa</i> ssp. <i>bellingiana</i>	--	--	1B.2	--		●		●										
	Ben Lomond buckwheat	<i>Eriogonum nudum</i> var. <i>decurrens</i>	--	--	1B.1	--	●													
	Ben Lomond spineflower	<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	FE	--	1B.1	--	●													
	benioniella	<i>Benioniella oregona</i>	--	CR	1B.1	--	●									●				

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Common Name	Scientific Name																	
Cove's cassia	<i>Senna covesii</i>	--	--	2B.2	--						●			●			●	
Coville's purple mat	<i>Nama demissa</i> var. <i>covillei</i>	--	--	1B.3	--									●				
Coyote ceanothus	<i>Ceanothus ferrisiae</i>	FE	--	1B.1	--				●									
coyote gilia	<i>Aliciella triodon</i>	--	--	2B.2	--								●	●				
cream-flowered bladderwort	<i>Utricularia ochroleuca</i>	--	--	2B.2	--		●	●				●						
creamy blazing star	<i>Mentzelia tridentata</i>	--	--	1B.3	--									●			●	
crested potentilla	<i>Potentilla cristae</i>	--	--	1B.3	--										●			
crisp monardella	<i>Monardella undulata</i> ssp. <i>crispa</i>	--	--	1B.2	--				●									
cruciform evening-primrose	<i>Chylismia claviformis</i> ssp. <i>cruciformis</i>	--	--	2B.3	--							●	●			●		
Crystal Springs lessingia	<i>Lessingia arachnoidea</i>	--	--	1B.2	--	●			●									
Cuesta Pass checkerbloom	<i>Sidalcea hickmanii</i> ssp. <i>anomala</i>	--	CR	1B.2	--				●									
Cuesta Ridge thistle	<i>Cirsium occidentale</i> var. <i>lucianum</i>	--	--	1B.2	--				●									
Cunningham Marsh cinquefoil	<i>Potentilla uliginosa</i>	--	--	1A	--				●									
Cup Lake draba	<i>Draba asterophora</i> var. <i>macrocarpa</i>	--	--	1B.1	--			●										
curly herissantia	<i>Herissantia crispa</i>	--	--	2B.3	--												●	
currant-leaved desert mallow	<i>Sphaeralcea grossulariifolia</i>	--	--	2B.3	--								●			●		
curved-pod milk-vetch	<i>Astragalus mohavensis</i> var. <i>hemigyris</i>	--	--	1B.1	--									●				
curved-spine beavertail	<i>Opuntia xcurvispina</i>	--	--	2B.2	--									●				
Cushenbury buckwheat	<i>Eriogonum ovalifolium</i> var. <i>vineum</i>	FE	--	1B.1	--						●			●				
Cushenbury milk-vetch	<i>Astragalus albens</i>	FE	--	1B.1	--						●			●				

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Common Name	Scientific Name																	
Cushenbury oxytheca	<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>	FE	--	1B.1	--						●							
Cushenbury rose	<i>Rosa woodsii</i> var. <i>glabrata</i>	--	--	1B.1	--									●				
cushion townsendia	<i>Townsendia condensata</i>	--	--	2B.3	--								●					
Cusick's monkeyflower	<i>Diplacus cusickioides</i>	--	--	2B.3	--							●				●		
cut-leaf anemone	<i>Anemone multifida</i> var. <i>multifida</i>	--	--	2B.2	--		●	●							●			
cut-leaf checkerbloom	<i>Sidalcea multifida</i>	--	--	2B.3	--			●					●			●		
Cuyamaca Lake downingia	<i>Downingia concolor</i> var. <i>brevior</i>	--	CE	1B.1	--						●							
Cuyamaca larkspur	<i>Delphinium hesperium</i> ssp. <i>cuyamaca</i>	--	CR	1B.2	--						●							
dacite manzanita	<i>Arctostaphylos tomentosa</i> ssp. <i>daciticola</i>	--	--	1B.1	--				●									
dark-eyed gilia	<i>Gilia millefoliata</i>	--	--	1B.2	--	●			●									
Darlington's blazing star	<i>Mentzelia puberula</i>	--	--	2B.2	--									●			●	
Darwin Mesa milk-vetch	<i>Astragalus atratus</i> var. <i>mensanus</i>	--	--	1B.1	--									●				
Davidson's bush-mallow	<i>Malacothamnus davidsonii</i>	--	--	1B.2	--				●		●							●
Davidson's saltscale	<i>Atriplex serenana</i> var. <i>davidsonii</i>	--	--	1B.2	--				●									●
Dean's milk-vetch	<i>Astragalus deanei</i>	--	--	1B.1	--													●
Death Valley round-leaved phacelia	<i>Phacelia mustelina</i>	--	--	1B.3	--									●				
Death Valley sandpaper-plant	<i>Petalonyx thurberi</i> ssp. <i>gilmanii</i>	--	--	1B.3	--									●				
decumbent goldenbush	<i>Isocoma menziesii</i> var. <i>decumbens</i>	--	--	1B.2	--													●
Dedecker's clover	<i>Trifolium dedeckerae</i>	--	--	1B.3	--			●					●	●				

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Common Name	Scientific Name																		
Deep Canyon snapdragon	<i>Pseudorontium cyathiferum</i>	--	--	2B.3	--												●		
deep-scarred cryptantha	<i>Cryptantha excavata</i>	--	--	1B.1	--				●						●				
Del Mar manzanita	<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	FE	--	1B.1	--														●
Del Mar Mesa sand aster	<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	--	--	1B.1	--														●
Del Norte buckwheat	<i>Eriogonum nudum</i> var. <i>paralinum</i>	--	--	2B.2	--	●													
Del Norte pyrrocoma	<i>Pyrrocoma racemosa</i> var. <i>congesta</i>	--	--	2B.3	--	●									●				
delicate bluecup	<i>Githopsis tenella</i>	--	--	1B.3	--			●	●										
delicate clarkia	<i>Clarkia delicata</i>	--	--	1B.2	--						●								●
Delta button-celery	<i>Eryngium racemosum</i>	--	CE	1B.1	--				●	●									
Delta mudwort	<i>Limosella australis</i>	--	--	2B.1	--					●									
Delta tule pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	--	--	1B.2	--				●	●									
depressed wild buckwheat	<i>Eriogonum ovalifolium</i> var. <i>depressum</i>	--	--	2B.1	--		●												
desert ageratina	<i>Ageratina herbacea</i>	--	--	2B.3	--									●					
desert beardtongue	<i>Penstemon pseudospectabilis</i> ssp. <i>pseudospectabilis</i>	--	--	2B.2	--									●			●		
desert beauty	<i>Linanthus bellus</i>	--	--	2B.1	--						●						●	●	
desert bedstraw	<i>Galium proliferum</i>	--	--	2B.2	--									●					●
desert cymopterus	<i>Cymopterus deserticola</i>	--	--	1B.2	--									●					
desert germander	<i>Teucrium glandulosum</i>	--	--	2B.3	--												●		
desert green-gentian	<i>Frasera albomarginata</i> var. <i>albomarginata</i>	--	--	2B.2	--									●					

Plants		Status				USGS Ecoregions														
Appendix E	Common Name	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85	
							Coast Range	Cascades	Sierra Nevada	Central California Foothills and Coastal Mountains	Central California Valley	Southern California Mountains	Eastern Cascades Slopes and Foothills	Central Basin and Range	Mojave Basin and Range	Klamath Mountains/California High North Coast Range	Northern Basin and Range	Sonoran Basin and Range	Southern California/Northern Baja Coast	
	forked buckwheat	<i>Eriogonum bifurcatum</i>	--	--	1B.2	--									●					
	forked hare-leaf	<i>Lagophylla dichotoma</i>	--	--	1B.1	--				●	●									
	forked purple mat	<i>Nama dichotoma</i> var. <i>dichotoma</i>	--	--	2B.3	--									●					
	Fort Ord spineflower	<i>Chorizanthe minutiflora</i>	--	--	1B.2	--														
	Fort Tejon woolly sunflower	<i>Eriophyllum lanatum</i> var. <i>hallii</i>	--	--	1B.1	--			●			●								
	fountain thistle	<i>Cirsium fontinale</i> var. <i>fontinale</i>	FE	CE	1B.1	--														
	foxtail thelypodium	<i>Thelypodium integrifolium</i> ssp. <i>complanatum</i>	--	--	2B.2	--								●	●			●		
	Franciscan manzanita	<i>Arctostaphylos franciscana</i>	FE	--	1B.1	--														
	Franciscan thistle	<i>Cirsium andrewsii</i>	--	--	1B.2	--	●													
	Freed's jewelflower	<i>Streptanthus brachiatus</i> ssp. <i>hoffmanii</i>	--	--	1B.2	--														
	Fremont barberry	<i>Berberis fremontii</i>	--	--	2B.3	--									●					
	Fremont's gentian	<i>Gentiana fremontii</i>	--	--	2B.3	--						●								
	frog's-bit buttercup	<i>Ranunculus hydrocharoides</i>	--	--	2B.1	--			●					●						
	frosted mint	<i>Poliomintha incana</i>	--	--	2A	--						●								
	Gabilan Mountains manzanita	<i>Arctostaphylos gabilanensis</i>	--	--	1B.2	--														
	Galena Creek rockcress	<i>Arabis rigidissima</i> var. <i>demota</i>	--	--	1B.2	--			●											
	Gambel's water cress	<i>Nasturtium gambelii</i>	FE	CT	1B.1	--														●
	Gander's cryptantha	<i>Cryptantha ganderi</i>	--	--	1B.1	--													●	
	Gander's pitcher sage	<i>Lepechinia ganderi</i>	--	--	1B.3	--														●
	Gander's ragwort	<i>Packera ganderi</i>	--	CR	1B.2	--						●								●
	Gasquet rose	<i>Rosa gymnocarpa</i> var. <i>serpentina</i>	--	--	1B.3	--		●								●				

Plants		Status				USGS Ecoregions													
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Common Name	Scientific Name																		
Gaviota tarplant	<i>Deinandra increscens</i> ssp. <i>villosa</i>	FE	CE	1B.1	--				●										●
Gerry's curly-leaved monardella	<i>Monardella sinuata</i> ssp. <i>gerryi</i>	--	--	1B.1	--														●
Geyer's milk-vetch	<i>Astragalus geyeri</i> var. <i>geyeri</i>	--	--	2B.2	--								●	●		●			
ghost-pipe	<i>Monotropa uniflora</i>	--	--	2B.2	--	●									●				
giant spanish-needle	<i>Palafoxia arida</i> var. <i>gigantea</i>	--	--	1B.3	--													●	
Gilman's buckwheat	<i>Eriogonum gilmanii</i>	--	--	1B.3	--									●					
Gilman's cymopterus	<i>Cymopterus gilmanii</i>	--	--	2B.3	--									●					
Gilman's goldenbush	<i>Ericameria gilmanii</i>	--	--	1B.3	--			●					●	●					
Gilman's milk-vetch	<i>Astragalus gilmanii</i>	--	--	1B.2	--									●					
glandular ditaxis	<i>Ditaxis claryana</i>	--	--	2B.2	--									●				●	
glandular western flax	<i>Hesperolinon adenophyllum</i>	--	--	1B.2	--				●						●				
globose cymopterus	<i>Cymopterus globosus</i>	--	--	2B.2	--								●						
golden alpine draba	<i>Draba aureola</i>	--	--	1B.3	--		●								●				
golden larkspur	<i>Delphinium luteum</i>	FE	CR	1B.1	--				●										
golden violet	<i>Viola purpurea</i> ssp. <i>aurea</i>	--	--	2B.2	--			●					●						
golden-carpet gilmania	<i>Gilmania luteola</i>	--	--	1B.3	--									●					
golden-spined cereus	<i>Bergerocactus emoryi</i>	--	--	2B.2	--														●
Goodding's phacelia	<i>Phacelia pulchella</i> var. <i>gooddingii</i>	--	--	2B.2	--									●					
Graham fishhook cactus	<i>Mammillaria grahamii</i> var. <i>grahamii</i>	--	--	2B.2	--													●	
gravel milk-vetch	<i>Astragalus sabulorum</i>	--	--	2B.2	--									●				●	
Gray's lomatium	<i>Lomatium grayi</i>	--	--	2B.3	--							●				●			
Great Basin claytonia	<i>Claytonia umbellata</i>	--	--	2B.3	--			●					●						

Plants		Status				USGS Ecoregions												
Common Name	Scientific Name	Federal	State	CRPR	Other CDFW	1 Coast Range	4 Cascades	5 Sierra Nevada	6 Central California Foothills and Coastal Mountains	7 Central California Valley	8 Southern California Mountains	9 Eastern Cascades Slopes and Foothills	13 Central Basin and Range	14 Mojave Basin and Range	78 Klamath Mountains/California High North Coast Range	80 Northern Basin and Range	81 Sonoran Basin and Range	85 Southern California/Northern Baja Coast
horned butterwort	<i>Pinguicula macroceras</i>	--	--	2B.2	--	●									●			
horned dandelion	<i>Taraxacum ceratophorum</i>	--	--	2B.1	--								●					
Horn's milk-vetch	<i>Astragalus hornii</i> var. <i>hornii</i>	--	--	1B.1	--					●	●			●				●
Hospital Canyon larkspur	<i>Delphinium californicum</i> ssp. <i>interius</i>	--	--	1B.2	--				●									
Howell's jewelflower	<i>Streptanthus howellii</i>	--	--	1B.2	--	●									●			
Howell's montia	<i>Montia howellii</i>	--	--	2B.2	--	●									●			
Howell's sandwort	<i>Sabulina howellii</i>	--	--	1B.3	--	●									●			
Howell's spineflower	<i>Chorizanthe howellii</i>	FE	CT	1B.2	--	●												
Howell's tauschia	<i>Tauschia howellii</i>	--	--	1B.3	--			●							●			
Howell's thelypodium	<i>Thelypodium howellii</i> ssp. <i>howellii</i>	--	--	1B.2	--		●					●				●		
Howell's violet	<i>Viola howellii</i>	--	--	2B.2	--										●			
Howe's hedgehog cactus	<i>Echinocereus engelmannii</i> var. <i>howei</i>	--	--	1B.1	--									●				
Humboldt Bay owl's-clover	<i>Castilleja ambigua</i> var. <i>humboldtiensis</i>	--	--	1B.2	--	●			●									
Humboldt County milk-vetch	<i>Astragalus agnicidus</i>	--	CE	1B.1	--	●									●			
Hutchinson's larkspur	<i>Delphinium hutchinsoniae</i>	--	--	1B.2	--				●									
Indian Knob mountainbalm	<i>Eriodictyon altissimum</i>	FE	CE	1B.1	--				●									
Indian Valley bush-mallow	<i>Malacothamnus aboriginum</i>	--	--	1B.2	--				●	●								
Indian Valley spineflower	<i>Aristocapsa insignis</i>	--	--	1B.2	--				●									
inflated Cima milk-vetch	<i>Astragalus cimae</i> var. <i>sufflatus</i>	--	--	1B.3	--								●	●				
intermediate monardella	<i>Monardella hypoleuca</i> ssp. <i>intermedia</i>	--	--	1B.3	--						●							●

Plants		Status				USGS Ecoregions													
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							Coast Range	Cascades	Sierra Nevada	Central California Foothills and Coastal Mountains	Central California Valley	Southern California Mountains	Eastern Cascades Slopes and Foothills	Central Basin and Range	Mojave Basin and Range	Klamath Mountains/California High North Coast Range	Northern Basin and Range	Sonoran Basin and Range	Southern California/Northern Baja Coast
	Jacumba milk-vetch	<i>Astragalus douglasii</i> var. <i>perstrictus</i>	--	--	1B.2	--						●						●	●
	Jacumba Mountains linanthus	<i>Linanthus maculatus</i> ssp. <i>emaculatus</i>	--	--	1B.1	--												●	
	Jaeger's hesperidanthus	<i>Hesperidanthus jaegeri</i>	--	--	1B.2	--								●					
	Jaeger's ivesia	<i>Ivesia jaegeri</i>	--	--	1B.3	--									●				
	Jaeger's milk-vetch	<i>Astragalus pachypus</i> var. <i>jaegeri</i>	--	--	1B.1	--						●						●	●
	Jaeger's phacelia	<i>Phacelia perityloides</i> var. <i>jaegeri</i>	--	--	1B.3	--									●				
	Janish's beardtongue	<i>Penstemon janishiae</i>	--	--	2B.2	--			●				●						
	Jared's pepper-grass	<i>Lepidium jaredii</i> ssp. <i>jaredii</i>	--	--	1B.2	--					●								
	Jaynes Canyon buckwheat	<i>Eriogonum diclinum</i>	--	--	2B.3	--										●			
	Jennifer's monardella	<i>Monardella stoneana</i>	--	--	1B.2	--													●
	Jepson's coyote-thistle	<i>Eryngium jepsonii</i>	--	--	1B.2	--				●									
	Jepson's dodder	<i>Cuscuta jepsonii</i>	--	--	1B.2	--		●	●							●			
	Jepson's horkelia	<i>Horkelia daucifolia</i> var. <i>indicta</i>	--	--	1B.1	--		●		●						●			
	Jepson's leptosiphon	<i>Leptosiphon jepsonii</i>	--	--	1B.2	--	●			●									
	Jepson's milk-vetch	<i>Astragalus rattanii</i> var. <i>jepsonianus</i>	--	--	1B.2	--				●									
	Johnson's bee-hive cactus	<i>Sclerocactus johnsonii</i>	--	--	2B.2	--									●				
	Johnston's buckwheat	<i>Eriogonum microthecum</i> var. <i>johnstonii</i>	--	--	1B.3	--						●							
	Johnston's rockcress	<i>Boechera johnstonii</i>	--	--	1B.2	--						●							
	jointed buckwheat	<i>Eriogonum intrafractum</i>	--	--	1B.3	--									●				
	Jokerst's monardella	<i>Monardella australis</i> ssp. <i>jokerstii</i>	--	--	1B.1	--						●							●

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Common Name	Scientific Name																		
Lewis Rose's ragwort	<i>Packera eurycephala</i> var. <i>lewisrosei</i>	--	--	1B.2	--		●	●	●										
lilliput lupine	<i>Lupinus uncialis</i>	--	--	2B.2	--							●							
Lime Ridge eriastrum	<i>Eriastrum ertterae</i>	--	--	1B.1	--				●										
Lime Ridge navarretia	<i>Navarretia gowenii</i>	--	--	1B.1	--				●										
limestone beardtongue	<i>Penstemon calcareus</i>	--	--	1B.3	--								●	●					
limestone daisy	<i>Erigeron uncialis</i> var. <i>uncialis</i>	--	--	1B.2	--								●	●					
limestone monkeyflower	<i>Erythranthe calicicola</i>	--	--	1B.3	--								●	●					
Lincoln rockcress	<i>Boechera lincolnensis</i>	--	--	2B.3	--								●	●					
little cutleaf	<i>Hymenopappus filifolius</i> var. <i>nanus</i>	--	--	2B.3	--								●	●					
little hulsea	<i>Hulsea nana</i>	--	--	2B.3	--		●					●			●				
little purple monkeyflower	<i>Erythranthe purpurea</i>	--	--	1B.2	--						●								
Little San Bernardino Mtns. linanthus	<i>Linanthus maculatus</i> ssp. <i>maculatus</i>	--	--	1B.2	--						●			●				●	
Little Sur manzanita	<i>Arctostaphylos edmundsii</i>	--	--	1B.2	--				●										
little-leaf elephant tree	<i>Bursera microphylla</i>	--	--	2B.3	--													●	
little-leaved huckleberry	<i>Vaccinium scoparium</i>	--	--	2B.2	--		●								●				
Livermore tarplant	<i>Deinandra bacigalupii</i>	--	CE	1B.1	--				●										
lobed ground-cherry	<i>Physalis lobata</i>	--	--	2B.3	--									●					
Loch Lomond button-celery	<i>Eryngium constancei</i>	FE	CE	1B.1	--				●										
Loma Prieta hoita	<i>Hoita strobilina</i>	--	--	1B.1	--	●			●										
Lompoc yerba santa	<i>Eriodictyon capitatum</i>	FE	CR	1B.2	--				●										
long bluebells	<i>Mertensia longiflora</i>	--	--	2B.2	--		●					●					●		
Long Valley milk-vetch	<i>Astragalus johannis-howellii</i>	--	CR	1B.2	--			●					●						

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Common Name	Scientific Name																		
Mt. Diablo jewelflower	<i>Streptanthus hispidus</i>	--	--	1B.3	--				●										
Mt. Diablo manzanita	<i>Arctostaphylos auriculata</i>	--	--	1B.3	--				●										
Mt. Diablo phacelia	<i>Phacelia phacelioides</i>	--	--	1B.2	--				●										
Mt. Eddy draba	<i>Draba carnosula</i>	--	--	1B.3	--		●								●				
Mt. Eddy sky pilot	<i>Polemonium eddyense</i>	--	--	1B.2	--										●				
Mt. Gleason paintbrush	<i>Castilleja gleasoni</i>	--	CR	1B.2	--						●								
Mt. Hamilton coreopsis	<i>Leptosyne hamiltonii</i>	--	--	1B.2	--				●										
Mt. Hamilton jewelflower	<i>Streptanthus callistus</i>	--	--	1B.3	--				●										
Mt. Hamilton lomatium	<i>Lomatium observatorium</i>	--	--	1B.2	--				●										
Mt. Hamilton thistle	<i>Cirsium fontinale</i> var. <i>campylon</i>	--	--	1B.2	--				●										
Mt. Laguna aster	<i>Dieteria asteroides</i> var. <i>lagunensis</i>	--	CR	2B.1	--						●						●	●	
Mt. Patterson senecio	<i>Senecio pattersonensis</i>	--	--	1B.3	--			●					●						
Mt. Shasta sky pilot	<i>Polemonium pulcherrimum</i> var. <i>shastense</i>	--	--	1B.2	--		●								●				
Mt. Tamalpais bristly jewelflower	<i>Streptanthus glandulosus</i> ssp. <i>pulchellus</i>	--	--	1B.2	--	●			●										
Mt. Tamalpais manzanita	<i>Arctostaphylos montana</i> ssp. <i>montana</i>	--	--	1B.3	--	●			●										
Mt. Tamalpais thistle	<i>Cirsium hydrophilum</i> var. <i>vaseyi</i>	--	--	1B.2	--	●			●										
Mt. Tedoc leptosiphon	<i>Leptosiphon nuttallii</i> ssp. <i>howellii</i>	--	--	1B.3	--										●				
Mt. Vision ceanothus	<i>Ceanothus gloriosus</i> var. <i>porrectus</i>	--	--	1B.3	--	●													
Mt. Whitney draba	<i>Draba sharsmithii</i>	--	--	1B.3	--			●											
mud nama	<i>Nama stenocarpa</i>	--	--	2B.2	--					●	●						●	●	

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Muir's tarplant	<i>Carlquistia muirii</i>	--	--	1B.3	--			●	●									
munchkin dudleya	<i>Dudleya gnoma</i>	--	--	1B.1	--													●
Munro's desert mallow	<i>Sphaeralcea munroana</i>	--	--	2B.2	--			●										
Munz's cholla	<i>Cylindropuntia munzii</i>	--	--	1B.3	--												●	
Munz's sage	<i>Salvia munzii</i>	--	--	2B.2	--													●
Munz's tidy-tips	<i>Layia munzii</i>	--	--	1B.2	--				●	●								
naked-stemmed phacelia	<i>Phacelia gymnoclada</i>	--	--	2B.3	--								●					
Napa bluecurls	<i>Trichostema ruygtii</i>	--	--	1B.2	--				●									
Napa checkerbloom	<i>Sidalcea hickmanii</i> ssp. <i>napensis</i>	--	--	1B.1	--				●									
Napa false indigo	<i>Amorpha californica</i> var. <i>napensis</i>	--	--	1B.2	--	●			●									
narrow-leaf sandpaper-plant	<i>Petalonyx linearis</i>	--	--	2B.3	--									●			●	●
narrow-leaved cottonwood	<i>Populus angustifolia</i>	--	--	2B.2	--			●						●				
narrow-leaved psorothamnus	<i>Psorothamnus fremontii</i> var. <i>attenuatus</i>	--	--	2B.3	--									●			●	
narrow-leaved yerba santa	<i>Eriodictyon angustifolium</i>	--	--	2B.3	--									●				
Nelson's evening-primrose	<i>Eremothera minor</i>	--	--	2B.3	--								●			●		
Nevada daisy	<i>Erigeron eatonii</i> var. <i>nevadincola</i>	--	--	2B.3	--			●					●					
Nevada ninebark	<i>Physocarpus alternans</i>	--	--	2B.3	--								●	●				
Nevada oryctes	<i>Oryctes nevadensis</i>	--	--	2B.1	--								●	●				
Nevin's barberry	<i>Berberis nevinii</i>	FE	CE	1B.1	--						●							●
Nevin's woolly sunflower	<i>Constancea nevinii</i>	--	--	1B.3	--													●
New Mexico locust	<i>Robinia neomexicana</i>	--	--	2B.3	--									●				
Newberry's cinquefoil	<i>Potentilla newberryi</i>	--	--	2B.3	--		●					●						

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Common Name	Scientific Name																		
pallid manzanita	<i>Arctostaphylos pallida</i>	FT	CE	1B.1	--				●										
palmate-bracted bird's-beak	<i>Chloropyron palmatum</i>	FE	CE	1B.1	--				●	●									
Palmer's frankenia	<i>Frankenia palmeri</i>	--	--	2B.1	--														●
Palmer's goldenbush	<i>Ericameria palmeri</i> var. <i>palmeri</i>	--	--	1B.1	--														●
Palmer's jackass clover	<i>Wislizenia refracta</i> ssp. <i>palmeri</i>	--	--	2B.2	--												●		
Palmer's monardella	<i>Monardella palmeri</i>	--	--	1B.2	--				●										
Panamint daisy	<i>Enceliopsis covillei</i>	--	--	1B.2	--									●					
Panamint dudleya	<i>Dudleya saxosa</i> ssp. <i>saxosa</i>	--	--	1B.3	--									●					
Panamint Mountains bedstraw	<i>Galium hilendiae</i> ssp. <i>carneum</i>	--	--	1B.3	--									●					
Panamint Mountains buckwheat	<i>Eriogonum microthecum</i> var. <i>panamintense</i>	--	--	1B.3	--								●	●					
Panamint Mountains lupine	<i>Lupinus magnificus</i> var. <i>magnificus</i>	--	--	1B.2	--									●					
Panamint rock-goldenrod	<i>Cuniculotinus gramineus</i>	--	--	2B.3	--								●	●					
Panoche pepper-grass	<i>Lepidium jaredii</i> ssp. <i>album</i>	--	--	1B.2	--				●	●									
pappose tarplant	<i>Centromadia parryi</i> ssp. <i>parryi</i>	--	--	1B.2	--	●			●	●									
Parish's alumroot	<i>Heuchera parishii</i>	--	--	1B.3	--						●								
Parish's brittle-scale	<i>Atriplex parishii</i>	--	--	1B.1	--						●			●			●	●	
Parish's bush-mallow	<i>Malacothamnus parishii</i>	--	--	1A	--														●
Parish's chaenactis	<i>Chaenactis parishii</i>	--	--	1B.3	--						●								●
Parish's checkerbloom	<i>Sidalcea hickmanii</i> ssp. <i>parishii</i>	--	CR	1B.2	--			●	●		●								
Parish's club-cholla	<i>Grusonia parishii</i>	--	--	2B.2	--									●					
Parish's daisy	<i>Erigeron parishii</i>	FT	--	1B.1	--						●			●					
Parish's desert-thorn	<i>Lycium parishii</i>	--	--	2B.3	--												●	●	

Plants		Status				USGS Ecoregions														
Appendix E	Common Name	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85	
							Coast Range	Cascades	Sierra Nevada	Central California Foothills and Coastal Mountains	Central California Valley	Southern California Mountains	Eastern Cascades Slopes and Foothills	Central Basin and Range	Mojave Basin and Range	Klamath Mountains/California High North Coast Range	Northern Basin and Range	Sonoran Basin and Range	Southern California/Northern Baja Coast	
	perennial goldfields	<i>Lasthenia californica</i> ssp. <i>macrantha</i>	--	--	1B.2	--	●			●										
	Peruvian dodder	<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	--	--	2B.2	--				●	●									●
	Petaluma popcornflower	<i>Plagiobothrys mollis</i> var. <i>vestitus</i>	--	--	1A	--				●										
	Philbrick's malacothrix	<i>Malacothrix foliosa</i> ssp. <i>philbrickii</i>	--	--	1B.2	--														●
	Pickering's ivesia	<i>Ivesia pickeringii</i>	--	--	1B.2	--							●			●				
	Pierpoint Springs dudleya	<i>Dudleya cymosa</i> ssp. <i>costatifolia</i>	--	--	1B.2	--			●											
	pincushion navarretia	<i>Navarretia myersii</i> ssp. <i>myersii</i>	--	--	1B.1	--				●	●									
	Pine Hill ceanothus	<i>Ceanothus roderickii</i>	FE	CR	1B.1	--				●										
	Pine Hill flannelbush	<i>Fremontodendron decumbens</i>	FE	CR	1B.2	--			●	●										
	pine rose	<i>Rosa pinetorum</i>	--	--	1B.2	--	●			●										
	pink creamsacs	<i>Castilleja rubicundula</i> var. <i>rubicundula</i>	--	--	1B.2	--				●	●									
	pink fairy-duster	<i>Calliandra eriophylla</i>	--	--	2B.3	--														●
	pink Johnny-nip	<i>Castilleja ambigua</i> var. <i>insalutata</i>	--	--	1B.1	--				●										
	pink sand-verbena	<i>Abronia umbellata</i> var. <i>breviflora</i>	--	--	1B.1	--	●			●										
	pink teddy-bear cholla	<i>Cylindropuntia fosbergii</i>	--	--	1B.3	--														●
	pink-margined monkeyflower	<i>Erythranthe trinitensis</i>	--	--	1B.3	--										●				
	Pinnacles buckwheat	<i>Eriogonum nortonii</i>	--	--	1B.3	--				●										
	Pinyon Mesa buckwheat	<i>Eriogonum mensicola</i>	--	--	1B.3	--								●	●					
	pinyon rockcress	<i>Boechera dispar</i>	--	--	2B.3	--			●			●		●	●					
	Pinzl's rockcress	<i>Boechera pinzliae</i>	--	--	1B.3	--			●					●						

Plants		Status				USGS Ecoregions													
Appendix E	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85	
						Coast Range	Cascades	Sierra Nevada	Central California Foothills and Coastal Mountains	Central California Valley	Southern California Mountains	Eastern Cascades Slopes and Foothills	Central Basin and Range	Mojave Basin and Range	Klamath Mountains/California High North Coast Range	Northern Basin and Range	Sonoran Basin and Range	Southern California/Northern Baja Coast	
Common Name	Scientific Name																		
pygmy lotus	<i>Acmispon haydonii</i>	--	--	1B.3	--														
pygmy manzanita	<i>Arctostaphylos nummularia</i> ssp. <i>mendocinoensis</i>	--	--	1B.2	--	●													
pygmy pussypaws	<i>Calyptridium pygmaeum</i>	--	--	1B.2	--			●			●								
pyrola-leaved buckwheat	<i>Eriogonum pyrolifolium</i> var. <i>pyrolifolium</i>	--	--	2B.3	--		●												
rabbit-ear rockcress	<i>Boechera pendulina</i>	--	--	2B.1	--								●						
Raiche's manzanita	<i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i>	--	--	1B.1	--				●						●				
Raiche's red ribbons	<i>Clarkia concinna</i> ssp. <i>raichei</i>	--	--	1B.1	--				●										
Rainbow manzanita	<i>Arctostaphylos rainbowensis</i>	--	--	1B.1	--						●								●
Ramona horkelia	<i>Horkelia truncata</i>	--	--	1B.3	--						●								●
Ramshaw Meadows abronia	<i>Abronia alpina</i>	--	--	1B.1	--			●											
Raven's lomatium	<i>Lomatium ravenii</i> var. <i>ravenii</i>	--	--	1B.3	--							●				●			
Raven's milk-vetch	<i>Astragalus ravenii</i>	--	--	1B.3	--			●											
Rawson's flaming trumpet	<i>Collomia rawsoniana</i>	--	--	1B.2	--			●	●										
rayless layia	<i>Layia discoidea</i>	--	--	1B.1	--				●										
rayless mountain ragwort	<i>Packera indecora</i>	--	--	2B.2	--		●	●				●							
recurved larkspur	<i>Delphinium recurvatum</i>	--	--	1B.2	--				●	●				●					
red four o'clock	<i>Mirabilis coccinea</i>	--	--	2B.3	--									●					
Red Hills cryptantha	<i>Cryptantha spithamaea</i>	--	--	1B.3	--				●										
Red Hills ragwort	<i>Senecio clevelandii</i> var. <i>heterophyllus</i>	--	--	1B.2	--				●										
Red Hills vervain	<i>Verbena californica</i>	FT	CT	1B.1	--				●										
Red Mountain catchfly	<i>Silene campanulata</i> ssp. <i>campanulata</i>	--	CE	4.2	--				●						●				

Plants		Status				USGS Ecoregions												
Appendix E	Scientific Name	Federal	State	CRPR	Other CDFW	1 Coast Range	4 Cascades	5 Sierra Nevada	6 Central California Foothills and Coastal Mountains	7 Central California Valley	8 Southern California Mountains	9 Eastern Cascades Slopes and Foothills	13 Central Basin and Range	14 Mojave Basin and Range	78 Klamath Mountains/California High North Coast Range	80 Northern Basin and Range	81 Sonoran Basin and Range	85 Southern California/Northern Baja Coast
San Luis Obispo monardella	<i>Monardella undulata</i> ssp. <i>undulata</i>	--	--	1B.2	--				●									
San Luis Obispo owl's-clover	<i>Castilleja densiflora</i> var. <i>obispoensis</i>	--	--	1B.2	--				●									
San Mateo thorn-mint	<i>Acanthomintha duttonii</i>	FE	CE	1B.1	--				●									
San Mateo woolly sunflower	<i>Eriophyllum latilobum</i>	FE	CE	1B.1	--	●			●									
San Miguel savory	<i>Clinopodium chandleri</i>	--	--	1B.2	--													●
San Nicolas Island buckwheat	<i>Eriogonum grande</i> var. <i>timorum</i>	--	CE	1B.1	--													●
San Nicolas Island desert-thorn	<i>Lycium verrucosum</i>	--	--	1A	--													●
San Nicolas Island lomatium	<i>Lomatium insulare</i>	--	--	1B.2	--													●
San Simeon baccharis	<i>Baccharis plummerae</i> ssp. <i>glabrata</i>	--	--	1B.2	--				●									
sand dune cryptantha	<i>Cryptantha fendleri</i>	--	--	2B.2	--								●					
sand dune phacelia	<i>Phacelia argentea</i>	--	--	1B.1	--	●												
sand evening-primrose	<i>Chylismia arenaria</i>	--	--	2B.2	--									●			●	
sand food	<i>Pholisma sonorae</i>	--	--	1B.2	--												●	
sand mesa manzanita	<i>Arctostaphylos rudis</i>	--	--	1B.2	--				●									
sand-loving wallflower	<i>Erysimum ammophilum</i>	--	--	1B.2	--	●			●									●
sandmat manzanita	<i>Arctostaphylos pumila</i>	--	--	1B.2	--				●									
sanicle cymopterus	<i>Cymopterus ripleyi</i> var. <i>saniculoides</i>	--	--	1B.2	--									●				
Santa Ana River woollystar	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	FE	CE	1B.1	--						●							●
Santa Barbara honeysuckle	<i>Lonicera subspicata</i> var. <i>subspicata</i>	--	--	1B.2	--				●		●							●

Plants		Status				USGS Ecoregions														
Appendix E	Common Name	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85	
							Coast Range	Cascades	Sierra Nevada	Central California Foothills and Coastal Mountains	Central California Valley	Southern California Mountains	Eastern Cascades Slopes and Foothills	Central Basin and Range	Mojave Basin and Range	Klamath Mountains/California High North Coast Range	Northern Basin and Range	Sonoran Basin and Range	Southern California/Northern Baja Coast	
	Santa Cruz Island ironwood	<i>Lyonothamnus floribundus</i> ssp. <i>aspleniifolius</i>	--	--	1B.2	--														●
	Santa Cruz Island malacothrix	<i>Malacothrix indecora</i>	FE	--	1B.1	--														●
	Santa Cruz Island monkeyflower	<i>Diplacus brandegeei</i>	--	--	1A	--														●
	Santa Cruz Island winged-rockcress	<i>Sibara filifolia</i>	FE	--	1B.1	--														●
	Santa Cruz microseris	<i>Stebbinsoseris decipiens</i>	--	--	1B.2	--	●			●										
	Santa Cruz Mountains beardtongue	<i>Penstemon rattanii</i> var. <i>kleei</i>	--	--	1B.2	--	●			●										
	Santa Cruz Mountains pussypaws	<i>Calyptridium parryi</i> var. <i>hesseae</i>	--	--	1B.1	--	●			●										
	Santa Cruz tarplant	<i>Holocarpha macradenia</i>	FT	CE	1B.1	--	●			●										
	Santa Cruz wallflower	<i>Erysimum teretifolium</i>	FE	CE	1B.1	--	●													
	Santa Lucia bedstraw	<i>Galium clementis</i>	--	--	1B.3	--				●										
	Santa Lucia bush-mallow	<i>Malacothamnus palmeri</i> var. <i>palmeri</i>	--	--	1B.2	--				●										
	Santa Lucia manzanita	<i>Arctostaphylos luciana</i>	--	--	1B.2	--				●										
	Santa Lucia mint	<i>Pogogyne clareana</i>	--	CE	1B.2	--				●										
	Santa Lucia monkeyflower	<i>Erythranthe hardhamiae</i>	--	--	1B.1	--				●										
	Santa Margarita manzanita	<i>Arctostaphylos pilosula</i>	--	--	1B.2	--				●										
	Santa Monica dudleya	<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	FT	--	1B.1	--														●
	Santa Rosa Island dudleya	<i>Dudleya blochmaniae</i> ssp. <i>insularis</i>	--	--	1B.1	--														●
	Santa Rosa Island manzanita	<i>Arctostaphylos confertiflora</i>	FE	--	1B.2	--														●
	Santa Rosa Mountains leptosiphon	<i>Leptosiphon floribundus</i> ssp. <i>hallii</i>	--	--	1B.3	--						●						●		

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						Coast Range	Cascades	Sierra Nevada	Central California Foothills and Coastal Mountains	Central California Valley	Southern California Mountains	Eastern Cascades Slopes and Foothills	Central Basin and Range	Mojave Basin and Range	Klamath Mountains/California High North Coast Range	Northern Basin and Range	Sonoran Basin and Range	Southern California/Northern Baja Coast
Common Name	Scientific Name																	
Santa Susana tarplant	<i>Deinandra minthornii</i>	--	CR	1B.2	--													●
Santa Ynez false lupine	<i>Thermopsis macrophylla</i>	--	CR	1B.3	--						●							
Santa Ynez groundstar	<i>Ancistrocarphus keilii</i>	--	--	1B.1	--				●									
Santiago Peak phacelia	<i>Phacelia keckii</i>	--	--	1B.3	--						●							●
saw-toothed lewisia	<i>Lewisia serrata</i>	--	--	1B.1	--			●										
Sawyer's pussy-toes	<i>Antennaria sawyeri</i>	--	--	1B.2	--													●
scabrid alpine tarplant	<i>Anisocarpus scabridus</i>	--	--	1B.3	--		●											●
Scadden Flat checkerbloom	<i>Sidalcea stipularis</i>	--	CE	1B.1	--			●										
scalloped-leaved lousewort	<i>Pedicularis crenulata</i>	--	--	2B.2	--								●					
Schoolcraft's cryptantha	<i>Oreocarya schoolcraftii</i>	--	--	2B.2	--													●
Schoolcraft's wild buckwheat	<i>Eriogonum microthecum</i> var. <i>schoolcraftii</i>	--	--	1B.2	--			●					●					
Schreiber's manzanita	<i>Arctostaphylos glutinosa</i>	--	--	1B.2	--	●												
Scott Mountain bedstraw	<i>Galium serpicum</i> ssp. <i>scotticum</i>	--	--	1B.2	--													●
Scott Mountain sandwort	<i>Sabulina stolonifera</i>	--	--	1B.3	--													●
Scott Valley buckwheat	<i>Eriogonum umbellatum</i> var. <i>lautum</i>	--	--	1B.1	--													●
Scott Valley phacelia	<i>Phacelia greenei</i>	--	--	1B.2	--													●
Scotts Valley polygonum	<i>Polygonum hickmanii</i>	FE	CE	1B.1	--	●												
Scotts Valley spineflower	<i>Chorizanthe robusta</i> var. <i>hartwegii</i>	FE	--	1B.1	--	●												
Scouler's catchfly	<i>Silene scouleri</i> ssp. <i>scouleri</i>	--	--	2B.2	--	●			●									
scrub lotus	<i>Acmispon argyraeus</i> var. <i>multicaulis</i>	--	--	1B.3	--									●				

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Common Name	Scientific Name																		
sea dahlia	<i>Leptosyne maritima</i>	--	--	2B.2	--														●
seacoast ragwort	<i>Packera bolanderi</i> var. <i>bolanderi</i>	--	--	2B.2	--	●									●				
seaside bird's-beak	<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	--	CE	1B.1	--				●		●								
seaside bittercress	<i>Cardamine angulata</i>	--	--	2B.1	--	●													
seaside pea	<i>Lathyrus japonicus</i>	--	--	2B.1	--	●													
Sebastopol meadowfoam	<i>Limnanthes vinculans</i>	FE	CE	1B.1	--				●										
Sequoia gooseberry	<i>Ribes tularense</i>	--	--	1B.3	--			●											
Serpentine Canyon monkeyflower	<i>Erythranthe percaulis</i>	--	--	1B.1	--			●											
serpentine catchfly	<i>Silene serpentinicola</i>	--	--	1B.2	--										●				
serpentine cryptantha	<i>Cryptantha dissita</i>	--	--	1B.2	--				●										
serpentine daisy	<i>Erigeron serpentinus</i>	--	--	1B.3	--	●			●										
serpentine rockcress	<i>Boechera serpticola</i>	--	--	1B.2	--										●				
serrated balsamroot	<i>Balsamorhiza serrata</i>	--	--	2B.3	--							●				●			
sessile-leaved yerba santa	<i>Eriodictyon sessilifolium</i>	--	--	2B.1	--														●
shaggyhair lupine	<i>Lupinus spectabilis</i>	--	--	1B.2	--			●	●										
shaggy-haired alumroot	<i>Heuchera hirsutissima</i>	--	--	1B.3	--						●								
Sharsmith's harebell	<i>Campanula sharsmithiae</i>	--	--	1B.2	--				●										
Sharsmith's stickseed	<i>Hackelia sharsmithii</i>	--	--	2B.3	--			●											
Sharsmith's western flax	<i>Hesperolinon sharsmithiae</i>	--	--	1B.2	--				●										
Shasta ageratina	<i>Ageratina shastensis</i>	--	--	1B.2	--										●				
Shasta chaenactis	<i>Chaenactis suffrutescens</i>	--	--	1B.3	--		●					●			●				
Shasta clarkia	<i>Clarkia borealis</i> ssp. <i>arida</i>	--	--	1B.1	--		●		●						●				

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Common Name	Scientific Name																	
slender townsendia	Townsendia leptotes	--	--	2B.3	--								●					
slender-horned spineflower	Dodecahema leptoceras	FE	CE	1B.1	--						●						●	●
slender-leaved ipomopsis	Ipomopsis tenuifolia	--	--	2B.3	--												●	
slender-petaled thelypodium	Thelypodium stenopetalum	FE	CE	1B.1	--						●							
slender-spined all thorn	Koeberlinia spinosa var. tenuispina	--	--	2B.2	--												●	
slender-stalked monkeyflower	Erythranthe gracilipes	--	--	1B.2	--			●	●									
slender-stem bean	Phaseolus filiformis	--	--	2B.1	--												●	
slender-stemmed androsace	Androsace filiformis	--	--	2B.3	--		●											
slender-stemmed monkeyflower	Erythranthe filicaulis	--	--	1B.2	--			●										
slough thistle	Cirsium crassicaule	--	--	1B.1	--					●								
small groundcone	Kopsiopsis hookeri	--	--	2B.3	--	●			●						●			
small pincushion navarretia	Navarretia myersii ssp. deminuta	--	--	1B.1	--				●									
small-flowered bird's-beak	Cordylanthus parviflorus	--	--	2B.3	--									●				
small-flowered calycadenia	Calycadenia micrantha	--	--	1B.2	--				●						●			
small-flowered grass-of-Parnassus	Parnassia parviflora	--	--	2B.2	--			●					●					
small-flowered sand-verbena	Tripterocalyx micranthus	--	--	2B.2	--									●				
small-leaved rose	Rosa minutifolia	--	CE	2B.1	--													●
Small's southern clarkia	Clarkia australis	--	--	1B.2	--			●										
smooth lessingia	Lessingia micradenia var. glabrata	--	--	1B.2	--				●									
smooth saltbush	Atriplex pusilla	--	--	2B.1	--								●					

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	Tiburon jewelflower	FE	CE	1B.1	--				●									
	Tiburon paintbrush	FE	CT	1B.2	--				●									
	Tidestrom's lupine	FE	CE	1B.1	--	●			●									
	Tidestrom's milk-vetch	--	--	2B.2	--						●			●				
	Tiehm's rockcress	--	--	1B.3	--			●										
	Toiyabe bluebells	--	--	2B.2	--							●						
	Tonopah milk-vetch	--	--	1B.2	--								●					
	Toro manzanita	--	--	1B.2	--				●									
	Torrey's blazing star	--	--	2B.2	--			●					●					
	Tracy's beardtongue	--	--	1B.3	--													
	Tracy's eriastrum	--	CR	3.2	--		●	●	●	●	●				●			
	Tracy's romanzoffia	--	--	2B.3	--	●												
	Trask's cryptantha	--	--	1B.1	--													●
	Trask's milk-vetch	--	CR	1B.2	--													●
	tree-anemone	--	CT	1B.2	--			●	●									
	Trinity buckwheat	--	CE	1B.2	--													●
	Trinity Mountains rockcress	--	--	1B.3	--													●
	Trinity River jewelflower	--	--	1B.2	--													●
	triple-ribbed milk-vetch	FE	--	1B.2	--						●			●				●
	True's mountain jewelflower	--	--	1B.1	--			●										
	tufted loosestrife	--	--	2B.3	--		●					●						
	tufted saxifrage	--	--	2B.3	--							●			●			

Plants		Status				USGS Ecoregions													
Appendix E	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85	
						Coast Range	Cascades	Sierra Nevada	Central California Foothills and Coastal Mountains	Central California Valley	Southern California Mountains	Eastern Cascades Slopes and Foothills	Central Basin and Range	Mojave Basin and Range	Klamath Mountains/California High North Coast Range	Northern Basin and Range	Sonoran Basin and Range	Southern California/Northern Baja Coast	
Common Name	Scientific Name																		
watershield	<i>Brasenia schreberi</i>	--	--	2B.3	--	●	●	●	●	●		●	●		●				
Watson's oxytheca	<i>Oxytheca watsonii</i>	--	--	2B.2	--									●					
wavyleaf twinvine	<i>Funastrum crispum</i>	--	--	2B.2	--						●							●	
wavy-leaved malacothrix	<i>Malacothrix foliosa</i> ssp. <i>crispifolia</i>	--	--	1B.2	--														●
wayside aster	<i>Eucephalus vialis</i>	--	--	1B.2	--										●				
Webber's ivesia	<i>Ivesia webberi</i>	FT	--	1B.1	--			●					●						
Webber's milk-vetch	<i>Astragalus webberi</i>	--	--	1B.2	--			●											
wedgeleaf woodbeauty	<i>Drymocallis cuneifolia</i> var. <i>cuneifolia</i>	--	--	1B.1	--						●								
western black currant	<i>Ribes hudsonianum</i> var. <i>petiolare</i>	--	--	2B.3	--		●					●							
western bristly scaleseed	<i>Spermolepis lateriflora</i>	--	--	2A	--													●	●
western Heermann's buckwheat	<i>Eriogonum heermannii</i> var. <i>occidentale</i>	--	--	1B.2	--				●										
western leatherwood	<i>Dirca occidentalis</i>	--	--	1B.2	--	●			●										
western ragwort	<i>Packera hesperia</i>	--	--	2B.2	--										●				
western sand-spurrey	<i>Spergularia canadensis</i> var. <i>occidentalis</i>	--	--	2B.1	--	●													
western seablite	<i>Suaeda occidentalis</i>	--	--	2B.3	--							●	●						
western valerian	<i>Valeriana occidentalis</i>	--	--	2B.3	--							●							
western white bog violet	<i>Viola primulifolia</i> ssp. <i>occidentalis</i>	--	--	1B.2	--	●									●				
Wheeler's dune-broom	<i>Chaetadelpa wheeleri</i>	--	--	2B.2	--								●	●					
white bear poppy	<i>Arctomecon merriamii</i>	--	--	2B.2	--									●					
White Mountains draba	<i>Draba monoensis</i>	--	--	1B.2	--								●						

Plants		Status				USGS Ecoregions													
Appendix E	Common Name	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85
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Ferns																			
	common moonwort	<i>Botrychium lunaria</i>	--	--	2B.3	--			●				●	●					
	desert spike-moss	<i>Selaginella eremophila</i>	--	--	2B.2	--						●			●			●	
	giant moonwort	<i>Botrychium yaaxudakeit</i>	--	--	2B.1	--			●										
	green spleenwort	<i>Asplenium viride</i>	--	--	2B.3	--			●										
	inundated bog-clubmoss	<i>Lycopodiella inundata</i>	--	--	2B.2	--	●		●										
	maidenhair spleenwort	<i>Asplenium trichomanes</i> ssp. <i>trichomanes</i>	--	--	2B.1	--										●			
	male fern	<i>Dryopteris filix-mas</i>	--	--	2B.3	--			●			●		●					
	Mingan moonwort	<i>Botrychium minganense</i>	--	--	2B.2	--		●	●				●			●			
	moosewort	<i>Botrychium tunux</i>	--	--	2B.1	--			●										
	northern adder's-tongue	<i>Ophioglossum pusillum</i>	--	--	2B.2	--		●	●							●			
	northern spleenwort	<i>Asplenium septentrionale</i>	--	--	2B.3	--		●	●										
	northwestern moonwort	<i>Botrychium pinnatum</i>	--	--	2B.3	--		●					●			●			
	paradox moonwort	<i>Botrychium paradoxum</i>	--	--	2B.1	--			●										
	Plummer's woodsia	<i>Woodsia plummerae</i>	--	--	2B.3	--									●				
	pumice moonwort	<i>Botrychium pumicola</i>	--	--	2B.2	--		●											
	rattlesnake fern	<i>Botrypus virginianus</i>	--	--	2B.2	--		●								●			
	scalloped moonwort	<i>Botrychium crenulatum</i>	--	--	2B.2	--		●	●			●	●	●		●			
	scaly cloak fern	<i>Astrolepis cochisensis</i> ssp. <i>cochisensis</i>	--	--	2B.3	--									●				
	slender moonwort	<i>Botrychium lineare</i>	--	--	1B.1	--			●										
	Sonoran maiden fern	<i>Thelypteris puberula</i> var. <i>sonorensis</i>	--	--	2B.2	--				●		●						●	●

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Appendix E	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85
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Common Name	Scientific Name																	
southwestern false cloak-fern	<i>Argyrochosma limitanea</i> ssp. <i>limitanea</i>	--	--	2B.1	--									●				
spiny cliff-brake	<i>Pellaea truncata</i>	--	--	2B.3	--									●				
stalked moonwort	<i>Botrychium pedunculosum</i>	--	--	2B.1	--			●										
upswept moonwort	<i>Botrychium ascendens</i>	--	--	2B.3	--		●	●			●	●	●					
western goblin	<i>Botrychium montanum</i>	--	--	2B.1	--		●	●				●			●			
Wooton's lace fern	<i>Myriopteris wootonii</i>	--	--	2B.3	--									●				
Gymnosperms																		
Bolander's beach pine	<i>Pinus contorta</i> ssp. <i>bolanderi</i>	--	--	1B.2	--	●												
bristlecone fir	<i>Abies bracteata</i>	--	--	1B.3	--				●									
Butano Ridge cypress	<i>Hesperocyparis abramsiana</i> var. <i>butanoensis</i>	FT	CE	1B.2	--	●												
Cuyamaca cypress	<i>Hesperocyparis stephensonii</i>	--	--	1B.1	--						●							●
Engelmann spruce	<i>Picea engelmannii</i>	--	--	2B.2	--		●								●			
Gowen cypress	<i>Hesperocyparis goveniana</i>	FT	--	1B.2	--				●									
Monterey cypress	<i>Hesperocyparis macrocarpa</i>	--	--	1B.2	--				●									
Monterey pine	<i>Pinus radiata</i>	--	--	1B.1	--	●			●									
Pacific silver fir	<i>Abies amabilis</i>	--	--	2B.3	--										●			
Piute cypress	<i>Hesperocyparis nevadensis</i>	--	--	1B.2	--			●	●									
pygmy cypress	<i>Hesperocyparis pygmaea</i>	--	--	1B.2	--	●												
Santa Cruz cypress	<i>Hesperocyparis abramsiana</i> var. <i>abramsiana</i>	FT	CE	1B.2	--	●												
Santa Rosa Island Torrey pine	<i>Pinus torreyana</i> ssp. <i>insularis</i>	--	--	1B.2	--													●
subalpine fir	<i>Abies lasiocarpa</i> var. <i>lasiocarpa</i>	--	--	2B.3	--										●			
Tecate cypress	<i>Hesperocyparis forbesii</i>	--	--	1B.1	--						●							●

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Common Name	Scientific Name																		
Torrey pine	<i>Pinus torreyana</i> ssp. <i>torreyana</i>	--	--	1B.2	--														●
Torrey's Mormon-tea	<i>Ephedra torreyana</i>	--	--	2B.1	--									●					
Lichens																			
angel's hair lichen	<i>Ramalina thrausta</i>	--	--	2B.1	--	●			●						●				
fringed chocolate chip lichen	<i>Solorina spongiosa</i>	--	--	2B.2	--			●											
island tube lichen	<i>Hypogymnia schizidiata</i>	--	--	1B.3	--	●			●										●
popcorn lichen	<i>Cladonia firma</i>	--	--	2B.1	--				●										
spiral-spored gilded-head pin lichen	<i>Calicium adpersum</i>	--	--	2B.2	--	●													
splitting yarn lichen	<i>Sulcaria isidiifera</i>	--	--	1B.1	--				●										
twisted horsehair lichen	<i>Bryoria spiralifera</i>	--	--	1B.1	--	●			●										
whiteworm lichen	<i>Thamnolia vermicularis</i>	--	--	2B.1	--				●										
Monocots																			
Abrams' onion	<i>Allium abramsii</i>	--	--	1B.2	--			●	●										
adobe-lily	<i>Fritillaria pluriflora</i>	--	--	1B.2	--				●	●									
Ahart's dwarf rush	<i>Juncus leiospermus</i> var. <i>ahartii</i>	--	--	1B.2	--				●	●									
alkali mariposa-lily	<i>Calochortus striatus</i>	--	--	1B.2	--			●	●	●	●			●					
American manna grass	<i>Glyceria grandis</i>	--	--	2B.3	--	●		●					●						
American scheuchzeria	<i>Scheuchzeria palustris</i>	--	--	2B.1	--		●												
appressed muhly	<i>Muhlenbergia appressa</i>	--	--	2B.2	--						●			●					●
Arizona cottontop	<i>Digitaria californica</i> var. <i>californica</i>	--	--	2B.3	--									●			●		
Arroyo de la Cruz mariposa-lily	<i>Calochortus clavatus</i> var. <i>recurvifolius</i>	--	--	1B.2	--				●										
black bog-rush	<i>Schoenus nigricans</i>	--	--	2B.2	--						●			●					

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Common Name	Scientific Name																		
Franciscan onion	<i>Allium peninsulare</i> var. <i>franciscanum</i>	--	--	1B.2	--	●			●										
Gentner's fritillary	<i>Fritillaria gentneri</i>	FE	--	1B.1	--							●							
Geysers panicum	<i>Panicum acuminatum</i> var. <i>thermale</i>	--	CE	1B.2	--		●		●										
giant fawn lily	<i>Erythronium oregonum</i>	--	--	2B.2	--	●									●				
grass alisma	<i>Alisma gramineum</i>	--	--	2B.2	--		●					●			●	●			
Great Basin onion	<i>Allium atrorubens</i> var. <i>atrorubens</i>	--	--	2B.3	--			●					●	●		●			
green yellow sedge	<i>Carex viridula</i> ssp. <i>viridula</i>	--	--	2B.3	--	●		●							●				
Greene's mariposa-lily	<i>Calochortus greenei</i>	--	--	1B.2	--		●					●			●				
Greene's tuctoria	<i>Tuctoria greenei</i>	FE	CR	1B.1	--		●		●	●		●							
Greenhorn fritillary	<i>Fritillaria brandegeei</i>	--	--	1B.3	--			●	●										
hair-leaved rush	<i>Juncus supiniformis</i>	--	--	2B.2	--	●													
hairy erioneuron	<i>Erioneuron pilosum</i>	--	--	2B.3	--									●					
hairy Orcutt grass	<i>Orcuttia pilosa</i>	FE	CE	1B.1	--					●									
Henderson's fawn lily	<i>Erythronium hendersonii</i>	--	--	2B.3	--	●									●				
Henderson's triteleia	<i>Triteleia hendersonii</i>	--	--	2B.2	--							●			●				
Hickman's onion	<i>Allium hickmanii</i>	--	--	1B.2	--				●										
Hillsborough chocolate lily	<i>Fritillaria biflora</i> var. <i>ineziana</i>	--	--	1B.1	--				●										
Hitchcock's blue-eyed grass	<i>Sisyrinchium hitchcockii</i>	--	--	1B.1	--	●													
Hoover's bent grass	<i>Agrostis hooveri</i>	--	--	1B.2	--				●										
hot springs fimbristylis	<i>Fimbristylis thermalis</i>	--	--	2B.2	--				●		●		●	●					
Howell's alkali grass	<i>Puccinellia howellii</i>	--	--	1B.1	--										●				
Howell's fawn lily	<i>Erythronium howellii</i>	--	--	1B.3	--										●				

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	livid sedge	<i>Carex livida</i>	--	--	2A	--	●													
	long-haired star-tulip	<i>Calochortus longebarbatus</i> var. <i>longebarbatus</i>	--	--	1B.2	--		●					●							
	Lyngbye's sedge	<i>Carex lyngbyei</i>	--	--	2B.2	--	●			●										
	Marin checker lily	<i>Fritillaria lanceolata</i> var. <i>tristulis</i>	--	--	1B.1	--	●			●										
	marsh arrow-grass	<i>Triglochin palustris</i>	--	--	2B.3	--			●					●						
	Marsh's blue grass	<i>Poa abbreviata</i> ssp. <i>marshii</i>	--	--	2B.3	--								●						
	Mormon needle grass	<i>Stipa arida</i>	--	--	2B.3	--								●	●					
	mountain bent grass	<i>Agrostis humilis</i>	--	--	2B.3	--			●											
	Mt. Diablo fairy-lantern	<i>Calochortus pulchellus</i>	--	--	1B.2	--				●										
	Mt. Pinos onion	<i>Allium howellii</i> var. <i>clokeyi</i>	--	--	1B.3	--			●	●		●								
	mud sedge	<i>Carex limosa</i>	--	--	2B.2	--		●	●				●			●				
	Munz's iris	<i>Iris munzii</i>	--	--	1B.3	--			●	●										
	Munz's onion	<i>Allium munzii</i>	FE	CT	1B.1	--														●
	Napa blue grass	<i>Poa napensis</i>	FE	CE	1B.1	--				●										
	nard sedge	<i>Carex nardina</i>	--	--	2B.2	--										●				
	narrow-anthered brodiaea	<i>Brodiaea leptandra</i>	--	--	1B.2	--				●										
	Nevada onion	<i>Allium nevadense</i>	--	--	2B.3	--									●					
	nine-awned pappus grass	<i>Enneapogon desvauxii</i>	--	--	2B.2	--									●					
	North Coast semaphore grass	<i>Pleuropogon hooverianus</i>	--	CT	1B.1	--	●			●						●				
	northern clustered sedge	<i>Carex arcta</i>	--	--	2B.2	--	●									●				
	northern coralroot	<i>Corallorhiza trifida</i>	--	--	2B.1	--			●											
	northern meadow sedge	<i>Carex praticola</i>	--	--	2B.2	--	●		●	●						●				
	Nuttall's ribbon-leaved pondweed	<i>Potamogeton epihydrus</i>	--	--	2B.2	--	●		●				●			●				

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Common Name	Scientific Name																		
Ojai fritillary	<i>Fritillaria ojaiensis</i>	--	--	1B.2	--				●		●								●
Orcutt's brodiaea	<i>Brodiaea orcuttii</i>	--	--	1B.1	--						●								●
Oregon sedge	<i>Carex halliana</i>	--	--	2B.3	--		●								●				
Palmer's mariposa-lily	<i>Calochortus palmeri</i> var. <i>palmeri</i>	--	--	1B.2	--			●	●	●	●			●					●
Parish's alkali grass	<i>Puccinellia parishii</i>	--	--	1B.1	--									●					
Patterson's blue grass	<i>Poa abbreviata</i> ssp. <i>pattersonii</i>	--	--	2B.3	--								●						
pendulous bulrush	<i>Scirpus pendulus</i>	--	--	2B.2	--							●							
Pilot Ridge fawn lily	<i>Erythronium taylorii</i>	--	--	1B.2	--			●											
Pitkin Marsh lily	<i>Lilium pardalinum</i> ssp. <i>pitkinense</i>	FE	CE	1B.1	--				●										
Piute Mountains triteleia	<i>Triteleia piutensis</i>	--	--	1B.1	--			●											
Pleasant Valley mariposa-lily	<i>Calochortus clavatus</i> var. <i>avius</i>	--	--	1B.2	--			●	●										
Point Reyes rein orchid	<i>Piperia elegans</i> ssp. <i>decurtata</i>	--	--	1B.1	--	●													
pointed broom sedge	<i>Carex scoparia</i> var. <i>scoparia</i>	--	--	2A	--			●											
porcupine sedge	<i>Carex hystericina</i>	--	--	2B.1	--			●	●						●				
prairie wedge grass	<i>Sphenopholis obtusata</i>	--	--	2B.2	--			●	●	●	●		●						●
Rawhide Hill onion	<i>Allium tuolumnense</i>	--	--	1B.2	--				●										
Red Bluff dwarf rush	<i>Juncus leiospermus</i> var. <i>leiospermus</i>	--	--	1B.1	--		●		●	●									
Red Hills soaproot	<i>Chlorogalum grandiflorum</i>	--	--	1B.2	--			●	●										
Regel's rush	<i>Juncus regelii</i>	--	--	2B.3	--										●				
Robbins' pondweed	<i>Potamogeton robbinsii</i>	--	--	2B.3	--		●	●							●				
Roderick's fritillary	<i>Fritillaria roderickii</i>	--	CE	1B.1	--	●			●										
roughstalk witch grass	<i>Panicum hirticaule</i> ssp. <i>hirticaule</i>	--	--	2B.1	--									●			●		

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Common Name	Scientific Name																		
round-headed beaked-rush	Rhynchospora globularis	--	--	2B.1	--				●										
Sacramento Orcutt grass	Orcuttia viscida	FE	CE	1B.1	--				●	●									
Salina Pass wild-rye	Elymus salina	--	--	2B.3	--								●	●					
San Benito fritillary	Fritillaria viridea	--	--	1B.2	--				●										
San Benito onion	Allium howellii var. sanbenitense	--	--	1B.3	--				●										
San Bernardino blue grass	Poa atropurpurea	FE	--	1B.2	--						●								
San Clemente Island brodiaea	Brodiaea kinkiensis	--	--	1B.2	--														●
San Clemente Island triteleia	Triteleia clementina	--	--	1B.2	--														●
San Diego goldenstar	Bloomeria clevelandii	--	--	1B.1	--														●
San Jacinto mariposa-lily	Calochortus palmeri var. munzii	--	--	1B.2	--						●						●		
San Joaquin Valley Orcutt grass	Orcuttia inaequalis	FT	CE	1B.1	--				●	●									
San Luis mariposa-lily	Calochortus obispoensis	--	--	1B.2	--				●										
San Luis Obispo sedge	Carex obispoensis	--	--	1B.2	--				●										●
Sanford's arrowhead	Sagittaria sanfordii	--	--	1B.2	--	●		●	●	●					●				●
Santa Lucia dwarf rush	Juncus luciensis	--	--	1B.2	--		●	●	●		●	●	●			●			●
Santa Lucia purple amole	Chlorogalum purpureum var. purpureum	FT	--	1B.1	--				●										
Santa Rosa Basalt brodiaea	Brodiaea santarosae	--	--	1B.2	--														●
Scribner's wheat grass	Elymus scribneri	--	--	2B.3	--			●					●						
seep kobresia	Kobresia myosuroides	--	--	2B.2	--			●					●						
serpentine sedge	Carex serpenticola	--	--	2B.3	--	●									●				
Sharsmith's onion	Allium sharsmithiae	--	--	1B.3	--				●										
Shasta fawn lily	Erythronium shastense	--	--	1B.2	--										●				

Plants		Status				USGS Ecoregions													
Appendix E	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85	
						Coast Range	Cascades	Sierra Nevada	Central California Foothills and Coastal Mountains	Central California Valley	Southern California Mountains	Eastern Cascades Slopes and Foothills	Central Basin and Range	Mojave Basin and Range	Klamath Mountains/California High North Coast Range	Northern Basin and Range	Sonoran Basin and Range	Southern California/Northern Baja Coast	
Common Name	Scientific Name																		
talus fritillary	<i>Fritillaria falcata</i>	--	--	1B.2	--				●										
The Cedars fairy-lantern	<i>Calochortus raichei</i>	--	--	1B.2	--	●													
thread-leaved brodiaea	<i>Brodiaea filifolia</i>	FT	CE	1B.1	--						●								●
three-awned grama	<i>Bouteloua trifida</i>	--	--	2B.3	--									●			●		
three-bracted onion	<i>Allium tribracteatum</i>	--	--	1B.2	--			●											
Thurber's reed grass	<i>Calamagrostis crassiglumis</i>	--	--	2B.1	--	●			●						●				
Tiburon mariposa-lily	<i>Calochortus tiburonensis</i>	FT	CT	1B.1	--				●										
timberland blue-eyed grass	<i>Sisyrinchium longipes</i>	--	--	2B.2	--						●								
Tioga Pass sedge	<i>Carex tiogana</i>	--	--	1B.3	--			●											
Tompkins' sedge	<i>Carex tompkinsii</i>	--	CR	4.3	--			●											
tough muhly	<i>Muhlenbergia arsenei</i>	--	--	2B.3	--									●					
Tuolumne fawn lily	<i>Erythronium tuolumnense</i>	--	--	1B.2	--			●											
Tuolumne iris	<i>Iris hartwegii</i> ssp. <i>columbiana</i>	--	--	1B.2	--			●											
vanilla-grass	<i>Anthoxanthum nitens</i> ssp. <i>nitens</i>	--	--	2B.3	--	●	●								●				
vernal pool bent grass	<i>Agrostis lacuna-vernalis</i>	--	--	1B.1	--				●										
water bulrush	<i>Schoenoplectus subterminalis</i>	--	--	2B.3	--		●	●							●				
water star-grass	<i>Heteranthera dubia</i>	--	--	2B.2	--		●		●	●		●							
water whorlgrass	<i>Catabrosa aquatica</i>	--	--	2B.1	--		●												
western lily	<i>Lilium occidentale</i>	FE	CE	1B.1	--	●													
western sedge	<i>Carex occidentalis</i>	--	--	2B.3	--						●		●						
western single-spiked sedge	<i>Carex scirpoidea</i> ssp. <i>pseudoscirpoidea</i>	--	--	2B.2	--			●					●						
western valley sedge	<i>Carex vallicola</i>	--	--	2B.3	--			●				●	●						
wheat sedge	<i>Carex atherodes</i>	--	--	2B.2	--							●							

Plants		Status				USGS Ecoregions												
Common Name	Scientific Name	Federal	State	CRPR	Other CDFW	1 Coast Range	4 Cascades	5 Sierra Nevada	6 Central California Foothills and Coastal Mountains	7 Central California Valley	8 Southern California Mountains	9 Eastern Cascades Slopes and Foothills	13 Central Basin and Range	14 Mojave Basin and Range	78 Klamath Mountains/California High North Coast Range	80 Northern Basin and Range	81 Sonoran Basin and Range	85 Southern California/Northern Baja Coast
white beaked-rush	Rhynchospora alba	--	--	2B.2	--	●	●	●	●						●			
white bog adder's-mouth	Malaxis monophyllos var. brachypoda	--	--	2B.1	--						●							
white-flowered rein orchid	Piperia candida	--	--	1B.2	--	●			●						●			
white-stemmed pondweed	Potamogeton praelongus	--	--	2B.3	--		●	●										
woolly-fruited sedge	Carex lasiocarpa	--	--	2B.3	--		●	●				●			●			
Yadon's rein orchid	Piperia yadonii	FE	--	1B.1	--				●									
Yosemite bog orchid	Platanthera yosemitensis	--	--	1B.2	--			●										
Yosemite onion	Allium yosemitense	--	CR	1B.3	--			●										
Yucaipa onion	Allium marvinii	--	--	1B.2	--						●							●

Federal:

FE = federal endangered
 FT = federal threatened
 FC = federal candidate
 PT = proposed threatened
 PFD = proposed for delisting
 FD = delisted

California:

CE = California state endangered
 CT = California state threatened
 CR = California state rare
 CCT = California state threatened candidate
 CCE = California state endangered candidate

CRPR Rank Categories:

1A = Plants presumed extirpated in California and either rare or extinct elsewhere
 1B = Plants Rare, Threatened, or Endangered in California and elsewhere.
 2A = Plants presumed extirpated in California, but more common elsewhere
 2B = Plants Rare, Threatened, or Endangered in California, but more common elsewhere
 3 = Plants about which more information is needed - A Review List
 4 = Plants of limited distribution - A Watch List

CRPR Code Extensions:

.1 = Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
 .2 = Fairly endangered in California (20-80% occurrences threatened)
 .3 = Not very endangered in California (less than 20% of occurrences threatened or no current threats known)

Source: CNDDDB 2019; USFWS 2019; CNPS 2019

Sensitive Natural Communities

Sensitive Natural Communities		Status				USGS Ecoregions													
Appendix E	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85	
						Coast Range	Cascades	Sierra Nevada	Central California Foothills and Coastal Mountains	Central California Valley	Southern California Mountains	Eastern Cascades Slopes and Foothills	Central Basin and Range	Mojave Basin and Range	Klamath Mountains/California High North Coast Range	Northern Basin and Range	Sonoran Basin and Range	Southern California/Northern Baja Coast	
Common Name	Scientific Name																		
Fen		--	--	--	--	●	●	●											
Grand Fir Forest		--	--	--	--	●													
Great Valley Cottonwood Riparian Forest		--	--	--	--			●	●	●									
Great Valley Mesquite Scrub		--	--	--	--				●	●									
Great Valley Mixed Riparian Forest		--	--	--	--				●	●									
Great Valley Valley Oak Riparian Forest		--	--	--	--				●	●									
Great Valley Willow Scrub		--	--	--	--				●	●									
Ione Chaparral		--	--	--	--			●	●										
Island Cherry Forest		--	--	--	--														●
Island Ironwood Forest		--	--	--	--														●
Mainland Cherry Forest		--	--	--	--														●
Maritime Coast Range Ponderosa Pine Forest		--	--	--	--	●													
Maritime Succulent Scrub		--	--	--	--														●
Mendocino Pygmy Cypress Forest		--	--	--	--	●													
Mesquite Bosque		--	--	--	--									●				●	
Mojave Mixed Steppe		--	--	--	--									●				●	
Mojave Riparian Forest		--	--	--	--						●		●	●				●	
Mojave Yucca Scrub and Steppe		--	--	--	--								●	●					
Mono Pumice Flat		--	--	--	--			●					●						
Montane Freshwater Marsh		--	--	--	--								●						

Sensitive Natural Communities		Status				USGS Ecoregions													
Appendix E	Scientific Name	Federal	State	CRPR	Other CDFW	1	4	5	6	7	8	9	13	14	78	80	81	85	
						Coast Range	Cascades	Sierra Nevada	Central California Foothills and Coastal Mountains	Central California Valley	Southern California Mountains	Eastern Cascades Slopes and Foothills	Central Basin and Range	Mojave Basin and Range	Klamath Mountains/California High North Coast Range	Northern Basin and Range	Sonoran Basin and Range	Southern California/Northern Baja Coast	
Common Name	Scientific Name																		
Transmontane Alkali Marsh		-	-	-	-								●	●			●		
Upland Douglas Fir Forest		-	-	-	-	●									●				
Valley Needlegrass Grassland		-	-	-	-	●			●	●	●			●	●				●
Valley Oak Woodland		-	-	-	-			●	●	●	●				●				●
Valley Sacaton Grassland		-	-	-	-					●									
Valley Saltbush Scrub		-	-	-	-					●									
Valley Sink Scrub		-	-	-	-				●	●									
Walnut Forest		-	-	-	-						●								●
Wildflower Field		-	-	-	-				●		●			●					

Source: CNDDDB 2019

Final Appendix H Responses to Comments

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

This Appendix of the Consolidated Final Program Environmental Impact Report (PEIR) contains written responses to all comments received by the State Water Resources Control Board (State Water Board) from agencies and the public pertaining to the Draft Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (Order) and Draft PEIR. Section 1 includes comprehensive “master responses” addressing two issues that received multiple comments from various parties. Section 2 presents responses to individual comments raising environmental issues pertaining to the Draft Order and Draft PEIR. Each response provides background regarding the specific issue, how the issue was addressed, and additional clarification and explanation as appropriate to address the comments. Section 3 includes comments received solely in support of the Order and PEIR that require no response.

1 Master Responses

After review and evaluation of the comments received on the Draft Order and Draft PEIR, it was determined that some comments by different commenters were substantially similar in subject matter. In response to these frequently raised comments, single “master responses” were prepared to avoid repetition of individual responses and lengthy duplication of text.

Each of the two master responses below include a summary of the similar comments received and responses to those general topics.

Master Response 1: Definition of Restoration Project

Summary of Comments

Several commenters state that the definition of restoration: is too broad; needs to be consistent with other definitions; should not include multi-benefit or mitigation projects; and may result in unintended adverse consequences to water resources, species, and habitats.

Response

The existing definition of a restoration project in the Order and PEIR serves to include projects by virtue of improving ecosystem functions and/or services. The Order includes commonly proposed and high priority categories of eligible project types and allows for an expedited regulatory review of those eligible restoration projects that do not qualify for the Order for Small Habitat Restoration Projects. The approving Water Board (per Section XIII. Conditions of the Order) may only authorize a proposed project under the Order if it determines that the following requirements are met: 1) the project meets the definition of a restoration project (as defined in Section V. Project Description of the Order); 2) the project adopts and implements all appropriate general protection measures (GPMs) and California Environmental Quality Act (CEQA) mitigation measures to protect water quality and beneficial uses; 3) the project proponent fulfills all approving Water Board requirements for project information and reporting; and 4) the project is designed to protect water quality and beneficial uses in accordance with regional or statewide water quality control plans. Furthermore, “The approving Water Board determines if a proposed project meets the definition of a restoration project and

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is eligible for authorization under this Order.” has been added to the project description (Section V. Project Description of the Order) to ensure authorization of proposed projects is appropriate and as intended.

The definition of a restoration project for the Order was developed based on input from numerous agencies and to be consistent with multiple permitting agency regulatory practices either existing or under development (e.g., California Department of Fish and Wildlife (CDFW), National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE)). Further, the PEIR incorporates by reference the information contained in the programmatic Biological Opinions developed by NMFS for restoration projects for the North Coast (NMFS 2012), Central Coast (NMFS 2016), South Coast (NMFS 2015), and Central Valley (NMFS 2018) regions of California (collectively referred to as the NMFS Programmatic BOs available in Appendix D). The NMFS Programmatic BOs provide federal Endangered Species Act (FESA) coverage for several categories of restoration project types, which are similar to those described in the Order and PEIR and which may affect anadromous fish. Consistent with the definition of a restoration project in the Order, to be eligible for coverage under the NMFS Programmatic BOs, projects must result in a net increase in aquatic or riparian resource functions and/or services. Avoidance and minimization measures are also described in the NMFS Programmatic BOs and must be included in the proposed projects, as applicable. The avoidance and minimization measures included in the NMFS Programmatic BOs are similar to the general and species protection measures developed as part of the Order and PEIR.

Multi-benefit projects have been identified as increasingly important to address multiple factors that have led to degradation of ecosystems, habitats, and the species that depend on them throughout the State. As stated in the PEIR (Section 1.1 Introduction and Overview of the Order),

“A restoration project permitted by the Order may include multiple benefits, such as groundwater recharge, recreation, flood management, water quality improvement, and/or adaptation to climate change. Restoration projects permitted by the Order may also contribute to the protection of existing and potential beneficial uses identified in each of the nine Regional Water Quality Control Boards (Regional Boards) water quality control plans (basin plans).”

An example of prioritization of multi-benefit projects throughout the State can be found in the CDFW funding opportunities for multi-benefit ecosystem restoration and protection projects under Proposition 1 (Water Quality, Supply, and Infrastructure Improvement Act of 2014). The CDFW Proposal Solicitation Notice for Proposition 1 Fiscal Year 2021-2022 focuses on planning, implementation, acquisition, and scientific study projects across multiple priorities, consistent with those identified in the Order (e.g., groundwater recharge, flood management, water quality improvement, and/or adaptation to climate change).

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In regard to including mitigation projects as being eligible for coverage under the Order, and concerns stated about the Order potentially being used to permit underlying projects, Order Section XIII.E.1. General Compliance:

“Enrollment and authorization of restoration projects under this Order are for the discharges of waste associated with only the restoration action and shall not be construed as authorization or any compliance determination for any related underlying project or activity. Restoration projects serving as mitigation for a related project or activity may be enrolled under this Order; however, this Order does not include any findings regarding the underlying related activity’s impact to water quality, public trust resources, or other matters of public interest. When considering the impact of restoration projects under this Order, the approving Water Board considers only those adverse changes that may result from approval of the new restoration project, including multi-benefit projects that may include non-restoration action elements (e.g., recreation, flood protection).”

For example, a large underlying project not associated with a restoration project, meeting the definition of a restoration project, and/or adhering the conditions in the Order would not be permitted under this Order. Projects not meeting these requirements can be authorized through other permitting methods.

Master Response 2: Construction General Permit and Stormwater Pollution Prevention Plan (SWPPP) Requirements

Summary of Comments

Several commenters request clarification on the applicability of Clean Water Act Section 402 National Pollution Discharge Elimination System (NPDES) permits including the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). Commenters questioned references in the draft Order that allude to preparation of a SWPPP being a requirement of the Order, which some commentors identified as excessively expensive. Commentators suggest that as written in the draft, General Protection Measure WQHM-2 and Condition XIII.E.9 may expand when the Construction General Permit or other NPDES permits are required. Commentors also request clarification on potential overlap between Section 402 NPDES permits and Section 401 Water Quality Certifications.

Response

Section 402 of the Clean Water Act describes discharges that must be authorized by an NPDES permit. An NPDES permit further describes the scope of discharges covered. The Order is not an NPDES permit. The Order does not change the scope of activities that are required to obtain an NPDES permit, including coverage under the Construction General Permit or a municipal separate storm sewer system (MS4) NPDES permit. Moreover, the Order does not alter any of the requirements set forth in any applicable NPDES permits. For example, the Order does not affect the requirement in the Construction General Permit to prepare a SWPPP. More information about the Construction General Permit and its requirements can be found on the [State Water Board’s Construction Stormwater Program website](https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html) at https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html.

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The Construction General Permit covers land disturbing activities that result in a disturbance of one or more acres, or less than one acre but are part of a larger common plan of development or sale that totals one or more acres of land disturbance. The Construction General Permit expressly states that it does not authorize the discharge of dredged or fill material to a water of the state. If a project includes land disturbances of one or more acres and discharges of dredged or fill material, then coverage under the Order and coverage under the Construction General Permit would be necessary.

Order Condition XIII.E.9. Construction General Permit Requirement and Order Attachment A, A.5.2 GPMs WQHM-2 SWPPP and WQHM-3 Erosion and Sediment Control Measures were revised to further clarify the intent to require compliance with any applicable NPDES permit requirements, not to expand or limit the scope of any NPDES permits. Whether any NPDES permits are required may be discussed during the pre-application consultation. If project proponents determine, and the approving Water Board concurs during the pre-application consultation, that obtaining coverage under the Construction General Permit is not required, then the project proponent will be in compliance with Order Condition XIII.E.9 and GPM WQHM-2. Early coordination with the approving Water Board is encouraged to confirm compliance with requirements.

Final Text for Order Condition XIII.E.9. Construction General Permit Requirement:

This Order does not provide coverage under the Construction General Permit. As applicable, project proponents shall maintain compliance with conditions described in, and required by, NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ; NPDES No. CAS00002, as amended or any subsequently issued permit). For ground disturbing activities that do not require enrollment in Order No. 2009-0009-DWQ, the Notice of Intent (NOI) will include appropriate erosion and sediment control measures to be considered by the approving Water Board.

Final Text for Order Attachment A, GPM WQHM-2: SWPPP: All projects covered by the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) will prepare and implement the required, site-specific, storm water pollution prevention plan (SWPPP).

Final Text for Order Attachment A, GPM WQHM-3: Erosion and Sediment Control Measures: For projects that do not require coverage under a NPDES permit per GPM WQHM-2, the project proponent will develop and implement erosion and sediment control measures (or plan), which will include appropriate BMPs to reduce the potential release of water quality pollutants to receiving waters. BMPs may include the following measures:

- ◆ Employ tackifiers, soil binders, or mulch as appropriate for erosion control.
- ◆ Install sediment control measures, such as straw bales, silt fences, fiber rolls, or equally effective measures, at repair areas adjacent to stream channels, drainage canals, and wetlands, as needed. Sediment control measures will be monitored during and after each storm event for effectiveness. Modifications,

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repairs, and improvements to sediment control measures will be made as needed to protect water quality.

- ◆ No sediment control products will be used that include synthetic or plastic monofilament or cross-joints in the netting that are bound/stitched (such as straw wattles, fiber rolls, or erosion control blankets), and which could trap snakes, amphibians, and other wildlife.

2 Responses to Individual Comments

This section contains the comment letters received on the Draft Order and Draft PEIR and the State Water Board’s responses to significant environmental issues raised in those comments. Each letter, as well as each individual comment within the letter, has been given a number for purposes of cross-referencing. Text changes made in response to a comment have been made in the Final documents. These changes are documented in Appendix H by ~~strikeout~~ where text was removed and by double underline where text was added. The changes amplify, clarify, or make modifications or corrections and do not change the results or conclusions of the Order or PEIR.

Table H-1 lists the parties (by cross-referencing number) who submitted individual comments raising environmental issues on the Draft Order and Draft PEIR during the public review period.

**Table H-1
Comments on the Draft Order and Draft PEIR**

Letter #	Commenter
350SV-1	350 Silicon Valley
ACWA-1	Association of California Water Agencies
AMR-1	American Rivers
CALT-1	California Trout
CBD-1	Citizens Committee to Complete the Refuge Center for Biological Diversity California Coastkeeper Alliance Sierra Club California
CDFW-1	California Department of Fish and Wildlife
CDOT-1	California Department of Transportation
CLSN-1	California Landscape Stewardship Network
CVWD-1	Coachella Valley Water District
DSC-1	Delta Stewardship Council
DU-1	Ducks Unlimited
EPA-1	United States Environmental Protection Agency Region IX
IND-1	General Public, Jeff TenPas
IND-2	General Public, Trent Tuthill (Same comment letter as TCD-1)

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Table H-1
Comments on the Draft Order and Draft PEIR

Letter #	Commenter
LACDPW-1	Los Angeles County Department of Public Works
LADWP-1	Los Angeles Department of Water and Power
LAND-1	Soluri Meserve, a law corporation on behalf of Local Agencies of the North Delta
LSLT-1	League to Save Lake Tahoe
PCT-1	Placer County Tomorrow
RRK-1	Russian Riverkeeper
SCC-1	Coastal Conservancy
SFBRWQCB-1	San Francisco Bay Regional Water Quality Control Board
SYRCL-1	South Yuba River Citizens League
TCD-1	Trinity County District 3 Supervisor
TRPA-1	Tahoe Regional Planning Agency
TRRP-1	Trinity River Restoration Program
UAIC-1	United Auburn Indian Community, Tribal Historic Preservation Department
VALW-1	Santa Clara Valley Water District (Valley Water)
VIEJAS-1	Viejas Band of Kumeyaay Indians
WWD-1	Westlands Water District

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Responses to Individual Commenters

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350SV-1 350 Silicon Valley

350SV-1

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



August 13, 2021

**Comments on Public Workshop:
Sec. 401 wetlands restoration projects statewide, and supporting EIS**

350 Silicon Valley, with more than 5,000 supporters in California, is pleased to submit the following comments on the August 4, 2021 *Public Workshop: Sec. 401 wetlands restoration projects statewide, and supporting EIS*.

The State Water Board has previously issued a general water quality certification for small habitat restoration projects that (a) shall not exceed five acres or a cumulative total of 500 linear feet of stream bank or coastline and (b) qualify for the CEQA Class 33 Categorical Exemption (Cal. Code Regs., tit. 14, § 15333). Restoration projects that fall outside the project size limits of the general water quality certification or small habitat restoration must obtain individual water quality certifications and/or waste discharge requirements from the State Water Board or Regional Water Quality Control Boards (Regional Boards). This process can be extremely time-consuming and costly, and creates a significant hurdle that greatly contributes to, on average, a 10-year timeline for restoration projects larger than the existing safe harbor.

Therefore, we are happy to see that a draft [General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide](#) dated June 30, 2021 has been issued. When finalized, this order will greatly streamline the process for restoration projects larger than five acres.

We fully support the draft General Order and offer one suggestion for the Boards' consideration.

The draft General Order should specify up front that consideration and application of the Endangered Species Act (ESA) is required as part of the review of restoration projects under consideration—as noted in Appendix A, A.5.4, p. 40 and footnote 10; and consonant with the existing CEQA exemption for smaller projects do (see §15333(a)). We believe it is essential to emphasize to project applicants when they begin the permit application process that the ESA will be considered on larger projects as well.

Wetland restoration is an important tool in combating climate change—as it provides for mitigation against rising sea levels, provides for carbon sinks, and helps to restore the native plant life that is important to support the health of the critical California biosphere reserves. With the addition of language incorporating ESA considerations, we are very happy to provide our full support to the draft General Order.

Thank you for the opportunity to comment on this important matter.

Sincerely,

Janet Cox
Legislation Director
350 Silicon Valley

4546 El Camino Real B10 #200, Los Altos, CA 94022 • <https://www.350siliconvalley.org>

1

2

3

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350SV-1 350 Silicon Valley

Responses to Comments from 350SV-1 350 Silicon Valley

350SV-1-1:

The State Water Board appreciates 350 Silicon Valley's (350SV) comments supporting the adoption of the Order. For clarification, the Order has not been adopted but will be considered by the State Water Board for adoption once the response to public comments and CEQA PEIR process is complete.

350SV-1-2:

See PEIR Section 2.5 Authorizations and/or Permits that May Be Required for Restoration Projects for a list of authorizations or permits that may be required for restoration projects authorized under the Order.

As described in Order Section IV. Project Purpose, the Order intends to provide authorization for restoration projects that meet the eligibility criteria in the Order, but do not qualify for authorization under the Order for Small Habitat Restoration Projects.

350SV-1-3:

The State Water Board appreciates 350 Silicon Valley's (350SV) comments supporting the adoption of the Order.

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ACWA-1 Association of California Water Agencies



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

ACWA-1
Bringing
Water
Together

Sent via ELECTRONIC MAIL to commentletters@waterboards.ca.gov

August 13, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000



RE: Association of California Water Agencies' Comments – Proposed General Order for Restoration Projects Statewide

Dear Ms. Townsend,

The Association of California Water Agencies (ACWA) appreciates the opportunity to provide public comments to the State Water Resources Control Board (State Water Board) on the *Proposed General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (proposed General Order) and draft Program Environmental Impact Report (PEIR)*. ACWA represents more than 460 public water agencies that collectively deliver approximately 90 percent of the water in California for domestic, agricultural, and industrial uses.

ACWA appreciates and strongly supports the State Water Board's proposed General Order and PEIR, which is critically needed to streamline permitting for, and accelerate implementation of, habitat restoration projects throughout the state in an environmentally protective manner. ACWA anticipates that the proposed General Order, particularly if adopted with ACWA's below comments included, will help reduce expenses that encumber restoration projects, reduce the permitting time for restoration projects, improve ecological functions and services of degraded habitats, increase habitat connectivity, improve water quality, increase sequestration of carbon, and increase watershed resilience to climate change throughout the state. ACWA also anticipates that by reducing "green tape" and related restoration project delays and soft costs, the proposed General Order will allow restoration project proponents to devote a larger share of grant funds and agency staff resources to actual habitat improvements "on the ground," which will benefit wildlife, waterways, and communities in California.

ACWA believes that the draft General Order and associated PEIR provide a streamlined, yet environmentally thorough, protective, and robust permitting process for restoration projects. ACWA additionally notes that the proposed General Order would be consistent with the goal of the Water Resilience Portfolio to align and improve permitting to help incentivize more multi-benefit and multi-partner restoration projects. In this regard,

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ACWA particularly appreciates the inclusion of Section E.1 in the proposed General Order, which clarifies the conditions that would be applicable when the proposed General Order is used to authorize (a) mitigation projects for otherwise legally permitted and authorized activities, and (b) multi-benefit projects that include non-restoration elements.

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ACWA has noted in its review that some small, but important additions to the proposed General Order could help to even further incentivize and assure streamlined permitting of restoration projects. To that end, ACWA asks the State Water Resources Control Board to consider the following comments.

Comment 1 – Clarify and assure that quantity-based compensatory mitigation requirements do not preclude the use of the proposed General Order for approval of restoration projects that, by design, convert aquatic habitat types to restore more natural hydrologic functions and improve ecological services.

ACWA suggests that Section I.2 of the proposed General Order be revised to state that projects designed to return existing features to a more natural hydrologic condition and/or aquatic habitat type, resulting in greater ecological functions and services overall, need not provide a specific quantity (acreage or linear feet) of a degraded habitat type as mitigation. We have concerns that Section I.2 currently runs the risk of being read as a mandate that applicants must provide a specific quantity of in-kind mitigation for low value habitat types that are intentionally converted to higher value habitat types, in addition to providing the intended lift in ecological functions and services. When quantity-based mitigation is mandated by water boards for restoration projects designed to convert low function and service habitat types for the benefit of the environment, that mandate can preclude the implementation of such restoration projects because it imposes expensive, and sometimes infeasible, quantity-based compensatory mitigation requirements.

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Clarifying that the increase in habitat functions or services resulting from a restoration project alone may be sufficient mitigation for the project would prevent unnecessary restoration project delays and hurdles, and better assure that the proposed General Order works to expedite environmentally beneficial projects at a larger scale.

Comment 2 – Clarify and assure that restoration projects which provide environmental benefits, but that do not eliminate historical facilities altogether, can be expedited under the proposed General Order.

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ACWA suggests adding clarifications to Attachment A to assure that restoration projects that provide environmental benefits as compared to existing conditions can be approved, even if those projects will not completely eliminate or rectify historical or cultural watershed modifications. Attachment A of the proposed General Order as currently written runs the risk of demanding “environmental perfection,” at the expense

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of encouraging and expediting environmentally “good” and beneficial restoration projects.

Currently, many restoration projects that would result in environmental benefits as compared to existing, historically modified conditions encounter major permitting hurdles and delays because the scope of the project and a water agency’s public health and safety mandates allow improvements to, but preclude the elimination of certain historical facilities. While the historical facilities must remain in place for public health and safety reasons, they often can be redesigned and retrofitted, or operated in a different manner to restore habitats and provide other environmentally valuable functions and services. Often these projects are precluded because, while environmentally beneficial and useful, they do not attain “environmental perfection,” which is often defined as the elimination of the facility altogether.

Therefore, ACWA recommends further clarifying in Attachment A to the proposed General Order that restoration projects providing environmental benefits, but not eliminating historical facilities altogether, can be expedited under the General Order.

Comment 3 – Clarify restoration project success and focus long-term project management responsibilities for restoration projects to better incentivize such work.

ACWA suggests it would be beneficial to clarify in the proposed General Order the long-term management goal of restoration projects. The proposed General Order should incorporate a mechanism for State Water Board “sign off” on the success of restoration projects so that applicants’ responsibilities and efforts are focused to the scope of the restoration projects, and complete after meeting success criteria. We are cognizant that restoration project effort duration can vary depending on the work being done, and believe that clarifying the goal of restoration projects to develop natural, self-sustaining, habitat types that change over time in response to watershed conditions would simplify and incentivize permitting of such projects, and reduce applicant concerns regarding retention of extended liability in perpetuity for natural habitat succession and/or potential ongoing ecological function and service effects of restoration projects.

Comment 4 – Clarify NPDES requirements and applicability to the proposed General Order.

ACWA suggests that the proposed General Order and appendices be revised to clarify that National Pollutant Discharge Elimination System (NPDES) permits are not applicable to, and not required for projects that do not result in discharges of waste or pollutants to Waters of the United States (US). Clarification is requested in section IX.E.9 and IX.E.10 on page 13, and A-18, A-39. Further, many applicants already have individual NPDES permits that cover construction projects that occur within the Municipal Separate Storm Sewer System permit boundary. This request seeks clarification that the proposed General Order’s requirements



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to comply with NPDES permits do not conflict with the requirements of the underlying NPDES permits themselves.

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Comment 5 – The proposed General Order cuts “green tape” and will expedite public water agencies’ implementation of specific restoration projects.

Specific public water agency projects planned for 2022 and beyond that could be eligible to use the proposed General Order include, but are not limited to:

- The City of Sacramento, in partnership with the Water Forum, and other regional stakeholders, has 10 river sites that are slated for restoration projects over the next 15 years including Lower Sunrise, Lower Sailor Bar, and Nimbus Basin.
- Sonoma County Water Agency’s Dry Creek Habitat Modification Projects will continue off channel and side channel enhancement work to satisfy Russian River Section 7 obligations.
- The Modesto and Turlock Irrigation Districts have developed the Tuolumne River Management Plan (TRMP) for the proposed operations, improvements, and resource protection measures under a new Federal Energy Regulatory Commission license for the Don Pedro Project. The TRMP proposes a suite of habitat management projects such as a gravel augmentation program, experimental gravel cleaning, increased habitat complexity through site-specific enhancements, and water hyacinth removal.
- The Santa Clara Valley Water District’s Almaden Lake Improvement Project would restore the channel and floodplain of Alamos Creek through Almaden Lake, which is a historical gravel mining pit. In addition to restoring a continuous natural creek and riparian corridor, the project would improve passage conditions for steelhead and remove a significant source of mercury pollution to the Guadalupe River.
- Coachella Valley Water District (CVWD) Projects that will benefit include: CVWD’s proposed Constructed Habitat project developed to satisfy the Coachella Valley Multiple Species Habitat Conservation Plan; as well as the multi-state agency and stakeholder agency project effort: the Salton Sea Management Program 10-year plan.

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ACWA appreciates the State Water Board’s consideration of these comments. If you have any questions regarding these comments, please contact me at NickB@acwa.com or (916) 441-4545.

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Sincerely,

Nicholas Blair
Regulatory Advocate

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cc: The Honorable E. Joaquin Esquivel, Chair, State Water Resources Control Board
The Honorable Dorene D'Adamo, Vice Chair, State Water Resources Control Board
The Honorable Laurel Firestone, Board Member, State Water Resources Control Board
The Honorable Sean Maguire, Board Member, State Water Resources Control Board
The Honorable Nichole Morgan, Board Member, State Water Resources Control Board
Ms. Eileen Sobeck, Executive Director, State Water Resources Control Board
Mr. Jonathan Bishop, Chief Deputy Director, State Water Resources Control Board
Mr. Phillip Crader, Deputy Director, Division of Water Quality, State Water Resources Control Board
Mr. Dave Eggerton, Executive Director, Association of California Water Agencies
Ms. Cindy Tuck, Deputy Executive Director for Government Relations, Association of California Water Agencies

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ACWA-1 Association of California Water Agencies

Responses to Comments from ACWA-1 Association of California Water Agencies

ACWA-1-1:

The State Water Board appreciates Association of California Water Agencies' (ACWA) comments supporting the adoption of the Order.

ACWA-1-2:

The Order Section V. Project Description includes the definition of a restoration project as:

"...one that would result in long-term net increase in aquatic or riparian resource area functions and/or services through implementation of the eligible project types, relevant general protection measures (GPMs), and consideration of design guidelines, summarized below and described in detail in Attachment A, Order Description and Eligibility."

The definition's use of net increase in functions and services indicates a project must have a net environmental benefit and result in an overall enhanced and/or restored environmental condition. Furthermore, the approving Water Board determines if a proposed project meets the definition of a restoration project and is eligible for authorization under the Order. The approving Water Board also determines if a proposed project adopts and implements all appropriate GPMs and CEQA mitigation measures appropriate for authorization under the Order.

No revisions are included in the Order or PEIR because of this comment.

ACWA-1-3:

As discussed above for response to comment ACWA-1-2, the definition of a restoration project uses net increase in functions and services and does not specify requirements to remove all historical features. Projects not meeting conditions of the Order can be authorized through other permitting methods. No revisions are included in the Order or PEIR because of this comment.

ACWA-1-4:

Order XIII.G.4. Monitoring Plan requires project proponents to develop a monitoring plan that identifies measurable performance standards and success criteria, methods to determine whether performance standards have been met, a timeframe and responsibility party for achieving the performance standards, and a reporting schedule. Further, Order XIII.I.3. Restoration and Monitoring Impacts prescribes extending the monitoring period if performance standards have not been met. Order Attachment D, Reporting and Notification Requirements apply to all projects authorized under the Order. As presented in Order Attachment D, the approving Water Board must issue a Notice of Project Complete Letter to affirm the project has completed applicable post-construction monitoring requirements, permit requirements, and achieved performance standards. The Notice of Project Complete Letter would not be issued until the project has achieved performance standards.

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ACWA-1-5:

See Master Response 2: Construction General Permit and SWPPP Requirements.

The Order is not an NPDES permit. It does not provide authorization to discharge under Clean Water Act Section 402. The Order would not alter the scope of activities that may be required to obtain an NPDES permit or the requirements of any NPDES permits. As stated in Order Condition XIII.G.2. Pre-Application Consultation, the approving Water Board will review draft project materials and provide project-specific guidance during the pre-application consultation. During the pre-application consultation, the project proponent and the approving Water Board may discuss whether the project proponent must obtain or maintain coverage under any other permits, such as NPDES permits. Early coordination with the approving Water Board is encouraged to confirm compliance requirements.

ACWA-1-6:

The State Water Board appreciates ACWA's comments supporting the adoption of the Order.

ACWA-1-7:

The State Water Board notes the contact name and number for ACWA.

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AMR-1 American Rivers

AMR-1



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 12, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

American Rivers received the Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide (Order). Thank you for the opportunity to comment.

American Rivers is a national organization focused on protecting wild rivers, restoring damaged rivers and conserving clean water for people and nature. We are a leader in meadow and floodplain restoration in California. We have over a decade of restoration experience and with over 15 restoration projects implemented. We were a founding member of the Sierra Meadows Partnership (SMP) and co-authored the Sierra Meadows Strategy, an "all-hands, all-lands" approach to increasing the pace, scale and efficacy of meadow restoration and protection throughout the Greater Sierra Nevada. American Rivers also leads the SMP Regulatory Workgroup and co-leads the Permitting and Engineering Workgroup of CDFW's Restoration Leaders Group, both aimed at improving permitting and environmental compliance for restoration projects.

We strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. Permitting and environmental compliance is acknowledged by the SMP as an onerous, time consuming and costly component of meadow restoration projects and is recognized as a bottleneck for implementation on the ground. There is a need to streamline permitting processes for restoration projects to increase the pace and scale of restoration to meet the targets of state and federal agencies, and to achieve benefits at the regional scale. To this end, programmatic permits and CEQA compliance for restoration projects have been a priority of the SMP since 2017. The proposed Order and PEIR would address this priority.

The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner and will make better use of grant funds and agency staff resources. It will also help grantees complete projects within limited grant timeframes, a frequent challenge with long permitting timelines. In addition, the Order will incentivize larger restoration projects that are often needed to address the root causes of degradation, which are precluded from using the

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Section 401 General Water Quality Certification for Small Habitat Restoration. Specifically, although most of American Rivers' meadow restoration projects fit the 5 acres criteria, they were typically precluded based on the 500 linear feet of stream channel criteria. Another frequent cause of project delay is CEQA compliance. We are hopeful that the PEIR associated with the project will provide a streamlined process for CEQA that will improve state agencies' willingness to accept the role of lead agency and decrease CEQA timelines.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order to streamline permitting and environmental compliance. This is needed to increase the pace and scale of restoration to achieve the landscape level benefits needed for climate resilience. This is especially urgent under the drought conditions California is currently experiencing and is predicted to continue to experience under climate change. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

In addition to voicing support for the draft Order and associate PEIR, we provide additional specific comments below.

Additional Comments

The new procedures for Section 401 compliance adopted in April 2020 introduced additional items (especially additional plans) that can be required on a case-by-case basis, some specific to Ecological Restoration and Enhancement Projects (as defined by the procedures). Development and multiple reviews of additional items is onerous and can result in delay of project times. This trend toward additional requirements, especially specific to ecological restoration and enhancement projects, is counter to streamlining permitting for ecological benefit. In review of the Order, we note the potential need for numerous plans in addition to the NOI, including the Monitoring Plan (Order Section G.4), Dewatering Plan (Order Section A.5.2 General Protection Measure IWW-6), Erosion Control Plan (Order Section A.5.2 General Protection Measure WQHM -3) and Revegetation Plan (Order Section A.5.2 General Protection Measure GPM-15). We urge the State Water Board to consider the time and capacity burden on the permittee to develop, undergo multiple reviews and report on additional items under the Order and to aim to reduce this burden to the extent practical by restricting the number of items and/or providing sideboards for agency review. Standardized templates may also help with this issue.

Order Section XIII, E.9 Construction General Permit Requirement and Section a.5.2 General Protection Measure WQHM 2: Stormwater Pollution Prevention Plan.

As written, these sections appear to indicate that if the project includes 1 acre of construction (disturbance) in general, it will require coverage under a NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit) and a Stormwater Pollution Prevention Plan (SWPPP). In American Rivers and other restoration practitioners experience, the criteria to trigger the need for a General Permit and SWPPP has been defined as 1 acre of construction in the upland (i.e. outside Waters of the State). We urge the State Board to continue with the criteria as American Rivers currently understands it and clarify in the language of the Order.

In addition, the requirements of the General Permit are highly duplicative where a Section 401 Water Quality Certification is already being issued for an aquatic restoration project. Thus, the need to acquire both seems duplicative for these types of projects. Further, the General Permit triggers the need for a SWPPP which requires hiring a Qualified SWPPP

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Developer and typically costs approximately \$5000-\$6000 dollars. This also triggers the need for a Qualified SWPPP Practitioner to implement the SWPPP during construction, further adding to grant-funded project costs and project complexity.

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Through discussions with the Central Valley Regional Water Quality Control Board, veteran meadow practitioners established that if all project components, including upland activities (e.g. access routes, staging areas, etc.) are included in the Area of Potential Effects (APE) for Section 404/401 compliance, then the Section 401 provides water quality protections for all project activities, obviating the need for a separate General Permit. This creates cost savings, expedites approval and reduced complexity for construction. However, this interpretation has not been universally accepted, creating uncertainty. We further urge the State Water Board to adopt and codify this interpretation in the Order, to provide streamlined and reduced costs for restoration projects.

Order Section XII Application Fees states: “Authorization of a project under this Order is not determinative of whether a project is a restoration project in the context of the fee schedule.” This creates undue confusion about the fee schedule. We recommend that if the project meets the definition of a restoration project under the Order, it should meet the categorical fee for a restoration project.

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Order Section XIII. C.4 Post-Construction states: “If the proposed project includes ground disturbance, when conducting post-construction monitoring, visually inspect the project site during the rainy season (October 1 – April 30) until a Notice of Project Complete Letter is issued to ensure excessive erosion, stream instability, or other water quality pollution is not occurring in or downstream of the project site.” Sierra meadow project sites are frequently inaccessible from approximately November to May/June due to snowpack and road closures. Consider adding caveat language to address this – eg. “unless not safely accessible.”

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Order Section XIII E.5 states “the project proponent must, at all times, fully comply with engineering plans, specifications, and technical reports submitted to support approval of a project under this Order...” Restoration projects typically require some degree of field fit. This does not provide flexibility to allow for field fit. Consider revisiting in this context.

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Order Section A.4.6 Floodplain Restoration states: “floodplain restoration project proposals will include information regarding considerations for water supply (channel flow, overland flow, and groundwater), water quality, and reliability; risks of channel changes; and channel and hydraulic grade.” This is the only Category that includes language about information that should be included. This is inconsistent with the other Category descriptions and we suggest removing the language, so it is not misused as requirements.

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Order Section A.4.10 Establishment, Restoration, and Enhancement of Stream and Riparian Habitat and Upslope Watershed Sites. We support the incorporation of Upslope Watershed Sites, as addressing these features is key to integrated watershed restoration. We suggest also including addressing the impacts of legacy railroad grades, which can also result in detrimental downstream effects.

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Order Section A.5.2 General Protection Measure GPM-5: Environmental Monitoring. The requirement of a biologist seems duplicative with requirements that would be included under the Section 1600 Lake and Streambed Alteration Agreement (LSA). This could cause confusion

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if there are differences between the requirements of each permit document. This type of monitoring seems more appropriately left to the LSA rather than as an inclusion in the Water Quality Certification. Consider removing.

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Order Section A.5.2 General Protection Measure VHDR-5: Revegetation Monitoring and Reporting calls for “a standard of success of 60% absolute cover compared to an intact, local reference site.” Appropriate reference sites can be challenging to find and can complicate project monitoring. We suggest that a comparison to pre-project conditions at the project site could serve the same purpose.

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Order Attachment B Draft Notice of Intent, Section VIII.A Total Project Areas states “Identify the acreage and linear feet of the aquatic and upland areas comprising the project site.” It is unclear whether this is asking for the area within the project boundary (e.g. 100 acres) or the area of activities/disturbance, for example as used to determine project area to meet the CEQA Small Habitat Restoration criteria (e.g. 4 acres). Consider rewording to clarify what is desired.

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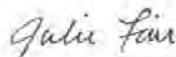
PEIR Section 1.3.2 Screening of Individual Restoration Projects, notes that a project must meet the following requirements to be eligible for coverage under the Order. It states “Proposes construction and operation and maintenance methods consistent with those described in Section 2.7, Typical Construction, Operation, and Maintenance Methods.” We noted that the Typical Construction, Operation and Maintenance Methods are not included in the Order itself, only in the PEIR. If compliance with this Section is a *requirement* for eligibility under the Order, we suggest this information should be included in the Order itself or be referenced in the Order in case proponents do not read the full PEIR.

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PEIR Section 1.3.3 Determining the Next Steps under CEQA. We appreciate that this section provides information about how agencies, especially agencies other than the Regional Water Boards, can utilize the PEIR. The scenarios are helpful to illustrate the process. Under Scenario 1, we suggest clarifying what type of document is needed in preparation of the notice of determination (e.g. a project description that includes General Protection Measures and mitigation measures). In addition, we are beginning to engage with the California Board of Forestry and Fire Protection’s California Vegetation Treatment Program (CalVTP), which provides a PEIR for fuel reduction activities. They have developed a number of supplemental materials and templates to guide use of the CalVTP for CEQA compliance available here: <https://bof.fire.ca.gov/projects-and-programs/calvtp/how-to-use-the-calvtp/>. These materials have been very helpful. We suggest the State Board develop similar materials to facilitate use of the Order’s PEIR.

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Sincerely,



Julie Fair
Director, Headwaters Conservation
American Rivers
Jfair@americanrivers.org

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AMR-1 American Rivers

Responses to Comments from AMR-1 American Rivers

AMR-1-1:

The State Water Board appreciates American River's (AMR) comments supporting the adoption of the Order and certification of the PEIR and information on AMR.

AMR-1-2:

The Order requirements are consistent with the standard 401 Certification permitting process, including those prescribed by the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State, which became effective on May 28, 2020. Only relevant reports would be required by the approving Water Board based upon the details of project activities being proposed. For example, if channel dewatering is not required for project construction, a dewatering plan would not be required. The Order would not add additional burden to the permitting process, in fact, the Order is more tailored to restoration projects compared to those prescribed in the Dredge or Fill Procedures.

AMR-1-3:

See Master Response 2: Construction General Order and SWPPP Requirements.

AMR-1-4:

As presented in Order Section XII. Application Fees, the approving Water Board will confirm the correct fee amount according to current fee regulations at the time of NOI submittal. "Authorization of a project under this Order is not determinative of whether a project is a restoration project in the context of the fee schedule. Projects authorized under this Order may not automatically qualify for a particular fee discharge category."

In the 2021-2022 fee schedule, a reduced fee is available for only restoration projects that meet the definition of an Ecological Restoration and Enhancement Projects (EREP) set forth in the Dredge or Fill Procedures. Not all projects authorized under the Order would meet the definition of an EREP. The fee structure, including how costs are structured for restoration projects, may change in the future. The fee schedule is adopted on an annual basis by the State Water Board. Interested stakeholders may find more additional information about the fee schedule on the [State Water Board's Fees website](https://www.waterboards.ca.gov/resources/fees/) at <https://www.waterboards.ca.gov/resources/fees/>.

No revisions are included in the Order or PEIR because of this comment.

AMR-1-5:

In response to this comment, Order Section XIII.C.4. Post-Construction was revised as follows:

"If the proposed project includes ground disturbance, when conducting post-construction monitoring, visually inspect the project site at least monthly or at an interval agreed to by the approving Water Board during the rainy season (October 1 – April 30) unless not safely accessible (e.g., high flows, inundation, ground

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saturation) or visually accessible (e.g., meadows covered in snow, area inundated with high turbidity water) until a Notice of Project Complete Letter is issued to ensure excessive erosion, stream instability, or other water quality pollution is not occurring in or downstream of the project site. If water quality pollution is occurring, contact the Water Board staff member overseeing the project within three (3) working days. The Water Board may require the submission of a Violation of Compliance with Water Quality Standards Report. Additional permits may be required to carry out any necessary site remediation.

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

AMR-1-6:

Order XIII.B.3.d. Project Modifications states, “Minor or non-material changes may be addressed with an 'Order Deviation' as provided in Attachment F. The approving Water Board will review the notification and determine whether the deviation can be approved under this Order or is subject to additional permitting requirements.”

Therefore, if minor or non-material changes are required, an Order deviation(s) should be reported to the approving Water Board (per the instructions in Attachment F) for review and authorization prior to implementation at the project site.

No revisions are included in the Order or PEIR because of this comment.

AMR-1-7:

In response to this comment, Order, Attachment A, Section A.4.6 Floodplain Restoration was revised as follows:

“Project proposals to create off-channel or side-channel habitats, floodplain restoration will include as appropriate information regarding considerations for water supply (channel flow, overland flow, and groundwater), water quality, and reliability; risks of channel changes; and channel and hydraulic grade.”

This revision does not change the analyses or conclusions in the Draft Order or Draft PEIR.

AMR-1-8:

In response to this comment, Order Section A.4.10. Establishment, Restoration, and Enhancement of Stream and Riparian Habitat and Upslope Watershed Sites was revised as follows:

“In addition, infrastructure located along streams and in riparian areas may be removed or relocated. The primary purpose of infrastructure removal is to eliminate or reduce impacts on riparian areas and vegetation, improve bank stability, reduce erosion, reduce sedimentation into adjacent streams, and provide for native revegetation or natural native plant recruitment. Among the types of infrastructure that could be removed or relocated are boat docks, boat haul-out locations, campgrounds and campsites, day-use sites, roads/trails, ~~and~~ off-highway/off-road vehicle routes, and legacy railroad grades that affect aquatic resources or riparian

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habitat. See Section A.4.7, Removal or Remediation of Pilings and Other In-Water Structures, for further detail on removal of in-water structures.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

AMR-1-9:

In response to this comment, GPM-5, Environmental Monitoring in Order Attachment A was revised as follows:

“As required in the NOA ~~or other agency permit~~, a ~~biologist or resource specialist~~ will ensure that all applicable protective measures are implemented during project construction. The ~~agency-approved biologist or resource specialist~~ will have authority to stop any work if they determine that any permit requirement is not fully implemented. The ~~agency-approved biologist or resource specialist~~ will prepare and maintain a monitoring log of construction site conditions and observations, which will be kept on file.”

Furthermore, the approving Water Board could accept a biologist required in a CDFW Lake and Streambed Alteration Agreement (LSAA) as the resource specialist if the role is similar. These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

AMR-1-10:

In response to this comment, GPM VHDR-5, Revegetation Monitoring and Reporting was revised as follows:

“All revegetated areas will be maintained and monitored for a minimum of 2 years after replanting is complete and until success criteria are met, to ensure the revegetation effort is successful. The standard for success is at least 60% absolute cover compared to pre-project conditions at the project site or at least 60% cover compared to an intact, local reference site (or an available reference site accepted by the approving Water Board). ~~60% absolute cover compared to an intact, local reference site.~~ If an appropriate reference site or pre-project conditions cannot be identified, success criteria will be developed for review and approval by the approving Water Board on a project-by-project basis based on the specific habitat impacted and known recovery times for that habitat and geography. The project proponent will prepare a summary report of the monitoring results and recommendations at the conclusion of each monitoring year.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

AMR-1-11:

Order Attachment B NOI, Section VIII, Table A, Total Project Areas refers to the total project area within the project boundary or project limits, including all areas of direct disturbance and temporary access and staging. Order Attachment B Section VIII, Table B Temporary and Permanent Project Impacts and Benefits to Water of the State

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refers to the areas of direct activities or direct disturbance for project construction/ implementation. The impact areas presented in Table B will likely be smaller than the total project limit areas presented in Table A. The description of information requested in both tables is consistent with the current standard application form for discharges of dredged or fill material to waters of the state.

No revisions are included in the Order or PEIR because of this comment.

AMR-1-12:

As stated in the PEIR Section 2.7 Typical Construction, Operation, and Maintenance Activities and Methods, the Order does not promote construction or operation and maintenance of specific facilities or other specific physical actions by the State Water Board. The typical construction, operation, and maintenance methods in the PEIR are reasonably foreseeable methods that may be used to implement the types of projects and actions that might be taken in the future. These descriptions are not a requirement of the Order.

No revisions are included in the Order or PEIR because of this comment.

AMR-1-13:

The State Water Board may develop supplemental materials and/or templates to guide use of the Order after adoption and will notify the public upon release of any such materials.

No revisions are included in the Order or PEIR because of this comment.

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CALT-1 California Trout

CALT-1



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 13, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
1001 I Street, 15th floor, Sacramento, CA 95814
email to: commentletters@waterboards.ca.gov



SUBJECT: Comments on the State Water Resources Control Board Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Implementation of Large Habitat Restoration Projects Statewide

Thank you for the opportunity to review the extensive documentation provided for the Statewide Restoration General Order (Order) and the accompanying Programmatic EIR. On behalf of my organization - California Trout, I have reviewed as much of the documentation as possible in the review period provided and commend the State Water Board for developing this Order.

Founded in 1971, California Trout (CalTrout) is a leading nonprofit organization whose mission is to ensure resilient, wild fish thriving in healthy waters for a better California. It is our belief that abundant wild fish indicate healthy waters and that healthy waters benefit all Californians. We are dedicated to solving California's complex resource issues while balancing the needs of wild fish and people.

We currently have more than sixty large-scale, "boots on-the-ground" conservation projects underway at various stages of project development, many of which will require permitting authorizations. The State Water Board's General Order and PEIR will establish an authorization process to obtain CEQA authorization more efficiently for many of our environmentally beneficial restoration activities. We strongly support the State Water Board's proposed action and acknowledge the Order will help expedite regulatory approval for large restoration projects while ensuring appropriate protective measures are in place. In addition, the Order will enable our organization and other restoration practitioners to save precious funding resources and allow those resources to be put toward accomplishing more beneficial on-the-ground restoration activities.

The Statewide restoration General Order appears very clear, comprehensive, well needed, and right on the money.

The North Coast region is a high priority area for investment of State bond funds, Federal recovery programs for ESA-listed species, and other funding resources to protect watersheds, rivers and streams, riparian habitat, wetland and estuarine habitats, and water quality. The comprehensive coverage provided by the Order appears to suit the needs of most, if not all, the project types that are designed and implemented by my organization in the North Coast region.

1380 9th Street, Arcata CA 95521
Phone: (707) 845-7810 E-mail: dmierau@caltrout.org



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CALT-1

 CALIFORNIA TROUT

We strongly encourage the State Water Board to coordinate with other state and local agencies, especially the CA Department of Fish and Wildlife, the California Coastal Commission, the State Lands Commission, and county planning departments to facilitate their recognition of the CEQA authorization provided under the Order for issuing permits. Without this fundamentally important step, the value and utility of the Order will be greatly diminished. CDFW needs to recognize the Order to enable their issuance of both a Lake and Streambed Alteration Agreement (Section 1600) and a Restoration Management Permit for CESA compliance.

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Please consider that areas along the North Coast are currently experiencing sea level rise that is outpacing our ability to design, permit, and implement restoration projects. As I am sure you are aware, areas in the Coastal Zone are subject to the Coastal Act administered by the Coastal Commission. Restoration projects implemented in the coastal zone must therefore obtain a coastal development permit, which is frequently the most challenging and constraining permitting process of all the required authorizations. We therefore strongly encourage you to collaborate with the Coastal Commission and their staff to ensure they are willing and able to recognize the CEQA authorization under the Order for issuing coastal development permits. The Coastal Commission needs to be on board with this streamlining process to facilitate protection and restoration of coastal habitats and resources.

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In addition, County planning departments need to similarly be brought into this permit streamlining process. We recently contacted the Humboldt County Planning and Building Division to inquire about their perspective on the Order, and it appears they may not even be aware of this Order and the process for its adoption and use. Other counties may also not be aware of this important step in permit streamlining. The State Water Board should consider a process for informing and educating local agencies about the General Order.

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The proposed types of restoration projects to be considered under the General Order appears to include the placement fill material, such as the beneficial reuse of dredged sediment or placement of upland material in waters of the state to establish, restore, or enhance wetlands. We strongly support this inclusion, accompanied with proper protective measures. Sediment should be viewed as a highly valuable resource, and placement of dredged sediments on wetlands and floodplain surfaces can be done in ways that are beneficial to these sensitive habitats. Simply put, we need the flexibility to place fill on-site in ecologically beneficial and cost-effective ways, even in the Coastal Zone and even on tidal and freshwater wetlands. This will be an important tool to protect and maintain these habitats, increase coastal resilience in the face of sea level rise, and preserve working landscapes and other open spaces.

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Please provide more clarity on the process by which project proponents would tier off the General Order's PEIR for associated project activities that cannot be authorized under the Order, or alternatively ensure the Regional Boards acting as lead agency are familiar with this process.

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The Order needs to recognize that in some degraded systems, native vegetation can become impactful to water quality and a nuisance; its removal can be acknowledged as a benefit toward rehabilitating degraded habitats and restoring more functional ecological processes.

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cont.

1380 9th Street, Arcata CA 95521
Phone: (707) 845-7810 E-mail: dmierau@caltrout.org

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Please avoid imposing arbitrary standards of success for mitigation and monitoring of project impacts, such as a threshold percent survival required for planted trees and shrubs. That discretion should be maintained by the lead agency.

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cont.

Please consider allowing less restrictive turbidity thresholds before projects are considered in violation of 401 water quality standards. It is often very difficult, and therefore expensive, to have to comply with restrictions on the occasional and temporary release of turbidity and these restoration project-related turbidities are typically orders of magnitude lower than conditions that occur in winter that are often related to other anthropogenic activities that go unregulated.

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Please reconsider requiring a Stormwater Pollution Prevention Plan (SWPPP) or enable the authorizing Regional Water Board to make this decision. These Plans are costly, time-consuming, and not always necessary. Requiring these plans in lieu of a water quality certification has just replaced one permitting requirement with another. Project proponents and our construction contractors know how to implement effective and protective sediment and erosion control BMPs.

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Please maintain the discretionary authority of Regional Boards to act as lead agency and authorize projects under the Order.

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CalTrout strongly supports State Water Board action to create a more efficient permitting mechanism for habitat restoration. Our organization implements all types of restoration projects throughout the state. Permitting is certainly one of the greatest barriers to our work. Creating a more efficient permitting process will help us do more on-the-ground work and get environmentally beneficial projects completed more quickly.

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CalTrout supports the proposed General Order and appreciates the efforts of the State Water Board to streamline the permitting process.

If you have any questions regarding this letter, please contact me at (707) 845-7810.

Sincerely,

Darren Mierau

North Coast Director
California Trout, Inc.

1380 9th Street, Arcata CA 95521
Phone: (707) 845-7810 E-mail: dmierau@caltrout.org

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CALT-1 California Trout

Responses to Comments from CALT-1 California Trout

CALT-1-1:

The State Water Board appreciates California Trout's (CALT) comments on the Draft Order and Draft PEIR, information on CALT, and the North Coast region. The State Water Board collaborated with CDFW and other agencies during the development of the Order and PEIR and will continue to coordinate with federal, state and local agencies throughout the Order adoption and implementation process, as needed.

CALT-1-2:

The Order would not hinder interagency or stakeholder collaboration, nor would the Order alter California Coastal Commission policies or procedures. The State Water Board encourages multi-agency collaboration but cannot prescribe engagement with another state agency. For projects supported by the National Oceanic and Atmospheric Administration Fisheries Restoration Center's Community-based Restoration Program, the California Coastal Commission established federal consistency with the California Coastal Act and California Coastal Management Program. This Consistency Determination applies to restoration of salmonid habitat and related upland, estuarine, and coastal restoration within the entire California Coastal Zone.

CALT-1-3:

The State Water Board encourages collaboration with local agencies but cannot prescribe engagement with other agencies. Further opportunities for public engagement include: (1) participation at the State Water Board Meeting to consider adoption of the Order; (2) availability of Order and PEIR documents on the [State Water Board 401 Program webpage](https://www.waterboards.ca.gov/water_issues/programs/cwa401/) at https://www.waterboards.ca.gov/water_issues/programs/cwa401/; and (3) submission of comments during the public notice period for individual NOIs pertaining to proposed projects considered for authorization under the Order. Furthermore, development and adoption of the Order is also included in materials related to California Natural Resource Agency's (CNRA's) Cutting the Green Tape initiative.

CALT-1-4:

Comment noted; the Order and PEIR acknowledge beneficial reuse of sediment in certain restoration projects.

CALT-1-5:

As described in the PEIR in Section 1.1 Introduction and Overview of the Order, later activities must be examined in light of the EIR to determine whether an additional environmental document must be prepared (Cal. Code of Regs., tit. 14, section 15168). For a proposed restoration project, the CEQA lead agency must determine whether the proposed activity would have effects that were not examined in the PEIR or if no subsequent EIR would be required pursuant to section 15162. Section 15152 governs the process for tiering off a broader EIR. Tiering may be one option where an additional environmental document must be prepared.

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CALT-1-6:

Overall project success criteria and measurable performance standards for projects authorized by the Order will be considered by the approving Water Board on an individual project basis as part of the development of the Monitoring Plan (Order XIII.G.4. Monitoring Plan).

Revegetation success criteria described under VHDR-5 has been included for consistency with other regulatory agency restoration permitting practices in place or under development (e.g., NMFS, USFWS). GPM VHDR-5, Revegetation Monitoring and Reporting was revised as follows:

“All revegetated areas will be maintained and monitored for a minimum of 2 years after replanting is complete and until success criteria are met, to ensure the revegetation effort is successful. The standard for success is at least 60% absolute cover compared to pre-project conditions at the project site or at least 60% cover compared to an intact, local reference site (or an available reference site accepted by the approving Water Board). ~~60% absolute cover compared to an intact, local reference site.~~ If an appropriate reference site or pre-project conditions cannot be identified, success criteria will be developed for review and approval by the approving Water Board on a project-by-project basis based on the specific habitat impacted and known recovery times for that habitat and geography. The project proponent will prepare a summary report of the monitoring results and recommendations at the conclusion of each monitoring year.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

CALT-1-7:

Order Section XIII references the specific sections of the California Code of Regulations, California Water Code, and Anti-Degradation Policy that identify the conditions and limitations of the Order to assure compliance with water quality standards and other pertinent requirements of state law. Designating less restrictive standards in this Order is not appropriate. However, Order Section XIII.F.2. Prohibitions states, “The approving Regional Board may have the authority to address short-term, construction-related impacts that would affect water quality and allow for exceedances of water quality objectives for limited magnitude and duration during construction of individual restoration projects. A project proponent should contact the approving Regional Board to determine if an exemption is possible.”

CALT-1-8:

See Master Response 2: *Construction General Permit and SWPPP Requirements.*

CALT-1-9:

Additional language has been added in PEIR Section 1.1 Introduction and Overview of the Order to describe how to determine the appropriate CEQA lead agency for an individual restoration project. Order Section XIII.A. Request for Authorization and Attachment B NOI Form, Step 1 require the applicant to submit an NOI to the applicable

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Water Board. Attachment B NOI Form, Step 5 states, “The NOI must be electronically submitted to the approving Water Board, including an electronic carbon copy (cc) to the State Water Board” where the discharge may occur. If the project is located under the jurisdiction of more than one Regional Board, then the NOI should be submitted solely to the State Water Board.

CALT-1-10:

The State Water Board appreciates California Trout’s comments supporting the adoption of the Order. The State Water Board notes the contact name and number for California Trout.

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CBD-1 Citizens Committee to Complete the Refuge, Center for Biological Diversity, California Coastkeeper Alliance, and Sierra Club California

CBD-1

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000

August 13, 2021



Via email: commentletters@waterboards.ca.gov

Re: Comments on the Proposed Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (proposed General Order) and supporting California Environmental Quality Act (CEQA) Draft Program Environmental Impact Report (PEIR).

Dear Members of the Board,

On behalf of Citizens Committee to Complete the Refuge, Center for Biological Diversity, California Coastkeeper Alliance, and Sierra Club California, we submit these comments regarding the proposed Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (proposed General Order) and supporting California Environmental Quality Act (CEQA) draft Program Environmental Impact Report (PEIR).

Our organizations support the concept of streamlined permitting for well-designed restoration projects. However, we are concerned that the proposed General Order is overly broad and over inclusive and, as a result, its adoption and application may result in unintended adverse consequences to water resources, species, and habitats. Restoration projects are complex and may have both beneficial and adverse impacts to various resources, it is important to have a transparent public process when the Regional Boards are balancing those factors. Particularly for large-scale restoration projects that will affect many resources and many public interest factors, a public process and review period may be needed to make sure the impacts to various environmental resources are fully considered and resources are adequately protected.

1

Comments re Proposed General Permit for Restoration Projects Statewide

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CBD-1

1. Definition of “restoration projects” in the General Order is Overbroad

We are concerned that the proposed definition of “restoration projects” for this General Order differs significantly from other definitions of restoration projects adopted by the State Water Resources Control Board (SRWCB). The SWRCB and the public spent a tremendous amount of time developing a definition of “restoration projects” in the *“Ocean Waters of California, and the Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries for Waters of the United States”* adopted April 2, 2019 and revised April 6, 2021 (Dredge and Fill Procedures). Restoration projects in that document are defined in the following manner:

“Ecological Restoration and Enhancement Project means the project is voluntarily undertaken for the purpose of assisting or controlling the recovery of an aquatic ecosystem that has been degraded, damaged or destroyed to restore some measure of its natural condition and to enhance the beneficial uses, including potential beneficial uses of water.

Such projects are undertaken:

1) in accordance with the terms and conditions of a binding stream or wetland enhancement or restoration agreement, or a wetland establishment agreement, between the real property interest owner or the entity conducting the habitat restoration or enhancement work and:

- a. a federal or state resource agency, including, but not limited to, the U.S. Fish and Wildlife Service, Natural Resources Conservation Service, Farm Service Agency, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, U.S. Forest Service, U.S. Bureau of Land Management, California Department of Fish and Wildlife, California Wildlife Conservation Board, California Coastal Conservancy or the Delta Conservancy;
- b. a local agency with the primary function of managing land or water for wetland habitat purposes; or
- c. a non-governmental conservation organization; or

2) by a state or federal agency that is statutorily tasked with natural resource management. These projects do not include the conversion of a stream or natural wetland to uplands or stream channelization. It is recognized that Ecological Restoration and Enhancement Projects may require ongoing maintenance or management to maximize fish, wildlife, habitat, or other ecological benefits, or filling gullied stream channels and similar rehabilitative activities to re-establish stream and meadow hydrology. Changes in wetland plant communities that occur when wetland hydrology is more fully restored during rehabilitation activities are not considered a conversion to another aquatic habitat type. These projects also do not include actions required under

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a Water Board Order for mitigation, actions to service required mitigation, or actions undertaken for the primary purpose of land development. [emphasis added]

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And under the “Amended order for Clean Water Act Section 401 General Water Quality Certification for small habitat restoration projects File #SB12006GN” only the following categories of projects would qualify:

“1. California Environmental Quality Act - The project shall be eligible for a categorical exemption under California Code of Regulations title 14, section 15333, “Small Habitat Restoration Projects.” Examples of small habitat restoration projects may include, but are not limited to:

- a. Revegetation of disturbed areas with native plant species.
- b. Wetland restoration, the primary purpose of which is to improve conditions for waterfowl or other species that rely on wetland habitat.
- c. Stream or river bank re-vegetation, the primary purpose of which is to improve habitat for amphibians or native fish.
- d. Projects to restore or enhance habitat that are carried out principally with hand labor and not mechanized equipment.
- e. Stream or river bank stabilization with native vegetation or other bioengineering techniques, the primary purpose of which is to reduce or eliminate erosion and sedimentation.
- f. Culvert replacement conducted in accordance with published guidelines of the California Department of Fish and Game Wildlife (DFG) (CDFW) or National Oceanic & Atmospheric Administration Fisheries, the primary purpose of which is to improve habitat or reduce sedimentation.

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2. The Project Size - The project size shall not exceed five acres or a cumulative total of 500 linear feet of stream bank or coastline.

The SWRCB’s General Certification for Small Habitat Restoration Projects (SHRP) also specifically disallows the use of this approval process for:

“4. Compensatory Mitigation Projects - The project shall not be a compensatory mitigation project. [emphasis added]

5. Primary Project Purpose - This Order authorizes activities whose primary purpose is habitat restoration. The project shall not be for restoration and enhancement conducted as part of a larger project whose primary purpose is not habitat restoration, e.g., land development or flood management. [emphasis added]

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Both of these other approaches narrowly define the range of activities considered “restoration” activities. The definition of restoration projects in the Dredge and Fill Procedures makes clear that “restoration” activities do not include “actions required under a Water Board Order for mitigation, actions to service required mitigation, or actions undertaken for the

Comments re Proposed General Permit for Restoration Projects Statewide

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primary purpose of land development.” The General Certification for Small Habitat Restoration Projects reiterates that for projects where restoration and enhancement actions are “conducted as part of a larger project whose primary purpose is not habitat, e.g. land development or flood management” [emphasis added] the use of the General Certification is disallowed.

In contrast the proposed definition of restoration project for this General Order is silent regarding such prohibitions:

An eligible project type that would result in a net increase in aquatic or riparian resource functions and/or services through implementation of relevant protection measures listed in Section 2.6, *Categories of Restoration Projects in the Order*, and Section 2.8, *Programmatic Sideboards, General Protection Measures, and Other Requirements*. The project must also be included in the list of eligible project types (see Section 1.2, *Categories of Eligible Project Types*). A restoration project permitted by the Order may include multiple benefits, such as groundwater recharge, recreation, flood management, water quality improvement, and/or adaptation to climate change. Restoration projects permitted by the Order may also contribute to the protection of existing and potential beneficial uses identified in each of the nine Regional Boards water quality control plans (basin plans).

The draft documents fail to provide adequate supporting rationale for the SWRCB to adopt a substantially different and much broader definition of the list of activities that could be covered as “restoration activities” under this draft General Order than under the Dredge and Fill or SHRP.

As stated earlier, we heartily recognize the need to encourage implementation of restoration projects, however, we believe the list of activities that could be covered by the draft General Order is overly broad.

The General Order would allow too wide a range of activities to be permitted than is appropriate for a general certification. 23 C.C.R. § 3861 states for a “general certification action”:

- (b) A class of activities receiving general certification shall
 - (1) consist of the same or similar types of activities;
 - (2) involve the same or similar types of discharges and possible adverse impacts requiring the same or similar certification conditions or limitations in order to alleviate adverse impacts to water quality

The draft General Order provides no limitations that would ensure the order applies only to the same or similar types of activities, discharges or adverse impacts. There are no limits on the size of a large restoration project, the types of projects than can be permitted by the General Order range from restoration projects that include recreation activities, flood



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management, ground water recharge, bridges, culverts, etc. Given the breadth of the activities that could be covered and the scant information provided in the documents, it is not possible to determine the magnitude of potential impacts to waters and wetlands under this General Order.

At minimum, the PEIR should be revised to provide some estimate of the number of the projects that are projected to be utilized under the different categories of activities per year and per the life of this General Order. The PEIR should provide some indication of the size and scale of restoration projects that are anticipated to be authorized under the proposed General Order. For example, what is the average length of bioengineered bank stabilization projects? How many of these types of projects would be anticipated per year? All we know currently is that the footprint of impacts can range for example from bioengineered bank stabilization projects that are over 500 linear feet in length to an unknown length.

2. Inclusion of Restoration Project that Provide Mitigation for Larger Projects in the General Order May Undermine Adequate Project Review

In addition, we are deeply troubled by the following draft General Order language that seems to remove the restrictions previously imposed on the use of an exemption or expedited permit review for “restoration” projects that are “actions required under a Water Board Order for mitigation, actions to service required mitigation, or actions undertaken for the primary purpose of land development”:

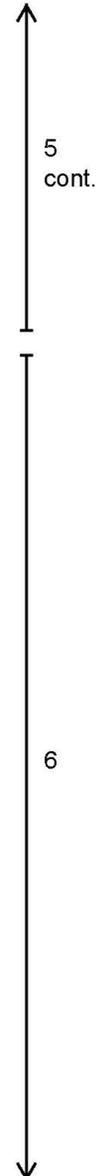
E. General Compliance Enrollment and authorization of restoration projects under this Order are for the discharges of waste associated with only the restoration action and shall not be construed as authorization or any compliance determination for any related underlying project or activity. Restoration projects serving as mitigation for a related project or activity may be enrolled under this Order; however, this Order does not include any findings regarding the underlying related activity's impact to water quality, public trust resources, or other matters of public interest. When considering the impact of restoration projects under this Order, the approving Water Board considers only those adverse changes that may result from approval of the new restoration project, including multi-benefit projects that may include non-restoration action elements (e.g., recreation, flood protection). [emphasis added]

What is meant by an “underlying related project or activity?” Are there restrictions on the type of “underlying related project or activity”? Certainly, this cannot pertain to projects “whose primary purpose is not habitat restoration, such as land development or flood management”? The documents provided fail to explain the basis for this significant deviation from prior, firmly stated exclusions or provide any rationale why restoration projects that include “non-restoration action elements” would be eligible for consideration under this General Order.

We strenuously object to the inclusion of compensatory mitigation projects tied to land development projects because compensatory mitigation is proposed for projects, not as a

Comments re Proposed General Permit for Restoration Projects Statewide

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voluntary action, but because it is required to compensate for adverse impacts to waters of the U.S. and waters of the State that result will result in the loss of habitats, beneficial uses, and the functions and values of waters and wetlands.

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We are also concerned about segmenting the review of restoration activities from those of related non-restoration action elements such as flood protection. The General Compliance language places no restrictions on what is considered a “multi-benefit project” or what is meant by “flood protection.” Could the phrase “flood protection” include traditional engineered levees and seawalls? Is this General Order intended to provide authorization for restoration/compensatory mitigation components of a flood protection project that employs traditional hard engineering (traditional riprap levees, seawalls, etc.) or is the use of this General Order limited to multi-benefit projects with “flood protection” actions such as those listed under the discussion of “floodplain restoration”?

And what is meant by the language in last sentence? Is this sentence saying for example, that for multi-benefit projects that may include non-restoration action elements (e.g., recreation, flood protection), the Water Board will only consider the adverse changes that may result from the restoration components and will not consider the adverse changes that may result from the “non-restoration components”? If so, how and why is it permissible to evaluate a “restoration project” separately from the “underlying related activity’s impacts to water quality, public trust or other matters of public interest”? The Dredge and Fill Procedures clearly state, “Project means the whole of an action that includes a discharge of dredged or fill material to waters of the state.” [emphasis added.] In contrast, the approach described above for the General Order suggests that the SWRCB would allow and encourage piece-meal review of a project’s impacts.

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We have substantive concerns regarding the impact the General Compliance language of the General Order could have on CEQA review of multi-benefit projects. If, as an example, a multi-benefit project has an upland/flood plain component (e.g. in the arid regions of the state) would the applicant be able to include both aquatic restoration components and upland/flood plain restoration components and bypass any additional site specific CEQA compliance for the project as a whole including any upland components of the project that may affect water quality?

Similarly, with respect to water conservation projects the General Order does not explain what restrictions, if any, are proposed during periods of drought when low fall and winter rains are predicted or how would large infrastructure associated with “water conservation” would be analyzed. For example, if the General Order allows for inclusion of off-stream storage projects where water is collected during high flows and stored does the General Order cover any actual channel or diversion created? If the General Order covers activities such as construction of water storage tanks, pipelines and other infrastructure will the impacts of all of that construction fall within the General Order? If water conservation includes new reservoirs for water to be collected during periods of high flows (i.e. the rainy season), how will the General Order ensure consideration of potential impacts as a consequence of drying

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reservoirs in periods of drought? Some examples of potential impacts might include loss of downstream sediment, or the addition of sediment in areas that might adversely impact the aquatic environment, air quality impacts from dry sediment being lofted into the air, which can also later be deposited in nearby streams, etc.

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As explained further below and the SWRCB is well aware, CEQA prohibits “piecemeal” review of the significant environmental impacts of a project. Here, the SWRCB may not divide a single project into smaller individual projects in order to avoid its responsibility to consider the environmental impacts of the project as a whole – it cannot properly consider approval of a restoration project that is part of a larger project separately from the “underlying related activities” that may have also impacts to water quality and other related resources.

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While we certainly support encouragement of restoration projects that restore or enhance beneficial uses and water quality, we cannot condone piece-meal review of projects.

3. Net Benefit Standard Needs to be Clearly Defined in the General Order

Net benefit should be clearly defined to require that the analysis of net benefit be within each watershed/stream affected and also consider net benefit to each of the resources. The General Order should ensure that the net benefit analysis can't trade-off improvements in water quality in one watershed against water quality impairment in another watershed and the analysis cannot trade-off benefits to one species and its habitat against impacts to or degraded habitat condition for another species. While we understand that the proposal limits the use of General Order where “take” of listed species will occur “except as authorized by agencies (CDFW and USFWS),” that limitation alone does not ensure that the net benefit analysis is provided for each of the listed species and habitat type and wholly fails to address other rare, imperiled or special status species and habitat types and natural communities that may be affected by the projects covered under the General Order.

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4. Other CEQA issues

a. PEIR project description and identification of likely impacts is inadequate

The EIR intended for use as a first-tier EIR for a program or policy should comply with CEQA's standards for an adequate environmental analysis in an EIR for a planning-level action, which is to say that it should “focus on the secondary effects that can be expected to follow from the adoption [of the policy].”¹ In defining the scope of the analysis, the project should be defined to include “the whole of an action, which has a potential for resulting in a physical change in the environment, directly or ultimately,” and “may be subject to several discretionary

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¹ Cal. Code Regs. tit. 14, § 15146. We agree with the CDFW that a program EIR is appropriate in this circumstance because the CalCannabis Licensing program will set the floor for environmental protection related to cannabis cultivation across the state.

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approvals by governmental agencies.”² The entire project being proposed for approval, and not some smaller aspect of the project as a whole, must be described in the EIR.³ “‘Project’ is given a broad interpretation in order to maximize protection of the environment [citation].”⁴ This PEIR fails to do that.

A project description must include all relevant parts of a project, including reasonably foreseeable future expansion or other activities that are a part of the project.⁵ In *San Francisco Ecology Ctr. v. City & County of San Francisco*,⁶ the Court stated that agencies are encouraged under CEQA guidelines to make reasonable forecasts about future conditions. Those reasonable forecasts need to include predicted sea level rise and other climate change related changes to the environment when assessing the likely impacts of the broad range of projects that could be approved under the proposed General Order. The PEIR does not include such an analysis.

It is well settled that CEQA forbids “piecemeal” review of the significant environmental impacts of a project. A public agency may not divide a single project into smaller individual projects in order to avoid its responsibility to consider the environmental impacts of the project as a whole.⁷ This rule derives, in part, from section 21002.1, subdivision (d), which requires the lead agency--in this case, the Commission--to “consider[] the effects, both individual and collective, of *all activities* involved in [the] project.” (Emphasis added.) Courts have considered separate activities as one CEQA project and required them to be reviewed together where, for example, the second activity is a reasonably foreseeable consequence of the first activity,⁸ or both activities are integral parts of the same project.⁹



² *San Joaquin Raptor*, supra, 27 Cal. App. 4th at 730; Guidelines § 15378.

³ See, e.g., *Habitat & Watershed Caretakers v. City of Santa Cruz* (2013) 213 Cal.App.4th 1277, 1297.

⁴ *San Joaquin Raptor*, 27 Cal. App. 4th at 730.

⁵ *Laurel Heights Improvement Ass’n v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 396. In *Laurel Heights*, the University of California planned to transfer medical laboratories to an office building in a residential neighborhood. *Id.* at 389. Initially, the laboratories were to occupy 100,000 square feet of a 354,000-square-foot building. *Id.* at 398. The University claimed that it had not formally decided to occupy the entire building, but the court noted that statements by the chancellor in the final EIR, public releases in newsletters, public meeting minutes, and private correspondence all indicated the University’s intent to occupy the entire building when another agency’s lease expired in several years.⁵ *Id.* at 397. Accordingly, there was “credible and substantial evidence” that the University’s occupancy of the entire building was a reasonably foreseeable consequence of the decision to move into the building. *Id.* at 398.

⁶ (1975) 48 Cal.App.3d 584, 595.

⁷ *Orinda Assn. v. Board of Supervisors* (1986) 182 Cal. App. 3d 1145, 1171.

⁸ *Bozung v. Local Agency Formation Com.* (1975) 13 Cal.3d 263, 283-84.

⁹ *Whitman v. Board of Supervisors* (1979) 88 Cal.App.3d 397, 414-415.

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The PEIR also improperly fails to analyze all physical changes to the environment. The PEIR repeatedly fails to identify and analyze significant effects. The determination “whether a project may have a significant effect plays a critical role in the CEQA process.”¹⁰ “The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data.”¹¹ “In evaluating the significance of the environmental effect of a project, the lead agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment which may be caused by the project.”¹²

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As explained above, given the broad definition of restoration project and the lack of any specific information on the number and scope of projects that could fall within the General Order it is impossible for the public or decision makers to know what impacts are likely and whether they are being adequately addressed by the General Order requirements.

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b. The Range of Alternatives is too Narrow.

The discussion of mitigation and alternatives is “the core of an EIR.”¹³ The lead agency must select a reasonable range of alternatives for evaluation in the EIR when determining its scope.¹⁴ The scope of alternatives reviewed must be considered in light of the nature of the project, the project’s impacts, relevant agency policies, and other material facts.¹⁵ Alternatives are not properly formulated and fleshed out in the PEIR. Action Alternatives in the PEIR only suggest what “could” be changed from the proposal but do not actually analyze any specific changes or suite of changes to the proposed project. The PEIR then uses overly narrow formulation of the project objectives to reject all action alternatives. This approach undermines clear-eyed assessment of potential impacts that could be avoided through alternatives.

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When an EIR is considering a General Order that would apply to myriad projects across the state, the complex nature of the projects, scale of potential impacts, number of moving parts should present a broad, nuanced range of alternatives. Mere blanket alternatives which consider the non-implementation of all or part of the project, as presented in the PEIR are not sufficient.

¹⁰ Guidelines, § 15064(b)

¹¹ Id., § 15064(b)

¹² Id., § 15064(d)

¹³ *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564.

¹⁴ Guidelines, §15126.6(a); *Citizens of Goleta Valley*, 52 Cal. 3d at 566.

¹⁵ *Mira mar Mobile Community v City of Oceanside* (2004) 117 Cal. App. 4th 477; *City of Rancho Palos Verdes v City Council* (1976) 59 CA3d 869.

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At minimum, an alternative should be analyzed that uses the dredge and fill procedures definition of "restoration projects" and the categories of actions permitted under the GC for SHRP to assess whether by narrowing the definition in these ways, significant impacts to the environment can be avoided.

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c. Monitoring and Reporting

The General Order should require that all monitoring and reporting for projects that rely on the General Order should be publicly available and posted by the boards on their websites in a timely manner. We are concerned that accurate and current information regarding projects is often difficult for the public to obtain. For example, much of the information currently available on the EcoAtlas website is very incomplete and out of date.

↑ 16

4. Issues Raised in Scoping Were Not Adequately Addressed in the PEIR

Many of the issues raised in these comments were presented to the board earlier, during the scoping process, but are not adequately addressed in the PEIR. The San Francisco Bay Conservation and Development Commission (BCDC) submitted scoping comments in a letter dated November 22, 2019, and in that letter several substantive concerns were raised that have not been adequately addressed in the PEIR or in the language of the draft General Order. One substantive comment is that restoration success is extremely dependent upon site specific design that requires adequate review and time for planning. It is still unclear whether the proposed expedited permit review process in the General Order will ensure and not hinder a rigorous review of proposed restoration plans.

Another concern raised by BCDC is that large scale restoration projects could result in habitat trade-offs where one type of habitat is replaced with another, which is why rigorous local, regional and cumulative review is required to ensure habitat conversions do not adversely impact suites of organisms. The example provided in the BCDC comment letter is where "wetland establishment activities in subtidal or some tidal areas could result in habitat type conversion that inadvertently eliminates or significantly reduces the numbers of certain populations of fish or wildlife (e.g. habitat conversion to another habitat type could disrupt foraging of certain bird guilds)." This issue has not been sufficiently addressed in the PEIR. The threshold of significance provided in the PEIR focuses on avoiding adverse impacts to listed species, but fails to adequately consider the potential individual and cumulative adverse impacts of the General Order related to habitat conversion as described above.

↑ 17

The BCDC letter also stated the PEIR should discuss whether the General Order would consider sea level rise and that the PEIR "...should consider how climate change may alter the way that allowable restoration projects will impact Bay and marsh natural resources (e.g. how might changing precipitation patterns and sea level rise impact the projects that would be allowed through the General Order)." The PEIR has not addressed this issue.

A related concern is that the long-term sustainability of tidal wetlands, restoration projects and proposed restoration projects may be adversely impacted by sea level rise and in

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the San Francisco Bay Area. This is significant, especially in light of diminishing sediment supplies that are necessary to sustain these habitats. It is therefore all the more important that large scale restoration projects be carefully reviewed and that coordination occurs across regional jurisdictions to ensure beneficial reuse of sediment is directed towards projects that will be sustainable in the long-term to avoid squandering this precious resource on projects that will only provide short-term gains. Will this be possible under the expedited review proposed by the draft General Order?

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cont.

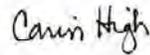
Thank you for the opportunity to submit these comments. We request that we be informed of any future opportunities for public review or comment. Please do not hesitate to contact us if you have any questions.

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Respectfully submitted,



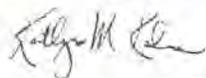
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Comments re Proposed General Permit for Restoration Projects Statewide

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CBD-1 Citizens Committee to Complete the Refuge, Center for Biological Diversity, California Coastkeeper Alliance, and Sierra Club California

Responses to Comments from CBD-1 Center for Biological Diversity

CBD-1-1:

The State Water Board appreciates the Citizens Committee to Complete the Refuge, Center for Biological Diversity, California Coastkeeper Alliance, and Sierra Club California comments on the Draft Order and Draft PEIR.

See Master Response 1: Definition of Restoration Project for additional details.

Furthermore, in response to this comment, Order Section III. Public Notice was revised to include the following text:

“The approving Water Board will also provide a 21-day public notice of a Notice of Intent (NOI; Attachment B) for an individual project proposed for authorization under this Order.”

This revision does not change the analyses or conclusions in the Draft Order or Draft PEIR.

CBD-1-2:

The definition of a restoration project used in the Order is broader than the definition of EREP as defined in the Dredge or Fill Procedures. The definition was developed based on input from numerous natural resource agencies and to be consistent with multiple permitting agency regulatory practices either existing or under development (e.g., CDFW, NMFS, USFWS, USACE). A broader definition is appropriate for this Order because projects must adhere to protective eligibility requirements. All projects seeking to enroll under the Order would have to meet the Order’s definition of a restoration project (Order, Section V. Project Description), be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4), adhere to programmatic sideboards (Order, Attachment A, A.5.1), including adopting GPMs (Order, Attachment A, A.5.2) and design guidelines (Order, Attachment A, A.6), and undergo a pre-application consultation (Order, Attachment A, A.5.3) with the approving Water Board.

In regards to covering mitigation projects, the Order “shall not be construed as authorization or any compliance determination for any related underlying project or activity” (Order Section XIII.E.1. General Compliance).

See Master Response 1: Definition of Restoration Project for additional details.

CBD-1-3:

The definition of a restoration project used in the Order is broader than the definition used in the General Order for Small Habitat Restoration Projects. The definition used in the General Order for Small Habitat Restoration Projects is limited by the scope of the CEQA categorical exemption. There are many common, high priority restoration projects that are not eligible for coverage under the General Order for Small Habitat Restoration

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Projects that were determined to be appropriate for expedited permitting so long as appropriate limitations and protective measures were included as part of the project.

See Master Response 1: Definition of Restoration Project for additional details.

CBD-1-4:

See Master Response 1: Definition of Restoration Project for additional details.

CBD-1-5:

Restoration projects that do not qualify for the General Order for Small Habitat Restoration Projects, or its most recent update, or terms of the Order, must obtain an Individual Water Quality Certification and/or Waste Discharge Requirements from the State Water Board or appropriate Regional Board. Obtaining individual authorization can be more time-consuming and costly than obtaining authorization under a General Order, which provides programmatic coverage. For this reason, the Order is needed to expedite regulatory review of eligible restoration projects that do not qualify for the General Order for Small Habitat Restoration Projects. The Order is intended as a companion to, not a replacement for, the General Order for Small Habitat Restoration Projects.

As described in the Order (Section I. Executive Summary and Attachment A, A.4 Categories of Restoration Projects in the Order), many types of restoration projects would be permitted under the Order. The individual restoration projects could be constructed, operated, and maintained in many different ways to meet regulatory requirements and guidelines. For this reason, the Draft PEIR identified a range of potential effects that could result from implementation of these general types of restoration projects. However, specific project details, such as project sizes, configurations, locations, and operations are not known at this time. For this reason, the potential effects that could result from individual restoration projects permitted under the Order are discussed to the extent feasible in a level of detail to facilitate meaningful review and informed public decision making in the broader context of the Order. The approving Water Board would evaluate each project individually for eligibility for coverage under the Order, and would consider multiple projects, where proposed in a given year and/or region/watershed. Furthermore, “The approving Water Board determines if a proposed project meets the definition of a restoration project and is eligible for authorization under this Order.” has been added to the project description (Section V. Project Description of the Order) to ensure authorization of proposed projects is appropriate and as intended. This revision does not change the analyses or conclusions in the Draft Order or Draft PEIR.

As described in Chapter 6 Alternatives of the PEIR, a reasonable range of alternatives to the Order were considered, including limiting number of projects permitted under the Order (e.g., specifying more narrowly the types of restoration projects, eliminating certain aspects of restoration projects, and eliminating or excluding an entire category of restoration projects included in the Order). These alternatives were screened and not selected based on their lack of ability to feasibly attain most of the basic project objectives.

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CBD-1-6:

Inclusion of restoration projects in the Order that provide mitigation or other benefits for larger (i.e., underlying) projects would not undermine adequate project review of the underlying projects. The Order does not provide authorization for any related underlying project or activity that is the reason why mitigation is required (see Draft Order section XIII.E.1., page 11). Order Section XIII.E.1 (Draft Order, page 11) states:

“Enrollment and authorization of restoration projects under this Order are for the discharges of waste associated with only the restoration action and shall not be construed as authorization or any compliance determination for any related underlying project or activity. Restoration projects serving as mitigation for a related project or activity may be enrolled under this Order; however, this Order does not include any findings regarding the underlying related activity’s impact to water quality, public trust resources, or other matters of public interest. When considering the impact of restoration projects under this Order, the approving Water Board considers only those adverse changes that may result from approval of the new restoration project, including multi-benefit projects that may include non-restoration action elements (e.g., recreation, flood protection).”

See also Master Response 1: Definition of Restoration Project for additional details. Any impacts caused by the underlying project would be fully evaluated and subject to appropriate mitigation requirements as outlined under a permitting method determined by the approving Water Board.

CBD-1-7:

As described in Order Section XIII.E.1. General Compliance (text provided above in CBD-1-6) and response to comment CDB-1-6, enrollment and authorization of restoration projects under the Order are for the discharges of waste associated with only the entire restoration project (including mitigation and multi-benefit [e.g. non-restoration action elements] that meet the definition of a restoration project and shall not be construed as authorization or any compliance determination for any related underlying project or activity, which would have to go through its own environmental review and permit approval processes.

For example, if a future restoration project includes underlying activities that make the entire project not meet the definition of a restoration project as stated in the Order, then this future restoration project would not be permitted under the Order.

Under CEQA Guidelines Section 15378, “project” means the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment...” Under CEQA Guideline Section 15124(b), the project description is required to include a statement of objectives sought by the proposed project. The statement of objectives “will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project and may discuss the project benefits.”

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The PEIR provides a clear project description to determine the Order’s environmentally significant effects, associated mitigation, and alternatives to the Order. The PEIR focuses on reasonably foreseeable changes from implementation of the types of projects and actions that might be taken in the future consistent with the level of detail appropriate for a program-level analysis. The PEIR assumes that the Order is implemented and achieves the desired outcomes. Accordingly, the PEIR evaluates the potential impacts of the types of restoration projects that the Order would encourage and promote in the study area.

The PEIR does not divide a potential restoration project into small individual projects or separate ‘underlying related activities’ from the potential restoration project (e.g., ‘piecemealing’). The PEIR evaluates future restoration projects permitted by the Order, including those with multiple benefits, such as groundwater recharge, recreation, flood management, water quality improvement, and/or adaptation to climate change. PEIR Chapter 3 Environmental Setting, Impacts, and Mitigation Measures identifies and analyzes potential direct and indirect environmental impacts associated with the Order.

Reasonably foreseeable impacts associated with a range of restoration projects, including future restoration projects with multi-benefit elements located in uplands or floodplains (meeting the definition of restoration project as stated in the Order) were evaluated in the Draft PEIR, including impacts to water quality (PEIR, Chapter 3.11 Hydrology and Water Quality).

Further, the whole of a multi-benefit project would be reviewed for eligibility of coverage under the Order and would also need to undergo individual CEQA review. See also detailed requirements in the PEIR regarding programmatic sideboards (Section 2.8.1), general protection measures (Section 2.8.2), prohibitions (Section 2.8.5), and pre-application consultations (Section 2.8.3), which would apply to all projects seeking coverage under the Order, including multi-benefit projects that have flood protection elements.

CBD-1-8:

As described in the PEIR Section 2.6.5 and Order, Attachment A, A.4.5, water conservation projects would include:

“Creation, operation, and maintenance of water conservation projects including offstream storage tanks and ponds and associated off-channel infrastructure (to) reduce low-flow stream diversions and enhance streamflows, particularly base flows for fish and wildlife habitat during the dry season. These projects typically require placing infrastructure (e.g., pumps, piping, screens, and headgates) in or adjacent to the stream to provide alternative water intake facilities.”

See also detailed requirements in the PEIR regarding design guidelines (Section 2.9) and programmatic sideboards (2.8.1) for water conservation projects.

The PEIR assesses the potential for future restoration projects permitted under the Order to result in insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years (PEIR, Chapter 3.19 Utilities and Public Services). In addition, project proponents in

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coordination with the CEQA lead agency would need to determine if future water conservation projects permitted under the Order could be approved as being within the scope of the PEIR or would need to undergo additional CEQA review.

In regards to diversion of flows and associated water right, Section XIII.A. Request for Authorization of the Order states:

“As applicable to a project, the approving Water Board will consult with the State Water Board, Division of Water Rights on whether the restoration project requires any water right approvals, including but not limited to, a new water right, petition to change purpose/place of use or point of diversion, time extension, or wastewater change petition. There may be limited instances where it may be more appropriate for the Division of Water Rights to process an individual certification to accompany a water right approval depending on the scope of the water right approval needed. If an individual certification is deemed necessary, project proponents must file a new and separate application with the State Water Board pursuant to California Code of Regulation, title 23, section 3855.”

All water conservation projects would require applicable permits or approvals, including those associated with California Fish and Game Code, which may impose conditions (construction and operations) on this category of projects.

CBD-1-9:

See responses to comments CBD-1-6 and CBD-1-7 above.

CBD-1-10:

As described in the Order and PEIR, a project must meet the Order’s definition of a restoration project: an eligible project type that would result in a net increase in aquatic or riparian resource functions and/or services through implementation of relevant protection measures. See PEIR Chapter 2 for categories of restoration projects in the Order (Section 2.6) and detailed requirements in the PEIR regarding programmatic sideboards (Section 2.8.1), general protection measures (Section 2.8.2), design guidelines (Section 2.9), species protection measures (Section 2.10), and other requirements. The approving Water Board is responsible for evaluating whether there is a net increase in aquatic or riparian resource functions within individual watersheds in their jurisdiction.

The analysis of potential impacts to habitats and species in the PEIR Sections 3.5 Biological Resources – Terrestrial and 3.6 Biological Resources – Aquatic identify the potential for temporary impacts associated with construction activities with long-term benefits associated with restoration projects. Implementing the GPMs and species protection measures would avoid or minimize direct construction-related impacts and would address many indirect effects of construction activities. Nonetheless, the GPMs and species protection measures may not necessarily address the unique characteristics and habitat requirements of all habitats/species that could be affected by projects permitted under the Order. If the CEQA lead agency for a restoration project determines that the project’s impacts on habitat/species may remain significant even with these GPMs and species protection measures, additional project-specific and

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species-specific mitigation measures would be required. In such a case, the lead agency would coordinate with CDFW, USFWS, or NMFS to develop additional project-specific measures to reduce these impacts. This coordination would be initiated as part of the CEQA review (e.g., CDFW is a CEQA trustee agency when projects may affect protected biological resources) and/or part of a required permitting process (e.g., Fish and Game Code Section 1600 and informal and formal consultation under the FESA and California Endangered Species Act (CESA)).

The analysis also identifies the potential for long-term habitat conversion associated with implementation of restoration projects. For example, certain restoration projects—wetland restoration, floodplain restoration, and off-channel/side-channel restoration—are likely to permanently convert an upland-based natural community (e.g., grassland) to a wetland-based natural community (e.g., tidal marsh). For some habitats/species, the effects of restoring seasonal floodplain, wetlands, and/or adjacent upland areas would be either beneficial or adverse. Similar to construction-related impacts, the GPMs and species protection measures may not be sufficient on their own to address all the potential long-term effects of individual restoration projects. If the CEQA lead agency for a future restoration project determines that the project's impacts on habitats/species may remain significant even with implementation of the GPMs and species protection measures, additional project-specific mitigation would be required. In such a case, the lead agency would coordinate with CDFW or USFWS to design additional project-specific measures to reduce operational impacts on sensitive habitats or special-status plants. This coordination would be initiated as part of the CEQA review (e.g., CDFW is always a CEQA trustee agency when projects may affect protected biological resources) and/or part of a required permitting process (e.g., Fish and Game Code Section 1600 and FESA/CESA consultation). To be able to proceed, the project would be required to adhere to any additional avoidance and minimization measures established under these permitting process (e.g., biological opinions and streambed alteration agreements).

CBD-1-11:

See responses to comments CBD-1-6 and CBD-1-7 regarding the details of the Order, including reasonably foreseeable actions that may be permitted under the Order.

As described in Section 3.1 Approach to Environmental Analysis of the PEIR, the impact analysis for resource areas involved reviewing existing information about similar actions and activities to allow the evaluation of a range of “big-picture effects” of multiple projects, consistent with the level of detail appropriate for a program-level analysis. Given the programmatic nature of the Order, individual project details are yet to be determined; impacts and assumptions are identified at a programmatic level, with the reasonable forecasting of construction and operation effects of projects permitted under the Order.

See Section 3.4 Air Quality and Greenhouse Gas Emissions of the PEIR, which addresses potential impacts from future restoration projects permitted under the Order on climate change.

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California courts have held that CEQA does not generally require consideration of the effect of the environment on a project (see *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015)). In addition, in 2018, CEQA Guidelines Section 15126.2 was revised to clarify how an EIR should analyze significant environmental effects the project may cause when locating development in areas susceptible to hazardous conditions, such as areas with sea level rise:

“In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published... The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or inland use plans addressing such hazards areas.”

As stated in PEIR Section 3.15 Population and Housing, restoration projects would not include the development of housing or commercial structures, including those areas susceptible to hazardous conditions.

The Order and PEIR acknowledge potential future conditions with climate change, including predicted sea level rise and other climate change-related changes to the environment. Specifically, the Order and PEIR include projects that address climate change in the definition of restoration project “...A restoration project permitted by the Order may include multiple benefits, such as groundwater recharge, recreation, flood management, water quality improvement, and/or adaptation to climate change...” (PEIR Section 1.1 Introduction and Overview of the Order). Additionally, project category descriptions included in Chapter 2 of the PEIR and Attachment A of the Order state that “...Project activities that plan for climate change, including sea level rise, should be considered in tidally influenced locations...” (under Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands discussions). Furthermore, restoration projects are an imperative part of fighting climate change through several mechanisms, including creating (through restoration) more resilient habitats and ecosystems to withstand the effects of climate change and through carbon sequestration (e.g., restoration of riparian forests, marshlands) that combats climate change. Finally, all projects seeking coverage under the Order would be required to undergo pre-application consultation with the approving Water Board and through its own environmental review pursuant to CEQA. No revisions are included in the Order or PEIR because of this comment.

CBD-1-12:

As described in Section 3.1 Approach to Environmental Analysis of the PEIR, the impact analysis for resource areas involved reviewing existing information about similar actions and activities to allow the evaluation of a range of “big-picture effects” of multiple projects, consistent with the level of detail appropriate for a program-level analysis.

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Given the programmatic nature of the Order, individual project details are yet to be determined; impacts and assumptions are identified at a programmatic level, with the reasonable forecasting of construction and operation effects of projects permitted under the Order. See also response to comments CBD-1-7 regarding ‘piecemealing.’

CBD-1-13:

As described in Section 3.1 Approach to Environmental Analysis of the PEIR, the impact analysis for resource areas involved reviewing existing information about similar actions and activities to allow the evaluation of a range of “big-picture effects” of multiple projects, consistent with the level of detail appropriate for a program-level analysis. Given the programmatic nature of the Order, individual project details are yet to be determined; impacts and assumptions are identified at a programmatic level, with the reasonable forecasting of construction and operation effects of projects permitted under the Order. PEIR Chapter 3 Environmental Setting, Impacts, and Mitigation Measures properly analyzed all physical changes to the environment, including significant effects.

CBD-1-14:

The PEIR evaluates a broad range of future restoration projects to be permitted under the Order and is consistent with the requirements of Section 15168 of the State CEQA Guidelines.

CBD-1-15:

As described in PEIR Chapter 6 Alternatives, the focus and definition of the alternatives evaluated in this PEIR are governed by the “rule of reason,” in accordance with section 15126.6(f) of the CEQA Guidelines. That is, the range of alternatives presented in the PEIR must permit a reasoned choice by the State Water Board. The CEQA Guidelines (section 15126.6) require that an EIR evaluate at least one “No Project Alternative,” evaluate a reasonable range of alternatives to the project, identify alternatives that were considered during the scoping process but were eliminated from detailed consideration, and identify the “environmentally superior alternative.” PEIR Chapter 6, Section 6.3 Alternatives Considered and Screening Criteria, describes the development of a reasonable range of alternatives, the method used to screen the alternatives, and the alternatives considered but eliminated from detailed consideration in this PEIR.

CEQA Guidelines section 15126.6(a) requires every EIR to describe and analyze a “range of reasonable alternatives” that “would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.” It does not require an EIR to consider any particular number of alternatives, nor does it mandate certain types of alternatives. CEQA also does not require that any particular alternative be analyzed, even if a specific, proposed alternative was submitted for agency consideration. “The range of alternatives required in an EIR is to set forth only those alternatives necessary to permit a reasoned choice regarding the proposed project.” (CEQA Guidelines section 15126.6(f)). This range is determined, in part, by the particular scope and purpose of the project under review. The selection of alternatives must also be guided by CEQA’s fundamental goal of environmental protection. See Public Resources Code sections 21000, 21001.

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In developing the Order, the State Water Board could conceivably construct various combinations of potential actions and other ways to meet the Order objectives. CEQA, however, does not require the EIR to consider this entire broad array of alternatives, for two reasons. First, the EIR must “focus on alternatives to the project...which are capable of avoiding or substantially lessening any significant effects of the project.” (CEQA Guidelines section 15126.6(b)). Second, CEQA does not require a lead agency consider alternatives to every feature or aspect of a project. Instead, the agency must consider alternatives to the project as a whole. For example, an EIR analyzing the impacts of a proposed housing development does not need to consider alternatives specifically addressing the grading plan or the location of an access road; it is obliged only to consider alternatives to the entire project.

State Water Board gave close attention to all of the alternatives proposed by the public, and many of the specifics of those proposals were incorporated into the alternatives to the Order. PEIR Section 6.3.1 Development of a Reasonable Range of Alternatives contains additional information on the development of the alternatives to the Order, based on information gathered during the development Order and during the PEIR scoping process. PEIR Section 6.3.2 Method Used to Screen Alternatives describes the method to screen alternatives, including those alternatives that avoid or lessen any potentially adverse environmental effect of the Order. Alternatives 1 through 3 (described in PEIR Section 4 Alternatives to the Order) have potential impacts that may be at a lesser magnitude than the impact of the Order.

See also Master Response 1: Definition of Restoration Project.

CBD-1-16:

To acquire reports submitted to the Water Board(s) for any specific project, members of the public may submit a public records request per the California Public Records Act.

CBD-1-17:

As described in the introduction section of each resource area discussed in PEIR Chapter 3, scoping comments were taken into consideration during preparation of the PEIR.

As described in the PEIR Chapter 2 Background and Description of the Order, there are detailed requirements regarding programmatic sideboards (Section 2.8.1), general protection measures (Section 2.8.2), design guidelines (Section 2.9), and species protection measures (Section 2.10) for future restoration projects permitted under the Order.

See response to comments CBD-1-11 regarding climate change and sea level rise.

The PEIR covers future restoration projects permitted under the Order statewide and was developed to be consistent with existing programs (e.g., NMFS Programmatic BOs) and in coordination with other agencies across regional jurisdictions, including those of the Regional Boards, CDFW, USFWS, and other agencies. In addition, individual restoration projects will be evaluated by the appropriate Water Board.

As stated in PEIR Chapter 4 Cumulative Impacts,

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“Restoration projects (i.e., seasonal wetland or tidal wetland restoration projects) would improve the quality of both wetland and upland habitats, which would result in a beneficial effect on wildlife movement and avian migratory corridors. Expanding riparian habitat would result in a beneficial effect on functionality for the movement of many riparian species, particularly those whose distribution is restricted to riparian habitat.

However, because the extent and location of such actions are yet to be determined, it is not possible to conclude that mitigation measures and applicable general protection measures would reduce the contribution of permitted actions to less than cumulatively considerable in all cases. Therefore, cumulative impacts on terrestrial biological resources would be significant and unavoidable.”

CBD-1-18:

The Citizens Committee to Complete the Refuge, Center for Biological Diversity, California Coastkeeper Alliance, and Sierra Club California will be informed of future opportunities for public review or comment, as requested.

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APPENDIX H – RESPONSES TO COMMENTS

CDFW-1 California Department of Fish and Wildlife

CDFW-1

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Deputy Director's Office
Ecosystem Conservation Division
P.O. BOX 944209
Sacramento, CA 94244-2090
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 12, 2021

Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812



Re: General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide; Draft Program Environmental Impact Report (SCH No. 2019100230)

Dear Ms. Townsend:

The California Department of Fish and Wildlife (CDFW) is pleased to support State Water Resources Control Board (Water Board) consideration of the proposed Statewide General Order for Restoration Projects (Proposed Order). The opportunity to comment marks an important milestone in the agencies' shared goal to increase the pace and scale of environmental restoration in California by streamlining the state's process to approve and facilitate these projects. CDFW recognizes the importance of the Water Board effort in the broader context of Governor Newsom's leadership as detailed in Executive Order N-82-20, and the related *Cutting the Green Tape* initiative by Secretary Blumenfeld and Secretary Crowfoot. The Water Board's effort, including its ongoing coordination with CDFW, is essential to effectively address the challenges of creating climate change resiliency, maintaining biodiversity, connecting wildlife corridors, protecting water supplies, and restoring ecosystem benefits and services. We commend and support the Water Board's effort, and CDFW will continue to do so with our shared interest.

CDFW offers its support and the comments that follow consistent with its mission as California's trustee agency for fish and wildlife. That mission directs CDFW to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public (Fish and G. Code, § 712.1, subd. (a)). CDFW carries out that mission with an ecosystem-based focus, informed by credible science and with a constant eye to interagency cooperation and coordination, as the current effort highlights (*Id.*, §§ 703.3, 703.5.). We do so in turn, holding California's fish and wildlife in trust on behalf of the all the people in the State (*Id.*, §§ 711.7, subd. (a), 1802).

CDFW also supports the Water Board's lead agency effort under the California Environmental Quality Act (CEQA). We appreciate the Water Board Program Environmental Impact Report (PEIR) for the Proposed Order identifies CDFW as a both a responsible and trustee agency under CEQA (See Pub. Resources Code, §§ 21069, 21070). The PEIR includes a robust analysis of potential effects on fish and wildlife that may result if the Proposed Order is approved, along with a comprehensive mitigation framework that will avoid or substantially lessen those effects to the extent feasible, as CEQA requires. The PEIR provides substantial information regarding potential effects to fish and wildlife to facilitate informed public decision making for both the Water Board and for other agencies that may propose to carry out or approve individual restoration projects in the future, including CDFW.

CDFW offers two comments against this backdrop. First, Section 2.8 (Programmatic Sideboards, General Protection Measures, and Other Requirements), in Chapter 2 of the PEIR, describes pre-application consultation with the applicants under the Proposed Order. Interagency consultation with an applicant that also includes CDFW would improve the process. Interagency consultation and joint review of applications with CDFW would foster open dialogue early in the process.

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CDFW-1

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Jeanine Townsend, Clerk to the Board
State Water Resource Control Board
August 12, 2021
Page 2

It would also help to identify permitting needs early on, improve process timelines across multiple agencies, and reduce potential inconsistencies between multiple authorizations that may be required to implement individual projects.

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cont.

Second, CDFW expects many of the restoration projects authorized under the Proposed Order, if adopted, will require separate approval under the Fish and Game Code, including the California Endangered Species Act (CESA) or CDFW's Lake and Streambed Alteration Program, as two examples. Most projects should qualify under the Fish and Game Code as voluntary habitat restoration projects, while others may not (See, e.g., Fish & G. Code, § 2081.2, subd. (a)(6)). We highlight the distinction not because it is relevant to Water Board and Regional Water Quality Control Board determinations regarding whether an individual project qualifies under the Proposed Order. We highlight the distinction because it can be relevant to the permitting options available for individual projects under the Fish and Game Code, including permitting tools CDFW has or is developing consistent with the Secretaries' *Cutting the Green Tape* initiative (See, e.g., and compare Fish & G. Code, § 2081, subds. (a)-(b)). The distinction is important, hopefully in rare instances, because some projects authorized under the Proposed Order, if adopted, may not be eligible for restoration permitting pathways under the Fish and Game Code, albeit CDFW expects other permitting tools would be available.

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Finally, CDFW encourages the Water Board to upload species-specific information developed during preparation of the Proposed Order and PEIR to the California Natural Diversity Database (CNDDDB) (See generally Pub. Resources Code, 21003, subd. (e)). Information regarding the CNDDDB is available on CDFW's web page (<https://wildlife.ca.gov/Data/CNDDDB>). Likewise, we respectfully remind the lead agency to pay the environmental filing fee for an environmental impact report as required by Fish and Game Code section 711.4. These fees fund CDFW's work under CEQA.

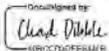
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In closing, CDFW appreciates the opportunity to provide comments to the Water Board regarding the Proposed Order and PEIR. Congratulations again on this important milestone. We look forward to further collaboration.

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Questions regarding this letter or further coordination should be directed to Karen Carpio, Senior Environmental Scientist at karen.carpio@wildlife.ca.gov.

Sincerely,


Chad Dibble, Deputy Director
Ecosystem Conservation Division

cc: Office of Planning and Research, State Clearinghouse, Sacramento

ec: California Department of Fish and Wildlife

Wendy Bogdan, General Counsel
Office of the General Counsel
Wendy.Bogdan@wildlife.ca.gov

Jeff Drongesen, Chief
Habitat Conservation Planning Branch
Jeff.Drongesen@wildlife.ca.gov

Karen Carpio
Senior Environmental Scientist (Specialist)
Habitat Conservation Planning Branch
Karen.Carpio@wildlife.ca.gov

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

CDFW-1 California Department of Fish and Wildlife

Responses to Comments from CDFW-1 California Department of Fish and Wildlife

CDFW-1-1:

The State Water Board appreciates CDFW comments supporting the adoption of the Order. In addition, the State Water Board thanks CDFW for its comments as a trustee and responsible agency pursuant to CEQA.

CDFW-1-2:

The Order would not hinder interagency or stakeholder collaboration, nor would the Order alter CDFW policies or procedures. The State Water Board encourages multi-agency collaboration but cannot prescribe engagement with another state agency. Order Section XIII. Conditions, Part A Request for Authorization, last paragraph states:

"Other regulatory agencies may also have authority separate and in addition to this Order to authorize restoration projects. Project proponents are encouraged to collaborate with other applicable regulatory agencies in coordination with the approving Water Board during project design, especially when fish passage and/or listed species are considerations."

Also, Order Attachment B NOI Form, Enrolling Projects Under the Order, Step 4 Pre-application consultation states:

"Note that other regulatory agencies, such as U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), California Department of Fish and Wildlife (CDFW), and California Coastal Commission (CCC), may also have authority separate and in addition to this Order to authorize restoration projects. Project proponents are encouraged to collaborate with other applicable regulatory agencies in coordination with the approving Water Board during project design, especially when fish passage and/or listed species are considerations."

CDFW-1-3:

Thank you for your comments regarding CDFW's permitting pathways and constraints. As stated in Response to Comment CDFW-1-2, the State Water Board encourages interagency collaboration throughout the permitting process.

CDFW-1-4:

This comment includes administrative process issues separate from and not appropriate for inclusion in the Order itself (or the PEIR) and are related to processes between future restoration project applicants and CDFW (via applicant interaction with CNDDDB to conduct database queries and input).

CDFW-1-5:

The State Water Board appreciates CDFW's comments supporting the adoption of the Order and notes the contact name and number for CDFW.

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CDOT-1 California Department of Transportation

CDOT-1

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

From: Loy_Carin@DOT
To: [commentletters](#)
Cc: [Kirkham, Stuart S@DOT](mailto:Kirkham_Stuart_S@DOT); [Nadolski, Jessica@Waterboards](mailto:Nadolski_Jessica@Waterboards)
Subject: Comments – Restoration Projects Statewide Order
Date: Wednesday, August 4, 2021 1:37:48 PM

EXTERNAL:

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board

This comment is to request that the State Water Board ensure that the Restoration Projects Statewide Order apply to restoration projects performed to establish conservation banks, mitigation banks, mitigation credit agreements, as well as establish advance mitigation credits or values in accordance with an advance permittee responsible agreement or another natural resource regulatory agency project-specific agreement.

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Sincerely,
Carin Loy

Carin Loy
Senior Environmental Planner
Office of Biological Science and Innovation
Advance Mitigation Program
California Department of Transportation
1120 N Street, 4th Floor, MS-27
Sacramento, California 95814
916-767-9959 (wk cell)
530-400-5040 (pers cell)



CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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CDOT-1 California Department of Transportation

Responses to Comments from CDOT-1 California Department of Transportation

CDOT-1-1:

Projects that meet the definition of a restoration project (Order Section V. Project Description) and requirements stated in the Order qualify for coverage under the Order. Furthermore, “The approving Water Board determines if a proposed project meets the definition of a restoration project and is eligible for authorization under this Order.” has been added to the project description (Order Section V. Project Description) to ensure authorization of proposed projects is appropriate and as intended.

Pursuant to Order Section XIII.E.1. General Compliance:

“Enrollment and authorization of restoration projects under this Order are for the discharges of waste associated with only the restoration action and shall not be construed as authorization or any compliance determination for any related underlying project or activity. Restoration projects serving as mitigation for a related project or activity may be enrolled under this Order; however, this Order does not include any findings regarding the underlying related activity’s impact to water quality, public trust resources, or other matters of public interest. When considering the impact of restoration projects under this Order, the approving Water Board considers only those adverse changes that may result from approval of the new restoration project, including multi-benefit projects that may include non-restoration action elements (e.g., recreation, flood protection).”

Therefore, while the Order could authorize restoration projects underlying conservation or mitigation banks, Mitigation Credit Agreements, advance permittee responsible agreements, or agency project-specific agreements, the actual establishment of these banks and agreements would not be covered under the Order because restoration projects permitted by the Order pertain only to construction and operation of those restoration projects, not development of instruments or agreements necessary for Banks, mitigation credit agreements, etc.

See also Master Response 1: Definition of Restoration Project for additional details.

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CLSN-1 California Landscape Stewardship Network

CLSN-1



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 12, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000
RE: Comments - Restoration Projects Statewide Order



To the State Water Resources Control Board,

We, the [California Landscape Stewardship Network](#) (CLSN) - a statewide network of networks that coordinates efforts to increase the pace and scale of landscape-scale stewardship - are strongly supportive and deeply encouraged by the leadership that the Water Board has shown in developing this draft Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (General Order) and the associated Programmatic Environmental Impact Report (PEIR). The process, the intention, and products resonate clearly with the goals of *Cutting Green Tape* and directly address Recommendation #6 in the November 2020 report entitled, *Cutting Green Tape: Regulatory Efficiencies for a Resilient Environment*. The set of recommendations in that report are the product of a series of roundtables facilitated by the CLSN in 2019-2020 that convened state agency leadership and restoration practitioners across the state to identify ways to advance beneficial restoration. The CLSN is committed to finding solutions to reduce barriers for scaling beneficial restoration, and the General Order and PEIR provide an important strategy for removing barriers and increasing ecological restoration in California.

Recognizing this, we strongly support adoption of this General Order as soon as possible. To this end, we would like to suggest the following modification to the draft General Order to ensure that it maximizes consistency with the spirit and intent of *Cutting Green Tape* and is able to leverage critical efficiencies that will expedite implementation of urgently needed ecological restoration at-scale.

Please consider the following recommendations as you finalize the General Order:

Recommendation 1.

Aquatic restoration requires working in ecologically sensitive ecosystems. We believe the General Order would benefit from a clear acknowledgement in Section IX. Avoidance and Minimization (page 3) that this Order specifically anticipates (a) that projects covered under it will take place in areas of high biological and ecological sensitivity and (b) that while restoration construction-related impacts to these resources will be avoided and minimized to the greatest extent practicable, they may be unavoidable in order to achieve the project goals and objectives. As practitioners, we believe it is important to explicitly state this in the General Order to ensure that staff understand that restoration construction-related impacts are sometimes unavoidable when implementing critical restoration work.

Recommendation 2.

Through the *Cutting Green Tape* Initiative, the CLSN team has worked extensively with Water Board staff on review of the Construction General Permit. We applaud the Water Board's 402 staff

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CLSN-1

on working collaboratively with us to craft language in the new Proposed Construction General Permit that explicitly reduces redundancy and confusion for both staff at the Regional Boards and project applicants regarding the applicability of CWA § 401 and/or § 402 for projects within waters of the state (i.e. project that will be obtaining 401 compliance). In the proposed Construction General Permit, Section I. Findings, Item 12, State Board staff developed language that we believe effectively addresses the issues of redundancy.

“Stormwater discharges from dredge spoil placement that occur outside of waters of the state (upland sites) and that disturb one or more acres of land surface from construction activity are covered by this General Permit. This General Permit does not cover the discharge of dredged or fill material to waters of the state. Construction projects that include the discharge of dredged or fill material to waters of the state should contact the applicable Regional Water Board to obtain authorization for the discharge of dredged or fill material to waters of the state.”

We strongly urge the Water Board to insert similar language in the General Order in *Section E.9 General Compliance, Construction General Permit and in Appendix A (page A-30) WQHM-2: Storm Water Pollution Prevention Plan and WQHM-3: Erosion Control Plan*. As currently written in these sections of the General Order, the text states that in any case where disturbance is over 1 acre, the applicant shall prepare and implement a Stormwater Pollution Protection Plan (SWPPP). These sections would benefit from

1. The clarity provided in the proposed Construction General Permit that notes that the trigger for the CGP/SWPPP is 1 acre of disturbance “outside of waters of the state”.
2. Replacing “shall” with “should consult with the appropriate Water Board staff on whether to ...”.

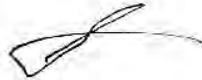
For aquatic restoration projects this nuance can have both significant cost implications and more importantly, significant implications for project success. SWPPP requirements have been developed and vetted for application in uplands, not waters of the state. Conversely, 401 conditions have been specifically designed for application in waters of the state and areas directly adjacent to waters of the state. As such, we strongly recommend utilizing the text from the draft Construction General Permit in the General Order to clarify the triggers for §401 and §402 compliance.

Thank you for the opportunity to share our comments and for your agency’s hard work and collaboration in preparing these documents. Also, thank you for your leadership and support of *Cutting Green Tape*. Please let us know if we can provide additional information.

Sincerely,



Darcie Goodman-Collins



Kevin Wright

*California Landscape Stewardship Network
 Policy & Funding Working Group Co-Chairs*

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cont.

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CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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APPENDIX H – RESPONSES TO COMMENTS

CLSN-1 California Landscape Stewardship Network

Responses to Comments from CLSN-1 California Landscape Stewardship Network

CLSN-1-1:

The State Water Board appreciates California Landscape Stewardship Network's (CLSN) comments supporting the adoption of the Order and information on CLSN.

CLSN-1-2:

While the Order does not explicitly state that impacts to high biological and ecological sensitivity may be unavoidable in order to achieve the Order goals and objectives, the PEIR acknowledges that restoration projects will take place in highly sensitive habitats and that potential impacts, including significant and unavoidable impacts, may occur, even with implementation of general and species protection measures, programmatic sideboards, and design guidelines. (See PEIR Section 3.5 Biological Resources - Terrestrial, and Section 3.6 Biological Resources - Aquatic.). No revisions are included in the Order or PEIR because of this comment.

CLSN-1-3:

See Master Response 2: Construction General Permit and SWPPP Requirements.

The provisions of the Order do not change the scope of activities that are subject to provisions of issued NPDES orders. While this comment includes quoted language from forthcoming revisions to the Construction General Permit and suggests inclusion of similar provisions in this Order, draft elements of other permits are not appropriate to include in this Order because the context is different. However, clarifying revisions pertaining to the NPDES and Construction General Permit have been made to the Order and PEIR (Master Response 2). The provisions of this Order address compliance with other applicable NPDES permits, including the Construction General Permit as potentially modified in the future. See Master Response 2 for text edits to clarify that compliance with the Construction General Permit will be confirmed by the approving Water Board during the project review process. Further, see Master Response 2 for proposed edits to GPMs WQHM-2 and WQHM-3 to clarify applicability of and requirements for Storm Water Pollution Prevention Plans and Erosion Control Plans, respectively.

CLSN-1-4:

The State Water Board appreciates California Landscape Stewardship Network's comments supporting the adoption of the Order.

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CVWD-1 Coachella Valley Water District

CVWD-1



COACHELLA VALLEY WATER DISTRICT

Established in 1918 as a public agency

GENERAL MANAGER
Jim Barrett

CLERK OF THE BOARD
Sylvia Bermudez

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

ASSISTANT GENERAL MANAGER
Robert Cheng

ASSISTANT GENERAL MANAGER
Dan Charlton

August 12, 2021

VIA EMAIL AT COMMENTLETTERS@WATERBOARDS.CA.GOV.

Jeanine Townsend
Clerk to the Board State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000



Subject: Proposed General Order for Clean Water Act Section 401 Water Quality
Certification and Waste Discharge Requirements for Restoration Projects Statewide
and Supporting Draft Program Environmental Impact Report

The Coachella Valley Water District (CVWD) understands the California State Water Resources Control Board issued a Notice of Opportunity for Public Comment and Board Workshop on June 30, 2021 regarding the subject topic. Public comments are accepted until August 13, 2021, and a Public Workshop will be held on August 3, 2021.

The proposed General Order and draft Program Environmental Impact Report (PEIR) would apply statewide and establish a permit authorization process for specific types of restoration activities. The State Water Board has previously issued a general water quality certification for small habitat restoration projects that (a) shall not exceed five acres or a cumulative total of 500 linear feet of stream bank or coastline, and (b) qualify for the CEQA Class 33 Categorical Exemption (Cal. Code Regs., tit. 14, § 15333). Restoration projects that fall outside the project size limits of the general water quality certification or small habitat restoration must obtain individual water quality certifications and/or waste discharge requirements from the State Water Board or Regional Water Quality Control Boards (Regional Boards). The process of obtaining individual authorization can be time consuming and increase the cost of regulatory compliance as compared to obtaining authorization under a general order that provides programmatic coverage. Restoration proponents seeking authorization for larger projects beyond the scale of the general water quality certification for small habitat restoration often do not have the funding to seek individual permits. This indicates the need for a general order that will expedite the regulatory approval process for large habitat restoration projects. The proposed General Order for large habitat restoration projects is intended as a companion, not a replacement, to the General WQC for small habitat restoration.

The proposed General Order would provide coverage for the following proposed types of restoration projects: Improvements to Stream Crossings and Fish Passage Removal of Small Dams, Tide Gates, Flood Gates, and Legacy Structures Bioengineered Bank Stabilization Restoration and Enhancement of Off-Channel and Side-Channel Habitat Water Conservation Projects, Floodplain Restoration Removal of Piling and Other In-Water Structures Removal of Nonnative Terrestrial and Aquatic Invasive Species and Revegetation with Native Plants Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands Establishment, Restoration, and Enhancement of Stream and Riparian Habitat and Upslope Watershed Sites. To be eligible for coverage under the proposed General Order, restoration projects would need to incorporate applicable protection measures, such as design guidelines or avoidance and minimization techniques.

Coachella Valley Water District
P.O. Box 1058 Coachella, CA 92236
Phone (760) 398-2651 Fax (760) 398-3711

www.cvwd.org
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CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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CVWD-1

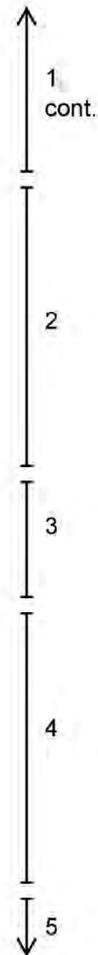
Jeanine Townsend,
Clerk to the Board State Water Resources Control Board
August 12, 2021
Page 2

CVWD would like to acknowledge the usefulness of a General Order for 401 water quality certification and waste discharge requirements related to large scale restoration projects over 5 acres. In the Coachella Valley several large-scale restoration projects are in planning stages and will benefit from streamlined permitting process, thus reducing temporal losses of environmental impacts for which the restoration serves as mitigation. These projects include the Salton Sea Management Plan 10-year plan, as well as CVWD's proposed Constructed Habitat project developed to satisfy the Coachella Valley Multiple Species Habitat Conservation Plan.

CVWD has identified provisions with uncertainties that could stall or reduce the benefits of the proposed General Order and requests the following clarifications be included the General Order:

- 1) In various locations of the draft general order and appendices the requirement for compliance with NPDES permits is discussed. This includes section IX.E.9 and IX.E.10 on page 13, and A-18, A-39. CVWD recommends the general order and appendices be revised to clarify that NPDES permits are not applicable to and not required for projects that do not impact Waters of the US. The NPDES Program is a federal program that has been delegated to the State of California for implementation through the State Water Resources Control Board (State Water Board) and the nine Regional Water Quality Control Boards (Regional Water Boards), collectively Water Boards, to regulate discharges to waters of the United States.
https://www.waterboards.ca.gov/water_issues/programs/npdes/
- 2) CVWD requests revisions to section E9 on page 13 of the proposed General Order to clarify that requirements to comply with NPDES permitting shall not supersede previously established NPDES compliance established by the applicant. Some applicants, including CVWD, already have NPDES permits that cover its construction projects that occur within the Municipal Separate Storm Sewer System permit boundary.
- 3) CVWD requests revisions to section H6 on page 18 of the proposed General Order to provide clarification of the definitions of non-wetland Waters of the State, how it relates to Waters of the US, for determining appropriate applicability of NPDES requirements to the applicant's project. In the State Wetland definition and Procedures for Discharges of dredged or Fill Material to Waters of the State
https://www.waterboards.ca.gov/press_room/press_releases/2021/procedures.pdf
the definition of non-wetland waters of the state is not specifically defined, rather it was delegated to the interpretation of the Regional Boards and discussed in an accompanied Implementation Guidance Document
https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/dredge_fill/revised_guidance.pdf (page 14).

CVWD recognizes the general order would promote expedient delivery of restoration projects and would also like to submit the following recommendation to improve the effectiveness of the general order in addressing accelerating impacts from Climate Change on habitat communities:



CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

CVWD-1

Jeanine Townsend,
Clerk to the Board State Water Resources Control Board
August 12, 2021
Page 3

- 4) CVWD recommends an expanded definition of eligible water conservation projects under appendix A 4.5 to address severe drought conditions in California, particularly the desert region, the Colorado River region, and other groundwater dependent environments. These projects can include groundwater replenishment projects, and aquifer protection efforts that indirectly support groundwater dependent ecosystems.

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CVWD appreciates the opportunity to comment on the general order and the time and effort involved to have the requested clarifications made. The clarification and edits will help to avoid any misinterpretation of general order requirements leading to more efficient and streamlined process for both applicant and regulatory staff. If you have any requests for further information from CVWD regarding this letter, please contact me at (760) 398-2661 extension 2545 or wpatterson@cvwd.org.

Sincerely,



William Patterson
Environmental Supervisor

WP: ms\Env Svcs\2021\July\Restoration projects RGP-401 Aug 2021.doc
File: 0645.1, 0022.21

Coachella Valley Water District
P.O. Box 1058 Coachella, CA 92236
Phone (760) 398-2651 Fax (760) 398-3711

www.cvwd.org

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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CVWD-1 Coachella Valley Water District

Responses to Comments from CVWD-1 Coachella Valley Water District

CVWD-1-1:

The State Water Board appreciates Coachella Valley Water District's (CVWD) comments supporting the Order and information on CVWD.

CVWD-1-2:

See Master Response 2: *Construction General Permit and SWPPP Requirements*.

The Order is not an NPDES permit. It does not provide authorization to discharge under Clean Water Act Section 402. The Order would not alter the scope of activities that may be required to obtain an NPDES permit or the requirements of any NPDES permits. As stated in Order Condition XIII.G.2. Pre-Application Consultation, the approving Water Board will review draft project materials and provide project-specific guidance during the pre-application consultation. During the pre-application consultation, the project proponent and the approving Water Board may discuss whether the project proponent must obtain or maintain coverage under any other permits, such as NPDES permits. Early coordination with the approving Water Board is encouraged to confirm compliance requirements.

CVWD-1-3:

See Master Response 2: *Construction General Permit and SWPPP Requirements*.

The Order is not an NPDES permit. This Order would not alter the scope of activities that may be required to obtain an NPDES permit or the requirements of any NPDES permits.

CVWD-1-4:

The comment initially references "section H6 on page 18 of the proposed General Order" which addresses the CDFW LSAA but then discusses the definition of non-wetland waters of the state. Both topics are discussed below.

Regarding the CDFW LSAA program, only CDFW may issue a LSAA. As written, section H.6. Administrative simply requires the project to submit any LSAA's issued for the project to the approving Water Board. Project proponents will need to coordinate with CDFW on the potential need for a LSAA.

Regarding any clarification on the definition of non-wetland waters of the state, the Water Code defines "waters of the state" broadly to include "any surface water or groundwater, including saline waters, within the boundaries of the state." As described in the Executive Summary, the Order applies to discharges to waters of the state, including waters of the U.S. as currently defined and implemented. The project proponent should consult with the approving Water Board regarding the scope of impacts to waters of the state. The State Water Board may consider the definition of non-wetland waters of the state as a separate, future project.

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CVWD-1-5:

As described in the PEIR Section 2.6.5 Water Conservation and Order A.4.5. Water Conservation, these projects would include creation, operation, and maintenance of water conservation projects including offstream storage tanks and ponds and associated off-channel infrastructure that reduce low-flow stream diversions and enhance streamflows, particularly base flows for fish and wildlife habitat during the dry season. These projects typically require placing infrastructure (e.g., pumps, piping, screens, and headgates) in or adjacent to the stream to provide alternative water intake facilities and could be located within the approving Water Board jurisdiction throughout California.

Water conservation projects permitted under the Order would need to meet the definition of a restoration project (Order V. Project Description). Water conservation projects not meeting the conditions of the Order can be authorized through other Water Board permitting methods.

Water conservation projects would also require other applicable permits or approvals, including those associated with the California Fish and Game Code, which may impose conditions (construction and operations) on these projects.

CVWD-1-6:

The State Water Board appreciates CVWD's comments supporting the adoption of the Order and notes the contact name and number for CVWD.

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DSC-1 Delta Stewardship Council

DSC-1

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



August 13, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 15th floor, Sacramento, CA 95814

Delivered via email: commentletters@waterboards.ca.gov



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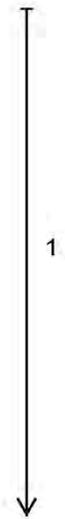
EXECUTIVE OFFICER
Jessica R. Pearson

RE: Comments – Restoration Projects Statewide Order

Dear Chair Esquivel and Members of the Board:

The Delta Stewardship Council (Council) appreciates the opportunity to comment on the proposed Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (proposed General Order). According to the Notice of Opportunity and draft Environmental Impact Report (EIR), the purpose of the statewide proposed General Order is to “establish a permit authorization process for specific types of restoration activities [and] provide Waste Discharge Requirements as well as Clean Water Act Section 401 Water Quality Certification.” For project proponents to use the Order, their proposed restoration projects would need to comply with the California Environmental Quality Act (CEQA).

The Council is an independent State of California agency established by the Sacramento-San Joaquin Delta Reform Act of 2009, codified in Division 35 of the California Water Code, sections 85000-85350 (Delta Reform Act). The Delta Reform Act charges the Council with furthering the State’s coequal goals for the Sacramento-San Joaquin Delta (the Delta) of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem, to be achieved in a manner that protects and enhances the unique cultural, recreational,



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Regarding Restoration Order, Chair Esquivel and Boardmembers, August 13, 2021

natural resource, and agricultural values of the Delta as an evolving place. (Wat. Code § 85054.)

Pursuant to the Reform Act, the Council has adopted the Delta Plan, a legally enforceable management framework for the Delta and Suisun Marsh for achieving the coequal goals. The Delta Reform Act grants the Council specific regulatory and appellate authority over certain actions that take place in whole or in part in the Delta and Suisun Marsh, referred to as “covered actions.” (Wat. Code, §§ 85022(a) and 85057.5.) The Council exercises that authority through regulatory policies set forth in Title 23 of the California Code of Regulations, Sections 5001 through 5016 and recommendations incorporated into the Delta Plan. Water Code section 85057.5(b) provides that a regulatory action of a state agency is *not* a covered action under the Delta Plan.

While the proposed General Order is not a covered action, the Council appreciates the opportunity to acknowledge the significant permitting improvements the General Order would provide and outline how projects complying with the proposed General Order in the Council’s jurisdiction may be covered actions.

Improving Permitting Efficiency Will Accelerate Implementation Of Restoration Projects

As described in the Council’s proposed amendment to the ‘ecosystems’ chapter of the Delta Plan ([draft Delta Plan Chapter 4: Protect, Restore, and Enhance the Delta Ecosystem](#)), improving permitting efficiency is one of the key actions that should be undertaken by government agencies to support implementation of ecosystem restoration. Permitting for ecosystem protection, restoration, and enhancement actions in the Delta can be complex, time-consuming, and costly, requiring coordination among multiple local, state, and federal agencies.

In partnership with other State agencies under the California Natural Resources Agency, the Council contributed funds to Sustainable Conservation’s Accelerating Restoration program to assist in development of the proposed General Order. Implementation of the General Order will accelerate restoration projects by saving time, money, and avoiding the complexities of individual permitting, especially for smaller proponents that may be unfamiliar with navigating the permitting process.

It is currently estimated that it will take approximately 60,000-80,000 acres of net new functional, diverse, and interconnected habitat to achieve the fully restored Delta landscape envisioned in the Delta Reform Act, or roughly 7 to 10 percent of the combined land area of the Delta and Suisun Marsh. A proposed amendment to Delta Plan Chapter 4 envisions restoration of these acres by 2050, and this proposed General Order would help achieve that goal.



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Covered Actions

State and local agencies are required to demonstrate consistency with the Delta Plan when carrying out, approving, or funding a covered action. ('certification of consistency', Wat. Code, §§ 85057.5 and 85225.) The proposed General Order is not a covered action, but projects that comply with the proposed General Order may be covered actions if they meet the criteria identified in Water Code section 85057.5(a). A covered action is a plan, program, or project as defined pursuant to CEQA that would: 1) occur in whole or in part within the boundaries of the Legal Delta (Wat. Code, § 12220) or Suisun Marsh (Pub. Res. Code, § 29101) (Wat. Code, § 85057.5(a)(1)); 2) be carried out, approved, or funded by the State or a local public agency (Wat. Code, §85057.5(a)(2)); 3) have a significant impact on the achievement of one or both of the coequal goals or the implementation of a government-sponsored flood control program to reduce risks to people, property, and State interests in the Delta (Wat. Code, § 85057.5(a)(4)); and 4) be covered by one or more of the regulatory policies contained in the Delta Plan (Cal. Code Regs., tit. 23, §§ 5003-5015).

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An existing mechanism for coordination among the agencies responsible for implementation of ecosystem protection, restoration, and enhancement actions and the Council is the early consultation process for covered action certification. State and local agencies may consult with the Council early in the planning process regarding the consistency of proposed projects with applicable regulatory policies in the Delta Plan. For ecosystem restoration projects, it is critically important that early consultation occur in the earliest possible stages of the CEQA review process to ensure that Delta Plan requirements are incorporated as features of proposed projects or as mitigation measures in CEQA documents for such projects.

Delta Plan Policies and Mitigation Measures

Future projects utilizing the proposed General Order that meet the definition of a covered action are required to demonstrate consistency with the Delta Plan and its mitigation measures. Delta Plan Policies most relevant to future restoration projects complying with the proposed general order include¹:

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General Policy **G P1(b)(2)**: Covered actions not exempt from CEQA must include all applicable feasible mitigation measures adopted and incorporated

¹ Descriptions of Delta Plan policies presented in this letter have been abridged to address requirements specific to ecosystem restoration projects. The full text of the Delta Plan's regulatory policies is available at <https://www.deltacouncil.ca.gov/pdf/delta-plan/regulations/2020-05-08-delta-plan-policies-handout.pdf>. The full text should be used in any future certification of consistency resulting from implementation of the General Order.

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Regarding Restoration Order, Chair Esquivel and Boardmembers, August 13, 2021

into the Delta Plan or substitute mitigation measures that the agency that files the certification of consistency finds are equally or more effective ([Cal. Code Regs., tit. 23, § 5002](#) and [Delta Plan Appendix O, Mitigation Monitoring and Reporting Program](#)).

General Policy **G P1(b)(3)**: Requires that all covered actions must document use of best available science, as relevant to the purpose and nature of the project ([Cal. Code Regs., tit. 23, § 5002](#) and [Delta Plan Appendix 1A, Best Available Science](#)).

General Policy **G P1(b)(4)**: Requires that ecosystem restoration covered actions must include adequate provisions, appropriate to the scope of the covered action, to assure continued implementation of adaptive management ([Cal. Code Regs., tit. 23, § 5002](#) and [Delta Plan Appendix 1B, Adaptive Management](#)).

Ecosystem Policy **ER P1**: Provides that the State Water Board's Bay Delta Water Quality Control Plan flow objectives shall be used to determine consistency with the Delta Plan ([Cal. Code Regs., tit. 23, § 5005](#)).

Ecosystem Policy **ER P2**: Provides that habitat restoration actions must be appropriate for the site's elevation, and deviations must be justified by best available science ([Cal. Code Regs., tit. 23, § 5006](#), [Delta Plan Appendix 3, Habitat Restoration](#), and [Delta Plan Appendix 4, Elevation Map](#)).

Ecosystem Policy **ER P3**: Provides that significant adverse impacts to the opportunity to restore habitat within priority habitat restoration areas must be avoided or mitigated ([Cal. Code Regs., tit. 23, § 5007](#) and [Appendix 5 Recommended Areas for Prioritization and Implementation of Habitat Restoration Projects](#)).

Ecosystem Policy **ER P4**: Provides that levee projects must evaluate and where feasible incorporate alternatives, including the use of setback levees in certain locations, to increase floodplains and riparian habitats ([Cal. Code Regs., tit. 23, § 5008](#) and [Appendix 8 Setback Levee Evaluation Areas](#)).

Ecosystem Policy **ER P5**: Provides that the potential for new introductions of, or improved habitat conditions for, nonnative invasive species, striped bass, or bass must be fully considered and avoided or mitigated in a way that appropriately protects the ecosystem ([Cal. Code Regs., tit. 23, § 5009](#)).

Delta as Place Policy **DP P2**: Provides that certain projects, including ecosystem restoration, must be sited to avoid or reduce conflicts with existing uses or those described or depicted in city and county general plans,



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when feasible, considering comments from local agencies and the Delta Protection Commission. Plans for ecosystem restoration must consider sites on existing public lands, when feasible and consistent with a project's purpose, before privately owned sites are purchased ([Cal. Code Regs., tit. 23, § 5011](#)).

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Revisions to Draft EIR

The Council recommends that the Final EIR for the proposed General Order reference the Delta Plan policies above and the mitigation measures required under **G P1(b)(2)** in the following EIR sections or chapters:

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- Resource Impact sections: The Delta Reform Act and the Delta Plan are referenced in the Hydrology impact section, but should be similarly included in other impact sections, including but not limited to the Biological resource sections.
- EIR Appendix C: The Delta Stewardship Council and the Delta Plan should be added to the list of Permits and Authorizations for Restoration Activities, with a focus on Consistency Certification and incorporation of Delta Plan Mitigation Measures.

6

While the EIR Appendix E acknowledges that other agencies may require additional protection or mitigation measures committed to as part of the CEQA review process, the Council recommends the Final EIR include the following Delta Plan mitigation measures, or include substitute measures that the lead agency finds are equally or more effective:

7

- Agriculture and Forestry Resources: "Manage project operations to minimize the introduction of invasive species or weeds that may affect agricultural production on adjacent agricultural land."
- Biological Resources: "An invasive species management plan shall be developed and implemented for any project whose construction or operation could lead to introduction or facilitation of invasive species establishment. The invasive species management plan will include the following elements:
 - Nonnative species eradication methods (if eradication is feasible)
 - Nonnative species management methods
 - Early detection methods
 - Notification requirements
 - Best management practices for preconstruction, construction, and post construction periods
 - Monitoring, remedial actions and reporting requirements

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Regarding Restoration Order, Chair Esquivel and Boardmembers, August 13, 2021

- Provisions for updating the target species list over the lifetime of the project as new invasive species become potential threats to the integrity of the local ecosystems
- Recreation: "If the substantial impairment, degradation, or elimination of recreational facilities occurs, replacement facilities of equal capacity and quality shall be developed and installed, with ongoing funding provided for maintenance of these facilities."

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Thank you for the opportunity to provide comment. Should you have any questions, please contact Daniel Constable at Daniel.Constable@deltacouncil.ca.gov.

Sincerely,



Jeff Henderson, AICP
Deputy Executive Officer
Delta Stewardship Council

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DSC-1 Delta Stewardship Council

Responses to Comments from DSC-1 Delta Stewardship Council

DSC-1-1:

The State Water Board appreciates Delta Stewardship Council’s (DSC) comments regarding the Order and PEIR as well as information on the DSC, Delta Reform Act, and Delta Plan.

DSC-1-2:

The State Water Board appreciates DSC’s comments regarding the draft Delta Plan Chapter 4: *Protect, Restore and Enhance the Delta Ecosystem* and how the Order could help achieve the ecosystem restoration goals within the Delta Plan.

DSC-1-3:

The State Water Board acknowledges the benefits of early consultation with DSC in the planning process for ecosystem restoration projects requiring consistency with the Delta Plan.

DSC-1-4:

The State Water Board acknowledges those future restoration projects within the boundaries of the Legal Delta or Suisun Marsh permitted under the Order may be required to demonstrate consistency with the Delta Plan and its mitigation measures if they meet the criteria identified in Water Code section 85057.5(a).

DSC-1-5:

In response to this comment, PEIR Section 3.5.3 Regulatory Setting and PEIR Section 3.6.3 Regulatory Setting were revised as follows:

“This topic is discussed in Section 3.11, *Hydrology and Water Quality*.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

DSC-1-6:

In response to this comment, PEIR Section 2.5, Table 2-1 Processes, Permits, and Authorizations that May Be Required for Approval of Restoration Projects was revised as follows:

Resource	Applicable Laws/Regulations/Permits	Regulating Agency
<u>Restoration projects are required to demonstrate consistency with the Delta Plan and its mitigation measures when carrying out, approving, or funding a ‘covered action’ defined by the Delta Plan</u>	<u>Delta Plan Certification of Consistency (Water Code Sections 85057.5 and 85225)</u>	<u>Delta Stewardship Council</u>

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This revision does not change the analyses or conclusions in the Draft Order or Draft PEIR.

PEIR Appendix C Existing Programmatic Permits and Processes includes a list of programmatic permits and authorizations for restoration activities. There is no programmatic authorization for restoration projects demonstrating consistency with the Delta Plan, therefore information on the Delta Plan was not added to Appendix C.

DSC-1-7:

Invasive species are addressed in the Order, Attachment A, A.5.2 GPMs (GPM-8, GPM-9, VHDR-2 and VHDR-3). The expectation is that restoration projects requiring consistency with the Delta Plan will include separate invasive species mitigation measure(s), in addition to GPMs and/or mitigation measures, as applicable/required. No revisions are included in the Order or PEIR because of this comment.

DSC-1-8:

An invasive species management plan requirement may be a requirement of an approving Water Board on an individual project basis. The expectation is that restoration projects requiring consistency with the Delta Plan will include a separate invasive species management plan in addition to GPMs and/or mitigation measures, as applicable. No revisions are included in the Order or PEIR because of this comment.

DSC-1-9:

Per CEQA Guidelines, where potentially significant impacts are identified, an EIR should propose and describe mitigation measures designed to minimize, reduce, or avoid each identified potentially significant impact whenever it is feasible to do so (CEQA Section 21002.1(b) and CEQA Guidelines Section 15126.4). In addition, an EIR should focus on mitigation measures that are feasible, practical and effective (Napa Citizens for Honest Govt. v. Napa County Bd. of Supervisors (2001) 91 Cal.App.4th 342, 365). The term “feasible” is defined in CEQA (Public Resources Code Section 21061.1) to mean, “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.” PEIR Mitigation Measure REC-1 (Section 3.16 Recreation) meets these requirements and is sufficient. No revisions are included in the Order or PEIR because of this comment.

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DU-1 Ducks Unlimited

DU-1



Western Regional Office
3074 Gold Canal Drive
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Ph: 916-852-2000, Fax: 916-852-2200
www.ducks.org

August 13, 2021

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000



RE: Comments – Restoration Projects Statewide Order

Ms. Townsend,

Ducks Unlimited, Inc. (DU) is pleased to provide comments to the State Water Resources Control Board (SWRCB) on the Proposed General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (Restoration General Order) and Supporting Draft Program Environmental Impact Report (Program EIR). Ducks Unlimited is one of the largest and most effective non-profit wetland conservation organizations in North America. For over 30 years, DU has worked with diverse public and private partners to design and implement over 1300 conservation projects benefitting more than 719,000 acres of wetland and associated upland habitats throughout the state of California. Our wetland restoration and enhancement projects are collaborative, voluntary efforts that are designed and implemented to benefit a suite of ecosystem services, and to result in long-term net increases in aquatic resource functions and services. Our projects often receive public funding, where the efficient and effective use of tax dollars supports the public's trust that grant-funded programs can deliver important conservation projects on time and within budget. None-the-less, permitting large-scale multi-beneficial restoration projects within the current regulatory system can take years and significant sums of money, and place a significant burden on the regulatory staff tasked within implementing wetlands and water quality protection programs.

Our comments on the Restoration General Order and Program EIR, as provided below, are from the perspective of a practitioner with extensive experience designing, permitting, and constructing large-scale restoration projects across the state. We commend the SWRCB and their staff for prioritizing development of a programmatic process aimed at getting more and larger restoration and enhancement projects in the ground, more quickly. Broad access to the type of programmatic process provided for in the proposed Restoration General Order is essential to both achieving DU's mission of conserving, restoring, and managing wetlands and associated habitats, as well as for realizing Governor Newsom's directive to conserve at least 30% of California's land and coastal waters by 2030.

Thank you for your work, and for the opportunity to comment on the Restoration General Order and Program EIR. We look forward to continuing to collaborate with you on these efforts.

Sincerely,

Jeffrey McCreary
Director of Operations, Western Region

Attachment

Conservations for Generations

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

DU-1

Restoration General Order and Program EIR Comments

The following comments are specific to the Restoration General Order (primarily Attachment A) and the Program EIR. Recommendations for modifications or additions to language in these documents are highlighted in ***bold italic text***.

1. Restoration Project Definition

The Restoration General Order defines a restoration project as “one that would result in a net increase in aquatic or riparian resource area, functions and/or services through implementation of the eligible project types, relevant protection measures, and design guidelines.” We recommend the SWRCB clarify that the required net increase in acreage, functions, and services may occur in the future as a result of anticipated habitat improvements associated with the project or as a result of sea level rise – e.g., anticipated sediment accretion in restored tidal marsh, improved hydrologic and vegetative response to changes in water management regimes, or transition of vegetation communities. Many restoration projects result in short-term losses of wetland functions and services, and in some cases acreage, that are offset by long-term improvements in aquatic habitat conditions, including sea level rise resiliency. Adding the words “***long-term***” prior to net increase in the definition would make clear the intention that the Restoration General Order consider the benefits of restoration projects at the temporal scale necessary to support meaningful habitat conservation efforts.

2. Eligible Project Types

We appreciate the breadth and depth of eligible project types included in the Restoration General Order and offer the following specific recommendations based on the descriptions in Appendix A. More generally, we encourage the SWRCB to ensure the Restoration General Order is available to all large-scale multi-benefit conservation and restoration actions across the state, including projects in managed wetland systems and other working landscapes. Managed wetlands and working landscapes provide critical habitat for migratory waterfowl and shorebirds, as well as a suite of other ecosystems services that have otherwise been lost to development and displacement of freshwater and estuarine wetlands throughout the state. When managed properly, these habitats provide numerous beneficial services to people and wildlife, including water quality protection and improvement, floodwater attenuation, carbon sequestration, and sea level rise resiliency. They can also be important recreational amenities for the residents of California, where they provide opportunities for fishing, hunting, boating, bird watching, hiking, and communing with nature.

Please refer to our specific comments below on Category A.4.9 on where explicit mention of these habitat types could be incorporated into the Restoration General Order for clarity.

- a. Category A.4.7 - Removal of Pilings and Other In-Water Infrastructure – Category A.4.7 allows for removal of certain in-water structures to improve water quality and habitat for fish and wildlife. We recommend this category be expanded to allow for both removal *and* replacement of those structures, provided replaced structures are suitable for in-water use and would improve water and habitat quality in the impacted area.
- b. Category A.4.9 - Establishment, Restoration and Enhancement of Tidal, Subtidal and Freshwater Wetlands – We recommend the following modifications to Category A.4.9 to ensure coverage of common enhancement and restoration practices in managed wetlands and working landscapes.

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- We recommend Category A.4.9 be revised to also include brackish and alkali wetlands to ensure coverage of projects in San Francisco Bay, Suisun Marsh, portions of the Sacramento-San Joaquin Delta, and the Salton Sea.
- We recommend the following sentence be added after the introductory sentence in Appendix A: ***“Restoration and enhancement work under Category A.4.9 may include work in managed wetlands, including those associated with state Wildlife Areas or National Wildlife Refuges, and/or working landscapes, such as flood irrigated pasture and rice fields, where project work would improve aquatic resource functions and services, increase wetland area, increase ecological productivity, and/or enhance wildlife or fish habitat diversity.”***
- We recommend the following sentence be revised to explicitly allow for replacement / installation of infrastructure typical of enhancement / restoration work in managed wetlands and working landscapes: ***“This project type generally includes grading (e.g., creating depressions, berms, and drainage features), installing related infrastructure (e.g., water control structures, siphons, sills), and/or breaching (e.g., excavating breaks in levees, dikes, and/or berms), to create topography, improve water management capabilities, or improve hydrology that:...* Facilitates water delivery and conveyance to benefit aquatic species, wildlife, or wetland vegetative response ”.***
- We support the inclusion of ecotones in the activities covered in Category A.4.9. Similarly, we support the broad definition of the types of living shorelines protection that may be used under this Category, including native vegetation, natural materials (shells), and rock armoring in areas where wind, wave or other hydraulic conditions require more substantive erosion protection.

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3. Activities Prohibited Under the Order

Section A.5.5 in Appendix A lists “water diversions” as activities prohibited under the Restoration General Order (with limited exceptions). We request this prohibition be refined as follows to acknowledge the use of water diversions in managed wetland systems:

“Water diversions, except diversions associated with water conservation projects as described in Section A.4.5, Water Conservation; water delivery or conveyance to and within managed wetland habitats as described in Category A.4.9, Establishment, Restoration and Enhancement of Tidal, Subtidal and Freshwater Wetlands; and those necessary to temporarily dewater the construction site of a restoration project.”

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4. General Protection Measures

We appreciate the broad suite of general protection measures provided in Section A.5.2 of Appendix A, and the ability to select and incorporate applicable measures based on site-specific conditions. We also appreciate the language in Section A.5.2 that allows for modification of these measures by the project proponent or as recommended by the authorizing RWQCB based on site-specific conditions or technological constraints or advances. The flexibility to tailor measures to be specific to and most protective of resources at a specific project site will allow broad access to the Restoration General Order.

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We offer the following comments on individual General Protection Measures:

- a. GPM-15: Revegetate Disturbed Areas: We appreciate the allowance for revegetation of some restored sites to come through natural recruitment. This is particularly important in tidal and managed wetlands and working landscapes where disturbed areas typically revegetate with comparable vegetation (e.g., pasture grasses, wetland vegetation) in one growing season, and where seed distributed after

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construction would likely be outcompeted as the site revegetates.

- b. WQHM-2: Storm Water Pollution Prevention Plan. We request this measure be revised to reflect the one acre disturbance threshold for preparation of a SWPPP is limited to work in *upland areas* (i.e., “For project construction sites **with upland disturbance areas** greater than one acre...”). We also encourage the SWRCB to explicitly allow best management practices (BMPs) typical of a SWPPP to developed as part of a stand-alone plan under the Restoration General Order (akin to the Erosion Control Plan under General Protection Measure WQHM-3), rather than a requirement of the Construction Stormwater General Permit. The stringent monitoring and reporting requirements of the Construction Stormwater General Permit are time consuming and expensive, and are often not a good fit for restoration work in aquatic environments. Providing the flexibility for this General Protection Measure to be met through a project-specific plan outside the framework of the Construction General Permit would reduce unnecessary costs while providing water quality protection during construction. Of note, this approach to construction stormwater management has been successfully used in the past for large-scale restoration projects, including the Sears Point Restoration Project in Sonoma County (Order No. R2-2013-0017).
- c. IWW-11 – Sediment Containment During In-Water Pile Driving: We note that the use of turbidity curtains in tidal environments is often ineffective, and can result in adverse impacts on substrate and aquatic vegetation, including eelgrass. Other measures, such as working to the extent practicable during low or incoming tides can be as effective in reducing turbidity issues at some locations. As such, we appreciate the flexibility in this measure that allows for turbidity curtains to be used only where effective and practicable.
- d. IWW-13: Dredging Operations and Dredging Materials Reuse Plan. This measure requires a dredging material management plan include a sampling program for conducting physical and chemical analyses of sediments before disturbance. We request this measure be revised to apply only where materials from an offsite location are being reused onsite; sediment testing should not necessarily be required for reuse of material onsite, unless there is a specific concern about residual contaminants in the soil based on historic land practices (which can be determined on a site-specific basis in collaboration with the RWQCB).
- e. VHDR-3: Revegetation Materials and Methods: This measure should be revised to allow for revegetation through natural recruitment at some restoration sites, consistent with GPM-15. As noted above, natural recruitment as a revegetation method is important in tidal and managed wetlands and working landscapes where disturbed areas typically revegetate quickly and where seed distributed after construction is readily outcompeted.
- f. VHDR-5: Revegetation Monitoring and Reporting. The 2-year monitoring period and success criteria tied to *absolute cover* are appropriate for demonstrating vegetation has reestablished at a reference site. Comparison to an “intact local reference site” is confusing in that it implies consideration of some metric other than absolute cover. We recommend references to a reference site be removed and the measure remain focused on ensuring a restoration site has stabilized and is not contributing to turbidity or sedimentation due to exposure of bare ground.

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5. CEQA Lead Agency

The ability for large-scale habitat restoration projects to utilize the CEQA analysis provided in the Program EIR is a key benefit of the SWRCB's current effort. However, in instances where additional project-specific CEQA analysis is required, the Program EIR and Restoration General Order lack clarity on how the CEQA lead agency should be determined. In particular, in instances where the only discretionary action(s) triggering CEQA compliance are state or local permit processes, it can be difficult to determine which regulatory agency has the "primary responsibility" for carrying out or approving the project. We recommend the SWRCB develop a decision matrix to assist project proponents and potential CEQA lead agencies in determining the appropriate CEQA lead agency for restoration projects covered under the Restoration General Order and Program EIR. We also recommend the matrix include the SWRCB / RWQCB as the state lead agency in instances where other agencies are unwilling or unable to serve as the CEQA lead agency.

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6. Program EIR Mitigation Measures

We offer the following comments on the mitigation measures provided in the Program EIR.

- a. Mitigation Measures AG-1: Minimize and Avoid Loss of Special Designation Farmland. This mitigation measure requires compensatory mitigation (1:1) for "permanent conversion of Special Designated Farmland" through preservation of other Special Designation Farmland. We request this mitigation measure we revised to reflect compensatory mitigation should only be considered where the Special Designation Farmland impacted by the restoration project has been functioning as viable farmland within the past 5 years and/or is anticipated to continue to function as viable farmland without intervention (i.e., the necessary installation of infrastructure to drain or otherwise manage water onsite). There are many historic agricultural properties that are excellent candidates for freshwater or estuarine wetland restoration, and that no longer function as viable farmland (or will not function in the short-term without intervention) due to a lack of active recent management, despite being Special Designation Farmland. For example, the tidal restoration area associated with the Ocean Ranch Restoration Project in Humboldt County is designated as Prime Farmland, but had not been farmable for over 50 years due to failed levees and lack of water management. Demonstration of recent and ongoing farm viability should be a consideration before compensatory mitigation is required.
- b. Mitigation Measure GEO-3: Conduct Individual Restoration Project Geotechnical Investigation and Report. This mitigation measure requires "a geotechnical investigation be performed for any restoration project that would result in potentially significant grading activities." It is unclear from the language in this measure what amount of grading would qualify as "significant". Moreover, many enhancement and restoration projects in managed wetland and working landscapes require "significant" earth moving (e.g., over 1000 cubic yards) in the form of shallow swales, grading or levelling of fields, and constructing habitat features (e.g., islands, low elevation berms) in areas that have no potential for geotechnical risk. We recommend this mitigation measure be revised to only require a geotechnical investigation where the nature of the project warrants consideration of geotechnical constraints, such as work on flood control levees or in areas with certain soil types subject to impacts such as liquefaction. In those instances, a geotechnical report should only apply to areas where consideration of those constraints is needed to inform design.

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- c. Mitigation Measure GEO-6: Implement Measures for Waterway Construction Activities. This mitigation measure states:

“For restoration projects that could cause subsurface seepage of nuisance water onto adjacent lands, the following measures shall be implemented:

- Perform seepage monitoring studies by measuring the level of shallow groundwater in the adjacent soils, to evaluate baseline conditions. Continue monitoring for seepage during and after project implementation.
- Develop a seepage monitoring plan if subsurface seepage constitutes nuisance water on the adjacent land.
- If adjacent land is not usable, implement seepage control measures, such as installing subsurface agricultural drainage systems to avoid raising water levels into crop root zones. Cutoff walls and pumping wells can also be used to mitigate the occurrence of subsurface nuisance water.”

As written, the third bullet implies some obligation on the restoration project to correct existing seepage issues on an adjacent property unrelated to the project. We recommend this bullet be revised to state: **“If it is determined that seepage from the project is responsible for making adjacent lands not usable,.....”**

7. Post-Construction Monitoring Plan

Identification of appropriate metrics and success criteria for measuring the short- and long-term outcomes of a restoration project is important to practitioners, project proponents and regulatory agencies for many reasons. They inform the effectiveness of design strategies and construction techniques in the field; allow for early identification and adaptive management to correct unintended outcomes; and provide a way to measure and record the relative success of a project over time. However, prescriptive “corrective actions” tied to specific “success criteria” are often not pragmatic due to grant funding limitations, and may be outside the regulatory purview of a specific agency. With that in mind, we recommend the Post-Construction Monitoring Plan be required to communicate to the RWQCB the progression of a project, and to identify potential solutions for remedying elements that may contribute to adverse impacts on beneficial uses of waters of the State, but that it not require a specific outcome in terms of project performance. In no instance should the monitoring obligation under the Restoration General Order be more onerous or expensive than that anticipated through an Individual Permit process.

8. Permit Issuance Timeline

The Restoration General Order does not provide a timeline for permit issuance after an application is found to be complete. We recommend the SWRCB include a 60-day period for a permit decision to emphasize the importance of timely review of restoration project permit applications. This timeline is aligned with the current ‘reasonable review period’ being identified by USACE for verification of a project under a Nationwide Permit (NWP) and would allow for up to 4 months of coordination between a project proponent and RWQCB prior to making a permit decision (including pre-application permit and completeness review).

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10. Application Fee

We understand that the Restoration General Order does not contemplate a change in the existing WQC/WDR fee structure for restoration projects. We recommend that projects covered under the Restoration General Order be eligible for the flat fee applied to ecological restoration and enhancement projects, regardless of size, and that that fee remain comparable to the current application and annual fees.

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11. Integration with Other Programmatic Processes

We encourage the SWRCB to continue to align the Restoration General Order with other state and federal programmatic or streamlined permit processes. For example, concurrent expansion of something comparable to the Habitat Restoration and Enhancement Act (HREA) to streamline California Endangered Species Act (CESA) and California Fish and Game Code (FGC) Section 1600 permitting of large restoration projects would be exceptionally useful to ensuring efficient delivery of habitat restoration projects.

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DU-1 Ducks Unlimited

Responses to Comments from DU-1 Ducks Unlimited, Inc.

DU-1-1:

The State Water Board appreciates Ducks Unlimited (DU) comments regarding the Order and Draft PEIR and information on DU.

DU-1-2:

The definition of a ‘restoration project’ is consistent with other regulatory agency permitting practices in place or under development. Since restoration projects are intended to be permanent solutions to environmental problems, the definition of a restoration project implies that the net increase in aquatic or riparian resource area, functions and/or services would occur as a result of project implementation, over the long-term.

See also Master Response 1: Definition of Restoration Project for additional details.

DU-1-3:

Restoration projects permitted under the Order providing mitigation or other multi-benefits are allowed consistent with Order Section XIII.E.1 General Compliance:

“Enrollment and authorization of restoration projects under this Order are for the discharges of waste associated with only the restoration action and shall not be construed as authorization or any compliance determination for any related underlying project or activity. Restoration projects serving as mitigation for a related project or activity may be enrolled under this Order; however, this Order does not include any findings regarding the underlying related activity’s impact to water quality, public trust resources, or other matters of public interest. When considering the impact of restoration projects under this Order, the approving Water Board considers only those adverse changes that may result from approval of the new restoration project, including multi-benefit projects that may include non-restoration action elements (e.g., recreation, flood protection).”

See also Master Response 1: Definition of Restoration Project for additional details.

DU-1-4:

In response to this comment (and comment SCC-1-7), Order Section A.4.7 was revised as follows:

“Removal or Remediation of Pilings and Other In-Water Structures

Untreated and chemically treated wood pilings, piers, vessels, boat docks, derelict seawalls (within embayments), and derelict fishing gear, and similar structures built using plastic, concrete, and other materials, may be removed and/or remediated to improve water quality and habitat for fish and wildlife. These projects are designed to remove contaminant sources and hazards from stream, river, and estuary habitats.”

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These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR. The future restoration projects in this category authorized under the Order will need to meet the definition of a restoration project.

DU-1-5:

Order Section A.4.9 Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands was not revised to include brackish and alkali wetlands or the recommended initial introductory sentence, as appropriate projects would be permitted under the Order if all Order Section XIII. Conditions are met.

In response to this comment, Order Section A.4.9 was revised as follows:

“This project type generally involves grading (e.g., creating depressions, berms, and drainage features), installing related infrastructure (e.g., water control structures, siphons, sills, etc.), and/or breaching (e.g., excavating breaks in levees, dikes, and/or berms), or both, to create topography, improve water management capabilities, and/or improve hydrology that:

- ◆ Facilitates water delivery and conveyance to benefit aquatic species, wildlife, or wetland vegetative response...”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR. The future restoration projects in this category permitted under the Order will need to meet the definition of a restoration project.

DU-1-6:

In response to this comment, Order Section A.5.5 Activities Prohibited under the Order was revised as follows:

- ◆ “Water diversions, except diversions associated with water conservation projects as described in Section A.4.5, Water Conservation; diversions associated with delivery or conveyance to and within managed wetland habitats as described in Category A.4.9, Establishment, Restoration and Enhancement of Tidal, Subtidal and Freshwater Wetlands; and those necessary to temporarily dewater the construction site of a restoration project.
- ◆ Installation of flashboard dams, head gates, or other mechanical structures are generally prohibited; however there are exceptions for certain projects that require them to meet ecological goals (e.g., With the exception of storage projects to reduce low flow stream diversions (Section A.4.5), off-channel/side-channel managed floodplain, and managed wetland habitat), and for the required replacement of legacy structures under the Small Dam, Tide Gate, Flood Gate, and Legacy Structure Removal project category habitat projects that require the installation of a flashboard dam, head gate, or other mechanical structures, except storage projects to reduce low flow stream diversions (see Section A.4.5).”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

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DU-1-7:

The State Water Board appreciates Ducks DU support regarding this text in the Order.

DU-1-8:

The State Water Board appreciates Ducks DU support regarding this text in the Order.

DU-1-9:

See Master Response 2: Construction General Order and SWPPP Requirements.

DU-1-10:

The State Water Board appreciates Ducks DU support regarding this text in the Order.

DU-1-11:

In response to this comment, GPM IWW-13 was revised as follows:

- ◆ **“IWW-13: Dredging Operations and Dredging Materials Reuse Plan.** Project proponent will develop and implement a dredging operations and dredging materials management plan to minimize the effects that could occur during dredging operations and material reuse and disposal. If material is being imported from off-site or if there are specific concerns about residual contaminants in the soil from historic land use activities (which can be determined on a site-specific basis in collaboration with the approving Water Board), the plan shall describe a sampling program for conducting physical and chemical analyses of sediments before import and/or disturbance. ...”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

DU-1-12:

In response to this comment, GPM VHDR-3 was revised as follows to include a reference to GPM-15: Revegetate Disturbed Areas, which includes development of a revegetation plan and allows for natural recruitment:

- ◆ **“VHDR-3: Revegetation Materials and Methods.** Upon completion of work, site contours will be returned to preconstruction conditions or to contours specified in a Water Board-approved project design that provides enhanced ~~or designed to provide increased~~ biological and hydrological functions. Where disturbed, topsoil will be conserved (and watered at an appropriate frequency) for reuse during restoration to the extent practicable. Native plant species comprising a diverse community structure (plantings of both woody and herbaceous species, if both are present) that follow an agency-approved plant palette will be used for revegetation of disturbed and compacted areas, as appropriate. See also GPM-15: Revegetate Disturbed Areas, which also allows for revegetation through natural recruitment (e.g., in tidal and managed wetlands and working landscapes where disturbed areas typically revegetate more quickly through natural recruitment than through seeding). Any area barren of vegetation as a result of project implementation will be restored to a natural state by mulching, seeding, planting, or other means with native trees, shrubs, willow stakes, erosion control

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native seed mixes, or herbaceous plant species following completion of project construction. Irrigation may also be required in order to ensure survival of containerized shrubs or trees or other vegetation, depending on rainfall. Soils that have been compacted by heavy equipment will be decompacted, as necessary, to allow for revegetation at project completion as heavy equipment exits the construction area.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

DU-1-13:

Overall project success criteria and measurable performance standards for projects authorized under the Order will be considered by the approving Water Board on an individual project basis as part of the development of the Monitoring Plan (Order XIII.G.4).

Revegetation success criteria described under GPM VHDR-5 has been included for consistency with other regulatory agency restoration permitting practices in place or under development (e.g., NMFS, USFWS, etc.). The text of GPM VHDR-5 was revised as follows:

- ◆ **“VHDR-5: Revegetation Monitoring and Reporting.** All revegetated areas will be maintained and monitored for a minimum of 2 years after replanting is complete and until success criteria are met, to ensure the revegetation effort is successful. The standard for success is at least 60% absolute cover compared to pre-project conditions at the project site or at least 60% cover compared to an intact, local reference site (or an available reference site accepted by the approving Water Board). ~~60% absolute cover compared to an intact, local reference site.~~ If an appropriate reference site or pre-project conditions cannot be identified, success criteria will be developed for review and approval by the approving Water Board on a project-by-project basis based on the specific habitat impacted and known recovery times for that habitat and geography. The project proponent will prepare a summary report of the monitoring results and recommendations at the conclusion of each monitoring year.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

DU-1-14:

Lead agencies for future restoration projects authorized under the Order will be determined according to CEQA Guidelines Section 15050 “Lead Agency Concept” and Section 15051 “Criteria for Identifying a Lead Agency.”

DU-1-15:

In response to this comment, the PEIR Mitigation Measure AG-1 (PEIR Section 3.3.4 Impacts and Mitigation Measures) was revised as follows:

“Based upon the cost and availability of farmland, whether the landowner is sponsoring the project, recent (within 5 years) and ongoing farmland viability, and

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other factors, the CEQA lead agency for the individual restoration project should consider whether a 1:1 ratio is appropriate and feasible on a case-by-case basis.”

This revision does not change the analyses or conclusions in the Draft Order or Draft PEIR.

DU-1-16:

In response to this comment, the PEIR Mitigation Measure GEO-3 (PEIR Section 3.9.4 Impacts and Mitigation Measures) was revised as follows to help clarify what might qualify as significant grading activities and when geotechnical investigation may be warranted:

“Mitigation Measure GEO-3: Conduct Individual Restoration Project Geotechnical Investigation and Report

When a restoration project involves ~~An individual restoration project’s geotechnical investigation shall be performed and a geotechnical report prepared for any restoration project that would result in potentially significant grading activities and warrants consideration of geotechnical factors and/or constraints (e.g., work on flood control levees, work in areas with certain soil types subject to liquefaction), the project proponent shall conduct and prepare a geotechnical report to address potential issues and concerns.~~ The geotechnical report shall include a quantitative analysis to determine whether excavation or fill placement would result in a potential for damage due to soil subsidence during and/or after construction. Project designs shall incorporate measures to reduce the potential damage to a less-than-significant level. ...”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

DU-1-17:

In response to this comment, the PEIR Mitigation Measure GEO-6 (PEIR Section 3.9.4 Impacts and Mitigation Measures) was revised as follows:

- ♦ ~~“If adjacent land is~~ If it is determined that seepage from the restoration project is responsible for making adjacent lands not usable, implement seepage control measures, such as installing subsurface agricultural drainage systems to avoid raising water levels into crop root zones. Cutoff walls and pumping wells can also be used to mitigate the occurrence of subsurface nuisance water.”

This revision does not change the analyses or conclusions in the Draft Order or Draft PEIR.

DU-1-18:

Performance standards, success criteria, and monitoring obligations will be established on an individual project basis by the project proponent, with input from the approving Water Board. Measurable performance standards and success criteria shall be identified as appropriate to meet the project purpose and goals and documented in the

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Monitoring Plan developed by the project proponent as required in Order Section XIII.G.4. Monitoring Plan. Post-construction monitoring reports will be submitted in accordance with the schedule dictated in the Monitoring Plan developed by the project proponent with input from the approving Water Board.

If the project proponent identifies the need for corrective actions to achieve performance standards, the authorizing Water Board will review and approve the proposed corrective actions.

Revegetation success criteria described under VHDR-5: Revegetation Monitoring and Reporting, has been included for consistency with other regulatory agency restoration permitting practices in place or under development (e.g., NMFS, USFWS, etc.) and VHDR-5 also allows for a project proponent to develop success criteria for review and approval by the approving Water Board on a project-by-project basis based on the specific habitat impacted and known recovery times for that habitat and geography.

In response to this comment, see also revisions to VHDR-5, Revegetation Monitoring and Reporting, discussed above in DU-1-13.

DU-1-19:

The USACE sets the reasonable period of time to act under the Clean Water Act and that time may vary depending on the details of the individual project. For example, the type of federal permit required may vary depending on the individual project. The USACE typically sets a longer reasonable period of time to act for projects requiring individual authorization. The intent of the Order is to streamline project reviews and approvals, but the duration of time it takes for the approving Water Board to make a final decision will depend on project complexity and development of design and planning. It is expected that close and early coordination with the approving Water Board will facilitate timely decisions. No revisions are included in the Order or PEIR because of this comment.

DU-1-20:

As presented in Order Section XII Application Fees, the approving Water Board will confirm the correct fee amount according to current fee regulations at the time of NOI submittal. Authorization of a project under this Order is not determinative of whether a project is a restoration project in the context of the fee schedule. Under the FY 2021-22 water quality fee schedule, projects that meet the definition of an EREP as defined and adopted by the State Water Board on April 2, 2019, can use the Category D flat fee. Though many projects that qualify for authorization under the Order will qualify for the Category D flat fee for EREPs, not all will. The Order's definition of a restoration project is broader than a definition of an EREP. The approving Water Board will identify and confirm the appropriate fee upon project review.

DU-1-21:

Efforts are ongoing to coordinate across various regulatory programs and agencies, including the Cutting the Green Tape initiative.

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EPA-1 United States Environmental Protection Agency Region IX

EPA-1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 13, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, California 95812-2000



Subject: EPA Comments – Large Restoration Projects Statewide Order

Dear Ms. Townsend,

EPA has reviewed the Proposed General Order For Clean Water Act Section 401 Water Quality Certification And Waste Discharge Requirements For Restoration Projects Statewide (General Order) and respectfully submits the following comments in response to the State Water Resources Control Board's (SWRCB) Revised Public Notice dated July 22nd, 2021. EPA supports the SWRCB's efforts to accelerate restoration of wetlands, streams, and other aquatic ecosystems through efficient and effective permitting procedures, and the following comments are intended to support widespread use of the General Order where appropriate.

1

Consistency with Clean Water Act §401 Rule

As a proposed Clean Water Act Section 401 Water Quality Certification, the General Order must comply with the statutory requirements of 33 U.S.C 1341. To increase efficiency of review and provide the most benefit to the public and the environment, the implementation process for the General Order should align with the process in the 2020 Clean Water Act 401 Certification Rule (40 C.F.R. Part 121). This should include, but is not limited to:

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- A process for project proponents to request a pre-filing meeting at least 30 days before submitting a certification request
- Concurrent submittal to the SWRCB and the federal agency with the items required in §121.5
- Establishment of a reasonable period of time for actions
- A statement that the proposed project will comply with water quality standards
- Certification conditions in compliance with the requirements of §121.7

Particular attention should be paid in the development of the General Order to ensuring that certification conditions clearly explain why the condition is necessary to assure that any discharge from the proposed project or authorized under the license or permit will comply with water quality requirements. These conditions must also include a citation to federal, state, or tribal law that authorizes the condition.

Applicability to Complex and/or Multi-purpose Projects

EPA recommends reexamining the project types expected to be covered under this general order to ensure that covered activities are adequately evaluated under the General Order and that complex aquatic resource restoration projects that require more analysis are not included. We agree with SWRCB's desire to advance permitting for large restoration projects but based on our experience

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improving permitting for highly complex multi-benefit tidal wetlands restoration projects in the San Francisco Bay, these types of projects are best addressed through coordinated permitting procedures and early interagency coordination as embodied in the Bay Restoration Regulatory Integration Team (BRRIT).

We recommend communicating more explicitly that complex multi-benefit tidal wetlands restoration projects will not be covered activities under the General Order. There are necessary, built-in complexities in restoring large-scale resilient baylands that are not well suited to coverage under a general order. In the Bay Area, tidal wetlands restoration means working in areas that are deeply subsided, often contaminated, have multiple endangered species, have experimental design features, and coexist with a myriad of urban infrastructure. These projects are permitted by upwards of six agencies that must all work together to successfully permit a project and address applicants' concerns. To that end, and in recognition of the regulatory challenges that do exist for restoration projects, the Bay Area restoration community is in the midst of a five-year pilot of coordinated permitting for restoration projects through the BRRIT. EPA is concerned that coverage of BRRIT-covered projects in the General Order will exclude the Water Boards from meaningful involvement and review of projects with important ramifications for compliance with EPA-approved Water Quality Standards.

Tidal wetlands, or baylands, restoration projects in the Bay Area have been, and continue to be, implemented on a large-scale through the South Bay Salt Pond Project and other landowners. The experience the restoration community has had with these efforts in places such as Eden Landing (CDFW), Cullinan Ranch (USFWS, San Pablo Bay Refuge), and Bair Island (USFWS, Don Edwards Wildlife Refuge) is instructive to demonstrate that early coordination through the BRRIT, rather than streamlined permitting, has been critical to successfully designing and permitting the projects. For South Bay Salt Pond and Refuge projects, regulatory agency workgroup meetings were held regularly to vet design and permitting challenges. On the Bair Island project website written for the general public, there is a testimonial to the collaborative process- it reads:

"As a whole, the restoration project presents a model for other cooperative efforts elsewhere in the Bay Area—a unique partnership among federal, State and local agencies, together with non-profit organizations and the private sector, to realize an ambitious vision of conservation."

In the Bay Area, we are interested in continuing this model of collaborative restoration design and implementation. EPA recommends re-evaluating tidal wetlands as a category for modification or exclusion from this General Order to ensure that project proponents are guided appropriately to what can and cannot be covered by this General Order. If tidal restoration projects are left in the General Order, then additional language should be added to the order so that project proponents understand that the General Protection Measures and accompanying EIR do not cover all project circumstances and there will be restoration projects that cannot use this order, and that those decisions will be made by the Regional Water Board.

The proposed General Order covers a broad range of activity types. While all activity types involve nature-based approaches, some are not clearly limited to projects that would result in a net gain in aquatic resource function. The proposed category of Bioengineered Bank Stabilization is of particular concern. Nature-based approaches to reducing excessive erosion and protecting property are an important component of watershed restoration, but may still result in adverse impacts to water quality if



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not appropriately sited & planned. While suspended sediment & turbidity pollution remains a prevalent problem in California streams, many streams are sediment-limited due to historical aggregate mining or trapping of bedload and suspended load behind impoundments. Bioengineered approaches to bank stabilization may exacerbate this “hungry water” phenomenon in sediment-limited streams by reducing or eliminating streambank sediment sources. EPA recommends re-evaluating this category for modification or exclusion from the General Order.

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Thank you again for the opportunity to comment on the proposed General Order. If there are any questions about EPA's comments, you can reach me by email at cohen.sahrve@epa.gov or phone at 415-264-4675.

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Sincerely,

Sahrve Cohen
Manager, Wetlands Section
Water Division

cc: Jessica Nadolski, State Water Resources Control Board

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EPA-1 United States Environmental Protection Agency Region IX

Responses to Comments from EPA-1 Environmental Protection Agency

EPA-1-1:

The State Water Board appreciates U.S. Environmental Protection Agency's (EPA) comments supporting the State Water Board's efforts.

EPA-1-2:

Order Section G.2. Pre-Application Consultation requires a request for a pre-application consultation meeting a minimum of thirty days prior to submittal of the NOI. Any applicable requirements pertaining to the current or future Clean Water Act 401 Water Quality Certification rules will be discussed at the meeting.

Certification conditions, currently and if required in the future, will be included as part of the Notice of Applicability (NOA) for an authorized project under the Order.

EPA-1-3:

The Order was developed to be consistent with the permitting requirements and procedures of several state and federal agencies. For example, the definition of a restoration project was developed based on input from numerous agencies and to be consistent with multiple permitting agency regulatory practices either existing or under development (e.g., CDFW, NMFS, USFWS, USACE). All projects must meet the definition of a restoration project (Order Section V. Project Description), be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4), and adhere to programmatic sideboards, including adopting protection measures and design guidelines (Order, Attachment A, A.5), and undergoing pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3).

In addition, the Order encourages early interagency coordination (Order, XIII.A. Request for Authorization)

“Project proponents are encouraged to collaborate with other applicable regulatory agencies in coordination with the approving Water Board during project design, especially when fish passage and/or listed species are considerations.”

Further, the Order (Order XIII.G.2.) requires the project proponent contact the approving Water Board to request a pre-application consultation meeting.

“The project proponent will contact the approving Water Board to submit available project information and request a pre-application consultation meeting a minimum of thirty (30) days prior to submittal of the NOI... Restoration projects can be complex and often benefit from pre-application consultation with the approving Water Board during the early stages of planning and design. During the pre-application consultation, the approving Water Board will review draft project materials and provide project-specific guidance for navigating the approval process. A site visit may also be conducted at the discretion and request of the approving Water Board.”

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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In addition, (Order XIII.G.2.) allows for further input from the approving Water Board.

“The approving Water Board will review the project information and may identify concerns, formulate questions and/or recommendations regarding the project design, and inclusion of applicable GPMs, including potential recommendations for modification of GPMs, where necessary, to accommodate and/or address site-specific conditions”

The approving Water Board also has the authority to determine whether the project is eligible for coverage under the Order after reviewing the NOI.

The Order would not hinder interagency or stakeholder collaboration, nor would the Order alter policies or procedures of the San Francisco Bay Regional Board or other regulatory agencies in the San Francisco Bay area. The Order could be utilized in a complementary manner with the San Francisco Bay Restoration Regulatory Integration Team (BRRIT) coordination and project approval program. For example, if the BRRIT elected to review a proposed project, the Regional Board would still have full authority to determine whether coverage under the Order is appropriate for the proposed project. If the Regional Board deemed use of the Order to be appropriate, the project would benefit from collaboration with the BRRIT to improve its effectiveness and be approved in a more efficient and consistent manner with other projects statewide.

Also see response to comment CDFW-1-2, which presents specific references to the Order that cite regulatory agency authority and encouragement to collaborate with other regulatory agencies during project review.

EPA-1-4:

The use of bioengineered bank stabilization techniques must be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4.1 and A.4.3), and adhere to programmatic sideboards, including adopting protection measures and design guidelines (Order, Attachment A.5 and A.6), and undergo pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3).

While bioengineered bank stabilization may be required on a site to address specific issues and may be necessary for certain projects, the Order would not cover projects that solely protect property from bank erosion. Further, the Order includes project type-specific design guidelines (Order, Attachment A, A.6), that have been developed with assistance from multiple regulatory agencies (e.g., CDFW, NMFS, USFWS) to help project proponents during the design development of their individual projects, in a manner that is appropriate and sustainable, minimizes adverse effects on aquatic habitats, and maximizes the ecological benefits of the restoration. The design guidelines (Order, Attachment A, A.6) also state that restoration projects should be based on a process-based approach that considers the multiple interactions of physical, chemical, and biological processes over a wide variety of spatial and temporal scales in order to identify the root causes of the problems, and to confirm the proposed solution (project) will be effective and appropriate given the physical setting (see Kondolf et al., 2001; Simon et al., 2007; Smith and Prestegard, 2005; Wohl et al., 2005, Wohl et al., 2015).

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All projects would be evaluated individually by the approving Water Board to assess if they are eligible for authorization under the Order and will provide an increase in functions and services. No revisions are included in the Order or PEIR because of this comment.

EPA-1-5:

The State Water Board appreciates EPA's comments on the Order and notes the contact name and number for EPA.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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IND-1 General Public, Jeff TenPas

IND-1

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

Jeff TenPas
24 East Main St
Winters, CA 95694
Aug 9, 2021



Jeanine Townsend
Clerk to the Board State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
commentletters@waterboards.ca.gov

Re: Comments – Restoration Projects Statewide Order

Dear Board:

I fully support the goal of a programmatic review and approval of low level restoration projects.

However, a red flag must be raised so that there is further review for projects that use earthmoving and fill to more than minimal extent. For instance, it seems that under this statewide order that projects that alter a mile of stream channel, by modifying an existing channel, creating a new channel on the floodplain, or constructing a new channel in fill, that all these could be allowed.

The problem certain to occur but often go unnoticed is a severe alteration of groundwater connections between the channel, floodplain, and deep groundwater. It must be borne in mind that there are four or more orders of magnitude difference in the hydraulic conductivity of sandy gravel deposits, such as in a buried channel, and fine silt deposits on a floodplain. Disrupting one square yard of the channel connection to a buried gravel deposit can alter or cutoff the groundwater supply to acres of riparian forest and acre feet of groundwater recharge.

Case in point, one mile of stream alteration in Winters, CA between 2011 and 2018 where the channel was partially filled to narrow and decrease depth. Imported fill was emplaced in the channel by earthmovers. The fill was fine and not sandy, it was exceedingly compacted by heavy earthmovers, but worst of all blocked and broke the connection to high permeability layers or buried channels in the old existing floodplain.

As a result, the existing riparian cottonwood forest died, replanted trees grew at first then reached a point where water stress killed them too. Later study revealed falling groundwater levels, and a permanent decrease in groundwater recharge was recorded by stream gauges between pre and post-project. The restoration project had effectively lined the channel with an impermeable liner, and \$ millions spent on restoration were wasted and in fact degraded the environment. Project proponents are not yet ready to admit to this, but the evidence is clear.



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IND-1

Board
Aug 9, 2021
Page 2

In general there is great ignorance or disregard for floodplain structure and groundwater flow in stream restoration projects. There is great focus on surface water connectivity of channel and floodplain that operates a few days ephemerally during floods, and blindness to maintaining groundwater connectivity that supports riparian forest and groundwater recharge 24 hours 365 days a year.

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The general order should be amended to exclude projects which risk significantly impacting on groundwater movement by:

- Limiting stream bank disturbance to 100 feet,
- Require particle size analysis of fill, and prohibit importing of fill incongruent with the existing floodplain material.
- Require that fill is not compacted, that low ground pressure equipment is used, and equipment operates on mats were needed. Earthmovers, paddle wheel scrapers, sheepsfoot rollers, and front-end loaders should be prohibited. Track laying equipment rather than wheeled equipment should be used.

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AND for projects disturbing greater than 100 feet,

- Require survey of floodplain structure, mapping, and planning to maintain connectivity of the stream to the existing layers and bodies of coarse texture that provide 99% of groundwater movement, that sub-irrigate the riparian forest, and recharge groundwater.
- Where stream channels are partially filled, require placement of high permeability layers or bodies of coarse textured fill that are aligned to maintain the groundwater connections of stream to floodplain.

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Thank you for the opportunity to comment. I would be happy to provide more information if that would be helpful, or to help revise language. I can be contacted at 920-917-8409, or jtenpas@lvcos.com, or the address above. It is important that floodplain structure and groundwater flow, the anatomy and physiology of the riparian body, become a primary focus of restoration plans. Millions have been spent and wasted on constructed channels in constructed floodplains with no regard to the structure and groundwater flow.

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Sincerely,

Jeff TenPas
Soil Scientist, Hydrologist, Watershed Scientist (US Forest Service, retired)

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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IND-1 General Public, Jeff TenPas

Responses to Comments from IND-1 Jeff TenPas

IND-1-1:

The State Water Board appreciates Mr. TenPas' supportive comments regarding the Order.

IND-1-2:

All projects must meet the definition of a restoration project (Order, Section V. Project Description), be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4), and adhere to programmatic sideboards, including adopting protection measures and design guidelines (Order, Attachment A, A.5 and A.6), and undergo a pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3).

Project proponents in coordination with the CEQA lead agency will need to determine if restoration projects proposed for authorization under the Order can be approved within the scope of the PEIR or would need to undergo additional CEQA review (PEIR Section 1.1).

Adherence to these requirements would ensure that proposed earthmoving and fill would be consistent with project objective requirements and not result in unintended adverse consequences. While the comment does not question the impact analysis conducted in the PEIR, it is important to note that a full range of potential impacts resulting from earthmoving and fill, including from large-scale projects in multiple eligible categories, were analyzed. No revisions are included in the Order or PEIR because of this comment.

IND-1-3:

Project proponents in coordination with the CEQA lead agency will need to determine if restoration projects proposed for authorization under the Order can be approved within the scope of the PEIR or would need to undergo additional CEQA review (PEIR Section 1.1), including addressing potential impacts to groundwater and biological resources. Potential groundwater impacts associated with implementing restoration projects authorized under the Order are addressed in PEIR Section 3.11. Potential impacts to biological resources, including riparian forests, are addressed in PEIR Section 3.5. No revisions are included in the Order or PEIR because of this comment.

IND-1-4:

All projects must meet the definition of a restoration project (Order, Section V. Project Description), be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4), and adhere to programmatic sideboards, including adopting protection measures and design guidelines (Order, Attachment A, A.5 and A.6). If the CEQA lead agency for a restoration project determines that the project's impacts on groundwater or habitat/species may remain significant even with implementation of the GPMs and species protection measures in the Order, additional project-specific and species-specific mitigation measures would be required. No revisions are included in the Order or PEIR because of this comment.

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IND-1-5:

See response to comment IND-1-4.

IND-1-6:

The State Water Board appreciates Mr. TenPas' supportive comments regarding the Order and notes the contact name and number for Mr. TenPas.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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IND-2 General Public, Trent Tuthill (Same comment letter as TCD-1)

IND-2

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000

Submitted Via e-mail to: commentletters@waterboards.ca.gov

Subject: **Comments – Restoration Projects Statewide Order**

Dear Ms. Townsend:

I submit these comments to you as a concerned citizen who has witnessed mainstem Trinity River restoration efforts over the past 18 years and as a property owner on the upper section of the Trinity River.

I object to any loosening of regulatory requirements or water quality objectives and standards for the Trinity River Restoration Program (TRRP) or the Bureau of Reclamation. TRRP activities are adversely affecting beneficial uses of the Trinity River through increased turbidity as a result of mainstem projects such as side channels and gravel placement. I have personally witnessed the TRRP projects negative effects on river turbidity during critical anadromous fish spawning migrations and witnessed members taking turbidity level readings well outside the work area, to misrepresent the actual levels. The long-awaited benefits of a restored fishery to compensate for the significant environmental impacts identified in TRRP's CEQA documents has not materialized.

Most recently one of the TRRP member agencies placed gravel in the river at Lewiston without the permission of the Trinity Management Council, without the knowledge of the TRRP executive director, and without any public notice. Numerous complaints were made to me and through social media about elevated turbidity in the river. All of this is now with the backdrop of raging wildfires along the Trinity River and its watershed with imminent erosion and sedimentation expected this winter.

The TRRP is operating under a stale Programmatic EIR from 2009 that should be revised every five years, according to CEQA Guideline Section 15162. Clearly this requires a subsequent EIR to the Master EIR or a supplement to it. Many of the current project types such as engineered logjams are not even discussed in the 2009 MEIR.

Consider the following:

- The Water Right Order 90-5 temperature compliance point at Douglas City cannot be monitored because the temperature probe has been buried since April 15.
- Despite a requirement in 90-5 to not harm the Trinity River, the Bureau of Reclamation's Temperature Management Plan didn't even give predictions of temperatures in the Trinity River, let alone an ability to monitor Douglas City.



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IND-2

The SWRB approved the plan without any discussion of protecting the Trinity River.

- The Bureau of Reclamation is considering additional drawdown of Trinity or Whiskeytown to make up for its overcommitment of water.
- The Water Quality Control Plan for the North Coast Region still contains a 1991 "Interim Action Plan for the Trinity River" that pre-dates the Trinity Record of Decision by nine years. Where is the final action plan for the Trinity River 30 years later?
- Water Quality Order 89-18 and Water Right Order 90-5 both call for a Trinity River water right proceeding to consider amendment of Reclamation's state water permits to ensure no harm is done to the Trinity River from CVP operations. We are still waiting while hundreds of millions are spent on disruptive and unsuccessful restoration projects.
- The TRRP claims that fine sediment in the Trinity River is no longer a problem, yet the Trinity River is still listed as impaired under the SWRCB's Section 303(d) Impaired Waterbodies List. The intensity of the fires and subsequent erosion this winter should eliminate any debate on this issue.

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In conclusion, I'm in favor of providing regulatory ease for upslope restoration projects to improve our watershed, decrease erosion, and improve fish passage, but the TRRP has consistently underfunded those projects. The TRRP's mainstem projects and gravel placement activities should be put under a moratorium for further 401 certifications until a new or supplemental Master EIR is approved. Loosening their regulatory restrictions for turbidity is exactly the opposite of what's needed at this time.

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Sincerely,

Trent Tuthill

Property Owner in Poker Bar area along the Trinity River

Cc: Representative Jared Huffman
North Coast Regional Water Quality Control Board
Ernest Conant, Regional Director Bureau of Reclamation
Michael Dixon, TRRP

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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IND-2 General Public, Trent Tuthill (Same comment letter as TCD-1)

Responses to Comments from IND-2 Trent Tuthill

IND-2-1:

This Order does not authorize specific projects. All projects must meet the definition of a restoration project (Order, Section V. Project Description), be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4), and adhere to programmatic sideboards, including adopting protection measures and design guidelines (Order, Attachment A, A.5 and A.6), and undergo a pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3).

IND-2-2:

Thank you for your comment. The Order does not impact any previously authorized Orders, projects, or actions.

IND-2-3:

The State Water Board appreciates Mr. Tuthill's comments regarding the Order. The Trinity River Restoration Program (TRRP) is a large, ongoing restoration program in the region of the North Coast Regional Board. Projects related to TRRP are reviewed by the Regional Board under an existing programmatic 401 water quality certification for the Program. The Regional Board review includes consideration of stringent water quality objectives. The Order would not supersede the existing programmatic certification for the TRRP nor loosen regulatory restrictions pertaining to turbidity or any regional water quality objective.

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LACDPW-1 Los Angeles County Department of Public Works

LACDPW-1

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

From: [Toan Duong](#)
To: [commentletters](#)
Cc: [Aracely Lasso](#); [Justin Duley](#); [Pat Wood](#)
Subject: Comments – Restoration Projects Statewide Order
Date: Thursday, August 12, 2021 10:15:54 AM
Attachments: [image001.png](#)



EXTERNAL:

Ms. Jeanine Townsend,

**DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT
GENERAL ORDER FOR CLEAN WATER ACT SECTION 401 WATER QUALITY
CERTIFICATION AND WASTE DISCHARGE REQUIREMENTS
ENVIRONMENTAL PLAN (RPPL2021007392)**

The project proposes to improve the efficiency of regulatory reviews for projects throughout the state that would restore aquatic or riparian resource functions and/or services. The Order would establish an authorization process for environmentally beneficial restoration project types and associated measures to protect species and the environment.

1

The Los Angeles County, Department of Public Works has reviewed the draft Program Environmental Impact Report (PEIR) and has the following comments for your consideration:

2

1. 1.3 Overview and Use of the PEIR, 1.3.2, Screening of Individual Restoration Projects, Page 1-7

Due to the discussion of floodplain management issues in Section 3.11 of the PEIR, it is recommended the PEIR's Step 2 add the following criterion:

"If located in an area mapped by the Federal Emergency Management Agency (FEMA), a state agency, or a local agency as a severe or high-risk flood hazard area, and has obtained written clearance from the federal, State or local floodplain manager having floodplain management jurisdiction over the restoration project property(s), then the restoration project has met the applicable federal, State and local laws, rules and regulations for development in flood hazard areas."

3

2. 3.11 Hydrology and Water Quality, Federal Emergency Management Agency-Related Laws and Regulations Floodplain Management Regulations, Page 3.11-11

It is recommended that 44 CFR 59.1 (Definitions) be added to the regulatory references. 44 CFR 59.1 defines development as any human activity. Restoration projects are human activity and thus may be subject to FEMA's regulations regarding activities in floodplains.

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LACDPW-1

3. **3.11 Hydrology and Water Quality, Regulatory Setting, State, Pages 3.11-19 through 3.11-26**

It is recommended that Executive Order B39-77 (Flood control, Flood plain management, Flood damage, Department of Water Resources, Government agencies) be added to the regulatory references.

4

4. **3.11 Hydrology and Water Quality, Regulatory Setting, Regional and Local, Page 3.11-26**

It is recommended that the discussion also include that local entities may have mapped flood hazard areas in addition to those mapped by FEMA, and local ordinances may regulate activities in those areas.

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5. **3.11.4 Impacts and Mitigation Measures, Impact 3.11-3, Effects of Constructed Facilities, Page 3.11-34**

The discussion of impacts needs to include the potential impacts of increasing the hydraulic roughness (Manning's n value) of a river, stream, or waterway due to removal of smooth surface channel linings (e.g., concrete), plantings that increase instream vegetation density, or a combination of both. Increasing the roughness coefficient decreases the channel's flow carrying capacity unless measures are implemented to offset the impact. It should be noted, during the storms that cause flood damage (e.g., the FEMA 20%, 10%, 1%, 0.2% annual chance floods, other types of floods identified by local entities), flow velocities and pore space in the soil will likely not be sufficient to allow instream percolation to completely offset the loss in the channel's flow-carrying capacity.

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Also, any alterations of levees that have been accredited by FEMA will need engineering analyses of the proposed altered levees to ensure they will meet FEMA's requirements for stability, erosion resistance and freeboard. FEMA will also require documentation and assurances for long term operation and maintenance of the altered levees.

Therefore, it is recommended the criteria to issue the proposed WDRs include the criterion stated in our comment above for PEIR Section 1.3.2.

For questions regarding comments 1 – 5, please contact Patricia Wood of Public Works, Stormwater Maintenance Division at pwood@pw.lacounty.gov or (626) 458-8131

7

Thank you,

Toan Duong
Civil Engineer
Los Angeles County Public Works
Office: (626) 458-4921



CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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LACDPW-1 Los Angeles County Department of Public Works

Responses to Comments from LACDPW-1 Los Angeles County, Department of Public Works

LACDPW-1-1:

The State Water Board appreciates Los Angeles County, Department of Public Work's comments on the Draft Order and Draft PEIR.

LACDPW-1-2:

In response to this comment, PEIR Section 2.5, Table 2-1 Processes, Permits, and Authorizations that May Be Required for Approval of Restoration Projects was revised as follows:

Resource	Applicable Laws/Regulations/Permits	Regulating Agency
<u>Floodplains designated as Special Flood Hazard Area (SFHA)</u>	<u>Permit for Floodplain Development is required before construction or development begins within any SFHA</u>	<u>Federal Emergency Management Agency or local county/city jurisdiction</u>

This revision does not change the analyses or conclusions in the Draft Order or Draft PEIR.

LACDPW-1-3:

In response to this comment, PEIR Section 3.11.3 Regulatory Setting was revised as follows:

"Development" is defined in the Code of Federal Regulations Title 44, 59.1(c). Per 44 Code of Federal Regulations and is any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."

This revision does not change the analyses or conclusions in the Draft Order or Draft PEIR.

LACDPW-1-4:

Executive Order 11988, Floodplain Management, and Executive Order 13690, Establishing a Federal Flood Risk Management Standard are included in PEIR Section 3.11.3. No revisions are included in the Order or PEIR because of this comment.

LACDPW-1-5:

In response to this comment, the PEIR Section 3.11.3 was revised as follows:

"Local entities may have mapped flood hazard areas, in addition to those mapped by FEMA, and local ordinances may regulate activities in those areas."

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This revision does not change the analyses or conclusions in the Draft Order or Draft PEIR.

LACDPW-1-6:

In response to this comment, PEIR Section 3.11.4 was revised as follows:

“Although Floodplain and levee restoration improvements may cause the existing course of a stream or river to change or the hydraulic roughness to increase (e.g., from plantings that increase instream vegetation density). However, such improvements would not be expected to substantially increase surface elevations, or the increase the chance of flooding outside of restored floodplains, or decrease the channel’s flow carrying capacity as floodplain and levee restoration improvements would need to meet design standards and permitting requirements.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

LACDPW-1-7:

The State Water Board appreciates LACDPW’s comments and notes the contact name and number for LACDPW.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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LADWP-1 Los Angeles Department of Water and Power

LADWP-1



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



Eric Garcetti, Mayor
Board of Commissioners
Cynthia McClain-Hill, President
Susana Reyes, Vice President
Jill Banks Barad
Ma Lehrer
Nicole Newman Brady
Yvette L. Furr, Acting Secretary
Martin L. Adams, General Manager and Chief Executive Officer

August 13, 2021

Submitted via e-mail to commentletters@waterboards.ca.gov

Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000

Dear Ms. Townsend:

Subject: Comments Letter - Proposed Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide

The Los Angeles Department of Water and Power (LADWP) would like to thank the State Water Resources Control Board (SWRCB) for the opportunity to comment on the Proposed Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (Proposed Order). LADWP acknowledges the time and effort the SWRCB has put forth into developing the Proposed Order.

LADWP supports the development of the Proposed Order to streamline the process of obtaining the Clean Water Act Section 401 Water Quality Certifications and Waste Discharge Requirements for restoration projects that are listed as applicable for coverage under the Proposed Order. This will ease the application process and provide consistent guidance for the restoration projects that are covered under the Proposed Order.

LADWP respectfully submits the following comments on the Proposed Order:

1. Section XIII.G.3 Exclusions and Prohibited Activities

The list of prohibited items in the Proposed Order include methods and equipment that are commonly used in restoration projects. For example, gabion baskets are utilized in restoration projects for stream bank stabilization because they are an effective method of erosion control that has been proven over multiple decades. Since gabion baskets are frequently used, for the purpose of streamlining the permitting process for



CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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LADWP-1

Ms. Jeanine Townsend
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August 13, 2021

restoration projects, LADWP is recommending that the exclusions and prohibited activities for the Proposed Order be applied only on a case by case basis.

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- 2. Attachment B Step 6 Completeness determination: Within 30 calendar days of receipt of an NOI, the approving Water Board will determine in writing whether the NOI is complete and will transmit the determination to the project proponent.**

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Although the Proposed Order Attachment B states that the Water Board will provide a determination on the NOI within 30 days, to avoid delays, LADWP is recommending that the language also include that the NOI will be automatically approved after 30 days if no action is taken by the Water Board within the 30-day time period.

- 3. Section XIII.B.1.c Request for Notice of Project Complete Letter: The project proponent shall submit a Request for Notice of Project Complete Letter within thirty (30) day following completion of all project activities including post-construction monitoring of restoration sites [. .] Upon approval of the request, the Water Board shall issue a Notice of Project Complete Letter to the project proponent.**

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In section XIII.B.2, it states that "annual reporting shall continue until a Notice of Project Complete Letter is issued to the project proponent." Also, in section XIII.C.4, it states that the visual inspection at the project site shall continue during the rainy season until the Notice of Project Complete Letter is issued. Delays in receiving a determination for the Project Completion Letter will result in continued inspections and monitoring in compliance with the Proposed Order after construction has concluded at the project site. To avoid delays with the 401 certification termination, LADWP is recommending that the language in the proposed order regarding the submittal for the request for a Project Completion Letter include an automatic approval 30 days after the request is submitted if no action is taken by the Water Board within this same 30 days.

- 4. Section XIII.B.3.c.ii: Within three (3) working days following completion of work in water or stream diversions, an In-Water Work and Diversion Water Quality Monitoring Report must be submitted to the Water Board.**

5

Attachment D, Part C, Report Type 7 lists the report contents of the In-Water Work and Diversion Water Quality Monitoring Report. It states that if applicable, water quality sampling data will need to be submitted with the report. In particular, Attachment A In Water Measure IWW-13 for dredging operations and dredging materials reuse plan requires a "sampling program for conducting physical and chemical analyses of sediments before disturbance." It is difficult to submit a report with sampling data within 3 working days of completing the in-water work. The testing laboratories take a couple of days to complete the sampling, perform quality assurance checks, and upload results to the database. All the proper General Protection Measures (GPM) should be

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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LADWP-1

Ms. Jeanine Townsend
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implemented for the in-water work and diversion during a project and should result in minimal to no impacts on water quality while waiting for sample results.

LADWP is recommending that the In-Water Work and Diversion Water Quality Monitoring Report be allowed to be submitted within 7 working days if in-situ sample analysis is required and within 14 working days if additional testing is required. This will allow time for laboratory reports to be finalized and the monitoring report to be completed.

In closing, LADWP would like to express our appreciation to the SWRCB for the opportunity to comment on the Proposed Order and looks forward to continuing to work with the SWRCB to develop the General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide. Please contact Ms. Robin Yamada, of my staff, at (213)367-4230 if there are any questions.

Sincerely,



Katherine Rubin
Manager of Air and Wastewater Quality and Compliance

RY:
c: Ms. Robin Yamada, LADWP

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CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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APPENDIX H – RESPONSES TO COMMENTS

LADWP-1 Los Angeles Department of Water and Power

Responses to Comments from LADWP-1 Los Angeles Department of Water and Power

LADWP-1-1:

The State Water Board appreciates Los Angeles Department of Water and Power's (LADWP) comments supporting the adoption of the Order.

LADWP-1-2:

Restoration project proponents proposing methods prohibited under the Order may still be authorized through a different permit process. No revisions are included in the Order or PEIR because of this comment.

LADWP-1-3:

Consistent with the Permit Streamlining Act (PSA), the Water Board will determine in writing whether an NOI is complete within 30 days. Failure to comply with this requirement is governed by the PSA. No revisions are included in the Order or PEIR because of this comment.

LADWP-1-4:

A Notice of Project Complete Letter is necessary to ensure that all applicable performance standards and post-construction requirements have been satisfied. The Notice of Project Complete Letter is a regularly used process for section 401 water quality certifications. Any delay in issuance of a Notice of Project Complete Letter can be addressed on an individual basis.

LADWP-1-5:

In response to this comment, Order Section XIII.B.3.c.ii In-Water Work and Diversions Water Quality Monitoring Report was revised as follows to allow for reporting flexibility due to laboratory report constraints:

“ii. Within three (3) working days, or within a timeframe agreed upon by the approving Water Board, following completion of work in water or stream diversions, an In-Water Work and Diversions Water Quality Monitoring Report must be submitted to the Water Board.”

This revision does not change the analyses or conclusions in the Draft Order or Draft PEIR.

LADWP-1-6:

The State Water Board appreciates LADWP's comments on the Order and notes the contact name and number for LADWP.

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LAND-1 Soluri Meserve, a law corporation on behalf of Local Agencies of the North Delta

LAND-1



tel: 916.455.7300 • fax: 916.244.7300
510 8th Street • Sacramento, CA 95814

August 12, 2021

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

SENT VIA EMAIL (commentletters@waterboards.ca.gov)

State Water Resources Control Board
Attn: Jeanine Townsend, Clerk to the Board
1001 I St, 24th Floor
Sacramento, CA 95812



RE: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend:

These comments on the State Water Board’s (“SWRCB”) Draft General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (“Order”) and Program Environmental Impact Report (“PEIR”) are submitted on behalf of Local Agencies of the North Delta (“LAND”). LAND is a coalition of local reclamation and water districts in the northern Delta working to protect Delta agriculture and communities. LAND member agencies cover approximately 100,000 acres of the northern Delta. Some of these agencies provide both water delivery and drainage services, while others only provide drainage services. These districts also support the maintenance of the levees that provide flood protection to homes and farms.

The Order would allow 401 Water Quality Certifications to be issued under a programmatic level for large restoration projects. LAND recognizes the desire to expedite permitting for these projects. However, if not properly designed and absent effective mitigation, large restoration projects pose a significant risk to the Delta’s natural resources, communities and agricultural operations. These comments focus on the application of the Order in the Delta. However, many of these comments could also apply to restoration projects statewide.

LAND supports well-planned Delta restoration activities, but the impacts on the environment and adjacent land and water uses must be fully disclosed and fully mitigated in the context of CEQA, the Delta Reform Act, and the Delta Plan; moreover, effective coordination with adjacent landowners must continue throughout the life of each project. LAND is specifically concerned with floodplain restoration, wetland creation and restoration, and removal of small dams and tide gates. These types of restoration projects could potentially expose the Delta ecosystem and its residents to several significant impacts that should be addressed in more detail by the Order and PEIR.

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A. Delta Plan Consistency

The Sacramento-San Joaquin Delta Reform Act of 2009 (Wat. Code, § 85000 et seq. [“Delta Reform Act”]) is only mentioned on pages 2-6, and 3.11-21 of the PEIR. Many of the potential projects covered by the Order and PEIR would likely be constructed within the Delta boundaries, including the restoration that is part of EcoRestore, the effort to comply with the Biological Opinions issued for the state and federal water projects (the CVP and the SWP). Therefore, SWRCB should include more detailed description of Delta Reform Act and Delta Plan requirements for restoration projects. This includes following the restoration guidelines in Chapter 4 of the Delta Plan, as well as the requirement to prepare a certificate of consistency with the Delta Plan.

In enacting the Delta Reform Act, the Legislature intended to “provide for the sustainable management of the Sacramento-San Joaquin Delta ecosystem, to provide for a more reliable water supply for the state, to protect and enhance the quality of water supply from the Delta, and to establish a governance structure that would direct efforts across state agencies to develop a legally enforceable Delta Plan.” (Wat. Code, § 85001, subd. (c).) The Legislature found the Delta to be “a critically important natural resource for California and the nation. It serves Californians concurrently as both the hub of the California water system and the most valuable estuary and wetland ecosystem on the west coast of North and South America.” (Wat. Code, § 85002.)

The Delta Reform Act’s Delta Plan requires covered actions to obtain a certification of consistency. (Wat. Code, §§ 85057.5, subd. (a), 85225.) A covered action is a “project” defined by CEQA (Pub. Resources Code, § 21065), that will occur in whole, or in part, within the boundaries of the Delta or Suisun Marsh, have a significant impact on the achievement of coequal goals (see Wat. Code, §§ 85054, 85300, subd. (a)), and is covered by one or more regulatory policy contained in the Delta Plan. Several project types identified in the Order and PEIR would meet these criteria and be required to obtain certifications of consistency.

Additionally, there are several mitigation measures in the Delta Plan that SWRCB should adopt or cross reference to help mitigate impacts from activities the Order would authorize. For example, Delta Plan Mitigation Measure 3-1 provides Best Management Practices for protecting water resources during construction and other activities in the Delta. (Exhibit A, Delta Plan Appendix O, pdf p. 9.) Other Delta Plan mitigation measures address salinity, water quality, Delta communities, flood risk, and biological resources impacts. (See Exhibit A.)

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B. Good Neighbor Policies are Essential to the Success of Restoration Projects

The purpose of the Order is to provide regulatory streamlining for similar classes of restoration activities covered under section 401. This should allow faster implementation with lower costs, however, the Order and the PEIR are not proactive in avoiding environmental impacts that create conflicts with neighboring landowners, and their local reclamation and water districts. These types of conflicts, which can slow down planning and permitting for restoration projects, are usually avoidable with proper planning.

To ensure that restoration proponents consider and reduce impacts on neighbors early in the process, it is suggested that the draft Good Neighbor Policies, attached as Exhibit B, be integrated into the Order and/or the PEIR. Restoration projects can be beneficial in many regards, but they can also negatively affect neighboring properties, agricultural lands, flood protection management, recreational activities, and water resources if not properly mitigated. The draft checklist, prepared by LAND and other entities interested in promoting well-planned restoration, provides an approach whereby restoration proponents and affected landowners and local agencies can communicate concerns and potentially find mutually agreeable compromises at the early planning stages of the project. This allows parties to avoid unnecessary conflict, which can lead to higher project costs, and shows good faith with the neighboring property owners and local agencies. Successful restoration should be a partnership with a community, building trust and achieving the environmental values together.

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C. Comments on the Order and the Program Environmental Impact Report

LAND believes there are several areas of the Order and PEIR that should be strengthened or clarified to ensure beneficial results from restoration projects do not have deleterious effects on surrounding landowners and existing uses. This is especially true in the Delta due to its topography, intrinsic ecology, and intertwined land uses.

1. Water Quality

The Order and the PEIR lack substantive requirements for monitoring and management of water quality before and after project implementation. More stringent requirements should be implemented to ensure completed restoration projects have post-construction monitoring. This would help ensure inadvertent adverse impacts do not occur once the project is constructed, or if they do occur, that they can be resolved. The Order contains several measures that may be necessary for a project to avoid and

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minimize impacts to water quality. However, these measures focus on construction activities, and do not include post-construction monitoring. (Order, pp. E-31 – E-36.)

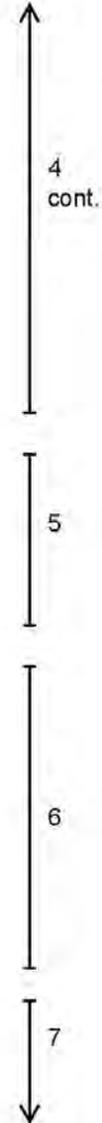
The Order states, “The project proponent shall identify the goal(s) of monitoring and reporting components in the NOI. The level of detail of the monitoring and reporting requirements shall be commensurate with the scope, complexity, and objectives of the project, and in consideration of project site conditions.” (Order, p. 16.) It then references Attachment D, Post-Construction Monitoring Report. However, it is unclear why the project proponent is identifying the goals of monitoring and reporting for a 401 certification. Additionally, Attachment D only pertains to projects that fall under the National Marine Fisheries Service Programmatic Biological Opinions, which are limited to “Humboldt, Del Norte, Trinity, Siskiyou, and a part of Mendocino counties.” (Order, Attachment D, p. 2, 6.) The Order should clarify the water quality management and monitoring requirements for a project once it is deemed complete for all of the regions to which the Order would apply.

Additionally, the PEIR lacks post-construction water quality monitoring. The PEIR relies heavily on existing regulatory schemes to prevent adverse effects to water quality. The PEIR should have clear language indicating what monitoring actions are required post-construction; as written, it is unclear whether a project must be monitored, how long it must be monitored, or how monitoring and reporting requirements will be enforced. SWRCB should require specific water quality monitoring and reporting to ensure water quality around the project area is not degraded.

2. Invasive Weed Control and Water Supply

Both the PEIR and the Order note that invasive species are a concern, but neither adequately addresses the potential impacts from the spread of these species. The PEIR indicates that these projects may spread invasive species. “The construction of restoration projects permitted under the Order could have another indirect impact: They could accidentally introduce invasive plant species, carried as seeds on construction equipment or personnel, or could spread invasive plant species through soil disturbance, which tends to promote the growth of invasive and other non-native species.” (PEIR, p. 3.5-32.) However, the PEIR does not contain any mitigation measures *specifically* dealing with the spread of invasive species.

The Order does contain *general* protection measures to prevent the spread of invasive species. GPM-8 states, “[w]hen practicable, invasive exotic plants in the project areas shall be removed and properly disposed of in a manner that will not promote their spread.” (Order, p. A-27.) It also contains measure VHDR-2, which provides guidance on how to properly remove invasive vegetation. (Order, Appendix E, p. E-37.)



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However, these measures exclusively focus on construction equipment and invasive species at the project site, not the overall project's potential for spreading invasive species. Both documents should implement conditions or mitigation measures to ensure the type of projects being proposed would not provide a catalyst for the spread of invasive species. This is especially important in areas, such as the Delta, that support invasive species that have historically been spread and worsened by restoration activities, and can cause adverse water quality and water supply impacts.

Studies show that exotic invasive plant species can consume more water than naturally occurring species, impacting water available for agriculture and other beneficial uses. (See Exhibit C, Pitcairn et al., *Yellow Starthistle continues its spread in California* (2006).) Water hyacinth is a well-documented Delta invasive plant that uses a considerable amount of water which is lost to the atmosphere due to transpiration. Weeds in arid regions compete for water with native plant or commodity crops, and the weeds can also compete for nutrients, and diminish crop values. (Exhibit D, Abouziena et al., *Water loss by weeds: a review* (2014) 7 Int. Journal of ChemTech Research 1, pp. 323-36.)

Aquatic weeds cause water loss in canals due to extensive root systems and high transpiration rates, in addition to physically blocking the canals. (*Id.* at 326.) Environmental impacts from weed proliferation are potentially significant to the Delta. (See Exhibit E, Ali & Khedr, *Estimation of water losses through evapotranspiration of aquatic weeds in the Nile River* (2018) 32 Water Science, pp. 259- 275.) For example, water loss through evapotranspiration from water hyacinth was 3.7 times that from open water. (Exhibit F, Timmer & Weldon, *Evapotranspiration and Pollution of Water by Water Hyacinth* (1966).) A study on the Nile River supported the doubling of evaporation as a result of hyacinth, and "...concluded that the main problem of water losses through evapotranspiration of aquatic weeds in the Nile River (Rosetta Branch) represented in water hyacinth, according to the present study more than 90% of water losses were from water hyacinth." (Exhibit E, p. 274.)

The Delta Plan provides guidance on this issue. Delta Plan Mitigation Measure 4-1 requires an invasive species management plan for any project that could lead to or facilitate invasive species. (Exhibit A, Delta Plan Appendix O, pdf pp. 11-13.) The PEIR should include a mitigation measure with similar language requiring an invasive species management plan, and/or cross reference Delta Plan mitigation measures.

3. Harmful Algal Blooms

The potential of restoration projects covered under the Order to lead to the proliferation of harmful algal blooms ("HABs") is not adequately discussed in the Order



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or the PEIR. Freshwater HABs are supported by high nutrient concentrations, low salinity, and low flows.¹ Under certain environmental conditions, a rapid increase or accumulation of these microscopic algae can occur, and HABs may result, that can have negative impacts on the environment, people, pets, wildlife, or livestock, as well as the economy. (SWRCB, *California Freshwater Harmful Algal Blooms Assessment and Support Strategy*, p. 29.²) In instances where projects lower flow rates or increase nutrients in an area, due to construction or project design, there would be an increase in residence time and increase the probability or number of HABs. The Order and the PEIR should provide specific information, direct conditions, and mitigation measures to curb the proliferation HABs in project areas, by ensuring adequate flows are maintained and increased temperature profiles and residence times are not extended.

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cont.

4. Salinity

Salinity intrusion is not a significant topic in the Order or the PEIR. This is surprising given the amount of research being conducted on this ongoing water quality problem. Several examples were given by Delta lead scientist, Dr. Laurel Larsen, at the August 4, 2021, SWRCB workshop on the draft Order and PEIR. Dr. Larsen noted that due to sea level rise and climate change, salinity intrusion will continue to be a large impact, especially in the Delta. Salinity intrusion can also be problematic in many coastal areas, leading to impacts on groundwater quality. (See Humboldt County, *Sea Level Rise Vulnerability Assessment*,³ City and County of San Francisco, *Sea Level Rise Vulnerability and Consequences Assessment*.⁴)

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The PEIR briefly mentions salinity related impacts stating, “[l]osses of irrigated farmland have resulted in part from drought and salinity-related reductions in water supply and from reclassification of lands” (PEIR, p. 3.3-4), and “projects involving levee setbacks could convert freshwater wetlands to salt marsh” (PEIR, p. 3.5-48). However, no mitigation for these occurrences is included. Changing the area of the tidal prism, or decreasing the ebb of tides can increase salinity concentrations, leading to worsening

¹ Factors leading to HABs in the Delta are described in Berg & Sutula, *Factors affecting Growth of Cyanobacteria With Special Emphasis on the Sacramento-San Joaquin Delta*, attached as Exhibit G.

² See

https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/SWAMP/HABs_strategy_phase%201.pdf.

³ See <https://humboldt.gov/DocumentCenter/View/62872/Humboldt-Bay-Area-Plan-Sea-Level-Rise-Vulnerability-Assessment-Report-PDF?bidId=>.

⁴ See https://sfplanning.s3.amazonaws.com/default/files/plans-and-programs/planning-for-the-city/sea-level-rise/SLRVCA_Report_Full_Report.pdf.

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water quality for native freshwater species, agricultural beneficial uses, and drinking water disinfection byproducts. Additionally, the Order does not provide any information regarding salinity intrusion, and its Water Quality Hazardous Materials Measures fail to provide requirements to ensure projects does not result in higher salinity levels. Both documents fail to analyze this situation, and in turn, fail to provide possible mitigation for this impact. Both mitigation measures and conditions should be adopted to ensure projects are not inadvertently degrading the environment by allowing salinity intrusion to increase or occur in new areas.

5. Recreation

Many areas of the state are reliant on the local water resources for recreation, even more so in the Delta. People who live, in and around the Delta, rely on its waterways for food, recreation, and tourism. Protecting the few areas available for recreation and recreational access are of the utmost importance. The PEIR states all recreation impacts are either less than significant or would be by implementing mitigation. (PEIR, p. 3.16-10.) However, the PEIR also states that some restoration projects permitted under the Order may create permanent impacts. (PEIR, p. 3.16-9.) Recreation in the Delta relies on the ability to move through waterways, permanently impeding on the ability to traverse these waterways has the potential to cut-off large areas to boating, fishing and other water activities. The PEIR should not allow one benefit to outweigh another. The mitigation for these impacts should be reconsidered, especially where there is a possibility of permanent impacts.

6. Public Safety

There are already public safety concerns in the Delta due to lack of transportation infrastructure. The PEIR notes that some projects such as levee setbacks, “may require road closures to facilitate construction, which could temporarily physically divide the community during construction.” (PEIR, p. 3.12-7.) Additionally, the PEIR notes, “[s]ome facilities outside of communities could isolate developed areas from urban services. For example, removing roads for construction of a new setback levee might isolate agricultural areas from facilities and communities that provide services and markets to farmers. Also, periodic inundation of roadways from flood widening projects could preclude or inhibit access between communities and services.” (PEIR, p. 3.12-8.) The PEIR must ensure this impact is mitigated in a way that egress and ingress from properties are not diminished and access to emergency services is not reduced.



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7. Agricultural Resources

The Order does not address potential agricultural impacts nor does it provide any general protection measures to reduce impacts to agriculture. The Order should provide general protection measures to ensure projects will not impact agricultural operations by diverting water that is already committed to other beneficial uses, impacting water quality for those uses, increasing the incidence of invasive weeds, or increasing erosion due to changes in runoff or flows, among other potential impacts.

The Order does not identify where the water for restoration projects would come from, the water rights accounting for the changes in consumptive use that would result from conversion of land to open water tidal habitat, or the appropriate means by which other beneficial uses and users would be protected from water supply impacts. This impact is also related to the potential impact to water quality resulting from changes to flow, and is inadequately addressed.

PEIR Impact 3.3-1 states, “[r]estoration projects permitted under the Order could convert Special Designation Farmland to nonagricultural use or conflict with a Williamson Act contract or zoning for agricultural use.” (PEIR, p. 3.3-8.) The majority of Delta land falls under Special Designation Farmland. Mitigation Measure AG-1 requires restoration projects that permanently convert Special Designated Farmland acquire an agricultural easement or contribute to a land trust at a target ratio of 1:1. (PEIR, p. 3.3-11.) However, it goes on to provide a loophole for any contributions that would be too expensive. (*Id.*) Many agricultural areas have already been fragmented to a condition that purchasing other easement credits will not be enough to offset the overall impact. The PEIR should consider implementing mitigation measures that do not rely on off-site mitigation, and close the cost loophole. Otherwise, the cumulative fragmentation impacts are not adequately mitigated, or this impact is not fully mitigated because of the loophole.

D. Conclusion

LAND respectfully requests that the SWRCB revise the Order and the PEIR to address the comments herein. The Order should address these potential impacts by conditioning more stringent monitoring and management of restoration projects to avoid negatively affecting surrounding landowners and local agencies, their beneficial uses of water, and associated impacts of these projects on water quality and quantity. These impacts must also be addressed by implementing more specific mitigation measures in the PEIR. Adequate mitigation measures at the programmatic level will allow projects to be legally defensible and ensure beneficial aspects of restoration projects covered by the Order are realized.

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Thank you for considering these comments and recommendations on the Draft Order and Draft PEIR. Please feel free to contact me (osha@semlawyers.com or 916-455-7300) with any questions about these comments.

↑ 14
cont.

Very truly yours,

SOLURI MESERVE
A Law Corporation

By: 
Osha R. Meserve

ORM/wra

cc: Michael George, Delta Watermaster (michael.george@waterboards.ca.gov)

Attachments:

Exhibit A – 2018 Delta Plan Mitigation Monitoring and Reporting Program

Exhibit B – LAND Good Neighbor Checklist

Exhibit C – Yellow starthistle continues its spread in California

Exhibit D – Water loss by weeds: a review

Exhibit E – Ali & Khedr, Estimation of water losses through evapotranspiration of aquatic weeds in the Nile River

Exhibit F – Timmer & Weldon, Evapotranspiration and Pollution of Water by Water Hyacinth

Exhibit G – Berg & Sutula, Factors Affecting Growth of Cyanobacteria With Special Emphasis on the Sacramento-San Joaquin Delta

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LAND-1 Soluri Meserve, a law corporation on behalf of Local Agencies of the North Delta

Responses to Comments from LAND-1 Local Agencies of the North Delta

LAND-1-1:

The State Water Board appreciates Local Agencies of the North Delta's (LAND) comments regarding the Draft Order and Draft PEIR as well as information on the LAND.

LAND-1-2:

All restoration projects authorized under the Order must adhere to programmatic sideboards, including adopting protection measures and design guidelines (Order, Attachment A, A.5 and A.6), and undergo pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3). The State Water Board acknowledges restoration projects permitted under the Order meeting the definition of a covered action are required to demonstrate consistency with the Delta Plan and its mitigation measures. In addition, the State Water Board acknowledges the benefits of early consultation with the Delta Stewardship Council in the planning process for restoration projects to determine applicable mitigation measures consistent with the Delta Plan. No revisions are included in the Order or PEIR because of this comment.

LAND-1-3:

The PEIR focuses on reasonably foreseeable changes from implementation of future restoration projects authorized under the Order, consistent with the level of detail appropriate for a program-level analysis. The PEIR assumes that the Order is implemented and achieves the desired outcomes. Accordingly, the PEIR evaluates potential impacts of the types of restoration projects that the Order would encourage and promote in the study area, including impacts to agricultural lands, flood protection management, recreation, and water resources.

All projects must meet the definition of a restoration project (Order, Section V. Project Description), be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4), and adhere to programmatic sideboards, including adopting protection measures and design guidelines (Order, Attachment A, A.5 and A.6), and undergo a pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3).

In addition, future restoration projects authorized under the Order would need to undergo their own CEQA review (PEIR Section 1.1 Introduction and Overview of the Order). No revisions are included in the Order or PEIR because of this comment.

LAND-1-4:

Monitoring requirements presented in the Order and PEIR are consistent with other programs and allow for flexibility based on project complexity (i.e., monitoring requirements commensurate with complexity of the project). It would be unnecessarily burdensome to prescribe additional monitoring requirements. To clarify, the reporting and notification requirements in Order Attachment D refer to requirements that apply to

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all projects authorized under the Order, whereas PEIR Appendix D refers to the NMFS Programmatic BOs. As discussed in Order Attachment D, the approving Water Board must issue a Notice of Project Complete Letter to affirm the project has completed applicable post-construction monitoring requirements, permit requirements, and achieved performance standards. The Notice of Project Complete Letter would not be issued until the project has achieved performance standards. Further, annual reports that document post-construction monitoring efforts and progress towards achieving performance standards may be required by the approving Water Board.

No revisions are included in the Order or PEIR because of this comment.

LAND-1-5:

The Order requires post-construction monitoring and reporting; see response to comment LAND-1-4.

LAND-1-6:

The Order and PEIR include a comprehensive suite of GPMs and species protection measures that were developed in coordination with multiple agencies and designed to avoid and/or minimize potential adverse effects that could result from implementation of restoration projects eligible for authorization under the Order. The GPMs and species protection measures include multiple measures specifically designed to address issues related to invasive weeds (and other non-native, invasive species). Invasive species are addressed in the Order, including applicable GPMs (GPM-8, GPM-9, VHDR-2 and VHDR-3 [Order, Attachment A, A.5.2]). No revisions are included in the Order or PEIR because of this comment.

LAND-1-7:

Comment is noted regarding GPMs to address construction-related introduction and spread of invasive species. All projects would be reviewed for eligibility of authorization under the Order. In addition, project proponents in coordination with the CEQA lead agency would need to determine if proposed restoration projects could be approved within the scope of the PEIR or would need to undergo additional CEQA review (PEIR Section 1.1 Introduction and Overview of the Order), including the proposed restoration project's ability to spread invasive species. Order Attachment A Sections A.5 provides detailed requirements regarding programmatic sideboards, GPMs, prohibitions, and pre-application consultations, which apply to all proposed projects seeking authorization under the Order. No revisions are included in the Order or PEIR because of this comment.

LAND-1-8:

See response to comment LAND-1-2 regarding Delta Plan mitigation measures and LAND-1-6 regarding invasive species.

LAND-1-9:

The influence of incremental changes in hydrological and water quality factors on the occurrences of freshwater cyanobacterial harmful algal blooms (cyanoHABs), particularly the toxin-producing *Microcystis aeruginosa* (*Microcystis*), in waterways throughout the State (including the Delta) are difficult to assess. This is due to the

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baseline (environmental setting) against which project-related incremental effects is measured is continually changing. In response to this comment, the PEIR, Section 3.11.2 Hydrology and Water Quality, Environmental Setting was revised as follows:

“Cyanobacterial harmful algal blooms (cyanoHABs), a water quality topic of concern, have been increasing since 2003 (Lehman et al. 2005). Increased occurrences of Microcystis cyanoHABs has been linked with increases in water temperatures which enables the growth rate of Microcystis to become competitive relative to other members of the phytoplankton community (Berg and Sutula 2015). A temperature threshold of 19 degrees Celsius (°C) has been identified as necessary to trigger growth of Microcystis in the Delta (Lehman et al. 2013), whereas temperatures of 25°C and above have been hypothesized to play a role in explaining its interannual variability (Lehman et al. 2018). Whereas water temperature appears to be a trigger for growth, other factors such as nutrient availability and high irradiance are necessary to sustain its growth and lead to the development of a bloom. In other words, once growth of Microcystis has been triggered, it cannot attain high enough growth rates to accumulate biomass and become dominant unless it can 1) maintain itself at the surface of the water column where irradiance is high and 2) there is an ample supply of nutrients available in the water column at the start of the bloom (Visser et al. 2005). At any time during a bloom, if the nutrient supply is depleted or the water mixing rate increases such that the time Microcystis can spend at the surface becomes limited, cells may become stressed and growth may slow down. An additional factor that will retard growth of Microcystis is exposure to saline water. This is evident when water containing Microcystis colonies is advected from the San Joaquin River into the lower Sacramento River or Suisun Bay; salinities in those regions are not conducive to growth resulting in the colonies breaking apart and blooms dissipating (Lehman et al. 2008). When Microcystis cells become sufficiently stressed, due to any environmental factor (e.g., light, nutrients, temperature, salinity), the colonies will settle out of the water column and the bloom will terminate (Visser et al. 1995).”

Additionally, PEIR, Section 3.11.4, Hydrology and Water Quality, Impacts and Mitigation Measures was expanded with the following text:

“Effects of Constructed Facilities (Natural or Artificial Infrastructure) and Operations and Maintenance of those Facilities

Long-term effects on water quality from restoration projects permitted under the Order are expected to be beneficial or sometimes neutral (in the case of fish screens or ladders), because the specific purpose of these projects would be to correct existing conditions that contribute to resource degradation. For example, projects implementing bioengineered bank stabilization would reduce the input of fine sediment, which would improve water quality. Other restoration projects, such as those to remove pilings and other in-water structures, would improve water quality by removing potential contaminant sources and hazards such as untreated and chemically treated wood pilings, piers, and vessels. In addition, restoration projects permitted under the Order could establish, restore, and enhance tidal, subtidal, and freshwater wetlands. For example, living shorelines provide a natural alternative to

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“hard” shoreline stabilization methods like stone sills or bulkheads, and provide numerous ecological benefits including water quality improvements; floodplain restoration would also improve water quality because floodplains, when inundated with water, act as natural filters by removing excess sediment and nutrients.

In regard to potential impacts associated with cyanoHABs, predicting whether these will either 1) develop, or 2) increase in frequency, severity, and/or duration, relative to a baseline, in a given location due to incremental changes in environmental factors is difficult. At a minimum, it requires knowledge of the factors for triggering (water temperature) and sustaining (high irradiance and high nutrient availability) growth and blooms in any particular location, together with data on how these factors are predicted to change. It is important to keep in mind that all three factors have to occur simultaneously for cyanoHABs to develop. Change in one factor alone will most likely not lead to a change in bloom status. For example, increase in nutrient concentration in a location with a well-mixed water column may not lead to a bloom of cyanoHAB species such as *Microcystis* as continued mixing of colonies to the bottom will prevent them from increasing their growth rate sufficiently to become dominant. Increase in residence time has been shown to increase cyanoHAB occurrences when it results in stratification of the water column (Carey et al. 2021). Stratification allows the surface layer to become isolated from the rest of the water column. This may increase the water temperature, water clarity, and decrease the mixing of cyanoHAB cells and colonies from the surface to the bottom allowing them to be continually exposed to high irradiance, and therefore, maintain maximum growth rates (Visser et al. 2005, Carey et al. 2012). If an increase in residence time does not lead to water column stratification, then the water may not warm sufficiently to trigger growth of cyanoHABs, or the mixing rate may not decrease sufficiently to maintain cyanoHAB species at the surface, effectively preventing the formation of colonies and accumulation of biomass. In addition, a decrease in residence time has to be sufficient that the growth rate of the cyanoHAB species exceeds the flushing rate of the water in order for colonies and biomass to accumulate in the area. If residence time is increased and stratification occurs, but the surface layer is depleted of nutrients, then cyanoHABs may not be able to develop due to nutrient limitation.

As is evident from the above discussion, changes in environmental factors and hydrology in a given location may or may not lead to changes in cyanoHABs depending on the thresholds of bloom development in that location and changes in environmental factors relative to those thresholds. However, restoration projects permitted under the Order would result in a number of improved ecological processes that would counteract these risks. For example, restoration projects have the potential to decrease water temperatures associated with the creation of shade through the restoration and enhancement of vegetation communities (e.g., riparian, emergent marsh). Restoration projects would also have the potential to improve tidal flushing, resulting in a well-mixed water column. The establishment of seagrasses, emergent marsh, and riparian vegetation would also result in increased uptake and removal of nutrients from the water. All of these beneficial ecological processes would counteract risks associated with environmental factors that contribute to

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increases in cyanoHABs. Finally, all projects must meet the definition of a restoration project, be consistent with categories of restoration projects described in the Order, and adhere to programmatic sideboards, including adopting applicable protection measures and design guidelines, and undergo pre-application consultation with the Water Board staff.

Routine O&M activities for restoration projects permitted under the Order could consist of periodic and routine work such as removing sediment within or near the facilities (e.g., culverts, fish screens and ladders), removing vegetation (e.g., invasive species in aquatic or riparian areas), and inspecting and maintaining facilities and natural features (e.g., replanting trees and shrubs, repairing biotechnical and other features). Routine O&M activities would be similar to those described for construction; however, the level of activity would be less intense during the O&M phase than during construction, so the degree of temporary changes to water quality would be much less.

As described above, the Order does not promote the construction or implementation of individual restoration projects, nor does it describe the specific size, location, implementation timing, or exact configuration of such projects. Because the potential exists for adverse impacts on water quality as a result of the maintenance of restoration projects permitted under the Order, this impact would be **potentially significant**.

However, restoration projects would incorporate general protection measures (listed above under Effects of Project Construction Activities) that would reduce impacts from O&M activities on water quality.

Implementing these general protection measures would reduce impacts from O&M activities on water quality to a **less-than-significant level**. Further, many of the long-term effects of these projects on water quality are expected to be beneficial or neutral, because the specific purpose of these projects would be to correct existing conditions that contribute to resource degradation and/or counteract risks associated with environmental factors that contribute to water quality degradation.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

LAND-1-10:

Regarding sea level rise, climate change, and salinity intrusion impacts, especially in the Delta, as the comment points out, these are issues associated with the environmental baseline (setting) and California courts have held that CEQA does not generally require consideration of the effect of the environment on a project [see California Building Industry Association v. Bay Area Air Quality Management District, 62 Cal.4th 369 (2015)]. In addition, in 2018, CEQA Guidelines Section 15126.2 was revised to clarify how an EIR should analyze significant environmental effects the

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project may cause when locating development in areas susceptible to hazardous conditions, such as areas with sea level rise:

“In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published... The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or inland use plans addressing such hazards areas.”

As stated in the PEIR Section 3.15 Population and Housing restoration projects would not include the development of housing or commercial structures, including those areas susceptible to hazardous conditions.

The Order and PEIR do acknowledge potential future conditions with climate change, including predicted sea level rise and other climate change-related changes to the environment. Specifically, the PEIR includes projects that address climate change in the definition of restoration project “...A restoration project permitted by the Order may include multiple benefits, such as groundwater recharge, recreation, flood management, water quality improvement, and/or adaptation to climate change...” (PEIR Section 1.1 Introduction and Overview of the Order). Additionally, project category descriptions included in Chapter 2 of the PEIR and Attachment A of the Order state that “...Project activities that plan for climate change, including sea level rise, should be considered in tidally influenced locations...” (PEIR Section 2.6.9 and Order Attachment A, A.4.9). Furthermore, restoration projects are an imperative part of fighting climate change through several mechanisms, including creating (through restoration) more resilient habitats and ecosystems to withstand the effects of climate change and through carbon sequestration (e.g., restoration of riparian forests, marshlands) which combats climate change. Finally, all projects seeking authorization under the Order would be required to undergo pre-application consultation with the approving Water Board and through its own environmental review pursuant to CEQA.

Reasonably foreseeable impacts associated with a range of restoration projects, (meeting the definition of restoration project) were evaluated in the PEIR, including impacts to water quality (PEIR, Section 3.11).

The comment reference to “[l]osses of irrigated farmland have resulted in part from drought and salinity-related reductions in water supply and from reclassification of lands” (PEIR, Section 3.3.2) refers to a baseline (setting) condition, which is addressed above. Further, the reference to “projects involving levee setbacks could convert freshwater wetlands to salt marsh” (PEIR, Section 3.5) refers to a project scenario that may result in the conversion of freshwater wetlands on the land-side of a waterway to salt marsh, re-establishing tidal flows. Any potential impacts to native freshwater species (PEIR Sections 3.5 and 3.6), agricultural beneficial uses (PEIR Section 3.3),

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and drinking water disinfection byproducts (PEIR Section 3.19 and herein) associated with this type of conversion have been analyzed in other sections of the PEIR (see above) and would be identified and addressed through environmental review pursuant to CEQA, as necessary for an individual proposed project.

In regards to restoration projects potentially changing the area of the tidal prism, or decreasing the ebb of tides, which could increase salinity concentrations, PEIR Section 3.11.4, Hydrology and Water Quality, Impacts and Mitigation Measures was expanded with the following text:

“Estuarine salinity levels, including those in the Delta and other estuaries throughout the State, are important to various water users, including municipal, industrial, and agricultural, and fish and wildlife. Salinity extends further into the estuaries during drier seasons and years since low freshwater inflows into the estuaries are diminished and less freshwater is available to offset salinity intrusion.

Restoration projects proposed for coverage under the Order could involve breaching and lowering existing levees and excavating a tidal channel network, thereby re-introducing daily tidal flows to a project site. Restored tidal exchange would also change flow patterns in the connected channels outboard of a project site. Because these tidal flows also distribute salinity within estuaries, these alterations in flow patterns could affect salinity levels in an estuary. Salinity increases are a concern to various municipalities, industries, agricultural interests, and resources agencies that depend on the availability of freshwater to maintain existing beneficial uses.

While these types of potential effects are possible, they would be expected to be rare and small, and only associated with large projects that have the potential to change tidal prism. For example, a model-based analysis of a 3,000-acre tidal marsh restoration project in the north Delta concluded that the project’s salinity effects would be less than significant because the project resulted in negligible or small changes (under worst-case conditions) in salinities that were still in compliance with water quality standards that are protective of beneficial uses (ESA 2019).

As described in Order Section VII, “potential projects seeking coverage under the Order would be required to identify the receiving waters and beneficial uses of waters of the state to be impacted by a proposed project, as listed in the applicable Regional Board water quality control plan.” This information is required in the Notice of Intent (NOI; Order Attachment B), which must be completed by a project proponent to apply for authorization under this Order.

Further, as described under Order Section XIII, “The Water Boards will independently review any project proposed for authorization under this Order to analyze impacts to water quality and designated beneficial uses within the applicable watershed(s). If the eligibility requirements set forth in this Order including Attachment A are not met, Water Boards will not authorize the proposed project under this Order and instead require the project proponent to apply for an individual certification or certification under another Order. Specifically, the approving Water Board will not authorize the proposed project under this Order if it determines that any of the following requirements are not met: 1) the project meets the definition of a

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restoration project (as defined in Section V of the Order); 2) the project adopts and implements all appropriate GPMs and CEQA mitigation measures to protect water quality and beneficial uses; 3) the project proponent fulfills all approving Water Board requirements for project information and reporting; and 4) the project is designed to protect water quality and beneficial uses in accordance with regional or statewide water quality control plans.”

Any potential restoration projects seeking coverage under the Order would be required to undergo pre-application consultation with the approving Water Board and analyze impacts to water quality and designated beneficial uses within the applicable watershed(s) through its own environmental review pursuant to CEQA; and the project would be required to be designed to protect water quality and beneficial uses in accordance with regional or statewide water quality control plans.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

LAND-1-11:

PEIR Section 3.16 Recreation identifies the potential impacts to recreation associated with implementation of restoration projects authorized under the Order. Implementing the GPMs and mitigation measures in Section 3.16 would reduce potential impacts to less than significant. Nonetheless, the GPMs and mitigation measures may not necessarily address the unique characteristics of the specific area and recreation could be affected by projects authorized under the Order. If the CEQA lead agency for a restoration project determines that the project’s impacts on recreation may remain significant even with implementation of GPMs and mitigation measures, additional project-specific mitigation measures would be required. Conversely, restoring upslope watershed areas, floodplain restoration, and multi-benefit restoration projects may include upgrading or expanding recreation facilities such trails or wildlife-oriented recreation. No revisions are included in the Order or PEIR because of this comment.

LAND-1-12:

PEIR Section 3.12 Land Use and Planning identifies the potential impacts to land use and planning, including the potential to physically divide an established community, associated with implementation of restoration projects authorized under the Order. Because the extent and location of restoration projects authorized under the Order are yet to be determined, and there are no applicable GPMs or mitigation measures applicable to these impacts, it is not possible to conclude that the restoration projects would not physically divide an established community or conflict with a land use plan, policy or regulation adopted to avoid an environmental effect. Therefore, the PEIR finds these impacts to be significant and unavoidable. Per CEQA Guidelines Section 159093, the State Water Board prepared a Statement of Overriding Considerations to balance, as applicable, the benefits of restoration projects authorized under the Order against its unavoidable environmental risks when determining whether to adopt the Order. No revisions are included in the Order or PEIR because of this comment.

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LAND-1-13:

PEIR Section 3.3 Agriculture and Forestry Resources identifies the potential impacts to agriculture resources associated with implementation of restoration projects authorized under the Order and this section has both GMPs and mitigation measures to reduce potential impacts to agricultural resources. Nonetheless, the GMPs and mitigation measures may not necessarily address the unique characteristics of the specific area and agricultural resources could be affected by projects authorized under the Order. Per CEQA Guidelines Section 159093, the State Water Board prepared a Statement of Overriding Considerations to balance, as applicable, the benefits of restoration projects authorized under the Order against its unavoidable environmental risks when determining whether to approve the Order.

In addition, project proponents in coordination with the CEQA lead agency would need to determine if proposed restoration projects could be authorized under the Order as within the scope of the PEIR or would need to undergo additional CEQA review (PEIR Section 1.1). A CEQA lead agency for a restoration project may determine additional or different project-specific mitigation measures to reduce potential agricultural impacts.

The PEIR assessed the potential for future restoration projects authorized under the Order to result in insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years (PEIR Section 3,19). New water rights would not be authorized under the Order.

See response to comment DU-1-15 regarding minor revisions to Mitigation Measure AG-1 (PEIR, Section 3.3).

LAND-1-14:

See responses to comments LAND-1-2 through LAND-1-13 above.

LAND-1-15:

The State Water Board appreciates LAND comments regarding the Draft Order and Draft PEIR and notes the contact name and number for LAND. The attachments provided were reviewed and considered during preparation of responses.

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LSLT-1 League to Save Lake Tahoe

LSLT-1



advocate | engage | create

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 12, 2021
Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

The League to Save Lake Tahoe (League) received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

The League is dedicated to protecting and restoring the environmental health, sustainability and scenic beauty of the Lake Tahoe Basin. In connection with our mission, we advocate for streamlined restoration projects that build resilience to climate change and prevent fine sediment, the leading cause of Lake Tahoe's dramatic clarity loss over the past half-century, from entering Lake Tahoe. The League also advocates for forest, riparian, aquatic ecosystem, and habitat restoration – all elements in the Restoration Projects Statewide Order.

We strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects in the Lake Tahoe Basin. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order. Projects for climate change adaptation and habitat restoration for imperiled species cannot be delayed. The ongoing drought gives further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

The environment and our organization will benefit from the Order and PEIR by saving time and resources, enabling integral restoration projects to be implemented sooner. The Order and PEIR would also allow shovel-ready projects to be implemented more efficiently, in line with the Natural Resources Secretary Crowfoot's Cutting the Green Tape Initiative and California's

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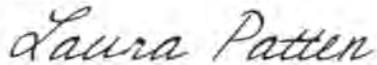
LSLT-1

Page 2 of 2

30x30. The League does want to ensure that this order will not reduce environmental protections within the Lake Tahoe Basin, but instead streamline the process for restoration projects that protect Lake water quality. The impacts of streamlined restoration work under this order would support a myriad of projects in the Tahoe Basin, including forest fuels reduction, aquatic invasive species control and avoidance, and water quality improvement projects which currently require a long permitting process through the Regional Water Board.

Thank you again for the opportunity to comment on behalf of the League. Please do not hesitate to reach out to me directly with any questions.

Sincerely,



Laura Patten
Senior Science Policy Analyst, The League to Save Lake Tahoe

2
3

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LSLT-1 League to Save Lake Tahoe

Responses to Comments from LSLT-1 League to Save Lake Tahoe

LSLT-1-1:

The State Water Board appreciates League to Save Lake Tahoe's (LSLT) comments supporting the adoption of the Order and information on LSLT.

LSLT-1-2:

The Order would not reduce environmental protections within the Lake Tahoe Basin, nor would the Order alter Water Board policies or procedures. All projects must meet the definition of a restoration project (Order, Section V. Project Description), be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4), and adhere to programmatic sideboards (Order, Attachment A, A.5.1), including adopting protection measures (Order, Attachment A, A.5.2) and design guidelines (Order, Attachment A, A.6), and undergo pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3).

LSLT-1-3:

The State Water Board appreciates LSLT's comments supporting the adoption of the Order.

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PCT-1 Placer County Tomorrow

PCT-1

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

From: [Michael Garabedian](#)
To: [commentletters](#)
Subject: Comments-Restoration Projects Statewide Order
Date: Friday, August 13, 2021 12:01:13 PM

EXTERNAL:



11:15 a.m.

This Proposed General Order could have deeply disturbing implications and possibilities for existing wetlands, vernal pool prairie, water courses, swales, and other areas of State and Regional Water Board jurisdiction.

1

Most significantly could be if the Order results in the State Board allowing or approving General Orders based on faulty, inadequate or what the board, public or others would or might consider to be inadequate, irresponsible, unnecessary, faulty or other problematic decisions and approvals including environmental mitigation required by other local, state or federal agencies.

2

For example, when an entity has solid CEQA disclosure of major natural area loss accompanied by findings that are legally sufficient?

Second, is concern about applying the General Order to large and even vast, areas of remaining natural resources already reduced, for example, by 90 percent locally, regionally or statewide?

3

Third is the grave problem of affected natural resources with absent, nearly absent, faulty, intentionally exclusionary, misleading if not bordering being unprincipled, claims of having had the public involvement required or necessary. This last point is arguably the case with the Placer County Conservation Plan Fish and Game Code NCCP requirements. The General Order must not actually or in effect ratify this. How could this be overcome?

4

An example of another kind of issue, is the issuance of streambed alteration permits that do not as far as I know, have public comment or involvement.

5

Fourth, what if the science is inadequate, as is the case, for example, of the Desert Energy Renewable Energy Conservation Plan (DRECP). See its two independent science review panel reports.

6

Fifth, what review including effectiveness has the Board given to its use of General Orders?

7

Thank you for this opportunity to comment,

Michael N. Garabedian
Placer County Tomorrow
916-719-7296
1725 Schellbach Dr.
Lincoln, California 95648

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PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

PCT-1 Placer County Tomorrow

Responses to Comments from PCT-1 Placer County Tomorrow

PCT-1-1:

The State Water Board appreciates Placer County Tomorrow's (PCT) comments on the Draft Order and Draft PEIR. Potential impacts (and benefits) to existing wetlands, vernal pool prairie, water courses, swales, and other areas of Water Board jurisdiction are evaluated in PEIR Sections 3.5, 3.6 and 3.11. Overall, the Order is expected to encourage projects that help to restore the environment.

PCT-1-2:

The definition of a restoration project was developed based on input from numerous agencies and to be consistent with multiple permitting agency regulatory practices either existing or under development (e.g., CDFW, NMFS, USFWS, USACE).

All projects must meet the definition of a restoration project (Order, Section V. Project Description), be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4), and adhere to programmatic sideboards (Order, Attachment A, A.5.1), including adopting protection measures (Order, Attachment A, A.5.2) and design guidelines (Order, Attachment A, A.6), and undergo pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3).

As discussed in PEIR Section 3.1, if the analysis determined that an impact would remain significant after the incorporation of appropriate GPMs and species protection measures, then the impact conclusion is significant and mitigation measures have been recommended to further reduce the magnitude of the impact. However, some impacts would remain significant and unavoidable.

Per CEQA Guidelines Section 159093, the State Water Board developed a Statement of Overriding Considerations to balance, as applicable, the benefits of restoration projects authorized under the Order against its unavoidable environmental risks when determining whether to adopt the Order.

PCT-1-3:

See response to comments PCT-1-2 regarding the definition of a restoration project and conditions placed on restoration projects authorized under the Order.

PCT-1-4:

PEIR Section 1.1 Introduction and Overview of the Order describes the environmental review and approval process, including public engagement, for the PEIR and Order. Further opportunities for public engagement include: (1) participation at the State Water Board Meeting to consider adoption of the Order; (2) availability of Order and PEIR documents on the [State Water Board 401 Program webpage](https://www.waterboards.ca.gov/water_issues/programs/cwa401/) at https://www.waterboards.ca.gov/water_issues/programs/cwa401/; and (3) submission of comments during the public notice period for individual NOIs pertaining to proposed projects considered for authorization under the Order. Furthermore, development and adoption of the Order is also included in materials related to California Natural Resource Agency's (CNRA's) Cutting the Green Tape initiative.

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The Order is intended to complement, not contradict or replace, existing or future conservation and restoration plans, such as Habitat Conservation Plans (HCPs) and Natural Community Conservation Plans (NCCPs). This Order does not ratify or otherwise approve a specific NCCP. Any project meeting the definition of a restoration project as presented in the Order and implementing applicable programmatic sideboards, GPMs, and other requirements is appropriate to be authorized using the Order. Also, each project would be reviewed individually by the approving Water Board. Development projects or projects not meeting the Order restoration project definition and conditions would not be approved under the proposed Order.

PCT-1-5:

PEIR Section 2.5 provides a list of permits and authorizations, including Sections 1600-1607 of the California Fish and Game Code LSAA, that may be required for restoration projects authorized under the Order. Issuance of LSAA's are not under the regulatory purview of the State Water Board or Regional Boards. The Order does not purport to issue or otherwise approve of a LSAA that may be required for a specific project.

PCT-1-6:

The State Water Board appreciates information on the Desert Renewable Energy Conservation Plan. As described in response to comment PCT-1-2, restoration projects authorized under the Order will undergo pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3).

The comment does not address the adequacy or content of the Order or PEIR; therefore, no revisions are included in the Order or PEIR because of this comment.

PCT-1-7:

As described in Order Section IV. Project Purpose, the State Water Board has previously authorized a General Order for Small Habitat Restoration Projects. The Order for Small Habitat Restoration Projects has been used effectively for smaller restoration projects prompting development of this Order. See response to comment PCT-1-4 for information on the public engagement process for the Order and PEIR.

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RRK-1 Russian Riverkeeper

RRK-1



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 13, 2021

State Water Resources Control Board
Clerk to the Board
Jeanine Townsend
P.O. Box 100
Sacramento, CA 95812-2000



Submitted via email to: commentletters@waterboards.ca.gov

RE: Comments – Restoration Projects Statewide Order

To Whom It May Concern:

On behalf of Russian Riverkeeper (RRK), I welcome the opportunity to submit these comments for the “Restoration Projects Statewide Order.” The Russian Riverkeeper is a local nonprofit that has been successfully protecting the Russian River watershed since 1993. Through public education, scientific research and expert advocacy, RRK has actively pursued conservation and protection for the River’s mainstem, tributaries and watershed. Our mission is to inspire the community to protect their River home, and to provide them with the tools and guiding framework necessary to do so. For that reason, we submit the following comments.

1

I. Restoration in the Russian River Watershed

California is home to a multitude of habitats, species, and other beautiful natural resources—many of which are completely unique to our part of the world. This level of biodiversity brings people from all around the world to visit and has helped create the California we know today. Unfortunately, having this high level of biodiversity also means that there are no one size fits all solutions when it comes to proper resource management. Each unique environment we have requires its own unique solutions as applied to the unique circumstances of that environment. For instance, some rivers may be mountainous headwaters with steep, narrow, rocky bedrock channels, while others are historically long, meandering alluvial floodplains. The two cannot be managed in the same way because they are not the same type of habitat. As such, streamlining projects across the state under the assumption that they will benefit each and every one of California’s unique riparian habitats is incorrect. Lasting solutions that protect the natural habitat cannot result from a one size fits all approach.

2

Of particular concern for us on the Russian River is the allowance of any rock materials in a streamlined bioengineered bank stabilization project. The Russian River is a historical alluvial floodplain which means that it wants to meander through large open spaces and is continually trying to expand beyond the narrow channels that humans have used to try and contain the river. With a long mining history, the Russian River is now deeply incised in many areas and has been forced into narrowly confined channels. As a result, the natural tendency for the river to flood over the banks and provide access to other nutrients has been completely eroded. These modifications to the river’s natural course have greatly diminished the main channel’s former

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RRK-1



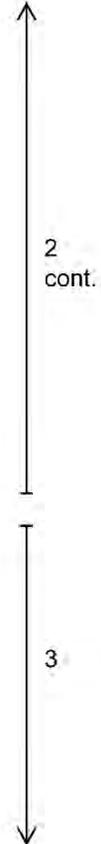
spawning habitat and dramatically reduced access to the nutritious resources juvenile salmon are so reliant on in the floodplains

Local agriculture is the primary proponent of streamlining these types of bank stabilization projects because it allows them to protect their private property from the river's natural course. We recognize that the Order states that outcome is not an intended result of this proposed streamlining process, but it is an on the ground reality that will continue to occur. There are very few groups or individuals out there that will be trying to restore the river for the river's sake through bank stabilization, as opposed to some personal interest and benefit.

If the State Water Board really wants to restore the river and stay clear of projects that "merely protect property from bank erosion" then there are other better avenues such as establishing and enforcing adequate buffer zones so that private property owners are not building or planting right to the bank's edge and causing degradation in the first place. Further, property owners should not be allowed to invest in any restoration project when they are contributing to the overall degradation of their riparian property elsewhere, and this should be considered as part of the "net benefit" calculation. There must be additional checks in place to ensure that any streamlining is actually done for the benefit of the river and that public resources are not being used to protect the worth of private property owners. For the Russian River this means no bank stabilization projects utilizing rocks or boulders without full review for site characteristics and public input.

A. Bioengineered Bank Stabilization

Over the years, Russian Riverkeeper has participated in and been witness to a variety of bank stabilization projects. A limited few have been success stories, but more often than not, they have resulted in failure in short time. This is due to the unique nature of rivers that are part of alluvial flood plains—they naturally want to spread out and carve a large meandering path to the ocean. Channeling such rivers only increases the velocity of flows and the sheer stress that leads to bank erosion until the river's equilibrium is found once again. This is a natural process, not a detriment to the river's health; and instead, as noted above, is a human built concern over loss of private property that gets eroded away by the river trying to break free from these channeled areas. It is actually beneficial to the river's health to allow this erosion as it needs the coarse sediment that comes from this erosion.



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RRK-1

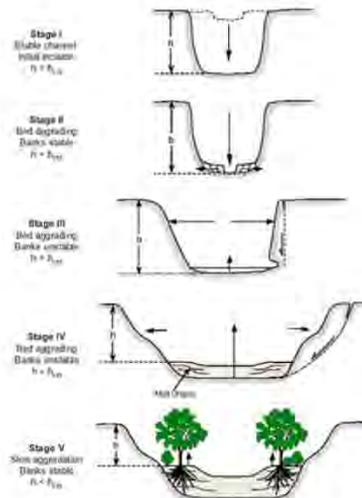


Figure 1: Illustration demonstrating how an incised river channel will naturally erode embankments until it has found its natural course and velocity. Only at that point will banks stabilize.

In fact, bank erosion helps remove the impacts of human channeling and allows further beneficial riparian habitat to flourish. Using rocks to stabilize the bank only locks in past human activities and prevents complete watershed restoration. This is deleterious to the beneficial use of salmon habitat, spawning and rearing which needs the coarse sediment that comes from this bank erosion.

Furthermore, no published reports in the Russian River have analyzed sources of fine sediment. Based on our own water quality monitoring most fine and suspended sediments are actually likely originating from agricultural tillage in vineyards, construction activities, and urban stormwater sources. If fine sediment control is really a concern of the State Water Board, then policies should be implemented to address it at their true source. Bank erosion is a critical source of coarse sediment and helps to offset human contributions of fine sediment to the riparian system.

In theory, the regional board would be aware of these local realities and be able to account for them before any project approvals occur. However, in many instances it is unlikely the staff bandwidth will be there for this to happen; and instead, largely over-engineered projects will likely be put in place to hold back embankments and prevent erosion from private property. Until the river reclaims its historical alluvial floodplains, the river will continue to erode away at the banks due to the higher flow velocity that stems from the artificial narrowing of the river in past years. Projects designed to hold the embankments up would be counter to this trajectory, and



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would only ensure that the narrowed channels created by historic mining continue to persist. The same is true of projects in the mainstem that are centered around reintroducing vegetation to the banks. Until the river has reclaimed its natural balance of width to depth rock-based stabilization projects will not prove lasting. As such, stabilization projects that would alter the river's natural evolution should require additional scrutiny.

Four of the five biggest bank stabilization projects in the Russian River have failed in recent years because they seek to impose a static solution in a dynamic environment, and go to support our concerns over bank stabilization projects in our watershed, especially those that involve rock structures. Any introduction of large rock to "stabilize" bank toes that are located on top of sand and gravel channel beds, such as in the Russian River, is doomed to fail from the start. This is because during flood events and high velocity flows, the river is able to scour that substrate away with little effort and all support is removed.

A great example is a stabilization project along the river below Stuhlmuller Vineyards. The project was permitted under the Army Corps nationwide permit and various state general permits, with funding coming from California's Department of Fish and Wildlife. The first major high flow event eroded 95% of installed plants, and at least 50% of the placed rock and fill, which ultimately resulted in even more bank erosion. All bank stabilization projects using bioengineered approaches have failed in the Russian River except at Oddfellows Recreation Park near Guerneville, and this was only because of the presence of a stable bedrock substrate. Without this firm substrate to anchor the larger stabilization rocks it would have also eroded in short time.



Figure 2: This photo was taken after completion of a bioengineered bank stabilization project on the Russian River at Stuhlmuller Vineyards.



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Figure 3: This photo is of the same stretch of project following the first high velocity flow event that the project experienced. It is clearly seen here that all the vegetation was removed during that high velocity event and the bank was further degraded.



Figure 4: Following the high velocity event at the Stuhlmuller project shown in Figures 1 and 2, that river stretch became very rocky in comparison to the rest of the river's more natural features. As a result, this stretch became prime habitat for bass and pike minnows which prefer those rocky areas. In contrast, the river's protect salmon species do not like this type of rocky habitat. So not only did the bank stabilization project fail, it created prime habitat for predators of our



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protected salmon species. Neither of those results were in the benefit of the river's health.

Restoration of our river to its historical state is necessary, but must be done with the river itself in mind. There is a right way to protect and restore our natural resources, and there is a wrong way. As such, we strongly object to any streamlined permitting for any bank stabilization project in alluvial reaches of the Russian River because of the history of failure and resulting increased negative impacts and disturbance to the river and beneficial uses. We are attaching three papers that lay out our concerns over bank stabilization in more detail.

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B. Suggested Improvements to Regional Water Board Oversight

When done properly, restoration of our natural resources is vital and important work. However, to ensure this Order is carried out in the way intended, there must be adequate funding for regional staff to sufficiently complete the tasks required of this Order. Regional Boards are frequently understaffed, underfunded, and consistently given a wider scope of work to complete. For restoration projects like this it is important that they are handled regionally where more site-specific knowledge is had, but designated funding must also come with it. Thus, we would like to emphasize the need for sufficient funding to fully support this program to ensure proper authorization of restoration projects is occurring and proper oversight is occurring.

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C. Need for Public Oversight Opportunities

Due to the unique nature of the Russian River, there must be some form of public oversight over any proposed bank stabilization projects. We have witnessed to many projects be built, wiped out, and subsequently cause even more harm to the river and it cannot continue. As such, we ask that there be public notice provided for bank stabilization project that is applied for under this order and that there is an opportunity for public comment. The public must be given the opportunity to provide comment on projects, especially since there is a long history of insufficient oversight by agencies in regards to bank stabilization projects.

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II. Conclusion

We appreciate the opportunity to provide comment and welcome any questions that you may have.

6

Sincerely,

Jaime Neary
Staff Attorney
Russian Riverkeeper

Don McEnhill
Executive Director
Russian Riverkeeper

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RRK-1 Russian Riverkeeper

Responses to Comments from RRK-1 Russian Riverkeeper

RRK-1-1:

The State Water Board appreciates Russian Riverkeeper’s (RRK) comments regarding the Draft Order and Draft PEIR as well as information on the RRK.

RRK-1-2:

The State Water Board appreciates RRK’s information regarding individual watersheds throughout the State, including the Russian River being unique, and ongoing issues with bank stabilization along the Russian River.

In regards to concerns over the use of bioengineered bank stabilization techniques, all projects must meet the definition of a restoration project (Order, Section V. Project Description), be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4), and adhere to programmatic sideboards (Order, Attachment A, A.5.1), including adopting protection measures (Order, Attachment A, A.5.2) and design guidelines (Order, Attachment A, A.6), and undergo pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3).

While bioengineered bank stabilization may be required to address specific issues and may be necessary for certain projects, the Order would not cover projects that merely protect property from bank erosion. Further, the Order includes project type–specific design guidelines that have been developed with assistance from multiple regulatory agencies (e.g., CDFW, NMFS, USFWS) to help project proponents design individual projects in a manner that is appropriate and sustainable, minimizes adverse effects on aquatic habitats, and maximizes the ecological benefits of the restoration. The design guidelines also state that restoration projects should be based on a process-based approach that considers the multiple interactions of physical, chemical, and biological processes over a wide variety of spatial and temporal scales in order to identify the root causes of the problems, and to confirm the proposed solution (project) will be effective and appropriate given the physical setting (see Kondolf et al., 2001; Simon et al., 2007; Smith and Prestegard, 2005; Wohl et al, 2005, Wohl et al., 2015).

All projects would be evaluated individually by the approving Water Board to assess if they meet all the eligibility requirements for authorization under the Order.

RRK-1-3:

State Water Board notes comments pertaining to the Russian River and bank stabilization projects. The North Coast Regional Board would be the approving Water Board for proposed projects along the Russian River. The North Coast Regional Board has typically authorized bio-engineered bank stabilization projects through an individual certification process and does not necessarily consider such projects (e.g., a bio-engineered bank stabilization project that impedes natural stream process) to qualify as restoration or be eligible for an expedited permit process for restoration projects.

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The Order Section V. Project Description includes the definition of a restoration project as:

“...one that would result in long-term net increase in aquatic or riparian resource area functions and/or services through implementation of the eligible project types, relevant general protection measures (GPMs), and consideration of design guidelines, summarized below and described in detail in Attachment A, Order Description and Eligibility.”

The definition’s use of net increase in functions and services indicates a project (under the Order) must have a net environmental benefit and result in an overall enhanced and/or restored environmental condition. Furthermore, the approving Water Board determines if a proposed project meets the definition of a restoration project and is eligible for authorization under the Order. The approving Water Board also determines if a proposed project adopts and implements all appropriate GPMs and CEQA mitigation measures appropriate for authorization under the Order.

RRK-1-4:

The approving Water Board will be determined by project location, and either be the appropriate Regional Board if solely located within their jurisdiction or State Water Board if a project is proposed to cross regional boundaries. Projects to be authorized under the Order are currently authorized as part of staff workload through other permit methods. The Order is intended to facilitate the authorization process for restoration projects as defined by the Order.

RRK-1-5:

PEIR Section 1.1 Introduction and Overview of the Order describes the environmental review and approval process, including public engagement for the Order and PEIR. Further opportunities for public engagement include: (1) participation at the State Water Board Meeting to consider adoption of the Order; (2) availability of Order and PEIR documents on the [State Water Board 401 Program webpage](https://www.waterboards.ca.gov/water_issues/programs/cwa401/) at https://www.waterboards.ca.gov/water_issues/programs/cwa401/; and (3) submission of comments during the public notice period for individual NOIs pertaining to proposed projects considered for authorization under the Order (Order Section III Public Notice). Furthermore, development and adoption of the Order is also included in materials related to California Natural Resource Agency’s (CNRA’s) Cutting the Green Tape initiative.

RRK-1-6:

The State Water Board appreciates RRK’s comments regarding the Draft Order and Draft PEIR.

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SCC-1 Coastal Conservancy

SCC-1



September 27, 2021

State Water Resources Control Board,
Jessica Nadolski, Jeanine Townsend
Comments sent via email to
Jessica.Nadolski@waterboards.ca.gov
commentletters@waterboards.ca.gov
via Office of Planning and Research (SCH Number 2019100230)

From: State Coastal Conservancy

Subject: Comments- Restoration Projects Statewide Order

To: State Water Resources Control Board,

Thank you for the opportunity to provide comments from the State Coastal Conservancy (SCC) on the newly proposed **General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide** per the 7/7/21 Draft Order. The SCC is a non-regulatory and project-driven state agency whose mission is to purchase, protect, restore, and enhance coastal resources. SCC has a long history of funding, planning, permitting, and implementing riparian, estuarine, watershed, and coastal restoration projects statewide. We have developed strong working relationships with many public agencies and nonprofits on habitat restoration efforts. The regional networks of partners in the Southern California Wetlands Recovery Project, the San Francisco Bay Restoration Authority, and other regional efforts are recognized as extensive and diverse collaborations of public and private agencies and landowners engaged in collaborative restoration projects. Our goal is to implement projects based on best habitat protection and design practices, to monitor outcomes, and to share results and lessons learned from the projects, so that successful nature-based techniques can be incorporated into future restoration project.

Living shorelines have been shown to be a successful method of a combined natural bank stabilization and habitat enhancement approach that can also be utilized as a climate adaptation strategy in low- to medium-energy coastal and estuarine environments. Living shorelines and other nature-based climate adaptation approaches have been successfully tried and tested by US Fish and Wildlife Service, NOAA, and other partners for more than two decades on the East Coast and the Gulf Coast, and since 2012 by the SCC and multiple local, state, federal, and non-profit partners at

1515 Clay Street, 10th Floor
Oakland, California 94612-1401
510•286•1015

C a l i f o r n i a S t a t e C o a s t a l C o n s e r v a n c y

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multiple sites in California. The projects have resulted in increased wave attenuation benefits, sediment stabilization and shoreline protection, and habitat restoration and enhancement for fish, mammals, birds, and a wide variety of aquatic species.

There is strong and growing interest in testing nature-based aquatic restoration and climate adaptation approaches on the West Coast- but a shorter history of projects on the Outer Pacific Coast and associated estuaries, and a smaller number of projects that have been constructed and monitored. This results in a great need for experimentation and testing of pilot projects, in order to document success, and to document ecosystem services and functions resulting from various approaches. We greatly support this new programmatic permitting tool to make 401 permitting more standardized and efficient for aquatic restoration projects in CA, that also supports and recognizes experimentation.

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Specific Comments and Questions:

Please accept these specific comments re the Draft General Order.

General:

1. The State Coastal Conservancy is pleased at this effort to create a programmatic 401 certification for aquatic habitat restoration projects. Our agency is engaged in implementing a wide variety of aquatic habitat restoration projects of all sizes in riparian, estuarine, and coastal areas. We support this effort to make Section 401 permit requirements and conditions more standardized, and to create a programmatic mechanism to qualify for the permit versus every project having to apply individually.
2. What is the associated federal action with this new General Order and PEIR? We are aware of a programmatic Biological Opinion being prepared by the US Fish and Wildlife Service. Are there additional actions being considered by US Army Corps of Engineers (USACE) and NOAA's National Marine Fisheries Service (NMFS)? Will this connect to any particular USACE Nationwide permits such as NWP 27 or NWP 13? Are there new regional general permits being considered? Are there any related actions being considered by the US EPA?
3. Please consider making more explicit references to estuarine and coastal habitats, including intertidal, tidal, and subtidal habitat types and project types. This Draft General Order is focused on riparian general protection measures and design guidelines, which is understandable since there is a longer body of practice and more riparian focused engineering and biological design guidance. Please consider including additional examples of tidal and estuarine design guidance, site conditions, tidal range, and substrate types so that it is clear that this General Order would be applied to projects and conditions in brackish and saltwater estuarine and coastal environments.
4. We appreciate seeing the supportive language and inclusion of projects that include testing and experimentation with new methods and techniques - there are very few living shoreline projects in San Francisco Bay and on the West Coast, and pilot projects must be conducted in order to document ecosystems services and functions from various design scales, methods, and habitat approaches. Some of our comments below focus on encouraging inclusion of additional innovative project types - such as enhanced rock slope protection

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and living seawall pilot projects- within the "Removal and modification of dams and other structures", 'Bioengineered Bank Stabilization', and 'Tidal, Subtidal, and Freshwater Wetland Establishment, Restoration, and Enhancement'.

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Attachment A:

Programmatic Sideboards Section:

5. Much of the material referenced in the Programmatic Sideboards section refers to Riparian restoration work and guidance. Please include these coastal and estuarine focused guidance documents in the list of reference documents and design guidance:

- San Francisco Bay Subtidal Habitat Goals Report
- Baylands Habitat Goals Science Update
- San Francisco Estuary Adaptation Atlas
- San Francisco Estuary Blueprint
- Native Oyster Restoration Guidelines
- San Francisco Bay Eelgrass Restoration Program
- San Francisco Bay New Life for Eroding Shorelines Report
- Wetlands on the Edge: the Future of Southern California's Wetlands (Southern California Wetlands Recovery Project Regional Strategy Update 2018)
- California Climate Adaptation Strategy
- California 4th Climate Assessment/ Coastal Natural Infrastructure Design Guidance
- US Fish and Wildlife Service's Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California
- Federal Highway Transportation Administration Nature-Based Design Guidelines
- USACE's International Design Guidelines for Nature-Based Features for Flood Control
- Global Harbour Project (vertical living seawall approaches)
- Seattle Seawall (vertical living seawall design components)

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Project Types:

5. **Section A.4.2 Removal of small dams, tidegates, floodgates, and legacy structures:** Can removal of derelict/failing seawalls be included? Can enhancements to structures be included, such as tiles and ledges attached to seawalls to provide more surface texture that benefits habitat, or wrapping pilings with other materials?
6. **Section A.4.3 Bioengineered Bank Stabilization:** There is a focus on riparian banks, does this also include estuarine banks such as shoreline earthen and rock levees? Can biological enhancements to estuarine and coastal bank stabilization structures be included, such as crown plantings and other biological treatments made to traditional CALTRANS rock slope protection designs?
7. **Section A.4.7 Removal of pilings and other in-water structures:** Similar comments as above- in addition to removal of pilings, piers, and docks, can enhancement of pilings, piers, and docks be included, as well as vertical living seawall approaches?
8. **Section A.4.9 Establishment of tidal/subtidal/ and freshwater wetlands:** Please confirm and include language that this includes revegetation and enhancement work in the associated upland transition zones, and the associated intertidal and subtidal habitats that aren't wetlands (ie Living Shorelines multi-habitat and multi-objective approaches to

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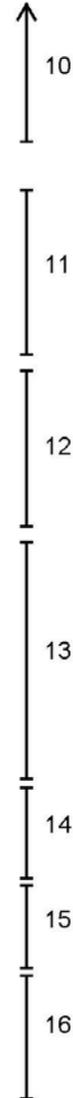
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protect wetlands, such as placement of oyster reefs, eelgrass plantings, etc.). Does this category include placement of features in offshore estuarine and coastal habitats, in addition to areas adjacent to shorelines and wetlands? Do habitat enhancements to seawalls and riprap in the intertidal and subtidal zones fit within this category? We encourage inclusion of pilot living seawall and green riprap projects in this programmatic permit, with consultation and more information for the regional boards upon request.



General Protection Measures:

9. **GPM #3 Construction Hours:** Construction in estuarine and coastal areas includes tidally driven work windows that don't always match with business hours 9am-5pm. Please consider language that allows for exception to this for tidally influenced projects, especially those in shallow nearshore areas that are hard to access, based on consultation and input from Regional Board staff. Most dredging projects in SF Bay are allowed a 24 hour window for this reason, and it is appropriate to give the same conditions to habitat restoration efforts.
10. **GPM #7 Fencing of environmentally sensitive areas:** Please include language that this is matched to the appropriate scale of project and habitat area and will not cause more harm than the proposed action. For example, a small transition zone native planting project that would occur in a short time frame should not require exclusion fencing which can impact habitat through trenching and can be avoided by strong biological monitoring and conservation measures to clear the area before planting and manage work practices to avoid impacts.
11. **GPM #8 Prevent Spread of invasive species:** We are extremely supportive of this language regarding equipment cleaning and other methods to prevent introduction or spread of invasive species. We recommend strengthening text to also include more reference to estuarine and coastal invasive species in addition to existing text on riparian (ie use example such as native oyster vs Pacific oyster focus, native Pacific cordgrass vs east coast forms). It would be helpful to provide some acknowledgement that in estuarine aquatic areas like SF Bay there are substantial non-native aquatic invertebrate, plant, and fish species that are now present in the bay and can't be controlled at the site level; but project design and success criteria can encourage monitoring and actions to take if treatments increase non-native species compared to baseline or control data at nearby sites.
12. **GPM #11 Revegetate disturbed areas:** Hydroseeding is often ineffective if not done with native species and the right attention to planting medium, watering, and maintenance. Please include best design guidance for hydroseeding in riparian, estuarine, and coastal areas; and also include potential for container plantings as needed
13. **IWW-1 Appropriate in water material placement:** Please also include clean shell (oyster half shell, other) as a material allowable for in water placement. Include reference to ensuring shell material is cured and inspected and free of pathogens or non-native species.
14. **IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment:** Please include more estuarine and coastal focus on language and examples- currently heavily focused on riparian information. Can construction of living seawall demonstration projects be included? Can encouragement of green-grey hybrid approaches to structure design be included (combination of lower intertidal shoreline berm plus oyster reefs offshore, etc.)?

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15. **VHDR-6. General Herbicide Use.** Chemical control may at times have less environmental impact or result in less habitat disturbance than other methods, yet the order stipulates that "Chemical control of invasive plants and animals shall only be used when other methods are determined to be ineffective or infeasible." Please add the text "or when chemical control will result in significantly less environmental impact than other methods."

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Design Guidelines:

16. **Bioengineered Bank Stabilization:** (similar as previous comment on this project type)- Can biological enhancements to estuarine and coastal bank stabilization structures be included, such as crown plantings and other biological treatments made to traditional CALTRANS rock slope protection designs?
17. **Piling and Other In-Water Structure Removal:** One condition states to keep all equipment out of the water- this may be riparian focused comment- in an estuarine site, piling removal is most often conducted via barge and cranes in the water. Equipment is used to grasp piling at the mudline or benthos and extract full pile if possible or cut pile below mudline if necessary. We recommend cutting pile to 2-3' below mudline, in order to ensure that there are no pile stubs remaining above the benthos that can cause safety, navigational, and environmental hazards.
18. **Tidal, Subtidal, and Freshwater Wetland Establishment, Restoration, and Enhancement:** Please improve language regarding estuarine and coastal areas and techniques. For areas such as San Francisco Bay that are highly altered due to historic fill, it is not always possible to base site plans and designs on historic conditions or locations. We are pleased to see support for experimental techniques and are glad to see that monitoring plans and reporting is required so that innovative techniques are tracked and assessed to make they are functioning as planned and providing data on outcomes. Please improve language regarding additions of native oyster spat to include justification of need, as many sites are substrate limited and not limited in available local oyster larvae; and include reference to strong oversight on source locations for oyster spat, and prevention of spread of any pathogens or disease.

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Thank you very much for your review of these comments. Please contact myself (mary.small@scc.ca.gov) or Marilyn Latta (marilyn.latta@scc.ca.gov) if you have any questions or want to discuss any of these comments.

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Sincerely,

Mary Small

Mary Small
Acting Executive Officer
California State Coastal Conservancy

C a l i f o r n i a S t a t e C o a s t a l C o n s e r v a n c y

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SCC-1 Coastal Conservancy

Responses to Comments from SCC-1 State Coastal Conservancy

SCC-1-1:

The State Water Board appreciates State Coastal Conservancy’s (SCC) comments regarding the Draft Order and Draft PEIR as well as information on the SCC, living shorelines, nature based aquatic restoration, etc.

SCC-1-2:

The State Water Board appreciates SCC support regarding the Order.

SCC-1-3:

This Order is State Water Board-initiated to improve the efficiency of regulatory reviews for projects throughout the state that would restore aquatic or riparian resource functions and/or services. The Order provides Clean Water Act Section 401 Water Quality Certification for future projects that will require authorization from the USACE under CWA Section 404 and Rivers and Harbors Act of 1899 Section 10 and Section 14 (33 USC 401, known as “Section 408”). This Order also provides Waste Discharge Requirements (WDRs) pursuant to the Porter-Cologne Water Quality Control Act (California Water Code §1300 et seq.). This Order covers projects that may directly or indirectly discharge to “waters of the state,” including “waters of the U.S.”

Although the Order was not formally requested by a federal agency or required by a federal action, there was coordination with the USACE on the proposal to develop an Order. In addition, the definition of a restoration project was developed based on input from numerous agencies and to be consistent with multiple resource agency regulatory practices and policies either existing or under development (e.g., CDFW, NMFS, USFWS, USACE).

Project applicants should coordinate with USACE and other federal agencies to determine the appropriate permitting pathway for their proposed project. PEIR Section 2.5 provides a list of authorizations and/or permits that may be required for restoration projects.

SCC-1-4:

In response to the comment to include more references to estuarine and coastal habitats, the Order (and PEIR) description of eligible project type “Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands” was revised as follows (Order, Attachment A, Section 2.6.9):

“This project category may also include:

- ◆ Constructing transitional tidal marsh habitat (i.e., “horizontal levees,” setback berms, or ecotone slopes, including revegetation and enhancement work in the associated upland transition, intertidal, and subtidal habitat zones)
- ◆ Thin-layer sediment augmentation for tidal marshes and nearshore habitat adaptation to rising sea levels (e.g., USFWS Salt Marsh Sediment Augmentation Project – Seal Beach)

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- ◆ Biological enhancements to pilings, piers, and docks (e.g., wrapping pilings, and attaching tiles and ledges to increase surface area for intertidal and subtidal species)
- ◆ Biological enhancements to estuarine and coastal shoreline stabilization structures and other nature-based solutions...

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

In response to a request to include removal or replacement of infrastructure within intertidal and subtidal areas to improve water quality and fish, see response to comment SCC-1-7 below.

Furthermore, the Order (and PEIR) references estuarine and coastal habitats, including intertidal and subtidal habitat types across multiple categories of project types. See also response to comment SCC-1-6, below, for additional estuarine and coastal habitat reference documents. For example, see project and design guideline descriptions for the following categories:

- ◆ Removal of Small Dams, Tide Gates, Flood Gates, and Legacy Structures—to improve fish and wildlife migration, tidal and freshwater circulation and flow, and water quality.
- ◆ Removal or Remediation of Pilings and Other In-Water Structures—to improve water quality and aquatic habitat for fish and wildlife.
- ◆ Removal of Nonnative Invasive Species and Revegetation with Native Plants—to improve watershed functions, such as aquatic and riparian habitat for fish and wildlife.
- ◆ Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands—to create or improve wetland ecological functions.

SCC-1-5:

The Order allows for new techniques, which would include innovations. See Order, Attachment A, 2.9:

“The project proponent may modify design approaches that do not conform with the specific guidelines, based on site-specific conditions or technological constraints or advances, or regionally accepted guidance documents.”

All projects must meet the definition of a restoration project (Order, Section V. Project Description) and the conditions (Order, Section XIII) in the Order. Projects not meeting the conditions of the Order can be authorized through other permitting methods. No revisions are included in the Order or PEIR because of this comment.

SCC-1-6:

The State Water Board appreciates the SCC listing various sources of information on working in coastal and estuarine areas.

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The Order and PEIR include language that references California’s Climate Adaptation Strategy and the California State Coastal Conservancy’s Climate Change Policy (Order, Attachment A, Section 2.6.9):

“California’s Climate Adaptation Strategy recommends using ecotones and living shorelines as a potential adaptation method to reduce the need for engineered “hard” shoreline protection devices and to provide valuable, functional coastal habitat (CNRA 2018). The California State Coastal Conservancy’s Climate Change Policy also supports the use of living shorelines for their ability to improve the resiliency of estuarine habitat to future sea level rise and other related effects of climate change (SCC 2011).”

In response to this comment, the Order and (PEIR) description of eligible project type Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands (Order, Attachment A, Section 2.6.9) was revised as follows:

“Project activities that plan for climate change, including sea level rise, should be considered in tidally influenced locations. California’s Climate Adaptation Strategy recommends using ecotones and living shorelines as a potential adaptation method to reduce the need for engineered “hard” shoreline protection devices and to provide valuable, functional coastal habitat (CNRA 2018). The California State Coastal Conservancy’s Climate Change Policy also supports the use of living shorelines for their ability to improve the resiliency of estuarine habitat to future sea level rise and other related effects of climate change (SCC 2011). More information about the benefits of these projects for climate change resilience can be found in sources such as the: San Francisco Bay Subtidal Habitat Goals Report, Baylands Habitat Goals Science Update, USFWS Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California, Wetlands on the Edge: the Future of Southern California’s Wetlands [Southern California Wetlands Recovery Project Regional Strategy Update 2018], San Francisco Estuary Adaptation Atlas, San Francisco Estuary Blueprint, San Francisco Estuary Institute & The Aquatic Science Center New Life for Eroding Shorelines Report).”

The Order (and PEIR) description of eligible project type Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands (Order, Attachment A, Section 2.6.9) was also revised as follows:

“Living shorelines can provide a natural alternative to “hard” shoreline stabilization methods like stone sills or bulkheads; they provide numerous ecological benefits, including water quality improvements, habitat for fish and invertebrates, and buffering of the shoreline from waves and storms.

Living shoreline projects use a suite of habitat restoration techniques to reinforce the shoreline, minimize coastal erosion, and maintain coastal processes while protecting, restoring, enhancing, and creating natural habitat for fish and aquatic plants and wildlife (e.g., wetlands, dunes, beaches, seaweed beds, rocky intertidal areas). The term “living shorelines” was coined because the approach provides living space for estuarine and coastal organisms. Strategic placement of native vegetation and natural materials or shells for native shellfish settlement enhances

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habitat values by creating new living space. The techniques also increase the connectivity of wetlands and deeper intertidal and subtidal lands while providing a measure of shoreline protection.”

The eligible project type category of Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands (Order, Attachment A, Section 2.6.9) was also revised as follows:

“This project category may also include:

- ◆ Beach renourishment
- ◆ Constructing open water areas
- ◆ Constructing noncommercial, native oyster habitat (e.g., reefs) over an unvegetated bottom in tidal waters
- ◆ Conducting noncommercial, native shellfish seeding
- ◆ Establishing submerged aquatic vegetation (e.g., eelgrass beds) in areas where those plant communities previously existed (e.g., San Francisco Bay Eelgrass Restoration)”

And the Design Guidelines in the Order, Attachment A, A.6 (and PEIR) was revised as follows:

“Native species and disease – When possible, species native to the project area should be used. Any shellfish transported across state lines or grown through an aquaculture facility should be certified disease free (see also A Guide to Olympia Oyster Restoration and Conservation, June 2015 or the most recent update for example implementation approaches).”

The remaining reference documents in the comment letter have elements that are specific to infrastructure-focused projects that may not meet the definition of a restoration project (Order, Section V. Project Description), therefore those documents are not referenced in the Order.

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

In addition, the Order includes language that allows for programmatic sideboards to include future guidance documents, where appropriate (Order, Attachment A, Section A.5.1):

“Individual habitat restoration projects authorized through the Order should be designed, planned, and implemented in a manner consistent with the techniques and minimization measures presented in the following guidance documents, as appropriate to project type:

- ◆ *Stream Habitat Restoration Guidelines (Cramer 2011)*

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- ♦ *Any relevant future updates, guidance, and/or agency requirements, where appropriate”*

Response to comment SCC-1-5 above shows where the Order allows for new techniques to be applied to project design.

SCC-1-7:

In response to this comment (and comment DU-1-4), Order Section A.4.7 was revised as follows:

“Removal or Remediation of Pilings and Other In-Water Structures

Untreated and chemically treated wood pilings, piers, vessels, boat docks, derelict seawalls (within embayments), and derelict fishing gear, and similar structures built using plastic, concrete, and other materials, may be removed and/or remediated to improve water quality and habitat for fish and wildlife. These projects are designed to remove contaminant sources and hazards from stream, river, and estuary habitats.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR. The future restoration projects in this category authorized under the Order will need to meet the definition of a restoration project.

SCC-1-8:

In response to this comment related to estuarine and coastal habitats, see response to comment SCC-1-4 above.

SCC-1-9:

All projects must meet the definition of a restoration project (Order, Section V. Project Description) and the conditions (Order, Section XIII.) in the Order. Projects not meeting the conditions of the Order can be authorized through other permitting methods.

In addition, response to comments related to enhancement of pilings, piers, and docks and vertical living seawall approaches, see response to comment SCC-1-4 above.

SCC-1-10:

The Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands projects category includes revegetation and enhancement work in the associated upland transition zones and the associated intertidal and subtidal habitats that are not wetlands (e.g., living shorelines). The category description also specifically identifies living shorelines, oyster beds/reefs, and planting bed (which would include eelgrass) restoration as projects that would be included under this category. See also response to comment SCC-1-4 above for clarifying revisions to the Order to address work in transition zones.

Projects in offshore estuarine and coastal habitats may be considered under this category, as long as they are within State Water Board jurisdiction associated with this Order and meet the definition of a restoration project (Order, Section V. Project Description) and the other conditions (Order, Section XIII.) in the Order. Projects not

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meeting the conditions of the Order can be authorized through other permitting methods. No revisions are included in the Order or PEIR because of this comment.

Enhancements to seawalls and riprap in the intertidal and subtidal zones may be considered under this category or under the Bioengineered Bank Stabilization category of projects, depending on the specific details of the proposed project. See response to comment SCC-1-4 above for revisions to address this comment.

Development of new pilot living seawalls and/or new green riprap projects may not meet the definition of a restoration project (Order, Section V. Project Description) and therefore may not be authorized under the Order but may be considered in future amendments.

SCC-1-11:

In response to this comment, the Order (and PEIR) GPM-3 was revised as follows:

- ◆ **“GPM-3: Construction Hours.** Construction activities shall generally be limited to daylight hours, to the extent feasible. If nighttime construction is necessary, including in tidally influenced waters where tides may limit daylight access and work schedules, all project lighting (e.g., staging areas, equipment storage sites, roadway, and construction footprint) will be selectively placed and directed onto the roadway or construction site and away from aquatic habitats. Light glare shields will be used to reduce the extent of illumination into aquatic habitats. If the work area is near surface waters, the lighting will be shielded so that it does not shine directly into the water.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

SCC-1-12:

In response to this comment, the Order (and PEIR) GPM-7 was revised as follows:

- ◆ **“GPM-7: Environmentally Sensitive Areas:** Monitoring, flagging, or fencing will be used, where appropriate, to minimize disturbance to environmentally sensitive areas (e.g., waters and wetlands).”

This revision does not change the analyses or conclusions in the Draft Order or Draft PEIR.

SCC-1-13:

GPM-8: Prevent Spread of Invasive Species, applies to all environments where restoration projects could be authorized under the Order, including coastal and estuarine areas. No revisions are included in the Order or PEIR because of this comment. See also response to comment SCC-1-15 below.

SCC-1-14:

This comment refers to GPM-15 (not GPM-11). GPM-15 allows for multiple planting approaches and requires the development of a plan that would be tailored to specific

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project site conditions. No revisions are included in the Order or PEIR because of this comment.

SCC-1-15:

In response to this comment, the Order (and PEIR) GPM IWW-1 was revised as follows:

- ◆ **“IWW-1: Appropriate In-Water Materials.** Selection and use of gravels, cobble, boulders, and instream woody materials in streams, and other materials (e.g., oyster shells, other substrates) for reef/bed restoration will be performed to avoid and/or minimize adverse impacts to aquatic resources, special-status aquatic species, and their habitats. On-site gravels will be screened and sorted; gravels imported from a commercial source will be clean-washed and of appropriate size. As necessary to protect aquatic species, placement will be overseen by an agency-approved Monitor; implementation timing will be determined based on the least amount of overlap, or impact on, all aquatic natural resources that may be affected and the timing of their use of the receiving area. Imported gravel from outside the project watershed shall not be from a source known to contain historic hydraulic gold mine tailings, dredger tailings, or mercury mine waste or tailings. Materials that may foul or degrade spawning gravels, such as sand or soil eroding from sandbag or earthen dams shall be managed to avoid release and exposure in salmonid streams. Oyster shells or other substrates for reef/bed restoration shall be cured and inspected to be free of pathogens and/or non-native species.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

SCC-1-16:

All projects must meet the definition of a restoration project (Order, Section V. Project Description) and the conditions (Order, Section XIII.) in the Order. Projects not meeting the conditions of the Order can be authorized through other permitting methods.

In response to this comment, the Order (and PEIR) GPM IWW-3 was revised as follows:

- ◆ **“IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment.** Material used for bank stabilization or in-water restoration shall minimize discharge sediment or other forms of waste to waters of the state. Where feasible, construction will occur from the top of the stream bank, or on a ground protection mat underlain with filter fabric, or a barge. All materials placed in streams, rivers or other waters shall be nontoxic. Any combination of wood, plastic, cured concrete, steel pilings, or other materials used for in-channel structures shall not contain coatings or treatments, or consist of substances toxic to aquatic organisms (e.g., zinc, arsenic, creosote, copper, other metals, pesticides, or petroleum-based products) that may leach into the surrounding environment in amounts harmful to aquatic organisms. Except for the following conditions, equipment must not be operated in

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standing or flowing waters without site-specific approval from State or Regional Board staff:...”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR. See response to comment SCC-1-10 above on coastal restoration, living seawalls, and green-grey hybrid approaches.

SCC-1-17:

In response to this comment, the Order (and PEIR) GPM VHDR-6 was revised as follows:

- ◆ **“VHDR-6: General Herbicide Use.** Chemical control of invasive plants and animals shall only be used when consistent with water quality control plans (e.g., basin plans) and when other methods are determined to be ineffective or would create greater environmental impacts than chemical control, or infeasible and all projects must be in compliance with Regional Board Basin Plan requirements. ...”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

SCC-1-18:

All projects must meet the definition of a restoration project (Order, Section V. Project Description) and the conditions (Order, Section XIII.) in the Order. Projects not meeting the conditions of the Order can be authorized through other permitting methods.

SCC-1-19:

Description of projects for the Removal or Remediation of Pilings and Other In-Water Structures category includes use of boats and barges. Cutting piles below mudline is also described. No revisions are included in the Order or PEIR because of this comment.

SCC-1-20:

The Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands projects category design guidelines description includes discussions related to oyster bed restoration, including substrates, native oyster larvae, native oyster reestablishment, and prevention of the introduction of pathogens, disease, and non-native species. See also responses to comments SCC-1-4 and SCC-1-6, above.

SCC-1-21:

The State Water Board appreciates SCC’s comments regarding the Draft Order and Draft PEIR and notes the contact name and number for SCC.

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SFBRWQCB-1 San Francisco Bay Regional Water Quality Control Board

SFBRWQCB-1



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



San Francisco Bay Regional Water Quality Control Board

Sent via electronic mail: No hard copy to follow

August 13, 2021

State Water Resources Control Board
Attn: Jeanine Townsend, Clerk to the Board
P.O. Box 100
Sacramento, CA 95814
Email: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide General Order

Dear Ms. Townsend:

I would like to thank the State Water Board for the opportunity to speak at the Board's August 4 workshop on the proposed General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (Order) and supporting California Environmental Quality Act (CEQA) draft Program Environmental Impact Report. The proposed Order considers a variety of aquatic and riparian restoration types that take place throughout the State. The Order has the potential to both improve permit timeframes and achieve substantial protection of beneficial uses and ecosystem resilience. There is an opportunity to clarify Order language to make its expectations more transparent and to reduce future staff resources required to determine whether non-restoration projects may be covered under the Order. This letter summarizes the San Francisco Bay Regional Water Quality Control Board's (SF Bay Water Board's) comments on the proposed Order.

- **The SF Bay Water Board supports restoration projects, and the Order should support the Water Boards' technical review and interagency coordination roles so we can ensure we are protecting beneficial uses as we help restoration projects move forward.** The regional water boards play an important technical review and interagency coordination role. In addition, the San Francisco Bay Region has a substantial engaged stakeholder community that places significant value on the region's outstanding water resources, recognizes the extent to which they are at risk, and has developed tools to promote restoration and protect riparian areas and wetlands. These tools include the San Francisco Bay Habitat Goals Project's guidance, iconic projects like Napa's Living River, and Measure AA which established the San Francisco Bay Restoration Authority (for which stakeholders voted to tax themselves for \$500 million over 20 years to support Bay wetland restoration and climate change adaptation. That's why we're working on the Bay Restoration Regulatory Integration Team (BRRIT), have supported development of tools including the Adaptation Atlas, and are participating in a raft of regional restoration and climate change adaptation efforts. We support permitting tools that facilitate efficient and substantive review of restoration projects, and to that end, a key role of the Order is to transparently set expectations regarding what is needed for a good project and to make that process as straightforward as possible.

JIM McGRATH, CHAIR | MICHAEL MONTGOMERY, EXECUTIVE OFFICER

1515 Clay St., Suite 1400, Oakland, CA 94612 | www.waterboards.ca.gov/sanfranciscobay

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SFBRWQCB-1

Comments – Restoration Projects Statewide General Order

August 13, 2021

- **The SF Bay Water Board values the collaborative approach we have taken with restoration projects over the past decades and we want to use the Order to continue it.** Restoration project designs are technically complex and often balance impacts and benefits to different resources. Well-designed projects can realize substantial benefits, and poorly designed projects can cause significant adverse impacts. The Order's current approach of requiring projects to implement General Protection Measures (GPMs) and asking project proponents to consider technical guidance would not provide sufficient assurance that projects are well designed and maximize benefits while avoiding potential adverse impacts, because it avoids thoughtful Water Board review of whether the GPMs or design guidance have been sufficiently considered and appropriately applied. The SF Bay Water Board has found the technical discussions with project proponents around those issues to be useful and to result in better projects, and we want to use the Order to facilitate those conversations. Increasing the Order's transparency with respect to expected project analyses and submittals will help ensure that project proponents know what is expected. It will also help us thoughtfully and efficiently review project designs. We appreciate and want to retain the Order's current language allowing Regional Water Boards to require the information necessary to review projects (p. 5). In addition, basis of design reports, which are scalable in size and complexity relative to a project's size and complexity, are a tool that we use to work with project proponents. One way to increase transparency would be to include guidance for project proponents on submittal of basis of design reports as an attachment; and, in addition to the general language regarding information submittal, to include language explicitly noting regional water board authority to require submittal of basis of design reports.

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We look forward to further collaboration with State Water Board staff on edits to the Order. If you have any questions, please contact Keith Lichten of my staff by e-mail to Keith.Lichten@waterboards.ca.gov

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Sincerely,

For Michael Montgomery
Executive Officer

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SFBRWQCB-1 San Francisco Bay Regional Water Quality Control Board

Responses to Comments from SFBRWQCB-1 San Francisco Bay Regional Water Quality Control Board

SFBRWQCB-1-1:

The State Water Board appreciates the San Francisco Bay Regional Water Quality Control Board's (SFBRWQCB) comments regarding the Draft Order and Draft PEIR.

SFBRWQCB-1-2:

The Order aligns with and would contribute to achieving the goals stated in the comment. The Order would complement existing interagency and stakeholder collaboration as well as Regional Board policies or procedures. For example, the BRRIT can still review the project and the Regional Board can request the applicant apply tools in use in the region, such as the Adaptation Atlas.

SFBRWQCB-1-3:

The Order requires applicants conduct pre-application consultation with the approving Water Board for the purpose of gaining technical guidance from Water Board staff and discussing authorization requirements such as the possible need for a basis of design report. See a detailed description of the pre-application consultation procedures in Order Section XIII.G.2.

All projects must meet the definition of a restoration project (Order, Section V. Project Description), be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4), and adhere to programmatic sideboards, including adopting protection measures and design guidelines (Order, Attachment A, A.5 and A.6), and undergo a pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3). The Order can only be used for projects meeting these conditions; the Order is only applicable for projects designed in an appropriate and sustainable manner that minimizes adverse effects on aquatic resources and maximizes the ecological benefits of the restoration, and are consistent with multiple permitting agency regulatory practices. The project proponent must demonstrate consistency with the above-mentioned measures/guidelines to qualify for authorization under the Order. Further, the approving Water Board has the authority to apply the Order after reviewing the proposed project NOI; the Order would not hinder Regional Board policies or procedures for application review.

SFBRWQCB-1-4:

The State Water Board appreciates SFBRWQCB's comments regarding the Order and notes the contact name and number for SFBRWQCB.

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SYRCL-1 South Yuba River Citizens League

SYRCL-1



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

SOUTH YUBA RIVER CITIZENS LEAGUE _____

August 13, 2021

Jeanine Townsend
State Water Resources Control Board
1001 I Street,
Sacramento, CA 95814



Via Electronic Submittal

RE: Proposed General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide and Supporting Draft Program Environmental Impact Report

Dear Ms. Jeanine Townsend,

The South Yuba River Citizens League (hereafter SYRCL) has reviewed the Restoration Projects Statewide Order and supplementary PEIR and appreciates the opportunity to comment. We would like to begin by commending the Board for developing a process to streamline permitting requirements for restoration projects. It is well established that environmental permitting is an obstacle to getting restoration projects on the ground – both financially and temporally. The proposed change in guidelines and the opportunity for public comment prior to any rule changes have the potential to result in meaningful change in removing obstacles to habitat restoration projects.

Since its founding in 1983, SYRCL has become one of California’s largest organizations focused on a single watershed, the Yuba. We are dedicated to landscape-level conservation and restoration, climate change resilience, and community engagement. SYRCL’s mission is to *unite the community to protect and restore the Yuba River watershed*. Indeed, our community is very involved in our work. We have 3,500 members and 1,000 active volunteers that work to improve stewardship in the watershed. Our members use the Yuba River for recreation, wildlife observation, aesthetic enjoyment, and spiritual renewal.

Since 1997, SYRCL has been actively involved in the planning of restoration projects both on the lower Yuba River, and throughout the watershed. SYRCL has been a regular participant in virtually all forums concerning ecosystem restoration in the Yuba River watershed, including the Yuba River Fisheries Technical Working Group, the Upper Yuba River Study Program, the Yuba Accord River Management Team, the Yuba Salmon Forum,



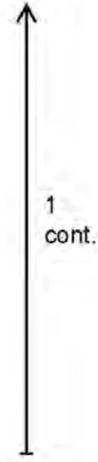
313 Railroad Ave., Suite 101 | Nevada City, CA 95959 | (530) 265-5961 | www.yubariver.org

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FERC relicensing processes, and two Integrated Regional Watershed Management groups overlapping the Yuba River watershed. In recent years, SYRCL's Lower Yuba restoration program has grown from a 5-acre project at Hammon Bar to over 200 acres of floodplain restoration and spawning habitat projects at Hallwood, Long Bar, Rose Bar, and multiple meadow restoration projects including at Van Norden, Haskell, and Loney Meadows.

These projects provide many benefits to the watershed, from increasing the amount and quality of juvenile salmon rearing habitat to helping mitigate the impacts of climate change by restoring the water storage capabilities of our high Sierra meadows. Our collaborative efforts in the Yuba watershed provide hydrologic and ecologic benefits throughout the Bay-Delta and provide crucial habitat for our threatened native salmonids. The regulatory and permitting process represents a significant cost and planning barrier to our projects. Agency inefficiencies associated with securing a 401 permit for the Lower Long Bar project (the only permit we were unable to secure in a timely manner) has forced us to delay the project by a year, resulting in increased project costs. The more efficient permitting process proposed in the Order will support SYRCL's efforts to restore aquatic habitats such as riparian zones, floodplains, and meadows along the Yuba River.



I. General Comments

(a) SYRCL thanks the Board for developing the Order.

SYRCL would like to thank the Board and its staff for developing a programmatic process aimed at implementing restoration projects more quickly. We believe this Order will help achieve the pace of restoration that is critically needed to address drought, climate change, and land use changes across the state. It will help support statewide efforts, such as Governor Newsom's Executive Order N-82-20 calling for conservation of 30% of California's lands by 2030. Additionally, restoration afforded by this Order will help achieve climate goals such as Governor Newsom's directive to achieve carbon neutrality by 2035, as well as international climate goals.

According to the most recent IPCC report, urgent and extensive action is the only way to prevent global warming from exceeding the 1.5°C threshold. The IPCC lists water conservation and restoration of natural infrastructure such as wetlands, forests, and floodplains, as critical endeavors in creating climate resilience for communities and absorbing carbon dioxide from the atmosphere. As climate change fuels heatwaves, wildfires, and amplifies drought and inequity, SYRCL recognizes that the Order will facilitate quick action on vital environmental efforts.

(b) SYRCL urges the Board to strengthen the definition of "restoration project" in the Draft Order.

The current definition of "restoration project" given in the Draft Order is, "one that would result in a net increase in aquatic or riparian resource area functions and/or services



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through implementation of the eligible project types, relevant general protection measures, and consideration of design guidelines... described in detail in Attachment A." SYRCL feels that this definition, even with the GPMs and design guidelines, leaves too much room for interpretation. We urge the board to shore up the definition of "restoration project." Specifically, we would like the definition to expressly state that the primary intent and main objective of the project must be restoration, otherwise it will not qualify and must go through an individual 401 certification. This explicit language will rule out bad actors and special interests who are looking to thwart the intent of the Order by including their project based on an incidental, unintentional, or unrelated increase in aquatic or riparian resources. Strengthening the definition of "restoration project" will ultimately help the Board protect its 401 authority.

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cont.

Additionally, the phrasing "*net increase* in aquatic or riparian resource area functions and/or services" (emphasis added) is vague. For example, what baseline is the net increase measured from? Who is responsible for taking and reporting these measurements? SYRCL respectfully requests that the Board revise this section to provide clarity on "net increase." Additionally, any projects that are mandated mitigation resulting from environmental degradation should be held to a strict standard regarding "net benefits." Their project should only qualify if they can demonstrate that their mitigation and restoration actions will surpass existing baseline conditions regardless of the cause of environmental degradation.

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II. Comments on the Draft Order

Application Fees (XII)

SYRCL understands that the application fee schedule is set forth in the California Code of Regulations, title 23, section 2200(a)(3). SYRCL also understands that project proponents must consult with the approving Water Board to determine the correct fee. However, this process should be made more transparent and streamlined with the General Order.

(a) The Board should increase transparency around application fees and work to reduce fees associated with restoration.

It is currently unclear which fees our organization would incur when initiating a restoration project. For example, all of our restoration projects require some degree of excavation and/or fill, whether it's filling channels for meadow restoration, or cutting floodplains for salmon. Ecological Restoration and Enhancement Projects have an application fee of \$551 and an annual fee of \$276 (*Flat Fee Category D*) OR no application or annual fee (*Flat Fee Category G(1)*). However, our projects frequently include the excavation of "...sediment or soil in shallow waters or under no-flow conditions... including channel reconstruction; embankment construction; [and] removing sediment to increase

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channel capacity...”¹ These projects could therefore be interpreted to fall under *Category A*, resulting in an application of \$2,066, a charge of \$18,414 per acre restored, and annual fees of \$1,736. The uncertainty in fee category results in an unknown cost which could amount to hundreds of thousands of dollars per project. The room for subjective interpretation of the definition of restoration as described in (b) above suggests that the fee schedule for projects may not be consistent based on the interpretation of the project by the SWRCB and the influence of outside organizations.

We encourage the Board to create a fee schedule with reduced fees for restoration projects, irrespective of how the restoration is set to occur, to (1) eliminate financial burden on small organizations and voluntary landowners that are conducting restoration, and (2) further the Board’s goal to streamline the permitting process and implement restoration projects.

(b) The Board should eliminate annual fees for monitoring restoration projects.

In the Draft Order, a Notice of Project Complete Letter will not be issued until all construction activities *including post-construction monitoring* (Draft Order XII.1.c.) (emphasis added). Monitoring efforts of restoration projects can occur for many years after project construction is completed and may start and stop pending availability of funding, volunteers, and academic interest. Requiring annual fees for the duration of project construction and all monitoring disincentivizes monitoring of restoration projects and therefore limits the ability to better understand the effects of restoration, and to improve upon them. Annual fees would complicate the extension of monitoring, especially if the extension is through additional grants, volunteers, or academic research. The goal of the Order is to streamline restoration permitting to make on-the-ground restoration easier and improve implementation timelines. An annual fee on restoration projects, especially for monitoring activities, is antithetical to the Restoration Order.

Notice of Project Complete (XIII.B.1.c)

According to paragraph 1c on page 7 of the Draft Order, “the project proponent shall submit a Request for Notice of Project Complete Letter within thirty days following completion of *all* project activities including post-construction monitoring of restoration sites” (emphasis added). Additionally, *Figure A-1 Restoration Projects Statewide Order Process Flow Chart* reflects the Notice of Project Complete is requested after both “post-construction monitoring reports,” and “Step 9: Monitor the Project and Document Findings.”

¹ WQC Fee Calculator: Step 1,(A). Accessed on 8/12/2021 at https://www.waterboards.ca.gov/resources/fees/water_quality/docs/dredgefillcalculator.xlsm



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(a) The Board should clarify what is meant by "post-construction monitoring" and clearly define expectations of post-construction monitoring (further than those described in Appendix D).

Due to the variable nature of monitoring and monitoring conditions, monitoring activities can be unpredictable. For example, some restorations projects are monitored every year in near-perpetuity, while others might be monitored every other year with volunteers, and others might even remain dormant for many years only to be monitored later as a graduate student's project. We recommend the Board institute a clearly defined period of time, (1-2 years) to monitor the project to identify issues/potential for project failure. Additionally, we encourage the Board to define its expectations more clearly for post-construction monitoring.

(b) The Board should issue Notices of Project Complete after the conclusion of construction activities.

Due to (1) variable conditions of monitoring, and (2) annual fees that would disincentivize monitoring, both mentioned above, we encourage the Board to issue Notices of Project Complete after the conclusion of construction activities.

Standard Conditions – Hydroelectric Facilities and FERC Projects (XIII.D.2)

We are heartened by SWRCB's interest in barring FERC projects from using this Order. We encourage the Board to evaluate the language in this section and make it bulletproof. We are concerned that "restoration activities [that] may involve a FERC-licensed facility" is vague language that could be subject to malevolent interpretation. This passage could be construed to include projects that aren't truly providing environmental benefits. For example, a dam operator could release spring flows and call them "restoration flows," but that should not exempt them from going through the full 401 process.

Exclusions and Prohibited Activities (XIII.G.3)

(a) iii. Use of undersized riprap

The Order would benefit from a clear legal definition of riprap. The current description is too vague to understand how it would impact restoration project design. For example, is armoring a riffle to prevent headcutting as part of a project design considered the use of riprap? The current description provides for broad interpretation which could block important features of restoration projects statewide. The Board should provide clarification as it relates to size of the material relative to the nature of the project (e.g. diameter), shape (e.g. rock vs A-jacks), and material origin (e.g. material native to the project area vs imported material).

(b) vii. Elimination of a riffle, pool, or riffle/pool complex that is not enhanced elsewhere in the project



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The Yuba watershed, like many Sierran watersheds, has been heavily impacted by historic mining activities. The lower Yuba River has an accumulation of mining sediments so vast that can be seen from space, like a scar on our watershed. The historic alteration of hydrology by dams and sedimentation by mining still negatively impacts the Yuba watershed. Often our restoration projects remove hydrologic features such as pools, *by design*. The intent of removing pools specifically is to eliminate refugia for non-native predators. Having to rebuild these pools elsewhere in a project would negate the restoration.

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Attachment A – Eligibility Requirements

We appreciate the consideration and thoroughness of the project descriptions. We especially appreciate the acknowledgement that river systems are dynamic, and that process-based restoration will lead to dynamic and changing habitat.

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III. Comments on the Draft PEIR

1.3.3 Determining the Next Steps Under CEQA

Scenario 2 demonstrates a clear example of streamlining of the process, whereby a project can tier from the PEIR such that the CEQA document for the individual restoration project only needs to include new effects not considered in the PEIR. This will help streamline restoration projects with complex and nuanced components, which SYRCL values and appreciates.

12

2.6.6 Floodplain Restoration

SYRCL appreciates the language, “Floodplains should mimic natural flooding patterns and remain flooded/inundated long enough to activate food webs.” This demonstrates that the Board understands and prioritizes the function and ecosystem services granted by floodplains.

13

2.7 Typical Construction, Operation, and Maintenance Activities and Methods

The intent of many aquatic restoration projects, especially in lower order channels, is to restore processes rather than a specific physical blueprint. SYRCL kindly requests that the Board update this section to reflect more explicit language that long-term physical maintenance of habitat restoration blueprints/plans are not required where the project’s intent is restoration of natural processes.

14

IV. Conclusion

Thank you for your consideration of SYRCL’s comments on the Proposed General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge

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Requirements for Restoration Projects Statewide and Supporting Draft Program
Environmental Impact Report. For more information, please contact Keiko Mertz, Policy
Manager, South Yuba River Citizens League, at keiko@yubariver.org.

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cont.

Sincerely,



Melinda Booth
Executive Director, South Yuba River Citizens League
313 Railroad Ave., Suite 101, Nevada City, CA 95959
530-265-5961 ext. 202, melinda@yubariver.org

Aaron Zettler-Mann
Watershed Science Director, South Yuba River Citizens League
313 Railroad Ave., Suite 101, Nevada City, CA 95959
530-265-5961 ext. 221, aaron@yubariver.org

Keiko Mertz
Policy Manager, South Yuba River Citizens League
313 Railroad Ave., Suite 101, Nevada City, CA 95959
530-265-5961 ext. 215, keiko@yubariver.org

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**STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD**

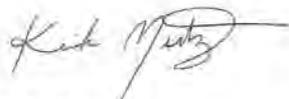
In the matter of:

**Proposed General Order for Clean Water Act Section 401 Water Quality
Certification and Waste Discharge Requirements for Restoration
Projects Statewide and Supporting Draft Program Environmental Impact
Report**

Proof of Service

I hereby certify that I have this day served by electronic mail the foregoing comments by South Yuba River Citizens League on the Proposed General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide and Supporting Draft Program Environmental Impact Report.

Executed at Nevada City, California this 13th day of August, 2021.



Keiko Mertz
313 Railroad Ave. Suite 101,
Nevada City, CA 95959
keiko@yubariver.org
530-265-5961 ext. 215

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SYRCL-1 South Yuba River Citizens League

Responses to Comments from SYRCL-1 South Yuba River Citizens League

SYRCL-1-1:

The State Water Board appreciates South Yuba River Citizens League’s (SYRCL) comments regarding the Draft Order and Draft PEIR as well as information on SYRCL.

SYRCL-1-2:

The State Water Board appreciates SYRCL’s support regarding the Order.

SYRCL-1-3:

The definition of a restoration project was developed based on input from numerous agencies to be consistent with multiple permitting agency regulatory practices either existing or under development (e.g., CDFW, NMFS, USFWS, USACE). All projects must meet the definition of a restoration project (Order, Section V. Project Description), be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4), and adhere to programmatic sideboards, including adopting protection measures and design guidelines (Order, Attachment A, A.5 and A.6), and undergo a pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3). The approving Water Board will determine whether a project meets the definition of a restoration project. Although the definition of restoration project includes mitigation projects, the Order shall not be construed as authorization or any compliance determination for any related underlying project or activity.

See also Master Response 1: Definition of Restoration Project and response to comments CBD-1-6, and CBD-1-7 for additional details. No revisions are included in the Order or PEIR because of this comment.

SYRCL-1-4:

In conjunction with technical assistance received from the approving Water Board during a required pre-application consultation meeting, project proponents would need to demonstrate a net increase in aquatic or riparian resource area, functions and/or services through implementation of the eligible project types, relevant protection measures, and design guidelines that would be compared against baseline conditions (conditions prior to restoration). The project proponent would further be responsible for monitoring and reporting consistent with Order requirements (Order Section XIII.G.4.). The approving Water Board will determine whether a project meets the definition of a restoration project. All projects, including mitigation projects, would be held to the same standard for purposes of authorization under the Order; however, the applicant may be required to conduct separate monitoring and reporting to demonstrate that the project is meeting its mitigation requirements. No revisions are included in the Order or PEIR because of this comment.

SYRCL-1-5:

As presented in Order Section XII. Application Fees, the approving Water Board will confirm the correct fee amount according to current fee regulations at the time of NOI submittal. “Authorization of a project under this Order is not determinative of whether a

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project is a restoration project in the context of the fee schedule. Projects authorized under this Order may not automatically qualify for a particular fee discharge category.”

In the 2021-2022 fee schedule, a reduced fee is available for only restoration projects that meet the definition of an Ecological Restoration and Enhancement Projects (EREP) set forth in the Dredge or Fill Procedures. Not all projects authorized under the Order would meet the definition of an EREP. The fee structure, including how costs are structured for restoration projects, may change in the future. The fee schedule is adopted on an annual basis by the State Water Board. Interested stakeholders may find more additional information about the fee schedule on the [State Water Board's Fees website](https://www.waterboards.ca.gov/resources/fees/) at <https://www.waterboards.ca.gov/resources/fees/>.

SYRCL-1-6:

Order XIII.G.4. Monitoring Plan requires project proponents to develop a monitoring plan that identifies measurable performance standards and success criteria, methods to determine whether performance standards have been met, a timeframe and responsibility party for achieving the performance standards, and a reporting schedule. Further, Order XIII.I.3. Restoration and Monitoring Impacts prescribes extending the monitoring period if performance standards have not been met. Order Attachment D, Reporting and Notification Requirements apply to all projects authorized under the Order. As presented in Order Attachment D, the approving Water Board must issue a Notice of Project Complete Letter to affirm the project has completed applicable post-construction monitoring requirements, permit requirements, and achieved performance standards. The Notice of Project Complete Letter would not be issued until the project has achieved performance standards.

See response to comment SYRCL-1-5 above for a discussion pertaining to the fee schedule.

SYRCL-1-7:

As provided in response to comment SYRCL-1-6 above, the monitoring plans will be commensurate based on the complexity and circumstances of each project. The monitoring plans will be developed by the project proponent. The project completion criteria (i.e., completed applicable post-construction monitoring requirements, permit requirements, and achieved performance standards) will be established with approving Water Board input but developed by the project proponent. The approving Water Board will review/comment on the plans, but the Order cannot prescribe standard statewide monitoring requirements due to the variability of projects. The timing of issuance of the Notice of Project Complete Letter will be determined in close coordination with the project proponent and approving Water Board regarding agreement on the status of performance standards.

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SYRCL-1-8:

The Draft Order is clear regarding restrictions and/or prohibitions for projects associated with FERC-licensed facilities. As described in the Order, Attachment A, Section A.4.:

“...Where restoration activities may involve a FERC-licensed facility, the restoration project may be covered by this Order only upon receipt of written approval by the Deputy Director for the Division of Water Rights or their designee...”

Further, Order Section XIII.D.2 states:

“Certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a FERC license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to Subsection 3855(b) of this Chapter and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought...”

No revisions are included in the Order or PEIR because of this comment.

SYRCL-1-9:

The description of categories of restoration projects and associated design guidelines provide adequate information of what constitutes materials that could be used and/or would be prohibited under the Order. Further, the Order provides flexibility in designs based on project site-specific conditions and design objectives, and all projects are required to undergo pre-application consultation with the approving Water Board, which allows for specific project needs to be discussed. No revisions are included in the Order or PEIR because of this comment.

SYRCL-1-10:

Comment regarding unique qualities (e.g., history of mining and presence of legacy tailings) of the Yuba River is noted. All projects must meet the definition of a restoration project (Order, Section V. Project Description) and the conditions (Order, Section XIII.) in the Order. Projects not meeting the conditions of the Order can be authorized through other permitting methods.

In order to address these unique features of the Yuba River, as well as other rivers throughout the state, the Order (and PEIR) text for prohibitions regarding the elimination of a riffle, pool, or riffle/pool complex that is not replaced/enhanced elsewhere by the project was revised as follows (Order Section XIII.G.3.vii):

“Elimination of a riffle, pool, or riffle/pool complex that is not replaced/enhanced elsewhere by the project. (Note: In some instances, a restoration project may affect or modify a riffle/pool complex depending on project-specific conditions and design objectives. For example, a culvert removal may affect an existing pool or restored geomorphology of a highly modified river may result in net reduction of certain features. These types of projects would be allowed under the Order.)”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

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SYRCL-1-11:

The State Water Board appreciates SYRCL support regarding the Order and PEIR project description.

SYRCL-1-12:

The State Water Board appreciates SYRCL support regarding the Order and PEIR project description.

SYRCL-1-13:

The State Water Board appreciates SYRCL support regarding the Order and PEIR project description.

SYRCL-1-14:

Design guidelines specifically state that the design of restoration projects should be based on a process-based approach that considers the multiple interactions of physical, chemical, and biological processes over a wide variety of spatial and temporal scales in order to identify the root causes of the problems, and to confirm the proposed solution (project) will be effective and appropriate given the physical setting (see Kondolf et al., 2001; Simon et al., 2007; Smith and Prestegard, 2005; Wohl et al, 2005, Wohl et al., 2015).

Order XIII.B.3.d. Project Modifications states, "Minor or non-material changes may be addressed with an 'Order Deviation' as provided in Attachment F. The approving Water Board will review the notification and determine whether the deviation can be approved under this Order or is subject to additional permitting requirements."

Therefore, if minor or non-material changes are required, an Order deviation(s) should be reported to the approving Water Board (per the instructions in Attachment F) for review and authorization prior to implementation at the project site.

No revisions are included in the Order or PEIR because of this comment.

SYRCL-1-15:

The State Water Board appreciates SYRCL's comments on the Draft Order and Draft PEIR and notes the contact's name and number for SYRCL.

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TCD-1 Trinity County District 3 Supervisor

TCD-1

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000



Submitted Via e-mail to: commentletters@waterboards.ca.gov

Subject: **Comments – Restoration Projects Statewide Order**

Dear Ms. Townsend:

I submit these comments to you as a Trinity County District 3 Supervisor. I represent constituents who live along, recreate and make their living on the Trinity River.

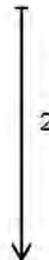
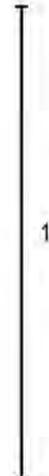
I object to any loosening of regulatory requirements or water quality objectives and standards for the Trinity River Restoration Program (TRRP) or the Bureau of Reclamation. TRRP activities are adversely affecting beneficial uses of the Trinity River through increased turbidity as a result of mainstem projects such as side channels and gravel placement. The long-awaited benefits of a restored fishery to compensate for the significant environmental impacts identified in TRRP's CEQA documents has not materialized.

Most recently one of the TRRP member agencies placed gravel in the river at Lewiston without the permission of the Trinity Management Council, without the knowledge of Mr. Dixon, and without any public notice. Numerous complaints were made to me and through social media about elevated turbidity in the river. All of this is now with the backdrop of raging wildfires along the Trinity River and its watershed with imminent erosion and sedimentation expected this winter.

The TRRP is operating under a stale Programmatic EIR from 2009 that should be revised every five years, according to CEQA Guideline Section 15162. Clearly this requires a subsequent EIR to the Master EIR or a supplement to it. Many of the current project types such as engineered logjams are not even discussed in the 2009 MEIR.

Consider the following:

- The Water Right Order 90-5 temperature compliance point at Douglas City cannot be monitored because the temperature probe has been buried since April 15.
- Despite a requirement in 90-5 to not harm the Trinity River, the Bureau of Reclamation's Temperature Management Plan didn't even give predictions of temperatures in the Trinity River, let alone an ability to monitor Douglas City. The SWRB approved the plan without any discussion of protecting the Trinity River.
- The Bureau of Reclamation is considering additional drawdown of Trinity or Whiskeytown to make up for its overcommitment of water.



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- The Water Quality Control Plan for the North Coast Region still contains a 1991 "Interim Action Plan for the Trinity River" that pre-dates the Trinity Record of Decision by nine years. Where is the final action plan for the Trinity River 30 years later?
- Water Quality Order 89-18 and Water Right Order 90-5 both call for a Trinity River water right proceeding to consider amendment of Reclamation's state water permits to ensure no harm is done to the Trinity River from CVP operations. We are still waiting while hundreds of millions are spent on disruptive and unsuccessful restoration projects.
- The TRRP claims that fine sediment in the Trinity River is no longer a problem, yet the Trinity River is still listed as impaired under the SWRCB's Section 303(d) Impaired Waterbodies List. The intensity of the fires and subsequent erosion this winter should eliminate any debate on this issue.

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In conclusion, I'd be all in favor of providing regulatory ease for upslope restoration projects to button up our watershed, decrease erosion, and improve fish passage, but the TRRP has consistently underfunded those projects. The TRRP's mainstem projects and gravel placement activities should be put under a moratorium for further 401 certifications until a new or supplemental Master EIR is approved. Loosening their regulatory restrictions for turbidity is exactly the opposite of what's needed at this time.

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Sincerely,

Liam Gogan

Cc: Representative Jared Huffman
North Coast Regional Water Quality Control Board
Ernest Conant, Regional Director Bureau of Reclamation
Michael Dixon, TRRP

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TCD-1 Trinity County District 3 Supervisor

Responses to Comments from TCD-1 Trinity County District 3

TCD-1-1:

This Order does not authorize specific projects. All projects must meet the definition of a restoration project (Order, Section V. Project Description), be consistent with categories of restoration projects described in the Order (Order, Attachment A, A.4), and adhere to programmatic sideboards, including adopting protection measures and design guidelines (Order, Attachment A, A.5 and A.6), and undergo a pre-application consultation with the approving Water Board (Order, Attachment A, A.5.3).

TCD-1-2:

Thank you for your comment. The Order does not impact any previously authorized Orders, projects, or actions

TCD-1-3:

The State Water Board appreciates Mr. Liam Gogan's comments regarding the Order. The Trinity River Restoration Program (TRRP) is a large, ongoing restoration program in the region of the North Coast Regional Board. Projects related to TRRP are reviewed by the Regional Board under an existing programmatic 401 water quality certification for the Program. The Regional Board review includes consideration of stringent water quality objectives. The Order would not supersede the existing programmatic certification for the TRRP nor loosen regulatory restrictions pertaining to turbidity or any regional water quality objective.

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TRPA-1 Tahoe Regional Planning Agency

TRPA-1

	TAHOE REGIONAL PLANNING AGENCY	Mail PO Box 5310 Stateline, NV 89449-5310	Location 128 Market Street Stateline, NV 89449	Contact Phone: 775-588-4547 Fax: 775-588-4527 trpa.gov		LAKE TAHOE ENVIRONMENTAL IMPROVEMENT PROGRAM
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August 20, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000

RE: Comments – Restoration Projects Statewide Order

To the State Water Resources Control Board:

The Tahoe Regional Planning Agency (TRPA) is strongly supportive and deeply encouraged by the leadership that the Water Board has shown in developing this draft Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (General Order) and the associated Programmatic Environmental Impact Report (PEIR). TRPA is a participating organization in the California Landscape Stewardship Network (CLSN) -a statewide network that coordinates efforts to increase the pace and scale of landscape-scale stewardship. The CLSN facilitated a series of roundtables with state agencies and restoration practitioners across the state to identify ways to advance beneficial restoration. The 2020 report, *Cutting Green Tape, Regulatory Efficiencies for a Resilient Environment*, includes recommendations that came out of the roundtable. The draft General Order resonate clearly with the goals of Cutting the Green Tape and directly address Recommendation #6. The General Order and PEIR provide an important strategy for removing barriers and increasing ecological restoration in California.

TRPA supports the adoption of this General Order as soon as possible; we would like to suggest the following modification to ensure that it is consistent with the spirit of Cutting the Green Tape and is able to maximize critical efficiencies that will expedite implementation of urgently needed ecological restoration at-scale.

Please consider the following recommendations and comments as you finalize the General Order and associated PEIR:

- General Order Recommendation 1: Section I.3 Restoration and Monitoring of Impacts (Page 18)

Restoration to either pre-project or future desired conditions often times takes longer than 365 days. We recommend extending this to two years to allow adequate time for vegetation to become established. Reconsider compensatory

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mitigation to offset temporal impacts. That adds time and money to restoration projects. Instead, we encourage the focus to be on successful restoration and adaptive management of restoration plans if performance standards are not being met.

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- General Order Recommendation 2: The existing General Order for small restoration projects covers projects up to 5 acres or 500 linear feet of streambank/coastline restoration. The proposed draft General Order appears not to have a size limit, but rather relies on a set of design criteria, general protection measures (GPM), and mitigation measures for projects that qualify under the General order. Please clarify that this is accurate, and that size is not a factor in projects being considered for the General Order. TRPA agrees with this update since size is not always equivalent to impacts.

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- General Order Recommendation 3: Section IX, Avoidance and Minimization (page 3)

Aquatic restoration requires working in ecologically sensitive ecosystems. We believe the General Order would benefit from a clear acknowledgement in this section that this Order specifically anticipates (a) that projects covered under it will take place in areas of high biological and ecological sensitivity and (b) that while construction related impacts to these resources will be avoided and minimized to the greatest extent practicable, they may be unavoidable in order to achieve the project goals and objectives. These statements may seem obvious, but from our experience as practitioners, it is critical to explicitly state this in the General Order to ensure that staff understand that construction related impacts are sometimes unavoidable when implementing critical restoration work.

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- General Order Recommendation 4. Section XII, Application Fees (page 4)

This section focuses on use of the dredge and fill calculator to determine fees for projects covered under the General Order. The dredge and fill calculator and fee schedule contain a suite of Flat Fees for unique project types include Category D: Ecological Restoration and Enhancement Projects. In order to both reduce confusion for the applicant and Regional Board staff regarding applicable fees as well as increase consistency with the spirit of Cutting Green Tape, we strongly

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recommend modifying this section to articulate that projects deemed to fit under the General Order should also fit within the flat fee Category D. Not only would this modification make it easier for restoration practitioners to anticipate the fees associated with the obtaining this permit, but it would be consistent with Cutting Green Tape in the state's desire to incentivize larger, more ecologically meaningful projects. Since the traditional dredge and fill calculator fees increase with the area or volume of dredge, the traditional approach results in financial penalties to larger projects, creating a financial disincentive to pursue larger projects. This section should also list entities that are not subject to application fees, as a lot of state agencies are not subject to fees.

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- General Order Recommendation 5. Section E.9 General Compliance, Construction General Permit (page 13).

Through the Cutting Green Tape Initiative, fellow participants in the CLSN have worked extensively with Water Board staff on review of the Construction General Permit. We applaud the Water Board's 402 staff on working collaboratively to craft language in the new Proposed Construction General Permit that explicitly reduces redundancy and confusion for Regional Board staff and project applicants regarding the applicability of CWA § 401 and/or § 402 to projects within waters of the state. In the proposed Construction General Permit, Section I. Findings, Item 12, Board staff developed language that we believe effectively addresses the issues of redundancy.

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“Stormwater discharges from dredge spoil placement that occur outside of waters of the state (upland sites) and that disturb one or more acres of land surface from construction activity are covered by this General Permit. This General Permit does not cover the discharge of dredged or fill material to waters of the state. Construction projects that include the discharge of dredged or fill material to waters of the state should contact the applicable Regional Water Board to obtain authorization for the discharge of dredged or fill material to waters of the state.”

We urge the Water Board to insert similar language in the General Order in *Section E.9 General Compliance, Construction General Permit and in Appendix A (page A-30) WQHM-2: Storm Water Pollution Prevention Plan and WQHM-3: Erosion Control Plan*. As currently written in this section of the General Order,

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the text states that, in any case “where disturbance is over 1 acre, the applicant shall prepare and implement a Stormwater Pollution Protection Plan (SWPPP)”. These sections would benefit from

1. The clarity provided in the proposed Construction General Permit that notes that the trigger for the CGP/SWPPP is 1 acre of disturbance “outside of waters of the state”.
2. Replacing “shall” with “should consult with the appropriate Water Board staff on whether to ...”.

As practitioners, we regularly experience this confusion and what appear to be inaccurate requirements placed on applicants through the 401 processes in regard to compliance with Construction General Permit. To this end, fellow participants in the CLSN have been working extensively with Water Board staff to obtain clarity on when a Construction General Permit is triggered and when it is not. Ensuring that language in this General Order is consistent with the language in the proposed draft Construction General Permit is critical for consistency between Water Board programs and consistency with the recommendation to reduce redundancy between §401 and §402 found in Appendix A of the November 2020 Cutting Green Tape Report. For aquatic restoration projects this nuance can have both significant cost implications and more importantly, significant implications for project success. SWPPP requirements have been developed and vetted for application in uplands, not waters of the state. Conversely, 401 conditions have been specifically designed for application in waters of the state and areas directly adjacent to waters of the state. As such, we strongly recommend utilizing the text from the draft Construction General Permit in the General Order to clarify the triggers for §401 and §402 compliance.

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- General Order Recommendation 6: Section 3. Exclusions and Prohibited Activities # ix (page 16)

The current language in subsection ix is as follows:

“With the exception of storage projects to reduce low flow stream diversions (see Section 1.4.5, Water Conservation in Attachment A) offchannel/side-channel habitat projects that require the installation of a flashboard dam, head gate, or other mechanical structures.”

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This exclusion is written in a manner that is extremely hard to understand. We recommended moving the text around and making the following changes to increase the clarity (note letters and words that have been added are in italics):

“Installation of a flashboard dams, head gates, or other mechanical structures, with the exception of storage projects to reduce low flow stream diversions (see Section 1.4.5, Water Conservation in Attachment A) *and* offchannel/side-channel habitat projects that require them in *order to meet ecological goals.*”

This recommendation should also be applied to Section A5.5 in Appendix A on page A-42, where the language is repeated.

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- General Order Recommendation 7: Appendix A. Flow Chart for the Process (page A-2)

The flow chart and process description in Appendix A appear to show the Regional Boards committing to approval of projects under this General Order within 30 days of receipt of a complete Notice of Intent (NOI). This chart, in Step 5, seems to indicate that the Regional Boards initiating a 30-day review for completeness after they received an NOI. In Step 6, the Completeness Determination appears to directly trigger a Notice of Applicability (NOA) or Notice of Exclusion (NOE), but there is no timeline included. Without a timeline, the chart can be interpreted to be illustrating that the NOA/NOE decision happens at the time of the Completeness Determination. Is there a step missing in this flow chart or is this General Order committing to the NOA/NOE as part of the Completeness Review? If so, we strong applaud the Water Board for this streamlined approach to project approval permit decision to emphasize the importance of timely review of permit applications for these critical projects. If not, we recommend the Water Board modify this flow chart so that applicants and staff have a clear understanding of realistic timelines for approval. If the 30-day period is only for completeness and will not culminate in the NOA/NOE, we urge the Water Board to add very specific timelines for completing the NOA/NOE after the Completeness Review is done. We believe 60 days is reasonable to accomplish this and gives Water Board staff 90 days in total review time. Finally, this timeline would be consistent with both California Department of Fish and

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Wildlife's Lake and Streambed Alternation Agreement timelines and with the current 'reasonable review period' being identified by USACE for verification of a project under a Nationwide Permit (NWP). We recommend the Water Board include a 60-day period for a permit decision, which would allow for up to 4 months of coordination between a project proponent and Regional Board staff prior to making a permit decision (including pre-application permit and completeness review).

8
cont.

- General Order Recommendation 8: Appendix A CEQA Flow Chart (Figure A-2, Page A-3)

This flow chart indicates it is up to the applicant to determine if the project is covered by the Statewide Order PEIR. At what point in the process should that be confirmed with the appropriate water board? The Pre-application meeting might be too late if water board feels like a separate CEQA document should be prepared. Also, can applications supplement the Statewide Order PEIR? For example, if there is only one impact that is not covered that is easily addressed through either GPMs or mitigation measures may that be addressed through an addendum, or would it trigger a whole separate CEQA?

9

- General Order Recommendation 9: Appendix A GPM-4 Environmental Awareness Training (Page A-26)

Is it up to the agency-approved biologist or resource specialist to determine that the training is adequate or even necessary?

10

- PEIR Recommendation 1: Mitigation Measure GEO-3: Conduct Individual Restoration Project Geotechnical Investigation and Report.

This mitigation measure requires "a geotechnical investigation be performed for any restoration project that would result in potentially significant grading activities." It is unclear from the language in this measure what amount of grading would qualify as "significant". Moreover, many enhancement and restoration projects in managed wetland and working landscapes require "significant" earth moving (e.g., over 1000 cubic yards) in the form of shallow

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swales, grading or levelling of fields, and constructing habitat features (e.g., islands, low elevation berms) in areas that have no potential for geotechnical risk. We recommend this mitigation measure be revised to only require a geotechnical investigation where the nature of the project warrants consideration of geotechnical constraints, such as work on flood control levees or in areas with certain soil types subject to impacts such as liquefaction. In those instances, a geotechnical report should only apply to areas where consideration of those constraints are needed to inform design.

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11
cont.

- PEIR Recommendation 2: Mitigation Measure GEO-6: Implement Measures for Waterway Construction Activities.

This mitigation measure states:

“For restoration projects that could cause subsurface seepage of nuisance water onto adjacent lands, the following measures shall be implemented:

- Perform seepage monitoring studies by measuring the level of shallow groundwater in the adjacent soils, to evaluate baseline conditions. Continue monitoring for seepage during and after project implementation.
 - Develop a seepage monitoring plan if subsurface seepage constitutes nuisance water on the adjacent land.
 - If adjacent land is not usable, implement seepage control measures, such as installing subsurface agricultural drainage systems to avoid raising water levels into crop root zones. Cutoff walls and pumping wells can also be used to mitigate the occurrence of subsurface nuisance water.”

12

As written, the third bullet implies some obligation on the restoration project to correct existing seepage issues on an adjacent property unrelated to the project. We recommend this bullet be revised to state: **“If it is determined that seepage from the project is responsible for making adjacent lands not usable,.....”**

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Thank you for the opportunity to share our comments and for your agency's hard work and collaboration in preparing these documents. Also, thank you for your leadership and support of *Cutting Green Tape*. Please contact me if you would like to discuss any of TRPA's comments at sfriedman@trpa.org or at (775) 901-2800.

13

Sincerely,



Shannon Friedman
Senior Planner
Environmental Improvement Division
Tahoe Regional Planning Agency

Shannon
Friedman

Digitally signed by Shannon
Friedman
DN: cn=Shannon Friedman, o=Tahoe
Regional Planning Agency, ou,
email=sfriedman@trpa.gov, c=US
Date: 2021.08.20 13:24:49 -07'00'

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TRPA-1 Tahoe Regional Planning Agency

Responses to Comments from TRPA-1 Tahoe Regional Planning Agency

TRPA-1-1:

The State Water Board appreciates Tahoe Regional Planning Agency's (TRPA) comments supporting adoption of the Order.

TRPA-1-2:

Certain restoration projects, especially those relying on restoration of natural processes, may require longer than 365 days to complete actions resulting in impact(s). The Order (Section XIII.I.3) was revised as follows:

“If restoration of temporary and permanent impacts to waters of the state is not completed within three hundred sixty-five (365) days of the start of post-construction monitoring (or a schedule approved by the Water Board during review of the NOI and supplemental materials), the approving Water Board may require the following: compensatory mitigation to offset temporal loss of waters of the state; remedial actions (e.g., re-seeding); and/or extension of the monitoring period if performance standards have not been met or are not likely to be met.”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

TRPA-1-3:

The comment is correct in its characterization of size limits for the Order for Small Habitat Restoration Projects. As described in Order Section IV, Project Purpose, this Order intends to provide authorization for restoration projects that meet the eligibility criteria in this Order, but do not qualify for authorization under the Order for Small Habitat Restoration Projects.

TRPA-1-4:

The Order and PEIR acknowledge that restoration projects will take place in highly sensitive habitats and that potential impacts, including significant and unavoidable impacts, may occur, even with implementation of general and species protection measures, and PEIR mitigation measures (PEIR Sections 3.5 and 3.6). Per CEQA Guidelines Section 159093, the State Water Board developed a Statement of Overriding Considerations to balance, as applicable, the benefits of restoration projects authorized under the Order against its unavoidable environmental risks when determining whether to adopt the Order. No revisions are included in the Order or PEIR because of this comment.

TRPA-1-5:

As presented in Order Section XII. Application Fees, the approving Water Board will confirm the correct fee amount according to current fee regulations at the time of NOI submittal. “Authorization of a project under this Order is not determinative of whether a project is a restoration project in the context of the fee schedule. Projects authorized under this Order may not automatically qualify for a particular fee discharge category.”

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In the 2021-2022 fee schedule, a reduced fee is available for only restoration projects that meet the definition of an Ecological Restoration and Enhancement Projects (EREP) set forth in the Dredge or Fill Procedures. Not all projects authorized under the Order would meet the definition of an EREP. The fee structure, including how costs are structured for restoration projects, may change in the future. The fee schedule is adopted on an annual basis by the State Water Board. Interested stakeholders may find more additional information about the fee schedule on the [State Water Board's Fees website](https://www.waterboards.ca.gov/resources/fees/) at <https://www.waterboards.ca.gov/resources/fees/>.

TRPA-1-6:

See Master Response 2: Construction General Permit and SWPPP Requirements.

The Order is not an NPDES permit. It does not provide authorization to discharge under Clean Water Act Section 402. The Order would not alter the scope of activities that may be required to obtain an NPDES permit or the requirements of any NPDES permits. As stated in Order Condition XIII.G.2. Pre-Application Consultation, the approving Water Board will review draft project materials and provide project-specific guidance during the pre-application consultation. During the pre-application consultation, the project proponent and the approving Water Board may discuss whether the project proponent must obtain or maintain coverage under any other permits, such as NPDES permits. Early coordination with the approving Water Board is encouraged to confirm compliance requirements.

TRPA-1-7:

As stated in Order Condition XIII.G.2. Pre-Application Consultation, the approving Water Board will review draft project materials and provide project-specific guidance during the pre-application consultation. During the pre-application consultation, the project proponent and the approving Water Board may discuss whether the proposed project is considered an excluded or prohibited activity (Order, Section XIII.G.3.) under the Order. If the proposed project is excluded or prohibited under the Order, the project may be authorized under an alternative permit method per the approving Water Board.

No revisions are included in the Order or PEIR because of this comment.

TRPA-1-8:

As described in the Order, the permitting Water Board will make a completeness determination within 30 days of receiving an NOI. The Order does not set forth a specific timeline for issuing an NOA/NOE. The intent of the Order is to streamline project reviews and approvals, but the amount of time needed to make a decision on an NOI will depend on project complexity.

No revisions are included in the Order or PEIR because of this comment.

TRPA-1-9:

PEIR Section 1.1, Introduction and Overview of the Order includes information on determining the next steps under CEQA for restoration projects authorized under the Order. This section defines the term “project proponent.” If the project proponent is not a public agency and the project proponent implementing the individual restoration project

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is a private entity (e.g., applicant), that party would coordinate with the public agency with principal responsibility to approve the project, as described in State CEQA Guidelines Section 15050 and 15051. Once an individual restoration project is identified, the project proponent would follow the steps identified in Figure 1-2 Restoration Projects Statewide Order CEQA Process Flow Chart (PEIR, Section 1.1).

It is recommended that the project proponent contact the approving Water Board as soon possible for a pre-application consultation meeting which could be before or during the preparation of the CEQA document.

If an individual restoration project or associated later activity would have impacts that were not fully described or new impacts not examined in this PEIR, the CEQA lead agency would need to prepare an initial study to determine the appropriate environmental document required. Should a separate environmental document be needed—whether that document is a notice of exemption, an addendum or supplemental document to this PEIR, or a document that tiers from or incorporates by reference this PEIR (i.e., negative declaration, mitigated negative declaration, or EIR)—the PEIR could be used to simplify the task of preparing the later environmental document (State CEQA Guidelines Section 15168[d]).

No revisions are included in the Order or PEIR because of this comment.

TRPA-1-10:

Based on the nature of the project activities, the project proponent in coordination with the CEQA lead agency (and in consultation with the approving Water Board) will make a determination regarding whether any individual GPM is necessary to reduce impacts. If GPM-4 is included, training would be required. Training materials may be reviewed for adequacy by the same agency(ies) that approve the biologist or resource specialist.

TRPA-1-11:

In response to this comment (and comment DU-1-16), the PEIR Mitigation Measure GEO-3 (PEIR Section 3.9.4 Impacts and Mitigation Measures) was revised as follows to help clarify what might qualify as significant grading activities and when geotechnical investigation may be warranted:

“Mitigation Measure GEO-3: Conduct Individual Restoration Project Geotechnical Investigation and Report

When a restoration project involves ~~An individual restoration project's geotechnical investigation shall be performed and a geotechnical report prepared for any restoration project that would result in potentially significant grading activities and warrants consideration of geotechnical factors and/or constraints (e.g., work on flood control levees, work in areas with certain soil types subject to liquefaction), the project proponent shall conduct and prepare a geotechnical report to address potential issues and concerns.~~ The geotechnical report shall include a quantitative analysis to determine whether excavation or fill placement would result in a potential for damage due to soil subsidence during and/or after construction. Project designs shall incorporate measures to reduce the potential damage to a less-than-significant level. ...”

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These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

TRPA-1-12:

In response to this comment, PEIR Mitigation Measure GEO-6 (PEIR, Section 3.9.4) was revised as follows.

~~“If adjacent land~~ “If it is determined that seepage from the restoration project is responsible for making adjacent lands not usable, implement seepage control measures, such as installing subsurface agricultural drainage systems to avoid raising water levels into crop root zones. Cutoff walls and pumping wells can also be used to mitigate the occurrence of subsurface nuisance water.”

This revision does not change the analyses or conclusions in the Draft Order or Draft PEIR.

TRPA-1-13:

The State Water Board appreciates TRPA’s comments supporting the adoption of the Order and notes the contact name and number for TRPA.

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TRRP-1 Trinity River Restoration Program

TRRP-1



Trinity River Restoration Program

P.O. Box 1300, 1313 South Main Street, Weaverville, California 96093
Telephone: 530-623-1800, Fax: 530-623-5944

NC-152
2.1.4.13

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 11, 2021

Ms. Jeanine Townsend
State Water Resources Control Board
P.O. Box 100
Sacramento, California 95812-2000



Dear Ms. Townsend:

I write this letter in support of the State Water Resource Control Board's efforts to develop programmatic Clean Water Act permitting to streamline the regulatory requirements for large restoration projects. The U.S. Bureau of Reclamation's Trinity River Restoration Program (TRRP) has worked with North Coast Regional Water Quality Control Board, as our California Environmental Quality Act (CEQA) lead, for years during implementation of large-scale restoration projects on the Trinity River. We applaud your intent as we know the cost and difficulties of permitting such large projects. This type of "large scale" regulatory support is essential to implementing these projects in a timely fashion, so that it becomes easier to legally do the right thing while putting restoration on the ground.

1

Today, as wildfires raze our region, it seems promising that this proposed regulatory streamlining might assist in speeding work along the river while also dovetailing with upslope programmatic vegetation management in support of Cal Fire's California Vegetation Treatment Program. Together these could encourage community protection while also providing trees that are necessary for in-river restoration projects. We need this type of forward-thinking regulatory support for beneficial projects that assist restoration from the ridgetop to the floodplain.

2

As I review the details of your proposal, I am hopeful that your efforts might reduce regulatory challenges which we have encountered and support additional restoration work in our region. As much as this programmatic EIR supports broad restoration objectives and categories, it also requires several site-specific details. For instance, it appears that the Project Details (e.g., size of rock stabilization or allowable turbidity levels) need to be approved on a project-specific basis. Because of that level of required detail, I question whether the proposed large-scale permitting of restoration could specifically streamline our Trinity River work when compared to projects already authorized under our existing Master EIR¹ for restoration activities (NCRWQCB and USBR 2009). That said, while the proposed regulatory effort might not directly benefit our work, it has the potential to expedite other projects that might synergistically benefit our own.

3

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Finally, I offer a couple specific comments related to special species protection. I notice that you have included a programmatic Biological Opinion to cover large-scale restoration projects for federal Endangered Species Act requirements that pertain to anadromous species. However, I don't see similar programmatic coverage included for federally listed terrestrial wildlife. How can we assure that the USFWS will work with programmatic applicants to streamline their permitting? Similarly, I would like to know how you propose to work with the California Department of Fish and Wildlife (CDFW) to ensure that your Programmatic EIR may be used by that agency to meet their needs to protect California listed species and so that they can efficiently provide Lake and Streambed Alteration Agreements for your permitted large-scale restoration projects.

4

Thank you for the opportunity to comment. We support your efforts to cut the green tape in the way of restoration. If the TRRP can assist with the effort in our region, we certainly would appreciate the opportunity, and I would encourage you to reach out to Brandt Gutermuth (fgutermuth@usbr.gov). More information about our program is located at www.trrp.net. For and I can be reached at Mdixon@usbr.gov or (530) 623-1800.

5

Sincerely,

Mike Dixon
TRRP Executive Director

¹ North Coast Regional Water Quality Control Board and U.S. Bureau of Reclamation. 2009. Channel rehabilitation and sediment management for remaining Phase 1 and Phase 2 sites. Master environmental impact report, environmental assessment/environmental impact report for the Trinity River Restoration Program (TRRP). Trinity River Restoration Program, Weaverville, California. Available: <https://www.trrp.net/library/document?id=366>.

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TRRP-1 Trinity River Restoration Program

Responses to Comments from Trinity River Restoration Program

TRRP-1-1:

The State Water Board appreciates Trinity River Restoration Program's (TRRP) comments supporting adoption of the Order.

TRRP-1-2:

The State Water Board appreciates TRRP information on CalFire's California Vegetation Treatment Program.

TRRP-1-3:

Because the unique and diverse characteristics of project sites and potential projects throughout the State, the Order requires applicants to provide project-level details as part of the application process in order to be eligible for authorization. If an individual restoration project or associated later activity would have impacts that were not fully described or new impacts not examined in this PEIR, the CEQA lead agency would need to prepare an initial study to determine the appropriate environmental document required. Should a separate environmental document be needed—whether that document is a notice of exemption, an addendum or supplemental document to this PEIR, or a document that tiers from or incorporates by reference this PEIR (i.e., negative declaration, mitigated negative declaration, or EIR)—the PEIR could be used to simplify the task of preparing the later environmental document (State CEQA Guidelines Section 15168[d]).

TRRP-1-4:

Efforts are ongoing to coordinate and align the Order and PEIR across multiple programs, including with the Cutting the Green Tape initiative identified by the California Natural Resources Agency. However, the Order pertains to Water Board authorizations only.

TRRP-1-5:

The State Water Board appreciates TRRP's comments regarding the Draft Order and Draft PEIR and notes the contact name and number for TRRP.

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**UAIC-1 United Auburn Indian Community, Tribal Historic Preservation
Department**

UAIC-1

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

From: [Anne Starkey](#)
To: [commentletters](#)
Cc: [Anna Cheng](#)
Subject: UAIC Comments - Proposed General Order for Restoration Projects Statewide
Date: Thursday, July 15, 2021 10:00:17 AM
Attachments: [image001.png](#)



EXTERNAL

Good afternoon,

On behalf of the United Auburn Indian Community, Tribal Historic Preservation Department, thank you for the opportunity to provide comments on the Proposed General Order for Restoration Projects Statewide. We received the chapter for Tribal and Cultural Resources and have the following comments:

1. We appreciate the use of the work “indigenous” in lieu of the term “prehistoric”. Thank you for that.
2. The Environmental Setting for the TCR chapter should NOT be a rehash of the same info from the Cultural Resources chapter. This is unacceptable. The Environmental Setting for the TCR chapter should be unique to the chapter and discuss the contemporary values of Tribal Nations and how they are stewards of their ancestors sites and landscapes. Please update this section to accurately reflect the background for TCRs.
3. The Mitigation Measures are written for archaeological resources and do not include tribal values. They need to be revised to be specific to TCRs and SEPARATE mitigation measures for both TCRs and Cultural resources. Below are what TCR mitigation measure SHOULD be in RED. Please revise each of the mitigation measures to be specific for each type of resource (Cultural and Tribal Cultural). Do NOT combine:

Mitigation Measure ~~CUL~~TCR-2: Conduct Inventory and Significance Evaluation of ~~Archaeological~~ Tribal Cultural Resources with Tribes that are culturally and geographically affiliated with the area.
~~See Section 3-7-4, Impacts and Mitigation Measures, in Section 3-7, Cultural Resources.~~

Mitigation Measure ~~CUL~~TCR-3: Implement Measures to Protect ~~Archaeological~~ Tribal Cultural Resources during Project Construction or Operation. ~~These measures include, but are not limited to, those outlined in PRC Section 21084.3.~~

4. Mitigation Measure CUL-2 states that an archaeological sensitivity assessment deems if an archaeological study is or is not needed. What about TCRs? Who decides if additional studies are needed to identify TCRs? These measures are completely one sided



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and favors archaeological values. They all must be revised to incorporate tribal values and Tribal input in each of the measures, as separate TCR mitigation measures.

↑ 3
| cont.

5. UAIC reiterates that California Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources (PRC Section 21080.3.1). This means that archaeologists shall not identify, evaluate, or make recommendations for cultural items or sites that are considered TCRs unless it is in direct coordination with consulting Tribes.
6. UAIC identifies, but not limited to, the following as TCRs:
 - Indigenous archaeological sites
 - Sacred Lands
 - Traditional Cultural Properties
 - Midden soils/disturbed midden soils
 - Burials, cremations, and all related burial or ceremonial items
 - Burial soils
 - Isolated artifacts
 - Cultural landscapes
 - Significant native plants/gathering areas

| 4

UAIC requests to review our recommended revisions prior to rereleasing the document. If our recommendations are not incorporated, we ask to be provided the reasons of why they were not included.

| 5

Thank you for your time and consideration.

Anna Starkey

*The United Auburn Indian Community is now accepting electronic consultation request, project notifications, and requests for information! Please fill out and submit through our website. Do not mail hard copy letters or documents. <https://auburnrancheria.com/programs-services/tribal-preservation> **Bookmark this link!***



Anna M. Starkey, M.A., RPA
Cultural Regulatory Specialist
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***UAIC-1 United Auburn Indian Community, Tribal Historic Preservation
Department***

Responses to Comments from UAIC-1 United Auburn Indian Community

UAIC-1-1:

The State Water Board appreciates United Auburn Indian Community's (UAIC) comments regarding the Draft Order and Draft PEIR.

UAIC-1-2:

In response to this comment, the PEIR Tribal Cultural Resources Environmental Setting (PEIR, Section 3.18.2) was revised to add the following text:

“Contemporary Values of California Native Americans

Today, California Native Americans find membership amongst many federally recognized tribes, as well as California Native American Tribes. Tribes continue to maintain a thriving culture, a deep connection to traditional homelands, and reverence for ancestral sites and heritage.

The following discussion regarding Tribal values and cultural continuity has been adapted from Rosenthal et al. (2021):

“Tribal sense of place is “inseparably intertwined” with their historic and contemporary sense of themselves. Places provide the backdrop to religious understanding, traditional stories, knowledge of resources such as varying landscapes, bodies of water, animals and plants, and self-identity. Knowledge of place is central to the continuation and persistence of culture, even if former [Native American] occupants now live removed from the core of their traditional homelands through no fault of their own. [Tribes] view...interconnected sites and places...as living entities within a Native American landscape; their associations and feeling persist and connect with Tribal members today.” (Rosenthal et al., 2021:21).

“Each Tribe has a differing view of [landscapes] with consideration to varying cultural components and values, and a different history within the same [l]andscape. Knowledge is held within each Tribal environment, integral to the thoughts and worldview of each Tribal member. Tribal political, economic, and physical relationships to the landscape are integral to traditional values and beliefs. In this respect, indigenous places continue to exist within, throughout, and outside of modern infrastructure. To the European way of framing worldviews, these concepts may seem abstract, but to many Tribal members, they are only commonsense, and involve innate abilities and traditions.” (Rosenthal et al., 2021:27).

“Tribes maintain a thriving culture and continue to have a deep connection to their traditional homelands and reverence for their ancestral sites and heritage that each of these places evokes.” (Rosenthal et al., 2021:40)”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

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UAIC-1-3:

In response to this comment, the Tribal Cultural Resources Impacts and Mitigation Measures section (PEIR, Section 3.18.4), was revised as follows:

“As part of the State Water Board or Regional Board’s issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure ~~CUL-2~~ TCR-1, CUL-3, and TCR-2 and CUL-4 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure CUL-2: Conduct Inventory and Significance Evaluation of Archaeological Resources

See Section 3.7.4, Impacts and Mitigation Measures, in Section 3.7, Cultural Resources.

Mitigation Measure TCR-1: Conduct Inventory and Significance Evaluation of Tribal Cultural Resources with Tribes that are Culturally and Geographically Affiliated with the Project Vicinity

Before implementation of any project permitted under the Order, the following shall be conducted: consultation with California Native American Tribes pursuant to PRC Section 21080.3; a tribal cultural resources records search; a California Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search; and an inventory and significance evaluation of tribal cultural resources identified that could be impacted by the project. These tasks shall be conducted as follows.

- ◆ Project proponent shall submit an NAHC SLF & Native American Contacts List Request at the initial stages of project development (or as early as practicable) to determine if a project would have an impact on tribal cultural resources.
- ◆ Project proponent shall coordinate with the approving Water Board or other CEQA lead agency, if applicable, as soon as possible to identify California Native American Tribes that are traditionally and culturally affiliated to a project area. The CEQA lead agency shall then conduct Tribal consultation, pursuant to PRC Section 21080.3, and as soon as practicable during early design, with such Tribes to determine whether any tribal cultural resources could be affected by the project. Consultation will include discussion regarding project design, cultural resources surveys, identification of tribal cultural resources, protocols for construction monitoring, and any other Tribal concerns. Construction of the project will not commence until the approving Water Board or other CEQA lead agency achieves compliance with the California Environmental Protection Agency Tribal Consultation Protocol (April 2018) and consultation pursuant to PRC Section 21080.3 has been concluded. If potential tribal cultural resources that may be impacted by the project are identified through consultation with California Native American

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Tribes that are traditionally and culturally affiliated to a project area, the following shall be conducted:

- Documentation of any tribal cultural resources identified in the project area, which may require additional tasks such as ethnographic research and interviews.
- ◆ If tribal cultural resources are identified in a project area, develop, before project implementation and in coordination California Native American Tribes that are traditionally and culturally affiliated to a project area, an approach for reducing such impacts. If any such tribal cultural resources are on or in the tide and submerged lands of California, this process shall also include coordination with the California State Lands Commission.

Mitigation Measure CUL-3: Implement Measures to Protect Archaeological Resources during Project Construction or Operation

See Section 3.7.4, Impacts and Mitigation Measures, in Section 3.7, *Cultural Resources*.

Mitigation Measure TCR-2: Implement Measures to Protect Tribal Cultural Resources during Project Construction or Operation. These measures include, but are not limited to, those outlined in PRC Section 21084.3.

If tribal cultural resources or indigenous archaeological resources that may qualify as tribal cultural resources are encountered during project construction or operation of any project permitted under the Order, all activity within 100 feet of the find shall cease and the find shall be flagged for avoidance. The lead agency, a qualified archaeologist, defined as one meeting the U.S. Secretary of the Interior's Professional Qualifications Standards for Archeology, and California Native American Tribes that are traditionally and culturally affiliated to a project area shall be immediately informed of the discovery. The qualified archaeologist and representatives from the notified Native American Tribes shall inspect the discovery and notify the lead agency of their initial assessment.

If the lead agency determines, based on recommendations from the qualified archaeologist and California Native American Tribes that are traditionally and culturally affiliated to a project area, that the resource may qualify as a tribal cultural resource (per PRC Section 21074), then the resource shall be avoided if feasible. If avoidance of the resource is not feasible, the lead agency shall consult California Native American Tribes that are traditionally and culturally affiliated to a project area to determine treatment measures to minimize or mitigate any potential impacts on the resource pursuant to PRC Section 21083.2 and State CEQA Guidelines Section 15126.4. If any such resources are on or in the tide and submerged lands of California, this process shall also include coordination with the California State Lands Commission. Once treatment measures have been determined, the lead agency shall prepare and implement a

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tribal cultural resources management plan that outlines the treatment measures for the resource. Treatment measures typically consist of the following steps:

- ◆ Determine whether the resource qualifies as a tribal cultural resource (per PRC Section 21074) through analysis that could include additional ethnographic research, archaeological investigations, or laboratory analysis.
- ◆ If it qualifies as a tribal cultural resource (per PRC Section 21074) implement measures for avoiding or reducing impacts such as the following:
 - Avoid and preserve the resource in place through measures that include but are not limited to the following:
 - Plan and construct the project to avoid the resource and protect the cultural and natural context.
 - Plan greenspace, parks, or other open space to incorporate the resources with culturally appropriate protection and management criteria.
 - Treat the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, through measures that include but are not limited to the following:
 - Protect the cultural character and integrity of the resource.
 - Protect the traditional use of the resource.
 - Protect the confidentiality of the resource.
 - Implement permanent conservation easements or other interests in real property, with cultural appropriate management criteria for the purposes of preserving or using the resource or place.

Mitigation Measure CUL-4: Implement Measures to Protect Human Remains during Project Construction or Operation

See Section 3.7.4, Impacts and Mitigation Measures, in Section 3.7, Cultural Resources.

Mitigation Measures CUL-2 TCR-1, CUL-3 TCR-2, and CUL-4 would be implemented to reduce the impacts of restoration projects permitted under the Order. However, because the extent and location of such actions are not known at this time, it is not possible to conclude that the mitigation measures, or equally effective mitigation measures, would reduce significant impacts to a less-than-significant level in all cases. Therefore, this impact would be **significant and unavoidable.**”

These revisions do not change the analyses or conclusions in the Draft Order or Draft PEIR.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

UAIC-1-4:

The State Water Board acknowledges UAIC's statement about tribal expertise and identified tribal cultural resource types. Project-specific tribal cultural resources will be determined during consultation with Tribes. Per Order XIII.E.7:

“Project proponents shall submit a Sacred Lands File & Native American Contacts List Request to the Native American Heritage Commission (NAHC) at the initial stages of project development (or as early as practicable) to determine if a project would have an impact on Native American cultural resources. The project proponent shall coordinate with the approving Water Board or other CEQA lead agency, if applicable, as soon as possible whenever tribes that are traditionally and culturally affiliated to a project area are identified. Any tribe identified by the NAHC, or on the CEQA lead agency's Assembly Bill 52 (AB 52) consultation list, will require notification of the proposed project by the lead agency as soon as practicable during early design, pursuant to AB 52 and the California Governor's Executive Order G-10-22, or not more than 14 days after submittal of the NOI to the approving Water Board.

Tribes will be consulted if a request is received from a tribe after initial notification. Consultation will include discussion regarding project design, cultural resource survey, Tribal Cultural Resources as defined by AB 52, protocols for construction monitoring, and any other tribal concern. The CEQA Notice of Determination (NOD) for the project will not be signed until tribal consultation has either concluded or been terminated as defined by AB 52. Construction of the project will not commence until the approving Water Board achieves compliance with the State Water Resources Control Board Tribal Consultation Policy (June 2019).”

No revisions are included in the Order or PEIR because of this comment.

UAIC-1-5:

The Tribal Cultural Resources section of Proposed Final PEIR was sent to UAIC by the State Water Board prior to release to the general public.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

VALW-1 Santa Clara Valley Water District (Valley Water)

VALW-1



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon
Clean Water • Healthy Environment • Flood Protection

August 13, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide General Order

Dear Ms. Townsend,

The Santa Clara Valley Water District (Valley Water) appreciates the opportunity to comment on the *Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide* (General Order) and associated *Programmatic Environmental Impact Report* (PEIR). Valley Water is a public agency that manages an integrated water resources system that includes the supply of safe, clean water; flood protection; and environmental stewardship on behalf of Santa Clara County's 2 million residents. Our primary comment is we urge the State Water Resources Control Board to certify the PEIR and adopt the proposed General Order as quickly as possible, and, if feasible, prior to the Spring of 2022, to expedite restoration and multi-benefit projects that can assist with the drought and other major challenges facing water supply agencies.

1

Valley Water strongly supports the draft General Order. Also, as a member agency, Valley Water supports the comments of the Association of California Water Agencies (ACWA) on the General Order and PEIR. More specifically, Valley Water concurs that the General Order will be more effective to expedite and facilitate restoration projects if ACWA's suggested clarifications are made to address:

- Sufficiency of increases in ecological functions and services to satisfy compensatory mitigation obligations;
- Access to the General Order for authorization of restoration projects that provide environmental benefits, but do not eliminate historical facilities needed to protect public health and safety;
- Limitations on long-term management responsibility and liability; and
- Clarification that the General Order does not impose new National Pollutant Discharge Elimination System requirements.

2

The General Order, particularly with the incorporation of ACWA's comments, will effectively incentivize implementation of the many restoration projects planned by Valley Water and other California water agencies engaged in environmental stewardship. Valley Water also appreciates that the General Order furthers the "cutting the green tape" initiative, and, consistent with the Water Resilience Portfolio, also streamlines permitting for multi-benefit projects that include non-restoration elements, as well as mitigation projects for otherwise legally permitted and authorized activities.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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APPENDIX H – RESPONSES TO COMMENTS

VALW-1

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August 13, 2021

Valley Water has implemented many restoration and multi-benefit projects. In our experience, the process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. This can result in a lost opportunity to move forward with critical restoration projects. Having this General Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change. These projects benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

3

We offer one additional suggestion that we believe would further expedite restoration projects if addressed in the General Order. We suggest that it would be beneficial to list the range of instruments that have already been approved for use by state and federal regulatory agencies to financially assure performance of environmental restoration projects under the template California Mitigation Bank Enabling Instrument (e.g., an irrevocable standby letter of credit, a check, a cashier's check, a performance bond, or an endowment fund in an amount determined appropriate using Property Analysis Record or a similar methodology). This would help clarify one of the current recurring issues that often results in significant restoration project delays, particularly for public agencies such as Valley Water, and would provide consistent guidance to the Regional Water Quality Control Boards.

The General Order and associated PEIR, particularly with clarifications submitted by ACWA, would provide an environmentally thorough, protective, and robust permitting process that will help applicants efficiently meet state requirements, while significantly streamlining and expediting implementation of restoration projects. We urge the State Water Resources Control Board to prioritize certification of the PEIR, and adoption and active use of the General Order by staff and the Regional Water Quality Control Boards. Projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought increases the urgency of providing an efficient mechanism for permitting restoration and multi-benefit projects. We also ask the Board to maintain a clear, implementable, and efficient General Order that retains expediting and streamlined permitting for these projects as public comment is considered.

With the above recommended revisions, Valley Water would benefit from the General Order and PEIR by saving time and resources, enabling restoration projects to be implemented faster and at a lower cost. Increased efficiency in environmental review and permitting would help Valley Water undertake additional restoration work. Valley Water's Almaden Lake Improvement Project is an example of a project that could benefit from implementation of the General Order. This project would restore the channel and floodplain of Alamos Creek through Almaden Lake, which is a historical gravel mining pit. In addition to restoring a continuous natural creek and riparian corridor, the project would improve passage conditions for steelhead and remove a significant source of mercury pollution in the sediments of Almaden Lake, which can be transported to the Guadalupe River. These regionally important benefits will, however, require the conversion of existing, degraded and mercury-impacted lake habitat to higher quality riverine, riparian, and buffer habitats. This habitat type conversion, while environmentally beneficial, creates the need for more streamlined permitting mechanisms.

4

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

VALW-1

Page 3
August 13, 2021

In closing, Valley Water strongly supports the General Order and PEIR because it will help to accelerate implementation of greatly needed habitat restoration projects that so many times are delayed due to the complexity of the permitting process. We look forward to the adoption of the General Order and the streamlined approach it would allow for the improvement of the environment for all.

5

Sincerely,



Melanie Richardson, P.E.
Assistant Chief Executive Officer

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

VALW-1 Santa Clara Valley Water District (Valley Water)

Responses to Comments from VALW-1 Santa Clara Water District

VALW-1-1:

The State Water Board appreciates Santa Clara Valley Water District's (VALW) comments regarding the Draft Order and Draft PEIR as well as information on the VALW.

VALW-1-2:

The State Water Board appreciates VALW's comments supporting adoption of the Order. The items listed in this comment would be considered during individual proposed project review by the approving Water Board. See also responses to comments ACWA-1-2 through ACWA-1-5 addressing relevant changes to the Order and PEIR associated with comments from the Association of California Water Agencies (ACWA).

VALW-1-3:

The State Water Board appreciates VALW's suggestion to help further expedite restoration project implementation. The Order is only for qualifying restoration projects that require Waste Discharge Requirements and Clean Water Act section 401 Water Quality Certification. Since the California Mitigation Banking Enabling Instrument template is routinely updated, and approved methods of financial assurance for mitigation bank performance may change and are a separate compliance issue from Waste Discharge Requirements and Water Quality Certification, specifying methods of financial assurance for mitigation bank performance would be outside the scope of the Order. Further, the referenced financial commitments are compensatory mitigation terms, and it would not be relevant to include compensatory mitigation financial assurance requirements with this statewide Order.

VALW-1-4:

The State Water Board appreciates VALW's comments regarding the Draft Order and Draft PEIR.

VALW-1-5:

The State Water Board appreciates VALW's comments regarding the Draft Order and Draft PEIR.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

VIEJAS-1 Viejas Band of Kumeyaay Indians

VIEJAS-1



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

From: Ray Teran
To: [commentletters](#)
Cc: [Ernest Pingleton](#)
Subject: FW: Notice of Opportunity for Public Comment and Board Workshop Pertaining to the Proposed General Order for Restoration Projects Statewide
Date: Thursday, July 1, 2021 1:00:48 PM

EXTERNAL:

In reviewing the above referenced project the Viejas Band of Kumeyaay Indians ("Viejas") would like to comment at this time.

The project area may contain many sacred sites to the Kumeyaay people. We request that these sacred sites be avoided with adequate buffer zones.

Additionally, Viejas is requesting, as appropriate, the following:

- All NEPA/CEQA/NAGPRA laws be followed
- Immediately contact Viejas on any changes or inadvertent discoveries.

Please call Ernest Pingleton at 619-655-0410 or email, epingleton@viejas-nsn.gov, for additional information. Thank you.

From: Ernest Pingleton
Sent: Thursday, July 1, 2021 12:51 PM
To: Ray Teran <rteran@viejas-nsn.gov>
Subject: Fwd: Notice of Opportunity for Public Comment and Board Workshop Pertaining to the Proposed General Order for Restoration Projects Statewide

Sent from my iPhone

Begin forwarded message:

From: "Nadolski, Jessica@Waterboards" <Jessica.Nadolski@waterboards.ca.gov>
Date: July 1, 2021 at 12:08:26 PM PDT
To: Ernest Pingleton <epingleton@viejas-nsn.gov>
Subject: Notice of Opportunity for Public Comment and Board Workshop Pertaining to the Proposed General Order for Restoration Projects Statewide

Dear Ernest Pingleton:

The State Water Resources Control Board (State Water Board) provided notification of consultation opportunity regarding the proposed Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (proposed General Order) with California Native American Tribes via letter on July 19, 2019. State Water Board staff conducted consultation between October 2019 and January 2020. During consultation, State Water Board received a request to notify the Viejas Band of

1

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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VIEJAS-1

Kumeyaay Indians when draft documents pertaining to the proposed General Order became available for review.

The State Water Board is now accepting comments on the proposed General Order and the supporting draft Program Environmental Impact Report. The proposed General Order establishes a streamlined permit process for specific types of environmentally beneficial restoration activities statewide.

The documents and details on how to submit comments are available on the following webpage:

https://www.waterboards.ca.gov/water_issues/programs/cwa401/generalordersunderdev

Comments must be received by the Board Clerk (commentletters@waterboards.ca.gov) no later than 12:00 noon on August 13, 2021. The Board will also accept comments at a public workshop on Tuesday, August 3, 2021, 9:00 a.m. The workshop is scheduled to take place virtually via video and teleconference only, but the format may be changed in future to allow for in-person attendance. The agenda with instructions for meeting access is available at the State Water Board Calendar page:

https://www.waterboards.ca.gov/board_info/calendar/

If you have any questions regarding this email, please do not hesitate to contact me at (916) 341-5290 or jessica.nadolski@waterboards.ca.gov. I will also be sending this information to you via certified mail.

Very Respectfully,

Jessica A. Nadolski

Senior Environmental Scientist
Wetlands Permitting and Enforcement Unit, Supervisor
Division of Water Quality
State Water Resources Control Board
(916) 341-5290
jessica.nadolski@waterboards.ca.gov

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

VIEJAS-1 Viejas Band of Kumeyaay Indians

Responses to Comments from VIEJAS-1 Viejas Band of Kumeyaay Indians

VIEJAS-1-1:

The State Water Board appreciates Viejas Band of Kumeyaay Indians' (VIEJAS) comments regarding the Draft Order and Draft PEIR. Per Order XIII.E.7:

“Project proponents shall submit a Sacred Lands File & Native American Contacts List Request to the Native American Heritage Commission (NAHC) at the initial stages of project development (or as early as practicable) to determine if a project would have an impact on Native American cultural resources. The project proponent shall coordinate with the approving Water Board or other CEQA lead agency, if applicable, as soon as possible whenever tribes that are traditionally and culturally affiliated to a project area are identified. Any tribe identified by the NAHC, or on the CEQA lead agency’s Assembly Bill 52 (AB 52) consultation list, will require notification of the proposed project by the lead agency as soon as practicable during early design, pursuant to AB 52 and the California Governor’s Executive Order G-10-22, or not more than 14 days after submittal of the NOI to the approving Water Board.

Tribes will be consulted if a request is received from a tribe after initial notification. Consultation will include discussion regarding project design, cultural resource survey, Tribal Cultural Resources as defined by AB 52, protocols for construction monitoring, and any other tribal concern. The CEQA Notice of Determination (NOD) for the project will not be signed until tribal consultation has either concluded or been terminated as defined by AB 52. Construction of the project will not commence until the approving Water Board achieves compliance with the State Water Resources Control Board Tribal Consultation Policy (June 2019).”

In addition, PEIR Section 2.5 provides a list of authorizations or permits that may be required for restoration projects authorized under the Order.

The State Water Board notes the contact name and number for VIEJAS.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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APPENDIX H – RESPONSES TO COMMENTS

WWD-1 Westlands Water District

WWD-1

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



Westlands Water District

3130 N. Fresno Street, P.O. Box 6056, Fresno, California 93703-6056, (559) 224-1523 FAX (559) 241-6277

Via ELECTRONIC MAIL to commentletters@waterboards.ca.gov

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000



RE: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

The consensus of the scientific community appears to be that restoration of habitat is a critical tool for reviving primary production and the health of ecosystems. Such habitat projects have particular importance for those ecosystems that have been highly altered. The results of a study published this month “show that a 77% loss of wetland habitats (primarily marshes) has reduced ecosystem [net primary production] by 94%, C (energy) flow to herbivores by 89%, and detritus production by 94%.”¹

Westlands Water District (“District”) recently completed one of the largest tidal habitat restoration projects in the State, the Lower Yolo Restoration Project. Based on its experience designing, permitting, and obtaining approval for that historic project, the District submits these comments in support of the State Water Resources Control Board’s (“State Water Board”) adoption of the proposed Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (proposed General Order). The District appreciates the State Water Board’s consideration of the proposed General Order and offers the following three comments.

1. It is essential to reduce undue delay in the permitting process. The General Order for 401 Certification and Waste Discharge Requirements (WDRs) will establish a consistent permitting process, which should improve coordination among the multiple agencies involved in permitting restoration projects and reduce the risk of undue delay. Many restoration projects occur in areas that have limited work windows because of seasonal hydrologic changes. Even minor delays in approvals can push project completion from one calendar year to the next, which prevents or postpones projects from providing much needed ecosystem restoration of biological functions and creates other ancillary impacts such as increased costs or loss of grant funding.

¹ Cloern et al., On the Human Appropriation of Wetland Primary Production, *Science of the Total Environment* 785 (2021)

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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WWD-1

2. Several sections of the proposed General Order, such as Section A, Section B.3.c.i, 3.B.3.d, C.3, E.2, contemplate State Water Board consideration of requests for approval. To ensure the General Order achieves the intended permit streamlining, and the related benefits of consistency and certainty, the District recommends that statements be added that reflect a time period by which the State Water Board would be expected to act on each request.

3

3. Section D.1 contemplates that the State Water Board may suspend, cancel, modify, or reissue an order after providing notice to the project proponent. The District recommends: (1) including a notice and opportunity to cure prior to taking any of the actions described above (the District suggests 60 days), and (2) limiting the authority to suspend, cancel, or modify an order to the period prior to construction.

4

The proposed General Order represents a positive step forward. The District appreciates the efforts by the State Water Board and its staff and welcomes any questions regarding these comments.

5


Jose L. Gutierrez, P.E.
Chief Operating Officer

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

WWD-1 Westlands Water District

Responses to Comments from WWD-1 Westlands Water District

WWD-1-1:

The State Water Board appreciates Westlands Water District's (WWD) comments regarding the Draft Order and Draft PEIR as well as information on the benefits of restoration projects and information on WWD's Lower Yolo Restoration Project.

WWD-1-2:

As noted, the Order should improve coordination and reduce the risk of undue delay. The intent of the Order is to streamline project reviews and approvals.

WWD-1-3:

The intent of the Order is to streamline project reviews and approvals. Because this Order covers a wide range of restoration projects with varying levels of complexity, a specific time frame in which to take action on an NOI has not been included. Note that the Permit Streamlining Act may apply as well as the reasonable period of time to act under the Clean Water Act.

WWD-1-4:

Order Section XIII.D.1 refers to modification or revocation of the entire Order from judicial or administration review. This condition is a standard condition required in all water quality certification actions pursuant to California Code of Regulations, title 23, section 3860. In addition, California Code of Regulations, title 23, section 3861 allows revision or revocation to a general certification. Any change shall not apply to activities subject to a federal license or permit issued before such a change is made. This section states that notice will be provided to project proponents if any changes occur.

WWD-1-5:

The State Water Board appreciates WWD's comments regarding the Draft Order and Draft PEIR.

3 Support Only Letters

State Water Board appreciates comments supporting the adoption of the Draft Order and certification of the Draft PEIR. Letters received including only support of the Draft Order and Draft PEIR are listed in Table H-2 and presented below.

Table H-2
Support Only Comments on the Draft Order and Draft PEIR

Agency or Affiliation	Commenter
Big Sur Land Trust	Rachel Saunders
Butte County Federal/State Land Use Coordinating Committee	Paula Daneluk
California Association of Resource Conservation Districts	Karen Buhr

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Table H-2
Support Only Comments on the Draft Order and Draft PEIR

Agency or Affiliation	Commenter
California Invasive Plant Council	Doug Johnson
California Watershed Network	Michael Wellborn
Conservation and Natural Resources Group, LLC	Leslie Friedman Johnson
Department of Water Resources	Teresa Connor
East Bay Municipal Utility District	Jose Setka
Environmental Defense Fund	Ann Hayden
Floodplain Forward Coalition (on behalf of): Northern California Water Association, American Rivers, Audubon California, California Rice Commission, California Trout, California Waterfowl, Conaway Preservation Group, Ducks Unlimited, Ecosystem Investment Partners, Environmental Defense Fund, Glenn-Colusa Irrigation District, Lundberg Family Farms, The Nature Conservancy, Point Blue Conservation Science, Reclamation District 108, Reclamation District 1500, River Garden Farms, River Partners, Sacramento River Settlement Contractors, Sutter Mutual Water Company, Yuba Water Agency	David Guy, Amy Merrill, Meghan Hertel, Tim Johnson, Jacob Katz, Jeff Volberg, Kyriakos Tsakopoulos, Jeff McCreary, Adam Davis, Ann Hayden, Thad Bettner, Mike Denny, Rodd Kelsey, Catherine Hickey, Lewis Bair, Brad Mattson, Roger Cornwell, Julie Rentner, Roger Cornwell, Brad Mattson, Willie Whittlesey
General Public	Angela Nomellini
General Public	Arthur Miller
General Public	Conor Ofsthun
General Public	Emmy Cattani
General Public	Frank Boren
General Public	Jeff Loomans
General Public	Lauren Dachs
General Public	Sally Liu
General Public	Teri Biancardi
General Public	Tim Vendlinski
General Public	Tina Quinn
Gordon and Betty Moore Foundation	Dan Winterson
Grassroots Ecology	Junko Bryant

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Table H-2
Support Only Comments on the Draft Order and Draft PEIR

Agency or Affiliation	Commenter
Humboldt Redwood Company, Humboldt Sawmill Company, Mendocino Redwood Company, Mendocino Forest Products, Allweather Wood	John Andersen
Marin Agricultural Land Trust	Thane Kreiner
Mattole Salmon Group	Nathan Queener
Mid Klamath Watershed Council	Luna Latimer
Morro Bay National Estuary Program	Lexie Bell
Natural Heritage Institute	Gerald Meral
Northern California Water Association	Todd Manley
Port of San Diego	Eileen Maher
Resource Conservation District of Monterey County	Paul Robins
Resource Conservation District of the Santa Monica Mountains	Rosi Dagit
Resources Legacy Fund	Michael Mantell
Sacramento-San Joaquin Delta Conservancy	Campbell Ingram
San Francisco Public Utilities Commission	Tim Ramirez
San Jose Water	Andrew Gere
Sanctuary Forest	Tasha McKee
Santa Clara Open Space Authority	Andrea Mackenzie
Santa Clara Valley Habitat Agency	Edmund Sullivan
Scott River Watershed Council	Betsy Stapleton
Sequoia Riverlands Trust	Adam Livingston
Sonoma Ecology Center	Richard Dale
Sonoma Resource Conservation District	Jessica Pollitz, Katie Robbins, Aaron Fairbrook, Kevin Cullinen, Kari Wester, Erica Mikesh
Symbiotic Restoration	Garrett Costello
The Land Conservancy of San Luis Obispo County	Kaila Dettman
The Watershed Research & Training Center	Joshua Smith
Water Foundation	Andrew Fahlund
Wine Institute	Noelle Cremers

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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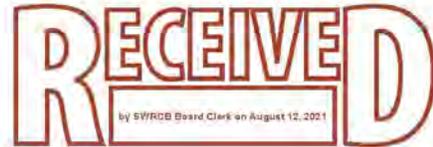


Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

Via email

August 12, 2021

Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000



SUBJECT: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

Thank you for the opportunity to offer comments on the proposed Order and PEIR for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide. We commend the Board for its efforts to expedite the regulatory approval process for large habitat restoration projects and are supportive of the proposed Order and PEIR.

Big Sur Land Trust (BSLT) is a non-profit organization with a mission to inspire love of land across generations, conservation of our unique Monterey County landscapes, and access to outdoor experiences for all. Since 1978, our generous donors and partners have conserved over 40,000 acres throughout Monterey County. BSLT, like many other non-profit organizations statewide, plans and implements multi-benefit habitat restoration projects on our lands such as the types described in the proposed Order: *Improvements to Stream Crossings and Fish Passage, Floodplain Restoration, Removal of Nonnative Terrestrial and Aquatic Invasive Species and Revegetation with Native Plants, Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands and Establishment, Restoration, and Enhancement of Stream and Riparian Habitat and Upslope Watershed Sites*. The process of obtaining authorization for these projects is time consuming and expensive. Any effort to streamline the permitting process is much appreciated and will allow us to complete habitat restoration more quickly and efficiently.

Thank you again for the opportunity to comment on this Order. We are in strong support of these efforts.

Sincerely,

Rachel T. Saunders

Rachel T. Saunders
Director of Conservation

P. O. Box 4071, Monterey, CA 93942 t: 831-625-5525 f: 831-658-0716 www.bigsurlandtrust.org

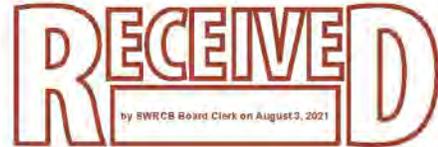
CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



BUTTE COUNTY FEDERAL/STATE LAND USE
COORDINATING COMMITTEE

7 COUNTY CENTER DRIVE
OROVILLE, CA 95965



August 2, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov

Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

The Butte County Federal/State Land Use Coordinating Committee (the Committee) received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

The Committee is charged with facilitating public interaction and comment on the management and enjoyment of public lands and advising the Board of Supervisors on current public lands management issues. The Committee functions under the Brown Act for public meetings.

The Committee strongly supports the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Butte County partners with other agencies, such as the Butte County Resource Conservation District and the Lassen and Plumas National Forests, to assist in obtaining grant funding for essential watershed restoration projects that benefit not only our local communities and riparian habitats, but also water users throughout the State. The recent wildfires experienced in and around the county (2018 Camp Fire, 2020 North Complex Fire, 2021 Dixie Fire) have heavily impacted our watersheds. Extensive work will be needed to restore these hard hit areas. A programmatic approach will meaningfully impact our ability to achieve restoration goals.

Some of the benefits recognized by the Committee upon approval of this Order and PEIR include:

- Saving time and resources, enabling projects to be implemented sooner
- More “bang for the buck” from funding dollars means more money available for on-the-ground work
- Utilization of clear guidelines for implementation of projects to streamline planning and design

Once again, we appreciate the thoughtfulness that has gone into the proposed order and PEIR, and support its implementation. We appreciate the opportunity to comment.

Sincerely,



Paula Daneluk, Director, Butte County Development Services
Butte County Federal/State Land Use Coordinating Committee

CC: Butte County Board of Supervisors
Butte County Forest Advisory Committee
Butte County Resource Conservation District
Sacramento River Watershed Program

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



July 30, 2021

To Whom it May Concern,

We are writing today in support of a quick approval of the State Water Resources Control Board Statewide Restoration General Order (Order) and Programmatic Environmental Impact Report (PEIR). As you know, the 96 Resource Conservation Districts in California are committed to environmental quality, restoration, and species preservation while maintaining a focus on communities and agricultural productivity. At any given moment, we are actively completing hundreds of restoration projects on private and public lands in partnership with farmers, ranchers, communities and state and federal agencies. With climate change and the growing need for development, we see an urgent need to protect species and habitat now. Removing barriers to our work while maintaining the utmost commitment to ecological health would help us address this urgency by ramping up the pace of restoration. For this reason, we strongly support the Order and PEIR being adopted quickly.

Working with private landowners and managers to implement restoration is incredibly challenging. It takes time to develop the relationships with landowners, create solid plans, make sure the project won't interfere with the viability of the farm, secure funding (often multiple sources), get permits from multiple agencies and then implement within the given windows of time that are available for work in and around streambeds. At times, making all of these items line up to get a project completed is nearly impossible and can take 10 years.

One of the biggest obstacles to private land conservation is permitting. The cost of getting permits, time delays of working with multiple permitting agencies, adjusting the plans to meet each agency's specifications (sometimes based on conflicting guidance), and grant funding windows causes many farmers and ranchers to back out of projects or projects to be delayed or never implemented. RCDs are small, mostly unfunded agencies that accomplish amazing restoration work on a shoestring budget. Because RCDs don't have ample base funding to pay for the permitting process they have to secure planning grants to pay for permitting fees. Planning grants are incredibly hard to come by.

These challenges get in the way of farmers and ranchers who volunteer their land for conservation simply to do the right thing. These are precisely the projects we should be promoting and making easier. Instead, we are creating high hurdles to conservation and barriers to getting great work done.

While the order and PEIR would not solve all of these problems, it would help ease the burden on these projects speeding them up exponentially while reducing the overall planning burden. Planning grants that are available (mostly from the State) will be much more effective and efficient. Given that our natural world is rapidly changing with the climate and that we are losing species every day, we just don't have the luxury of delaying conservation any longer and must use every dollar to its highest efficiency.

California Association of Resource Conservation Districts
801 K Street, MS 14-15, Sacramento, CA 95814
(916) 457-7904 www.carcd.org

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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The timing of this order and PEIR couldn't be better. The California State Legislature has appropriated over \$2 billion in funding for conservation in the 2021-2022 general fund budget. Much of this funding is for restoration work. The order and PEIR will help to get this funding out and on the ground quickly, effectively and with the highest benefit projects. We have a chance to get traction in supporting the natural world in our fight against climate change. The order and PEIR is a critical component of making that happen.

Sincerely,

A handwritten signature in black ink that reads "Karen Buhr". The signature is written in a cursive, flowing style.

Karen Buhr
Executive Director

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



1442-A Walnut St., #462
Berkeley, CA 94709
(510) 843-3902
fax: (510) 217-3500
www.cal-ipc.org

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

Board of Directors

Julia Parish, President
American Conservation Experience

Drew Kerr, Vice President
*San Francisco Estuary Invasive
Spartina Project*

Laura Pavliscak, Secretary
Santa Clara River Conservancy

Jason Giessow, Treasurer
Dendra, Inc.

Steven Addison
Oakland Civic Corps

Gina Darin
California Dept. of Water Resources

Doug Gibson
Nature Collective

Sarah Godfrey
Center for Natural Lands Management

Metha Klock
San Jose State University

Juli Matos
Channel Islands National Park

Tanya Meyer
Yolo County Resource Conservation District

LeeAnne Mila
El Dorado County Dept. of Agriculture

Scott Oneto
*Central Sierra Cooperative Extension
UC Agriculture & Natural Resources*

Steve Schoenig
California Dept. of Fish & Wildlife (retired)

Amanda Swanson
California Dept. of Fish & Wildlife

Marcos Trinidad
Audubon Center at Debs Park, Los Angeles

Cheryl Wilen
UC Agriculture & Natural Resources (retired)

Student Liaisons

Katherine Brafford, *UC Davis*

Robert Fitch, *UC Santa Barbara*

Clarissa Rodriguez, *UC Riverside*

Noah Teller, *UC Riverside*

[Affiliations for identification only]

August 11, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000

RE: Restoration Projects Statewide Order

Dear Ms. Townsend,

I am writing to comment on the Proposed Order for Clean Water Act Section 401
Water Certification and Waste Discharge Requirements for Restoration Projects
Statewide.

Cal-IPC supports the State Water Resources Control Board's proposed Order and
Programmatic Environmental Impact Report (PEIR). These actions will facilitate the
implementation of important habitat restoration projects by reducing the time
and expense currently needed to obtain environmental permitting for projects
that are themselves designed to protect the environment.

We represent the community of natural resource managers seeking to protect the
environment by controlling invasive species that degrade biodiversity, increase
wildfire risk, decrease water availability and climate resiliency, and more. Too
many important invasive species management projects simply don't get done
because of permitting hurdles. We strongly support the state's efforts to "cut
green tape".

We encourage the Board to certify the PEIR and prioritize adoption and active
staff use of this Order to facilitate projects needed for climate resiliency and
biodiversity protection.

Sincerely,

Doug Johnson
Executive Director
djohnson@cal-ipc.org



CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 12, 2021



Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov

Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend:

The California Watershed Network (CWN) has received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*.

CWN is a 501(c)(3) non-profit organization formed in 2000, with the mission to help people protect and restore the natural environments of California's watersheds while ensuring healthy and sustainable communities. CWN works to develop a coordinated network of community-based watershed management efforts in California.

We strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, and efficient Order as public comment is considered.

Sincerely,

A handwritten signature in black ink that reads 'Michael Wellborn'.

Michael Wellborn, President

Mission Statement

To help people protect and restore the natural environments of California watersheds while ensuring healthy and sustainable communities.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



Conservation and Natural Resources Group, LLC
2394 South Fitch Mountain Road
Healdsburg, CA 95448

October 12, 2020

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

I received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

I have worked for more than 30 years in the fields of natural resources, water policy and ecosystem restoration in California, and have witnessed how the process of implementing regulations, many of which have been instituted to protect the environment, can create obstacles to restoring important and often imperiled habitats.

I strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner and will make better and more efficient use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. I respectfully urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority.

Sincerely,

Leslie Friedman Johnson
Partner, Conservation and Natural Resources Group

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

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STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY

GAVIN NEWSOM, Governor

DEPARTMENT OF WATER RESOURCES

NORTHERN REGION OFFICE
2440 MAIN STREET
RED BLUFF, CA 96080-2356



August 12, 2021

State Water Resources Control Board
Division of Water Quality
Attention: Jeanie Townsend, Clerk to the Board
Post Office Box 100
Sacramento, California 95812-2000
E-mail: commentsletters@waterboards.ca.gov

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



Subject: Restoration Projects Statewide Order PEIR

The California Department of Water Resources' (DWR) mission is to sustainably manage the water resources of California, in cooperation with other agencies, to benefit the State's people and protect, restore, and enhance natural and human environments. DWR is a proponent of habitat restoration and enhancement efforts across the State to increase ecosystem function and support endangered and threatened species recovery. DWR's Northern Region Office (NRO) is actively involved in fisheries restoration efforts within the Sacramento River and its tributaries, as well as meadow restoration efforts further upslope in the watersheds.

DWR commends the State Water Resources Control Board (SWRCB) for its effort to develop a General Order for the Clean Water Act Section 401 that establishes an authorization process to improve permit efficiency for beneficial restoration activities. DWR strongly supports SWRCB's proposed action and acknowledges the General Order will help expedite regulatory approval for large restoration projects. The current process for obtaining the necessary environmental clearances and permits for large restoration projects can be time consuming and costly. A more efficient permitting process, such as the proposed General Order for implementation of large habitat restoration projects, will directly support DWR's efforts to implement aquatic and riparian habitat restoration efforts in a timely and more cost-effective manner.

The majority of NRO's restoration efforts within the Central Valley are funded and in support of the Central Valley Project Improvement Act (CVPIA), and we would like to confirm large-scale restoration and enhancement programs like CVPIA will benefit from this proposed General Order. We also anticipate future restoration efforts will include funding under voluntary agreements in accordance with the Clean Water Act, so confirmation that voluntary agreement-funded restoration efforts would also be covered under this proposed General Order would be very beneficial to completing restoration as envisioned under the agreement.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

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State Water Resources Control Board
August 12, 2021
Page 2

Thank you for the opportunity to provide comments. If you have any questions or comments, you may contact Brian Humphrey at (530) 529-7307 or brian.humphrey@water.ca.gov.



Teresa Connor
Region Manager
Northern Region Office

cc: Brian Humphrey, Senior Environmental Scientist (Specialist)

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 12, 2021



Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000
commentletters@waterboards.ca.gov

VIA EMAIL

Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to express our support of the proposed Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide. As stewards of the Mokelumne River, EBMUD has worked with multiple partners on a myriad of restoration projects to enhance the river ecosystem and improve long-term sustainability of ecosystem functions. The proposed General Order would enable EBMUD and our partners at the Lower Mokelumne River Partnership to significantly increase the breadth of environmentally beneficial restoration projects with a welcome enhancement to regulatory efficiency.

EBMUD has conducted habitat restoration in the lower Mokelumne River for nearly three decades. From 1990 to 2019, over \$1.8 million was invested on the lower Mokelumne River to support gravel enhancement, gravel replenishment, and the development of side channels and floodplains to improve habitat complexity and promote healthy salmonid populations. The Mokelumne River habitat restoration program is recognized as one of the most effective in the Central Valley, but a continued legacy of amplified actions is essential to provide key adaptations for climate change.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Setka", written over a white background.

Jose D. Setka
Environmental Affairs Officer

375 ELEVENTH STREET, OAKLAND, CA 94607-4240, TOLL FREE 1-866-40-EBMUD, (1-866-403-2683)

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 11th, 2021
Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

Environmental Defense Fund received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

Environmental Defense Fund is dedicated to enhancing water system resilience to climate change and other stressors by supporting collaborative and data-driven management. Timely, cost-effective, and coordinated restoration is an important tool to support California’s communities and ecosystems.

We strongly support the State Water Resources Control Board’s (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and swift implementation of this Order because projects for climate change adaptation and habitat restoration for imperiled species can’t be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Sincerely,

A handwritten signature in black ink, appearing to read "Ann Hayden", enclosed in a yellow rectangular box.

Ann Hayden,
Senior Director Western Water and Resilience Landscapes
Environmental Defense Fund

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
 PROGRAM ENVIRONMENTAL IMPACT REPORT
 APPENDIX H – RESPONSES TO COMMENTS



August 13, 2021

**Public Comment
 Restoration Projects Statewide Order
 Deadline: August 13, 2021 by 12 noon**

Jeanine Townsend, Clerk to the Board
 State Water Resources Control Board
 P.O. Box 100, Sacramento, CA 95812-2000
 Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend:

On behalf of the Floodplain Forward Coalition, we are writing to support the State Water Resources Control Board’s (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help accelerate floodplain reactivation, multi-benefit water management, nature-based solutions, and the implementation of habitat restoration projects throughout the state. Many of us will provide individual comments to the State Water Board, but here we join together to express our appreciation for specifically including **floodplain restoration** in the proposed Order.

We are a diverse coalition of conservation organizations, farmers and other landowners, local governments, water suppliers and academic institutions who care deeply about the future of California and have come together as the Floodplain Forward Coalition to advance a new model for water management and land use as shown in [Reactivating our Floodplains: A New Way Forward](#). We have developed [A Portfolio for Fish and Wildlife](#) that showcases the types of restoration projects we are advancing to reactivate our floodplains in the Sacramento Valley and which would benefit from this proposed Order. We “support the development of expedited and cost-effective permitting mechanisms for common types of restoration and enhancement projects” as called for in the Water Resilience Portfolio ¶13.2.

The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed.

We are all very excited that farmland (primarily ricelands), wildlife refuges, and the bypasses currently designed for flood protection can be managed to work together for dynamic fisheries and wildlife conservation and to mimic the historic floodplain in the Sacramento River Basin, while continuing to provide flood protection for Sacramento, rural communities and lands. Spreading out and slowing down water across this landscape is a nature-based solution that mimics natural floodplain processes and provides multiple benefits year-round by allowing farmers to cultivate rice and other crops for humans during the spring and summer; habitat for birds, reptiles, and other fauna in the fall; and food for migratory birds and juvenile native fish species in the winter. This holistic water management can bring our ecosystem and farmlands to life through the careful interaction of water, sun and land.

Sincerely yours,

Amy Merrill
AMERICAN RIVERS

Meghan Hertel
AUDUBON CALIFORNIA

Tim Johnson
CALIFORNIA RICE COMMISSION

Jacob Katz
CALIFORNIA TROUT

Jeff Volberg
CALIFORNIA WATERFOWL

Kyriakos Tsakopoulos
CONAWAY PRESERVATION GROUP

Jeff McCreary
DUCKS UNLIMITED

Adam Davis
ECOSYSTEM INVESTMENT PARTNERS

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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Ann Hayden
ENVIRONMENTAL DEFENSE FUND

Thad Bettner
GLENN-COLUSA IRRIGATION DISTRICT

Mike Denny
LUNDBERG FAMILY FARMS

Rodd Kelsey
THE NATURE CONSERVANCY

David Guy
NORTHERN CALIFORNIA WATER ASSOCIATION

Catherine Hickey
POINT BLUE CONSERVATION SCIENCE

Lewis Bair
RECLAMATION DISTRICT 108

Brad Mattson
RECLAMATION DISTRICT 1500

Roger Cornwell
RIVER GARDEN FARMS

Julie Rentner
RIVER PARTNERS

Roger Cornwell
SACRAMENTO RIVER SETTLEMENT CONTRACTORS

Brad Mattson
SUTTER MUTUAL WATER COMPANY

Willie Whittlesey
YUBA WATER AGENCY

cc: SWRCB Members

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

From: [Angela Namellini and Ken Olivier](#)
To: [commentletters](#)
Subject: Comments – Restoration Projects Statewide Order
Date: Saturday, July 31, 2021 11:59:45 AM

EXTERNAL:

July 31, 2021

Jeanine Townsend, Clerk to the Board

State Water Resources Control Board

P.O. Box 100, Sacramento, CA 95812-2000

Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

I received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

As one of the chief funders of the California Salmon and Steelhead Coalition (a united effort by The Nature Conservancy, California Trout and Trout Unlimited to improve instream waterflows for fish), I believe that this order would incrementally speed up the restoration of streams to promote the health of various fish populations in the State. As I'm sure you're aware, given the current climate crisis, rapid progress is more urgently needed than ever.

I strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Sincerely,

Angela Nomellini

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

July 26, 2021
Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

I have received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

As a native Californian who has always valued our natural resources, and who has supported California environmental causes actively, I have a keen interest in the proposed Order.

I strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

I have had the opportunity to visit a Sustainable Conservation restoration project and have witnessed firsthand the benefits of smaller scale habitat restoration. I believe the draft Order will contribute immeasurably in our efforts to secure our water future in California.

Sincerely,

A handwritten signature in black ink that reads "Arthur S Miller".

Arthur S Miller
1249 Mt View Bl
Walnut Creek, CA 94596

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Conor Ofsthun
cofsthun@moffattnichol.com
3659 Richmond St
San Diego, CA 92103
July 7, 2021



To Whom it May Concern,

I would like to submit this letter of support for the DRAFT RESTORATION PROJECTS STATEWIDE ORDER PROGRAM ENVIRONMENTAL IMPACT REPORT which intends to improve the efficiency of regulatory reviews for restoration projects, both small under the General Order for Small Habitat Restoration Projects (Order #SB12006GN), and larger projects.

Thank you,

Conor Ofsthun

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

From: [Emmy Cattani](#)
To: [commentletters](#)
Subject: Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects
Date: Thursday, July 8, 2021 5:07:14 PM

EXTERNAL:

July 8, 2021
Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

I received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

I strongly support the State Water Resources Control Board's proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

My family and I operate a farming and a cattle ranching business with operations in Kern, Mono and Sacramento Counties. As climate change continues to impact the carrying capacity and productivity of our land, habitat restoration will be an important tool for ensuring that we can continue to support healthy native wildlife species and a thriving family business. A more efficient permitting

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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process for restoration projects will enable family-scale businesses like mine to participate in these opportunities.



Sincerely,
Emmy Cattani

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

Frank Boren
1146 Crest Ave, Pacific Grove
CA 93950
831-5743049

June 11, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000



Re: Comments-Restoration Projects Statewide Order

Dear Ms. Townsend,

As a past President of The Nature Conservancy I support the State Water Resources Control Board's proposed Order and Programmatic Environmental Impact Report.

It is urgent that we accelerate the needed habitat restoration projects throughout the State. The potential of doing so is visionary and positive.

Kindest regards,

A handwritten signature in black ink that reads "Frank Boren".

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 10th, 2021
Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

My name is Jeff Loomans, and having read the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide* I appreciate the opportunity to comment.

I strongly support the State Water Resources Control Board's proposed Order and Programmatic Environmental Impact Report (PEIR.)

As a homeowner along the Bolinas Lagoon in West Marin, I care deeply about the health of California's tidal lands, wetlands, and riparian areas. While not speaking officially on behalf of these organizations, I have worked actively with the Bolinas Lagoon Advisory Council, the Greater Farallones Association and Marin County's Community Development Agency to pursue aquatic habitat restoration along the Marin coastline. I have seen firsthand that one of the biggest challenges in this urgently needed work is the time and expense of securing individual permits.

The draft Order and PEIR will benefit habitat restoration projects in my area, and throughout the state, by providing programmatic coverage under a pre-written General Order. Our local and regional agencies responsible for restoration will save time and money. With a more efficient process, project delays will be avoided; and with more funds and staff time available, more restoration projects will be undertaken. These projects are urgently needed for maintaining ecosystem health, for water quality, and for responding to climate change. In my area we have already seen broad benefits to people and to wildlife demonstrated in our earliest completed projects. California needs to execute many more of these projects, at a much faster pace. PEIR will help us do that, while maintaining the protections and thoroughness of the permitting process.

I respectfully urge the State Water Resources Control Board to certify the PEIR and prioritize adoption and active staff use of this Order. We have two projects initiated in the Bolinas Lagoon estuarine system vital for imperiled species and for providing upland escape habitat as climate change causes sea levels to rise. These projects are now respectively at, and a few years away from seeking permits. Projects like these across the state cannot afford to be further delayed. I hope that the Board in considering public comments will pass this Order in as clear and efficient a form as possible.

Sincerely,

Jeff Loomans
167 Dipsea Road, Stinson Beach CA 94970

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

Lauren B. Dachs
P.O. Box 193809
San Francisco, CA

August 5, 2021
Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

I received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

As the recently retired President of the S. D. Bechtel, Jr Foundation, which over the period of its spend-down spent hundreds of millions of dollar to address the critical challenge of water in California, I am strongly in support of the effort to stream line permitting. This will allow for much needed habit retoration as well as providing clean and affordable water for people and the environment.

I strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

California, its citizens and all of us working on improving the land, water and climate which we all share would benefit tremendously from this Order and PEIR. As a philanthropist and active citizen I hope you will move this along as quickly as possible. The effects of the drought and climate are upon us so not a minute to waste.

Sincerely,

Lauren Bechtel Dachs

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

July 28, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

I, **Sally Liu**, received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

I am a board member of Sustainable Conservation and The Nature Conservancy – California Chapter. I also am a supporter of the San Mateo County Resource Conservation District. As a supporter of habitat restoration projects across California and of these organizations, I have heard from landowners and non-profit and governmental agencies how difficult it is to get restoration projects through the permitting process. The process needs to be streamlined and cost-conscious. There is limited time and funding to restore habitats for our native species AND for the ecosystem services that benefit people as well. This is ever more important as climate change pushes us further into drought conditions and we need to keep our freshwater systems in as healthy shape as possible.

I strongly **support** the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Sincerely,

Sally Liu
Tundra Glacier Fund Advisor
Board Member of Sustainable Conservation
Board Member of The Nature Conservancy – California Chapter
Supporter of the San Mateo County Resource Conservation District

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

July 29, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

Teri Biancardi, of Meadowview Homeowners Association, received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

Our Homeowner Association's common area open space is being eroded into dangerous channels with ten foot vertical banks by off-site storm water being directed onto our property. We have repaired part of one of these channels through the creation of a bio-engineered stream restoration project, but the permitting was onerous and expensive. We would have liked to do the entire stream course, and address other dangerous areas on our 400 acre property, but the permitting process was a barrier.

We felt the terms of existing permits were designed for developers, not people like us with limited resources, who want to create a safe space, but not at the expense of wetlands and the wildlife it supports.

As the project leader of the above project, I strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Our organization will also benefit from the Order and PEIR by being able to fix our dangerous areas in a way that supports wildlife, wetlands, and the ecosystem services they provide. Our project has also gained a lot of attention and support from the City of Temecula, and the County, as well as the region's

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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Flood Control District. It provides a model for green storm water management that provides multiple benefits. It shows that there are other, better options than concrete channels that destroy wetlands, impair water quality, and are blights on the landscape. Our stream restoration project has even been recognized in the Army Corps of Engineers [Atlas of Engineering with Nature, Volume II](#). I am hopeful this sort of project will come to be implemented in many more parts of our watershed, especially with the added incentive of a streamlined permitting process.

Sincerely,

Teri Biancardi

Teri Biancardi

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

30 July 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

Thank you for the opportunity to comment on the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*, spearheaded by the non-profit, Sustainable Conservation.

I devoted a 31-year career, and now my retirement years, to the protection of land, water, and air; and to making government work for communities across the country. Twenty-seven of those years were spent at EPA Region 9 in regulatory and non-regulatory roles. I learned about the permitting obstacles faced by farmers and ranchers who wanted to improve the health of the soil, water, and habitats on their private properties. At the same time, I learned what politically-powerful land developers meant when they asked agencies and elected officials for “permit streamlining”. Too often, they wanted special treatment, unwarranted exemptions from regulatory requirements, and the minimum level of constraints on their externalities, e.g., stormwater runoff, degradation of wetlands, fragmentation of stream corridors, etc..

Regulatory agencies should not be unnecessarily stringent when it comes to permitting habitat restoration projects, and unnecessarily lenient when it comes to permitting the destruction of those same habitats. With this draft Statewide Order, the State Water Board has the unique opportunity to “right a wrong” that’s been embedded in our regulatory system for decades.

Please approve the draft statewide Order while keeping it clear, strong, and useful; and certify the Programmatic Environmental Impact Report (PEIR). Together, these documents will save time and money for all concerned, and greatly assisting applicants with adhering to State regulatory requirements. The Statewide Order and the PEIR provide an environmentally thorough, protective, and robust permitting process while avoiding delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people.

Sincerely,

Tim Vendlinski
Oakland, CA

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

From: [Tina Quinn](#)
To: [commentletters](#)
Subject: Comments – Restoration Projects Statewide Order.
Date: Saturday, August 7, 2021 12:16:30 PM

EXTERNAL:

August 7, 2021

Jeanine Townsend, Clerk to the Board

State Water Resources Control Board

P.O. Box 100, Sacramento, CA 95812-2000

Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

I, Tina Quinn, received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

This has been a topic that I've been involved with for the past 30 years, when Sustainable Conservation was first being formed, and I know that right now you have the opportunity to change the way people implement restoration projects in their communities. Time is of the essence and it is imperative that government takes action to change how restoration projects are permitted. Unfortunately, as you know, right now it's very cumbersome for anyone who wants to upgrade their property and invest time & resources into a restoration project. There are SO MANY benefits to moving forward with this.

I strongly **support** the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Thank you for the good work you are all doing and for bringing this forward.

With much gratitude,

Tina Quinn
tinaquimmail@gmail.com
C: 310-213-9555

"The courage of an expanding heart means learning to sing and cry at the same time." -
Frances Moore Lappé

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

1661 Page Mill Road
Palo Alto, CA 94304
650.213.3000

moore.org



July 27, 2021
Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov

Re: Comments – Restoration Projects Statewide Order

Dear Ms Townsend:

The Gordon and Betty Moore Foundation works to make significant positive impact in the field of environmental conservation. I lead the Foundation's Bay Area Conservation Portfolio, through which we have supported a variety of restoration projects that benefit wildlife and enhance ecosystem services for people.

I strongly support the State Water Resources Control Board's proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be tremendously time-consuming and expensive. Having this Order in place will help save time and money and avoid delays for critically-needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. The drought has given further urgency to addressing this established state priority.

Many projects we fund will see significantly reduced time and cost through the proposed order, which will in turn allow our funding to have an even greater impact.

Sincerely,

A handwritten signature in black ink that reads "Dan Winterson".

Dan Winterson
Gordon and Betty Moore Foundation
dan.winterson@moore.org

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 11, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

Grassroots Ecology received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

Grassroots Ecology is a small nonprofit carrying out restoration projects with community volunteers and students in the Silicon Valley region, including projects in riparian areas and on the Bayshore. We partner with local agencies such as cities and open space districts to carry out work on their lands. Over the years, several of our projects have been subject to year(s)-long delays to complete CEQA and permitting work – all are projects that have restoration as the sole project objective – resulting in higher administrative costs and delays in creating habitat improvements.

We strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Sincerely,

A handwritten signature in black ink, appearing to read "Junko Bryant".

Junko Bryant
Assistant Director

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 10, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000

Re: Comments - Restoration Projects Statewide Order

Dear Ms. Townsend,



On behalf of our businesses, Humboldt Redwood Company, Humboldt Sawmill Company, Mendocino Redwood Company, Mendocino Forest Products, and Allweather Wood, we fully support the proposed Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide and the Programmatic Environmental Impact Report (PEIR). By way of introduction, our companies own 440,000 acres of forestland that are sustainably managed for forest products and are third party certified as operating sustainably.

Since the inception of our companies in 1998, we have been very active in the restoration of fisheries and terrestrial habitats. We have also invested significantly in upgrading watercourse crossings and abandoning streamside roads wherever possible. Through 2020, we have upgraded over 5,800 stream crossings and removed 38 fish barriers, opening over 28 miles of stream habitat.

We support the adoption of this Order and PEIR as it streamlines the process to get this important work completed. Landowners who agree to do this type of work on their land will be encouraged to do more knowing the process has been made much easier as a result of the Order. Additionally, the General Protection Measures are in line with measures we are used to adhering to when conducting restoration work, yet still protective of wildlife and water quality.

We applaud the agencies involved in creating this user friendly and streamlined permit process. Our companies will certainly use the Order to continue the work we have started on our ownership.

Sincerely,

John Andersen
Director, Forest Policy
Humboldt and Mendocino Redwood Companies

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

Post Office Box 889
Point Reyes Station
California 94956
T: 415 462-1158
F: 415 462-1099
www.malt.org

July 12, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

Marin Agricultural Land Trust (MALT) received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

MALT was the first land trust in the U.S. focused on agricultural conservation and we remain true to our mission: permanently protect Marin’s agricultural land for agricultural use. We are in the midst of the worst drought in at least 50 years, highlighting how resilience to climate change is of critical importance to both our local food systems and our environment.

We strongly support the State Water Resources Control Board’s (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, people, and our food systems. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can’t be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

MALT accompanies ranchers and farmers in Marin County in better stewarding their land for sustainable agriculture; habitat restoration is an element of our Stewardship Assistance Programs (SAP). We believe that the draft order and PEIR will enable restoration projects on farm and ranch lands to be implemented sooner with more funding allocated to on-the-ground work rather than navigating bureaucracy, and consequent greater impact.

BOARD OF DIRECTORS: Thank Kreiner, Chief Executive Officer | Neil Rudolph, Chair | Robert McGee, Vice-Chair
Tamara Hicks, Secretary | Diana Hagan, Treasurer | Bill Barbani II | Marcia Borinaga | Barbara Boucke | Sam Delcino
Andrew Giacomini | Ralph Grosti | Janine Guillot | Lynne Heinrich | Tim Kehoa | Paul Martin | Molly Myerson
Rebecca Patton | Lisa Penola | Andrew Riesantfeld | David Schneider | Vivian Straus
FOUNDED in 1980 by Phyllis Faber and Ellen Straus



CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Post Office Box 809
Point Reyes Station
California 94956
T 415 663-1158
F 415 663-1099
www.malt.org

Sincerely,

A handwritten signature in black ink, appearing to be "Thane Kreiner", written over a horizontal line.

Thane Kreiner, PhD
Chief Executive Officer

BOARD OF DIRECTORS Thane Kreiner, Chief Executive Officer | Neil Rudolph, Chair | Robert McGee, Vice-Chair
Tamara Hicks, Secretary | Diana Hagan, Treasurer | Bill Barboni II | Marcia Barinaga | Barbara Boucke | Sam Dolcini
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FOUNDED in 1980 by Phyllis Faber and Ellen Straus



CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



Mattole Salmon Group

PO Box 188 ph: (707) 629-3433
1890 Lighthouse Road fx: (707) 629-3435
Petrolia, CA 95558 msg@mattolesalmon.org
www.mattolesalmon.org

August 12, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov

Subject: Comments – Restoration Projects Statewide Order



Dear Ms. Townsend:

Thank you for the opportunity to comment on the *Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. I am pleased to see more efficient permitting pathways being developed for restoration projects, and the Mattole Salmon Group strongly supports the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR).

The Mattole Salmon Group has been working to restore self-sustaining runs of salmon and steelhead in the Mattole River watershed since 1980. For the past several decades, we have been heavily focused on restoring the complexity of instream habitat, primarily by adding large wood to streams. In recent years we have been actively trying to scale up our work to more efficiently and effectively improve habitat over multiple miles of stream. The need is for habitat restoration at this scale, as past impacts to aquatic habitat occurred at a large scale, with all large riparian trees and instream wood being removed from most streams in the watershed pre-1970. These streams will continue to offer only very poor salmonid rearing habitat, with insufficient habitat complexity, velocity refuge, and cover, for decades without the addition of large quantities of instream wood.

The previously adopted *General Order for Small Habitat Restoration Projects* is helpful in expediting permitting for small projects, but not applicable to the larger restoration projects that we see as necessary to improve habitat sufficiently to give hope for recovery of salmon and steelhead runs. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources. Implementing these projects is expensive, the need for habitat improvement is great and vast, and reducing time and money spent in permitting enables more work to be done to improve habitat.

We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Sincerely,

A handwritten signature in black ink, appearing to read "Nathan Queener".

Nathan Queener
Fisheries Biologist
Mattole Salmon Group
nathan@mattolesalmon.org

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Mid Klamath Watershed Council

P.O. Box 409, Orleans, CA 95556 (primary)

P.O. Box 50, Happy Camp, CA 96039

Tel: (530) 627-3202

www.mkwc.org

mail@mkwc.org

Public Comment

Restoration Projects Statewide Order

Deadline: August 13, 2021 by 12 noon

August 4, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000

Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

The Mid Klamath Watershed Council received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

Since 2001, the Mid Klamath Watershed Council (MKWC) has been working to restore the threatened Klamath River in Northern California and the upslope habitats upon which the river depends. The Klamath River and its tributaries, including the Salmon and Trinity Rivers, have some of the largest remaining wild salmon runs in the lower 48 States and hold the promise of significant ecological improvement through restoration programs.

We strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of habitat restoration projects in our service area, as well as throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. The permitting process should not be a hindrance to this much-needed restoration. Having this Order in place will help save time and money, avoid delays, and increase the pace and scale of restoration in the Klamath Basin. Having a more efficient process will make better use of grant funds, our organizational staff resources, and agency staff resources. The Mid Klamath Watershed Council has more prioritized restoration projects than it has resources to implement. This Order will increase our ability to complete more projects, which will lead to more direct, restoration benefits.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Sincerely,

A handwritten signature in black ink, appearing to read 'Luna Latimer', written in a cursive style.

Luna Latimer
Director
Mid Klamath Watershed Council

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 12, 2021
Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000

Subject: Comments – Restoration Projects Statewide Order



Dear Ms. Townsend,

The **Morro Bay National Estuary Program** received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

The Estuary Program is a nonprofit that brings together citizens, organizations, agencies, and landowners to protect and restore the Morro Bay Estuary for people and wildlife. We complete a range of restoration projects in the watershed including floodplain restoration, erosion control, livestock fencing, road improvements, water conservation, nutrient removal best management practices (BMPs), low impact design for stormwater, among others. We also work closely with partners such as the Coastal San Luis Resource Conservation District to implement BMPs for reduction of sediment and nutrient impacts.

We strongly support the State Water Resources Control Board's proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

The Estuary Program would benefit from having a more streamlined process. Implementing these restoration and enhancement projects in the watershed in a timely and efficient manner is essential to providing quality habitat for diverse fish and wildlife species and extending our available resources as projects that take longer tend to cost more. Many grant funds have narrow time periods for permitting and implementation. With the diverse permits needed for improvement projects, having smaller-scale projects streamlined would ensure that funding is utilized most efficiently and habitat improvements are realized sooner.

Sincerely,



Lexie Bell
Executive Director
lbell@mbnep.org

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

July 9, 2021
Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov

Subject: Comments – Restoration Projects Statewide Order



Dear Ms. Townsend,

This is a comment on the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*.

The Natural Heritage Institute has worked on ecological restoration in aquatic environments throughout the world. We are always concerned when environmental compliance slows or stops important ecological restoration projects.

As the former Deputy Secretary of the California Natural Resources Agency, I saw this happen again and again. I sometimes thought we were our own worse enemy: stymied by environmental regulations when we were trying to restore habitat.

For this reason we strongly support the State Water Resources Control Board's proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Living in Marin County, I constantly see examples of the necessity of this proposed order. We are trying to restore native wildlife like beavers and amphibians, but the cost and time-consuming nature of environmental compliance slows down or even stops these projects.

We hope the Order will facilitate the implementation of restoration projects.

Sincerely,

Gerald H. Meral, Ph. D.
Director, California Water Resources Program
Natural Heritage Institute

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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APPENDIX H – RESPONSES TO COMMENTS



NCWA

Northern California Water Association

*To advance the economic, social and environmental sustainability of Northern California
by enhancing and preserving the water rights, supplies and water quality.*

August 12, 2021

**Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon**

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



RE: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend:

The Northern California Water Association received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

NCWA is committed to advance the economic, social, and environmental sustainability of the Sacramento Valley by enhancing and preserving its water rights, supplies, and water quality for the rich mosaic of farmlands, refuges and managed wetlands, and meandering rivers that support fisheries and wildlife, and cities and rural communities in the region.

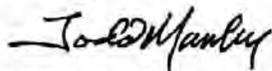
NCWA and our members strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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APPENDIX H – RESPONSES TO COMMENTS

NCWA and our members, working with our conservation organization and state and federal agency partners are implementing collaborative, comprehensive programs to promote [salmon recovery](#) and enhance [Pacific Flyway habitat](#) in the Sacramento Valley. Both of these programs are focused on the implementation of habitat projects. The Sacramento Valley Salmon Recovery Program builds upon a [long history](#) of salmon project implementation in the Sacramento Valley. The program is designed to benefit all four runs on Chinook salmon in the Sacramento Valley and implements projects targeted to provide habitat for all salmon freshwater life-cycle stages in the [upper](#), [middle](#) and [lower](#) reaches of the region's rivers. Projects to benefit the Pacific Flyway include [infrastructure improvements to increase water deliveries](#) to National Wildlife Refuges and State Wildlife Areas and [improvements to privately-managed](#) agricultural lands and wetlands. Both fish and birds are benefiting from efforts to [reactivate floodplains](#) in the Sacramento Valley. These projects occur on both the [wet-side](#) and the [dry-side](#) of the region's levees and includes a [portfolio of projects](#) that will need to secure permits prior to implementation. This proposed Order will be of great benefit to the projects contributing to these programs and many others in the Sacramento Valley and NCWA strongly supports its approval.

Sincerely,



Todd N. Manley
Director of Government Relations

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 13, 2021

Via email: commentletters@waterboards.ca.gov
Jeanine Townsend
Clerk to the Board
State Water Resources Control Board



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend:

The Port of San Diego (Port) appreciates the opportunity to comment on the Clean Water Act Section 401 General Water Quality Certification and Waste Discharge Requirements for Implementation of Restoration Projects Statewide. The Port supports this program to improve the efficiency of regulatory review for environmentally beneficial restoration projects which support the protection of water-dependent species and the environment.

The Port is a self-sustaining public corporation and regional government agency created in 1962 through the California State Legislature's adoption of the San Diego Unified Port District Act (Port Act). Through the Port Act, the Port was granted management of 35 miles of state tidelands and submerged lands around San Diego Bay (Bay) and entrusted with managing and protecting the tidelands and diverse waterfront uses in a manner that is consistent with the Public Trust Doctrine. These public trust uses promote and balance navigation, commerce, fisheries (including aquaculture), recreation, and environmental stewardship in the Bay and in the Pacific Ocean off the City of Imperial Beach.

As coastal resource managers, the Port, as well as other ports, are uniquely positioned to take a leadership role in the development and implementation of nature-based solutions within coastal ecosystems, which includes biologically-friendly shoreline structures in addition to protecting existing wetlands and eelgrass habitats.

The Port, therefore, respectfully requests the bank stabilization restoration project type to be expanded to include any biologically-friendly shoreline structures and living shorelines, in addition to clarifying that tidal habitats are included. Biologically-friendly shoreline structures and living shorelines should be allowed to be constructed with hard materials designed to attract native intertidal species, including shellfish and algae, which will then promote biodiversity by attracting foraging birds, fish, and marine mammals.

As a stakeholder faced with the unique challenges and opportunities for coastal resiliency, the Port welcomes the opportunity to work with the State Water Resources Control Board staff to advance permitting efficiencies during regulatory review. Thank you for the opportunity to provide feedback on the Restoration Projects Statewide Order. Please do not hesitate to contact me via phone at 619-686-6200 or via email at emaher@portofsandiego.org.

Sincerely,

A handwritten signature in cursive script that reads "Eileen Maher".

Eileen Maher
Director, Environmental Conservation

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



744 La Guardia Street, Building A, Salinas, CA 93905

(831) 975-7775

August 12, 2021

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

The Resource Conservation District (RCD) of Monterey County received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

The Mission of the RCD of Monterey County is “Conserving and improving natural resources, integrating the public interest in environmental quality with the needs of agricultural and urban users.” As Executive Director for the RCD, I support the State Water Resources Control Board’s (SWRCB) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner and will make better use of grant funds and agency staff resources.

As a small, grant-dependent organization, we anticipate adoption of the Order and PEIR to help us make most efficient use of time and resources, enabling projects to be implemented in a more timely and cost-effective manner. It will free more of our funding dollars for on-the-ground work. This will be particularly valuable for on-farm water quality improvement projects we are starting to scope with farmers that don’t fit under the Small Habitat Restoration Project definition.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the SWRCB to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can’t be delayed. The drought has given further urgency to addressing this established state priority. We also ask the SWRCB to maintain a clear, implementable, and efficient Order as public comment is considered.

Sincerely,

A handwritten signature in black ink that appears to read 'P. Robins'.

Paul Robins
Executive Director

“Conserving and improving natural resources, integrating the public interest in environmental quality with the needs of agricultural and urban users”

♻️ Printed on Recycled Paper

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

818.597.8627 phone
818.597.8630 fax
info@rcdsmm.org

540 South Topanga Canyon Boulevard
Topanga, California 90290

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19 July 2021



Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov

EXECUTIVE OFFICER
Clark Stevens

Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

The Resource Conservation District of the Santa Monica Mountains (RCDSMM) received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

For over 60 years, the RCDSMM has implemented numerous habitat restoration projects within the Santa Monica Mountains and we strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



With the Order and PEIR in place, our projects will save time and resources, more efficiently and cost-effectively implement on the ground projects. In particular, our work assisting property owners in providing more defensible, ecologically sensitive and sustainable native firewise landscapes following the Woolsey Fire will definitely benefit from this streamlined permitting process.

Thank you for your efforts to cut the green tape and help foster implementation efforts.

Sincerely,

Rosi Dagit, Sr. Conservation Biologist

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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APPENDIX H – RESPONSES TO COMMENTS



RESOURCES LEGACY FUND
CREATIVE SOLUTIONS. LASTING RESULTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 10, 2021



Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov

RE: Proposed General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide, and Supporting Draft Program Environmental Impact Report

Dear Ms. Townsend,

On behalf of the Resources Legacy Fund (RLF), a 501(c)3 non-profit organization headquartered in Sacramento, thank you for this opportunity to comment on the proposed General Order and accompanying draft Program Environmental Impact Report (PEIR) referenced above. RLF views the proposed Order and PEIR from the State Water Resources Control Board (State Water Board) as a significant advancement in the removal of barriers to ecological restoration in California, an important strategy for conserving biodiversity and water resources, addressing climate change, and enhancing equitable access to the outdoors for all Californians.

RLF has supported this strategy since 2002 through grantmaking to non-profit organizations, coordination and collaboration with philanthropic partners and state agencies, and direct engagement with decision makers. In addition, RLF facilitated the new, coordinated permitting system for multi-purpose restoration projects in San Francisco Bay, which resulted in the creation of the Bay Restoration Regulatory Integration Team.

From this basis, RLF is pleased to offer its strong support for the State Water Board's proposed General Order, which has the potential to expand, accelerate, and lower the costs of habitat restoration projects throughout California.

In addition to supporting the strategy of eliminating barriers to restoration, RLF works with an array of partners engaging in ecological restoration projects, including small and large non-profits, resource conservation districts, Tribal governments and organizations, and others. Often, funding availability represents a constraint for their important projects, and the process of obtaining multiple individual state permits for a restoration project represents a significant proportion of costs, diverting time and resources that could be applied to greater restoration. A General Order that provides programmatic coverage could save time and money for these partners, facilitating critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase state resilience to climate change. The draft Order and associated PEIR provide an environmentally protective and robust permitting process that will help applicants better meet state requirements while completing their important work.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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Page 2 of 2

A more efficient permitting process for restoration will also make better use of state and federal resources, both in helping increase the on-the-ground impact of restoration grant funding, and in reducing demand for scarce agency staff time for the review of permit applications.

Science-driven, equity-centered ecological restoration is a critical piece of the state's needed response to the intertwined crises of climate change, habitat and biodiversity loss, and water resource management, and every effort should be made to reduce barriers to this solution. RLF will continue to prioritize policies and projects that advance it, and we will continue to support the State of California to do so as well.

Adoption of the proposed general order also aligns with other high level natural resources strategies for the state. It is an important early implementation action called for by Natural Resources Secretary Wade Crowfoot under the California Natural Resources Agency's Cutting the Green Tape Initiative and will help advance Governor Newsom's goal in his Nature-Based Solutions Executive Order to conserve 30 percent of the state's lands and coastal waters by 2030.

Accordingly, we urge the State Water Board to certify the PEIR, prioritize adoption of the General Order for restoration projects, and to invest in the training and coordination needed to ensure broad application of the Order by State Water Board staff.

Thank you for your consideration of our comments, and for your agency's hard work and collaboration with sister agencies and other partners on this important initiative. Please let us know if we can provide additional information.

Sincerely,



Michael A. Mantell
President

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER PROGRAM ENVIRONMENTAL IMPACT REPORT APPENDIX H – RESPONSES TO COMMENTS

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SACRAMENTO - SAN JOAQUIN

DELTA CONSERVANCY

A California State Agency

August 2, 2021

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov

Subject: Comments – Restoration Projects Statewide Order



Dear Ms. Townsend,

The Sacramento-San Joaquin Delta Conservancy received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

The Delta Conservancy is a California State agency tasked with being a lead agency for ecosystem restoration and promoting environmental protection and the economic wellbeing of Delta residents. We serve the Delta and the Suisun Marsh. Utilizing voter approved Proposition 1 grant funds, the Conservancy has 29 active restoration projects within our jurisdiction. The Delta is widely viewed as an ecosystem in crisis and efforts to restore ecological function are a high priority for the State. Current processes to obtain individual permits for restoration projects are excessively complex, time consuming, and costly to the point of being a major deterrent for our grantee applicants. In some cases, the permitting process has been so cumbersome that projects have been in the planning stage for decades. Without programmatic permitting it is highly unlikely the State can meet its restoration objectives in this critical estuary.

Therefore, I strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

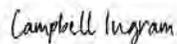
1450 Halyard Drive, Suite 6, West Sacramento, CA 95691 | (916) 375-2084 | www.deltaconservancy.ca.gov

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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Our grantees will benefit from the Order and PEIR through significant savings in time, effort and cost of permitting which will allow more of our funding to go directly to restoration benefits. We are currently in the fifth round of solicitation for our Proposition 1 program and anticipate additional funding to expand the program in the future. This represents dozens of potential projects that could directly benefit from the proposed order.

Sincerely,



Campbell Ingram
Executive Officer

1450 Halyard Drive, Suite 6, West Sacramento, CA 95691 | (916) 375-2084 | www.deltaconservancy.ca.gov

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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525 Golden Gate Avenue, 10th Floor
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Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

Natural Resources and Lands Management

August 12, 2021



Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov

Subject: San Francisco Public Utilities Commission Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

The San Francisco Public Utilities Commission (SFPUC) received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for providing the opportunity to review and provide comments on the contents of the proposed General Order and draft Program Environmental Impact Report (PEIR).

The SFPUC is responsible for delivering high quality, reliable drinking water to approximately 2.7 million customers in the greater San Francisco Bay Area. The SFPUC is committed to the protection and restoration of natural resources that affect or are affected by the operation of the Hetch Hetchy Regional Water System (HHRWS) within the Tuolumne River, Alameda Creek, and Peninsula watersheds. The SFPUC proactively manages the HHRWS and our watershed lands in a manner that maintains the integrity of the natural resources, restores habitats for native species, and enhances ecosystem function. The SFPUC is involved in planning for projects that could be expedited by this proposed General Order and draft PEIR, such as fish barrier removal and habitat enhancement and restoration projects in Alameda Creek and San Mateo Creek.

We strongly support the State Water Resources Control Board's (State Water Board) proposed General Order and supporting PEIR, which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state and within SFPUC watershed lands. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help the save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve

- London N. Breed
Mayor
- Sophie Maxwell
President
- Anson Moran
Vice President
- Tim Paulson
Commissioner
- Ed Harrington
Commissioner
- Newsha Ajami
Commissioner
- Michael Carlin
Acting
General Manager

Services of the San Francisco Public Utilities Commission

OUR MISSION: To provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.



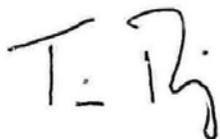
CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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water quality, and increase our resilience to climate change. Having a more efficient process in place is an important incentive to complete restoration projects so their benefits can contribute sooner to the recovery of native species threatened by the effects of climate change.

We urge the State Water Board to certify the PEIR and prioritize adoption of this Order since urgent action is needed for habitat restoration to support biodiversity objectives throughout the state.

Thank you for your time and effort to move restoration projects forward at an accelerated pace.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Ramirez". The signature is stylized with a large, looped "R" and a distinct "T".

Tim Ramirez
Division Manager

CC: Ellen Natesan, Planning and Regulatory Compliance Manager
Casey Sondgeroth, Senior Environmental and Regulatory Compliance
Planner
Anna Fedman, Environmental and Regulatory Compliance Planner

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



110 W. Taylor Street
San Jose, CA 95110-2131

July 16, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

San Jose Water Company received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

San Jose Water Company (SJW) is an investor owned public water utility serving nearly one-million customers in Santa Clara County. SJW manages more than 6000 acres of watershed land in the Los Gatos Creek Watershed for source water protection, wildfire risk reduction, and habitat preservation. Our watershed lands are vitally important for the maintenance of biodiversity and habitat and for conservation of special-status plants and wildlife that rely on a healthy watershed. The watershed provides a critical high-quality water supply for residents throughout the region. We are significantly invested in ecosystem-based restoration and conservation management in the watershed given increasing risks from climate change and development. As an organization, we are committed to long-term and sustainable management of these resources to address these risks with ecological restoration as a fundamental component of our overall organizational watershed management strategy.

We strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

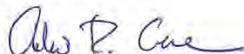
The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Our organization will also benefit from the Order and PEIR by streamlining permitting and compliance for ecosystem restoration projects and programs, allowing SJW to commit additional resources directly to restoration. Likewise, it will strengthen our ability to develop landscape-scale restoration programs/projects with greater assurance of timelines and funding. Importantly, the Order and PEIR will reduce organizational barriers to restoration by reducing project costs and risk while supporting SJW participation in regional water resiliency programs/projects through targeted restoration focused on water supply and water quality.

Sincerely,

A handwritten signature in blue ink that reads "Andrew R. Gere".

Andrew R. Gere, P.E.
President and Chief Operating Officer

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Sanctuary Forest

P.O. Box 166
Whitethorn
California 95589

Board of Directors

Eric Shafer, President
Retired Teacher

Renee Crowley, Vice President
Retired Park Unit Manager

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Campbell Thompson
Biologist, Restorationist

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Restorationist

David Sopjes
Retired Teacher

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April Newlander
Executive Director

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Water Program Director

Anna Rogers
*Education, Development
& Administrative Director*

Bryce Howe
Stewardship Program Coordinator

Walker Wise
Water Program Coordinator

Denise Dills
Bookkeeper & Contract Manager

Ashley Brookens
Administrative & Program Assistant

Phone: 707-986-1087
Fax: 707-986-1607
sanctuary@sanctuaryforest.org
www.sanctuaryforest.org



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 13, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov

Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

Sanctuary Forest Inc. received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

Sanctuary Forest is a land and water trust that was founded in 1987 to conserve, steward and restore the forests and streams of the Mattole River headwaters. We work with many state agencies, restoration partners and our diverse community and implement a broad spectrum of projects. In 2002, the Mattole River mainstem stopped flowing for 6 weeks with dire consequences to native salmon, wildlife and our community and since then a pattern of longer dry seasons and extreme low flows has become the norm. Since 2005 we have dedicated our work to improving streamflows and have developed innovative strategies that are now being implemented in other parts of the state. These strategies include storage and forbearance (storing water from the winter for use during the summer) and groundwater recharge (projects that slow runoff and increase groundwater storage). Over the last 15 years we have learned that land use impacts are one of the biggest causes of low flows and that significant watershed scale restoration will be needed to address water scarcity. Restoration is critical for the survival of our native salmon and all wildlife. Without restoration, the impacts of climate change along with past and present land practices will result in extreme water scarcity – including loss of stream habitat as well as increased fire, loss of forests and upland habitat.

We strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Our organization will significantly benefit from the Order and PEIR by saving time and resources such that more projects can be implemented and restoration can more readily be achieved in the timeframe meaningful for the survival of fish and wildlife. In addition, the current permitting process is very complex and time consuming making it very difficult to secure permits within the timeframe needed to start work at the beginning of the restoration season. We are experiencing this problem first-hand as I write this letter, with a project scheduled for implementation on McKee Creek and funded by the Wildlife Conservation Board. On August 10, we learned that our Army Corps permit would be delayed by 3-4 weeks due to delays with the SWRCB 401 permit. This delay will likely make it impossible to complete the work within the seasonal work-window restrictions that require work to stop by Oct 15. Not only does this create problems by adding work to an already full schedule for the following season, but it requires extensions from the funding agencies which are not always possible. We are also experiencing firsthand the amount of time it takes to prepare and shepherd the permit applications. This spring, we spent at least 160 hours of staff time on federal, state and county permit applications for one small restoration project. We are now behind on other projects and very discouraged. If every project requires a similar permitting effort, we will likely be overwhelmed to the point where we may not be able to sustain this work. Examples of specific projects coming up in 2022 and beyond that could be eligible to use the proposed order include:

- North Fork Lost River Flow and Habitat Enhancement Project, funded by Wildlife Conservation Board Prop 1, scheduled for implementation summer of 2022, cost ~ 2.1 million
- Anderson Creek Instream and Riparian Habitat Restoration Project, funded by CDFW Environmental Enhancement project, scheduled for implementation summer of 2022, cost ~\$290,000
- North Fork Baker Creek Fish Passage Project, pending funding from CDFW FRGP, scheduled for implementation summer of 2023, cost ~\$400,000
- Future "shovel ready" implementation projects with CEQA and planning completed through the Mattole Headwaters Streamflow Enhancement Planning Project, funded by Wildlife Conservation Board Prop 1. Implementation 2023 – 2025 and estimated cost of ~ 4 million.
- Future implementation projects currently in the planning phase, with planning and CEQA funded by CDFW FRGP and the California State Coastal Conservancy. Implementation 2026-2030 and estimated cost of ~5 million.

Sincerely,



CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

The Santa Clara Valley Open Space Authority (Authority) received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

On behalf of the Authority, I express strong support for the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the State.

The Authority is a public, independent special district created by the California State Legislature in 1993 at the urging of community leaders who saw the importance of maintaining the ecological integrity of the region. The Authority conserves the natural environment, supports agriculture, and connects people to nature by protecting open spaces, natural areas, and working farms and ranches for future generations. We currently own or manage over 27,000 acres of open space in southern Santa Clara County and we are a member of the Santa Cruz Mountains Stewardship Network.

The Santa Cruz Mountains Stewardship Network (Network) is a region-wide and cross-sector collaboration of organizations committed to working together to help cultivate a resilient and vibrant region. Many of the conservation and land management organizations who are members of the Network have missions that include preserving and restoring open space. Large-scale restoration projects with multiple benefits that provide habitat for rare species, flood or drought resilience, and waterway benefits are a high priority for many Network organizations. The Authority and Network organizations will benefit from the Order and PEIR by saving time and resources, enabling projects to be implemented sooner and directing more funding for on-the-ground work.

The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which

33 Las Colinas Lane
San Jose, CA 95119
408.224.7476 T
408.224.7548 F
openspaceauthority.org

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER PROGRAM ENVIRONMENTAL IMPACT REPORT APPENDIX H – RESPONSES TO COMMENTS



benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The following are specific projects the Authority is leading in collaboration with Network partners. These examples represent specific projects that could be eligible to use the proposed Order.

- Restoration of Laguna Seca as a wetland complex in Coyote Valley
- Floodplain restoration along Fisher Creek in Coyote Valley
- Floodplain and habitat creation in the Pajaro Valley

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established State priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

We greatly appreciate the opportunity to provide these comments and look forward to partnering with the Network and State agencies to implement priority habitat restoration projects that bring such vital public benefit.

Sincerely,

A handwritten signature in blue ink that reads "Andrea Mackenzie".

Andrea Mackenzie
General Manager

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

From: [Edmund Sullivan](#)
To: [commentletters](#)
Cc: [Gerry Haas](#); [lmonarres@dudek.com](#); [Will Spangler](#)
Subject: Comments – Restoration Projects Statewide Order
Date: Monday, August 9, 2021 2:54:14 PM



EXTERNAL:

Dear State Water Resources Control Board,

Please accept these written comments from the Santa Clara Valley Habitat Agency (SCVHA) on the proposed Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (proposed General Order) and supporting California Environmental Quality Act (CEQA) draft Program Environmental Impact Report (PEIR) as **unqualified support for the proposed General Order as written.**

The SCVHA agrees with the State Water Board assertion that the process of obtaining individual authorization for larger restoration projects can be time consuming and increase the cost of regulatory compliance as compared to obtaining authorization under a general order that provides programmatic coverage. Moreover, as stated in the proposed General Order, restoration proponents seeking authorization for larger projects beyond the scale of the existing general water quality certification for small habitat restoration often do not have the funding to seek individual permits. We agree that this indicates the need for a general order that will expedite the regulatory approval process for large habitat restoration projects. The intended benefit of the proposed General Order for large habitat restoration projects cannot be understated.

SCVHA leads the implementation of the Santa Clara Valley Habitat Plan (Habitat Plan). The Habitat Plan is a 50-year regional plan to protect endangered species and natural resources while permitting future development in Santa Clara County in compliance with both the Federal and State Endangered Species Acts. In 2013 the Habitat Plan was adopted by all local participating agencies and permits were issued from the US Fish and Wildlife Service and California Department of Fish and Wildlife. It is both a Federal habitat conservation plan and a State natural community conservation plan, or HCP/NCCP.

In providing a long-term, coordinated program for habitat restoration and conservation, the Habitat Plan aims to enhance the viability of threatened and endangered species throughout the Santa Clara Valley while streamlining the federal and state permit process. This proposed General Order would facilitate the successful implementation of our HCP/NCCP restoration mission aligning with our already streamlined endangered species permits and Clean Water Act Section 404 Regional General Permit, saving SCVHA and our conservation partners, which includes both the United State Fish & Wildlife Service and the California Department of Fish & Wildlife, time and money.

Sincerely,

Edmund Sullivan

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

Executive Officer
Santa Clara Valley Habitat Agency
535 Alkire Avenue, Suite 100
Morgan Hill, CA 95037-4128
(408) 779-7261 Main Tel / (408) 779-7265 Dir Tel
(716) 930-4816 Mobile
edmund.sullivan@scv-habitatagency.org
www.scv-habitatagency.org

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CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



7/1/2021

Jeanine Townsend, Clerk to the Board State Water Resources Control Board
P.O. Box 100,
Sacramento, CA 95812-2000

Comments – Restoration Projects Statewide Order

Dear Ms. Townsend and State Water Resources Control Board,

I strongly support the adoption of the proposed Restoration Projects Statewide Order. I am the Board Chair of the Scott River Watershed Council and am deeply involved in the Council's restoration project development and permitting. The need to obtain individual water quality and waste discharge permitting for projects larger than 5 acres and/or 500 linear feet of streambank impact has severely limited our ability to implement projects of a size that begins to reach the scale and scope needed to address climate change and other threats to state water resources and the ecosystems dependent upon them. As noted in the notice of the opportunity to comment on this order, the process of obtaining individual authorization can be time consuming and increase the cost of regulatory compliance as compared to obtaining authorization under a general order that provides programmatic coverage.

I appreciate the leadership that the State Water Resources Control Board is exhibiting in moving this very necessary restoration permitting forward. It is in line with the State's "Cutting the Green Tape" initiative, and the Governor's Water Resiliency, Drought Emergency, 30 by 30 and Climate Change plans.

I urge the Board to adopt and place into service this order as quickly as possible so that organizations such as mine can move quickly towards solutions to address the climate emergency we are living through.

Sincerely Yours,

Betsy Stapleton

Betsy Stapleton
Board Chair, Scott River Watershed Council
707.499.7082
PLEASE NOTE NEW EMAIL: betsy@scottriver.org
Address: 514 N State Hwy 3
P.O. Box 355
Etna, Ca 96027
Website: www.scottriver.org



CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 11, 2021

Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000



Re: Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide

Dear Ms. Townsend,

I am writing on behalf of Sequoia Riverlands Trust (SRT) to express our strong support for the State Water Resources Control Board (SWRCB's) proposed Order and Programmatic Environmental Impact Report (PEIR), which will lower barriers to greatly needed habitat restoration projects in our region and around the state. SRT is a regional, Land Trust Alliance-accredited nonprofit that holds fee title, conservation easements or deed restrictions on over 40,000 acres of habitat and farmland in the Southern Sierra, Southern San Joaquin Valley and Carrizo Plain. We have extensive experience with land management and habitat restoration, in contexts ranging from prescribed burns and conservation-oriented grazing to the first successful, ecologically-based aggregate mine reclamation in Tulare County.

As a founding member of the Southern Sierra Partnership (SSP)—a coalition of business and conservation organizations that also includes Audubon California, Sierra Business Council, Tejon Ranch Conservancy and The Nature Conservancy—SRT has contributed to climate adaptation planning for a seven-million acre region stretching from the peaks of the Sierra Nevada and Tehachapi Mountains to the center of the San Joaquin Valley, a vision that continues to inform our work.¹ We are also active in multiple Groundwater Sustainability Agencies, a watershed-based Regional Conservation Investment Strategy and other water-related

¹ Southern Sierra Partnership. 2010. *Framework for Cooperative Conservation and Climate Adaptation for the Southern Sierra Nevada and Tehachapi Mountains*. Available at <http://www.southernsierrapartnership.org/ssp-framework.html>.

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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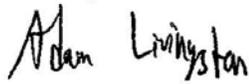
partnerships, where we are helping to build a consensus in favor of conservation-oriented repurposing of land that no longer has the water for irrigated agriculture. In both the climate adaptation and farmland retirement contexts, success will entail not only putting land into permanent conservation status, but also landscape-scale habitat restoration.

For this reason, we are grateful to see that the SWRCB is lowering barriers for habitat restoration projects. The process of obtaining an individual permit for a restoration project can be more time-consuming and expensive than permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will save time and money and avoid delays for critically needed projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and strengthen our resilience to climate change—all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements, and potentially facilitate future SRT habitat restoration projects. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order, because projects for climate change adaptation and habitat restoration for imperiled species cannot be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

We appreciate your consideration, and would welcome the opportunity to discuss these issues further.

Sincerely,

A handwritten signature in black ink that reads "Adam Livingston". The signature is written in a cursive style with a large initial "A".

Adam J. Livingston
Director of Planning and Policy
Sequoia Riverlands Trust

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



SONOMA ECOLOGY CENTER
Protecting the beauty and biodiversity of Sonoma Valley



August 13, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov

RE: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

Sonoma Ecology Center (SEC) received the Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide. Thank you for the opportunity to comment.

SEC has worked for over three decades in the North San Francisco Bay region on projects focusing on watershed health. We conduct research and implement restoration projects that focus on water quality and quantity, invasive species removal, stormwater capture and flood reduction, and native species and habitat enhancement. We have a staff of over 30.

SEC strongly supports the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements.

PO Box 1486, Eldridge, CA 95431 • (707) 996-0712 • fax (707) 996-2452
Sonoma Garden Park • 19996 7th Street East, Sonoma 95476 • 707 996-4883
Sugarloaf Ridge State Park • 2605 Adobe Canyon Rd .Kenwood, CA 95452 • 707 833-5712
info@sonomaecologycenter.org • www.sonomaecologycenter.org

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Like many organizations, we would benefit from the proposed Order and PEIR. We currently divert significant staff or consultant time to individual project permitting. While in some cases this is merited, in many cases, especially for routine, predictable projects that occur across a watershed or regional scale, this time costs our organization, and for publicly-funded projects, costs taxpayers, as we wait for review and conduct and often replicate permit-related tasks. These funds could instead be spent on implementation and projects could be implemented in a more time efficient way, sometimes making the difference as to whether a project succeeds.

At this critical time for biodiversity and water resources, there is so much important work to be done and plenty of opportunity to do this work, and we know that a more effective permitting process would benefit the people and resources of our state. We strongly support the State Water Board's proposed Order and PEIR.

Thank you for your consideration of our comments.

Sincerely,



Richard Dale
Executive Director

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



1221 Farmers Lane, Suite F
Santa Rosa, CA 95405

707.569.1448
SonomaRCD.org

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 2nd, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000



Re: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend, Clerk to the Board:

We, the undersigned staff of Sonoma Resource Conservation District, would like to express our support for the Proposed General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide and the California Environmental Quality Act (CEQA) draft Program Environmental Impact Report.

Our organization and others like us are often hindered by the robust and arduous permitting process for projects that are enhancing and restoring natural resources. We understand the necessity of the permitting process and support the protection of waters of the State and U.S. However, viewing and permitting projects like ours, which endeavor to improve and protect these waters, using the same lens as development or projects that negatively impact the environment, is detrimental to our efforts, draining critical staff time and funding that could be spent doing more restoration projects. We believe that the proposed Restoration Projects Statewide Order will help streamline natural resource projects of all sizes and continue to cut the green tape that so often impedes restoration efforts across the state.

Sincerely,

Jessica Pollitz, P.E.
Engineer

Katie Robbins
Project Manager

Aaron Fairbrook
Program Manager

Kevin Cullinen
Project Manager

Kari Wester
Project Manager

Erica Mikesb, P.E.
Partner Engineer

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
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Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

From: [Symbiotic Restoration](#)
To: [commentletters](#)
Subject: Comments – Restoration Projects Statewide Order
Date: Wednesday, August 4, 2021 12:49:25 PM

EXTERNAL:

August 4, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Ms. Townsend,

Symbiotic Restoration received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

Symbiotic Restoration builds beaver dam analogs in an attempt to repair incised creeks and rivers. Our low-tech, process based restoration method takes care not to create more harm to an ecosystem than already exists. As an environmental steward of the land, it is of utmost concern to restore the stream and meadow to a healthy condition. Beaver dam analogs help restore streams and meadows to their original condition, increase ground water storage, sequester carbon, and create dynamic habitats for many species. Our company's existing standard operating procedure has measures in place to minimize the likelihood of possible negative issues from happening, such as minimizing contamination, reducing soil compaction and disturbance, as well as reducing the spread of invasive species .

We strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS

be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

Symbiotic Restoration is a member of several collaboratives in the North State that have undergone an assessment of degraded meadows. Many potential projects exist, but are contingent on funding opportunities. Stream lining permit processes make it easier for us to implement projects when funding becomes available. Currently 50-100 projects have been identified as meadows in need of restoration, which if completed could dramatically increase water storage in the upper watershed in our drought stricken state.

Sincerely,

Garrett Costello
Symbiotic Restoration
801-599-9992
symbioticrestoration.com

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
PROGRAM ENVIRONMENTAL IMPACT REPORT
APPENDIX H – RESPONSES TO COMMENTS



Mailing: PO Box 12206, San Luis Obispo, CA 93406
Office: 1137 Pacific Street, Suite A, San Luis Obispo, CA 93401

805 544 9096
805 544 5122
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lcslo.org

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 12, 2021
Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

The Land Conservancy of San Luis Obispo County received the Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide. Thank you for the opportunity to comment.

The Land Conservancy of San Luis Obispo County (LCSLO) is a non-profit land trust with a mission to conserve and care for the diverse wildlands, farms, and ranches of the Central Coast. We have decades of experience implementing wetland restoration and enhancement projects to improve water quality, climate resilience and habitat for flora and fauna. One of our greatest hurdles to implementing wetland restoration is the time and expense involved in the permitting process.

We strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

LCSLO plans to implement substantial wetland creation, enhancement and restoration projects on our properties over the next 10 years. This order and PEIR will enable us to scale these projects up in size above the current 5 acre exemption and directly translate to more wetland acreage being restored.

Sincerely,

Kaila A Dettman
Executive Director
(805) 544-9096 Ext.
104 kailad@lcslo.org

SAVING SPECIAL PLACES SINCE 1984



CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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APPENDIX H – RESPONSES TO COMMENTS

August, 12, 2021
Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov

Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

The Watershed Research and Training Center (Watershed Center) received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

My name is Joshua Smith and I'm the Watershed Stewardship Program Director at the Watershed Center. I oversee a number of restoration projects in the Trinity River Watershed and I have closely watched the development of the Restoration Projects Statewide Order for large scale restoration with enthusiasm. We have utilized the HREA pathway in the past and while it was extremely valuable, we have found it to limit the scope and breadth of our potential restoration work. We are very excited that the State has invested in helping to streamline our ability to implement restoration stream projects in a time when anadromous fisheries are disappearing in front of our eyes.

We strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be much more time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner, and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient Order as public comment is considered.

We are collaborating with the Yurok Tribe on a new restoration project for spring chinook salmon in the South Fork Trinity River and we hope to utilize this PEIR permitting pathway as soon as it is available. Spring Chinook numbered in the tens of thousands in the South Fork in the 1960's, but last year we only counted 15 fish. We need to increase the scope, scale and promptness with which restoration is occurring and this tool will greatly help our efforts. We anticipate implementing the project in the fall of 2022 if the Order is available in time.

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Our organization will also benefit from the Order and PEIR because it will likely be the environmental compliance tool of choice for two other stream restoration projects that are currently in the design phases. We have a groundwater recharge project being designed for Salt Creek and a meadow restoration project being designed for Indian Valley Creek that will both utilize this Order to save time and funding.

With the three restoration projects due to be implemented in the next 5 years the PEIR will save our organization a huge amount of time and effort. Furthermore all of the associated State and Federal grants we have secured for these projects plus the State and Federal regulatory officials will all be saved time, effort and funds due to this streamlined procedure.

Sincerely,

Joshua Smith

The Watershed Research & Training Center

[98 Clinic Ave, Hayfork, Ca 96041-0356](mailto:98%20Clinic%20Ave%2C%20Hayfork%2C%20Ca%2096041-0356)

[\(530\)628-4206](tel:5306284206)

www.thewatershedcenter.com

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Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon



July 14, 2021

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
Delivered via email to: commentletters@waterboards.ca.gov



Subject: Comments – Restoration Projects Statewide Order

Dear Ms. Townsend,

Water Foundation received the *Notice of Opportunity for Public Comment and Board Workshop for the Proposed Order for Clean Water Act Section 401 Water Certification and Waste Discharge Requirements for Restoration Projects Statewide*. Thank you for the opportunity to comment.

The Water Foundation is a nonprofit philanthropy working to support lasting water solutions for communities, economies, and the environment. The Foundation complements strategic grantmaking with field-building and engagement with high-level decision makers and community leaders, and helps funders identify and act on opportunities to better manage water. We have supported work throughout California's watersheds and a variety of critical policy arenas. Our partners span a broad spectrum: conservation organizations, environmental justice groups, agricultural associations, water providers, business groups, and local, tribal, state, and federal agencies

We strongly support the State Water Resources Control Board's (State Water Board) proposed Order and Programmatic Environmental Impact Report (PEIR), which will help to accelerate implementation of greatly needed habitat restoration projects throughout the state. The process of obtaining an individual permit for a restoration project can be time-consuming and expensive compared to permitting under a pre-written General Order that provides programmatic coverage. Having this Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner and will make better use of grant funds and agency staff resources.

The current draft Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority.

As investors in freshwater restoration throughout California, the Water Foundation will significantly benefit from the Order and PEIR as our grantees save time and resources, implementing projects sooner. The Order

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will also help maximize the impact of restoration dollars by directing a greater portion of both public and philanthropic resources toward actions on the ground rather than further process that will do little to affect eventual decisions.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew Fahlund". The signature is stylized and cursive.

Andrew Fahlund
Senior Program Officer

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Public Comment
Restoration Projects Statewide Order
Deadline: August 13, 2021 by 12 noon

August 11, 2021

Delivered via e-mail: commentletters@waterboards.ca.gov

Mr. E. Joaquin Esquivel, Chair
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814



RE: Statewide General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide and Supporting Draft Program Environmental Impact Report

Dear Chair Esquivel:

Wine Institute is writing to express support for the adoption of the State Water Resources Control Board's (State Board) proposed General Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide and Supporting Draft Program Environmental Impact Report (PEIR). Wine Institute is a public policy advocacy group representing approximately 1,000 California wineries and affiliated organizations responsible for 85 percent of the nation's wine production. California's wineries have a long history of engaging in practices to ensure their long-term sustainability. These practices include supporting and conducting restoration and enhancement projects to improve and restore natural systems in and around California's wine regions. The proposed General Order and PEIR will help accelerate the implementation of habitat restoration projects throughout California and it is for this reason that Wine Institute supports its adoption.

Wine Institute and its members believe voluntary restoration projects are an integral part in ensuring California can maintain important ecosystem functions and the long-term viability of California's fish and wildlife. Unfortunately, the current process for obtaining the necessary permits for restoration projects is cumbersome and can cause significant delays in project implementation. Having this General Order in place will help save time and money and avoid delays for critically needed restoration projects that restore degraded habitats, increase habitat connectivity, improve water quality, sequester carbon, and increase our resilience to climate change – all of which benefit wildlife, waterways, and people. Having a more efficient process in place is an important incentive to complete more restoration projects in a timely manner and will make better use of grant funds and agency staff resources.

The current draft General Order and associated PEIR provide an environmentally thorough, protective, and robust permitting process that will help applicants better meet state requirements. We urge the State Water Board to certify the PEIR and prioritize

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adoption and active staff use of this Order because projects for climate change adaptation and habitat restoration for imperiled species can't be delayed. The drought has given further urgency to addressing this established state priority. We also ask the Board to maintain a clear, implementable, and efficient General Order as public comment is considered.

Wine Institute members have undertaken voluntary efforts to improve riparian habitat. For example, they have placed large woody debris in streams to create fish refugia, removed migration barriers to improve fish passage, enhanced instream flows, constructed fish ladders, and moved roads away from riparian areas. One of the major obstacles to these projects has been the multiple permits needed from numerous local, state, and federal agencies. The adoption of the proposed General Order will help reduce one of these barriers and make the implementation of restoration and enhancement projects easier. Ultimately it should lead to improvements in both water quality and habitat for native, riparian dependent species.

Wine Institute appreciates the opportunity to provide comments as you consider the adoption of the proposed General Order and PEIR for large scale restoration projects. Should you have any questions or need additional information please contact me by email (ncremers@wineinstitute.org).

Sincerely,



Noelle G. Cremers
Director, Environmental and Regulatory Affairs

CC: Karen Ross, Secretary, California Department of Food and Agriculture

Final Appendix I Findings of Fact and Statement of Overriding Considerations

CONSOLIDATED FINAL RESTORATION PROJECTS STATEWIDE ORDER
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Findings of Fact and Statement of Overriding Considerations

Section 1. Description of the Order

The categories of restoration project types eligible for enrollment under the Order are listed below. These eligible project types are described in detail in Section 2.6, *Categories of Restoration Projects in the Order* of the PEIR. An individual permitted project may incorporate one or more of these project types. Projects may conduct restoration activities such as establishment, reestablishment, rehabilitation, and/or enhancement for any of these project types:

- ◆ **Improvements to Stream Crossings and Fish Passage**—for upstream and downstream movement by fish and other species, and to improve functions of streams.
- ◆ **Removal of Small Dams, Tide Gates, Flood Gates, and Legacy Structures**—to improve fish and wildlife migration, tidal and freshwater circulation and flow, and water quality.
- ◆ **Bioengineered Bank Stabilization**—to reduce input of fine sediment, enhance aquatic and riparian habitat, and improve water quality.
- ◆ **Restoration and Enhancement of Off-Channel and Side-Channel Habitat**—to improve aquatic and riparian habitat for fish and wildlife; to restore the hydrologic, hydraulic, and biogeochemical functions and processes of streams; or both.
- ◆ **Water Conservation Projects**—to reduce low-flow stream diversions, through installation of features such as off-stream storage tanks and ponds and necessary off-channel infrastructure.
- ◆ **Floodplain Restoration**—to improve ecosystem function by creating hydrologic connections between streams and floodplains, through such measures as breaching and removal of levees, breaching and removal of berm and dike setbacks, and hydraulic reconnection and revegetation.
- ◆ **Removal or Remediation of Pilings and Other In-Water Structures**—to improve water quality and aquatic habitat for fish and wildlife.
- ◆ **Removal of Nonnative Invasive Species and Revegetation with Native Plants**—to improve watershed functions, such as aquatic and riparian habitat for fish and wildlife.
- ◆ **Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands**—to create or improve wetland ecological functions.
- ◆ **Establishment, Restoration, and Enhancement of Stream and Riparian Habitat and Upslope Watershed Sites**—to create or restore the functions of

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streams and riparian areas, including upslope watershed sites that could contribute sediment to streams or disrupt floodplain and riparian functions.

The approving Water Board will determine whether an individual restoration project is eligible for authorization under the Order. All projects permitted under the Order must also incorporate applicable general protection measures into their project design to ensure avoidance and minimization of impacts on sensitive resources.

Species protection measures (Appendix F) are included in the Consolidated Final PEIR and provide avoidance and/or minimization measures developed specifically for individual covered species or covered species guilds, based upon unique life history and habitat requirements. Further, design guidelines are also included to facilitate development of individual restoration projects, in a manner that is appropriate and sustainable, minimizes adverse effects on aquatic habitats, maximizes the ecological benefits of the restoration, and is consistent with multiple permitting agency regulatory practices (e.g., CDFW, NMFS, USFWS).

Section 2. Findings Required Under CEQA

CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to substantially lessen or avoid significant environment impacts that would otherwise occur. Mitigation measures or alternatives are not required, however, where such changes are infeasible or where the responsibility for the project lies with some other agency. (CEQA Guidelines, § 15091, sub. (a), (b).)

In seeking to effectuate the substantive policy of CEQA to substantially lessen or avoid significant environmental effects to the extent feasible, an agency, in adopting findings, need not necessarily address the feasibility of both mitigation measures and environmentally superior alternatives when contemplating approval of a proposed project with significant impacts. Where a significant impact can be mitigated to an “acceptable” level solely by the adoption of feasible mitigation measures, the agency, in drafting its findings, has no obligation to consider the feasibility of any environmentally superior alternative that could also substantially lessen or avoid that same impact — even if the alternative would render the impact less severe than would the proposed project as mitigated. (*Laurel Hills Homeowners Association v. City Council* (1978) 83 Cal.App.3d 515, 521; see also *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 730-731; and *Laurel Heights Improvement Association v. Regents of the University of California (“Laurel Heights I”)* (1988) 47 Cal.3d 376, 400-403.)

In these Findings, the State Water Board first addresses the extent to which each significant environmental effect can be substantially lessened or avoided through the adoption of feasible mitigation measures. Only after determining that, even with the adoption of all feasible mitigation measures, an effect is significant and unavoidable does the State Water Board address the extent to which alternatives described in the PEIR are (i) environmentally superior with respect to that effect and (ii) “feasible” within the meaning of CEQA.

In cases in which a project’s significant effects cannot be mitigated or avoided, an agency, after adopting proper findings, may nevertheless approve the project if it first

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adopts a statement of overriding considerations setting forth the specific reasons why the agency found that the “benefits of the project outweigh the significant effects on the environment.” (Public Resources Code, Section 21081, sub. (b); see also, CEQA Guidelines, Sections 15093, 15043, sub.(b).)

In the Statement of Overriding Considerations found at the conclusion of these Findings, the State Water Board identifies the specific economic, social, and other considerations that, in its judgment, outweigh the significant environmental effects that projects authorized under the Order would cause.

The California Supreme Court has stated that “[t]he wisdom of approving ... any development project, a delicate task which requires a balancing of interests, is necessarily left to the sound discretion of the local officials and their constituents who are responsible for such decisions. The law as we interpret and apply it simply requires that those decisions be informed, and therefore balanced.” (Goleta II (1990) 52 Cal. 3d553, 564 [276 Cal. Rptr. 410, 801 P.2d 1161].)

These findings do not attempt to describe the full analysis of each environmental impact contained in the Consolidated Final PEIR. Instead, a full explanation of these environmental findings and conclusions are presented in the PEIR and these findings hereby incorporate by reference the discussion and analysis in the Consolidated Final PEIR supporting the determination regarding the impacts of the Order and mitigation measures designed to address those impacts. In making these findings, the State Water Board ratifies, adopts and incorporates in these findings the determinations and conclusions of the Consolidated Final PEIR relating to environmental impacts and mitigation measures except to the extent any such determinations and conclusions are specifically and expressly modified by these findings.

The State Water Board further adopts and incorporates all of the mitigation measures set forth in the Consolidated Final PEIR and Appendix J, the Mitigation Monitoring and Reporting Program (MMRP), to substantially lessen or avoid the potentially significant and significant impacts of the Order. The State Water Board adopts each of the mitigation measures proposed in the Consolidated Final PEIR to reduce or eliminate significant impacts resulting from the Order. Accordingly, in the event a mitigation measure in the Consolidated Final PEIR has inadvertently been omitted in these findings or the MMRP, such mitigation measure(s) is hereby adopted and incorporated in the findings below by reference. In addition, in the event the language describing a mitigation measure set forth in these findings or the MMRP fails to accurately reflect the mitigation measures in the Consolidated Final PEIR due to a clerical error, the language of the policies and implementation measures, as set forth in the Consolidated Final PEIR shall control. The impact numbers and mitigation measure numbers used in these findings reflect the information contained in the Consolidated Final PEIR.

2.1 General Protection Measures and Species Protection Measures in the Order

To qualify for authorization under the Order, restoration projects must meet the appropriate general protection measures, species protection measures, and other conditions described in Sections 2.8.1 through 2.8.4 of the Consolidated Final PEIR. While the impact analysis for each resource area determined the nature and

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significance of each impact before incorporation of general protection measures and species protection measures, the applicable measures (general and species protection) are a requirement of the Order. Therefore, if incorporating one or more general protection measures and/or species protection measures into a restoration project would reasonably mitigate an impact, then the impact conclusion is less than significant and the impact statement is located below in Section 2.2, *Impacts Found to be Less Than Significant or No Impact and Thus Requiring No Mitigation*. If the analysis has determined that an impact would remain significant after the incorporation of appropriate general protection measures and species protection measures, then the impact conclusion is significant, and mitigation measures have been recommended to further reduce the magnitude of the impact. If mitigation is required, then this impact statement is found below in Section 2.3, *Significant or Potentially Significant Impacts Reduced to Less Than Significant Levels Through Mitigation Measures*.

2.2 Impacts Found to be Less Than Significant or No Impact and Thus Requiring No Mitigation

Consistent with Public Resources Code section 21002.1 and section 15128 of the State CEQA Guidelines, the PEIR focused its analysis on potentially significant impacts, and limited discussion of other impacts for which it can be concluded with certainty there is no potential for significant adverse environmental impacts. State CEQA Guidelines section 15091 does not require specific findings to address environmental effects that an EIR identifies as “no impact” or a “less than significant” impact. Nevertheless, the State Water Board hereby finds that, based on substantial evidence in the whole of the record, restoration projects permitted under the Order, including those that incorporate general protection measures and/or species protection measures, would have either no impact or a less than significant impact to the following resource areas. Therefore, these impacts do not require mitigation (with incorporation of applicable general protection measures and/or species protection measures).

Impact Category: Aesthetics

Impact 3.2-1: Implementing future restoration projects permitted under the Order could result in substantial degradation of visual qualities.

The following general protection measures may apply to visual resources:

- ◆ **GPM-11: Material Disposal**
- ◆ **GPM-14: Project Cleanup after Completion**
- ◆ **GPM-15: Revegetate Disturbed Areas**
- ◆ **VHDR-1: Avoidance of Vegetation Disturbance**
- ◆ **VHDR-3: Revegetation Materials and Methods**
- ◆ **VHDR-4: Revegetation Erosion Control Materials and Methods**
- ◆ **VHDR-5: Revegetation Monitoring and Reporting**

Findings (Effects of Project Construction Activities): Construction activities for restoration projects permitted under the Order could cause temporary changes in local visual conditions. Views could include excavation, grading, vegetation removal, construction equipment, parking vehicles, and temporary construction offices. These

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elements would be removed after construction; therefore, their presence would not cause permanent changes to local visual conditions. For these reasons, the visual character and quality impact associated with the Order would **less than significant**.

Impact 3.2-2: Implementing future restoration projects permitted under the Order could result in substantial adverse effects on scenic vistas and scenic resources.

The following general protection measures may apply to visual resources:

- ◆ **GPM-11: Material Disposal**
- ◆ **GPM-14: Project Cleanup after Completion**
- ◆ **GPM-15: Revegetate Disturbed Areas**
- ◆ **VHDR-1: Avoidance of Vegetation Disturbance**
- ◆ **VHDR-3: Revegetation Materials and Methods**
- ◆ **VHDR-4: Revegetation Erosion Control Materials and Methods**
- ◆ **VHDR-5: Revegetation Monitoring and Reporting**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities for restoration projects permitted under the Order could be visible from designated scenic roads and highways, resulting in significant temporary and long-term or permanent adverse changes to scenic vistas. However, construction elements would be removed after construction; therefore, their presence would not cause permanent changes to local visual conditions.

Many long-term effects on visual quality from restoration projects permitted under the Order are expected to be beneficial or neutral; the projects would involve habitat restoration, which would return the existing sites to more natural characteristics. Restoration projects permitted under the Order would be visible from any of the designated scenic resources including highways, expressways, routes, or waterways. However, they would not result in substantial adverse effects on scenic vistas or scenic resources, given the relatively localized effects, and the visual qualities of the area would not be substantially degraded.

For these reasons, the impacts associated with scenic vistas and scenic resources with the Order would **less than significant**.

Impact 3.2-3: Implementing future restoration projects permitted under the Order could result in new sources of substantial light or glare.

Findings (Effects of Constructed Facilities and O&M of those Facilities): Restoration projects permitted under the Order would not be expected to include new permanent lighting, or buildings or other facilities that would include highly reflective materials. Routine O&M activities would introduce workers and vehicles into the study area, but nighttime lighting would not likely be required and no new sources of light and glare would be introduced to the study area. In addition, natural light reflected by constructed restoration projects (e.g., additional water present as a result of a setback levee or increase in floodplain area) is not expected to be annoying or distracting, because water features are considered aesthetically beneficial. For these reasons,

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impacts associated with new sources of substantial light or glare with the Order would be **less than significant**.

Impact Category: Agricultural and Forestry Resources

Impact 3.3-1: Restoration projects permitted under the Order could convert Special Designation Farmland to nonagricultural use or conflict with a Williamson Act contract or zoning for agricultural use.

Findings (Effects of Project Construction Activities): Construction for restoration projects permitted under the Order could temporarily convert Special Designation Farmland to nonagricultural use, or could conflict with a Williamson Act contract or zoning for agricultural use. However, these conversions would be temporary, and the land is expected to be returned to agricultural use after construction. Therefore, this impact would be **less than significant**.

Impact 3.3-2: Restoration projects permitted under the Order could conflict with existing zoning for forestland, timberland, or timberland zoned Timberland Production, or could result in the loss of forestland from conversion of land to non-forest use.

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction for restoration projects permitted under the Order could temporarily convert forestland or land zoned for forestland, timberland, or timberland zoned Timberland Production. However, these conversions would be temporary, and the land is expected to be returned to forestland and/or timberland use after construction.

Some types of restoration projects permitted under the Order would have beneficial impacts on forestland or land zoned for forestland, timberland, and timberland zoned timberland production (e.g., enhancement of meadow production/meadow restoration). Other restoration projects—fish screens, fishways, and bioengineered bank stabilization—would have minimal operational impacts because they would be located along streambanks or riverbanks, or in the river and would not be expected to affect forestland or timberland. Additionally, some projects—including bank stabilization, restoration and enhancement of off-channel and side-channel habitat, floodplain restoration, water conservation, and removal of nonnative terrestrial and aquatic invasive species and revegetating with native plants—would reduce soil erosion, recharge groundwater, use off-stream water storage for dry season use, provide natural pest control, and provide water quality buffers.

Water conservation projects (e.g., off-stream storage tanks and ponds) could be located in forestland or land zoned for forestland, timberland, or timberland zoned Timberland Production. However, water conservation projects would not be expected to remove forestland creating less than 10 percent native tree cover or substantially lessen the ability to grow crops associated with Timberlands. Some restoration sites could also be located on grazing lands that would result in the potential loss of rangeland available for livestock. However, restoration projects can generally allow for managed grazing.

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Therefore, this impact would be **less than significant**.

Impact 3.3-3: Restoration projects permitted under the Order could involve other changes in the existing environment that, because of their location or nature, could indirectly result in the conversion of Special Designation Farmland to nonagricultural use or conversion of forestland to non-forest use. (p. 3.3-14 – 3.3-16).

The following general protection measures may apply to agricultural and forestry resources:

- ◆ **GPM-8: Prevent Spread of Invasive Exotic Plants**
- ◆ **GPM-10: Equipment Maintenance and Materials Storage**
- ◆ **GPM-11: Material Disposal**
- ◆ **GPM-12: Fugitive Dust Reduction**
- ◆ **GPM-15: Revegetate Disturbed Areas**
- ◆ **IWW-14: Dredging Operations and Dredging Materials Reuse Plan**
- ◆ **VHDR-1: Avoidance of Vegetation Disturbance**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**
- ◆ **VHDR-4: Revegetation Erosion Control Materials and Methods**
- ◆ **VHDR-5: Revegetation Monitoring and Reporting**
- ◆ **VHDR-6: Herbicide Use**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities for restoration projects permitted under the Order have the potential to negatively affect the viability of surrounding agricultural or forest uses, impede access to agricultural areas, or disrupt agricultural infrastructure.

Implementing these general protection measures would reduce the impacts of project construction related to indirect conversion of Special Designation Farmland to nonagricultural use or conversion of forestland to non-forest use to a **less-than-significant** level.

O&M activities would be limited to the footprint created during construction of restoration projects permitted by the Order. This work would be unlikely to result in indirect conversion of forestland to non-forest use, or of Special Designation Farmland to nonagricultural use. Additionally, some projects would reduce soil erosion, recharge groundwater, use off-stream water storage during the dry season, provide natural pest control, and provide water quality buffers. Therefore, these actions would be beneficial for existing Special Designation Farmland or forestland.

This impact would be **less than significant**.

Impact Category: Air Quality and Greenhouse Gas Emissions

Impact 3.4-1: Implementing future restoration projects permitted under the Order could conflict with an applicable air quality plan.

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The following general protection measures may apply to air quality and greenhouse gas emissions:

- ◆ **GPM-8: Work Area and Speed Limits**
- ◆ **GPM-17: Fugitive Dust Reduction**

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Emissions-generating activities would be less intense and less frequent in the operational phase than during construction. It is anticipated that emissions from restoration projects permitted under the Order would not violate an air quality standard, contribute substantially to an air quality violation, or result in a short-term cumulatively considerable net increase of non-attainment pollutants. Therefore, this impact would be **less than significant**.

Impact 3.4-2: Emissions from future restoration projects permitted under the Order could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

The following general protection measures may apply to air quality and greenhouse gas emissions:

- ◆ **GPM-8: Work Area and Speed Limits**
- ◆ **GPM-17: Fugitive Dust Reduction**

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Restoration projects permitted under the Order could require periodic and routine maintenance. These activities would produce air pollutant emissions that could result in a cumulatively considerable net increase of a criteria pollutant for which a project region is non-attainment under an applicable federal or state ambient air quality standard. Emissions-generating activities would be similar to those described for the construction of projects; however, the level of activity would be less intense and less frequent in the operational phase than during construction.

Routine O&M activities for restoration projects permitted under the Order would not be expected to result in a cumulatively considerable net increase of any criteria pollutant for which a project region is non-attainment under an applicable federal or state ambient air quality standard and this impact would be **less than significant**.

Impact 3.4-3: Emissions from future restoration projects permitted under the Order could result in other emissions (such as those leading to odors) that would adversely affect a substantial number of people.

The following general protection measures would be required when applicable to address this impact to the extent feasible:

- ◆ **IWW-13: Dredging Operations and Dredging Materials Reuse Plan**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Sources of construction-related emissions generally would not be in one location for long periods of time. The emissions would be intermittent and

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would dissipate from the source rapidly over a short distance. Given the temporary and intermittent nature of the impacts and the dissipation of odors, objectionable odors are unlikely to affect a substantial number of people.

Given the temporary and intermittent nature of the impacts and the dissipation of odors from constructed restoration projects, objectionable odors are unlikely to affect a substantial number of people.

This impact would be **less than significant**.

Impact 3.4-4: Emissions from future restoration projects permitted under the Order could expose sensitive receptors to substantial pollutant concentrations.

The following general protection measures may apply to air quality and greenhouse gas emissions:

- ◆ **GPM-8: Work Area and Speed Limits**
- ◆ **GPM-17: Fugitive Dust Reduction**

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Restoration projects permitted under the Order could temporarily generate emissions of air pollutants. The specific locations and emissions of possible future facilities during O&M activities are not currently known; therefore, the precise air pollutant emissions impacts cannot be identified at this time. Factors necessary to identify specific impacts include the project's location and operational characteristics, frequency and duration of emissions, and the location of sensitive receptors. However, given the temporary and intermittent nature of the impacts and the dissipation of pollutant concentrations, such emissions are unlikely to affect a substantial number of people. Impacts would be **less than significant**.

Impact 3.4-5: Implementing future restoration projects permitted under the Order could result in an increase in GHG emissions that may have a significant impact on the environment

Findings (Effects of Constructed Facilities and O&M of those Facilities): Activities that generate GHG emissions would be similar to those described for the construction of projects permitted under the Order; however, the level of activity, and therefore the level of emissions, would be much lower during operations than during construction because activity would not cause an equal duration or concentration of emissions. Because operational emissions would not approach CARB's recommended thresholds and legislation that has established screening levels, the projects' GHG emissions would not be substantial and would not conflict with state and local planning efforts.

This impact would be **less than significant**.

Impact 3.4-6: Implementing future restoration projects permitted under the Order could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs.

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Findings (Effects of Constructed Facilities and O&M of those Facilities): The specific locations and scale of possible future facilities are not known at this time. Factors necessary to identify specific impacts include the project's location, design features, size, and the applicable GHG reduction plans and policies of jurisdictions. However, the level of activity and therefore the level of emissions would be much lower in the O&M phase than during construction because activity would not be as intense. Also, it is assumed that projects would be operated and maintained in compliance with any policies that have been adopted as rules or regulations to reduce emissions of GHGs. Therefore, this impact would be **less than significant**.

Impact Category: Biological Resources – Terrestrial

Impact 3.5-3: Implementing restoration projects permitted under the Order could result in adverse effects on riparian habitat or sensitive natural communities.

The locations of sensitive natural communities relative to the footprints of restoration projects permitted under the Order are yet to be determined. However, the Order contains the following general protection measures to reduce this impact:

- ◆ **GPM-5: Environmental Monitoring**
- ◆ **GPM-7: Environmentally Sensitive Areas**
- ◆ **GPM-8: Prevent Spread of Invasive Exotic Plants**
- ◆ **GPM-9: Environmentally Sensitive Areas**
- ◆ **GPM-12: Fugitive Dust Reduction**
- ◆ **GPM-15: Revegetate Disturbed Areas**
- ◆ **GPM-17: Fugitive Dust Reduction**
- ◆ **WQHM-4: Hazardous Materials Management and Spill Response Plan**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**

Additionally, restoration projects that could adversely affect riparian habitat or sensitive natural communities, would implement the following species protection measures, as applicable

- ◆ General Species Protection Measures
 - **SPM-1: Preconstruction Surveys**
 - **SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion**
- ◆ Invertebrate Species Protection Measures
 - **INVERT-1: Implement California Freshwater Shrimp Measures**
 - **INVERT-2: Vernal Pool Branchiopods Measures**
 - **INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol**

Findings (Effects of Project Construction Activities): Restoration projects permitted under the Order are expected to result in long-term improvements in the extent of sensitive natural communities, including riparian habitat. However, project construction work could result in unavoidable short-term impacts, including minor vegetation removal or trampling, hydrologic changes, deposition of dust or debris, soil compaction, or other

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temporary disturbances that could affect habitat conditions and function. Implementing general protection measures and species protection measures would reduce the potential for impacts on riparian habitat and sensitive natural communities. Further, prior to project implementation, project proponents would be required to consult with appropriate federal, state, and/or local agencies, potentially including USACE, EPA, USFWS, and CDFW in addition to the State and/or Regional Boards. As part of the permitting process, these agencies may require project proponents to develop and implement modified and/or additional measures to protect sensitive resources under their jurisdiction. Additionally, as part of the CEQA process, the lead agency would consult with the applicable resource agencies to develop adequate project-specific mitigation measures to address impacts on sensitive natural communities. In addition, much of this mitigation for sensitive natural communities would go hand-in-hand with species protection measures developed under FESA and CESA consultation with the federal and state wildlife agencies. Completing these processes and implementing the aforementioned general protection measures and species protection would reduce the impact of construction on sensitive natural communities to a **less-than-significant** level.

Impact 3.5-4: Implementing restoration projects permitted under the Order could result in adverse effects on state and federally protected wetlands through direct removal, hydrological interruption, or other means.

The Order contains the following general protection measures to reduce impacts on federally and state protected wetlands and waters:

- ◆ **GPM-5: Environmental Monitoring**
- ◆ **GPM-7: Environmentally Sensitive Areas**
- ◆ **GPM-10: Equipment Maintenance and Materials Storage**
- ◆ **GPM-11: Materials Disposal**
- ◆ **GPM-14: Project Cleanup after Completion**
- ◆ **GPM-15: Revegetate Disturbed Areas**
- ◆ **WQHM-1: Staging Areas and Stockpiling of Materials and Equipment**
- ◆ **WQHM-2: Storm Water Pollution Prevention Plan**
- ◆ **WQHM-3: Erosion Control Plans**
- ◆ **WQHM-4: Hazardous Materials Management and Spill Response Plan**
- ◆ **WQHM-5: In-Water Concrete Use**
- ◆ **WQHM-6: Accidental Discharge of Hazardous Materials**
- ◆ **IWW-1: Appropriate In-Water Materials**
- ◆ **IWW-2: In-Water Vehicle Selection and Work Access**
- ◆ **IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment**
- ◆ **IWW-4: In-Water Staging Areas and Use of Barges**
- ◆ **IWW-8: Removal of Diversion and Barriers to Flow**
- ◆ **IWW-11: Sediment Containment during In-Water Pile Driving**
- ◆ **IWW-13: Dredging Operations and Dredging Materials Reuse Plan**

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In addition, as described above, projects would have to comply with requirements identified during the following permitting processes for impacts on jurisdictional wetlands and waters of the United States and/or state:

- ◆ **U.S. Army Corps of Engineers—Clean Water Act Section 404 permit**
- ◆ **The respective Regional Boards—Clean Water Act Section 401 water quality certification and/or waste discharge requirements**
- ◆ **CDFW—Section 1600 Lake or Streambed Alteration Agreement**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities for projects permitted under the Order could disturb or remove wetlands and other waters of the United States and/or state (by regulatory definition, waters of the state also encompass all waters of the United States). Additionally, some restoration projects could convert an area from one wetland type to another. Construction activities could also affect the hydrologic patterns that sustain existing wetland features. During project-level planning, it is expected that the project proponent would conduct an aquatic resources delineation in concert with field reconnaissance visits to map and identify the extent of jurisdictional waters of the United States and/or state, including wetlands.

Implementing these regulatory requirements, the general protection measures, and species protection measures identified above would reduce the impact of project construction on jurisdictional waters and other waters to a **less-than-significant** level.

Operations of constructed infrastructure facilities would not be expected to affect wetlands or other waters of the United States and/or state; all of the impacts of these projects on wetlands and waters would have occurred during construction. Restoration projects permitted under the Order would often expand the extent of aquatic habitat, including by reestablishing wetlands in areas that were previously diked and drained for urban development or agricultural production, or by restoring side-channel habitat, seasonal floodplain, and floodplain benches in areas currently constrained by constructed levees. Thus, the net effect of many restoration projects permitted under the Order should be to increase the acreage of wetlands and other waters and/or improve the functioning of existing features of these types. The impact of constructed facilities and associated O&M on jurisdictional waters and other waters would be **less than significant**.

Impact 3.5-5: Implementing restoration projects permitted under the Order could interfere with the movement of native resident and migratory wildlife species.

To reduce this impact on the movement of native resident and migratory wildlife species, the Order includes the following general protection measures:

- ◆ **GPM-2: Construction Work Windows**
- ◆ **GPM-3: Construction Hours**
- ◆ **GPM-4: Environmental Awareness Training**
- ◆ **GPM-5: Environmental Monitoring**
- ◆ **GPM-6: Work Area and Speed Limits**
- ◆ **GPM-7: Environmentally Sensitive Areas**

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- ◆ **GPM-18: Trash Removed Daily**
- ◆ **VHDR-1: Avoidance of Vegetation Disturbance**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**

Additionally, restoration projects that could interfere with the movement of native resident and migratory wildlife species would implement the following species protection measures, as applicable.

- ◆ General Species Protection Measures
 - **SPM-1: Preconstruction Surveys**
 - **SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion**
 - **SPM-3: Species Protection Construction Work Windows**
 - **SPM-4: Species Capture, Handling and Translocation**
 - **SPM-5: Sensitive Species Entrapment Prevention**
 - **SPM-6: Airborne Noise Reduction**
- ◆ Amphibian Species Protection Measures
 - **AMP-1: Wildlife Passage Design**
 - **AMP-2: Rain Event Limitations**
 - **AMP-3: Pre-Construction Survey**
 - **AMP-4: Disease Prevention and Decontamination**
 - **AMP-5: Lighting**
 - **AMP-6: Clearing and Grubbing Vegetation**
 - **AMP-7: Pump Screens**
 - **AMP-8: Removal of Non-native Species**
 - **AMP-9: Placement of Suitable Erosion Control Material**
 - **AMP-10: Encounters with Species**
 - **AMP-11: Species Observations and Handling Protocol**
- ◆ Reptile Species Protection Measures
 - **REP-1: Pre-Construction Survey**
 - **REP-2: Environmentally Sensitive Area Fencing**
 - **REP-3: Clearing and Grubbing Vegetation**
 - **REP-4: Prohibited Use of Rodenticides**
 - **REP-5: Species Observations and Encounters**
 - **REP-6: Species Handling and Relocation**
- ◆ Bird Species Protection Measures
 - **BIRD-1: Habitat Assessment**
 - **BIRD-2: Nest Protection Work Window**
 - **BIRD-3: Work Area Limits**
 - **BIRD-4: Site Access Restrictions**
 - **BIRD-5: Monitoring**

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- ◆ Mammal Species Protection Measures
 - **MAM-1: Conduct Habitat Assessment**
 - **MAM-2: Exclusion Areas**
 - **MAM-3: Use of Handheld Tools**
 - **MAM-4: Species Trapping and Relocating**
 - **MAM-5: Reporting Requirements**
- ◆ Invertebrate Species Protection Measures
 - **INVERT-1: Implement California Freshwater Shrimp Measures**
 - **INVERT-2: Vernal Pool Branchiopods Measures**
 - **INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol**
 - **INVERT-4: Implement Butterfly Protection Measures**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction work could interfere with the local movement of native resident or migratory wildlife species. For example, ground disturbance could temporarily disrupt movement by amphibians and reptiles. However, these construction activities would not interfere substantially with the movement of these animals because they could move through adjacent habitat to nearby unaffected habitat. Construction activities, including movement of equipment and personal vehicles and removal of vegetation, could interfere with the movement of other terrestrial wildlife species, such as large mammals or birds, but these activities would not likely result in substantial effects on movement by these species because they are mobile and can move away from construction activities to other areas not being affected by construction.

Implementing the general protection measures and species protection measures identified above would reduce the impact on the movement and migratory conditions of terrestrial wildlife to a **less-than-significant** level.

Most long-term impacts on terrestrial biological resources of implementing projects permitted under the Order should be neutral or beneficial, because the specific purpose of these projects would be to correct existing conditions that contribute to resource degradation.

Constructed facilities and O&M activities are generally not expected to adversely affect movement by terrestrial wildlife species. There may be terrestrial species with more limited mobility that could be negatively affected by large-scale conversion of terrestrial habitat types to aquatic and wetland habitat features. Overall, however, the types of restoration projects that would be permitted under the Order are largely expected to improve movement and migration for terrestrial wildlife. This impact would be **less than significant**.

Impact 3.5-6: Implementing restoration projects permitted under the Order could conflict with local policies or ordinances protecting biological resources.

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In general, it is expected that the general protection measures would be adequate to satisfy any requirements set forth by a local jurisdiction intended to protect biological resources:

- ◆ **GPM-2: Construction Work Windows**
- ◆ **GPM-3: Construction Hours**
- ◆ **GPM-4: Environmental Awareness Training**
- ◆ **GPM-5: Environmental Monitoring**
- ◆ **GPM-6: Work Area and Speed Limits**
- ◆ **GPM-7: Environmentally Sensitive Areas**
- ◆ **GPM-18: Trash Removed Daily**
- ◆ **VHDR-1: Avoidance of Vegetation Disturbance**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**

Additionally, the following species protection measures, would be adequate to satisfy any requirements set forth by a local jurisdiction intended to protect biological resources, as applicable.

- ◆ General Species Protection Measures
 - **SPM-1: Preconstruction Surveys**
 - **SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion**
 - **SPM-3: Species Protection Construction Work Windows**
 - **SPM-4: Species Capture, Handling and Translocation**
 - **SPM-5: Sensitive Species Entrapment Prevention**
 - **SPM-6: Airborne Noise Reduction**
- ◆ Amphibian Species Protection Measures
 - **AMP-1: Wildlife Passage Design**
 - **AMP-2: Rain Event Limitations**
 - **AMP-3: Pre-Construction Survey**
 - **AMP-4: Disease Prevention and Decontamination**
 - **AMP-5: Lighting**
 - **AMP-6: Clearing and Grubbing Vegetation**
 - **AMP-7: Pump Screens**
 - **AMP-8: Removal of Non-native Species**
 - **AMP-90: Placement of Suitable Erosion Control Material**
 - **AMP-10: Encounters with Species**
 - **AMP-11: Species Observations and Handling Protocol**
- ◆ Reptile Species Protection Measures
 - **REP-1: Pre-Construction Survey**
 - **REP-2: Environmentally Sensitive Area Fencing**
 - **REP-3: Clearing and Grubbing Vegetation**
 - **REP-4: Prohibited Use of Rodenticides**
 - **REP-5: Species Observations and Encounters**
 - **REP-6: Species Handling and Relocation**

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- ◆ Bird Species Protection Measures
 - **BIRD-1: Habitat Assessment**
 - **BIRD-2: Nest Protection Work Window**
 - **BIRD-3: Work Area Limits**
 - **BIRD-4: Site Access Restrictions**
 - **BIRD-5: Monitoring**
- ◆ Mammal Species Protection Measures
 - **MAM-1: Conduct Habitat Assessment**
 - **MAM-2: Exclusion Areas**
 - **MAM-3: Use of Handheld Tools**
 - **MAM-4: Species Trapping and Relocating**
 - **MAM-5: Reporting Requirements**
- ◆ Invertebrate Species Protection Measures
 - **INVERT-1: Implement California Freshwater Shrimp Measures**
 - **INVERT-2: Vernal Pool Branchiopods Measures**
 - **INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol**
 - **INVERT-4: Implement Butterfly Protection Measures**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): In general, it is expected that the general protection measures and species protection measures that would protect special-status plants, special-status wildlife, sensitive natural communities, and jurisdictional wetlands and waters of the United States and/or state would be adequate to satisfy any requirements set forth by a local jurisdiction intended to protect biological resources resulting from effects of project construction activities or constructed facilities and operations and maintenance of these facilities. Thus, implementing these general protection measures would reduce this impact to a **less-than-significant** level.

Impact 3.5-7: Implementing restoration projects permitted under the Order could conflict with the provisions of an adopted habitat conservation plan or natural community conservation plan.

In general, it is expected that the general protection measures should be adequate to eliminate any conflicts with approved conservation plans:

- ◆ **GPM-2: Construction Work Windows**
- ◆ **GPM-3: Construction Hours**
- ◆ **GPM-4: Environmental Awareness Training**
- ◆ **GPM-5: Environmental Monitoring**
- ◆ **GPM-6: Work Area and Speed Limits**
- ◆ **GPM-7: Environmentally Sensitive Areas**
- ◆ **GPM-18: Trash Removed Daily**
- ◆ **VHDR-1: Avoidance of Vegetation Disturbance**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**

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Additionally, the following species protection measures, should be adequate to eliminate any conflicts with approved conservation plans, as applicable.

- ◆ General Species Protection Measures
 - **SPM-1: Preconstruction Surveys**
 - **SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion**
 - **SPM-3: Species Protection Construction Work Windows**
 - **SPM-4: Species Capture, Handling and Translocation**
 - **SPM-5: Sensitive Species Entrapment Prevention**
 - **SPM-6: Airborne Noise Reduction**
- ◆ Amphibian Species Protection Measures
 - **AMP-1: Wildlife Passage Design**
 - **AMP-2: Rain Event Limitations**
 - **AMP-3: Pre-Construction Survey**
 - **AMP-4: Disease Prevention and Decontamination**
 - **AMP-5: Lighting**
 - **AMP-6: Clearing and Grubbing Vegetation**
 - **AMP-7: Pump Screens**
 - **AMP-8: Removal of Non-native Species**
 - **AMP-9: Placement of Suitable Erosion Control Material**
 - **AMP-10: Encounters with Species**
 - **AMP-11: Species Observations and Handling Protocol**
- ◆ Reptile Species Protection Measures
 - **REP-1: Pre-Construction Survey**
 - **REP-2: Environmentally Sensitive Area Fencing**
 - **REP-3: Clearing and Grubbing Vegetation**
 - **REP-4: Prohibited Use of Rodenticides**
 - **REP-5: Species Observations and Encounters**
 - **REP-6: Species Handling and Relocation**
- ◆ Bird Species Protection Measures
 - **BIRD-1: Habitat Assessment**
 - **BIRD-2: Nest Protection Work Window**
 - **BIRD-3: Work Area Limits**
 - **BIRD-4: Site Access Restrictions**
 - **BIRD-5: Monitoring**
- ◆ Mammal Species Protection Measures
 - **MAM-1: Conduct Habitat Assessment**
 - **MAM-2: Exclusion Areas**
 - **MAM-3: Use of Handheld Tools**
 - **MAM-4: Species Trapping and Relocating**
 - **MAM-5: Reporting Requirements**

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- ◆ Invertebrate Species Protection Measures
 - **INVERT-1: Implement California Freshwater Shrimp Measures**
 - **INVERT-2: Vernal Pool Branchiopods Measures**
 - **INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol**
 - **INVERT-4: Implement Butterfly Protection Measures**

Findings (Effects of Project Construction Activities): Restoration projects permitted under the Order may occur in areas permitted by an adopted HCP or NCCP. During project-level planning and CEQA analysis, the potential for an overlap of project footprints with the planning areas of approved conservation plans would be evaluated. Should the analysis identify an overlap, the compatibility of the project's construction activities with the provisions of the conservation plans would need to be assessed further. Actions occurring outside the plan areas of these conservation plans would not likely result in a conflict unless the influence of the actions would extend within the conservation plan's boundaries. In some cases, an HCP, NCCP, or similar conservation plan may be in its early planning phase or in preparation, but not yet adopted. A conflict, if any, with a conservation plan that has not been adopted would not meet the criterion for a significant impact according to CEQA standards.

The impact of construction activities for proposed restoration projects permitted under the Order related to a conflict with an adopted HCP or NCCP would be **less than significant**.

Impact Category: Biological Resources - Aquatic

Impact 3.6-1: Implementing future restoration projects permitted under the Order could result in substantial adverse effects to special-status fish species directly, or indirectly through habitat modifications.

The following general protection measures would be required when applicable to address this impact to the extent feasible:

- ◆ **FISH-1: Habitat Disturbance Avoidance and Minimization.**
- ◆ **FISH-2: Habitat Assessment and Surveys**
- ◆ **FISH-3: Fish Capture and Relocation**
- ◆ **FISH-4: Reporting**
- ◆ **GPM-2: Construction Work Windows**
- ◆ **GPM-3: Construction Hours**
- ◆ **GPM-4: Environmental Awareness Training**
- ◆ **GPM-5: Environmental Monitoring**
- ◆ **IWW-1: Appropriate In-Water Materials**
- ◆ **IWW-2: In-Water Vehicle Selection and Work Access**
- ◆ **IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment**
- ◆ **IWW-4: In-Water Staging Areas and Use of Barges**
- ◆ **IWW-5: Cofferdam Construction**
- ◆ **IWW-6: Dewatering/Diversion Restrictions**

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- ◆ **IWW-7: Fish and Aquatic Species Exclusion while Installing Diversion Structures**
- ◆ **IWW-8: Removal of Diversion and Barriers to Flow**
- ◆ **IWW-9: In-Water Pile Driving Plan for Sound Exposure**
- ◆ **IWW-10: In-Water Pile Driving Methods**
- ◆ **IWW-11: Sediment Containment during In-Water Pile Driving**
- ◆ **IWW-12: Pile-Driving Monitoring**
- ◆ **IWW-13: Dredging Operations and Dredging Materials Reuse Plan**
- ◆ **SPM-3: Species Protection Construction Work Windows**
- ◆ **WQHM-1: Staging Areas and Stockpiling of Materials and Equipment**
- ◆ **WQHM-2: Storm Water Pollution Prevention Plan**
- ◆ **WQHM-3: Erosion Control Plans**
- ◆ **WQHM-4: Hazardous Materials Management and Spill Response Plan**
- ◆ **WQHM-5: In-Water Concrete Use**
- ◆ **WQHM-6: Accidental Discharge of Hazardous Materials**
- ◆ **VHDR-1: Avoidance of Vegetation Disturbance**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**
- ◆ **VHDR-4: Revegetation Erosion Control Materials and Methods**
- ◆ **VHDR-5: Revegetation Monitoring and Reporting**
- ◆ **VHDR-6: Herbicide Use**
- ◆ **VHDR-7: Herbicide Application Planning**
- ◆ **VHDR-8: Herbicide Application Reporting**

Findings (Effects of Constructed Facilities and O&M of those Facilities): Most long-term impacts on aquatic biological resources of implementing the restoration projects permitted under the Order should be beneficial, because the specific purpose of these projects would be to restore or enhance existing conditions. However, temporary impacts could occur during maintenance activities for projects that would leave infrastructure at project sites after construction (e.g., stream crossings and fish passage improvements and water conservation projects) would require operations and maintenance of those structures, which could lead to limited, ongoing adverse impacts on special-status fish species. Maintenance activities could include sediment removal within or near the facilities, vegetation removal, and inspection and maintenance of facilities. These activities may lead to temporary mobilization of sediment, ground disturbance, chemical contamination, or vegetation removal.

Implementing the general protection measures would reduce or further reduce potential impacts to a **less-than-significant** level.

Impact 3.6-2: Implementing future restoration projects permitted under the Order could result in substantial adverse direct effects on the movement of native resident or migratory fish.

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Project construction activities could temporarily affect fish movement. Instream construction activities also could impede upstream passage of fishes by causing altered hydrologic conditions, such as temporarily increased velocities.

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However, because cofferdams typically do not block the entire width of affected waterways, the movement of juvenile or adult fishes are unlikely to be substantially affected. Riparian corridors and rivers often serve as the main routes for movement and migration of numerous fish and wildlife species. Thus, the loss, fragmentation, or alteration of riparian and riverine habitats could limit access to habitats for breeding (e.g., seasonal spawning areas for fish), rearing, foraging, and other needs. However, impacts on riparian vegetation from construction activities are expected to be temporary, limiting the impact on fish movement.

Implementing restoration projects permitted under the Order could result in construction-related impacts on fish movement, but the impacts are expected to be minimal and temporary. Therefore, the impact of project construction activities on fish movement would be less than significant.

The long-term effects of restoration projects permitted under the Order on fish movement are expected to be **beneficial**.

Impact Category: Energy Resources

Impact 3.8.1: Implementing restoration projects permitted under the Order could result in substantial inefficient, wasteful, or unnecessary long-term consumption of energy resources or changes to hydropower generation.

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities and routine O&M for restoration projects permitted under the Order would incorporate all feasible control measures to improve equipment efficiency and reduce energy use, as required by local air pollution control or management districts. These measures may include best management practices to meet the efficiency standards for on-site construction vehicles and exhaust control plans to reduce unnecessary equipment idling. The projects would also implement other policies consistent with state and local legislation and policies for energy conservation to help reduce energy use during project construction.

Therefore, this impact would be **less than significant**.

Impact 3.8.2: Implementing restoration projects permitted under the Order could conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities for restoration projects permitted under the Order would incorporate all feasible control measures to improve equipment efficiency and reduce energy use, as required by local air pollution control or management districts. These measures may include best management practices to meet the efficiency standards for on-site construction vehicles and exhaust control plans to reduce unnecessary equipment idling. The projects would also implement other policies consistent with state and local legislation to help reduce energy use during construction. It is anticipated that construction of restoration projects permitted under

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the Order would conform to applicable state and local plans, policies, and regulations related to energy use.

Impacts associated with the loss of development or implementation of other state or local plans for renewable energy or energy efficiency would be expected to be less than significant as construction activities for restoration projects would be limited to the construction period and would not involve long-term obstruction of undeveloped land. Therefore, energy use by construction activities for restoration projects permitted under the Order would not likely conflict with any applicable state or local plans, policies, or regulations establishing energy standards and this impact would be less than significant.

It is anticipated that operational activities for restoration projects permitted under the Order would conform to applicable state and local plans, policies, or regulations related to energy use. Constructed infrastructure would not be expected to obstruct a state or local plan for renewable energy as renewable projects could be built in other locations throughout the state. Energy use during the operation of restoration projects permitted under the Order would not likely conflict with applicable state, regional, or local plans, policies, or regulations establishing energy standards. Therefore, this impact would be less than significant.

Impact Category: Geology and Soils

Impact 3.9-4: Implementing future restoration projects permitted under the Order could result in substantial soil erosion or loss of topsoil.

Projects implementing applicable general protection measures included in the Order would further reduce impacts to geology and soil resources. The following general protection measures may apply to geology and soil resources:

- ◆ **GPM-15: Revegetate Disturbed Areas**
- ◆ **WQHM-1: Staging Areas and Stockpiling of Materials and Equipment**
- ◆ **WQHM-2: Storm Water Pollution Prevention Plan**
- ◆ **WQHM-3: Erosion Control Plans**
- ◆ **WQHM-4: Hazardous Materials Management and Spill Response Plan**
- ◆ **VHDR-1: Avoidance of Vegetation Disturbance**
- ◆ **VHDR-3: Revegetation Materials and Methods**
- ◆ **VHDR-4: Revegetation Erosion Control Materials and Methods**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction-related and O&M activities for restoration projects permitted under the Order could result in substantial soil erosion or the loss of topsoil by disturbing large volumes of soil through excavation, earthmoving, grading, filling, or stockpiling of soil material. These disturbed soils could be more susceptible to wind and water erosion, resulting in the loss of topsoil. Water erosion has a higher potential to occur on steep and/or organic sediment and could occur in many parts of the state.

Implementing the general protection measures listed above would reduce impacts on soil erosion and the loss of topsoil to a **less-than-significant** level.

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Impact Category: Hazards and Hazardous Materials

Impact 3.10-1: Implementing future restoration projects permitted under the Order could involve the routine transport, use, or disposal of hazardous materials that, if accidentally released, could create a hazard to the public or the environment, or that could be located within one-quarter mile of a school.

The Order includes the following general protection measures to reduce this impact:

- ◆ **GPM-6: Work Area and Speed Limits**
- ◆ **GPM-7: Environmentally Sensitive Areas and/or Wildlife Exclusion**
- ◆ **GPM-10: Equipment Maintenance and Materials Storage**
- ◆ **GPM-11: Material Disposal**
- ◆ **GPM-12: Fugitive Dust Reduction**
- ◆ **GPM-14: Project Cleanup after Completion**
- ◆ **WQHM-1: Staging Areas and Stockpiling of Equipment**
- ◆ **WQHM-2: Storm Water Pollution Prevention Plan**
- ◆ **WQHM-4: Hazardous Materials Management and Spill Response Plan**
- ◆ **WQHM-5: In-Water Concrete Use**
- ◆ **WQHM-6: Accidental Discharge of Hazardous Materials**
- ◆ **IWW-1: Appropriate In-Water Materials**
- ◆ **IWW-2: In-Water Vehicle Selection and Work Access**
- ◆ **IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment**
- ◆ **IWW-6: Dewater/Diversion Restrictions**
- ◆ **IWW-13: Dredging Operations and Dredging Materials Reuse Plan**
- ◆ **VHDR-6: Herbicide Use**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction and O&M of future restoration projects permitted under the Order would likely require limited quantities of hazardous materials commonly used during construction activities (e.g., fuels for equipment, oils, hydraulic fluids, solvents, cleaners, sealants, lubricants, and herbicides). The types and quantities of hazardous materials would vary by construction site and type of restoration project. If improperly used, stored, handled, transported, or disposed of, hazardous materials could be accidentally released, which could expose construction workers, the public, and the environment (including soil, groundwater, or surface water) to contamination. Furthermore, during the construction of projects requiring equipment that would use fuel, oil, and/or coolant, accidental spills could occur while equipment is refueled, or equipment could be upset, resulting in the release of fuel, oil, and/or coolant into the surrounding environment.

Implementing the general protection measures would reduce the impact on the public or the environment of an accidental release of hazardous materials, or from the location of construction activities within one-quarter mile of a school, to a **less-than-significant** level.

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Impact 3.10-2: Ground-disturbing activities for construction of future restoration projects permitted under the Order could encounter previously unidentified contaminated soil and/or groundwater, potentially exposing construction workers, the public, and the environment to risks associated with hazardous materials.

Findings: Ground-disturbing activities may occur after restoration projects permitted under the Order have been constructed. Operational activities would involve installing monitoring equipment (e.g., groundwater wells, flow gauges, depth gauges, cameras, stakes, and similar equipment). However, the ground-disturbing activities would be limited and would occur in the same areas as when the facilities were constructed. Therefore, operational activities would not be expected to encounter previously unidentified contaminated soil and/or groundwater that could expose construction workers, the public, and the environment to risks associated with hazardous materials. This impact would be **less than significant**.

Impact 3.10-4: Implementing future restoration projects permitted under the Order could interfere with emergency response access or with an adopted emergency response or evacuation plan (including those located in or near state responsibility areas or land classified as very high FHSZ) or result in inadequate emergency access.

Findings (Effects of Constructed Facilities and O&M of those Facilities): Routine O&M of constructed facilities (whether natural or infrastructure) is not anticipated to interfere with emergency response access or adopted emergency response or evacuation plans. Furthermore, project proponents implementing the Order would comply with all federal, state, and local regulations and policies to help reduce impacts related to emergency response access and adopted emergency response or evacuation plans. Therefore, this impact would be **less than significant**.

Impact Category: Hydrology and Water Quality

Impact 3.11-1: Implementing restoration projects permitted under the Order could result in the release of pollutants into surface water and/or groundwater that could violate water quality standards or waste discharge requirements, substantially degrade water quality, or obstruct implementation of a water quality control plan.

The following general protection measures may apply to hydrology and water quality:

- ◆ **GPM-10: Equipment Maintenance and Materials Storage**
- ◆ **GPM-11: Material Disposal**
- ◆ **GPM-12: Fugitive Dust Reduction**
- ◆ **WQHM-1: Staging Areas and Stockpiling of Materials and Equipment**
- ◆ **WQHM-2: Storm Water Pollution Prevention Plan**
- ◆ **WQHM-3: Erosion Control Plans**
- ◆ **WQHM-4: Hazardous Materials Management and Spill Response Plan**
- ◆ **WQHM-5: In-Water Concrete Use**
- ◆ **WQHM-6: Accidental Discharge of Hazardous Materials**

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- ◆ **IWW-1: Appropriate In-Water Materials**
- ◆ **IWW-2: In-Water Vehicle Selection and Work Access**
- ◆ **IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment**
- ◆ **IWW-4: In-Water Staging Areas and Use of Barges**
- ◆ **IWW-6: Dewatering/Diversion**
- ◆ **IWW-10: In-Water Pile Driving Methods**
- ◆ **IWW-11: Sediment Containment during In-Water Pile Driving**
- ◆ **IWW-12: Pile-driving Monitoring**
- ◆ **IWW-13: Dredging Operations and Dredging Materials Reuse Plan**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**
- ◆ **VHDR-4: Revegetation Erosion Control Materials and Methods**
- ◆ **VHDR-6: Herbicide Use**
- ◆ **VHDR-7: Herbicide Application Planning**
- ◆ **VHDR-8: Herbicide Application Reporting**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects permitted under the Order could require the movement of earth and other materials and the use of heavy equipment. In-channel disturbance for the placement or removal of structures could cause temporary changes to water quality in several different ways. Construction work could also introduce pollutants through equipment (e.g., oils, lubricants, hydraulic fluids) and materials (e.g., soil and cover materials, concrete) into affected waterways, or into flood hazard, tsunami, or seiche zones, where inundation could release the pollutants. Localized degradation of groundwater quality could result from temporary, short-term construction activities such as building access roads and temporary facilities, or from O&M activities such as vegetation control. If hazardous materials were to be discharged to the land surface or surface waters during this work, they could travel to underlying aquifers. If the discharge volume were large enough, the hazardous materials could degrade local groundwater quality to a sufficient degree to impair its continued use.

In addition, construction activities for some restoration projects could include temporary dewatering. Groundwater extracted during dewatering operations may contain elevated levels of suspended sediment, turbidity, or other constituents (e.g., metals, construction materials) that could degrade water quality when discharged into surface waters.

It is assumed that project proponents would comply with applicable federal, state, and local regulations and ordinances.

Integration of applicable general protection measures into project designs and plans would reduce impacts from construction activities on the water quality of the study area to a **less-than-significant** level.

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Impact 3.11-2: Implementing restoration projects permitted under the Order could substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that a project may impede sustainable groundwater management of the basin or obstruct implementation of a sustainable groundwater management plan.

The following general protection measures may apply to hydrology and water quality:

◆ **IWW-6: Dewatering/Diversion**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities for restoration projects permitted under the Order could include temporary dewatering to facilitate equipment access, excavation or placement of materials, and repair or removal of infrastructure. These activities could result in a localized, temporary reduction in groundwater levels near the construction area, which would be expected to return to preconstruction levels after dewatering activities cease (or possibly better levels, if the aquifer were depleted, or in the case of a multi-benefit restoration project). Land grading, placement of dredged or other in-water material removed (e.g., legacy structures) on land before disposal, construction of structures (e.g., fish screens, earthen embankments), and stockpiling of construction materials could change drainage patterns during construction, which typically would result in changes in groundwater recharge. Actual alterations of groundwater recharge would depend on the type of construction activity and hydrologic and hydraulic factors. Construction of restoration projects permitted under the Order could reduce groundwater levels and alter groundwater recharge. However, these reductions would be localized and temporary, and preconstruction conditions would be expected to resume, or be improved, after construction. Project construction would not be anticipated to obstruct with implementation of a sustainable groundwater management plan.

Some of the long-term effects of restoration projects permitted under the Order on groundwater recharge are expected to be beneficial (e.g., stream, floodplain, and riparian projects typically would improve groundwater recharge) or neutral. Restoration projects permitted under the Order could affect groundwater supplies and recharge.

Slurry cutoff walls may be installed in setback levees, which could restrict water flow and affect groundwater levels. The potential consequences are anticipated to be localized changes in well water levels and/or high groundwater levels near the setback levees and near the locations where slurry cutoff walls are installed. However, such changes would not be expected to substantially affect groundwater resources.

Restoration projects permitted under the Order would establish, restore, and enhance stream and riparian areas and may include activity in upslope watershed sites (e.g., outside of the State and Regional Water Boards' jurisdiction). Specific project features such as small wood structures or beaver dam analogues would increase ponding and reconnect floodplains. By increasing the rate, duration, and inundation of floodplain surfaces, these features would elevate the water table during both low- and high-flow conditions, increasing groundwater recharge. Floodplain restoration would

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also allow for groundwater recharge because floodplains, when inundated with water, allow floodwaters to infiltrate the ground.

Therefore, this impact would be **less than significant**.

Impact 3.11-3: Implementing restoration projects permitted under the Order could substantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner that could substantially increase the rate of runoff; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems; or impede or redirect flood flows.

To reduce the impact of project construction on the rate or amount of surface runoff in a manner that would increase the risk of flooding on- or off-site, the Order includes the following general protection measures:

- ◆ **WQHM-1 Staging Areas and Stockpiling of Materials and Equipment**
- ◆ **WQHM-2: Storm Water Pollution Prevention Plan**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects permitted under the Order could temporarily change drainage patterns; however, these changes would not be expected to change surface runoff in a manner that could exceed existing or planned stormwater drainage systems and/or create or increase on- or off-site flooding. Any changes would likely have relatively localized effects on-site and immediately downstream (or downslope) of the site; floodplain restoration improvements would not be expected to increase surface elevations or the chance of flooding in adjacent floodplains. Therefore, restoration projects permitted under the Order would not increase the rate or amount of surface runoff in a manner that would increase the risk of flooding on- or off-site.

Restoration projects permitted under the Order could permanently alter drainage patterns. Many of the long-term effects of these projects on drainage patterns and flood flows are expected to be beneficial or neutral, because the specific purpose of these projects would be to correct existing conditions that contribute to resource degradation. Restoration projects could alter runoff rates and timing, as local drainage patterns could change during project construction. However, these projects would likely have relatively localized effects on-site and immediately downstream (or downslope) of the floodplain restoration improvements, and would not increase surface water elevations or the chance of flooding in adjacent floodplains.

Therefore, this impact would be **less than significant**.

Impact Category: Land Use and Planning

Impact 3.12-1: Restoration projects permitted under the Order could conflict with a land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect.

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Findings (Effects of Project Construction Activities): Construction of restoration projects permitted under the Order could involve mobilization of equipment and materials, preparation of staging areas, installation of temporary construction offices, staging and storage of equipment and materials, vehicle parking, use of designated access and haul routes, clearing of vegetation and structures, preparation of borrow sites, site restoration and demobilization, and removal of excess materials. Restoration projects would be required to comply with applicable city and county general plans and other local policies and ordinances. Potential temporary conflicts with adjacent land uses, policies and regulations from construction noise, dust, and traffic are addressed in those sections of this PEIR.

Therefore, this impact would be **less than significant**.

Impact 3.12-2: Implementing restoration projects permitted under the Order could physically divide an established community.

Findings (Effects of Project Construction Activities): Construction activities for restoration projects permitted under the Order could result in the temporary physical division of the community; however, these conversions would most likely take place on the periphery of a community, rather than through the community, and would be temporary. A majority of construction activities would take place on or near a body of water, which would not further divide an established community.

Therefore, this impact would be **less than significant**.

Impact Category: Noise

Impact 3.14-4: Implementing future restoration projects permitted under the Order that are located within the vicinity of a private airstrip, an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, could expose people residing or working in the project area to excessive noise levels.

Findings (Effects of Constructed Facilities and O&M of those Facilities): Routine O&M activities for facilities constructed for restoration projects permitted under the Order could be located within the vicinity of a private airstrip, an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport. Depending on their location, these projects could expose people working in the project area to excessive noise levels. However, routine O&M activities (e.g., vegetation clearing, debris removal, monitoring) would be limited and temporary, occurring yearly, monthly, weekly, or on an as-needed basis, depending on the restoration project. Restoration projects permitted under the Order would not include occupied structures; therefore, exposure of people residing in the area to excessive noise levels is not applicable.

The level of significance for potential impacts depends, in large part, on its proximity to an airport use plan, or on the project's location within 2 miles of a public airport or public use airport. However, because O&M activities would be temporary, this impact would be **less than significant**.

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Impact Category: Population and Housing

Impact 3.15-1: Implementing restoration projects permitted under the Order could require relocation by construction and operation crews, resulting in population growth and demand for housing.

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Restoration projects permitted under the Order would have the potential to result in an increase in temporary and long-term population growth. Individual restoration project locations and the scale of potential future permitted restoration projects and their staffing needs are not known at this time. Factors necessary to identify potential impacts include the number of construction workers employed, the duration of project construction, and the location of projects relative to populated areas. However, none of the restoration projects permitted under the Order would involve constructing new homes, businesses, or other infrastructure that would provide new long-term employment opportunities or result in population growth and demand for housing. Furthermore, while temporary or longer-term population increases could occur, the potential presence of existing vacant units in and around the project area would help absorb the population increases, which would be negligible and temporary.

O&M supporting constructed infrastructure for restoration projects permitted under the Order may include maintenance and cleaning of fish screens, removal of debris and sediment from stream crossings, and maintenance and operation of fishways. These O&M activities could require additional staff. However, it is anticipated that these activities would be similar to those in the project area located near a waterway. Furthermore, the potential presence of existing vacant units in and around the project area is expected to be sufficient to accommodate any workers who temporarily relocate to the area.

Therefore, this impact would be **less than significant**.

Impact 3.15-2: Implementing restoration projects permitted under the Order may displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere.

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities (natural or artificial infrastructure), and operations and maintenance of those facilities permitted under the Order would not result in the elimination of housing. Some construction activities could involve removing or relocating existing infrastructure such as boat docks, boat haul-out locations, campgrounds and campsites, day-use sites, roads/trails, and off-highway/off-road vehicle routes.

Water conservation projects could involve constructing new infrastructure (e.g., fish screens, fishways, pumps and piping, screens and head gates); however, these projects would most likely be in less urbanized or rural environments in areas with minimal housing. Given that the location and scope of an individual restoration project permitted under the Order are yet to be determined, the potential exists for some such projects to result in displacement of some housing and people. Factors necessary to identify specific

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impacts include the type of project and the location of construction relative to people and housing. Even though these factors are not known, these impacts should be negligible because projects would typically occur in low-density population regions near waterways, limiting the potential for the displacement of people or housing. Furthermore, none of the restoration projects permitted under the Order would include the removal or relocation of housing.

Therefore, this impact would be **less than significant**.

Impact Category: Recreation

Impact 3.16-1: Implementing future restoration projects permitted under the Order could directly impair, degrade, or eliminate recreational resources, facilities, and opportunities.

Findings (Effects of Project Construction Activities): Construction work for restoration projects permitted under the Order could temporarily impair, degrade, or eliminate recreational resources, facilities, and opportunities. While these types of construction activities may impair recreational activities, they would not be expected to significantly impair, degrade, or eliminate recreational resources, facilities, and opportunities. In addition, a restoration project permitted by the Order could provide new recreational opportunities, which would be beneficial. In addition, restoration projects permitted under the Order such as removal of a small dam could provide increased recreational opportunities in stream or river systems, such as kayaking.

Furthermore, recreational opportunities are abundant throughout the study area, and construction work for restoration projects permitted under the Order would be temporary and localized. Therefore, impacts on parks, trails, boating, and fishing areas throughout the study area would be less than significant when compared to the total recreation opportunities for the surrounding populations.

This impact would be **less than significant**.

Impact Category: Transportation

Impact 3.17-1: Future restoration projects permitted under the Order could conflict with a plan, ordinance, or policy addressing the circulation system including transit, roadways, bicycle, and pedestrian facilities.

Findings (Effects of Constructed Facilities and O&M of those Facilities): Operations and maintenance of facilities for future restoration projects that would be permitted under the Order are not likely to substantially increase traffic or cause circulation problems associated with transit, roadways, bicycle, and pedestrian facilities. These projects would adhere to regional and local general plans and traffic regulations; therefore, they would not create substantial traffic during peak-hour periods. Workers involved with the operations and maintenance of constructed facilities would come from an existing worker pool within the project region and would not result in a substantial increase in the number of workers or vehicle trips. Therefore, operations would not substantially increase traffic or roadway congestion.

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Some restoration projects permitted under the Order could remove or relocate bicycle and pedestrian facilities, affecting demands on other pathways and recreational activities. Constructing project facilities in waterways and small channels could affect navigation and boat traffic; periodic maintenance activities could be required, which could temporarily obstruct vessel navigation and boats. However, these restoration projects would be required to adhere to statewide, regional, and local policies, regulations, and ordinances governing traffic and circulation systems.

Therefore, this impact would be **less than significant**.

Impact 3.17-2: Future restoration projects permitted under the Order could conflict with or be inconsistent with State CEQA Guidelines Section 15064.3(b).

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Operations of facilities for restoration projects that would be permitted under the Order are not likely to require a large amount of automobile travel. The workers hired for each project would likely come from the regional worker pool and would not substantially increase automobile trips. Some projects may require operations and maintenance activities involving the removal of debris or the use of heavy equipment. However, substantially fewer trips are anticipated to occur than during construction.

Therefore, this impact would be **less than significant**.

Impact Category: Utilities and Public Services

Impact 3.19-1: Implementing future restoration projects permitted under the Order could require or result in the construction or relocation of new water or expanded water, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Findings (Constructed Facilities and O&M of those Facilities): Routine O&M activities for restoration projects permitted under the Order would not require or result in the construction or relocation of new water or expanded water, storm drainage, electric power, natural gas, telecommunications facilities or water conveyance facilities.

Therefore, this impact would be **less than significant**.

Impact 3.19-2: Implementing future restoration projects permitted under the Order could result in insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

Findings: (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Population changes could occur resulting in reasonably foreseeable future development (e.g., new housing or commercial development). These future development projects may require surface water during normal, dry and multiple dry years. These projects are not anticipated to result in insufficient water supplies by meeting existing regulatory requirements (e.g., existing Biological Opinions on the Long-Term Operations of the Central Valley Project and State Water Project). Future

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restoration projects would need to comply with relevant federal, state, and local regulations and ordinances (including demonstrating there are sufficient water supplies, if needed), as would reasonably foreseeable future development projects. Therefore, implementing future restoration projects permitted under the Order would not result in insufficient water supplies to serve reasonably foreseeable future development during normal, dry, and multiple dry years.

Construction-related impacts would be temporary and short-term, and the water needed for construction and construction workers could be provided by existing municipal and non-municipal systems (such as water wells or water trucks).

Restoration projects may require a water supply for maintenance activities. For example, irrigation water may be needed for the initial establishment of native plant revegetation. However, the water supply needed for maintenance would be limited and could be met by existing municipal and non-municipal systems.

Constructed facilities, including expansion or modification of floodplains and fish passage improvements, could have effects on water supply availability if water levels are reduced near diversion intakes. However, anticipated changes in water levels resulting from constructed facilities would need to comply with relevant federal, state, and local regulations and ordinances and would not impede operations of existing diversion facilities or substantially change water supply availability to water users. Some of the long-term effects of restoration projects permitted under the Order on groundwater recharge are expected to be beneficial (e.g., stream, floodplain, and riparian restoration projects typically would improve groundwater recharge).

Therefore, this impact would be **less than significant**.

Impact 3.19-3: Future restoration projects permitted under the Order could be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and could fail to comply with federal, state, and local statutes and regulations related to solid waste.

Findings (Effects of Project Construction Activities. Constructed Facilities and Operations and Maintenance of those Facilities): Construction and O&M activities for restoration projects permitted under the Order could temporarily increase the amount of solid waste hauled to local landfills. The magnitude of the increase in solid waste generation would depend on the size, number, location, and nature of the projects, and their ability to recycle, reuse, or dispose of materials on-site.

Most projects permitted under the Order that would involve earthmoving activities would not generate large amounts of construction waste (e.g., organic materials from borrow areas and restoration construction sites, excavated material, and soil not suitable for earthen structures) that would require disposal at a landfill. Most excess organic material would be used to reclaim borrow areas and temporarily disturbed sites or would be provided to local farmers for incorporation into their land to help improve soil quality. Debris generated during project clearing and grubbing operations would be disposed of based on the type of material and local conditions.

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The materials generated would be hauled off-site to landfills (e.g., building demolition waste); delivered to recycling facilities (e.g., concrete); sold (e.g., organic material to cogeneration facilities); or reused onsite or nearby (e.g., restoration project or other projects needing fill material). Thus, construction waste is unlikely to cause the permitted capacity of local landfills to be exceeded or would not be in compliance with federal, state, and local regulations related to solid waste.

Therefore, impacts related to solid waste disposal needs and compliance would be **less than significant**.

Impact 3.19-4: Implementing future restoration projects permitted under the Order could result in substantial adverse physical impacts associated with construction of new or modified fire protection, police protection, schools, and other public facilities.

Findings Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction and O&M activities for future restoration projects permitted under the Order would not include new land development or occupied structures that would increase population and add new public service demands. Construction and O&M activities for restoration projects permitted under the Order would not add substantial new demands to existing fire or police protection facilities, schools, or other public facilities. Increases in demands for public services, such as from jobsite accidents or jobsite security during construction of future project actions, would be temporary or short-term and are unlikely to require new or altered public service facilities because the overall numbers of workers at permitted projects would typically be a small portion of the population in any given project area.

This impact would be **less than significant**.

2.3 Significant or Potentially Significant Impacts Reduced to a Less Than Significant Levels Through Mitigation Measures

The following environmental significant and potentially significant impacts would be reduced to less than significant levels through implementation of applicable mitigation measures are set out below.

The State Water Board finds that the mitigation measures cited below are feasible, are adopted, and reduce impacts to a less than significant level. Accordingly, the State Water Board finds that, pursuant to Public Resources Code section 21081(a)(1) and State CEQA Guidelines section 15091(a)(1), changes or alterations required in, or incorporated into, the Order mitigate or avoid the potentially significant impacts of the Order as identified in the PEIR. Therefore, impacts in this section are considered significant or potentially significant, but implementation of mitigation measures (with incorporation of applicable general protection measures and/or species protection measures) will reduce impacts to a less than significant level.

The State Water Board or Regional Water Quality Control Board's (Regional Board) will include applicable measures below as conditions of the Notice of Applicability (NOA) issued for an individual project under the Order. The applicability of the general protection measures, species protection measures, and mitigation measures would

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depend on the restoration activities, project location, and the potentially significant impacts of the individual restoration project. Implementation of the mitigation measure(s) would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

The basis for the finding for each identified impact is set forth below.

Impact Category: Aesthetics

Impact 3.2-1: Implementing future restoration projects permitted under the Order could result in substantial degradation of visual qualities.

The following general protection measures may apply to visual resources:

- ◆ VHDR-5: Revegetation Monitoring and Reporting

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure AES-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure AES-1: Minimize Degradation of Visual Quality

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Construction of restoration projects could permanently alter the existing visual landscape and during construction, some restoration projects could temporarily alter existing visual landscape due to soil exposure and immature vegetation during and after construction.

Additionally, some restoration projects could result in the placement of infrastructure. Adding a project feature that prominently contrasts with the existing visual qualities and character of the surrounding landscape could cause a change in visual quality. These facilities may not be of the same visual character as surrounding landscapes.

With implementation of the Mitigation AES-1, this impact is reduced to a **less than significant** level.

Impact 3.2-3: Implementing future restoration projects permitted under the Order could result in new sources of substantial light or glare.

The following general protection measures may apply to visual resources:

- ◆ GPM-3: Construction Hours

The following mitigation measures within the authority of the Board to impose have been adopted to address this impact to the extent feasible:

Mitigation AES-2: Avoid Effects of Project Lighting

Findings (Effects of Project Construction Activities): Construction activities or the use of construction lighting for restoration projects permitted under the Order could temporarily generate glare.

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With implementation of the Mitigation Measure AES-2, this impact is reduced to a **less than significant** level.

Impact Category: Biological Resources – Terrestrial

Impact 3.5-7: Implementing restoration projects permitted under the Order could conflict with the provisions of an adopted habitat conservation plan or natural community conservation plan.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure TERR-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure TERR-1: Coordinate with CDFW, USFWS, and Permittees Regarding HCPS, NCCPs, and Other Conservation Plans

Findings (Effects of Constructed Facilities and O&M of those Facilities): Most long-term impacts on terrestrial biological resources of implementing projects permitted under the Order should be neutral or beneficial, because the specific purpose of these projects would be to correct existing conditions that contribute to resource degradation. Nonetheless, there are foreseeable circumstances in which restoration projects targeted to specifically benefit aquatic organisms may conflict with already approved conservation plans.

Depending on their specific locations and the applicable plans, constructed facilities established by projects permitted under the Order could conflict with adopted HCPs, NCCPs, or similar conservation plans. If such a restoration project would eliminate habitat that contributes to the conservation goals of species covered under an HCP or NCCP, the resource agencies that previously issued take permits under the conservation plan (e.g., CDFW and USFWS) may need to review the incidental take permits for those covered species. Based on this assessment, these agencies may determine that with the impact of the restoration project permitted under the Order on covered species' habitat, new or revised conditions would be required to offset those impacts and achieve the net conservation benefits originally identified in the HCP or NCCP.

In such a case, the CEQA lead agency for the project permitted under the Order would need to coordinate with the local entities implementing the approved conservation plan, and the resource agencies that previously issued take permits under the conservation plan. The purpose of this coordination would be to design additional project-specific measures to reduce conflicts between the project and implementation of the approved conservation plan.

With implementation of the Mitigation Measure TERR-1, this impact is reduced to a less than significant level.

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Impact Category: Geology and Soils

Impact 3.9-1: Implementing future restoration projects permitted under the Order could cause direct or indirect adverse effects on people or structures related to risk of loss, injury, or death due to a fault rupture.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure GEO-1 and GEO-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure GEO-1: Include Geotechnical Design Recommendations

Mitigation Measure GEO-2: Comply with the Alquist-Priolo Act

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): The specific locations and scale of possible future restoration projects are not yet determined; therefore, the risk of a fault rupture cannot be determined. Factors needed to identify specific impacts include the project's design, its location relative to underlying soil and geotechnical conditions, and proximity to known earthquake faults. Restoration projects permitted under the Order could cause direct or indirect adverse effects on people or structures related to the risk due to a fault rupture.

Implementing Mitigation Measures GEO-1 and GEO-2 would reduce potentially significant impacts related to the potential exposure to people and structures to risk of loss, injury, or death due to a fault rupture to a **less-than-significant** level.

Impact 3.9-2: Implementing future restoration projects permitted under the Order could directly or indirectly result in adverse effects on people or structures related to risk of loss, injury, or death due to strong seismic ground shaking.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measures GEO-3 and GEO-4 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure GEO-3: Conduct Individual Restoration Project Geotechnical Investigation and Report

Mitigation Measure GEO-4: Adhere to International Building Code

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): The specific locations and scale of possible future permitted restoration projects are not known at this time; therefore, the risk associated with strong seismic ground shaking cannot be determined. Restoration projects permitted under the Order could directly or indirectly result in adverse effects on people or structures related to strong seismic ground shaking.

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Implementing Mitigation Measures GEO-3 and GEO-4 would reduce potentially significant impacts that could result in direct or indirect adverse effects on people or structures related to the risk due to strong seismic ground shaking to a **less-than-significant** level.

Impact 3.9-3: Implementing future restoration projects permitted under the Order could directly or indirectly cause adverse effects on people or structures from unstable soil conditions.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure GEO-3, GEO-6, GEO-7, and GEO-8 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure GEO-3: Conduct Individual Restoration Project Geotechnical Investigation and Report

Mitigation Measure GEO-6: Implement Measures for Waterway Construction Activities

Mitigation Measure GEO-7: Implement Measures for Levee Construction and Other Fill Embankment Designs

Mitigation Measure GEO-8: Assess the Presence of Highly Organic Soils

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): To determine the effects of construction activities related to unstable soils, factors such as project design, location relative to underlying soils, and geotechnical conditions would need to be known. The potential exists for indirect or direct exposure of people or structures to adverse effects from unstable soils during restoration projects permitted under the Order.

Implementing Mitigation Measures GEO-3, GEO-5, GEO-6, GEO-7, and GEO-8 would reduce potentially significant impacts related to indirect or direct adverse effects on people or structures associated with the risk from unstable soils to a **less-than-significant** level.

Impact Category: Hazards and Hazardous Materials

Impact 3.10-2: Ground-disturbing activities for construction of future restoration projects permitted under the Order could encounter previously unidentified contaminated soil and/or groundwater, potentially exposing construction workers, the public, and the environment to risks associated with hazardous materials.

The Order includes the following general protection measures to reduce this impact:

- ◆ **GPM-6: Work Area and Speed Limits**
- ◆ **GPM-7: Environmentally Sensitive Areas and/or Wildlife Exclusion**

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- ◆ **GPM-10: Equipment Maintenance and Materials Storage**
- ◆ **GPM-11: Material Disposal**
- ◆ **GPM-12: Fugitive Dust Reduction**
- ◆ **GPM-14: Project Cleanup after Completion**
- ◆ **WQHM-1: Staging Areas and Stockpiling of Equipment**
- ◆ **WQHM-2: Storm Water Pollution Prevention Plan**
- ◆ **WQHM-4: Hazardous Materials Management and Spill Response Plan**
- ◆ **WQHM-5: In-Water Concrete Use**
- ◆ **WQHM-6: Accidental Discharge of Hazardous Materials**
- ◆ **IWW-1: Appropriate In-Water Materials**
- ◆ **IWW-2: In-Water Vehicle Selection and Work Access**
- ◆ **IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment**
- ◆ **IWW-6: Dewater/Diversion Restrictions**
- ◆ **IWW-13: Dredging Operations and Dredging Materials Reuse Plan**
- ◆ **VHDR-6: Herbicide Use**

In addition, as part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measures HAZ-1, HAZ-2, and HAZ-3 would be required when applicable to a given project. Implementation of these mitigation measures would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure HAZ-1: Prepare and Implement a Health and Safety Plan and Provide Qualified Oversight of Fill Removal Related to Earthmoving Activities

Mitigation Measure HAZ-2: Notify Appropriate Federal, State, and Local Agencies If Contaminated Soils Are Identified, and Complete Recommended Remediation Activities

Mitigation Measure HAZ-3: Notify Appropriate Federal, State, and Local Agencies If Accidental Discharges of Hazardous Materials

Findings (Effects of Project Construction Activities): Certain restoration projects permitted under the Order would have ground-disturbing construction activities (e.g., stream crossing and fish passage improvements; removal of small dams, tide gates, flood gates, and legacy structures; bioengineered bank stabilization; and restoration and enhancement of off-channel/side-channel habitat). These ground-disturbing activities (e.g., excavation, clearing of the land for preparation of site, grading, cut and fill) could cause the release of previously unidentified contaminated soil and/or groundwater that could expose construction workers, the public, and the environment to hazardous materials.

In addition, sediments excavated during dredging activities may contain hazardous materials, which could expose construction workers to health and safety risks. Construction activities from these project types may have potentially significant impacts

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related to the potential exposure of construction workers, the public, and the environment to existing on-site hazardous materials.

The general protection measures would be followed to reduce the impacts of ground-disturbing activities for restoration projects permitted under the Order related to the release or exposure to previously unidentified contaminated soil and/or groundwater that could expose construction workers, the public, and the environment to risks from hazardous materials.

Implementing Mitigation Measures HAZ-1, HAZ-2, and HAZ-3 and the applicable general protection measures would reduce the impact related to potential discovery of previously unidentified contaminated soil and/or groundwater to a **less-than-significant** level.

Impact 3.10-4: Implementing future restoration projects permitted under the Order could interfere with emergency response access or with an adopted emergency response or evacuation plan (including those located in or near state responsibility areas or land classified as very high FHSZ) or result in inadequate emergency access.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure HAZ-5 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure HAZ-5: Coordinate with Applicable Federal, State, and Local Agencies and Districts

Findings (Effects of Project Construction Activities): Future restoration projects permitted under the Order could be located in areas where their construction could physically interfere with adopted emergency response plans or evacuation plans, or result in inadequate emergency access. Projects often use heavy equipment, the operation of which may temporarily disrupt existing transportation and circulation patterns in the project area. Impacts could include direct disruption of traffic flows and street operations. Some waterside restoration projects permitted under the Order may use barges to transport construction materials, workers, and equipment, which would reduce impacts on water-related response times.

The level of significance of a potential impact of a restoration project permitted under the Order related to interference with emergency response access or adopted emergency response or evacuation plans would depend, in large part, on the project's size and proximity to a populated area. Construction-related interference with emergency response, evacuation plans, and adopted emergency response would be temporary. In addition to Mitigation Measure HAZ-5, other feasible, equally effective mitigation measures are available, such as maintaining alternative property access; providing advance notification to local police, fire, and emergency service providers of the timing, location, and duration of activities that could affect emergency vehicle movement; and installing traffic control devices to maintain safe driving conditions. Implementing Mitigation Measure HAZ-5, or equally effective mitigation measures,

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would reduce impacts on emergency response access or adopted emergency response and evacuation plans to a **less-than-significant** level.

Impact 3.10-5: Implementing future restoration projects permitted under the Order could expose people or structures, either directly or indirectly, to a significant loss, injury, or death due to wildland fires.

As part of the State Water Board or Regional Board' issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure FIRE-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure FIRE-1: Develop and Implement a Fire Prevention Plan

The following general protection measures would be required when applicable to address this impact to the extent feasible:

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities, (natural or artificial infrastructure), and operations and maintenance of those facilities permitted under the Order could be constructed and operated in areas where their construction and operation could pose a threat to people and structures because of wildfires. The study area involves the entire state of California; therefore, restoration projects could be located in areas with moderate to high fire risk areas, or in areas where vegetation is present. Construction equipment and vehicles could come into contact with vegetated areas, potentially igniting dry vegetation by accidental discharge of sparks, resulting in fire.

Restoration projects permitted under the Order could be located in areas where their operation could pose a threat to people or structures because of wildland fires. Because the locations of future restoration projects permitted under the Order are yet to be determined, it is possible that facilities could be constructed in areas where vegetation is present in or near infrastructure, equipment, and O&M vehicles.

Implementing Mitigation Measure FIRE-1 would reduce the impact of exposure to wildland fires to a **less-than-significant** level.

Impact 3.10-6: Implementing future restoration projects permitted under the Order could create vector habitat that would pose a significant public health hazard.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure HAZ-6 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure HAZ-6: Prepare and Implement a Vector Management Plan

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities

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(natural or artificial infrastructure), and operations and maintenance of those facilities permitted under the Order could create new vector habitat that would pose a significant public health hazard. Mosquitoes require standing water to complete their growth cycles, and any body of standing water that remains undisturbed for multiple days represents a potential mosquito breeding site.

Implementing Mitigation Measure HAZ-6 would reduce the impact related to public health hazards from new vector habitat to a **less-than-significant** level.

Impact Category: Mineral Resources

Impact 3.13-1: Implementing restoration projects permitted under the Order could result in the loss of availability of a known mineral resource.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure MIN-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure MIN-1: Minimize Potential Impacts from Loss of a Known Mineral Resource

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities (natural or artificial infrastructure), and O&M of those facilities permitted under the Order (e.g., new setback levees and floodway widening) could affect mineral resources designated by the California Geological Survey as resources of regional and statewide importance (MRZ-2), depending on the projects' locations and proximity to mineral resources. Active, permitted mines may be present, and development of the proposed restoration projects could substantially deplete already inadequate aggregate resources. Construction-related demand could exceed the availability of mineral resource supplies. For example, constructing setback levees and widening floodways would require large quantities of construction aggregate, which could limit the ability of other aggregate users in the area to obtain and use aggregate.

Implementing Mitigation Measure MIN-1, or equally effective mitigation measures, would reduce the potentially significant impacts of restoration projects permitted under the Order to a **less-than-significant** level.

Impact 3.13-2: Implementing restoration projects permitted under the Order could result in the loss of availability of a locally important mineral resource recovery site.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure MIN-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

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Mitigation Measure MIN-2: Minimize Potential Impacts from the Loss of a Locally-Important Mineral Resource Recovery Site

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities (natural or artificial infrastructure), and operations and maintenance of those facilities permitted under the Order could result in the loss of availability of a locally important mineral resource recovery site, if the restoration project's construction or resulting infrastructure would occur on or near mineral recovery sites that have been identified in local general plans, specific plans, or other land use plans. Many producing natural gas wells lie within delineated natural gas fields and a permitted mining operations are present in the study area.

Restoration projects have the potential to affect mineral resource recovery sites, including productive oil and natural gas wells and active mining sites, depending on the projects' specific locations and characteristics at the time they are implemented.

Impacts on mineral extraction sites would be temporary if the effects would be limited to the construction period. The impacts would be permanent if project facilities would be placed in an area where a resource recovery site exists and the extraction site would experience a permanent loss of availability. However, the specific locations and scale of future permitted restoration projects are yet to be determined. Therefore, the risk related to the loss of an important mineral resource recovery site cannot be determined. The factors necessary to identify the risk include the locations of the new facilities relative to known mineral resource recovery sites delineated on a local general plan, specific plan, or other land use plan.

Implementing Mitigation Measure MIN-2, or equally effective mitigation measures, would reduce the potentially significant impacts of restoration projects permitted under the Order to a **less-than-significant** level.

Impact Category: Noise

Impact 3.14-1: Implementing future restoration projects permitted under the Order could result in a temporary or permanent increase in ambient noise levels in excess of standards established in applicable plans and ordinances.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure NOISE-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure NOISE-2: Minimize Operations and Maintenance Noise Conflicts

Findings (Effects of Constructed Facilities and O&M of those Facilities): Routine O&M activities for constructed facilities (natural or artificial infrastructure) for restoration projects that would be permitted by the Order could produce ambient noise. For example, O&M work for fish screens on water intakes could involve operating a pump

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station that would produce noise. However, pump stations are normally enclosed and would not be expected to result in a permanent substantial noise increase relative to existing conditions, nor would noise levels generated by the pump station exceed local jurisdictions' noise standards.

Most maintenance activities would involve truck trips, vegetation removal, sediment removal within or near the facilities, and inspection and maintenance of facilities. These activities could require heavy equipment that would generate noise at levels similar to those described above. However, elevated noise levels would be less frequent than during construction of these projects, because maintenance would be less frequent than ongoing construction activities.

Implementing Mitigation Measure NOISE-2 would reduce the impact related to a temporary or permanent increase in ambient noise levels from operation of constructed facilities for restoration projects permitted by the Order to a **less-than-significant level**.

Impact 3.14-2: Implementing future restoration projects permitted under the Order could expose sensitive receptors to excessive groundborne vibration.

The following mitigation measures within the authority of the Board to impose have been adopted to address this impact to the extent feasible:

Mitigation Measure NOISE-1: Minimize Noise Conflicts

Mitigation Measure NOISE-2: Minimize Operations and Maintenance Noise Conflicts

Findings (Effects of Constructed Facilities and O&M of those Facilities): Operation of restoration projects permitted under the Order could expose people to elevated groundborne vibration, but far less frequently than during construction. Some projects, such as the construction of new levees, are not likely to generate vibration during operation. However, some heavier maintenance and repair activities could generate impacts, except that jackhammering and pile driving and other activities that would generate the highest levels of vibration would not be expected to commonly be used as part of O&M activities.

Implementation of MM-NOISE 1 and NOISE-2 would reduce the impact of groundborne vibration during O&M activities for constructed facilities for restoration projects permitted by the Order to a **less-than-significant level**.

Impact 3.14-3: Implementing future restoration projects permitted under the Order could expose sensitive receptors to excessive groundborne noise levels.

The following general protection measures may apply to noise impacts:

- ◆ **GPM-2: Construction Work Windows**
- ◆ **GPM-3: Construction Hours**
- ◆ **GPM-6: Work Area and Speed Limits**
- ◆ **IWW-9: In-Water Pile Driving Plan for Sound Exposure**

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As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure NOISE-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure NOISE-2: Minimize Operations and Maintenance Noise Conflicts

Findings (Effects of Constructed Facilities and O&M of those Facilities): Routine O&M activities for constructed facilities (natural or artificial infrastructure) for future restoration projects permitted by the Order could result in a substantial (10-dBA) long-term or permanent increase in groundborne noise levels. For example, operation of fish screens on water intakes could involve using a pump station that would produce noise. Ordinarily, these facilities are enclosed and would not be expected to result in a permanent substantial increase in noise levels relative to existing conditions, nor would the noise levels generated by pump stations be expected to exceed the local jurisdictions' noise standards. However, these projects could be located in a quiet rural environment where typical noise levels may be as low as 20 dBA. As a result, operation of restoration projects permitted under the Order could expose sensitive receptors to excessive groundborne noise levels by more than 10 dBA.

Most maintenance activities would involve truck trips, vegetation removal, sediment removal within or near the facilities, and inspection and maintenance of facilities. These activities could require heavy equipment that could generate noise levels similar to those described above, but elevated noise levels would occur less frequently than during construction of these projects, because maintenance would be less frequent than ongoing construction activities.

Therefore, the impact of excessive groundborne noise levels generated during operation of constructed facilities for restoration projects permitted by the Order would be **less than significant**.

Although the impact would be less than significant, Mitigation Measure NOISE-2 may help to further reduce impacts associated with excessive groundborne noise levels associated with operation of constructed facilities.

Impact 3.14-4: Implementing future restoration projects permitted under the Order that are located within the vicinity of a private airstrip, an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, could expose people residing or working in the project area to excessive noise levels.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure NOISE would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

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Mitigation Measure NOISE-3: Prepare Preconstruction Safety Plans

Findings (Effects of Project Construction Activities): Construction of restoration projects that would be permitted under the Order could be located in the vicinity of a private airstrip, an airport land use plan, or within 2 miles of a public airport or public use airport. These restoration projects would not include occupied structures; therefore, exposure of excessive noise levels to the people residing in the area of a restoration project is not discussed further.

Implementing Mitigation Measure NOISE-3 would reduce this impact to a **less-than-significant level**.

Impact Category: Recreation

Impact 3.16-1: Implementing future restoration projects permitted under the Order could directly impair, degrade, or eliminate recreational resources, facilities, and opportunities.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure REC-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure REC-1: Minimize Impairment, Degradation, or Elimination of Recreational Resources

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Restoration projects permitted under the Order could permanently impair or eliminate recreational resources, depending on the project locations and types. Infrastructure may be removed or relocated along streams and in riparian areas. The infrastructure affected may include but would not be limited to boat docks, boat haul-out locations, campgrounds and campsites, day-use sites, and roads/trails and off-highway/off-road vehicle routes in the areas of the restoration projects.

Alternatively, a restoration project permitted by the Order could provide new recreational opportunities, which would be beneficial.

Impacts attributable to the locations, sizes, and nature of restoration projects could include long-term and permanent changes to recreational resources. However, the specific locations and scale of possible future projects are not currently known. Therefore, the potential significant recreational impacts in the study area cannot be determined at this time. The factors necessary to identify specific impacts include the size and characteristics of a project, the duration of construction, and the type and precise location of the resource or facility itself.

Implementing Mitigation Measure REC-1 would reduce the impact related to impairment, degradation, or elimination of recreational resources to a **less-than-significant level**.

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Impact 3.16-2: Future restoration projects permitted under the Order could alter recreational resources or facilities or require the construction or expansion of recreational facilities that could result in environmental impacts.

The Order includes the following general protection measures to reduce this impact:

- ◆ **GPM-6: Work Area and Speed Limits**
- ◆ **GPM-7: Environmentally Sensitive Areas and/or Wildlife Exclusion**
- ◆ **GPM-10: Equipment Maintenance and Materials Storage**
- ◆ **GPM-11: Material Disposal**
- ◆ **GPM-12: Fugitive Dust Reduction**
- ◆ **GPM-13: Trash Removed Daily**
- ◆ **GPM-14: Project Cleanup after Completion**
- ◆ **GPM-15: Revegetate Disturbed Areas**
- ◆ **WQHM-1: Staging Areas and Stockpiling of Equipment**
- ◆ **WQHM-2: Storm Water Pollution Prevention Plan**
- ◆ **WQHM-4: Hazardous Materials Management and Spill Response Plan**
- ◆ **WQHM-5: In-Water Concrete Use**
- ◆ **WQHM-6: Accidental Discharge of Hazardous Materials**
- ◆ **IWW-1: Appropriate In-Water Materials**
- ◆ **IWW-2: In-Water Vehicle Selection and Work Access**
- ◆ **IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment**
- ◆ **IWW-5: Cofferdam Construction**
- ◆ **IWW-6: Dewater/Diversion Restrictions**
- ◆ **IWW-8: Removal of Diversion and Barriers to Flow**
- ◆ **IWW-13: Dredging Operations and Dredging Materials Reuse Plan**
- ◆ **VHDR-1: Avoidance of Vegetation Disturbance**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**
- ◆ **VHDR-4: Revegetation Erosion Control Materials and Methods**
- ◆ **VHDR-6: General Herbicide Use**

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measures NOISE-1 and REC-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure NOISE-2: Minimize Operations and Maintenance Noise Conflicts

Mitigation Measure REC-1: Minimize Impairment, Degradation, or Elimination of Recreational Resources

Findings (Effects of Project Construction Activities, Constructed Facilities and O&M of those Facilities): Construction activities and constructed facilities for restoration projects permitted under the Order could result in the construction and

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modification of recreational facilities and associated environmental impacts. However, the specific locations and scale of possible future permitted actions are not currently known. Therefore, the locations and characteristics of new or modified recreational facilities in the study area cannot be determined at this time. The factors necessary to identify individual restoration projects impacts include the project's size and characteristics, the duration of construction, and the types and precise locations of construction activities and the facility or resource itself. Restoration projects permitted under the Order could result in changes to recreational resources that could result in impacts on the environment.

Implementation of these general protection measures and Mitigation Measures REC-1 and NOISE-2 would reduce impacts to recreational resources to a **less-than-significant** level.

Impact 3.16-3: Implementing future restoration projects permitted under the Order could increase the use of existing recreational resources and facilities such that substantial physical deterioration would occur or be accelerated.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measures REC-1 and REC-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure REC-1: Minimize Impairment, Degradation, or Elimination of Recreational Resources

Mitigation Measure REC-2: Minimize Impacts on Existing Recreational Resources

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities (natural or artificial infrastructure), and operations and maintenance of those facilities permitted under the Order could temporarily or permanently impede recreational use, causing recreational users to be displaced to other resources or facilities. Many construction-related impacts may be temporary; however, it is reasonable to expect that some impacts may be long-term, and some may be long-term and permanent. Alternatively, scenarios including improved or setback levees, restoring upslope watershed areas, floodplain restoration, and multi-benefit restoration projects could result in new public access or recreation facilities such trails.

In addition, restoration projects such as establishing, restoring, and enhancing tidal, subtidal, and freshwater wetlands could support native marsh plants; provide habitat elements for targeted species; provide other targeted wetland functions; and provide hydrologic variability for fish and other aquatic species. Also, fish passage improvement projects (e.g., dam removal) could improve recreation (e.g., allow for boating or kayaking that was previously impassable).

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The specific locations and scale of possible future permitted restoration projects are not yet known. Therefore, the potential for displacement that would accelerate physical deterioration at existing recreational facilities in the study area cannot be determined at this time. The factors necessary to identify individual restoration projects impacts include the size and characteristics of a project; the duration of construction; and the types and precise locations of construction activities, the facility or resource itself, and alternative recreational opportunities. Adverse changes to recreation resources could result from the construction and operation of restoration projects permitted under the Order.

Implementing Mitigation Measures REC-1 and REC-2 would reduce this impact to a **less-than-significant** level.

Impact Category: Transportation

Impact 3.17-1: Future restoration projects permitted under the Order could conflict with a plan, ordinance, or policy addressing the circulation system including transit, roadways, bicycle, and pedestrian facilities.

To reduce impacts on the circulation system, the Order includes the following general protection measures:

- ◆ GPM-6: Work Area and Speed Limits
- ◆ GPM-10: Equipment Maintenance and Materials Storage
- ◆ WQHM-1: Staging Areas and Stockpiling of Materials and Equipment

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure TRA-1, TRA-2, TRA-3, TRA-4, and TRA-5 would be required when applicable to a given project.

Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure TRA-1: Prepare Construction Traffic Management Plan

Mitigation Measure TRA-2: Prepare Waterway Traffic Control Plan

Mitigation Measure TRA-3: Develop Channel Closure Plan for Affected Facilities

Mitigation Measure TRA-4: Reduce Project Effects on Boat Passage and Transit Facilities

Mitigation Measure TRA-5: Minimize Effects on Trails and Bicycle and Pedestrian Circulation and Identify Alternatives

Findings (Effects of Project Construction Activities): Construction activities for future restoration projects that would be permitted under the Order could result in temporary partial or full road closures. As a result, these projects could conflict with a plan, ordinance, or policy associated with the circulation system, or could affect the use of federal, state, and local highways and bridges and transit, roadways, bicycle, and pedestrian facilities.

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Implementation of the applicable general protection measures and Mitigation Measures TRA-1 through TRA-5 into project designs and plans would reduce the impact related to a conflict with a plan, ordinance, or policy addressing the circulation system to a **less-than-significant** level.

Impact 3.17-3: Implementing future restoration projects permitted under the Order could substantially increase hazards due to a geometric design feature or incompatible uses.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure TRA-7 and TRA-8 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure TRA-7: Conduct Routine Inspections

Mitigation Measure TRA-8: Repair Damaged Roadways and Trails Following Construction

Findings (Effects of Project Construction Activities, Constructed Facilities and O&M of those Facilities): Construction of restoration projects, constructed facilities (natural or artificial infrastructure), and operations and maintenance of those facilities permitted under the Order could affect transportation infrastructure such as roads, bridges, railroads, and navigable waterways. Work to establish, restore, and enhance stream and riparian habitat has the potential to affect infrastructure elements such as boat docks, boat haul-out locations, campgrounds and campsites, day-use sites, roads and trails, and off-highway/off-road vehicle routes. Such work could require substantial temporary alterations to the horizontal and vertical alignments of these facilities. Upslope restoration and enhancement projects could decommission, upgrade, and stormproof priority roads and trails.

In addition, employees could commute along designated access routes. These routes would generally be preexisting public roads near construction sites; however, new off-road haul routes may be constructed between borrow sites, staging areas, and construction sites. These constructed access roads would be temporary and restored to pre-project conditions once construction was completed.

Construction of some projects would affect navigation in waterways and deep water channels, potentially increasing hazards associated with channel design and geometric features. Such projects could expose boaters to additional hazards, such as increased water velocities, or an increased risk of a collision when multiple vessels are present in the construction area. However, the exact designs of the restoration projects permitted under the Order are yet to be determined.

Project operations could affect navigation in waterways and shallow water channels and cause a potential for an increased navigation hazard if debris such as tree snags and other types of floating or submerged debris accumulated (e.g., on bridges, culverts,

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large woody material, engineered logjams). This debris could pose a navigational hazard or damage vessels navigating in the channel.

Restoration projects would be required to adhere to statewide, regional, and local policies, regulations, and ordinances governing traffic and circulation systems. Implementing Mitigation Measures TRA-7 and TRA-8 and the applicable general protection measures would reduce the impact related to a substantial increase in hazards due to a geometric design feature or incompatible use to a **less-than-significant** level.

Impact Category: Wildfire

Impact 3.20-1: Implementing restoration projects permitted under the Order could exacerbate fire risk.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure FIRE-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure FIRE-1: Develop and Implement a Fire Prevention Plan

Findings: Effects of Project Construction Activities, Constructed Facilities and O&M of those Facilities): Construction activities for restoration projects permitted under the Order could be located in areas with a High or Very High Fire Hazard Severity rating. Construction work could occur, or staging areas could be located in or near areas with dense vegetation and/or be susceptible to high winds. For example, heavy construction equipment and passenger vehicles could drive on vegetated areas before clearing and grading, which could increase the fire danger. Construction equipment or heated mufflers could throw sparks, or oils, lubricants, and other combustible materials could accidentally ignite, resulting in a fire. Construction activities such as steel cutting and welding, while uncommon for most restoration project types, are also potential sources of ignition.

O&M of restoration projects permitted under the Order could occur in areas subject to the threat of wildfires. A restoration project may include reestablishment of native vegetation in areas where vegetation had previously been removed. In such cases, fuel loading may increase after the native vegetation has grown in and may result in an increase in fire danger. In addition, vegetation could be present in or near the locations of restoration projects or facilities, and equipment and vehicles used during O&M activities could come into contact with vegetated areas and be exposed to high winds, potentially igniting dry vegetation and causing a fire. As a result, project occupants (O&M workers) could be exposed to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

The specific locations of possible future permitted restoration projects are not known at this time. Therefore, the risk of a wildfire cannot be determined. Factors necessary to identify the risk include the location of the facilities relative to areas rated as High and

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Very High Fire Hazard Severity Zones and the degree of overgrown or dry vegetation in the restoration project area.

Implementing Mitigation Measure FIRE-1 would reduce the impacts of project activities related to fire risk to a **less-than-significant** level.

Impact 3.20-2: Implementing restoration projects permitted under the Order could result in downslope or downstream risks as a result of runoff, post-fire slope instability, or drainage changes.

General protection measures regarding site stabilization and erosion control would be implemented on permitted projects:

- ◆ **WQHM-3: Erosion Control Plans**
- ◆ **WQHM-6: Accidental Discharge of Hazardous Materials**
- ◆ **IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**
- ◆ **VHDR-4: Revegetation Erosion Control Materials and Methods**

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure FIRE-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure FIRE-1: Develop and Implement a Fire Prevention Plan

Findings (Effects of Project Construction Activities, Constructed Facilities and Operations and Maintenance of those Facilities): Construction and O&M activities for restoration projects permitted under the Order would include grading and drainage changes and removal of nonnative vegetation. Construction and O&M work for restoration projects permitted under the Order could result in a reduction of vegetation in the study area. Plant roots stabilize the soil and above-ground plant parts slow the flow of water, allowing it to percolate into the soil. Removing plants during construction activities for restoration projects permitted under the Order could increase runoff.

Restoration projects could also be located in areas with a High or Very High Fire Hazard Severity rating. Removal of surface vegetation by a wildfire reduces the ability of the soil surface to absorb rainwater and can cause an increase in runoff that may include large amounts of debris.

Increased surface runoff and erosion is also possible in a post-fire environment where surface vegetation has been removed and steep slopes can increase the velocity of runoff flows.

However, these restoration projects would not increase the rate or amount of surface runoff in a manner that would increase flooding on- or off-site, thereby resulting in downslope or downstream risk, because general protection measures regarding site

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stabilization and erosion control would be implemented on permitted projects. In addition, these changes would likely have relatively localized effects on site and immediately downstream or downslope of the site. Therefore, floodplain restoration improvements are not expected to increase surface elevations or the chance of flooding in adjacent floodplains.

In addition, many of the restoration projects permitted under the Order would involve revegetating with native plants in areas where nonnative plant communities have been removed, which would restore soil stability and slow the rate of runoff. Further, many restoration project types permitted under the Order would improve the health and resiliency of vegetation communities, including communities in riparian and adjacent upslope areas that evolved with wildfire. The restoration of native vegetation communities that are more healthy and resilient would reduce downslope or downstream risks from runoff, post-fire slope instability, or drainage changes.

Construction and O&M activities for restoration projects permitted under the Order are not expected to increase the rate or amount of surface runoff or changes to drainage in a manner that would result in downslope or downstream risks. However, the exact locations and extent of restoration projects that would be permitted under the Order are not yet determined. Factors necessary to identify the risk include the location of the facilities relative to areas rated as High and Very High Fire Hazard Severity Zones and the degree of overgrown or dry vegetation in the restoration project area. Therefore, it is not possible to conclude that such projects would not result in post-fire slope instability.

The specific locations of possible future permitted restoration projects are not known at this time. Therefore, it is not possible to conclude that such projects would not result in post-fire slope instability. Factors necessary to identify the risk include the location of the facilities relative to areas rated as High and Very High Fire Hazard Severity Zones and the degree of overgrown or dry vegetation in the restoration project area.

Implementation of Mitigation Measure FIRE-1 would reduce the impacts of project O&M activities related to post-fire slope instability to a **less-than-significant** level.

2.4 Significant and Unavoidable Impacts

The following significant and potentially significant environmental impacts are unavoidable and cannot be mitigated in a manner that would lessen the impact to below the level of significance. Notwithstanding disclosure of these impacts, the State Water Board adopts the Order due to overriding considerations as set forth below in Section 4, *Statement of Overriding Considerations*.

Impact Category: Agricultural and Forestry Resources

Impact 3.3-1: Restoration projects permitted under the Order could convert Special Designation Farmland to nonagricultural use or conflict with a Williamson Act contract or zoning for agricultural use.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measures AG-1, AG-2, and GEO-3 would be required when applicable to a given project. Implementation of this mitigation

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measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure AG-1: Minimize and Avoid Loss of Special Designation Farmland.

Mitigation Measure AG-2: Minimize Impacts on Lands Protected by Agricultural Zoning or Williamson Act Contract

Mitigation Measure GEO-6: Implement Measures for Waterway Construction Activities

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Restoration projects permitted under the Order could result in short-term, long-term, or permanent conversion of Special Designation Farmland to nonagricultural uses; conflicts with agricultural zoning; and conflicts with Williamson Act contracts.

For these reasons, even with implementation of Mitigation Measures AG-1, AG-2, and GEO-6, this impact is **significant and unavoidable**.

Impact Category: Air Quality and Greenhouse Gas Emissions

Impact 3.4-1: Implementing future restoration projects permitted under the Order could conflict with an applicable air quality plan.

The following general protection measures may apply to air quality and greenhouse gas emissions:

- ◆ **GPM-8: Work Area and Speed Limits**
- ◆ **GPM-17: Fugitive Dust Reduction**

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure AIR-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure AIR-1: Minimize Conflicts with Applicable Air Quality Plans

Findings (Effects of Project Construction Activities): The specific locations and emissions of possible construction activities are not known at this time. Therefore, the potential for a conflict between a given restoration project permitted under the Order and an applicable air quality plan cannot be determined. Factors necessary to identify specific impacts include the location and size of the project, construction characteristics, attainment status of the local air basin or basins, and the applicable AQMPs of the local air quality district.

For these reasons, even with implementation of Mitigation Measure AIR-1, this impact is **significant and unavoidable**.

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Impact 3.4-2: Emissions from future restoration projects permitted under the Order could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

The following general protection measures may apply to air quality and greenhouse gas emissions:

- ◆ **GPM-8: Work Area and Speed Limits**
- ◆ **GPM-17: Fugitive Dust Reduction**

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure AIR-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure AIR-1: Minimize Conflicts with Applicable Air Quality Plans

Findings (Effects of Project Construction Activities): The specific locations and emissions of possible future facilities are not known at this time. Therefore, the potential for substantial construction-related emissions impacts cannot be determined. Factors necessary to identify site- or resource-specific impacts include the project's location, duration, and construction characteristics, and the thresholds of the local air quality district. Construction activities for restoration projects permitted under the Order could result in a cumulatively considerable net increase of a criteria pollutant for which a project region is in non-attainment status under an applicable federal or state ambient air quality standard.

For these reasons, even with implementation of Mitigation Measure AIR-1, this impact is **significant and unavoidable**.

Impact 3.4-4: Emissions from future restoration projects permitted under the Order could expose sensitive receptors to substantial pollutant concentrations.

The following general protection measures may apply to air quality and greenhouse gas emissions:

- ◆ **GPM-8: Work Area and Speed Limits**
- ◆ **GPM-17: Fugitive Dust Reduction**

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measures AIR-1 and AIR-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure AIR-1: Minimize Conflicts with Applicable Air Quality Plans

Mitigation Measure AIR-2: Minimize Construction Air Pollutant Emissions

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Findings (Effects of Project Construction Activities): Construction activities from restoration projects permitted under the Order could include activities that would generate air pollutant emissions such as fugitive dust, CO, and TACs that could present health risks to sensitive receptors.

The health impacts from exposure to these pollutants depend on the concentrations to which sensitive receptors are exposed, the duration of the exposure, and the toxicity of the pollutant. Although construction-related emissions would last no more than a few years and are transient, some construction activities for restoration projects permitted under the Order could occur over several years and could be close to sensitive receptors.

For these reasons, even with implementation of Mitigation Measures AIR-1 and AIR2, this impact is **significant and unavoidable**.

Impact 3.4-5: Implementing future restoration projects permitted under the Order could result in an increase in GHG emissions that may have a significant impact on the environment.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure AIR-3 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure AIR-3: Minimize GHG Emissions

Findings (Effects of Project Construction Activities): Equipment used for the construction of restoration projects permitted under the Order could increase GHG emissions in the short term. Following project completion, all construction emissions would cease. Despite the intensity and duration of construction activities, and the lack of available mitigation measures to abate GHG emissions from heavy-duty construction equipment and on-road hauling emissions, the incremental contribution to climate change by the project's construction emissions could be short term and minimal. However, construction activities permitted under the Order could increase GHG emissions. The specific locations and GHG emissions of possible future projects are not currently known; therefore, the potential for significant construction-related GHG emissions impacts cannot be identified at this time. Factors necessary to identify specific impacts include the project's location and construction characteristics, and the frequency and duration of emissions.

For these reasons, even with implementation of Mitigation Measure AIR-3, this impact is **significant and unavoidable**.

Impact 3.4-6: Implementing future restoration projects permitted under the Order could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure AIR-1, AIR-2, and AIR-3

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would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure AIR-1: Minimize Conflicts with Applicable Air Quality Plans

Mitigation Measure AIR-2: Minimize Construction Air Pollutant Emissions

Mitigation Measure AIR-3: Minimize GHG Emissions

Findings (Effects of Project Construction Activities): Construction of projects permitted under the Order could conflict with GHG emissions reduction policies, plans, and regulations. However, the specific locations and scale of possible future facilities are not currently known; therefore, the precise conflicts and subsequent impacts cannot be identified at this time. Factors necessary to identify specific impacts include the project's location, design features, and size, and the applicable GHG emissions reduction plans and policies of jurisdictions.

For these reasons, even with implementation of Mitigation Measures AIR-1, AIR-2, and AIR-3, this impact is **significant and unavoidable**.

Impact Category: Biological Resources - Terrestrial

Impact 3.5-1: Implementing restoration projects permitted under the Order could adversely affect habitat for special-status plant species.

The Order contains the following general protection measures that reduce the potential for adverse impacts on special-status plants:

- ◆ **GPM-5: Monitoring**
- ◆ **GPM-7: Environmentally Sensitive Areas**
- ◆ **GPM-8: Prevent Spread of Invasive Exotic Plants**
- ◆ **GPM-12: Fugitive Dust Reduction**
- ◆ **GPM-15: Revegetate Disturbed Areas**
- ◆ **IWW-6: Dewatering/Diversion Restrictions**
- ◆ **WQHM-4: Hazardous Materials Management and Spill Response Plan**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**

Additionally, restoration projects that could adversely affect habitat for special-status wildlife species would implement the following species protection measures, as applicable:

- ◆ **General Species Protection Measures**
 - **SPM-1: Preconstruction Surveys**
 - **SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion**
 - **SPM-3: Species Protection Construction Work Windows**
 - **SPM-4: Species Capture, Handling and Translocation**
 - **SPM-5: Sensitive Species Entrapment Prevention**

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- **SPM-6: Airborne Noise Reduction**
- ◆ Plant Species Protection Measures
 - **PLANT-1: Habitat Assessment and Surveys**
 - **PLANT-2: Avoidance of Vernal Pool and Other Annual and Perennial Species**
 - **PLANT-3: Exclusion Buffer Establishment**
 - **PLANT-4: Work Restrictions in the Exclusion Buffer**
 - **PLANT-5: Biological Monitoring**
 - **PLANT-6: Herbicide Application, Clearing, and Ground Disturbance**
 - **PLANT-7¹: Measures for When Effects Cannot Be Avoided**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction-related impacts of projects permitted under the Order would not be expected to cause a major decline in the population of special-status plant species in most cases; however, in cases where the plant species' distribution is already very limited because of very specific and specialized habitat niches/requirements (e.g., requiring specific soil types such as serpentine and soil temperature range; specific requirements along tidal water and land interface), even small losses could be important and potentially significant.

The construction of restoration projects permitted under the Order could have another indirect impact: They could accidentally introduce invasive plant species, carried as seeds on construction equipment or personnel, or could spread invasive plant species through soil disturbance, which tends to promote the growth of invasive and other nonnative species.

Invasive plant species can outcompete native plant species, reducing habitat complexity and quality for both special-status plant and wildlife species. It can reasonably be expected that one or more invasive plant species could already be established in restoration project areas before any construction work begins. However, construction activities could introduce new invasive plant species to the project areas or expand the footprint of invasive plants already established in the area. The unintentional introduction or spread of invasive plants could reduce or eliminate the diversity and abundance of native plants, including those considered to be special-status plants.

Certain restoration projects are likely to permanently convert an upland-based natural community (e.g., grassland) to a wetland-based natural community (e.g., tidal marsh). Restoration actions that would create more tidal or freshwater marsh habitat would likely expand habitat opportunities for many special-status plant species that rely on such habitat types. The historical extent of wetlands in California has declined by 90 percent or more since the 1800s (California Assembly 1984). As a result, many of the special-species plants that rely on these habitat types would benefit from restoration. Conversely, expanding the footprint of aquatic habitat and wetlands may adversely affect upland special-status plants. These species may not adapt to periods of extended inundation, and they could be lost if inundated as a result of aquatic habitat restoration projects permitted under the Order.

¹ Staff Note: The PEIR listed Plant-7 in error. There is not a Plant-7 protection measure.

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For these reasons, this impact is **significant and unavoidable**.

Impact 3.5-2: Implementing restoration projects permitted under the Order could result in adverse direct effects on special-status wildlife species.

The presence and extent of special-status terrestrial wildlife in the construction area of restoration projects permitted under the Order are yet to be determined at this time. However, the Order contains the following general protection measures to protect special-status terrestrial wildlife:

- ◆ **GPM-2: Construction Work Windows**
- ◆ **GPM-3: Construction Hours**
- ◆ **GPM-4: Environmental Awareness Training**
- ◆ **GPM-5: Environmental Monitoring**
- ◆ **GPM-6: Work Area and Speed Limits**
- ◆ **GPM-7: Environmentally Sensitive Areas**
- ◆ **GPM-8: Work Area and Speed Limits**
- ◆ **GPM-9: Environmentally Sensitive Areas**
- ◆ **GPM-10: Equipment Maintenance and Materials Storage**
- ◆ **GPM-13: Trash Removed Daily**
- ◆ **GPM-14: Equipment Maintenance and Materials Storage**
- ◆ **GPM-15: Revegetated Disturbed Areas**
- ◆ **GPM-18: Trash Removed Daily**
- ◆ **GPM-20: Revegetated Disturbed Areas**
- ◆ **WQHM-1: Staging Areas and Stockpiling of Materials and Equipment**
- ◆ **WQHM-2: Storm Water Pollution Prevention Plan**
- ◆ **WQHM-4: Hazardous Materials Management and Spill Response Plan**
- ◆ **WQHM-5: In-Water Concrete Use**
- ◆ **WQHM-6: Accidental Discharge of Hazardous Materials**
- ◆ **VHDR-1: Avoidance of Vegetation Disturbance**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**
- ◆ **VHDR-4: Revegetation Erosion Control Materials and Methods**
- ◆ **VHDR-5: Revegetation Monitoring and Reporting**

Additionally, restoration projects that could adversely affect habitat for special-status wildlife species would implement the following species protection measures, as applicable:

- ◆ **General Species Protection Measures**
 - **SPM-1: Preconstruction Surveys**
 - **SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion**
 - **SPM-3: Species Protection Construction Work Windows**
 - **SPM-4: Species Capture, Handling and Translocation**
 - **SPM-5: Sensitive Species Entrapment Prevention**
 - **SPM-6: Airborne Noise Reduction**

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- ◆ Amphibian Species Protection Measures
 - **AMP-1: Wildlife Passage Design**
 - **AMP-2: Rain Event Limitations**
 - **AMP-3: Pre-Construction Survey**
 - **AMP-4: Disease Prevention and Decontamination**
 - **AMP-5: Lighting**
 - **AMP-6: Clearing and Grubbing Vegetation**
 - **AMP-7: Pump Screens**
 - **AMP-8: Removal of Non-native Species**
 - **AMP-9: Placement of Suitable Erosion Control Material**
 - **AMP-10: Encounters with Species**
 - **AMP-11: Species Observations and Handling Protocol**
- ◆ Reptile Species Protection Measures
 - **REP-1: Pre-Construction Survey**
 - **REP-2: Environmentally Sensitive Area Fencing**
 - **REP-3: Clearing and Grubbing Vegetation**
 - **REP-4: Prohibited Use of Rodenticides**
 - **REP-5: Species Observations and Encounters**
 - **REP-6: Species Handling and Relocation**
- ◆ Bird Species Protection Measures
 - **BIRD-1: Habitat Assessment**
 - **BIRD-2: Nest Protection Work Window**
 - **BIRD-3: Work Area Limits**
 - **BIRD-4: Site Access Restrictions**
 - **BIRD-5: Monitoring**
- ◆ Mammal Species Protection Measures
 - **MAM-1: Conduct Habitat Assessment**
 - **MAM-2: Exclusion Areas**
 - **MAM-3: Use of Handheld Tools**
 - **MAM-4: Species Trapping and Relocating**
 - **MAM-5: Reporting Requirements**
- ◆ Invertebrate Species Protection Measures
 - **INVERT-1: Implement California Freshwater Shrimp Measures**
 - **INVERT-2: Vernal Pool Branchiopods Measures**
 - **INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol**
 - **INVERT-4: Implement Butterfly Protection Measures**

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Restoration projects permitted under the Order would likely generate elevated levels of noise, vibration, and visual and proximity-related disturbances during construction work and operation of heavy machinery. Construction

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activities would typically increase the presence of humans in the immediate project area, unless the actions would occur in an urbanized area, in which case the local wildlife are likely already acclimated to human activity. Additional analysis would be required during project-level planning, when the specific location and design approach for a given project permitted under the Order would be defined further. The additional analysis would determine whether the project footprint overlaps with designated critical habitat for a federally listed species, and if so, would evaluate the potential of the action to interfere with the functional values provided by the affected critical habitat for that species.

Prior to project implementation, project proponents would be required consult with appropriate federal, state, and/or local agencies. As part of the permitting process, these agencies may require project proponents to develop and implement additional measures to protect sensitive resources under their jurisdiction. Additionally, if the CEQA lead agency for a future restoration project determines that the project's impacts on special-status wildlife species may remain significant even with implementation of these general protection measures, then additional project-specific and species-specific mitigation measures would be required. In such a case, the lead agency would coordinate with CDFW, USFWS, and/or others to design additional project-specific measures to reduce these impacts, if required.

It cannot be determined with certainty that all projects permitted under the Order would be able to implement appropriate avoidance and/or minimization measures to reduce their construction-related impacts on special-status terrestrial wildlife to a less-than-significant level.

Typically, the overwhelming majority (if not all) future projects permitted under the Order should be able to identify and implement feasible and appropriate mitigation measures to reduce construction-associated impacts on special-status terrestrial wildlife to a less-than-significant level. In such a circumstance, the project-level CEQA analysis conducted for individual projects permitted under the Order would arrive at a conclusion of "less than significant" for impacts on special-status terrestrial wildlife.

Over the long-term, large-scale restoration projects permitted by the Order may result in large-scale conversion of habitat currently used by terrestrial wildlife to features designed principally to benefit aquatic species. No specific mitigation measures can be identified at the time of this analysis to address this issue because the precise scope, locations, and descriptions of these restoration projects are yet to be determined (they will be defined in the future by project proponents seeking permitting under the Order).

Thus, for the purposes of this programmatic analysis, impacts on terrestrial wildlife resources would be **significant and unavoidable**, because it cannot be determined with certainty that all projects permitted under the Order would be able to implement appropriate mitigation measures to reduce impacts on special-status terrestrial wildlife to a less-than-significant level.

However, based on a review of prior CEQA analyses for large-scale restoration projects, only in rare circumstances would future projects permitted under the Order be unable to identify and implement feasible, appropriate general protection and/or species protection measures (or adjust the restoration design during project planning to avoid

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habitat for special-status wildlife) that would reduce O&M impacts on special-status terrestrial wildlife to a less-than-significant level.

Impact 3.5-3: Implementing restoration projects permitted under the Order could result in adverse effects on riparian habitat or sensitive natural communities.

The following general protection measures applicable to protection of sensitive natural communities during construction of projects permitted under the Order also apply to maintenance of those same projects:

- ◆ **GPM-5: Environmental Monitoring**
- ◆ **GPM-7: Environmentally Sensitive Areas**
- ◆ **GPM-8: Prevent Spread of Invasive Exotic Plants**
- ◆ **GPM-9: Environmentally Sensitive Areas**
- ◆ **GPM-12: Fugitive Dust Reduction**
- ◆ **GPM-15: Revegetate Disturbed Areas**
- ◆ **GPM-17: Fugitive Dust Reduction**
- ◆ **WQHM-4: Hazardous Materials Management and Spill Response Plan**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**

Additionally, restoration projects that could adversely affect riparian habitat or sensitive natural communities, would implement the following species protection measures, as applicable:

- ◆ General Species Protection Measures
 - **SPM-1: Preconstruction Surveys**
 - **SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion**
- ◆ Invertebrate Species Protection Measures
 - **INVERT-1: Implement California Freshwater Shrimp Measures**
 - **INVERT-2: Vernal Pool Branchiopods Measures**
 - **INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol**

Findings (Effects of Constructed Facilities and O&M of those Facilities): Most long-term impacts on terrestrial biological resources of implementing the restoration projects permitted under the Order should be neutral or beneficial, because the specific purpose of these projects would be to correct existing conditions that contribute to resource degradation. Ongoing long-term maintenance of restoration sites may result in short-term impacts on sensitive natural communities, particularly if the maintenance would involve ground disturbance and vegetation management. However, operation of infrastructure-focused projects (e.g., fish passage improvements, water conservation projects) is not expected to result in ongoing effects on sensitive natural communities. Restoration-related activities permitted under the Order are expected to result in the expansion of many sensitive natural communities, particularly riparian habitat, which would be a focus of many of the targeted project types.

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In the unlikely case that the CEQA lead agency for a restoration project determines that the project's impacts on sensitive natural communities may be significant (e.g., conversion of a terrestrial-based sensitive natural community such as Great Valley oak riparian forest into side-channel riverine habitat) even with previously identified general protection measures, additional project-specific mitigation may be required. Much of the protection of sensitive natural communities would go hand-in-hand with species-specific protection measures developed under FESA and CESA consultation with the federal and state wildlife agencies. Nonetheless, operation of large-scale restoration projects permitted by the Order may convert particular sensitive natural community habitats to other natural community types, even ones considered sensitive by CDFW.

Thus, for the purposes of this programmatic analysis, impacts on sensitive natural communities would be **significant and unavoidable**. It cannot be determined with certainty that all projects permitted under the Order would be able to implement appropriate avoidance, mitigation, and/or minimization measures to reduce impacts on any sensitive natural community to a less-than-significant level.

Based on a review of prior CEQA analyses for large-scale restoration projects, only in rare circumstances would future CEQA analyses for individual projects permitted under the Order conclude that there would be a significant impact on a particular sensitive natural community. (This is principally because most restoration activities would focus on highly altered areas where sensitive natural communities have been already degraded or eliminated.) Most projects would generally increase the extent of certain sensitive natural communities such as riparian forest (e.g., Southern cottonwood willow riparian forest, Great Valley oak riparian forest) and marsh habitat (e.g., montane freshwater marsh).

Impact Category: Biological Resources - Aquatic

Impact 3.6-1: Implementing future restoration projects permitted under the Order could result in substantial adverse effects to special-status fish species directly, or indirectly through habitat modifications.

The following general protection measures would be required when applicable to address this impact to the extent feasible:

- ◆ **FISH-1: Habitat Disturbance Avoidance and Minimization.**
- ◆ **FISH-2: Habitat Assessment and Surveys**
- ◆ **FISH-3: Fish Capture and Relocation**
- ◆ **FISH-4: Reporting**
- ◆ **GPM-2: Construction Work Windows**
- ◆ **GPM-3: Construction Hours**
- ◆ **GPM-4: Environmental Awareness Training**
- ◆ **GPM-5: Environmental Monitoring**
- ◆ **IWW-1: Appropriate In-Water Materials**
- ◆ **IWW-2: In-Water Vehicle Selection and Work Access**
- ◆ **IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment**
- ◆ **IWW-4: In-Water Staging Areas and Use of Barges**

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- ◆ **IWW-5: Cofferdam Construction**
- ◆ **IWW-6: Dewatering/Diversion Restrictions**
- ◆ **IWW-7: Fish and Aquatic Species Exclusion while Installing Diversion Structures**
- ◆ **IWW-8: Removal of Diversion and Barriers to Flow**
- ◆ **IWW-9: In-Water Pile Driving Plan for Sound Exposure**
- ◆ **IWW-10: In-Water Pile Driving Methods**
- ◆ **IWW-11: Sediment Containment during In-Water Pile Driving**
- ◆ **IWW-12: Pile-Driving Monitoring**
- ◆ **IWW-13: Dredging Operations and Dredging Materials Reuse Plan**
- ◆ **SPM-3: Species Protection Construction Work Windows**
- ◆ **WQHM-1: Staging Areas and Stockpiling of Materials and Equipment**
- ◆ **WQHM-2: Storm Water Pollution Prevention Plan**
- ◆ **WQHM-3: Erosion Control Plans**
- ◆ **WQHM-4: Hazardous Materials Management and Spill Response Plan**
- ◆ **WQHM-5: In-Water Concrete Use**
- ◆ **WQHM-6: Accidental Discharge of Hazardous Materials**
- ◆ **VHDR-1: Avoidance of Vegetation Disturbance**
- ◆ **VHDR-2: Native and Invasive Vegetation Removal Materials and Methods**
- ◆ **VHDR-3: Revegetation Materials and Methods**
- ◆ **VHDR-4: Revegetation Erosion Control Materials and Methods**
- ◆ **VHDR-5: Revegetation Monitoring and Reporting**
- ◆ **VHDR-6: Herbicide Use**
- ◆ **VHDR-7: Herbicide Application Planning**
- ◆ **VHDR-8: Herbicide Application Reporting**

Findings (Effects of Project Construction Activities): In-water aquatic habitat may be physically disturbed during construction of restoration projects permitted under the Order, from activities such as dewatering, excavation, fill, and placement of materials. This disturbance could affect the juvenile and adult life stages of special-status fish species by causing direct injury or mortality, or by displacing fish or disrupting their normal behaviors. The size and extent of in-water construction activities would vary by the restoration objective. However, most of these activities would be discrete, affecting only localized areas.

All types of restoration projects requiring ground disturbance in or adjacent to streams or wetlands could increase turbidity and levels of suspended sediment within the project worksites and downstream. The resuspension and deposition of instream sediments would be an indirect impact of operating construction equipment and excavating and placing materials in the river. Short-term increases in turbidity and suspended sediment levels during construction may negatively affect fish populations and other aquatic organisms temporarily by reducing the availability of food, reducing feeding efficiency, and increasing the exposure of fishes to sediment released into the water column.

Several types of restoration projects permitted under the Order could generate noise, motion, and vibration from the use of heavy equipment, including pile driving and/or through the use of explosives for small dam removal.

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Potential construction activities (e.g., removing or adding structures, modifying the morphology and topography of streams and banks) may alter bank and riparian habitat through removal of native and nonnative vegetation, excavation, and grading. Numerous other project types, such as restoring off-channel, floodplain, wetland, or riparian habitat, would create additional riparian vegetation that would enhance fish habitat.

Using herbicides to remove invasive plant species could cause short-term impacts on special-status fish species. These potential indirect impacts include the short-term loss of shading and habitat provided by the invasive plants. To minimize these potential impacts, restoration projects would implement general protection measures that require the use of best practices (e.g., spraying practices) and herbicides and/or surfactants containing labels approving their use within or adjacent to waterways.

Heavy equipment and construction materials would be required for the construction of several types of restoration projects. Equipment refueling, fluid leakage, and maintenance activities in and near stream channels pose some risk of contamination by toxic chemicals and potential take.

In addition, water that comes into contact with wet cement and other construction materials during project construction could adversely affect water quality and may harm special-status fish species. If not properly contained, contaminants (e.g., fuels, lubricants, hydraulic fluids, construction materials) could be introduced into the water system, either directly or through surface runoff. Contaminants may be toxic to fish or cause altered oxygen diffusion rates and acute and chronic toxicity to aquatic organisms, thereby reducing growth and survival.

Dewatering entails placing a temporary barrier, such as a cofferdam, to isolate the work area; rerouting streamflow around the dewatered area; pumping water out of the isolated work area; relocating fish from the work area; and restoring the project site upon project completion. The life stage of fishes most likely to be exposed to the potential impacts of dewatering would be juveniles. However, the number of juvenile fish present at a given project site may be low. Migrating adult fish may be present, but in most cases, their mobility would enable them to avoid construction areas.

Any fish present during installation of a cofferdam could be injured by the in-water construction activity itself or could become trapped behind the cofferdam. Fish trapped behind a cofferdam would experience degraded water quality (e.g., higher temperatures, less dissolved oxygen). They would also become entrained in or impinged on the pumps used for dewatering or would become stranded after dewatering is complete.

Special-status fish species may be present in the study area, and the construction of restoration projects permitted under the Order has the potential to disturb habitat for these species.

Implementing restoration projects permitted under the Order could result in construction-related disturbance and associated impacts on special-status fish species. However, the general protection measures and species protection measures identified above would avoid and/or reduce potential impacts to a **less-than-significant** level.

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The only exception would be for the use of explosives for small dam removal. As described in Chapter 2 and above, in order to be considered a project eligible for the Order, the use of explosives for small dam removal would have to be justified due to site-specific conditions, including equipment access difficulties. Further, the use of explosives must be conducted in dry or dewatered conditions and potential harm to fish from the explosives blast and pressure waves would need to be analyzed. Incorporation of general protection measures and species protection measures identified above would avoid and/or reduce in most cases, however, because the exact details of blasting are yet to be determined for a given project, analysis of this type of activity is not possible at this time. As a result, the use of explosives for small dam removal would be a **significant and unavoidable impact**.

Impact Category: Cultural Resources

Impact 3.7-1: Implementing future restoration projects permitted under the Order could cause a substantial adverse change in the significance of a historical resource pursuant to State CEQA Guidelines Section 15064.5.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure CUL-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure CUL-1: Conduct Inventory and Significance Evaluation of Architectural Resources

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Project construction and constructed facilities and O&M for restoration projects permitted under the Order are the types of activities that have the potential to affect historical (i.e., architectural) resources. However, the exact details, including precise locations, of any such activities have yet to be determined. Therefore, it is not known whether implementing the restoration projects permitted under the Order would affect any architectural resources. Factors necessary to identify specific impacts on historical resources include the project's design, footprint, and type; the precise location of construction activities and facilities; and the type and location of operational activities.

Therefore, even with implementation of Mitigation Measure CUL-1, this impact would be **significant and unavoidable**.

Impact 3.7-2: Implementing future restoration projects permitted under the Order could cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure CUL-2 and CUL-3 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

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Mitigation Measure CUL-2: Conduct Inventory and Significance Evaluation of Archaeological Resources

Mitigation CUL-3: Implement Measures to Protect Archaeological Resources during Project Construction or Operation

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities and constructed facilities and O&M for restoration projects permitted under the Order are the types of activities that have the potential to affect archaeological resources. However, the exact details, including precise locations, of any such activities have yet to be determined. Therefore, it is not known whether implementing restoration projects permitted under the Order would affect any archaeological resources. Factors necessary to identify specific impacts on archaeological resources include the project's design, footprint, and type; the precise location of construction activities and facilities; and the type and location of O&M activities.

Therefore, even with implementation of Mitigation Measures CUL-2 and CUL-3, this impact would be **significant and unavoidable**.

Impact 3.7-3: Implementing future restoration projects permitted under the Order could disturb any human remains, including those interred outside of dedicated cemeteries.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure CUL-2, CUL-3, and CUL-4 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure CUL-2: Conduct Inventory and Significance Evaluation of Archaeological Resources

Mitigation CUL-3: Implement Measures to Protect Archaeological Resources during Project Construction or Operation

Mitigation Measure CUL-4: Implement Measures to Protect Human Remains during Project Construction or Operation

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities and constructed facilities and O&M by project proponents for restoration projects permitted under the Order are the types of activities that have potential to affect human remains. However, the exact details, including precise locations, of any such activities have yet to be determined. Therefore, it is not known whether implementing restoration projects permitted under the Order would affect any human remains, either known or unknown, including those associated with archaeological resources. Factors necessary to identify specific impacts on human remains include the project's design, footprint, and type; the precise location of construction activities and facilities; and the type and location of operational activities.

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For these reasons, even with implementation of Mitigation Measures CUL-2, CUL-3, and CUL-4, this impact is **significant and unavoidable**.

Impact Category: Geology and Soils

Findings: The types of restoration projects permitted under the Order would not include the use of septic tanks or alternative wastewater disposal because the projects would not increase the demand for wastewater disposal from construction or operation crews or occupied structures. Therefore, impacts related to this threshold of significance are not addressed further.

Impact 3.9-5: Implementing future restoration projects permitted under the Order could directly or indirectly result in the loss of a unique paleontological resource or geological resource.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure GEO-9 and GEO-10 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure GEO-9: Conduct a General Project-Level Analysis

Mitigation Measure GEO-10: Conduct Worker Training

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): To determine the effects of construction activities and constructed facilities, paleontological or geological resources would need to be known. Also, restoration projects permitted under the Order could directly or indirectly result in the loss of a unique paleontological resource or geological resource, if projects are located on or near areas where sediment with moderate to high paleontological sensitivity occurs. The potential exists for restoration projects permitted under the Order to result in adverse effects on paleontological or geological resources.

For these reasons, even with implementation of Mitigation Measures GEO-9 and GEO-10, this impact is **significant and unavoidable**.

Impact Category: Hazards and Hazardous Materials

Impact 3.10-3: Future restoration projects permitted under the Order could be implemented within 2 miles of an airport, resulting in a safety hazard.

To reduce the impacts of restoration projects permitted under the Order that would be located within 2 miles of a public or private airport, the Order includes the following general protection measure:

◆ **GPM-4: Construction Hours**

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure HAZ-4 would be required when applicable to a given project. Implementation of this mitigation measure would be

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the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure HAZ-4: Establish Airport Operation Area Buffer Zones

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities (natural or artificial infrastructure), and operations and maintenance of those facilities permitted by the Order could be located within 2 miles of an airport. Because the exact locations of projects that would be permitted by the Order are not yet determined, it is possible that some projects could be constructed within 2 miles of an airport.

The level of significance of a potential impact of a restoration project permitted under the Order would depend, in large part, on its proximity to an airport land use plan or on whether it would be within 2 miles of a public or private airport. The necessary factors to identify airport safety risks include the location of the project relative to an airport. The potential would exist for restoration projects to create safety hazards by placing people at construction sites near airports, and to result in increased collisions between aircraft and wildlife near an airport or airport land use plan.

For these reasons, even with implementation of Mitigation Measure HAZ-4, this impact is **significant and unavoidable**.

Impact Category: Land Use and Planning

Impact 3.12-1: Restoration projects permitted under the Order could conflict with a land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect.

Findings (Effects of Constructed Facilities and O&M of those Facilities): The majority of constructed facilities for restoration projects permitted under the Order would not conflict with a land use plan, policy, or regulation adopted to avoid or mitigate environmental effects. Other restoration projects could result in new long-term or permanent features that could conflict with land use plans, policies, or regulations adopted to avoid or mitigate environmental effects. Restoring and enhancing off-channel/side-channel habitat would involve reconnecting and creating side-channel, alcove, oxbow, pond, off-channel, floodplain, and other habitats, and potentially removing off-channel fill and plugs. Work may include removing or breaching levees, berms, and dikes; excavating channels; constructing wood or rock tailwater control structures; and constructing large wood habitat features. Impacts associated with construction activities and some operation activities have the potential to conflict with land use policies, such as those related to conversion of agricultural land and reduction of noise impacts. Therefore, constructed facilities and operation associated with restoration projects permitted under the Order could result in conflicts with a land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect. In these limited instances, compliance with required permits and approvals would reduce impacts associated with projects to a less than significant level. However, if there is no jurisdiction by the agency and no requirement to obtain a permit, land use policy conflicts could occur. Because there could be potential adverse changes to land use

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and planning due to the construction of restoration projects, this impact would be **significant and unavoidable**.

Impact 3.12-2: Implementing restoration projects permitted under the Order could physically divide an established community.

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Restoration projects permitted under the Order (e.g., new fish screens and floodplain restoration) likely would not physically divide an established community. These projects are generally located on the periphery of a community. They would not result in a permanent division of established communities, isolate industry from communities with services, or disrupt development patterns that would adversely affect the accessibility of the area.

Some facilities outside of communities could isolate developed areas from urban services. For example, removing roads for construction of a new setback levee might isolate agricultural areas from facilities and communities that provide services and markets to farmers. Also, periodic inundation of roadways from flood widening projects could preclude or inhibit access between communities and services.

Because the extent and location of restoration projects permitted under the Order are yet to be determined, it is not possible to conclude that the restoration projects would not physically divide an established community. Therefore, this impact would be **significant and unavoidable**.

Impact Category: Noise

Impact 3.14-1: Implementing future restoration projects permitted under the Order could result in a temporary or permanent increase in ambient noise levels in excess of standards established in applicable plans and ordinances.

The following general protection measures may apply to noise impacts:

- ◆ **GPM-2: Construction Work Windows**
- ◆ **GPM-3: Construction Hours**
- ◆ **GPM-6: Work Area and Speed Limits**
- ◆ **IWW-9: In-Water Pile Driving Plan for Sound Exposure**

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure NOISE-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure NOISE-1: Minimize Noise Conflicts

Findings (Effects of Project Construction Activities): Construction activities for future restoration projects permitted under the Order could require the use of haul trucks and heavy equipment. Depending on the types and models of equipment used for construction, typical noise levels for these kinds of construction equipment would range from 80 to 95 dBA maximum noise level at 50 feet (FTA 2018). Most construction

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activities would occur during daylight hours; however, in rare cases, some activities, expedited projects, and projects where the construction schedule is nearing the prohibited work time frames (e.g., for biological species) may require continuous daytime and nighttime work. Also, several cities and counties have exempted construction activities from restrictive noise limits during specified daytime hours, while others have placed numeric limits on noise generated during construction.

Most restoration projects would likely occur far from residential areas and other sensitive receptors and would take place during the day. However, some construction-related activities may occur close to receptors and/or at night (e.g., if construction must be completed before a blackout period for a sensitive species).

However, the specific locations of restoration projects that would be permitted under the Order are yet to be determined. Therefore, even with implementation of general protection measures, some construction activities could result in temporary or permanent increases in ambient noise levels. Actual exposure levels would depend on multiple variables such as the intensity of construction activity, the distance of sensitive receptors to the noise source, and any structures or topography that might intervene and affect noise attenuation.

For these reasons, even with implementation of Mitigation Measure NOISE-1, this impact is **significant and unavoidable**.

Impact 3.14-2: Implementing future restoration projects permitted under the Order could expose sensitive receptors to excessive groundborne vibration.

The following general protection measures may apply to noise impacts:

◆ **IWW-9: In-Water Pile Driving Plan for Sound Exposure**

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure NOISE-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure NOISE-1: Minimize Noise Conflicts

Findings (Effects of Project Construction Activities): Construction activities for restoration projects permitted under the Order could require the use of heavy equipment such as pile drivers, bulldozers, haul trucks, and jackhammers, and explosives. These types of equipment or processes could generate groundborne vibration at levels ranging from 0.035 to 1.518 inches per second PPV at 25 feet and 79–112 VdB at 25 feet (FTA 2018) and could expose sensitive receptors to elevated vibration levels.

Vibration levels typically tend to dissipate rapidly as distance increases from the vibration source. For example, stockpiling of materials may require constructing piers for barge landings, and pier construction may use pile drivers that could generate 1.518 inches per second PPV and 112 VdB at 25 feet. Applying FTA's recommended procedure for determining vibration levels at various distances from the source, the predicted most-

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conservative ground vibration levels would exceed the threshold of 80 VdB for human disturbance for pile driving at distances within 290 feet. With regard to structural damage, the threshold of 0.2 inch per second PPV would be exceeded for pile driving at distances within 96 feet.

Because the exact locations of restoration projects permitted under the Order are yet to be determined at this time, it is possible that construction activities could take place near sensitive receptors which could be exposed to excessive ground borne vibration. The factors necessary to determine individual restoration projects impacts include the type and exact location of construction activities, construction schedule, type of equipment used, and applicable local noise standards. Therefore, even with implementation of Mitigation Measure NOISE-1, this impact may, in some cases, be **significant and unavoidable**.

Impact 3.14-3: Implementing future restoration projects permitted under the Order could expose sensitive receptors to excessive groundborne noise levels.

The following general protection measures may apply to noise impacts:

- ◆ **GPM-2: Construction Work Windows**
- ◆ **GPM-3: Construction Hours**
- ◆ **GPM-6: Work Area and Speed Limits**
- ◆ **IWW-9: In-Water Pile Driving Plan for Sound Exposure**

The following mitigation measures within the authority of the Board to impose have been adopted to address this impact to the extent feasible:

Mitigation Measure NOISE-1: Minimize Noise Conflicts

Findings (Effects of Project Construction Activities): Construction activities for future restoration projects permitted under the Order could expose sensitive receptors to excessive groundborne noise levels (i.e., pile drivers, bulldozers, haul trucks, jackhammers and explosives [e.g., small dam removal]). As shown in Table 3.14-2, groundborne noise levels ranging from 25 to 40 dBA are the approximate threshold of perception for many humans ranging from inaudible to excessive for quiet sleeping areas; 35–50 dBA is the approximate dividing line between barely perceptible and distinctly perceptible, ranging from tolerable for sleeping areas to excessive in most quiet occupied areas; and 45–60 dBA ranges from excessive for sleeping areas to excessive even for infrequent events for some activities (FTA 2018). A noise level increase of 10 dBA or more is considered substantial. Construction activities would take place mostly during the day when construction-related noise increases would be smaller; however, it is possible that these increases could be substantial. Furthermore, a project may require some nighttime work to complete work before prohibited work time frames (e.g., for biological species).

Because the specific locations and scale of applicable projects are not known at this time, the potential for permitted actions to result in exposure of sensitive receptors to excessive groundborne noise levels cannot be determined. Factors necessary to determine individual restoration projects impacts include the type and precise locations

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of project activities, construction schedule, types of equipment used, and local ambient and groundborne noise levels. Construction activities that would be permitted under the Order could increase groundborne noise levels by more than 10 dBA.

Therefore, even with implementation of Mitigation Measure NOISE-1, this impact would be **significant and unavoidable**.

Impact Category: Transportation

Impact 3.17-2: Future restoration projects permitted under the Order could conflict with or be inconsistent with State CEQA Guidelines Section 15064.3(b).

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure TRA-6 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure TRA-6: Reduce Emissions

Findings (Effects of Project Construction Activities): Construction activities for future restoration projects that would be permitted under the Order could exceed the threshold of significance and conflict with State CEQA Guidelines Section 15064.3(b). Equipment, materials, and workers would have to be transported to project construction sites. Larger projects located near water may use large barges to transport construction equipment and materials via waterways. However, the level of significance of impacts for automobile travel would depend on the locations and types of restoration projects permitted under the Order.

Each project would require its own analysis in terms of VMT and would be required to adhere to State CEQA Guidelines Section 15064.3(b). However, the specific projects that would be carried out under the Order are yet to be determined. Therefore, the potential exists for a restoration project to exceed the threshold of significance set for transportation impacts by the CEQA lead agency or conflict or be inconsistent with State CEQA Guidelines Section 15064.3(b).

Therefore, even with implementation of Mitigation Measure TRA-6, this impact would be **significant and unavoidable**.

Impact Category: Tribal and Cultural Resources

Impact 3.18-1: Implementing future restoration projects permitted under the Order could cause a substantial adverse change in the significance of a tribal cultural resource, as defined in PRC Section 21074.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure TCR-1, TCR-2, and CUL-4 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

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Mitigation Measure TCR-1: Conduct Inventory and Significance Evaluation of Tribal Cultural Resources with Tribes that are Culturally and Geographically Affiliated with the Project Vicinity

Mitigation Measure TCR-2: Implement Measures to Protect Tribal Cultural Resources during Project Construction or Operation. These measures include, but are not limited to, those outlined in PRC Section 21084.3.

Mitigation Measure CUL-4: Implement Measures to Protect Human Remains during Project Construction or Operation

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities and constructed facilities and operations and maintenance for restoration projects permitted under the Order are the types of activities that have potential to affect tribal cultural resources. Because the exact details, including locations, of any such activities have yet to be determined, it is not known whether implementing restoration projects permitted under the Order would affect any tribal cultural resources. Factors necessary to identify specific impacts on tribal cultural resources include the design and footprint of a project, type, and precise location and timing (i.e., seasonal access for cultural ceremonies or resources) of construction activities and facilities, and type and location of operations activities.

Therefore, even with Mitigation Measures CUL-2, CUL-3, and CUL-4, this impact would be **significant and unavoidable**.

For these reasons, this impact is significant and unavoidable.

Impact Category: Utilities and Public Services

Impact 3.19-1: Implementing future restoration projects permitted under the Order could require or result in the construction or relocation of new water or expanded water, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Findings (Effects of Project Construction Activities): Implementing future restoration projects permitted under the Order are not anticipated to require the relocation of new water or expanded water facilities due to the extensive cost of relocation and potential environmental impacts from the relocation. However, future restoration projects could require the relocation of stormwater outfalls or utilities (e.g., electric power, natural gas, or telecommunication facilities) that would cause significant environmental effects.

The types and range of potential environmental effects to other resource areas (e.g., effects to cultural or tribal cultural resources, special status species and habitat, erosion, water quality, air quality) due to the relocation of stormwater outfalls or other facilities resulting from construction activities are analyzed in the other resource sections of the PEIR. The Order includes general protection measures, species protection measures, and mitigation measures to avoid and minimize impacts on

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environmental resources in the study area resulting from the implementation of future restoration projects.

Since there are significant and unavoidable impacts for some of these resource areas, this impact would be **significant and unavoidable**.

Section 3. Alternatives

The State Water Board considered alternatives to the Order presented and analyzed in the Consolidated Final EIR and presented during the comment period and public hearing process. Some of these alternatives have the potential to avoid or reduce certain significant or potentially significant environmental impacts, as set forth below. The State Water Board finds that these alternatives are infeasible. Based on the impacts identified in the Consolidated Final PEIR and other reasons summarized below, and as supported by substantial evidence in the record, the State Water Board finds that approval and implementation of the Order as presented is the most desirable, feasible, and appropriate action and hereby rejects the other alternatives and other combinations and/or variations of alternatives as infeasible based on consideration of the relevant factors set forth in CEQA Guidelines Section 15126.6, subdivision (f) (also CEQA Guidelines, Section 15091, subdivision (a)(3)). Each alternative and the facts supporting the finding of infeasibility are set forth below.

3.1 Alternative Considered but Rejected

The alternative that was considered but rejected is “Flexibility in regulations regarding restoration projects (e.g., higher NTU thresholds).”

The State Water Board is governed by CWA and California Water Code requirements related to the Order. Regulations in Title 23, Division 3, Chapter 15, Article 5 of the California Code of Regulations contain the interpretation of the state’s Antidegradation Policy that has been promulgated in regulations.

The State Water Board enacted the Statement of Policy with Respect to Maintaining High Quality of Waters in California, also referred to as the California Antidegradation Policy. This policy is used to ensure that high-quality water is maintained, and it limits the discharge of pollutants into high-quality water in the state (Resolution Number 68-16).

An alternative that requires the State Water Board to change threshold standards (such as NTUs) are outside the scope of the Order. Therefore, this alternative was rejected from further consideration.

3.2 Summary of Alternatives Considered

Three alternatives were identified for further evaluation in the PEIR: The No Project Alternative and two potentially feasible alternatives to the Order resulting from the alternatives development and screening process described above:

- ◆ No Project Alternative
- ◆ Alternative 1—Specify more narrowly the types of restoration projects included in the Order (e.g., the project must exceed a certain limited percent of footprint)

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- ◆ Alternative 2—Eliminate certain aspects of restoration categories (e.g., eliminating bank stabilization)

No Project Alternative

The No Project Alternative consists of existing conditions at the time the NOP is published, and what would be reasonably expected to occur in the foreseeable future without adoption of the Order, based on current plans and consistent with available infrastructure. Restoration projects initiated by project proponents are assumed to continue to be implemented, and projects would remain subject to the requirement to apply for a CWA Section 401 water quality certification and/or waste discharge requirements for each restoration project. Proponents of restoration projects would continue to obtain individual CWA Section 401 water quality certifications and/or waste discharge requirements from the State Water Board and/or Regional Boards.

Relationship to Project Objectives

The No Project Alternative would not achieve the objective to help streamline the regulatory process for restoration projects statewide by interpreting state standards in a uniform manner to ensure that the projects are consistent with federal and state water quality laws. As stated above, when proponents of restoration projects apply for a Section 401 water quality certification or waste discharge requirements, they would be reviewed and evaluated without the benefit of a systematic and consistent Order process, which could result in the loss of efficiencies and a longer time frame for permit approval by the State Water Board and/or Regional Boards. In summary, the No Project Alternative does not meet the project objectives of the Order.

Facts in Support of Finding of Infeasibility

As stated above, the No Project Alternative does not meet the objectives of the Order. In addition, recognizing that each restoration project would receive its case-by-case review by the State Water Board and/or Regional Board without the opportunity for up-front and consistent identification, selection, and application of species protection measures, general protection measures, design criteria, and/or mitigation from a program EIR, the permit applications and CEQA documentation would not benefit from the eligibility requirements or time savings associated with this program and may be repetitive from one project to the next and/or vary in mitigation approaches.

Alternative 1—Specify More Narrowly the Types of Restoration Projects Included in the Order

This alternative would allow for larger restoration projects than specified in the Order for Small Habitat Restoration Projects but would be more limited than the Order. Furthermore, this alternative would define the level of restoration necessary for projects to qualify for coverage and would indicate how that level can or should be measured. This alternative differs from the Order in that restoration projects implemented by project proponents that do not meet the size constraints or certain criteria required by this alternative would not be covered under this alternative.

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Relationship to Project Objectives

Because Alternative 1 would limit the restoration projects covered under the Order to specific size constraints or certain criteria, this alternative would not fully achieve streamlining of the regulatory process for restoration projects statewide.

Facts in Support of Finding of Infeasibility

As stated above, Alternative 1 partially achieves the project objectives, but this alternative would not fully achieve streamlining of the regulatory process for restoration projects statewide.

Also, depending on the specific circumstances, project size limits may be arbitrary, and imposing such limits may not reduce temporary adverse impacts, especially if appropriate protection measures are implemented. Also, if projects must meet certain criteria (e.g., the percentage of hardscape, such as concrete or unvegetated riprap, must not exceed a certain limited percentage of the total footprint), some project types—such as fish passage and road crossing improvements—may not be eligible because certain projects require a higher percentage of hardscape. More resources would also be spent on planning and permitting and less on project implementation.

Alternative 2—Eliminate Certain Aspects of Restoration Categories

This alternative would remove certain elements from the categories of restoration projects, such as the following:

- ◆ Bank stabilization projects that may depend on riprap, currently covered under the Stream and Riparian Habitat Establishment, Restoration, and Enhancement category.
- ◆ Removal, replacement, modification, retrofit, installation, or resetting of culverts, fords, bridges, and other stream crossings and water control structures of any size, currently covered under the Improvements to Stream Crossings and Fish Passage category
- ◆ Removal of small dams, currently covered under the Removal of Small Dams, Tide Gates, Flood Gates, and Legacy Structures category.

This alternative differs from the Order in that it would reduce the types or varieties of restoration projects that would be implemented under the Order.

Relationship to Project Objectives

Because Alternative 2 would remove certain elements from the categories of restoration project covered under the Order, this alternative would not fully achieve streamlining of the regulatory process for restoration projects statewide.

Facts in Support of Finding of Infeasibility

As stated above, Alternative 2 partially achieves the project objectives, but would not fully achieve streamlining of the regulatory process for restoration projects statewide.

Similar to Alternative 1, depending on the specific circumstances, restricting certain project types under Alternative 2 may not result in reduced temporary adverse impacts,

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especially if the projects are planned and designed appropriately with implementation of protection measures. The Order was developed to address these issues and concerns. Specifically, all projects permitted under the Order must incorporate *applicable* general protection measures into their designs to ensure that the projects avoid and minimize impacts to sensitive resources. In addition, the Order requires a pre-application consultation meeting with the approving Water Board, unless the consultation is waived by contacting the approving Water Board.

All project types included in the Order are essential for ecological and environmental improvements. Removing projects from eligibility under the Order would cause such projects to be delayed, slowing down their implementation and associated contributions to species recovery and water quality improvement.

Alternative 3—Exclude Entire Categories of Restoration Projects

The alternative would exclude entire categories of restoration projects that would be covered under the Order. For example, under this alternative, all restoration projects associated with the Water Conservation and Floodplain Restoration categories under the Order would not be implemented. This alternative differs from the Order in that it would reduce types of restoration projects that would be authorized under the Order.

Relationship to Project Objectives

Because Alternative 3 would exclude entire categories of restoration project covered under the Order, this alternative would not fully achieve streamlining of the regulatory process for restoration projects statewide.

Facts in Support of Finding of Infeasibility

As stated above, Alternative 3 would not achieve all the project objectives. This alternative does not include all categories of restoration projects in the Order; entire categories of restoration projects would be removed.

Similar to Alternatives 1 and 2, depending on specific project circumstances, restricting certain project types under Alternative 3 may not result in reduced temporary adverse impacts, especially if the projects are planned and designed appropriately with implementation of protection measures. The Order was developed to address these issues and concerns; specifically, all projects permitted under the Order must incorporate *applicable* general protection measures into their designs so that the projects avoid and minimize impacts to sensitive resources. In addition, the Order requires a pre-application consultation meeting with the approving Water Board, unless the consultation is waived by contacting the approving Water Board.

All project types included in the Order are essential for ecological and environmental improvements. Removing projects from eligibility under the Order would cause such projects to be delayed, slowing down their implementation and associated contributions to species recovery and water quality improvement. More resources would also be spent on planning and permitting, and less for project implementation.

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Environmentally Superior Alternative

As stated in the Consolidated Final PEIR, Alternatives 1, 2, and 3 would result in similar impacts compared to the Order, but potentially at a lesser magnitude. Alternative 3 excludes entire categories of restoration projects, which, depending on the excluded restoration category, could result in less construction activity than under the other alternatives. Therefore, Alternative 3 would be the environmentally superior alternative.

However, as described above, Alternative 3 would not fully achieve most of the objectives. All project types included in the Order are essential for ecological and environmental improvements and removing them from Order eligibility would cause delays in environmentally beneficial restoration projects, thus slowing down project implementation and associated contributions to species recovery and water quality improvement.

Implementation of appropriate general protection measures, species protection measures, and mitigation measures would minimize the potential for significant impacts of Alternative 3. However, as with the Order, the exact location and extent of projects that would be permitted under Alternative 3 are not known at this time. Therefore, construction-related impacts would still be considered significant and unavoidable.

Section 4. Statement of Overriding Considerations

The State Water Board hereby declares that pursuant to State CEQA Guidelines Section 15093, it has balanced the benefits of the Order against any unavoidable environmental impacts in determining to adopt the Order. Pursuant to the State CEQA Guidelines, if the benefits of the Order outweigh the unavoidable adverse environmental impacts, those impacts may be considered acceptable.

Having reduced the adverse significant environmental impacts of the Order to the extent feasible by adopting the mitigation measures contained in the Consolidated Final EIR, the MMRP, and this appendix; having considered the entire administrative record on the Order; and having weighed the benefits of the Order against its unavoidable adverse impact after mitigation, the State Water Board has determined that each of the following social, economic, and environmental benefits of the Order separately and individually outweighs the potential unavoidable adverse impacts and renders those potential adverse impacts acceptable, based upon the following overriding considerations.

The considerations taken into account by the State Water Board in making this decision are identified below.

4.1 Policy Considerations

Efforts to enhance and restore habitats and ecological functions and processes throughout the state are ongoing. A wide variety of California laws, mandates, plans, mitigation requirements, and initiatives—many of which are the result of decades-long collaboration and reports based on scientific research—call for the restoration of aquatic, riparian, and floodplain habitats.

In 2019, the California Natural Resources Agency, in collaboration with the California Environmental Protection Agency (including the State Water Board), and California

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Department of Food and Agriculture launched the Cutting Green Tape initiative, which focuses on improving processes and policies and increasing regulatory efficiency. In addition, in 2020, Governor Gavin Newsom issued the Nature-Based Solutions Executive Order (N-82-20) that set the goal of conserving 30 percent of California’s lands and coastal waters by 2030 (Office of Governor Gavin Newsom 2020). The State Water Board’s purpose for the Order—to improve the efficiency of regulatory review for projects that restore aquatic and riparian habitats and improve water quality (Consolidated Final PEIR Section 2.2.1)—contributes to and is consistent with the statewide initiatives.

4.2 Economic Considerations

Restoration projects that fall outside the scope of the General Order for Small Habitat Restoration Projects (Order #SB12006GN) must obtain an individual water quality certification and/or waste discharge requirements from the State Water Board and/or the appropriate Regional Board. This process can require greater time and expense and provides less regulatory certainty for restoration project proponents than would be expected to request authorization under a General Order. As stated in Consolidated Final PEIR Section 2.2.2, the objective of the Order is to help expedite statewide implementation of restoration projects to improve the environment and make the regulatory process efficient by interpreting state standards in a uniform manner to ensure that applicable projects are consistent with federal and state water quality laws.

The permit process can result in higher costs for both the regulatory agency and the project proponent without the establishment of a streamlined approach (Hanak et al. 2013). Actions to simplify the process and lower the cost of permitting could leave more dollars available for the actual restoration work (Public Policy Institute of California 2021).

To ensure that funding is used efficiently, and restoration projects are implemented in a timely manner, agencies have already developed programmatic processes, such as those existing programmatic permits and authorizations for restoration projects listed in Appendix C of the Consolidated Final PEIR. The restoration projects permitted under the Order contribute to and are consistent with these programmatic processes, which generally require less time and financial cost. The Order also clarifies regulatory expectations and serves as a helpful, timesaving planning tool, by including environmental protection measures and design guidelines for project proponent reference during the design phase of a project.

4.3 Social Considerations

California is home to an unparalleled range of landscapes, many of them unique to this state. Traveling south to north or east to west in California, one passes through an immense spectrum of natural beauty and biological diversity, which adds immeasurably to the quality of life of 37 million Californians by providing clean air and water, wildlife habitat, recreation, and view sheds, and a host of other tangible and intangible benefits. The people of California, recognizing both the value of the state’s ecological wealth and the threats it faces from population growth and accompanying pressures, have enacted a range of environmental laws, and funded environmental protection through voter-approved bond acts. Environmental quality in the state has improved, but much remains

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to be done. Public health, recreation, economic development, and overall quality of life are not only compatible with but dependent upon the continued vigorous pursuit of California's environmental goals (Sustainable Conservation 2011).

Programmatic permits and authorizations for restoration projects, such as the Order, are one of the most effective approaches for enabling the faster approval of environmentally beneficial projects while ensuring that essential environmental protections are in place and funding is spent effectively on project implementation. Healthy, revitalized rivers and other waterways improve water quality and supply so that people, farms, and wildlife have the water they need to thrive. As Californians face ever more extreme climate changes and environmental challenges, each effort to restore and revitalize aquatic habitat adds up to a meaningful win for the entire state (Sustainable Conservation 2022).

The restoration projects permitted under the Order contribute to and are consistent with meeting California's environmental goals and providing environmental benefits to the residents of California.

Appendix J

Mitigation Monitoring and Reporting Program

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Introduction¹

Public Resources Code Section §21081.6(a)(1)) and the California Environmental Quality Act (CEQA) Guidelines Section 15097 require public or lead agencies to establish monitoring or reporting programs for projects approved by a public agency whenever approval involves the adoption of either a mitigated negative declaration or specified environmental findings related to environmental impact reports.

A public or lead agency adopting measures to mitigate or avoid the significant impacts of a proposed project is required to ensure that the measures are fully enforceable, through permit conditions, agreements, or other means (Public Resources Code Section 21081.6(b)). The mitigation measures required by a public or lead agency to reduce or avoid significant project impacts may be incorporated into the design or program for the project, or made conditions of project approval as set forth in a Mitigation Monitoring and Reporting Program (MMRP). The program must be designed to ensure project compliance with mitigation measures during project implementation.

The following is the MMRP for the State Water Resources Control Board (State Water Board) Order for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Restoration Projects Statewide (Order). The MMRP includes the mitigation measures identified in the Consolidated Final Program Environmental Impact Report (PEIR) that are required to address the significant impacts associated with the Order.

Restoration projects authorized under the Order must comply with applicable general protection measures, species protection measures, and mitigation measures listed in the impact section for each resource area. The State Water Board or Regional Water Quality Control Board's (Regional Board) will include applicable measures as conditions of the Notice of Applicability (NOA) issued for an individual project under the Order. The applicability of the general protection measures, species protection measures, and mitigation measures would depend on the restoration activities, project location, and the potentially significant impacts of the individual restoration project.

The required mitigation measures are summarized in Table 1-1; the full text of the impact analysis and mitigation measures are presented in Chapter 3 of the Consolidated Final PEIR.

Format of the MMRP

The MMRP is organized in a table format (Table 1-1) by resource. The column headings in the table are defined as follows:

- ◆ **Resource:** This column identifies the impacted resource.
- ◆ **Mitigation Measures:** This column identifies the mitigation measures associated with the impacts identified in the PEIR.

¹ This Appendix is entirely new and was not included in the Draft EIR. However, double underline is not used to denote the entire appendix for ease of reading.

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- ◆ **Monitoring Responsibility:** This column provides a reporting area for assignment of responsibility of each monitoring and reporting task (for future individual restoration projects).
- ◆ **Monitoring Compliance Record (Name/Day):** This column provides a reporting area for identifying who completed the mitigation measure and/or monitoring compliance and the date of completion (for future individual restoration projects).

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**Table 1-1
 Summary of Mitigation Measures (PEIR Chapter 3)**

Resource(s)	Mitigation Measures	Monitoring Responsibility	Monitoring Compliance Record (Name / Date)
Aesthetics	<p>Mitigation Measure AES-1: Minimize Degradation of Visual Quality</p> <ul style="list-style-type: none"> ◆ Use compatible colors for proposed structural features, such as fish screens and storage tanks. Use earth tone paints and stains with low levels of reflectivity. ◆ Minimize the vertical profile of proposed structures as much as possible. ◆ Use vegetation plantings on proposed facility walls, such as climbing plants, espaliers, and other forms that soften the appearance of structures. ◆ Provide vegetative screening to soften views of structures. Landscaping should complement the surrounding landscape. 		
	<p>Mitigation Measure AES-2: Avoid Effects of Project Lighting</p> <p>Proposed lighting facilities shall use shields, and lighting shall be directed downward and inward toward the facilities.</p>		
Agriculture and Forestry	<p>Mitigation Measure AG-1: Minimize and Avoid Loss of Special Designation Farmland</p> <p>The following measures shall be implemented before and during construction of restoration projects permitted under the Order to minimize and avoid loss of Special Designation Farmland, as applicable.</p> <ul style="list-style-type: none"> ◆ Restoration projects shall be designed to minimize, to the greatest extent feasible, the loss of agricultural land with the highest values. ◆ Restoration projects that will result in permanent conversion of Special Designated Farmland shall preserve other Special Designation Farmland in perpetuity by acquiring an agricultural conservation easement, or by contributing funds to a land trust or other entity qualified to preserve Special Designation Farmland in perpetuity (at a target ratio of 1:1, depending on the nature of the conversion and the characteristics of the Special Designated Farmland to be 		

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Agriculture and Forestry (cont.)	<p>converted, to compensate for the permanent loss). Based upon the cost and availability of farmland, whether the landowner is sponsoring the project, and other factors, the CEQA lead agency for the individual restoration project should consider whether a 1:1 ratio is appropriate and feasible on a case-by-case basis. For example, contributions to a program such as the California Farmland Conservancy Program, which establishes conservation easements to preserve existing farmland in California, may be prohibitively expensive at a 1:1 ratio where there is a significant amount of affected Special Designated Farmland because it is based on a farm real estate average value per acre. For example, the farm real estate average value per acre in 2019 was \$10,000 [USDA 2019].</p> <ul style="list-style-type: none"> ◆ Restoration project features shall be designed to minimize fragmentation or isolation of Special Designation Farmland. Where a project involves acquiring land or easements, the remaining nonproject area shall be of a size sufficient to allow viable farming operations. The project proponents shall be responsible for acquiring easements, making lot line adjustments, and merging affected land parcels into units suitable for continued commercial agricultural management. ◆ Any utility or infrastructure serving agricultural uses shall be reconnected if it is disturbed by project construction. If a project temporarily or permanently cuts off roadway access or removes utility lines, irrigation features, or other infrastructure, the project proponents shall be responsible for restoring access as necessary to ensure that economically viable farming operations are not interrupted. ◆ Where applicable to a project site, buffer areas shall be established between restoration projects and adjacent agricultural land. The buffers shall be sufficient to protect and maintain land capability and flexibility in agricultural operations. Buffers shall be designed to protect the feasibility of ongoing agricultural 		

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Agriculture and Forestry (cont.)	<p>operations and reduce the effects of construction-related or operational activities (including the potential to introduce special-status species in the agricultural areas) on adjacent or nearby properties. Buffers shall also serve to protect restoration areas from noise, dust, and the application of agricultural chemicals. The width of each buffer shall be determined on a project-by-project basis to account for variations in prevailing winds, crop types, agricultural practices, ecological restoration, or infrastructure. Buffers can function as drainage swales, trails, roads, linear parkways, or other uses compatible with ongoing agricultural operations.</p> <p>Mitigation Measure AG-2: Minimize Impacts on Lands Protected by Agricultural Zoning or Williamson Act Contract Restoration projects shall be designed to minimize, to the greatest extent feasible, conflicts and inconsistencies with land protected by agricultural zoning or a Williamson Act contract and the terms of the applicable zoning/contract.</p> <p>Mitigation Measure GEO-6: Implement Measures for Waterway Construction Activities See Section 3.9.4, Impacts and Mitigation Measures, in Section 3.9, Geology and Soils.</p>		
Air Quality	<p>Mitigation Measure AIR-1: Minimize Conflicts with Applicable Air Quality Plans Proponents of restoration projects permitted under the Order and their construction contractors shall implement the following measures to minimize conflicts between project construction and applicable air quality plans:</p> <ul style="list-style-type: none"> ◆ Use equipment and vehicles that comply with CARB requirements and emission standards for on-road and off-road fleets and engines. New engines and retrofit control systems should reduce NOX and PM emissions from diesel-fueled on-road and off-road vehicles and equipment. 		

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Air Quality (cont.)	<ul style="list-style-type: none"> ◆ Minimize idling times, either by shutting equipment off when not in use or by reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure, Title 13, Section 2485 of the California Code of Regulations). Clear signage should be posted for construction workers at all entrances to the site. ◆ Maintain all equipment in proper working condition according to the manufacturer's specifications. ◆ Use electric equipment when possible. Use lower emitting alternative fuels to power vehicles and equipment where feasible. ◆ Use low-volatile organic compound (VOC) coatings and chemicals; minimize chemical use. 		
	<p>Mitigation Measure AIR-2: Minimize Construction Air Pollutant Emissions</p> <p>Air quality analyses prepared for future restoration projects shall evaluate human health risks from potential exposures of sensitive receptors to substantial pollutant concentrations from the projects. The need for a human health risk analysis should be evaluated using approved screening tools, and discussed with the local air quality management district or air pollution control district during the preparation of the air quality analysis.</p> <p>If the project's health risk is determined to be significant, control measures should be implemented to reduce health risks to levels below the applicable air district threshold.</p> <p>Implementation of one or more of the following requirements, where feasible and appropriate, would reduce the effects of construction:</p> <ul style="list-style-type: none"> ◆ Use equipment with diesel engines designed or retrofitted to minimize DPM emissions, usually through the use of catalytic particulate filters in the exhaust. 		

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Air Quality (cont.)	<ul style="list-style-type: none"> ◆ Use electric equipment to eliminate local combustion emissions. ◆ Use alternative fuels, such as compressed natural gas or liquefied natural gas. <p>If the restoration project would result in significant emissions of airborne, naturally occurring asbestos, or metals from excavation, hauling, blasting, tunneling, placement, or other handling of rocks or soil, a dust mitigation and air monitoring plan shall identify individual restoration project measures to minimize emissions and ensure that airborne concentrations of the TACs of concern do not exceed regulatory or risk-based trigger levels.</p>		
	<p>Mitigation Measure AIR-3: Minimize GHG Emissions</p> <p>Restoration projects permitted under the Order shall implement the GHG mitigation measures listed in the most recent air district guidance documents (e.g., CAPCOA 2010; BAAQMD 2011), as appropriate for the project site and conditions. Current versions of such guidance documents list the following for construction of projects:</p> <ul style="list-style-type: none"> ◆ Use alternative fuels for construction equipment. ◆ Use electric and hybrid construction equipment. ◆ Limit construction equipment idling beyond regulatory requirements. ◆ Institute a heavy-duty off-road vehicle plan. ◆ Implement a construction vehicle inventory tracking system. ◆ Use local building materials for at least 10 percent of total materials. ◆ Recycle or reuse at least 50 percent of construction waste or demolition materials. 		

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Air Quality (cont.)	<p>In addition, the California Attorney General’s Office has developed a list of measures and strategies to reduce GHG emissions at the individual project level. As appropriate, the measures can be included as design features of a restoration project, required as changes to the project, or imposed as mitigation (whether undertaken directly by the project proponent or funded by mitigation fees). The measures are examples; the list is not intended to be exhaustive. The following are best management practices to consider and implement (as applicable) during design, construction, and O&M of project facilities.</p> <p><i>Transportation and Motor Vehicles</i></p> <ul style="list-style-type: none"> ◆ Limit idling time for commercial vehicles, including delivery and construction vehicles. ◆ Use low- or zero-emission vehicles, including construction vehicles. ◆ Institute a heavy-duty off-road vehicle plan and a construction vehicle inventory tracking system for construction projects. ◆ Promote ridesharing. ◆ Provide the necessary facilities and infrastructure to encourage the use of low- or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations). ◆ Provide a shuttle service to public transit/work sites. ◆ Provide information on all options for individuals and businesses to reduce transportation-related emissions. 		

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Air Quality (cont.)	<p><i>SmartWay Truck Efficiency</i> This strategy involves requiring existing trucks/trailers to be retrofitted with the best available “SmartWay Transport” and/or CARB-approved technology. Technologies that reduce GHG emissions from trucks include devices that reduce aerodynamic drag and rolling resistance. Aerodynamic drag may be reduced using devices such as cab roof fairings, cab side gap fairings, cab side skirts, and on the trailer side, skirts, gap fairings, and trailer tail. Rolling resistance can be reduced using single wide tires or low-rolling resistance tires and automatic tire inflation systems on both the tractor and the trailer.</p> <p><i>Tire Inflation Program</i> The strategy involves actions to ensure that vehicle tire pressure is maintained to manufacturer specifications.</p> <p><i>Blended Cements</i> The strategy to reduce CO₂ emissions involves the addition of blending materials such as limestone, fly ash, natural pozzolan, and/or slag to replace some of the clinker in the production of Portland cement.</p> <p><i>Anti-Idling Enforcement</i> The strategy guarantees emissions reductions as claimed by increasing compliance with anti-idling rules, thereby reducing the amount of fuel burned through unnecessary idling. Measures include enhanced field enforcement of anti-idling regulations, increased penalties for violations of anti-idling regulations, and restriction on registrations of heavy-duty diesel vehicles with uncorrected idling violations.</p>		

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Biological - Terrestrial	<p>Mitigation Measure TERR-1: Coordinate with CDFW, USFWS, and Permittees Regarding HCPs, NCCPs, and Other Conservation Plans</p> <p>If the site for a restoration project permitted under the Order is within the planning area for any adopted HCP, NCCP, or similar conservation plan, the CEQA lead agency for the project shall consult with the plan permittee(s), CDFW and/or USFWS, as applicable, to identify any potential conflicts with the plan’s goals, objectives, or conservation measures. As part of this consultation, the CEQA lead agency shall seek input regarding potential design features, conservation measures, or other mitigation strategies to avoid potential conflicts and achieve substantial conformance with the objectives of the HCP, NCCP, or similar conservation plan. The CEQA lead agency shall implement these elements as applicable to ensure that the restoration project conforms to applicable goals and policies set forth in the adopted conservation plan.</p>		
Cultural	<p>Mitigation Measure CUL-1: Conduct Inventory and Significance Evaluation of Architectural Resources</p> <p>Before implementation of any project permitted under the Order, the need for an inventory and significance evaluation of architectural resources in the project area shall be assessed, and, if necessary based upon the type of restoration activity conducted and potential for built features to be present or disturbed. The assessment should consist of a review of maps and aerial photos to see if existing buildings dams, levees, roads, or other built features are in the CEQA project area. If so, and the age of these features is either unknown or is known to be older than 45 years old, then an inventory and evaluation should be completed by, or under the direct supervision of, a qualified architectural historian, defined as one who meets the U.S. Secretary of the Interior’s Professional Qualifications Standards for Historical History or History. This inventory and evaluation shall include the following:</p>		

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Cultural (cont.)	<ul style="list-style-type: none"> ◆ Map(s) and verbal description of the project CEQA Area of Potential Effects (C-APE) for cultural resources that delineates both the horizontal and vertical extents of where a project could result in impacts, including both direct and indirect, on cultural resources. ◆ A records search at the appropriate repository of the California Historical Resources Information System for the C-APE and vicinity (typically areas within 0.25 or 0.5 mile, based on setting) to acquire records on previously recorded cultural resources in the C-APE and vicinity and previous cultural resources studies conducted for the C-APE and vicinity. ◆ Background research on the history of the C-APE and vicinity for all projects determined to need additional historical architecture assessment. ◆ If, after review, features of the built environment are determined to be less than 45 years old, a summary statement of their age and references for this determination will be included in the project area description. No further analysis is necessary. ◆ If historic-era built resources are determined to likely be present, an architectural field survey of the C-APE, unless previous architectural field surveys no more than two years old have been conducted for the C-APE, in which case a new field survey is not necessary. Any architectural resources identified in the C-APE during the survey shall be recorded on the appropriate California Department of Parks and Recreation 523 forms (i.e., site record forms). ◆ An evaluation of any architectural resources identified in the C-APE for California Register eligibility (i.e., whether they qualify as historical resources, as defined in State CEQA Guidelines Section 15064.5). 		

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Cultural (cont.)	<ul style="list-style-type: none"> ◆ An assessment of potential project impacts on any historical resources identified in the C-APE. This should include an analysis of whether the project’s potential impacts on the historical resource would be consistent with the U.S. Secretary of the Interior’s Standards for the Treatment of Historic Properties and applicable guidelines. ◆ A technical report meeting U.S. Secretary of the Interior’s Standards for architectural history technical reporting This report will document the mitigation measures taken and any study results, and following CEQA lead agency review and approval, completes the requirements of this mitigation measure. <p>If potentially significant impacts on historical resources are identified, an approach for reducing such impacts shall be developed before project implementation and in coordination with interested parties (e.g., historical societies, local communities). Typical measures for reducing impacts include:</p> <ul style="list-style-type: none"> ◆ Modifying the project to avoid impacts on historical resources. ◆ Documentation of historical resources, to the standards of and to be included in the Historic American Building Survey, Historic American Engineering Record, or Historic American Landscapes Survey, as appropriate. As described in the above standards, the documentation shall be conducted by a qualified architectural historian, defined above, and shall include large-format photography, measured drawings, written architectural descriptions, and historical narratives. The completed documentation shall be submitted to the U.S. Library of Congress. ◆ Relocation of historical resources in conformance with the U.S. Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. ◆ Monitoring construction-related and operational vibrations at historical resources. 		

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Cultural (cont.)	<ul style="list-style-type: none"> ◆ For historical resources that are landscapes, preservation of the landscape’s historic form, features, and details that have evolved over time, in conformance with the U.S. Secretary of the Interior’s Guidance for the Treatment of Cultural Landscapes. ◆ Development and implementation of interpretive programs or displays, and community outreach. 		
	<p>Mitigation Measure CUL-2: Conduct Inventory and Significance Evaluation of Archaeological Resources</p> <p>Before implementation of any project permitted under the Order that includes ground disturbance, an archaeological records search and sensitivity assessment, inventory and significance evaluation of archaeological resources identified in the C-APE shall be conducted. The inventory and evaluation should be done by or under the direct supervision of a qualified archaeologist, defined as one who meets the U.S. Secretary of the Interior’s Professional Qualifications Standards for Archeology, and shall include the following:</p> <ul style="list-style-type: none"> ◆ Map(s) and verbal description of the project C-APE for cultural resources that delineates both the horizontal and vertical extents of where a project could result in impacts, including both direct and indirect, on cultural resources. ◆ A records search at the appropriate repository of the California Historical Resources Information System (CHRIS) for the C-APE and vicinity (typically areas within 0.25 or 0.5 mile, based on setting) to acquire records on previously recorded cultural resources in the C-APE and vicinity and previous cultural resources studies conducted for the C-APE and vicinity. This task can be performed by either the qualified archaeologist or the appropriate local CHRIS center staff. 		

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Cultural (cont.)	<p>Outreach to the California Native American Heritage Commission, including a request of a search of the Sacred Lands File for the C-APE, to determine if any documented Native American sacred sites could be affected by the project.</p> <ul style="list-style-type: none"> ◆ Consultation with California Native American Tribes pursuant to PRC Section 21080.3 to determine whether any indigenous archaeological resource or tribal cultural resources could be affected by the project. Project proponents shall submit a Sacred Lands File & Native American Contacts List Request to the Native American Heritage Commission (NAHC) at the initial stages of project development (or as early as practicable) to determine if a project would have an impact on Native American cultural resources. The project proponent shall coordinate with the approving Water Board or other CEQA lead agency, if applicable, as soon as possible whenever tribes that are traditionally and culturally affiliated to a project area are identified. Any tribe identified by the NAHC will require notification of the proposed project by the lead agency as soon as practicable during early design. Tribes will be consulted if a request is received after initial notification. Consultation will include discussion regarding project design, cultural resource survey, protocols for construction monitoring, and any other tribal concern. Construction of the project will not commence until the approving Water Board or other CEQA lead agency achieves compliance with the California Environmental Protection Agency Tribal Consultation Protocol (April 2018). ◆ If the C-APE is in or adjacent to navigable waterways, outreach to the California State Lands Commission to request a search of their Shipwrecks Database, to determine whether any submerged archaeological resources may be present in the C-APE. 		

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Cultural (cont.)	<ul style="list-style-type: none"> ◆ Background research on the history, including ethnography and indigenous presence, of the C-APE and vicinity. ◆ An archaeological sensitivity analysis of the C-APE based on mapped geologic formations and soils, previously recorded archaeological resources, previous archaeological studies, and Native American consultation. ◆ If an archaeological study is not warranted based on the above review, a summary of the assessment and justification of the determination will be prepared. If the CEQA lead agency agrees with the determination, no further study is needed. <p>If a study is warranted, as a result of these archival studies and consultations, an archaeological field survey of the C-APE will be conducted. The field survey shall include, at a minimum, a pedestrian survey. If the archaeological sensitivity analysis suggests a high potential for buried archaeological resources in the C-APE, a subsurface survey shall also be conducted. If previous archaeological field surveys no more than two years old have been conducted for the C-APE, a new field survey is not necessary, unless their field methods do not conform to those required above (e.g., no subsurface survey was conducted but C-APE has high potential for buried archaeological resources). Any archaeological resources identified in the C-APE during the survey shall be recorded on the appropriate California Department of Parks and Recreation 523 forms (i.e., site record forms).</p> <ul style="list-style-type: none"> ◆ An evaluation of any archaeological resources identified in the C-APE for California Register eligibility (i.e., as qualifying as historical resources, as defined in State CEQA Guidelines Section 15064.5) as well as whether they qualify as unique archaeological resources, pursuant to PRC Section 21083.2. Such evaluation may require archaeological testing (excavation), potentially including laboratory analysis, and consultation with relevant Native American representatives (for indigenous resources). 		

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Cultural (cont.)	<ul style="list-style-type: none"> ◆ An assessment of potential project impacts on any archaeological resources identified in the C-APE that qualify as historical resources (per State CEQA Guidelines Section 15064.5) and/or unique archaeological resources (per PRC Section 21083.2). This shall include an analysis of whether the project’s potential impacts would materially alter a resource’s physical characteristics that convey its historical significance and that justify its inclusion (or eligibility for inclusion) in the California Register or a qualified local register. ◆ A technical report meeting U.S. Secretary of the Interior’s Standards for archaeological technical reporting. This report will document the mitigation measures taken and any study results, and, following CEQA lead agency review and approval, completes the requirements of this mitigation measure. <p>If potentially significant impacts on archaeological resources that qualify as historical resources (per State CEQA Guidelines Section 15064.5) and/or unique archaeological resources (per PRC Section 21083.2) are identified, develop, before project implementation and in coordination with interested or consulting parties (e.g., Native American representatives [for indigenous resources], historical societies [for historic-era resources], local communities) an approach for reducing such impacts. If any such resources are on or in the tide and submerged lands of California, this process shall also include coordination with the California State Lands Commission. Typical measures for reducing impacts include:</p> <ul style="list-style-type: none"> ◆ Modify the project to avoid impacts on resources. ◆ Plan parks, green space, or other open space to incorporate the resources. ◆ Develop and implement a detailed archaeological resources management plan to recover the scientifically consequential information from archaeological resources before any excavation at the resource’s location. Treatment for most 		

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Cultural (cont.)	<p>archaeological resources consists of (but is not necessarily limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the resource to be affected by the project.</p> <ul style="list-style-type: none"> ◆ Develop and implement interpretive programs or displays, and conduct community outreach. 		
	<p>Mitigation Measure CUL-3: Implement Measures to Protect Archaeological Resources during Project Construction or Operation</p> <p>If archaeological resources are encountered during project construction or operation of any project permitted under the Order, all activity within 100 feet of the find shall cease and the find shall be flagged for avoidance. The lead agency and a qualified archaeologist, defined as one meeting the U.S. Secretary of the Interior’s Professional Qualifications Standards for Archeology, shall be immediately informed of the discovery. The qualified archaeologist shall inspect the discovery and notify the lead agency of their initial assessment. If the qualified archaeologist determines that the resource is or is potentially indigenous in origin, the lead agency shall consult with culturally affiliated California Native American Tribes to assess the find and determine whether it is potentially a tribal cultural resource.</p> <p>If the lead agency determines, based on recommendations from the qualified archaeologist and culturally affiliated California Native American Tribes, that the resource is indigenous, that the resource may qualify as a historical resource (per State CEQA Guidelines Section 15064.5), unique archaeological resource (per PRC Section 21083.2), or tribal cultural resource (per PRC Section 21074), then the resource shall be avoided if feasible. If avoidance of an identified indigenous resource is not feasible, the lead agency shall consult with a qualified archaeologist,</p>		

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Cultural (cont.)	<p>culturally affiliated California Native American Tribes, and other appropriate interested parties to determine treatment measures to minimize or mitigate any potential impacts on the resource pursuant to PRC Section 21083.2 and State CEQA Guidelines Section 15126.4. If any such resources are on or in the tide and submerged lands of California, this process shall also include coordination with the California State Lands Commission. Once treatment measures have been determined, the lead agency shall prepare and implement an archaeological (and/or tribal cultural) resources management plan that outlines the treatment measures for the resource. Treatment measures typically consist of the following steps:</p> <ul style="list-style-type: none"> ◆ Determine whether the resource qualifies as a historical resource (per State CEQA Guidelines Section 15064.5), unique archaeological resource (per PRC Section 21083.2), or tribal cultural resource (per PRC Section 21074) through analysis that could include additional historical or ethnographic research, evaluative testing (excavation), or laboratory analysis. ◆ If it qualifies as a historical resource (per State CEQA Guidelines Section 15064.5) and/or unique archaeological resource (per PRC Section 21083.2), implement measures for avoiding or reducing impacts such as the following: <ul style="list-style-type: none"> ◆ Modify the project to avoid impacts on resources. ◆ Plan parks, green space, or other open space to incorporate resources. ◆ Recover the scientifically consequential information from the archaeological resource before any excavation at the resource’s location. This typically consists of (but is not necessarily limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the resource to be affected by the project. 		

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Cultural (cont.)	<ul style="list-style-type: none"> ◆ Develop and implement interpretive programs or displays. ◆ If it qualifies as a tribal cultural resource (per PRC Section 21074) implement measures for avoiding or reducing impacts such as the following: ◆ Avoid and preserve the resource in place through measures that include but are not limited to the following: <ul style="list-style-type: none"> • Plan and construct the project to avoid the resource and protect the cultural and natural context. • Plan greenspace, parks, or other open space to incorporate the resources with culturally appropriate protection and management criteria. ◆ Treat the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, through measures that include but are not limited to the following: <ul style="list-style-type: none"> • Protect the cultural character and integrity of the resource. • Protect the traditional use of the resource. • Protect the confidentiality of the resource. ◆ Implement permanent conservation easements or other interests in real property, with cultural appropriate management criteria for the purposes of preserving or using the resource or place. 		
	<p>Mitigation Measure CUL-4: Implement Measures to Protect Human Remains during Project Construction or Operation</p> <p>If human remains are encountered during construction or operation and maintenance of any project permitted under the Order, all work shall immediately halt within 100 feet of the find and the lead agency shall contact the appropriate county coroner to evaluate the remains and follow the procedures and protocols set</p>		

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Cultural (cont.)	<p>forth in State CEQA Guidelines Section 15064.5(e)(1). If human remains encountered are on or in the tide and submerged lands of California, the lead agency shall also contact the California State Lands Commission. If the coroner determines that the remains are Native American in origin, the appropriate county shall contact the California Native American Heritage Commission, in accordance with California Health and Safety Code Section 7050.5(c) and PRC Section 5097.98. Per PRC Section 5097.98, the project’s lead agency shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the lead agency has discussed and conferred, as prescribed PRC Section 5097.98, with the most likely descendants and the property owner regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.</p>		
Geology and Soils	<p>Mitigation Measure GEO-1: Include Geotechnical Design Recommendations To minimize potential impacts from seismic events and the presence of adverse soil conditions, lead agencies shall ensure that geotechnical design recommendations are included in the design of facilities and construction specifications. Recommended measures to address adverse conditions shall conform to applicable design codes, guidelines, and standards.</p>		
	<p>Mitigation Measure GEO-2: Comply with the Alquist-Priolo Act For construction in an Alquist-Priolo Earthquake Fault Zone, a determination must be made by a licensed practitioner (California Certified Engineering Geologist) that no fault traces are present within structures, such as setback levees. The standard of care for such determinations includes direct examination of potentially affected subsurface materials (soil and/or bedrock) by logging of subsurface trenches. Levee</p>		

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Geology and Soils (cont.)	<p>structures may also be required to have heavier reinforcement against strong ground motion, in compliance not only with California regulations but, in many cases, with additional federal regulations. Costs necessary to prepare and identify collected fossils, and for any curation fees charged by the paleontological repository. The SJECCD shall ensure that information on the nature, location, and depth of all finds is readily available to the scientific community through university curation or other appropriate means.</p>		
	<p>Mitigation Measure GEO-3: Conduct Individual Restoration Project Geotechnical Investigation and Report</p> <p>An individual restoration projects geotechnical investigation shall be performed and a geotechnical report prepared for any restoration project that would result in potentially significant grading activities. The geotechnical report shall include a quantitative analysis to determine whether excavation or fill placement would result in a potential for damage due to soil subsidence during and/or after construction. Project designs shall incorporate measures to reduce the potential damage to a less-than-significant level. Measures shall include but not be limited to:</p> <ul style="list-style-type: none"> ◆ Removal and recompaction of existing soils susceptible to subsidence ◆ Ground improvement (such as densification by compaction or grouting, soil cementation) ◆ Reinforcement of structural components to resist deformation due to subsidence <p>The assessment of subsidence for specific projects shall analyze the individual restoration projects potential for and severity of cyclic seismic loading. A geotechnical investigation shall also be performed by an appropriately licensed professional engineer and/or geologist to determine the presence and thickness of potentially liquefiable sands that could result in loss of bearing value during seismic</p>		

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Geology and Soils (cont.)	<p>shaking events. Project designs shall incorporate measures to mitigate potential damage to a less-than-significant level. Measures shall include but not be limited to:</p> <ul style="list-style-type: none"> ◆ Ground improvement (such as grouting or soil cementation) ◆ Surcharge loading by placement of fill, excavation, soil mixing with non-liquefiable finer-grained materials, and replacement of liquefiable materials at shallow depths ◆ Reinforcement of structural components to resist deformation due to liquefaction <p>An analysis of individual restoration projects probable and credible seismic acceleration values, conducted in accordance with current applicable standards of care, shall be performed to provide for a suitable project design. Geotechnical investigations shall be performed and geotechnical reports shall be prepared in the responsible care of California licensed geotechnical professionals including professional civil engineers, certified geotechnical engineers, professional geologists, certified engineering geologists, and certified hydrogeologists, all of whom practice within the current standards of care for such work.</p>		
	<p>Mitigation Measure GEO-4: Adhere to International Building Code Constructed facilities shall be required to adhere to the current approved version of the International Building Code (IBC), and to comply with the IBC for critical structures (e.g., levees).</p>		
	<p>Mitigation Measure GEO-5: Conduct Expansive Clay Investigation In areas where expansive clays exist, a licensed professional engineer or geologist shall perform a hydrogeological/geotechnical investigation to identify and quantify the potential for expansion, particularly differential expansion of clayey soils caused by leakage and saturation beneath new improvements. Measures could include but are not limited to removing and recompacting problematic expansive soils, stabilizing soils, and/or reinforcing the constructed improvements to resist deformation from expansion of subsurface soils.</p>		

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Geology and Soils (cont.)	<p>Mitigation Measure GEO-6: Implement Measures for Waterway Construction Activities</p> <p>For projects that involve the engineered subsurface structural components (e.g., of surface impoundments, levees, bridge footings/abutments) project design shall provide for protection from leakage to the subsurface. Measures could include but are not limited to rendering concrete less permeable by specifying concrete additives such as bentonite, designing impermeable liner systems, designing leakage collection and recovery systems, and constructing impermeable subsurface cutoff walls.</p> <p>For restoration projects that could cause subsurface seepage of nuisance water onto adjacent lands, the following measures shall be implemented:</p> <ul style="list-style-type: none"> ◆ Perform seepage monitoring studies by measuring the level of shallow groundwater in the adjacent soils, to evaluate baseline conditions. Continue monitoring for seepage during and after project implementation. ◆ Develop a seepage monitoring plan if subsurface seepage constitutes nuisance water on the adjacent land. ◆ If adjacent land is not usable, implement seepage control measures, such as installing subsurface agricultural drainage systems to avoid raising water levels into crop root zones. Cutoff walls and pumping wells can also be used to mitigate the occurrence of subsurface nuisance water. 		
	<p>Mitigation Measure GEO-7: Implement Measures for Levee Construction and Other Fill Embankment Designs</p> <p>For projects that involve the construction of setback levees, surface impoundments, and other fill embankments, the project design shall place fill in accordance with state and local regulations and the prevailing standards of care for such work.</p>		

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Geology and Soils (cont.)	Measures could include but are not limited to blending the soils most susceptible to landsliding with soils that have higher cohesion characteristics; installing slope stabilization measures; designing top-of-slope berms or v-ditches, terrace drains, and other surface runoff control measures; and designing slopes at lower inclinations.		
	<p>Mitigation Measure GEO-8: Assess the Presence of Highly Organic Soils For projects that would result in a significant or potentially significant risk to structures because of the presence of highly organic soils, the lead agencies shall require a geotechnical evaluation before construction to identify measures to mitigate organic soils. The following measures may be considered:</p> <ul style="list-style-type: none"> ◆ Over-excavation and import of suitable fill material. ◆ Structural reinforcement of constructed works to resist deformation. ◆ Construction of structural supports below the depth of highly organic soils into materials with suitable bearing strength. 		
	<p>Mitigation Measure GEO-9: Conduct a General Project-Level Analysis Restoration projects implemented by other public proponents under the Order would be required to do a desktop search on whether the project site would be located in a paleontological sensitive unit. If the project site was determined to be located on a paleontological sensitive unit, then Mitigation Measure GEO-9 (and Mitigation Measure GEO-10, below, as applicable) would be implemented. If restoration projects implemented under the Order fall outside a paleontological sensitive unit, GEO-9 (and Mitigation Measure GEO-10, below) would be not required. During project development and project-level analysis, a paleontological resource monitoring and recovery plan shall be developed and implemented for all actions determine by the project proponent to be located on a paleontological sensitive unit.</p>		

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Geology and Soils (cont.)	<p>The plan shall include protocols for paleontological resources monitoring in areas where construction-related excavation would affect sediment with moderate to high paleontological sensitivity.</p> <p>The paleontological resource monitoring and recovery plan shall provide guidelines for the establishment of a yearly or biannual monitoring program led by a qualified paleontologist to determine the extent of fossiliferous sediment being exposed and affected by erosion, and determine whether paleontological resources are being lost. If the loss of scientifically significant paleontological resources is documented, then a recovery program should be implemented.</p>		
	<p>Mitigation Measure GEO-10: Conduct Worker Training</p> <p>For projects that are determined to have moderate to high paleontological sensitivity, before the start of any ground-disturbing activity (e.g., excavation or clearing), a qualified paleontologist shall prepare paleontological resources sensitivity training materials for use during project worker environmental training or equivalent. This training shall be conducted by a qualified environmental trainer under the supervision of the qualified paleontologist. For restoration projects that involve construction crew phases, additional trainings shall be conducted for new construction personnel. The paleontological resource sensitivity training shall focus on the types of resources that could be encountered within the individual restoration project site and the procedures to follow if they are found. Project proponents and/or project contractors shall retain documentation demonstrating that all construction personnel attended the paleontological resource sensitivity training before the start of work on the site, and shall provide documentation to the project manager upon request.</p>		

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<p>Hazards and Hazardous Materials</p>	<p>Mitigation Measure HAZ-1: Prepare and Implement a Health and Safety Plan and Provide Qualified Oversight of Fill Removal Related to Earthmoving Activities</p> <p>The following measures shall be implemented before and during construction of any restoration project permitted under the Order:</p> <ul style="list-style-type: none"> ◆ A health and safety plan for the project shall be developed and implemented. This plan shall clearly notify all workers of the potential to encounter hazardous materials during ground-disturbing work and other construction activities. The plan shall identify proper handling and disposal procedures for contaminants expected to be on-site and shall provide maps and phone numbers for local hospitals and other emergency contacts. Construction workers shall comply with all protocols outlined in the health and safety plan throughout project implementation. ◆ Any hazardous materials being stored in the project area and not needed for construction activities shall be removed and disposed of at appropriately permitted locations before construction. A qualified professional (e.g., geologist or engineer) shall oversee fill excavation activities and work in potential project areas that contain abandoned underground storage tanks requiring removal, to properly identify any contaminated soils that may be present. Excavation of underground storage tanks must comply with county ordinances and policies. If contaminated soils are found, Mitigation Measure HAZ-2 shall be implemented. ◆ Removal of underground storage tanks associated with the restoration project shall include measures to ensure their safe transport and disposal. Remediation actions, if necessary, shall be defined in consultation with the local Regional Board and implemented during construction. 		

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Hazards and Hazardous Materials (cont.)	<p>Mitigation Measure HAZ-2: Notify Appropriate Federal, State, and Local Agencies If Contaminated Soils Are Identified, and Complete Recommended Remediation Activities</p> <p>The following measures shall be implemented before construction of any restoration project permitted under the Order if contaminated soils are found on the project site:</p> <ul style="list-style-type: none"> ◆ The appropriate federal, state, and local agencies shall be notified if evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) is encountered during construction activities. Any contaminated areas shall be cleaned up in accordance with the recommendations of the Regional Board, DTSC, or other appropriate federal, state, or local regulatory agencies. ◆ A site plan shall be prepared for the remediation activities appropriate for the proposed land uses, including excavation and removal of on-site contaminated soils, and needed redistributions of clean fill material on the study area. The plan shall include measures to ensure the safe transport, use, and disposal of contaminated soil and building debris removed from the site. If ground-disturbing activities encounter contaminated groundwater, the construction contractor shall report the contamination to the appropriate agencies, dewater the area, and treat the groundwater to remove the contaminants before discharge into the sanitary sewer system. The construction contractor shall comply with the plan and applicable federal, state, and local laws. The plan shall outline specific procedures for handling and reporting of hazardous materials, and for disposing of hazardous materials removed from the site at an appropriate off-site facility. 		

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Hazards and Hazardous Materials (cont.)	<p>Mitigation Measure HAZ-3: Notify Appropriate Federal, State, and Local Agencies If Accidental Discharges of Hazardous Materials Following an accidental discharge of a reportable quantity of a hazardous material or an unknown material, the appropriate federal, state, and local agencies shall be notified. Any contaminated areas shall be cleaned up in accordance with the recommendations of the Regional Board, DTSC, or other appropriate federal, state, or local regulatory agencies.</p>		
	<p>Mitigation Measure HAZ-4: Establish Airport Operation Area Buffer Zones Restoration projects permitted under the Order shall avoid creating hazardous wildlife attractants within a distance of 10,000 feet of a designated Airport Operations Area.</p>		
	<p>Mitigation Measure HAZ-5: Coordinate with Applicable Federal, State, and Local Agencies and Districts Before construction, project proponents implementing restoration projects permitted under the Order shall coordinate with the appropriate federal, state, and local government agencies, districts, and emergency response agencies regarding the timing of construction projects that would occur near the project sites. Specific measures to mitigate potentially significant impacts shall be determined during the interagency coordination, and shall include measures to achieve the following performance standards:</p> <ul style="list-style-type: none"> ◆ Reduce potential traffic impacts so that no more than 30 trucks per hour will be added to any road (e.g., by scheduling construction truck trips and designating alternate haul routes to disperse truck trips). ◆ Reduce potential traffic safety impacts (e.g., by employing flaggers to manage traffic flow at conflict locations). 		

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Hazards and Hazardous Materials (cont.)	<ul style="list-style-type: none"> ◆ Provide outreach and community noticing (e.g., via the web, utility bill inserts, and other methods) for locations where multiple projects will create construction traffic simultaneously. 		
	<p>Mitigation Measure HAZ-6: Prepare and Implement a Vector Management Plan The following measures shall be implemented by restoration projects permitted under the Order to prevent public health hazards posed by vector habitat as applicable (e.g., restoration projects that result in standing water and are located near populated areas):</p> <ul style="list-style-type: none"> ◆ Freshwater habitat management shall include management of water control structures, vegetation management, mosquito predator management, drainage improvements, and other best management practices. The agency implementing the restoration project shall coordinate with the California Department of Fish and Wildlife and local mosquito and vector control agencies regarding these strategies and specific techniques to help minimize mosquito production. ◆ Permanent ponds shall be maintained to increase the diversity of waterfowl yet decrease the introduction of vectors through constant circulation of water, vegetation control, and periodic draining of ponds. ◆ The project shall avoid ponding in tidal marsh habitat or in areas within the waterside of setback levees. Restoration projects shall be designed with methods to reduce mosquito breeding. 		

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Hazards and Hazardous Materials (cont.)	<p>Mitigation Measure MIN-1: Minimize Potential Impacts from Loss of a Known Mineral Resource</p> <p>The following measures shall be implemented during construction of restoration projects permitted under the Order:</p> <ul style="list-style-type: none"> ◆ Project proponents shall ensure land use compatibility between existing mineral resource extraction activities and restoration projects. ◆ An adequate buffer (to be determined on an individual project basis in coordination with appropriate regulatory agencies) shall be maintained between future projects and designated MRZ-2 sectors. ◆ Project proponents shall ensure that future land use changes in designated mineral resource extraction areas recognize mineral resource extraction as a compatible use. ◆ The use of construction aggregate shall be limited to local sources with sufficient capacity to meet the needs of both restoration projects and future local development, to the extent possible. ◆ Project construction shall use recycled aggregate where possible, to decrease the demand for new aggregate. 		
Mineral	<p>Mitigation Measure MIN-2: Minimize Potential Impacts from the Loss of a Locally-Important Mineral Resource Recovery Site</p> <p>The following measures shall be implemented during and after construction of restoration projects permitted under the Order:</p> <ul style="list-style-type: none"> ◆ Access to existing, active mineral resource extraction sites that have been identified in local general plans, specific plans, or other land use plans shall be maintained both during and after project construction. 		

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Mineral (cont.)	<ul style="list-style-type: none"> ◆ Projects shall implement the most current recommendations identified in the California Department of Conservation (DOC) Geologic Energy Management Division (formerly Division of Oil, Gas, and Geothermal Resources) construction site well review program (DOC 2021), such as: ◆ Identify all existing natural gas well sites and oil production facilities in or near the project area. ◆ Identify any oil or natural gas well within 100 feet of any navigable body of water or watercourse perennially covered by water or any officially recognized wildlife preserve as a “critical well” (California Code of Regulations Title 14, Chapter 4, Article 2, Sections 1720[a][2][B] and 1720[a][2][C]). DOC requires that “critical wells” include equipment capable of meeting more stringent blowout prevention requirements than noncritical wells, based on pressure testing and ratings. ◆ Identify safety measures to prevent unauthorized access to equipment. ◆ Include safety shutdown devices on oil and natural gas wells and other equipment, as appropriate. ◆ Notify DOC of new oil or natural gas wells or changes in oil or natural gas well operations or physical conditions, receive written approval of the changes from DOC, and receive written notification of DOC’s inspection of new or changed equipment. The approvals will be related primarily to the ability to: <ul style="list-style-type: none"> • Protect all subsurface hydrocarbons and freshwater. • Protect the environment. • Use adequate blowout prevention equipment. • Use approved drilling and cementing techniques. 		

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Mineral (cont.)	<ul style="list-style-type: none"> ◆ If any plugged/abandoned or unrecorded oil and natural gas wells are uncovered during construction, notify DOC, complete remedial well plugging actions, and avoid constructing any structures over the abandoned oil and natural gas wells. ◆ If oil and natural gas wells are under the jurisdiction of or a lease from the State Lands Commission, provide additional plans and environmental documentation as required before modifying the oil or natural gas wells. 		
Noise	<p>Mitigation Measure NOISE-1: Minimize Noise Conflicts</p> <p>The following measures shall be implemented during construction of any restoration project permitted under the Order:</p> <ul style="list-style-type: none"> ◆ Noise-generating activities shall follow the applicable general plan and/or noise ordinances for the jurisdiction located within the vicinity of the project. ◆ Construction equipment shall be located away from sensitive receptors, to the extent feasible, to reduce noise levels below applicable local standards. ◆ Construction equipment shall be maintained to manufacturers’ recommended specifications, and all construction vehicles and equipment shall be equipped with appropriate mufflers and other approved noise-control devices. ◆ Idling of construction equipment shall be limited to the extent feasible to reduce the time that noise is emitted. ◆ An individual traffic noise analysis of identified haul routes shall be conducted and mitigation, such as reduced speed limits, shall be provided at locations where noise standards cannot be maintained for sensitive receptors. ◆ The project shall incorporate the use of temporary noise barriers, such as acoustical panel systems, between construction activities and sensitive receptors if it is concluded that they would be effective in reducing noise exposure to sensitive receptors. 		

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Noise (cont.)	<p>Mitigation Measure NOISE-2: Minimize Operations and Maintenance Noise Conflicts</p> <p>The following measures shall be implemented during O&M activities for any restoration project permitted under the Order:</p> <ul style="list-style-type: none"> ◆ Noise-sensitive receptors in the vicinity of project activities shall be identified and projects shall be designed to minimize exposure of sensitive receptors to long-term, operational noise sources (for example, water pumps) to reduce noise levels below applicable local standards. ◆ The hours of operation at noise generation sources near or adjacent to noise-sensitive areas shall be limited, wherever practicable, to reduce the level of exposure to meet applicable local standards. 		
	<p>Mitigation Measure NOISE-3: Prepare Preconstruction Safety Plans</p> <p>To reduce potential impacts on people residing or working in the vicinity of a private airstrip, an airport land use plan, or where such a plan has not been adopted within 2 miles of a public airport or public use airport, construction contracts shall include requirements for the contractor to prepare a construction safety plan. The plan shall be developed before construction activities begin, in collaboration with aviation base personnel, to coordinate construction activities including a schedule, coordination of personnel with aviation radios, and notice requirements. Furthermore, the contractor shall coordinate with emergency service personnel.</p>		
Recreation	<p>Mitigation Measure REC-1: Minimize Impairment, Degradation, or Elimination of Recreational Resources</p> <p>If restoration projects permitted under the Order result in the substantial impairment, degradation, or elimination of recreational facilities, replacement facilities of equal capacity and quality shall be developed and installed.</p>		

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Recreation (cont.)	<p>Mitigation Measure REC-2: Minimize Impacts on Existing Recreational Resources</p> <p>If a restoration project results in substantial temporary or permanent impairment, degradation, or elimination of recreational facilities that causes users to be directed toward other existing facilities, the project proponent shall coordinate with affected public and private recreation providers to direct the displaced users to underused recreational facilities.</p> <p>The project proponent shall conduct additional operations and maintenance work at existing facilities to prevent them from deteriorating. If possible, temporary replacement facilities shall be provided. If the increase in use is temporary, once use levels have decreased back to existing conditions, the degraded facilities shall be rehabilitated or restored.</p> <p>Where impacts on existing facilities are unavoidable, the project proponent shall compensate for impacts through mitigation, restoration, or preservation off-site or creation of additional permanent new replacement facilities.</p>		
Transportation	<p>Mitigation Measure TRA-1: Prepare Construction Traffic Management Plan</p> <p>Before construction begins, the construction manager shall have a qualified professional prepare a construction traffic management plan. The plan shall provide the appropriate measures to reduce potential traffic obstructions or service level degradation at affected traffic facilities. The scope of the construction traffic management plan will depend on the type, size, and duration of the specific qualifying restoration project under the Order. The plan could include such measures as construction signage, flaggers for lane closures, and construction schedule and/or delivery schedule restrictions. The plan shall be submitted to the local public works department and implemented as appropriate throughout construction.</p>		

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Tribal Cultural	<p>Mitigation Measure TCR-1: Conduct Inventory and Significance Evaluation of Tribal Cultural Resources with Tribes that are Culturally and Geographically Affiliated with the Project Vicinity</p> <p>Before implementation of any project permitted under the Order, the following shall be conducted: consultation with California Native American Tribes pursuant to PRC Section 21080.3; a cultural resources records search; a California Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search; and an inventory and significance evaluation of tribal cultural resources identified that could be impacted by the project. These tasks shall be conducted as follows.</p> <ul style="list-style-type: none"> ◆ Project proponent shall submit an NAHC SLF & Native American Contacts List Request at the initial stages of project development (or as early as practicable) to determine if a project would have an impact on tribal cultural resources. ◆ Project proponent shall coordinate with the approving Water Board or other CEQA lead agency, if applicable, as soon as possible to identify California Native American Tribes that are traditionally and culturally affiliated to a project area. The CEQA lead agency shall then conduct Tribal consultation, pursuant to PRC Section 21080.3, and as soon as practicable during early design, with such Tribes to determine whether any tribal cultural resources could be affected by the project. Consultation will include discussion regarding project design, cultural resources surveys, identification of tribal cultural resources, protocols for construction monitoring, and any other Tribal concerns. Construction of the project will not commence until the approving Water Board or other CEQA lead agency achieves compliance with the California Environmental Protection Agency Tribal Consultation Protocol (April 2018) and consultation pursuant to PRC Section 21080.3 has been concluded. If potential tribal cultural resources 		

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Tribal Cultural (cont.)	<p>that may be impacted by the project are identified through consultation with California Native American Tribes that are traditionally and culturally affiliated to a project area, the following shall be conducted:</p> <ul style="list-style-type: none"> • Documentation of any tribal cultural resources identified in the project area, which may require additional tasks such as ethnographic research and interviews. • If tribal cultural resources are identified in a project area, develop, before project implementation and in coordination California Native American Tribes that are traditionally and culturally affiliated to a project area, an approach for reducing such impacts. If any such tribal cultural resources are on or in the tide and submerged lands of California, this process shall also include coordination with the California State Lands Commission. 		
	<p>Mitigation Measure TCR-2: Implement Measures to Protect Tribal Cultural Resources during Project Construction or Operation.</p> <p>These measures include, but are not limited to, those outlined in PRC Section 21084.3. If tribal cultural resources or indigenous archaeological resources that may qualify as tribal cultural resources are encountered during project construction or operation of any project permitted under the Order, all activity within 100 feet of the find shall cease and the find shall be flagged for avoidance. The lead agency, a qualified archaeologist, defined as one meeting the U.S. Secretary of the Interior’s Professional Qualifications Standards for Archeology, and California Native American Tribes that are traditionally and culturally affiliated to a project area shall be immediately informed of the discovery. The qualified archaeologist and representatives from the notified Native American Tribes shall inspect the discovery and notify the lead agency of their initial assessment.</p>		

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Tribal Cultural (cont.)	<p>If the lead agency determines, based on recommendations from the qualified archaeologist and California Native American Tribes that are traditionally and culturally affiliated to a project area, that the resource may qualify as a tribal cultural resource (per PRC Section 21074), then the resource shall be avoided if feasible. If avoidance of the resource is not feasible, the lead agency shall consult California Native American Tribes that are traditionally and culturally affiliated to a project area to determine treatment measures to minimize or mitigate any potential impacts on the resource pursuant to PRC Section 21083.2 and State CEQA Guidelines Section 15126.4. If any such resources are on or in the tide and submerged lands of California, this process shall also include coordination with the California State Lands Commission. Once treatment measures have been determined, the lead agency shall prepare and implement a tribal cultural resources management plan that outlines the treatment measures for the resource. Treatment measures typically consist of the following steps:</p> <ul style="list-style-type: none"> ◆ Determine whether the resource qualifies as a tribal cultural resource (per PRC Section 21074) through analysis that could include additional ethnographic research, archaeological investigations, or laboratory analysis. ◆ If it qualifies as a tribal cultural resource (per PRC Section 21074) implement measures for avoiding or reducing impacts such as the following: <ul style="list-style-type: none"> • Avoid and preserve the resource in place through measures that include but are not limited to the following: <ul style="list-style-type: none"> - Plan and construct the project to avoid the resource and protect the cultural and natural context. - Plan greenspace, parks, or other open space to incorporate the resources with culturally appropriate protection and management criteria. 		

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**Table 1-1
 Summary of Mitigation Measures (PEIR Chapter 3)**

Resource(s)	Mitigation Measures	Monitoring Responsibility	Monitoring Compliance Record (Name / Date)
Tribal Cultural (cont.)	<ul style="list-style-type: none"> • Treat the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, through measures that include but are not limited to the following: <ul style="list-style-type: none"> - Protect the cultural character and integrity of the resource. - Protect the traditional use of the resource. - Protect the confidentiality of the resource. • Implement permanent conservation easements or other interests in real property, with cultural appropriate management criteria for the purposes of preserving or using the resource or place. 		
	<p>Mitigation Measure TRA-2: Prepare Waterway Traffic Control Plan A waterway traffic control plan shall be prepared before project construction begins. The plan shall be followed throughout construction to ensure that vessels can navigate safely and efficiently during construction. The plan shall identify vessel traffic control measures to reduce congestion and navigation hazards to the extent feasible. Construction zones in waterways shall be barricaded or guarded by readily visible barriers or other effective measures to warn boaters of their presence and restricted access. Warning devices and signage shall comply with the California Uniform State Waterway Marking System and shall be operational during nighttime hours and periods of dense fog.</p>		
	<p>Mitigation Measure TRA-3: Develop Channel Closure Plan for Affected Facilities Before construction begins in areas where temporary partial waterway closure is necessary, a temporary channel closure plan shall be developed. The plan shall identify alternative detour routes and procedures for notifying boaters of construction activities and partial closures including coordination with the U.S. Coast Guard, local boating organizations, and marinas. The channel closure plan shall be implemented as appropriate throughout construction.</p>		

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Resource(s)	Mitigation Measures	Monitoring Responsibility	Monitoring Compliance Record (Name / Date)
Tribal Cultural (cont.)	<p>Mitigation Measure TRA-4: Reduce Project Effects on Boat Passage and Transit Facilities</p> <p>To the extent feasible, the following actions shall be implemented to reduce impacts of project construction on boat passage and transit facilities:</p> <ul style="list-style-type: none"> ◆ To the extent feasible, ensure that safe boat access to public launch and docking facilities, businesses, and residencies is maintained. ◆ Coordinate with transit system operators, as appropriate, to establish alternative transit system routes to be rerouted during construction. ◆ Provide boat passage as an integral component of operable gate facilities, and design such facilities to provide uninterrupted boat passage when the gates are in the “up” position. Floating docks with mooring bits shall be provided along the shoreline on both sides of the boat passage facilities for boaters to use while waiting. ◆ Before construction begins in areas where bridge closure may be necessary, develop a traffic plan that identifies traffic control measures to reduce congestion and provide alternative routes. 		
	<p>Mitigation Measure TRA-5: Minimize Effects on Trails and Bicycle and Pedestrian Circulation and Identify Alternatives</p> <p>To minimize potential impacts of project construction on trails and bicycle and pedestrian circulation, the following actions shall be taken when feasible:</p> <ul style="list-style-type: none"> ◆ Minimize closure of paths. ◆ Provide for temporary or permanent relocation of the trails and bicycle pedestrian circulation locations to the extent feasible. ◆ Consult with the appropriate public works department to determine the most feasible alignment for facility relocation. 		

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Resource(s)	Mitigation Measures	Monitoring Responsibility	Monitoring Compliance Record (Name / Date)
Tribal Cultural (cont.)	<p>Mitigation Measure TRA-6: Reduce Emissions</p> <p>To comply with State CEQA Guidelines Section 15064.3(b), the following measures shall be taken to reduce effects associated with increased VMT:</p> <ul style="list-style-type: none"> ◆ Limit idling time for commercial vehicles, including delivery and construction activities. ◆ Use low- or zero-emissions vehicles, including construction vehicles. ◆ Institute a heavy-duty off-road vehicle plan and a construction vehicle inventory tracking system for construction projects. ◆ Promote ridesharing. ◆ Provide the necessary facilities and infrastructure to encourage the use of low- or zero-carbon emissions vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations). ◆ Increase the cost of driving and parking private vehicles, such as by imposing tolls and parking fees. ◆ Provide a shuttle service to public transit and worksites. ◆ Provide information on all options for individuals and businesses to reduce transportation-related emissions. 		
	<p>Mitigation Measure TRA-7: Conduct Routine Inspections</p> <p>An inspection and operation plan shall be developed and implemented, where applicable. The plan shall include procedures for routine inspections and facility operation to allow safe navigation should the facility become damaged or malfunctions. This plan shall include the following specific components:</p> <ul style="list-style-type: none"> ◆ Routine inspections and correction procedures to ensure that facility safety features are in good working order. 		

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Resource(s)	Mitigation Measures	Monitoring Responsibility	Monitoring Compliance Record (Name / Date)
Tribal Cultural (cont.)	<ul style="list-style-type: none"> ◆ Routine inspections and correction procedures for navigational hazards around facilities, including floating or submerged debris and the formation of shoals. 		
	<p>Mitigation Measure TRA-8: Repair Damaged Roadways and Trails Following Construction</p> <p>If damage to roads, sidewalks, trails, and/or medians occur, the construction contractor shall coordinate with the affected project proponents to ensure that any impacts are adequately repaired in accordance with applicable agency standards. Roads and/or driveways disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces. Roadside drainage structures and road drainage features (e.g., rolling dips) shall be protected by regrading and reconstructing roads to drain properly. The construction contractor shall work with the applicable agencies to document preconstruction conditions of road features before the start of construction.</p>		
	<p>Mitigation Measure FIRE-1: Develop and Implement a Fire Prevention Plan</p> <p>The following measures shall be implemented before and during construction of restoration projects permitted under the Order, where applicable:</p> <ul style="list-style-type: none"> ◆ For restoration projects in areas designated as Very High or High Fire Hazard Severity Zones, a project-specific fire prevention plan for construction and operation of the project shall be prepared and submitted to the CEQA lead agency for review before the start of construction. ◆ The draft copy of the fire prevention plan shall be provided to each fire agency (e.g., CAL FIRE and county or local municipal fire agencies) before the start of any construction activities in areas designated as Very High or High Fire Hazard Severity Zones. 		