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March 2, 2016

To: Coastal Commissioners and Interested Persons

From: Mark Delaplaine, Manager, Energy, Ocean Resources and Federal Consistency Division
Larry Simon, Federal Consistency Coordinator

Subject: **Addendum to CD-0004-15 – NOAA RC, Southern California**

This addendum provides a revision to the staff report. The additional language does not change the staff's recommendation that the Commission **concur** with CD-0004-15.

Revision to the Staff Report

The addition is shown below in underline.

Page 13, Section III.B (Habitat Restoration Projects), First Non-Italic Paragraph:

For any of the aforementioned projects that NOAA RC funds or for which it provides technical assistance, the agency requires that all regulatory conditions must be met and all environmental protection measures must be implemented in order to reduce the potential for ancillary environmental impacts. Those protection measures are provided in **Exhibit 2**. In addition, proposed projects must be consistent with the 2015 NMFS Programmatic Biologic Opinion for southern California restoration projects, or another applicable project-specific NMFS biological opinion that otherwise falls within the scope of this consistency determination, and must include implementation of any additional project-specific measures imposed by NOAA RC as needed to protect natural resources.

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Staff:	L. Simon-SF
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Hearing Date:	3/9/16

STAFF REPORT: REGULAR CALENDAR

Consistency Determination No.: **CD-0004-15**

Federal Agency: **NOAA Restoration Center**

Location: Santa Barbara, Ventura, Los Angeles, Orange, and San Diego Counties

Project Description: Community-Based Restoration Program to construct salmonid habitat restoration and other coastal and estuarine habitat restoration projects.

Staff Recommendation: Concurrence

SUMMARY OF STAFF RECOMMENDATION

The National Oceanic and Atmospheric Administration Restoration Center (NOAA RC) has submitted a general consistency determination for its Community-based Restoration Program (CRP) activities in the coastal zone of the following southern California counties: Santa Barbara, Ventura, Los Angeles, Orange, and San Diego. This consistency determination builds on the success of general consistency determination CD-021-13 (concurred with by the Commission on May 2013) for similar CRP activities on the northern and central California coast and on the successful 19-year history of the CRP in restoring and enhancing coastal resources.
The CRP constructs salmonid habitat restoration projects such as biotechnical stream bank stabilization, riparian revegetation, instream restoration, water conservation, fish passage barrier

removal, and invasive species removal. The CRP also constructs a variety of coastal and estuarine habitat restoration projects designed to restore and enhance seagrass beds, kelp forests, mudflats, salt marsh, brackish marsh, and other tidally influenced habitats.

Commission concurrence with this consistency determination would allow NOAA RC to provide funding, technical support, monitoring, and annual reporting for specific conservation projects selected and approved under the CRP for the restoration and enhancement of coastal resources without further formal review by the Coastal Commission. NOAA RC will notify the Commission staff annually, or on an as needed basis consistent with project timelines, of selected projects before their implementation, so that Commission staff can review them for compliance with this consistency determination. Any activities that do not fall within the scope of the CRP and this consistency determination will be subject to the Commission's normal regulatory review processes.

NOAA RC will also prepare an annual report summarizing the results of projects implemented under the CRP during the most recent construction season within the coastal zone, and the results of post-construction implementation and effectiveness monitoring for that year and previous years, if appropriate. The annual report shall include a summary of the specific type and location of each project and the amount of habitat restored.

The standard of review for consistency determinations is Chapter 3 of the Coastal Act. The proposed program includes protective measures to ensure that conservation projects will conform to the Chapter 3 policies of the Coastal Act, enhance natural resources, improve coastal water quality, protect and enhance environmentally sensitive habitats, improve populations of threatened and endangered species, and help maintain the environmental viability of agricultural lands. The staff recommends the Commission find the proposed program consistent with the stream, wetlands, ESHA, water quality, agriculture, cultural, and visual resource policies of the Coastal Act (Sections 30230, 30231, 30233, 30240-43, 30244, and 30251).

Commission staff recommends concurrence with CD-0004-15. The motion to implement this recommendation is found on Page 4, below.

TABLE OF CONTENTS

I. FEDERAL AGENCY'S CONSISTENCY DETERMINATION

The NOAA Restoration Center has determined the project consistent to the maximum extent practicable with the California Coastal Management Program (CCMP).

II. MOTION AND RESOLUTION

Motion:

*I move that the Commission **concur** with consistency determination CD-0004-15.*

Staff recommends a **YES** vote on the motion. Passage of this motion will result in a concurrence in the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution:

*The Commission hereby **concurs** with consistency determination CD-0004-15 by the NOAA Restoration Center on the grounds that the project is fully consistent, and thus consistent to the maximum extent practicable, with the enforceable policies of the California Coastal Management Program.*

III. FINDINGS AND DECLARATIONS

A. PROJECT BACKGROUND AND PROCEDURES

The National Oceanic and Atmospheric Administration Restoration Center (NOAA RC) in Santa Rosa has submitted a general consistency determination for a program to simplify the permit process for landowners and non-profit organizations as they undertake habitat improvement projects in the coastal zone of southern California, primarily to benefit threatened and endangered salmonid species and to restore other coastal and estuarine habitats. Under this consistency determination, NOAA RC proposes to expand its Community-based Restoration Program (CRP), which provides funding and technical assistance for habitat restoration projects in California, into the coastal zone areas of Santa Barbara, Ventura, Los Angeles, Orange, and San Diego Counties.

The proposed southern California habitat restoration program is similar to NOAA's northern/central California habitat restoration program (CD-021-13) which the Commission concurred with in May 2013:

In May 2013, the Commission unanimously approved a federal Consistency Determination (CD-021-13) for CRP activities in the Coastal Zone of the North and Central California Coasts, from the Oregon border through San Luis Obispo County. The rate of NOAA RC project implementation in the Coastal Zone

increased significantly after creation of CD-021-13, with 12 projects thus far approved. Further, NOAA RC and its many restoration partners now actively seek to restore important coastal resources, as the more efficient approval process creates a higher likelihood that a project will be implemented and allows more resources to be applied towards on the ground coastal resource restoration.

Exhibit 1 provides a brief summary of the twelve projects approved to date for implementation under the provisions of CD-021-13.

NOAA RC's proposed southern California habitat restoration program also builds on the success of the 17-year history of the CRP program (including restoration of riparian habitat, tidal and freshwater wetlands, and submerged aquatic vegetation), and on negative determinations made by NOAA RC and concurred with by the Commission's Executive Director for the following CRP habitat restoration projects in the coastal zone:

- Salmon Creek Estuary Fish Habitat Improvement Structures, Sonoma County (ND-074-09)

- Willow Creek 2nd Bridge Area Project, Sonoma County (ND-023-10)

- Pescadero Creek Lagoon Sandbar Breaching and Ecological Function Project, San Mateo County (ND-037-12, ND-0221-13, ND-0046-14, ND-0029-15)

The following NOAA RC restoration projects previously completed in southern California are examples of the types of projects that would be implemented under CD-0004-15:

- Carpenteria Creek Watershed – Pinkham Fish Passage Improvement
- Arroyo Sequit Creek Steelhead Barrier Removal
- Topanga Creek Berm Removal
- Long Point Palos Verdes Kelp Restoration
- Alamitos Bay Olympia Oyster Restoration – Long Beach
- Upper Newport Bay Eelgrass Restoration

The term of this consistency determination program extends for ten years. NOAA RC states that a summary report analyzing the achievements and effectiveness of the program, and including recommendations for any needed program modifications, will be submitted to the Commission at the close of the term. The program may be renewed for a second ten-year term should NOAA RC propose such an extension and the Commission concur.

NOAA RC reviews in the subject consistency determination the purpose of the proposed program and the need for an alternate and more efficient regulatory review process for restoration projects in the southern California coastal zone:

NOAA RC's CRP has funded and provided technical assistance for habitat restoration projects along the coast of California since 1996. CRP projects benefit a range of coastal resources, including streams, floodplains, wetlands and

> *estuaries, giving populations of threatened and endangered salmon and steelhead better conditions for spawning, rearing and migration, and improving conditions for other aquatic and riparian species.*
>
> *For 19 years, from 1996 through 2014, a total of 375 CRP projects were completed in California; of which at least 20 had occurred in the Coastal Zone - an average of around one project per year. Where a Consistency Determination was not in place, projects were permitted under the Coastal Act through issuance of Coastal Development Permits (CDPs) by a certified Local Coastal Program (LCP) or by the California Coastal Commission (Commission).*
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> *NOAA RC will take the lead role of insuring that proposed restoration projects meet the environmental and coastal protection standards of the Commission, thereby reducing the amount of time spent on permitting individual projects. This programmatic approach will allow NOAA RC to focus more time on design, construction and other aspects of the technical assistance it provides to applicants, furthering coastal resource restoration goals.*
>
> *NOAA RC is proposing this alternative regulatory process for environmentally beneficial projects that meet the standards of the Coastal Act as well as the federal Endangered Species Act and other federal and state fish and wildlife and water quality laws and regulations. Projects that are consistent with the terms of this review will be implemented with NOAA RC oversight, avoiding the need for in-depth LCP or Commission project-by-project review. This process gives the Commission the opportunity to programmatically review NOAA RC's clear, well-defined goals, processes, and procedures for consistency with the Coastal Act and the CCMP.*

In this consistency determination the Commission is reviewing a general habitat restoration program and general types of projects rather than a specific project at a single location. NOAA RC has made this consistency determination pursuant to the federal regulations implementing the Coastal Zone Management Act (CZMA), 15 CFR §930.36(c). These regulations provide that:

> *In cases where Federal agencies will be performing repeated activity other than a development project (e.g., ongoing maintenance, waste disposal) which cumulatively has an effect upon any coastal use or resource, the Federal agency may develop a general consistency determination, thereby avoiding the necessity of issuing separate consistency determinations for each incremental action controlled by the major activity. A Federal agency may provide a State agency with a general consistency determination only in situations where the incremental actions are repetitive and do not affect any coastal use or resource when performed separately. A Federal agency and State agency may mutually agree on a general consistency determination for de minimis activities (see §930.33(a)(3)) or any other repetitive activity or category of activity(ies). If a Federal agency*

> *issues a general consistency determination, it shall thereafter periodically consult with the State agency to discuss the manner in which the incremental actions are being undertaken.*

NOAA RC's current proposal (developed in coordination with Sustainable Conservation, a non-profit organization with expertise in coordinating habitat restoration work with private landowners, government agencies, and other non-profit entities) is based on an existing model of coordinated, multi-agency, regulatory review, including the success of the aforementioned CD-021-13, that ensures the integrity of agency mandates but makes permitting of conservation projects more accessible to farmers, ranchers, rural landowners, and local non-profit restoration groups. This increased accessibility, in turn, has been shown to increase the number and quality of conservation projects and beneficial effects in a given area.

Regarding funding of potential projects under this consistency determination, NOAA RC reports that proposals selected for implementation are primarily funded through cooperative agreements with project partners (e.g., Resource Conservation Districts, local restoration practitioners, non-profits, land conservancies) who conduct outreach to willing landowners to collaborate on voluntary restoration projects on their properties. CRP projects are implemented on private or public lands and the majority of projects include an outreach or education component to promote and enhance natural resource stewardship. By promoting community involvement and stewardship of local projects, the CRP leverages between two and three times the federal investment through partner organization in-kind and matching contributions. Multi-year cooperative agreement awards are also considered, and additional releases of Congressional funds may be used to fund selected proposals without further competition. Awards are dependent upon the amount of funds Congress makes available to NOAA for this purpose in annual budgets. Funds will be administered by NOAA RC. A new three-year federal funding opportunity is expected to be released by February 2016 and is anticipated to be at a similar, if not greater, level than for the previous three-year period.

NOAA RC also supports non-funded projects included in the CRP. These project types include hands-on technical assistance; participation in feasibility studies, design plans, and construction oversight to ensure benefits are realized; support in development of appropriate monitoring protocols to ensure project performance can be evaluated; tracking the progression of restoration projects through site visits and progress report evaluation; and involvement in public meetings and events to discuss or highlight restoration activities.

All habitat restoration projects authorized through the CRP are designed and implemented consistent with techniques and minimization measures presented in the California Department of Fish and Wildlife's *California Salmonid Stream Habitat Restoration Manual* and other widely accepted manuals guiding habitat restoration and erosion control work in California. The CRP requires detailed avoidance and minimization measures for all projects to reduce the potential for ancillary effects to listed species and riparian and aquatic habitats. Funded and technical assistance projects are evaluated by NOAA RC biologists and other technical staff in the CRP project selection process. Non-funded projects eligible for technical and regulatory assistance (including coverage under a NOAA Fisheries programmatic biological opinion) might receive help leveraging alternate funding sources and are prioritized separately by NOAA RC staff.

Evaluation criteria are similar for both processes and include, but are not limited to, the following:

- Importance and Applicability to Program Priorities
- Project Benefits
- Technical/Scientific Merit
- Qualifications of Applicant or Project Partner
- Cost Effectiveness
- Outreach, Education, and Community Involvement

Resource Conservation Districts, land trusts, non-profit organizations, and state legislators have submitted letters to the Commission supporting the proposed program and consistency determination as a vehicle to increase the number of habitat restoration projects in the coastal zone, while concurrently improving permitting efficiency and protecting sensitive habitat and species. These letters are provided in **Exhibit 4**.

To improve project applicants' navigation through the regulatory process, NOAA RC staff provides applicants with assistance applying for and completing the required permits and authorizations, including cooperation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (NMFS):

> *A key component of the regulatory process includes consultation with the U.S. Fish and Wildlife Service (FWS) and intra-agency consultation with NMFS under Section 7 of the Endangered Species Act (ESA), for projects that may affect threatened and endangered species and designated critical habitat. Consultation with NMFS also may include, as appropriate, analysis of potential effects to Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act.*
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> . . .
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> *Since the completion of programmatic BOs* [Biological Opinions] *for the North and Central California Coasts, many of the restoration projects in those regions which receive NOAA RC funding or technical assistance have utilized these programmatic BOs to meet the ESA Section 7 consultation requirement. These programmatic consultations were written to facilitate the review and authorization of multiple projects of similar scope and purpose, and to encourage implementation of more restoration projects using a more efficient ESA Section 7 consultation process.*
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> *The programmatic BOs provide ESA Section 7 coverage for NOAA RC-funded or authorized projects and projects that fit the parameters of the BOs that require a Clean Water Act Section 404 permit from the Corps (almost all CRP projects require Corps permits). Projects that do not meet the standards for these programmatic BOs – due to their size, proposed methods or materials, or any*

other reason – can be reviewed through NMFS' individual project Section 7 consultation process, or through other existing programmatic BOs.

NOAA RC states that since 2006, a programmatic BO for the Central Coast (*Santa Rosa Office Biological Opinion*) has been used for most NOAA RC projects (over 65 projects thus far) affecting salmonid habitat from Mendocino County south to San Luis Obispo. Recognizing the value of this BO's programmatic approach for ESA Section 7 consultations, in 2012 NOAA RC and the Corps of Engineers completed a second programmatic BO with NMFS for projects affecting salmonid habitat on the North Coast from the Oregon border to Mendocino County (*Arcata Office Biological Opinion*).

A new programmatic Biological Opinion from the NMFS Long Beach Office was signed December 23, 2015, and will be used for most NOAA RC projects affecting salmonid habitat in southern California under the subject consistency determination (*Programmatic Biological Opinion for Fisheries Habitat Restoration Projects in South-Central and Southern California*, National Marine Fisheries Service, December 2015). This southern California programmatic BO authorizes up to 150 salmonid habitat restoration projects over a 10-year period and includes the following types of projects:

- Instream habitat improvement
- Instream barrier modification and fish passage improvement
- Bioengineered stream bank stabilization and riparian habitat restoration
- Upslope watershed restoration
- Small dam removal
- Off-channel/side-channel habitat
- Water conservation

These restoration practices closely follow detailed technical descriptions found in the California Department of Fish and Wildlife *Salmonid Stream Habitat Restoration Manual*, NMFS' *Guidelines for Salmonid Passage at Stream Crossings*, NMFS' *Fish Screening Criteria for Anadromous Salmonids*, and other recognized restoration manuals and sources. All projects proposed for coverage under a programmatic BO must comply with detailed environmental protection measures, including project-type prohibitions. Construction monitoring and post-project monitoring and reporting requirements follow standard procedures established by the California Department of Fish & Wildlife (CDFW).

In its consistency determination NOAA RC also addresses species recovery plans for the 28 distinct populations of listed Pacific salmon and steelhead species, all of which are experiencing significant declines or are nearly extinct. NMFS is required by the Endangered Species Act to develop recovery plans for the conservation and survival of these listed species. NOAA RC states that NMFS has completed and published the *Southern California Steelhead (SCS) Final Recovery Plan (January 2012)* for salmonids occurring within the geographic area of this consistency determination. CRP projects moving forward in southern California under CD-0004-15 will focus on implementation of this recovery plan. Restoration efforts are focused in priority watersheds identified in the recovery plan, but projects are not exclusively limited to these areas.

NOAA RC previously completed a *Program Environmental Assessment (PEA)* for the CRP in 2002. From 2002 onward, NOAA RC analyzed the potential environmental impacts of individual projects by tiering from the *PEA* to streamline NEPA compliance for the projects it conducts. With steady growth in the number and scope of its projects, in 2006 NOAA RC developed a *Supplemental PEA (SPEA)* to ensure continued compliance with NEPA and other applicable laws and regulations. As NOAA-RC's restoration program has continued to evolve, it determined that the *PEA* and *SPEA* were becoming outdated and should be replaced with a *Program Environmental Impact Statement (PEIS)*. The *PEIS* simplifies NOAA RC's NEPA compliance process (eliminating duplicative NEPA documentation for many projects), and supports program-level decision making within NOAA RC. The *Final PEIS* was issued in June 2015.

NOAA RC and state and federal regulatory agencies have cooperatively developed permits and agreements to protect and restore sensitive habitats and resources, and implementation of CRP projects is based on those agreements. NOAA RC, Resource Conservation Districts (RCD), Sustainable Conservation, and the private landowners, lessees, and managers who will construct the conservation projects work cooperatively together to implement the CRP. NOAA RC has established specific guidelines and procedures for the installation, maintenance, and monitoring of the projects included in this consistency determination, to ensure that project development activities, implemented with the assistance of the RCD (or another entity) and the landowner/operator, are consistent with NOAA RC and CRP objectives and comply with all applicable state and federal regulations, including the Coastal Act for projects located within the coastal zone. To address potential direct, indirect, and cumulative effects to sensitive species, habitats, and coastal water quality associated with the construction and installation of the proposed projects, the CRP includes a detailed set of environmental protection measures (**Exhibit 2**). These protective measures ensure that conservation projects implemented under this consistency determination will conform to the policies of the Coastal Act, and protect environmentally sensitive habitats and the quality and biological productivity of coastal waters.

Commission concurrence with this consistency determination would allow NOAA RC to provide funding, technical support, monitoring, and annual reporting for specific conservation projects selected and approved by NOAA RC for the enhancement of aquatic habitat and control of sedimentation within Santa Barbara, Ventura, Los Angeles, Orange, and San Diego counties without further formal review by the Coastal Commission. NOAA RC will notify the Commission staff annually of selected projects before their implementation, so that staff can review them for compliance with this consistency determination. Any activities that do not fall within the scope of the CRP and this consistency determination will be subject to the Commission's normal regulatory review processes.

NOAA RC proposes in the subject consistency determination that the CRP be implemented in the coastal zone of the aforementioned counties for ten years beginning in 2016, with a full evaluation and summary report of the program's activities and progress provided to the Commission in 2026. Landowners working on projects not eligible for inclusion in the CRP consistency determination, or on projects determined by the NOAA RC to require individual coastal development permits or individual consistency determinations due to their complexity or

potential adverse effects on coastal resources, will be evaluated individually by the Commission or the appropriate local government.

Federal consistency review is therefore an appropriate way for the Commission to evaluate the Chapter 3 consistency of this federal project, which is not subject to coastal development permit (CDP) requirements. Commission concurrence with this federal consistency determination will supplant any coastal development permit requirements for activities covered under this federal project (i.e., for those restoration projects that meet the requirements of NOAA RC's Community-based Restoration Program), both within the CDP jurisdiction of the aforementioned coastal counties, as well as within the Commission's original jurisdiction. Normal CDP requirements will still apply for those restoration projects located within the coastal zone that are not specifically authorized by this consistency determination.

B. HABITAT RESTORATION PROJECTS

Proposed habitat restoration projects included in this programmatic consistency determination fall into six general categories as summarized by NOAA RC (additional project details are provided in **Exhibit 3)**:

> ***Salmonid Habitat and Related Upland Restoration Projects****. Salmonid habitat and related upland restoration projects are intended to restore degraded salmonid habitat through improving stream cover, pool habitat and spawning gravel; removing or modifying barriers to fish passage; ensuring adequate flows; and reducing or eliminating ongoing erosion or sedimentation impacts. Salmonid habitat restoration projects authorized through the CRP must be designed and implemented consistent with the techniques and minimization measures presented in CDFW's California Salmonid Stream Habitat Restoration Manual, NMFS's Guidelines for Salmonid Passage at Stream Crossings, NMFS Fish Screening Criteria for Anadromous Salmonids, or other appropriate restoration manuals all of which contain extensive guidance on effective implementation of habitat restoration practices and pre- and post-construction protection measures. Potential projects include:*
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> - *Instream Habitat Structures and Improvements*
> - *Barrier Modification for Fish Passage Improvement*
> - *Riparian Habitat Restoration and Bioengineering*
> - *Upslope Watershed Restoration*
> - *Removal of Small Dams*
> - *Creation of Off-Channel/Side Channel Habitat*
> - *Water Conservation Projects*
> - *Fish Screens*
> - *Headgates and Water Measuring Devices*
> - *Invasive Species Control Projects*
> - *Sediment Removal*

Wetland Restoration. *NOAA RC funds many kinds of wetland restoration activities. These activities include the removal or addition of substrate to create the desired elevation for wetland vegetation and fish habitat. Techniques include removing sediment and possibly vegetation to achieve intertidal elevations, introducing appropriate sediments such as dredged material to achieve the required elevation, and planting native vegetation. Other techniques include berm or levee breaching or modification for tidal flow. Most often, the goal is to achieve an intertidal wetland, but frequently the project is designed to result in a mosaic of habitats including shallow subtidal, intertidal, and upland habitats.*

Submerged Aquatic Habitat Restoration. *Submerged Aquatic Vegetation (SAV) restoration involves transplanting or seeding subtidal habitats in bays and estuaries with seagrasses. SAV is usually planted to provide nursery and feeding habitat for a variety of aquatic fish and other organisms. In addition, SAV provides fish and other marine species hiding places from predation and competition. SAV beds help stabilize bay sediments, making it easier for additional SAV or other stable substrate dependent organisms, such as oysters, to establish. Most of the SAV restoration in California has been to eelgrass (Zostera marina), which can live in fully marine to brackish waters.*

Shellfish Habitat and Shellfish Restoration and Creation. *NOAA RC funds many kinds of shellfish restoration projects. In California, funded projects primarily focus on native oysters (e.g. Ostrea lurida) but may also restore other shellfish species such as hard clams, scallops and abalone. Techniques can be grouped into two types: placement of shellfish substrate and introduction of shellfish. These types are implemented separately, or at the same restoration site, depending on the needs of the locality.*

Living Shorelines. *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. 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 shell for native shellfish settlement enhance habitat values by creating new living space. The techniques also increase connectivity of wetlands and deeper intertidal and subtidal lands while providing a measure of shoreline protection. Design strategies using rock armoring, rock sill, groin, or breakwater installations are not covered under this CD.*

In addition, California's Climate Adaptation Strategy recommends the use of 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 2014). The State Coastal Conservancy Climate Change Policy also supports the use of Living Shorelines for their ability

to provide stronger estuarine habitat resiliency to future sea level rise and other climate change related effects (SCC 2011).

Kelp Forest Restoration. *Kelp forests are important structural habitat components of the near shore marine environment that provide nursery and feeding grounds for thousands of marine species. They are also instrumental in the carbon sequestration process, which is important to maintaining healthy CO_2 levels in the environment. Kelp forest restoration has been implemented in Southern California, where kelp forests have been reduced by 80% over the past century. Kelp forest restoration occurs in subtidal environments with hard substrate for kelp holdfast attachment. NOAA RC has worked with the California Coastkeeper Alliance both in Los Angeles and Orange Counties to help restore beds along the coast. Most kelp restoration projects are very labor intensive and therefore the overall footprint of restoration is small, typically one to three acres.*

For any of the aforementioned projects that NOAA RC funds or for which it provides technical assistance, the agency requires that all regulatory conditions must be met and all environmental protection measures must be implemented in order to reduce the potential for ancillary environmental impacts. Those protection measures are provided in **Exhibit 2**. In addition, proposed projects must be consistent with the 2015 NMFS Programmatic Biologic Opinion for southern California restoration projects, and must include implementation of any additional project-specific measures imposed by NOAA RC as needed to protect natural resources.

NOAA RC reports that pre- and post-construction monitoring will be conducted for all projects implemented under this consistency determination:

Monitoring and reporting will include photo-documentation (consistent with the pre-construction monitoring requirements), as-built drawings (post-construction plans for engineered projects); documentation of the required avoidance, minimization, and other environmental protection measures that were implemented; number (by species) of fish and wildlife relocated; and any incidental injury or mortality that resulted from the project. The applicant(s) shall submit this information to NOAA RC within 6 months post-construction for inclusion in their internal annual reporting process, as described below.

A description of whether the project is meeting success criteria for revegetation and other parameters must also be submitted, starting at 6 months post-construction. Depending upon the type of project, a minimum of 1 year of monitoring is required. However, based upon funding availability, project goals, and federal, state and local agency monitoring requirements, more years of monitoring may be added. Fulfillment and completion of monitoring requirements is the responsibility of the project applicant. Regardless of the project's post-construction monitoring period, NOAA RC engages and works collaboratively with partner agencies and project proponents if issues arise that could negatively affect project outcome and success.

NOAA RC also states that it has a long record of effective project coordination, restoration implementation, and post-project monitoring under the CRP and the northern/central California programmatic consistency determination:

> *The success of NOAA RC's Program stems from early coordination and staff involvement in design, funding, permitting, construction and post-project monitoring and compliance – for all projects NOAA RC funds, as well as those for which only technical assistance and oversight are provided. When NOAA RC is involved in a project at any level, staff biologists and other specialists communicate frequently with the project proponents during planning and design stages, coordinate closely during project implementation, and then remain involved to ensure that post-project compliance and effectiveness monitoring is carried out. In the CRP's 19-year history and the Damage Assessment, Remediation and Restoration Program's (DARRP) 22-year history, NOAA RC has never experienced a project implementation issue that was not resolved.*

For the subject consistency determination, NOAA RC proposes to follow the same project notification process successfully used under CD-021-13 for the northern and central California habitat restoration program. By May 15 of each year (or on an as-needed basis consistent with project timelines) NOAA RC will provide the Commission staff with a list of and summary information about qualifying projects to be covered by NOAA RC's programmatic southern California consistency determination for the upcoming year. Project information will include the title of the project, project applicant and partners, project location and expected habitat benefits, and an analysis of project compliance with this consistency determination. This information will be submitted to the Commission staff prior to final NOAA RC approval of any proposed project. The Commission staff will then review a proposed project for compliance with this consistency determination, request additional or clarifying information from NOAA RC as needed, and determine if the project is consistent with this consistency determination. Any proposed projects that do not fall within the scope of this consistency determination will be subject to the Commission's normal regulatory review processes.

NOAA RC will provide the Commission an annual report for the program summarizing the results and status of all projects implemented under this consistency determination during the most recent construction season. This report will include a list of participating landowners; describe the type, location, purpose, and design of each project; quantify the area affected, the amount of habitat restored, and any impacts to coastal resources for each project; provide project photo documentation; provide post-construction monitoring results for each project; and for multi-year projects, outline the type of work to be conducted in the following year.

C. OTHER AGENCY APPROVALS

U.S. Army Corps of Engineers (Corps)
Applicants for all projects which are funded by NOAA RC, or which receive NOAA RC technical assistance, must complete the federal Clean Water Act Section 404/Section 10

permit process with the Corps' Regulatory Division in the Los Angeles District, which has jurisdiction along the Southern California coast.

National Marine Fisheries Service (NMFS)
Consultation with NMFS has been completed by NOAA RC on a programmatic basis for coastal California, through Biological Opinions and incidental take statements issued by the NMFS Long Beach office.

U.S. Fish and Wildlife Service (FWS)
Consultation with FWS is completed almost exclusively on an individual basis for all NOAA RC restoration projects, resulting in a Biological Opinion and incidental take statement, or an informal letter of concurrence.

State Water Resources Control Board/Regional Water Quality Control Board
NOAA RC applicants with projects that may affect federal or state waters must receive a federal Clean Water Act Section 401 Water Quality Certification, and in some cases additional Waste Discharge Requirements, to comply with Section 401 and the Porter-Cologne Act. These permits are issued by the State Water Board or appropriate Regional Water Board. Applicants with projects that qualify may choose to utilize the State Water Board's 2012 General Order for Clean Water Act Section 401 Water Quality Certification for Small Habitat Restoration Projects (an interim reissuance of the expired 2007 Small Habitat Restoration General Order).

California Department of Fish and Wildlife
Applicants for NOAA RC restoration projects must receive either a Section 2081 incidental take permit or a Section 2080.1 Consistency Determination (documenting consistency with a federal incidental take statement) from CDFW for compliance with California Endangered Species Act. Section 1602 of the California Fish and Wildlife Code requires a project applicant to notify CDFW of any proposed activity that may substantially modify a river, stream or lake; if needed, a Lake or Streambed Alteration (LSA) Agreement must be prepared and submitted to CDFW.

CEQA
NOAA RC project applicants must ensure that CEQA is complied with for their projects, through an exemption (Categorical Exemption 15333 for Small Habitat Restoration Projects or another exemption), a Negative Declaration (ND) or Mitigated Negative Declaration (MND), Environmental Impact Report (EIR), or through an existing programmatic ND, MND, or EIR for a local coordinated permit program or other restoration program.

Local Plans and Policies
NOAA RC project applicants must comply with all applicable city and county regulations and codes, including those issued by local planning, public works and other departments. All required city and county permits must be obtained by the applicant before a NOAA RC project can be implemented.

C. STREAMS/WETLANDS/ESHA/WATER QUALITY

Coastal Act Section 30230 states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Coastal Act Section 30231 states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Coastal Act Section 30233 states in part:

> *(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
>
> > *(1)New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
> >
> > *(2)Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
> >
> > *(3)In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*
> >
> > *(4)Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*

> *(5)Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*
>
> *(6)Restoration purposes.*
>
> *(7)Nature study, aquaculture, or similar resource-dependent activities.*

Coastal Act Section 30240 states:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
>
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

The purpose of NOAA RC's CRP is to provide funding and technical assistance for high quality habitat restoration and erosion control projects in coastal California. CRP projects will provide substantial benefits to habitat for anadromous fish and other aquatic species, water quality, coastal wetlands, upland environmentally sensitive habitats, and estuarine and marine environments. However, whenever work of this kind takes place, the potential exists for long- and short-term disturbance or degradation of the environment due to incidental effects. The projects and activities approved for funding and/or technical assistance by the NOAA RC are expressly designed to avoid long-term disturbance or degradation altogether, minimize any short-term adverse impacts, protect and enhance sensitive habitat, improve water quality in coastal watersheds, restore coastal resources to a more naturally functioning state, and improve the environmental sustainability of coastal agriculture operations.

In order to participate in the CRP, projects must clearly meet the program's goals and standards. CRP activities that will increase the health of wetlands, streams, and other environmentally sensitive habitats as part of a project include, but are not limited to:

- Instream Habitat Structures and Improvements
- Bioengineering and Riparian Habitat Restoration
- Upslope Watershed Restoration
- Creation of Off-channel/Side-channel Habitat
- Invasive Species Control

The need for conservation efforts in riparian and wetland habitats of the coastal zone is high. NOAA RC reports that:

> *. . . losses of riparian habitat in California are estimated to be between 85-98%, depending on the region . . . Many streams that anadromous fish depend on have in-stream flows that have declined 30-50% from what they once were, and in some*

Southern California streams, flows during summer months have become non-existent. Climate change is exacerbating the issue of low instream flows, and is an additional reason why water conservation projects are essential.

Within the CRP program area proposed for this consistency determination are impaired waterways. Many of these waterway impairments – including water temperature, sediment, nutrients, pathogens, other organics, pesticides, and hydro-modification – affect habitat for fish and other aquatic species and water quality. Unstable geology, erodible soils and high seasonal precipitation cause erosion and sedimentation in these waterways. Sedimentation reduces water quality and impairs spawning and rearing of salmonids, including the protected coho salmon and steelhead. Roads constructed along canyon floors and steep inner gorges cause channel realignment resulting in direct delivery of sediment to waterways. Excess sediment alters the natural hydrology of coastal wetlands, and affects recruitment of native wetlands vegetation and aquatic life. The lack of riparian vegetation leads directly to high stream temperatures and runoff from agricultural fields and other land uses into waterways. Stream modifications from decades of flood control efforts, channelization, and small dams have altered natural fluvial regimes and degraded stream habitat. At river and stream mouths, sediment, pollutants, and constructed fill have degraded and destroyed estuarine resources, including oyster and other native shellfish populations and submerged aquatic vegetation. These resource impairments can be addressed by CRP projects and activities, which are designed to reduce and eliminate anthropogenic sources of sediment, and benefit riparian, wetlands, estuarine and uplands habitat, and improve water quality.

To protect environmentally sensitive habitats, the NOAA RC ensures that, in time and manner of implementation, all funded and authorized CRP projects meet the program's goals and standards, comply with its environmental protection measures (**Exhibit 2**), and comply with all conditions required by programmatic and project permits and authorizations from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, State and Regional Water Quality Control Boards, and the Commission. The consistency determination includes a detailed description of the environmental commitments that will be attached to each eligible project in the CRP. These measures, used to the maximum extent possible, will minimize impacts to sensitive species and habitats, and include, but are not limited to, the following:

- Limit construction temporally in order to avoid spawning, rearing and migration periods of anadromous fish, and the nesting or breeding seasons of birds and terrestrial animals;
- Limit construction temporally in order to reduce erosion during rainy periods;
- Optimize planting of seedlings by planting close to or during the rainy season;
- Limit the size and grade of disturbance to existing grades;
- Restrict the number and size of access routes, staging areas and total work site area to the minimum necessary;
- Restrict habitat improvements to techniques that are in accordance with the "California Salmonid Stream Habitat Restoration Manual"; and
- Use native plants in revegetation efforts, and use native plants of local genetic stock where feasible.

The CRP's environmental protection measures, and all conditions required by the NOAA RC's southern California *Biological Opinion* and other federal and state regulatory permits and approvals, will ensure that the short-term impacts that could result from implementation of CRP projects will not adversely affect riparian areas, wetlands, the marine environment, and water quality. The proposed restoration activities are allowable uses under Sections 30233 and 30240 of the Coastal Act. The long-term benefits of the CRP in the coastal zone will enhance riparian vegetation and bank stability, provide additional habitat areas for foraging, breeding, and shelter, and improve water quality and aquatic habitats by decreasing sediment and other pollutants flowing to coastal waters. The Commission therefore finds that the project is consistent with Sections 30230, 30231, 30233, and 30240 of the Coastal Act.

D. AGRICULTURE

Coastal Act Section 30241 states in part:

> *The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas' agricultural economy. . . .*

Coastal Act Section 30242 states:

> *All other lands suitable for agricultural uses shall not be converted to nonagricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.*

Coastal Act Section 30243 states:

> *The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities.*

One goal of the CRP is to enhance agricultural lands through conservation efforts that will enhance soil and water resources. Consistent with Coastal Act agricultural policies, proposed implementation of the CRP in the coastal zone will help maintain the long-term viability of farming, ranching, and grazing in the coastal zone by reducing the loss of valuable top soil subject to erosion, improving dependable water supplies for agricultural operations, and increasing the function and health of waterways passing through agricultural properties. By improving the compatibility between agricultural land uses and the protection of sensitive habitat areas and waterways, the CRP will assist in preserving the long-term viability of both agricultural and natural resources.

Most of the conservation practices approved for this program act as part of the farming or ranching operation even if the specific project location can no longer be used for economic production. The practices to be implemented in this project are an integral part of production since they enhance resource conditions and prevent loss of productive resources from adjacent crop or rangeland. This does not constitute conversion of agricultural lands to non-agricultural use, as these practices serve the agricultural purpose of controlling erosion and enhancing waterways. The beneficial impacts of retaining significant amounts of soil on site that would otherwise be lost to erosion, and increasing the quality of waterways on agricultural land, greatly outweigh the minor loss in areas of production from a site-specific conservation structure. Minimal conversion of agricultural lands to non-agricultural use would occur under the CRP in Southern California.

The NOAA RC states that:

> *Although a CRP project could result in the restoration and conversion of current and/or historic agricultural lands or anthropogenic fill into native salt and brackish marshlands and riparian floodplain habitat, these types of projects are proposed very infrequently. Since 1996 only two CRP projects involving the restoration and conversion of agricultural lands to wetlands and riparian habitat have been implemented in the Coastal Zone of California. This relatively minor loss of agricultural lands was offset by important gains in coastal wetlands and riparian floodplain acreage – two of the coastal habitats most impacted by land uses in the Coastal Zone since 1850 (by conversion of natural habitat due to construction of dikes, levees, and channels; fill of habitat for roadways, railroad crossings, and flood control projects). In addition, some areas currently or historically used for agricultural production are likely to be inundated by rising sea levels due to climate change, and their restoration to natural marshlands and floodplains would help to provide resiliency to coastal resources, including protection of higher elevation agricultural lands.*

In past reviews of CRP projects noted above, the Commission found proposed habitat improvements consistent with Sections 30241 and 30242 because only minor amounts of agricultural land would be converted to habitat or water quality improvement measures.[1] Therefore, the Commission finds that the proposed implementation of the CRP in the coastal zone would help to protect agricultural lands and resources and is consistent with Sections 30241, 30242, and 30243 of the Coastal Act.

E. CULTURAL RESOURCES

Coastal Act Section 30244 states:

> *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

[1] The Commission also found, in other contexts, conversion of agricultural land for habitat restoration activities consistent with the Coastal Act under the conflict resolution provision (Section 30007.5).

Humans have occupied coastal California from as long as 15,000 years ago, and have left important and widespread cultural resources dating from historical and pre-historic times. The potential exists for encountering cultural resources from a variety of the CRP's activities, although most projects will take place in areas that have already been developed, modified, cultivated or otherwise disturbed by human land uses, and will not exceed the depth, extent, or kind of previous activities.

The NOAA RC states in its consistency determination that:

> *NOAA RC fulfills the requirements of the National Historic Preservation Act (NHPA), Section 106 and ensures that potential effects of restoration activities are considered in the earliest planning stages for projects, as specified in Section J, Table 1 – NOAA RC Summary of General Project Requirements and Protection Measures for Coastal Resources and in NOAA RC NEPA documents (Attachments C, D and E). Should NOAA RC suspect that cultural resources are present at any project site, field personnel will conduct a records search and field survey to determine the extent and significance of the cultural resources, if any. NOAA RC consults with the appropriate State Historic Preservation Office (SHPO), tribes, and agencies to identify potential cultural resources and evaluates if they would be adversely affected by the proposed project. Project plans are revised accordingly to avoid adverse impacts to cultural resources.*
>
> *Should the project applicant or any project partners uncover human remains in the course of a project, NOAA RC and project proponents will follow procedures established by the Native American Heritage Commission, including immediately stopping work in the area and notifying the County Coroner.*

Project applicants implementing NOAA RC projects receive appropriate training to carry out cultural resource protection measures, monitoring, and reporting. The NOAA RC will not proceed with a project where significant impacts to cultural resources cannot be avoided through agency actions and/or revised plans. Therefore, the Commission finds that the CRP includes reasonable measures and commitments for the protection of archaeological and paleontological resources and is consistent with Section 30244 of the Coastal Act.

F. VISUAL RESOURCES

Coastal Act Section 30251 states:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and*

> *Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

CRP projects would not adversely affect scenic or visual resources. Minor modifications to viewsheds may occur from re-establishment of native vegetation where it has not been present for some time, and temporary effects could occur during construction and soil disturbance during and following project installation. However, these effects would be temporary, and would be offset by beneficial effects to scenic or visual resources accruing from the restoration of riparian, wetland and estuarine habitats, and other coastal resources. Therefore, the Commission finds the program's overall visual effect would be beneficial and consistent with Section 30251 of the Coastal Act.

APPENDIX A

SUBSTANTIVE FILE DOCUMENTS

1. CD-0004-15 (NOAA Restoration Center), Community Based Restoration Program, Southern California.
2. CD-021-13 (NOAA Restoration Center), Community Based Restoration Program, Northern and Central California.
3. ND-074-09 (NOAA Restoration Center), Salmon Creek Estuary Fish Habitat Improvement Structures, Sonoma County.
4. ND-023-10 (NOAA Restoration Center), Willow Creek 2nd Bridge Area Project, Sonoma County.
5. ND-037-12, ND-0221-13, ND-0046-14, and ND-0029-15 (NOAA Restoration Center), Pescadero Creek Lagoon Sandbar Breaching and Ecological; Function Project, San Mateo County.
6. *California Salmonid Stream Habitat Restoration Manual*, California Department of Fish and Wildlife, 2010.
7. *Programmatic Biological Opinion for Fisheries Habitat Restoration Projects in South-Central and Southern California*, National Marine Fisheries Service (NMFS), December 2015.
8. *Guidelines for Salmonid Passage at Stream Crossings*, NMFS, 2001.
9. *Fish Screening Criteria for Anadromous Salmonids*, NMFS, 1997.
10. *Southern California Steelhead (SCS) Final Recovery Plan*, NMFS, January 2012.
11. *California Climate Adaptation Strategy*, California Natural Resources Agency, 2014.
12. *Sea Level Rise Policy Guidance*, California Coastal Commission, 2015.
13. *Program Environmental Assessment for Community-based Restoration Program*, NOAA Restoration Center, 2002.
14. *Supplemental Program Environmental Assessment for Community-based Restoration Program*, NOAA Restoration Center, 2006.
15. *Program Environmental Impact Statement for Community-based Restoration Program*, NOAA Restoration Center, 2015.

Projects Approved to Use CD-021-13

Project	County	Habitat Type Restored
Strawberry Creek Fish Passage Barrier and Invasive Species Removal	Humboldt	Fish Passage/Instream Habitat/Riparian
Ten Mile River Coho Habitat Rehabilitation	Mendocino	Instream Habitat/Riparian/Cattle Exclusion
Newman Gulch Fish Passage Barrier Removal	Mendocino	Fish Passage/Instream Habitat
Sheephouse Creek Sediment Reduction	Sonoma	Upland Road Sediment
Green Gulch Creek Habitat Enhancement	Marin	Instream Habitat/Riparian
Waukell Creek Off-Estuary Habitat Enhancement, Lower Klamath Phase II	Del Norte	Instream Habitat/Tidal Wetlands
Martin Slough Tide Gate Improvement	Humboldt	Fish Passage/Tidal Wetlands
Lower Beith Creek Stream Restoration	Humboldt	Instream Habitat/Riparian
Gazos Creek Rural Road Sediment Reduction	San Mateo	Upland Road Sediment
Pilarcitos Creek Rural Roads Improvement	San Mateo	Upland Road Sediment
San Gregorio Creek Streamflow Enhancement – Repetto Farm Pond	San Mateo	Streamflow Enhancement
Big Sur River Fish Passage – Riverside Campground Bridge Replacement	Monterey	Fish Passage

Exhibit 1
CD-0004-15
Page 1

TABLE 1 - NOAA RC SUMMARY OF GENERAL PROJECT REQUIREMENTS AND PROTECTION MEASURES FOR COASTAL RESOURCES

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
General Requirements/ Project Limits	Application reviewed by NOAA RC biologists to determine whether project qualifies for NOAA RC Program, overall restoration benefit, ESA mandates met, avoidance of impacts to other coastal and marine resources. Must obtain all other agency permits to proceed.	- In addition to general conditions, site specific conditions are required as needed for each project. - Voluntary restoration projects only; projects must clearly demonstrate habitat restoration benefits. - Engineering review required for complex projects - All other permits must be obtained before the project may commence - Contractors must be briefed in advance by qualified biologist on all protection measures - Impact evaluation criteria must be followed: first avoidance, then minimization, and mitigation. - Detailed success criteria required for revegetation projects - NOAA maintains tracking database to provide info on project monitoring and ensure compliance with all requirements - NOAA retains right of reasonable access to property to monitor effectiveness of project through life of signed landowner agreement - Monitoring and reporting required (see "monitoring, success criteria and reporting" section of the Table, below) *The NMFS Long Beach Office programmatic BO also specifies:* - Specific protection measures for species, water quality, and several other resources areas. - Limitations on number of projects implemented annually to avoid cumulative impacts - Maximum stream dewatering length: 500'

[1] Note: All projects are subject to site- and project-specific conditions, as specified in either the NOAA RC Long Beach Office programmatic BO, other programmatic BOs applicable for CRP projects, individual Section 7 consultations for CRP projects that require separate consultation, and addendums to these documents containing further conditions. NOAA RC and NMFS staff will determine which BO shall be applied or whether individual Section 7 consultation must be completed. This table contains general requirements from the following sources: NOAA RC NEPA EAs (2002, 2006), Long Beach Office programmatic BO, Program Environmental Impact Statement (PEIS) (June 2015), and NOAA RC.

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
		- Maximum staging area size: 0.5 ac - Consistency with CDFW Salmonid Stream Habitat Restoration Manual, CDFW Culvert Criteria for Fish Passage, CDFW/NOAA Fish Screening Criteria for Salmonids, Handbook for Forest and Ranch Roads (Weaver and Hagans). - Construction work window limited to June 1-November 30 with planting allowed beyond November 30. - Additional early collaboration with NMFS, topographic and hydraulic surveys and analyses, monitoring and reporting, and other protection and information measures may be required.
Water Quality	NOAA requires both project-specific and general measures for WQ protection. Sec. 401 WQ Certification from SWRCB/RWQCB, 1600 Agreement or Habitat Restoration and Enhancement (HRE) Act/AB 2193 approval from CDFW, Army Corps Sec. 404 Permit, and compliance w/local ordinances also required.	- Detailed water quality protection and erosion control requirements during and following construction. - Dewatering for in-channel work, with specific rules for how dewatering shall occur. - Retain as many trees and shrubs as feasible, emphasizing shade-producing and bank-stabilizing trees and brush. - Specific avoidance of impacts from poured concrete. - Specific requirements for access road maintenance and road decommissioning - Temporary erosion controls will be in place before any significant alteration of the action site and will be monitored during construction to ensure proper function. Turbidity curtains, hay bales, and erosion mats shall be used where appropriate. - Erosion and head cuts will be anticipated and minimized through grade control structures or bank re-contouring. - Confine vegetation and soil disturbance to the minimum area, and minimum length of time, as necessary to complete the action, and otherwise prevent or minimize erosion associated with the action. - Cease work under high flows or seasonal conditions that threaten to disturb turbidity reduction measures, except for efforts to avoid or minimize resource damage. - Mulch and seed exposed areas after ground-disturbance activities complete.

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
		General On-Site Pollution Controls: - Properly confine, remove, and dispose of construction waste, including every type of debris, discharge water, concrete, cement, grout, washout facility, welding slag, petroleum product, or other hazardous materials generated, used, or stored on-site. - All vehicles and other heavy equipment will (a) be stored, fueled, and maintained in a vehicle staging area set back from any natural waterbody or wetland; (b) inspected daily for fluid leaks before leaving the vehicle staging area. - Generators, cranes, and any other stationary equipment operated within 150 feet of any natural water body or wetland will be maintained as necessary to prevent leaks and spills from entering the water. - Use procedures to contain and control a spill of any hazardous material generated, used or stored on-site, including notification of proper authorities. - When local conditions indicate the presence of contaminated sediments is likely, soil samples will be tested for contaminant levels and precautions will be taken to avoid disturbance of or provide for proper disposal of contaminated sediments. - Equipment will always be refueled away from stream corridors, and operators are required to have a spill response plan in place in case of a leak. *The NMFS Long Beach Office programmatic BO also specifies:* - Use native plant species to revegetate ramps following use, preferably with a mulch or binder that will hold the soils in place while the vegetation is establishing. - If vegetation cannot be established for a particular ramp following use, apply temporary erosion-control mats or blankets, straw, or gravel as appropriate. - For ramps where sediment is already eroded and mobilized, temporary controls shall be installed. These may include: sediment-control fences, fabric-covered triangular dikes,

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
		gravel-filled burlap bags, biobags, or hay bales staked in place. - All mechanized equipment working in the stream channel or within 25 feet of a wetted channel shall have a double containment system for diesel and oil fluids. Hydraulic fluids in mechanical equipment working within the stream channel shall not contain organophosphate esters. Vegetable based hydraulic fluids are preferred. - Oil absorbent and spill containment materials shall be located on site when mechanical equipment is in operation within 100 feet of the proposed watercourse crossings. If a spill occurs, no additional work shall commence in-channel until (1) mechanical equipment is inspected by the contractor, and the leak has been repaired, (2) the spill has been contained, and (3) CDFW and NOAA RC are contacted and have evaluated the impacts of the spill. - Areas for fuel storage, refueling, and servicing of construction equipment must be located in upland location. - Use or storage of petroleum-powered equipment shall be accomplished in a manner to prevent the potential release of petroleum materials into waters of the state (Fish & Game Code 5650). - Prior to use, all equipment will be cleaned to remove external oil, grease, dirt, or mud. Wash sites must be located in upland locations so wash water does not flow into a stream channel or adjacent wetlands. - All construction equipment must be in good working condition, showing no signs of fuel or oil leaks. Prior to construction, all mechanical equipment shall be inspected on a daily basis to ensure there are no motor oil, transmission fluid, or coolant leaks. All leaks shall be repaired in the equipment staging area or other suitable location prior to resumption of construction activity.
Listed Species	NOAA mission to protect species; integral part of project review. ESA section 7 consultations required with FWS and NOAA; CDFW CESA	- Work windows for all listed species - Buffer distance from species required - Detailed fish capture and relocation and dewatering requirements; qualified biologist required; reporting all encounters with listed species. - Water quality, water quantity, sensitive habitat protection, and other general measures also serve to protect species. *The NMFS Long Beach Office BO also specifies:*

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
	compliance or Habitat Restoration and Enhancement (HRE) Act/AB 2193 approval also required.	- Work window of June 1 – November 30 with revegetation activities allowed beyond November 30.
Environmentally Sensitive Habitat Protection	Review projects for benefits to habitat and conditions required for avoidance of temporary and long-term impacts.	*General Measures for Reduction of Soil Compaction* - Existing access ways will be used whenever possible. Temporary access roads will not be built on slopes greater than 50%, where grade, soil, or other features suggest a likelihood of excessive erosion or failure. - Soil disturbance and compaction will be minimized within 150 feet of a natural waterbody or wetland. - All temporary access roads will be removed when the action is completed, the soil will be stabilized, and the site will be revegetated. - Temporary roads in wet or flooded areas will be restored shortly after the work period is complete. - Heavy equipment will be selected and operated in a manner that minimizes adverse effects to the environment (e.g., minimally-sized, low pressure tires, minimal hard turn paths for tracked vehicles, temporary mats or plates within wet areas or sensitive soils). - To the extent feasible, heavy equipment will work from the top of the bank, unless work from another location would result in less habitat disturbance. *Site Restoration* - Any large wood, mature native vegetation, topsoil, and native channel material displaced by construction will be stockpiled for use during site restoration. When construction is finished, all stream banks, soils, and vegetation will be cleaned up and restored as necessary to renew ecosystem processes that form and maintain productive fish habitats. Measures to ensure native vegetation or revegetation success will be identified and implemented. - Any stream bank area left barren of vegetation as a result of project implementation or maintenance shall be restored to a natural state by seeding, planting, or other means with native trees, shrubs, or grasses. - Barren areas shall typically be planted with a combination of willow stakes, native shrubs and trees and/or erosion control grass mix. - Native plant species shall be used for revegetation of disturbed and

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
		compacted areas *Planting or Installing Vegetation* - NOAA RC will ensure the use of an appropriate assemblage of species native to the action area or region, including trees, shrubs, and herbaceous species. - No more than 5 percent of the below ground biomass of an existing donor bed will be harvested for transplanting purposes. Thin existing beds without leaving any noticeable bare areas. Harvesting of flowering shoots will only occur from widely separately plants. *Invasive Species Spread Prevention* - Vehicles or equipment used to manage invasive plants should be cleaned of all debris before removing it from the treatment site to prevent the unintended spread of seeds, rhizomes or plant fragments to other areas. Biofouled debris bearing non-native species should be appropriately treated before moving to reduce the likelihood of introducing or spreading or invasive species. - Prevention measures are used to identify and minimize the risks of introducing non-native organisms during restoration activities *Adequate Training of Volunteers* - Training should be provided to ensure minimal impact to the restoration site by volunteers. Volunteers shall be trained in the use of low-impact techniques for planting, equipment handling, and moving around the restoration site to avoid unnecessary impacts to native flora and fauna. **Invasive Species Removal** *Herbicide Application Controls* - Use of herbicides in project areas will be conducted according to established protocols for the locality, as determined by a state-licensed herbicide applicator. Such protocols will include information and guidelines for appropriate use, timing, amounts, application methods, and safety procedures relevant to the herbicide application. - When herbicides are used near waterways, an approved herbicide that is safe to use near aquatic habitats will be utilized. Methods that do not require surfactants will be used when possible. In situations where surfactants are

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
		necessary, products used will be limited to those determined to be the least toxic to aquatic and marine/estuarine organisms. - Herbicides will not be applied when winds exceed 5 miles per hour, during a rain event, or when rain is forecast within 24 hours. *Additional Information and Guidelines* - For high-risk projects, additional measures shall be taken to ensure invasive species are controlled and removed. Additional information for inspection and cleaning methods can be found in NOAA RC Best Management Practices for Invasive Species at: http://www.habitat.noaa.gov/restoration/programs/invasivespecies.html. **Wetlands** - Wetlands projects follow standard protection measures listed through this table including, but not limited to, flagging sensitive areas, on-site erosion controls, on-site pollution prevention controls, methods to reduce soil compaction, seasonal work periods, adequate training of volunteers, and planting and installing vegetation standards. *The NMFS Long Beach Office programmatic BO also specifies:* - Flagging required around sensitive areas and buffers - Specific habitat data and surveys required as part of project application - Specific measures to minimize impacts to riparian vegetation - Tree size removal limits - Construction access point must minimize vegetation and soil disturbance and compaction - See *Section N - Summary of Consistency with the California Coastal Management Program* for additional discussion on ESHA protection.
Water Quantity	Any projects approved for NOAA RC Program that affect flows will conserve water for habitat.	- Existing diversions only; must be in compliance with SWRCB water rights requirements; only allowed if water conservation benefit for species. - Additional hydrological data/water flow data information required for water conservation projects.

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
		- Pipe developments must decrease stream diversion and include permitted instream flow dedication, and be maintained for at least 10 years.
Visual Resources	Project evaluated for Consistency Determination applicability. Projects typically result in improved visual resources. Project applications are evaluated and ranked based on their level of community and landowner support. Also addressed through CEQA and local ordinances.	- All other permits/approvals must be acquired before project commences. - Most projects result in a net benefit to visual impacts by restoring degraded habitat and vegetation. - See *Section N - Summary of Consistency with the California Coastal Management Program* for a more detailed discussion of visual resource protection.
Public Access	Evaluated during application review process and community involvement. Projects ranked based on public/landowner support in coordination with local agencies and other stakeholders, as well as watershed studies and prioritized actions from Integrated Regional Water Management Programs. Also addressed through CEQA process and local ordinances.	- All other permits/approvals must be acquired before project commences. NOAA's mission supports public access and recreation as long as it does not negatively impact listed species. - Some NOAA RC projects include public recreational access improvement components. Projects often include partners with shared mission of maintaining public access for educational and/or recreation purposes (US FWS, State Coastal Conservancy, etc.). - Project applications are evaluated and ranked based on their level of community and landowner support. - See *Section N - Summary of Consistency with the California Coastal Management Program* for a more detailed discussion of public access protection.

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
Estuarine and Marine Resources	Review projects for habitat/species benefits, and require avoidance of potential adverse impacts to estuarine habitat.	- Project/site specific protection measures required by NOAA RC; all measures for water quality/sensitive habitat/species listed above also apply in estuarine areas. - NMFS Long Beach programmatic BO is utilized where applicable and project specific BOs (with project specific protection measures) are developed as needed for estuarine and marine species. - Project- and species-specific conditions imposed by NOAA. - *Assessment, Research, and Monitoring Techniques* - Destructive sampling techniques (such as biomass sampling, benthic cores, fish capture, etc.) will only be used as part of an experimental design, tailored to require the fewest number of samples to achieve the desired purpose. All researchers will obtain biological sampling permits as required for their locality. All available information on sediment transport in the project area would be considered prior to barrier island and beach habitat restoration. - See *Section N - Summary of Consistency with the California Coastal Management Program* for a more detailed discussion of estuarine and marine resources protection. **Living Shorelines** - Protection measures for living shorelines include those mentioned for wetlands, sea grasses, and oyster restoration since many of the techniques are used simultaneously. **Kelp Restoration** - In all cases, kelp restoration is performed by registered, certified divers. All restoration practitioners must minimize turbidity and sedimentation based on considerations such as access to the project, size of restoration effort, duration, or sediment characteristics. All vessel operators are licensed and establish vessel corridor routes to avoid kelp beds and establish anchor lines to avoid hard bottom areas or kelp beds. **Submerged Aquatic Vegetation** - Measures to protect both the donor beds and the newly restored beds will be implemented. For all geographic areas, no more than five percent of the below

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
		ground biomass of an existing donor bed will be harvested for transplanting purposes. Plants harvested will be taken in a manner to thin an existing bed without leaving any noticeable bare areas. Harvesting of flowering shoots for seed buoy techniques will occur only from widely separated plants and only a certain percent of the donor stock can be used per year. This percent is site dependent and prior to restoration requires intimate knowledge of the genetics and population dynamics of the donor site. - All efforts to reduce any turbidity while at the site will be implemented. In most cases restoration takes place during low tide and turbidity is avoided. If divers and boats are used the boat propellers are lifted and divers enter the SAV area outside the bed. - Mooring locations and buoy installation - when barges and other boats must moor on site to accomplish restoration work, mooring locations will be chosen to minimize damage to existing healthy reefs or adjacent SAV beds. - Off-site sediment and dredge spoils are placed in a manner to minimize impacts to any existing vegetation. - Before dredged material is deposited, sediments must be tested for contaminants and analyzed for physical characteristics such as grain size and water content to ensure vegetation will successfully re-colonize the area. **Shellfish Restoration** *General* - Disturbance is typically short duration. Reefs are typically built prior to times of high spat set (larval settling). All shell material is placed in un-vegetated areas (i.e. not directly on seagrasses). Any shell material or structures that are not providing ecological services are removed. *Shell sources* - Shell or other substance used for substrate enhancement will be procured from clean sources that do not deplete the existing supply of shell bottom. Shells will be left on dry land for a minimum of one month before placement in the aquatic environment. Shells from the local area will be used whenever possible.

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
		Native species and disease - Shellfish will be species native to the project area. Any shellfish transported across state lines or grown through an aquaculture facility will be certified disease free. **Rock Breakwaters** *(developed for habitat protection purposes)* - All rock or shell breakwaters will be designed with appropriate ingress and egress for fish in consultation with local regulatory agencies.
Coastal Agriculture	NOAA ranks projects based on public/landowner support, in coordination with local agencies and other stakeholders, as well as watershed studies and prioritized actions from Integrated Regional Water Management Programs. Projects evaluated for protecting the loss of valuable agricultural top soil, increasing the function and health of waterways and improving dependable water supplies for livestock. CEQA analysis evaluates for impacts to agriculture.	- Protection measures to prevent erosion and sediment runoff must be implemented. - Projects evaluated for protecting the loss of valuable agricultural top soil, increasing the function and health of waterways passing, and improving dependable water supplies for livestock. - Although rare, conversion to estuarine or wetland uses are evaluated for their ability to buffer sea level rise due to climate change, thereby protecting adjacent agricultural lands. - All other permits/approvals must be acquired before project commences. - See *Section N - Summary of Consistency with the California Coastal Management Program* for a more detailed discussion of agricultural resource protection.
Cultural Resources	Evaluated during NOAA RC project review.	- NOAA RC complies with section 106 of the NHPA on an individual project basis. NOAA RC or designee will consult with SHPO and tribal officers for projects that may impact cultural or historic resources. NOAA RC has a staff Cultural Resource Specialist who is utilized as needed.

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
	NOAA ranks projects based on public/landowner support, in coordination with local agencies and other stakeholders, as well as watershed studies and prioritized actions from Integrated Regional Water Management Programs. Also included in CEQA analysis.	- See *Section N - Summary of Consistency with the California Coastal Management Program* for a more detailed discussion of cultural resources protection.
Cumulative Impacts	NOAA RC reviews for avoidance of cumulative impacts. Also addressed in CEQA compliance by SWRCB/CDFW/local agencies.	- The NMFS Long Beach programmatic BO has restrictions to avoid cumulative impacts and specifies a limit of 15 projects per year.
Monitoring, Success Criteria, and Reporting	Pre- and post-construction and success monitoring, and annual reports required.	- Pre- and post-construction monitoring plan required of all projects; monitoring protocol typically follows CDFW FRGP. - Pre-construction reporting is provided to Coastal Commission annually; subsequently qualifying projects funded later in the year will be reported to Coastal Commission on a project-by-project basis. - Success criteria are developed for each project. - Post-construction monitoring and reporting information including: - Photo-documentation; - As-built drawings; - Documentation of the required avoidance, minimization, and other environmental protection measures that were implemented; - Number (by species) of fish and wildlife relocated; - Any incidental injury or mortality; and

Resource Area	NOAA Review Process	NOAA Restoration Center Southwest Region - General Requirements and Protection Measures[1]
		- A description of whether the project is meeting success criteria for revegetation and other parameters. -Additional monitoring is required for off-channel/side-channel habitat, water conservation, wetlands, submerged aquatic habitat, living shorelines, and kelp forest restoration, as described in Section L, below.
General Application and Review Process	NOAA RC directly involved in project review, funding (when available), technical assistance, design, protection measures, monitoring and reporting. NOAA also coordinates with other agencies on project permitting.	*General Process:* - For projects not funded by NOAA RC, project review begins with a project application for Clean Water Act section 404 and/or Rivers and Harbors Act section 10 permit authorization with the Army Corps' Regulatory Division. Qualifying restoration projects will then follow the general review process described below. - NOAA RC reviews project, assesses project qualifications and appropriateness for use of NMFS Long Beach Office programmatic BO or other BOs; after approval for Program inclusion, sends to CDFW biologist and RWQCB staff for review. Projects in the Coastal Zone are evaluated for coverage under this Consistency Determination. - NOAA RC is alerted to projects through project partnerships, funding opportunities, and through its involvement in technical assistance and project development. - Team of NOAA RC, NMFS, CDFW, and Corps assists NOAA RC with project oversight. - Projects submitted to other agencies and NMFS biologists for review and approval throughout the year, as applications come in. - All specific information requirements must be met before project is eligible to proceed under Program. - Evaluation of monitoring plans (including success criteria) and reports. - Help with adaptive management, if needed.

1. Salmonid Habitat and Related Upland Restoration Projects

Salmonid habitat and related upland restoration projects are intended to restore degraded salmonid habitat through improving stream cover, pool habitat and spawning gravel; removing or modifying barriers to fish passage; ensuring adequate flows; and reducing or eliminating ongoing erosion or sedimentation impacts. Salmonid habitat restoration projects authorized through the CRP must be designed and implemented consistent with the techniques and minimization measures presented in CDFW's *California Salmonid Stream Habitat Restoration Manual*, NMFS's *Guidelines for Salmonid Passage at Stream Crossings*, NMFS *Fish Screening Criteria for Anadromous Salmonids*, or other appropriate restoration manuals all of which contain extensive guidance on effective implementation of habitat restoration practices and pre- and post-construction protection measures.

These projects are reviewed and authorized by NMFS under section 7 of the ESA and the Magnuson-Stevens Fishery Conservation and Management Act (as discussed earlier under the Regulatory Framework section).

Additional engineering and fish passage specialist review may be required for projects including, but not limited to: fish passage at stream crossings, culvert retrofit and replacement, new and retrofitted fish ladders/fishways, removal of flashboard dam abutments and sills, debris basin removal, creation or connection of off-channel habitat features, installation of fish screens, removal of small dam involving special or complex conditions, and placement of weirs in concrete lined channels. Project or program specific BOs may include additional applicable requirements.

In addition to following applicable protection measures specified in Section J, *Table 1 – NOAA RC Summary of General Project Requirements and Protection Measures for Coastal Resources*, general measures for instream work will be implemented and flows will be diverted around the project worksite as described in the 2015 NMFS Long Beach Office Programmatic BO for Restoration Projects, for projects qualified to utilize the BO. Applicable protection measures will be followed as specified in the BO sections, *Requirements for Fish Relocation and Dewatering Activities* and *Measures to Minimize Loss or Disturbance of Riparian Vegetation.* Additional measures, or modified measures, may be imposed by NOAA RC as needed to protect natural resources.

Salmonid habitat restoration activities included in the CRP for this Consistency Determination are listed below, as well as additional activity-specific resource protection measures, above and beyond those described in Section J, *Table 1 – NOAA RC Summary of General Project Requirements and Protection Measures for Coastal Resources.*

1. Instream Habitat Structures and Improvements

Instream habitat structures and improvements are intended to provide predator escape and resting cover, increase spawning habitat, improve migration corridors, improve pool to riffle ratios, and add habitat complexity and diversity. Specific techniques for instream habitat improvement include placement of: 1) cover structures (divide logs, engineered log jams, digger logs, spider logs; and log, root wad, and boulder combinations); 2) boulder structures (boulder weirs, vortex boulder weirs, boulder clusters, and single and opposing boulder-wing-deflectors); 3) log structures (log weirs, upsurge weirs, single and opposing log-wing-deflectors, engineered log jams, and Hewitt ramps); and 4) imported spawning gravel. Implementation of these types of projects may require the use of heavy equipment (*e.g.*, self-propelled logging yarders, excavators, backhoes, helicopters), however, hand labor will be used when possible.

Large woody material (LWM) may also be placed in the stream channel to enhance pool formation and increase stream channel complexity. Projects will include both anchored and unanchored logs, depending on site conditions and wood availability.

Supplemental Protection Measures for Instream Habitat Structures and Improvements
In addition to applicable environmental protection measures described under Section J, *Summary of Environmental Compliance Requirements and NOAA Project Review,* the following measures apply to instream habitat structures and improvements:

Flow Diversion Measures: If it is necessary to divert flow around the work site, either by pump or by gravity flow, the suction end of the intake pipe shall be fitted with fish screens meeting CDFW and NMFS (NMFS, 2008b) criteria to prevent entrainment or impingement of small fish. Any turbid water pumped from the work site itself to maintain the site in a dewatered state shall be disposed of in an upland location where it will not drain directly into any stream channel, or it will be treated to filter suspended materials before flowing back into the stream.

Turbidity Measures: Any work with equipment within the stream channel shall be performed in isolation from the flowing stream. If there is any flow when the work is done, the project proponent shall construct cofferdams upstream and downstream of the excavation site and divert all flow from upstream of the upstream dam to downstream of the downstream dam. The cofferdams may be constructed from many different materials and methods to meet the objective; for example, clean river gravel or sand bags, which may be sealed with sheet plastic. Foreign materials such as sand bags and any sheet plastic shall be removed from the stream upon project completion. In some cases, clean river gravel may be left in the stream, but the cofferdams must be breached to return the stream flow to its natural channel. To minimize effects to aquatic species, stream diversion shall be in place for the shortest duration necessary to complete in-stream project activities.

When cofferdams are installed, debris racks will be placed at the bypass pipe inlet. Bypass pipes will be monitored a minimum of two times per day, seven days a week, during the construction period. The contractor or project applicant shall remove all accumulated debris. Bypass pipe diameter will be sized to accommodate, at a minimum, twice the summer baseflow.

Cofferdams will be removed so surface elevations of water impounded above the cofferdam will not be reduced at a rate greater than one inch per hour. This will minimize the risk of beaching and stranding of fish as the area upstream becomes dewatered.

2. Barrier Modification for Fish Passage Improvement

Barrier modification projects are intended to improve salmonid fish passage by providing access to historically available upstream spawning and rearing habitat that is currently blocked or obstructed. Projects may include those that improve fish passage through existing culverts, bridges, and paved and unpaved fords through replacement, removal, or retrofitting structures. These practices may include the use of gradient control weirs upstream or downstream of barriers to control water velocity, water surface elevation, or provide sufficient pool habitat to facilitate jumps, or interior baffles or weirs to mediate velocity and provide increased water depth. Weirs may also be used to improve passage in flood control channels (particularly concrete-lined channels). Implementing these types of projects may require the use of heavy equipment (*e.g.*, self-propelled logging yarders, mechanical excavators, backhoes), however, hand labor will be used when possible.

Removing barriers to fish passage will help mitigate the effects of climate change (e.g., increased number and intensity of drought events, habitat loss or alteration, etc.) to threatened and endangered fish species by increasing connectivity of river and stream networks.

Supplemental Protection Measures for Fish Barrier Modification

In addition to applicable environmental protection measures described under Section J, *Summary of Environmental Compliance Requirements and NOAA Project Review,* the flow diversion and turbidity measures, as described above, in Section I.1, are also applicable to barrier modification projects.

3. Riparian Habitat Restoration and Bioengineering

Riparian habitat restoration projects are intended to improve salmonid habitat through increasing stream shading to lower water temperatures, recruitment of LWD, bank stability, the number of plants and plant groupings, and benthic invertebrate production. Riparian habitat restoration projects may include natural regeneration, livestock exclusionary fencing, bioengineering, and revegetation.

Bioengineering and revegetation to reduce instream sediment will improve fish habitat and fish survival by increasing fish embryo and alevin survival in spawning gravels, decreasing injury to juvenile salmonids from high concentrations of suspended sediment, and minimizing the loss of, or reduction in size of, pools from excess sediment deposition. The proposed activities will reduce stream sedimentation from bank erosion by stabilizing stream banks with appropriate site-specific techniques including: boulder-stream bank stabilization structures, log-stream bank stabilization structures, tree revetment, native plant material revetment, willow wall

revetment, willow siltation baffles, brush mattresses, checkdams, brush checkdams and water bars.

Supplemental Protection Measures for Riparian Habitat Restoration and Bioengineering
In addition to applicable environmental protection measures described under Section J, *Summary of Environmental Compliance Requirements and NOAA Project Review,* the flow diversion and turbidity protection measures, as described above in Section I.1, are also applicable to riparian habitat and bioengineering projects.

4. Upslope Watershed Restoration
Upslope watershed restoration projects are intended to reduce delivery of sediment to anadromous salmonid streams. Road-related upslope watershed restoration projects include decommissioning, upgrading, and storm proofing. Implementation of these types of projects may require the use of heavy equipment (*e.g.*, self-propelled logging yarders, mechanical excavators, backhoes), however, hand labor will be used when possible.

5. Removal of Small Dams
Dam removal is conducted to restore fisheries access to historic habitat for spawning and rearing and to improve long-term habitat quality and proper stream geomorphology. Types of eligible small dams include permanent, flashboard, debris basin, and/or seasonal dams that are standalone barriers with the characteristics listed below.

This covered activity only includes small dam removal projects that will form, naturally or with excavation, a channel of natural grade and shape upstream of the dam. Dam removal projects will: 1) release a volume of sediment that will have minimal effects on downstream habitat, and 2) be designed to create a channel that provides the same hydraulic conditions and habitat for listed fish as the natural channel. Implementing small dam removal projects may require the use of heavy equipment (e.g. mechanical excavators, backhoes, etc.) and in some cases explosives. Some small dam removals can be accomplished with hand tools such as jackhammers.

Supplemental Protection Measures for Small Dam Removal
In addition to applicable environmental protection measures described under Section J, *Table 1 – NOAA RC Summary of General Project Requirements and Protection Measures for Coastal Resources* and the flow and turbidity measures listed in Section I.1 above, the following measures apply to small dam removal:

All construction will take place out of the wetted channel either by implementing the project from the bank and out of the channel or by constructing coffer dams, relocating aquatic species found within the project reach, and dewatering the channel. The Long Beach Office programmatic BO limits disturbance of riparian vegetation for site access for removal of small dams to no more than 250 linear feet (125 feet on each side of the channel). All disturbed areas will be revegetated with native grasses, trees, or shrubs.

Technical information on sediment volume, project reach geomorphology, downstream spawning areas, and channel and hydraulic grade are required in the project proposal for review by NOAA RC. Depending on the complexity of the project, additional technical

information including: hydraulic modeling, sediment modeling, geomorphic assessments, analysis of hydrologic conditions, and a detailed assessment of habitat conditions may also be required in the project proposal.

Small dam removal projects such as those in urbanized streams, base level dams (where head cuts could be sent up multiple tributaries), and dams located in heavily incised channels will receive additional engineering review.

Flow diversion and turbidity protection measures, as described above in Section I.1, are also applicable to small dam removal.

Any use of explosives for small dam removal must be justified due to site-specific conditions including equipment access difficulties. Explosives use must be conducted in dry or dewatered conditions and potential harm to steelhead and other aquatic life, and human health and property, from the explosives blast and pressure waves must be analyzed. Application of the NMFS Long Beach Office programmatic BO for ESA section 7 coverage of small dam removal projects with proposed use of explosives requires additional detailed effects analysis and protection and information measures. Project applicants are required to provide project designs to NOAA technical monitors prior to project approval and implementation. Data requirements and analysis to be provided with dam removal project design should attempt to meet NMFS 2011 Anadromous Salmonid Passage Facility Design (NMFS 2011 Guidelines). If proposed project designs do not meet the NMFS 2011 Guidelines, a project proponent can request an alternative project design be approved at the discretion of NOAA RC and NMFS engineers if a clear benefit to fish passage can be shown. Applicants will be required to implement the NOAA RC Fish Passage Barrier Removal Performance Measures and Monitoring Worksheet (Attachment F) that includes regionally appropriate fish passage criteria for fish passage projects, and which have been incorporated into the data needs described below.

6. Creation of Off-Channel/Side Channel Habitat

Types of side-channel or off-channel restoration activities eligible for the CRP include:

- Connection of abandoned side-channel or pond habitats to restore fish access;
- Connection of adjacent ponds, remnants from aggregate excavation;
- Connection of oxbow lakes on floodplains that have been isolated from the meandering channel by river management schemes, or channel incision;
- Creation of side-channel or off-channel habitat with self-sustaining channels; and
- Improvement of hydrologic connection between floodplains and main channels.

Restoration projects in this category may include removal or breaching of levees and dikes, channel and pond excavation, constructing wood or rock tailwater control structures, and construction of large wood material (LWM). Implementation of these types of projects may require the use of heavy equipment (*e.g.*, self-propelled logging yarders, mechanical excavators, backhoes), and creation of temporary access roads.

Supplemental Protection Measures for Off-Channel and Side-Channel Habitat

In addition to applicable environmental protection measures described under Section J *Summary of Environmental Compliance Requirements and NOAA Project Review,* the following measures apply to off-channel and side-channel habitat projects:

Technical information on water supply (channel flow/overland flow/groundwater), water quality, and water reliability; risk of channel change; and channel and hydraulic grade is required in the project proposal for review by NOAA RC. Application of the NMFS Long Beach Office programmatic BO for ESA section 7 coverage of off-channel and side-channel projects may require additional early collaboration with NMFS, topographic and hydraulic surveys and analyses, monitoring and reporting, and other protection and information measures.

In addition, the flow diversion and turbidity protection measures must be applied, as described above in Section I.1.

Project Restrictions
Projects that involve the installation of a flashboard dam, head gate or other mechanical structure are not eligible for the Program. Off-channel ponds constructed under this Program will not be used as a point of water diversion. Use of logs or boulders as stationary water level control structures will be allowed.

7. Water Conservation Projects
In addition to applicable environmental protection measures described under the Section J, *Summary of Environmental Compliance Requirements and NOAA Project Review,* the following measures apply to water conservation projects.

Projects that involve surface diversions will only be considered for existing diversions that are compliant with State and federal water law. Storage reservoirs will not be greater than 10 acre-feet in size. Flow measuring device installation and maintenance may be required for purposes of accurately measuring and managing pumping rate or bypass conditions set forth in this document or in the water right or special use permit.

All pump intakes will be screened in accordance with NMFS Southwest Region's *Fish Screening Criteria for Salmonids*. Stockwater ponds and wells will be located at least 100 feet from the edge of the active channel and should be designed to avoid stranding of juvenile salmonids during flood events. Application of the NMFS Long Beach Office programmatic BO for ESA section 7 coverage of water conservation projects may require additional early collaboration with NMFS, topographic and hydraulic surveys and analyses, monitoring and reporting, and other protection and information measures.

a. Developing Alternative Supply or Off-stream Storage
This category covers ponds that meet conditions of the supplemental protection measures listed below. They can be for alternative supply or off channel water storage for other water conservation opportunities.

Many riparian fencing projects, designed to keep livestock from damaging riparian areas, necessitate the development of off-stream watering areas for livestock. These include ponds that have been excavated and are filled either by rainwater, overland

flow, surface diversions, or groundwater (either through water table interception or pumping). The CRP also covers water lines, watering troughs, and piping used to provide groundwater to livestock, so as to achieve the overarching goal of protecting aquatic habitat.

Off-stream storage may be created for landowners with appropriate water rights in order to manage the time of year water is taken off of a river/stream, so as to optimally protect habitat.

b. Tailwater Collection Ponds

Tailwater is created in some agricultural irrigation operations (flood, sprinkler) as unabsorbed irrigation water flows off the field back into the stream. Restoration projects to address tailwater input involve constructing tailwater capture systems to intercept tailwater before it enters streams. Water held in capture systems, such as a pond, can be reused for future irrigation purposes, therefore reducing the need for additional stream diversions and helping to provide for adequate freshwater habitat.

Supplemental Protection Measures for Tailwater Collection Ponds

In addition to applicable environmental protection measures described under the Section J, *Summary of Environmental Compliance Requirements and NOAA Project Review,* the following measures apply to tailwater collection ponds:

Tailwater collection ponds that do not incorporate return channels to the creek will be located at least 100 feet from the edge of the active channel and should be designed to avoid stranding of juvenile salmonids during flood events.

c. Water Storage Tanks

Water storage tanks are used to provide storage to reduce the impact on fish from water taken from streams or groundwater during low water periods. Water storage tanks can be filled through rainwater catchment or by surface or groundwater flow. The California Water Plan supports the use of diverse water supplies in Southern California given the arid climate and flashy nature of storm events (CWP 2013).

Supplemental Protection Measures for Water Storage Tanks

In addition to applicable environmental protection measures described under Section J, *Summary of Environmental Compliance Requirements and NOAA Project Review,* the following measures apply to water storage tank projects.

All pump intakes will be properly screened in accordance with NMFS Fish Screening Criteria. Water conservation projects that include water storage tanks and a Forbearance Agreement for the purpose of storing winter and early spring water for summer and fall use, require registration of water use pursuant to California Water Code § 1228.3 and consultation with CDFW. Diversions to fill storage facilities during the winter and spring months shall be made pursuant to a Small Domestic Use Appropriation (SDU) filed with the State Water Board, as applicable.

Project Restrictions
All water storage tank projects will be required to be accompanied by a Forbearance Agreement for at least 5 years, which will provide temporal and quantitative assurances for pumping activities that result in less water withdrawal during summer low flow period. The low flow threshold, measured in cubic feet per second (cfs) and based on the season of diversion and season of storage, will be determined by NOAA RC on a site by site basis. Water storage capacity for the water diversion forbearance period must be of sufficient capacity to provide for all water needs during that time period. For example, if the no-pump period is 105 days (August to November), the diverters must have enough storage to cover any domestic, irrigation, or livestock needs during that time.

d. Piping Ditches
Piping projects consist of constructing a pipe to transport irrigation water instead of using a ditch, thereby reducing evaporation and absorption of water. Water saved by these projects will remain in the stream for salmonid and other habitat benefits.

Supplemental Protection Measures for Piping Ditches
In addition to applicable environmental protection measures described under Section J, *Summary of Environmental Compliance Requirements and NOAA Project Review,* the following measures apply to piping ditches.

Only water conservation piping projects that result in a decrease in the stream flow diversion rate with a permitted instream dedication of the water saved are included in the Program. Landowners will enter an agreement with NOAA RC or the Corps stating that they will maintain the pipe for at least 10 years.

Applicants must demonstrate that they intend to dedicate water for instream beneficial use by filing a *Petition for Instream Flow Dedication* (California Water Code § 1707, 1991) and make progress towards instream dedication.

8. Fish Screens
This category includes the installation, operation, and maintenance of fish screens provided they meet the NMFS *Fish Screening Criteria for Anadromous Salmonids.* Installing a fish screen usually involves site excavation, forming and pouring a concrete foundation and walls, installation of a fish bypass pipe or channel, and installation of the fish screen structure. Heavy equipment is typically used for excavation of the screen site and bypass. If the fish screen is placed within or near flood prone areas, typically rock or other armoring is installed to protect the screen.

9. Headgates and Water Measuring Devices
Measuring devices are typically installed with the head gate to allow water users to determine the volume of water diverted. Headgate installation projects must clearly demonstrate habitat restoration benefits. While no headgates are allowed for off-channel pond creation, headgates are necessary for measuring water conservation efforts.

Supplemental Protection Measures for Headgates and Water Measuring Devices
In addition to applicable environmental protection measures described under Section J, *Summary of Environmental Compliance Requirements and NOAA Project Review,* the following measures apply to headgates and water measuring devices.

The application must include instream and ditch/pump hydraulic calculations showing there is sufficient head to divert maximum diversion flow and bypass flow at minimum stream flow, taking into consideration head losses at flow measurement devices, fish screens, pipes, open ditches, and headgates.

Measuring devices must be approved by the California Department of Water Resources (DWR) for watersheds with DWR water master service. Otherwise, measuring devices must conform to the *2001 U.S. Bureau of Reclamation Water Measurement Manual* (BOR 2001).

Design drawings must show structural dimensions in plan, elevation, longitudinal profile, and cross-sectional views, as well as important component details.

10. Invasive Species Control Projects
Invasive aquatic and wetland plant species can reduce biodiversity of native plants and habitat and food sources for native species, as well as alter entire ecosystem processes. Today, invasive species pose one of the dominant environmental threats to biological diversity, second only to habitat destruction (Lawler et. al. 2006), and are cited as a cause of endangerment for 49 percent of the species listed under the federal ESA (Wilcove et. al 1998).

Control methods for invasive species are often multifaceted and may include a combination of physical, mechanical, biological, cultural, and chemical techniques. Individual populations within a treatment area may receive several different types of treatments or a single treatment depending upon highly localized factors and the treatment plan that is designed. This integrated approach also includes assessments of risk, identification of thresholds for action, and planning to reach the most desired outcome.

Supplemental Protection Measures for Invasive Species Removal
In addition to applicable environmental protection measures described under the Section J, *Summary of Environmental Compliance Requirements and NOAA Project Review,* the following measures apply to invasive species removal projects.

Along with hand and mechanical removal, targeted herbicide use is a common method for invasive vegetation removal projects. Herbicide use is restricted in accordance with approved application methods and best management practices (designed to prevent exposure to non-target areas and organisms). Any herbicide considered for control of invasive plants must adhere to all regulations and obtain necessary permits. Herbicides will be registered for use in California and applied by a licensed applicator under all applicable state and local permits. A project area may be treated several times per year, often for multiple years, to control regrowth of the invasive plant.

Herbicides may be applied to control established stands of non-native species including Arundo, Tamarisk, Vinca, Ivys, Brooms and other species. Where it is necessary to use

herbicides to control established stands of exotics or to control the invasion of exotics into restoration plantings, the herbicides must be applied according to registered label conditions. When herbicides are used near waterways, an approved herbicide that is safe to use near aquatic habitats will be utilized. Methods that do not require surfactants will be used when possible. In situations where surfactants are necessary, products used will be limited to those determined to be the least toxic to aquatic and marine/estuarine organisms. To the greatest extent feasible, herbicides will be applied directly to target species by backpack sprayer or hand application to minimize exposure to non-target species. Herbicide tracers (i.e., spray pattern indicators) should be used whenever possible to track herbicide application progress. Herbicides will not be applied when winds exceed 5 miles per hour, during a rain event, or when rain is forecast within 24 hours.

11. Sediment Removal

Sediment accumulation in streams from either natural or anthropogenic processes (e.g., excessive stream bank erosion, rural and forest road-related erosion, upland development impacts) can alter normal flow patterns, bury or suffocate aquatic species eggs, entrap or demobilize fish, cause flooding, block migratory fish from reaching spawning areas, and otherwise adversely affect the aquatic environment. Sediment removal projects are undertaken to alleviate these situations and restore natural flow regimes. Such projects undertaken by the CRP, generally associated with other project types such as small dam removal, upslope restoration or bank stabilization, are typically small in scale and do not involve major dredging operations, but would involve the use of heavy equipment (e.g., front-end loaders and dump trucks) to haul the sediment to a disposal location.

NOAA RC funds fish passage barrier removal projects (small dams, fords, culverts, etc.) that may require sediment excavation behind the structure to avoid downstream sediment impacts. In addition, NOAA RC implements projects that excavate sediment to create new tidal or riverine channels to restore tidal and off channel habitats. Projects may also remove sediment from other sources, such as major land erosion or forest roads. The sediment is usually excavated down to the design channel grade and sediment is either trucked off site or if a suitable site exists, stored onsite, outside of the floodplain, with implementation of appropriate erosion control measures.

2. Estuarine and Coastal Restoration: Wetland, Submerged Aquatic Vegetation, Oysters, Living Shorelines, Kelp and Rocky Reefs

1. Wetland Restoration

NOAA RC funds many kinds of wetland restoration activities. These activities include the removal or addition of substrate to create the desired elevation for wetland vegetation and fish habitat. Techniques include removing sediment and possibly vegetation to achieve intertidal elevations, introducing appropriate sediments such as dredged material to achieve the required elevation, and planting native vegetation. Other techniques include berm or levee breaching or modification for tidal flow. Most often, the goal is to achieve an intertidal wetland, but frequently the project is designed to result in a mosaic of habitats including shallow subtidal, intertidal, and upland habitats.

a. Sediment Removal and Material Placement

Historically, loss of wetlands has resulted from filling and conversion of marsh habitats to uplands. This conversion was sometimes for the purpose of creating buildable upland areas, but frequently, dredge spoils from waterways were piled on marsh habitats for disposal purposes.

A characteristic restoration project to remove dredged spoils from the natural substrate would involve using heavy machinery to remove/relocate the unwanted or contaminated sediment. The first task to remove unwanted/contaminated sediment is often to remove upland vegetation that has grown into the area. Ideally grubbing of native wetland vegetation is done to be used for revegetation of the project site. The area is excavated, generally via heavy machinery unless the project footprint is small enough to be done with hand tools, to an elevation determined by project designers based on the overall goals of the project. Creation of gentle slopes will allow for the most natural transition of habitats and is most likely to create the largest range of habitat types in response to sea-level rise (Fejtek et. al 2014).

In cases where the wetland has subsided and native marsh vegetation has been inundated, frequently due to water impounded by dikes or culverts and increasingly due to sea level rise, various techniques may be used to raise the level of the marsh. In areas fully converted to open water, local subtidal sediments may be used to raise the elevation, either across a large area behind a retaining dike, or in a pattern of mounds designed to provide a variety of elevations and slow water velocities, further trapping sediment to build elevation naturally. In both cases, the typical equipment used is a dredge with heavy construction equipment used to distribute dewatered sediment to the appropriate elevation. A final technique involves spraying a thin layer of dredge spoil over an existing vegetated marsh. This technique is used when the marsh is failing to keep up with sea level rise and/or subsidence, but still has critical rooted vegetation that would be smothered by deploying sediment in a traditional manner.

In any of the techniques above, native vegetation may be planted, either because a local native vegetation source is not available, or because project managers wish to jump-start vegetation growth and involve citizens in planting efforts. Native plants may be sourced from local nurseries, or from healthy donor marshes.
In general these wetland restoration projects vary in size from a few acres to hundreds of acres. Based on their environmental impacts, some projects may fit under a NOAA RC programmatic NEPA document, however at times NOAA RC must adopt another agency's EIS to move forward with funding and implementation.

The length of time between initiating sediment placement/removal and when active restoration efforts are complete will vary due to the size of the restoration site and the season in which the work was begun. Frequently, only a few weeks or months are required to remove the upland vegetation and soil, but planting cannot be completed until the appropriate tidal cycles or growing season begins. For this reason, active restoration activities may last over a year, even at smaller sites.

b. Levee Modification and Removal

In California, NOAA RC implements culvert or levee (berms, dikes, etc.) removal, breaching or modifications to return surface water flows, either riverine or tidal, to a more natural regime, thereby increasing available habitat to fish and other coastal resources and increasing carbon sequestration and storage capacity. Most of the levee removals or breaching are associated with wetland restoration projects. Funded projects primarily benefit salt marsh, freshwater tidal marsh and may enhance connections between estuaries and their watersheds.

NOAA RC funds levee and berm modification or removal projects to help restore the natural flow and hydrology to affected areas and reconnect additional fish habitat that has been blocked. These projects typically involve several components, including but not limited to the following:

- Physical removal of the levee, berm, or plug materials, which are typically earthen or concrete, using heavy equipment;
- Use of heavy equipment to breach the levee;
- Filling of ditches and canals behind levees; and/or
- Channel construction and modification.

In order to minimize the impacts from this activity, unless it is being used to fill man-made features such as ditches or canals, nonnative fill material originating from outside the floodplain will be removed to an upland site. The berm or levee shall always be breached at the downstream end of the project and/or at the lowest elevation of the floodplain to ensure the flows will naturally recede back into the main channel, thus minimizing any risk of fish entrapment.

In many cases, non-native species are removed from the area where tidal flows would enter following breaching of the levee or berm. Native plants are planted along the perimeter of the restoration site where there is the expectation of successful re-establishment.

Most of the levee modification projects funded by NOAA RC have been levee breaches. The height of the levee can range from two to ten feet and its breaching can allow up to 600 acres of tidal water coverage to occur. Levee breaches funded by NOAA RC do not border housing or commercial developments. As with the wetland restoration projects discussed above, levee breaching may fit under the NOAA RC programmatic EA or PEIS. At times NOAA RC must adopt another agency's EIS to move forward with funding and implementation.

Standard Protection Measures for Wetland Projects

Wetlands projects follow standard protection measures listed in Section J, *Table 1 – NOAA RC Summary of General Project Requirements and Protection Measures for Coastal Resources,* including, but not limited to, flagging sensitive areas, on-site erosion controls, on-site pollution prevention controls, methods to reduce soil compaction, seasonal work periods, adequate training of volunteers, and planting and installing vegetation standards.

2. Submerged Aquatic Habitat Restoration

Submerged Aquatic Vegetation (SAV) restoration involves transplanting or seeding subtidal habitats in bays and estuaries with seagrasses. SAV is usually planted to provide nursery and feeding habitat for a variety of aquatic fish and other organisms. In addition, SAV provides fish and other marine species hiding places from predation and competition. SAV beds help stabilize bay sediments, making it easier for additional SAV or other stable substrate dependent organisms, such as oysters, to establish. Most of the SAV restoration in California has been to eelgrass (*Zostera marina*), which can live in fully marine to brackish waters. Other SAV restoration with species such as surf grass (*Phyllospadix sp.*), which lives in the outer coast, and widgeon grass (*Ruppia maritima*), which is found in more brackish waters, have not been implemented yet by NOAA RC in California.

In general, SAV projects funded by NOAA RC convert open water and unvegetated open bottom to seagrass beds. While all habitat types are valuable for conservation, the loss of seagrass habitat is particularly significant; SAV has experienced a 40% decline worldwide. In some areas, SAV beds are still fairly intact, while other areas have declined up to 90%. (Fonseca et al 1998). In most locations, seagrass colonization is too prone to being disrupted by the disturbances mentioned above to count on a sufficient natural recolonization rate (Fonseca et al 1998). Therefore, NOAA RC often provides technical and financial support to restoration projects for the purpose of creating or reestablishing SAV where it does not currently exist.

SAV habitat is also frequently impacted by boaters, whose propellers dig into the bottom, tearing up sea grass meadows, creating readily identifiable bare spots called "prop scars." Larger vessels that run aground on shallow flats also cause damage to SAV beds. A small injury to an SAV bed may be enlarged by a storm event that takes advantage of the instability caused by the original damage. Also, SAV beds die off due to poor water quality and high turbidity.

Restoration is accomplished by direct planting of live plants in bare root, plug or mat form, either by hand or with mechanical methods. In some cases, seeds are distributed via seed buoys. At times the planting area is enhanced with sediment (i.e. prop scars are filled to allow for improved SAV growth) to provide nutrients and proper elevations for the transplants.

NOAA RC has been conducting eelgrass planting and seeding restoration in California for 10 years with a variety of organizations in San Francisco Bay and in Southern California. Currently restoration projects average less than an acre up to four acres at any given site. Eelgrass restoration sites include various locations within Upper Newport Back Bay and off the Channel Islands National Park in Southern California.

Standard Protection Measures for Submerged Aquatic Vegetation

Measures to protect both the donor beds and the newly restored beds will be implemented. SAV plants or seeds are usually collected from existing SAV beds, which can cause minor disturbances to the beds and their substrate, and temporarily reduce the number of individuals or seeds in the existing population. For all geographic areas, no more than five percent of the

below ground biomass of an existing donor bed will be harvested for transplanting purposes. Plants harvested will be taken in a manner that thins an existing bed without leaving any noticeable bare areas. Harvesting of flowering shoots for seed buoy techniques will occur only from widely separated plants and only a certain percent of the donor stock can be used per year. This percent is site dependent and prior to restoration requires intimate knowledge of the genetics and population dynamics of the donor site.

All efforts to reduce any potential turbidity while at the site are implemented. In most cases restoration takes place during low tide and turbidity is avoided. If divers and boats are used, the boat propellers are lifted and divers enter the SAV area outside the bed.

3. Shellfish Habitat and Shellfish Restoration and Creation

NOAA RC funds many kinds of shellfish restoration projects. In California, funded projects primarily focus on native oysters (e.g. *Ostrea lurida*) but may also restore other shellfish species such as hard clams, scallops and abalone. Techniques can be grouped into two types: placement of shellfish substrate and introduction of shellfish. These types are implemented separately, or at the same restoration site, depending on the needs of the locality.

Shellfish substrate is placed to encourage oyster larval recruitment. Restoration sites are subtidal or intertidal on un-vegetated, soft bottom estuarine areas. Rarely, substrate may be placed on hard substrate that represents former reef habitat, but only if the hard substrate is not currently producing oysters at a sustainable level. Natural substrate (oyster or clam shells) is preferred due to the oysters' affinity for it, but is not always available. Shells are most often deployed loose or in plastic mesh bags. Artificial substrate is used when there is not enough shell substrate available to create larger reef areas or when the bottom substrate is unstable and substantial sinking of the reef is likely to occur. Common artificial substrates include limestone rock and baycrete (e.g. Reef Balls, Oyster Castles, etc.). Regardless of type, most substrate is deployed from a boat or barge, but in some shallow water situations, restoration practitioners and community volunteers may carry the substrate to the reef location.

Restoration efforts also include releasing live shellfish in the restoration area if the local population is not large enough to produce viable larvae or has been fully extirpated from the area. Oysters may be released as single oysters, or already attached to substrate as spat on shell. Non-reef-forming organisms such as clams and abalone are released as individuals, but may be caged to reduce predation and facilitate research efforts. Rearing shellfish prior to release occurs in land-based or near-shore aquaculture facilities. Some shellfish are purchased from commercial facilities, but some funding recipient organizations run their own facilities as well.

The preliminary step to either of these restoration techniques may include the use of a shellfish rearing facility. These facilities consist of land-based tanks or floating cages. Rearing facilities are used to spawn additional shellfish and make sure stocks are disease free before being placed in their new environment.

Native oyster restoration funded by the RC has taken place in Humboldt and San Francisco Bays in Northern California and Los Alamitos Bay and Newport bays in Southern California.

Restoration areas can be from under an acre in size up to three acres. Abalone restoration aimed at increasing the endangered white (*Haliotis sorenseni*) and black (*Haliotis cracherodii*) abalone species, by growing and out-planting the various life history stages of green abalone (*Haliotis fulgens*) as a proxy species has been implemented for recovery efforts at locations off shore in Southern California.

Standard Protection Measures for Oyster Restoration
Disturbance at a shellfish restoration site typically only lasts as long as is needed to deploy the substrate or shellfish. Most native oyster restoration projects are performed with small boats and divers and consist of 20 to 60 bags of shell material that are placed by hand. Larger amounts of substrate can usually be deployed in a day; loose shells are sprayed off barges with high pressure hoses or are placed with specialized hopper-conveyer belt systems built into the deployment vessel; other substrate (reef balls) is typically placed using heavy equipment loaded on the barge. Reefs are typically built prior to times of high spat set (larval settling). All shell material is placed in un-vegetated areas (i.e. not directly on seagrasses). Any shell material or structures that are not providing ecological services are removed.

Shell sources - Shell or other substance used for substrate enhancement will be procured from clean sources that do not deplete the existing supply of shell bottom. Shells will be left on dry land for a minimum of one month before placement in the aquatic environment. Shells from the local area will be used whenever possible.

Native species and disease - Shellfish will be species native to the project area. Any shellfish transported across state lines or grown through an aquaculture facility will be certified disease free.

4. Living Shorelines
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. 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 shell for native shellfish settlement enhance habitat values by creating new living space. The techniques also increase connectivity of wetlands and deeper intertidal and subtidal lands while providing a measure of shoreline protection. Design strategies using rock armoring, rock sill, groin, or breakwater installations are not covered under this CD.

In addition, California's Climate Adaptation Strategy recommends the use of 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 2014). The State Coastal Conservancy Climate Change Policy also supports the use of Living Shorelines for their ability to provide stronger estuarine habitat resiliency to future sea level rise and other climate-change related effects (SCC 2011).

At this time the only Living Shoreline projects in California with NOAA support and technical assistance are within San Francisco Bay at two locations. The goal of these projects is to

create biologically rich and diverse subtidal and intertidal habitats, including eelgrass and oyster reefs, as part of a self-sustaining estuary system that restores ecological function and is resilient to changing environmental conditions.

Standard Protection Measures for Living Shorelines
Protection measures for living shorelines include those mentioned above for wetlands, seagrasses and oyster restoration since many of the techniques are used simultaneously.

5. Kelp Forest Restoration
Kelp forests are important structural habitat components of the near shore marine environment that provide nursery and feeding grounds for thousands of marine species. They are also instrumental in the carbon sequestration process, which is important to maintaining healthy CO_2 levels in the environment.

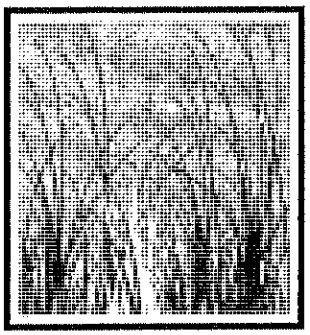
Kelp forest restoration has been implemented in Southern California, where kelp forests have been reduced by 80% over the past century. Pollution and sedimentation runoff from nearby land-based human activities have harmed kelp forests. Overfishing, extinction, and reduction of natural sea urchin predators has eliminated large areas of kelp forest that once existed.

Kelp forest restoration involves out-planting and transplanting of various kelp life history stages. Spore bags are attached to the substrate to allow for dispersal and seeding of substrate. Transplanting of lab grown kelp or drift kelp is also utilized. In some projects, sea urchins are removed from planted or already established areas to increase survival and growth of the kelp forest. Kelp forest restoration aims to restore structural and functional attributes of kelp forests. Techniques of planting and predator removal tend to be similar in all areas where kelp restoration is done. Kelp restoration primarily focuses on giant kelp (*Macrocystis pyrifera*), but different geographic regions could benefit from kelp restoration techniques with other kelp/algal species which may have different starting conditions and depth requirements.

Kelp forest restoration occurs in subtidal environments with hard substrate for kelp holdfast attachment. NOAA RC has worked with the California Coastkeeper Alliance both in Los Angeles and Orange Counties to help restore beds along the coast. Most kelp restoration projects are very labor intensive and therefore the overall footprint of restoration is small, typically one to three acres.

Standard Protection Measures for Kelp Restoration
In all cases, kelp restoration is performed by hand by registered, certified, and specially trained divers. There is very little sedimentation that occurs with this type of restoration, but all restoration practitioners minimize turbidity and sedimentation based on considerations such as access to the project, size of restoration effort, duration, or sediment characteristics.

All vessel operators must be licensed and establish vessel corridor routes to avoid kelp beds and establish anchor lines to avoid hard bottom areas or kelp beds.



Cal-IPC
California Invasive Plant Council

1442-A Walnut St., #462
Berkeley, CA 94709
(510) 843-3902
fax (510) 217-3500
www.cal-ipc.org

January 29, 2016

Charles Lester, Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

Dear Dr. Lester:

I am writing on behalf of Cal-IPC to urge the California Coastal Commission to concur with the general consistency determination made by NOAA for its Community-based Restoration Program. This program provides critical funding and technical assistance for projects in coastal counties. Permitting is one of the challenges when seeking to implement effective invasive plant management projects, and this measure would help habitat restoration proceed in the coastal zone while maintaining the highest levels of resource protection.

Cal-IPC supports partners across California in developing collaborative strategies for landscape-level invasive plant management. Cal-IPC has worked with an extensive network of public and private partners for 25 years. The state's newly updated Wildlife Action Plan makes clear how important invasive plant management is for protecting wildlife.

Partners in Santa Barbara, Los Angeles, Orange and San Diego counties are working to control emerging invasive plant species before they spread. This general consistency determination will facilitate greater funding and technical assistance for restoration projects addressing such priority needs in these areas, as it has done for northern coastal areas. We urge your concurrence with NOAA's decision.

Sincerely,

Doug Johnson

Doug Johnson
Executive Director

RESOURCE
CONSERVATION DISTRICT
OF THE
SANTA MONICA MOUNTAINS

818.597.8627 phone
818.597.8630 fax
info@rcdsmm.org

540 S. Topanga Canyon Blvd., Topanga, CA 90290

Charles Lester, Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

4 February, 2016

Dear Dr. Lester:

The Resource Conservation District of the Santa Monica Mountains (RCDSMM) would like to express its strong support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP). The process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone.

The cooperative habitat restoration projects for which the CRP provides funding and technical assistance bring important restoration work to coastal locations throughout California, including Los Angeles and Ventura County watersheds where the RCDSMM works. NOAA's CRP leverages additional and matching funds and encourages community involvement in the design and implementation of restoration projects. The permitting assistance provided by the CRP is also key in helping ensure that these environmentally beneficial projects are successfully implemented.

For more than 50 years, the RCDSMM has partnered with landowners, community organizations, restoration scientists and regulatory agencies to plan, design and implement habitat restoration and erosion control projects. The Malibu Lagoon restoration, Solstice Creek restoration, Rodeo Grounds Berm Removal in Topanga Creek, and the recently completed Trancas Lagoon Restoration Feasibility Study are some examples of such collaborative projects.

In Southern California, the NOAA RC has funded a number of important riparian, estuarine and marine habitat restoration projects. Through the efforts of many cooperating partners, habitat for sensitive species such as Southern California steelhead was enhanced and stream and coastal water quality was improved due to reduced erosion. We hope to see many more habitat projects funded and implemented in the coming years – part of the ongoing effort the RCDSMM leads to improve coastal resources in this region.

NOAA is an important environmental partner in Southern California. This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We urge your concurrence with the NOAA RC's decision.

Sincerely,

Clark Stevens
Executive Officer

Exhibit 4
CD-0004-15
Page 3 of 23

The Land Trust for Santa Barbara County

protecting natural lands and our agricultural heritage

Charles Lester, Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

February 5, 2016

Dear Dr. Lester:

The Land Trust for Santa Barbara County would like to express its strong support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP). The process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone.

The cooperative habitat restoration projects for which the CRP provides funding and technical assistance bring important restoration work to coastal locations throughout California, including many in the Santa Barbara region where our organization's efforts are focused, including the multiple drainages of the Carpinteria, Montecito, Santa Barbara, Goleta and Gaviota coasts, as well as inland tributaries to the Sisquoc, Jaro and greater Santa Ynez River watersheds. NOAA's CRP leverages additional and matching funds and encourages community involvement in the design and implementation of restoration projects. The permitting assistance provided by the CRP is also key in helping ensure that these environmentally beneficial projects are successfully implemented.

For more than 30 years, the Land Trust for Santa Barbara County has partnered with landowners, community organizations, restoration scientists and regulatory agencies to plan, design, implement, maintain and support habitat restoration and erosion control projects throughout the County. Our work has resulted in preservation and or restoration of more than 25,000 acres, with significant areas of coastal salt marsh, wetlands, riparian and upland aquatic habitats that support a host of wildlife species, including California Tiger Salamander, California Red-legged Frog, Tidewater Gobie, and Southwestern Steelhead.

In Southern California, the NOAA RC has funded a number of important riparian, estuarine and marine habitat restoration projects. Through the efforts of many cooperating partners, habitat for sensitive species such as Southern California steelhead was enhanced and stream and coastal water quality was improved due to reduced erosion. We hope to see many more habitat projects funded and implemented in the coming years – part of the ongoing effort the Land Trust for Santa Barbara County leads to improve coastal resources in this region.

NOAA is an important environmental partner in Southern California. This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We urge your concurrence with the NOAA RC's decision.

Sincerely,

Bruce Reitherman
Conservation Director

LOS ANGELES WATERKEEPER®

Charles Lester, Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

February 5, 2016

Dear Dr. Lester:

The Los Angeles Waterkeeper would like to express its strong support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP). The process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone.

The cooperative habitat restoration projects for which the CRP provides funding and technical assistance bring important restoration work to coastal locations throughout California, including Los Angeles County where Los Angeles Waterkeeper works. NOAA's CRP leverages additional and matching funds and encourages community involvement in the design and implementation of restoration projects. The permitting assistance provided by the CRP is also key in helping ensure that these environmentally beneficial projects are successfully implemented.

For more than 25 years, Los Angeles Waterkeeper (formerly Santa Monica Baykeeper) has partnered with landowners, community organizations, restoration scientists and regulatory agencies to plan, design, implement and support various habitat restoration and erosion control projects in Santa Monica and San Pedro Bays, including the kelp restoration project. LAW's participation in that collaborative program has led to the restoration of approximately 25 acres of kelp forests in Santa Monica Bay.

In Southern California, the NOAA RC has funded a number of important riparian, estuarine and marine habitat restoration projects. Through the efforts of many cooperating partners, habitat for sensitive species such as Southern California steelhead was enhanced and stream and coastal water quality was improved due to reduced erosion. We hope to see many more habitat projects funded and implemented in the coming years, including our newest dive program dedicated to the tracking of an invasive species of algae currently threatening the health of our coastal waters. Los Angeles Waterkeeper's ongoing and developing coastal water projects will continue to provide support in efforts to improve coastal resources in this region.

NOAA is an important environmental partner in Southern California. This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We urge your concurrence with the NOAA RC's decision.

Sincerely,

Michael Quill
Los Angeles Waterkeeper
120 Broadway, Suite 105
Santa Monica, CA 90401
310-394-6162 EXT. 113

CALIFORNIA TROUT

FISH · WATER · PEOPLE

California Trout, Inc.
Southern California Regional Office
701 E. Santa Clara Street, Ste. 12
Ventura, CA 93001

Charles Lester, Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

February 8, 2016

Dear Dr. Lester:

California Trout would like to express its strong support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program. The process of obtaining Coastal Development Permits for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination will facilitate timely habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone.

The cooperative habitat restoration projects for which the Community-based Restoration Program provides funding and technical assistance bring important restoration work to coastal locations throughout California. For 45 years, CalTrout has worked to solve complex resources issues while balancing the needs of wild fish and people throughout California. We aim to ensure resilient wild fish populations are thriving in California's cold water streams. In particular, in Southern California we chair and coordinate the Santa Clara River Steelhead Coalition (Los Angeles and Ventura Counties) and the South Coast Steelhead Coalition (Orange, Riverside and San Diego Counties), which are collaborations of non-profit organizations, government resource agencies, and stakeholders that promote the recovery of endangered Southern California steelhead. The permitting assistance provided by the Community-based Restoration Program is critical to helping ensure that our respective Coalition work plans are successfully implemented, and prioritized projects are addressed in an efficient and timely manner.

CALIFORNIA TROUT

FISH · WATER · PEOPLE

NOAA is an important environmental partner in Southern California and to that end participates as a member of both aforementioned Coalitions'. This consistency determination will encourage greater Community-based Restoration Program funding and technical assistance for restoration proponents. We strongly urge your concurrence with the NOAA RC's decision, to ensure that the progress and momentum gained by our Coalition's is not undermined and/or delayed by Coastal Development Permitting processes.

Thank you for your consideration.

Sincerely,

Candice Meneghin
Conservation Manager, Southern California Region
California Trout
Tel: (805) 665-6203
Email: cmeneghin@caltrout.org
www.caltrout.org

The Nature Conservancy
Protecting nature. Preserving life.

Santa Clara River and Coast Project
Ventura Field Office
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Ventura, CA 93001

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nature.org
nature.org/california

February 9, 2016

Charles Lester, Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

RE: NOAA Restoration Center Community-based Restoration Program – Consistency Determination

Dear Dr. Lester:

The Nature Conservancy would like to express its support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP). The process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone.

For more than 15 years, The Nature Conservancy has partnered with landowners, community organizations, restoration scientists, cities, the California State Coastal Conservancy and regulatory agencies to plan, design and implement habitat restoration and natural floodplain infrastructure projects in Ventura County. We own and have conserved over 3,500 acres of riparian and coastal habitat, much of this in the coastal zone. Along with our partners at the City of Oxnard and the State Coastal Conservancy, we are currently planning for over 630 acres of restoration at the Ormond Beach Wetland Complex in Oxnard.

The cooperative habitat restoration projects for which the CRP provides funding and technical assistance bring important restoration work to coastal locations throughout California, including the Santa Clara River and Ormond Beach where The Nature Conservancy has a number of ongoing restoration and conservation projects. The permitting assistance provided by the CRP also helps ensure that these environmentally beneficial projects are successfully implemented.

In Southern California, the NOAA RC has funded a number of important riparian, estuarine and marine habitat restoration projects. Through the efforts of many cooperating partners, habitat for sensitive species such as Southern California steelhead was enhanced and stream and coastal water quality was improved due to reduced erosion. We hope to see many more habitat projects funded and implemented in the coming years – part of the ongoing effort The Nature Conservancy leads to improve coastal resources in this region.

NOAA is an important environmental partner in Southern California. This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We respectfully request your concurrence with the NOAA RC's decision.

Sincerely,

Laura Riege

Laura Riege
Restoration Manager, The Nature Conservancy

cc: Erik Schmidt, Senior Conservation Strategist, Sustainable Conservation

Exhibit 4
CD-0004-15
Page 9 of 23

Cachuma Resource Conservation District
920 E. Stowell Rd. Santa Maria, CA 93454
Phone: (805) 928-9269

February 11, 2016

Jack Ainsworth, Senior Deputy Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

RE: **NOAA RC - General Consistency Determination**

Mr. Ainsworth:

The Cachuma Resource Conservation District would like to express its strong support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP). The process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone.

The cooperative habitat restoration projects for which the CRP provides funding and technical assistance bring important restoration work to coastal locations throughout California, including Santa Barbara County where our district works. NOAA's CRP leverages additional and matching funds and encourages community involvement in the design and implementation of restoration projects. The permitting assistance provided by the CRP is also key in helping ensure that these environmentally beneficial projects are successfully implemented.

For more than 20 years, the CRCD has partnered with landowners, community organizations, restoration scientists and regulatory agencies to support natural resources conservation in Santa Barbara County.

This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We urge your concurrence with the NOAA RC's decision.

Sincerely,
Anne Coates

Anne Coates
Cachuma Resource Conservation District
920 E. Stowell Rd.
Santa Maria, CA 93454
acoates@rcdsantabarbara.org

SCHR

California Coastal Commission
Larry Simon, Federal Consistency Coordinator
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

February 11, 2016

Dear Mr. Simon:

South Coast Habitat Restoration (SCHR) would like to express its strong support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP). The process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone.

The cooperative habitat restoration projects for which the CRP provides funding and technical assistance bring important restoration work to coastal locations throughout California, including watershed in Santa Barbara and Ventura Counties where our non-profit organization works. NOAA's CRP leverages additional and matching funds and encourages community involvement in the design and implementation of restoration projects. The permitting assistance provided by the CRP is also key in helping ensure that these environmentally beneficial projects are successfully implemented.

For more than eight years, SCHR has partnered with landowners, community organizations, restoration scientists and regulatory agencies to plan, design and implement habitat restoration and erosion control projects in Santa Barbara and Ventura Counties. Our work, along with our partners, has resulted in the removal of all the major barriers in the Carpinteria Creek and Tajiguas Creek watersheds. All of the barrier removal project in Carpinteria where in the coastal zone and had this consistency determination been in place when we began work to remove barriers, there would have been thousands of dollars saved.

In Southern California, the NOAA RC has funded a number of important riparian, estuarine and marine habitat restoration projects. Through the efforts of many cooperating partners, habitat for sensitive species such as Southern California steelhead was enhanced and stream and coastal water quality was improved due to reduced erosion. We hope to see many more habitat projects funded and implemented in the coming years – part of the ongoing effort the SCHR to improve coastal resources in this region.

NOAA is an important environmental partner in Southern California. This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We urge your concurrence with the NOAA RC's decision.

Sincerely,

Mauricio Gomez, Director
South Coast Habitat Restoration
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Carpinteria, CA 93014
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mgomez@schabitatrestoration.org
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DISTRICT OFFICE
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89 S. CALIFORNIA STREET
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VENTURA, CA 93001
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FAX (805) 641-3708

Assembly
California Legislature

DAS WILLIAMS
ASSEMBLYMEMBER, THIRTY-SEVENTH DISTRICT

February 11, 2016

Interim Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

Dear Interim Executive Director:

I am writing to express my strong support to the California Coastal Commission for the General Consistency Determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP). The process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone.

The cooperative habitat restoration projects for which the CRP provides funding and technical assistance bring important restoration work to coastal locations throughout California, including my district which encompasses coastal areas of Santa Barbara and Ventura Counties. NOAA's CRP leverages additional and matching funds and encourages community involvement in the design and implementation of restoration projects. The permitting assistance provided by the CRP is also key in helping ensure that these environmentally beneficial projects are successfully implemented.

In Southern California, the NOAA RC has funded a number of important riparian, estuarine and marine habitat restoration projects. Through the efforts of many cooperating partners, habitat for sensitive species such as Southern California steelhead was enhanced and stream and coastal water quality was improved due to reduced erosion. We hope to see many more habitat projects funded and implemented in the coming years – part of the ongoing effort the great organizations in our area lead to improve coastal resources in this region.

NOAA is an important environmental partner in Southern California. This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We urge your concurrence with the NOAA RC's decision.

Sincerely,

DAS WILLIAMS
Assemblymember, 37th District

environmental
DEFENSE CENTER

February 11, 2016

Susan Hansch and Jack Ainsworth,
Acting Executive Directors
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

Re: Coastal Consistency Determination for NOAA Restoration Center Community-based Restoration Program

Dear Susan and Jack:

The Environmental Defense Center (EDC) would like to express its strong support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP). The EDC protects and restores the environment through education, advocacy, on-the-ground projects and legal action. Through our work to improve conditions for federally endangered Southern California steelhead, we have learned that the process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects may limit the opportunities for voluntary habitat restoration in Southern California's Coastal Zone. The process for obtaining a CDP can be complex to ensure developments along the California coast comply with the Coastal Act and Local Coastal Plans. While important to ensure the coastal development projects avoid and minimize adverse effects on coastal resources and public access, the CDP process can affect grant funding, project timing and budgets for voluntary habitat restoration projects which by their nature further the Coastal Act and LCP policies for habitat protection and enhancement. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the California Coastal Zone.

The cooperative habitat restoration projects for which the CRP provides funding and technical assistance bring important restoration work to coastal locations throughout California, including watersheds in Ventura, San Luis Obispo and Santa Barbara Counties where EDC works. NOAA's CRP leverages additional and matching funds and encourages community involvement in the design, implementation and monitoring of habitat restoration projects. The permitting assistance provided by the CRP also helps ensure that these environmentally beneficial projects are successfully implemented.

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www.EnvironmentalDefenseCenter.org

For more than 15 years, the EDC has partnered with landowners, community organizations, restoration scientists and regulatory agencies to plan, design and support habitat restoration and improvement projects in our service area. Our work has resulted in the removal of barriers to steelhead migration in San Jose Creek and Mission Creek in Santa Barbara County, new fishing restrictions to protect steelhead in the Sisquoc River, and improved flows in numerous streams including Devil's Canyon in the Los Padres National Forest.

In Southern California, the NOAA RC has funded a number of important riparian, estuarine and marine habitat restoration projects. Through the efforts of many cooperating partners, habitat for sensitive species such as Southern California steelhead was enhanced and stream and coastal water quality was improved due to reduced erosion. We hope to see many more habitat projects funded and implemented in the coming years – part of the ongoing effort to which the EDC contributes in order to improve coastal resources in our region.

NOAA is an important environmental partner in Southern California. This consistency determination will encourage greater CRP funding and technical assistance for voluntary restoration proponents in the Coastal Zone of Southern California. We urge your concurrence with the NOAA RC's consistency determination.

Sincerely,

Brian Trautwein

Brian Trautwein,
Environmental Analyst / Watershed Program Coordinator
Environmental Defense Center

February 12, 2016

Via Electronic Mail

Commission Staff; Larry Simon, Federal Consistency Coordinator
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

Re: Coastal Commission Restoration Decision on NOAA's Community-based Restoration Project

Dear Dr. Lester:

On behalf of Defenders of Wildlife and our more than 200,000 members and supporters in California, I am writing in strong support for the General Consistency Determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP).

The long and arduous process of obtaining Coastal Development Permits for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone. However, approval of the consistency determination from the Coastal Commission would allow coastal habitat restoration projects in that region to move forward in a more efficient process.

Federally funded community-based restoration projects have been very successful in Southern California. One example is the Upper Newport Bay Ecosystem Restoration Project, where Newport Bay Conservancy, California Department of Fish and Wildlife, the City of Newport and the US Army Corps of Engineers partnered with the local community to preserve over 1,000 acres of previously unmanaged land. The federal government funded 65% of this project, while state and local entities funded the rest. The benefit of these projects is twofold as they encourage community participation in the design and implementation of restoration of critical habitat. The permitting assistance provided by the CRP is key in helping ensure that these environmentally beneficial projects are successfully implemented. We encourage the California Coastal Commission to continue community efforts in such restoration projects with the approval of NOAA's consistency determination.

In 2013, NOAA RC awarded over $1.6 million in funding for coastal habitat restoration through the CRP to benefit coastal marine species on the Northern and Central Coasts. These projects were located in Benbow Dam, Green Valley Creek, Lost Coast, Lower Klamath River, Mill Creek and Sears Point. Defenders of Wildlife hopes to see more habitat projects funded and

California Program Office

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Sacramento, CA 95814

Telephone 916-313-5800

implemented in the coming years to improve the coastal habitat we protect in the Southern California's Coastal Zone.

Southern California's marine habitat would greatly benefit from restoration projects through the CRP. NOAA's consistency determination will assure greater funding and technical assistance for such projects. For these reasons we strongly urge California Coastal Commission's approval of NOAA RC's decision.

Sincerely,

Kim Delfino
California Program Director

TROUT UNLIMITED

Larry Simon, Federal Consistency Coordinator
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

February 12, 2016

Dear Mr. Simon:

Trout Unlimited would like to express its strong support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP).

Trout Unlimited (TU) is North America's leading coldwater fisheries conservation organization, dedicated to the conservation, protection and restoration of trout and salmon fisheries and their watersheds. TU has more than 140,000 members across the United States, including 10,000 members in California. TU's vision is that, by the next generation, trout and salmon will be restored throughout their native range so that our children can enjoy healthy fisheries in their home waters. To accomplish this vision, TU works to protect, reconnect, and restore fish populations and their habitat, and to sustain this work by building a diverse movement of businesses, people, and communities dedicated to our mission. In California, our staff and members have actively engaged in coastal Coho and Steelhead restoration projects throughout their range.

The process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone. **We have seen this first hand on the north and central coast. There we have successfully used NOAA RC's other consistency determinations to speed up project implementation and save public dollars.**

We hope to see many more habitat projects funded and implemented in the coming years. This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We urge your concurrence with the NOAA RC's decision.

Sincerely,

George Sutherland
South Coast Chapter

Brian J. Johnson
California Director

SAN DIEGO COASTKEEPER

February 16, 2016

Charles Lester, Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

Dear Dr. Lester:

San Diego Coastkeeper would like to express its strong support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP). The process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone.

The cooperative habitat restoration projects for which the CRP provides funding and technical assistance bring important restoration work to coastal locations throughout California, including San Diego County watersheds where San Diego Coastkeeper works. NOAA's CRP leverages additional and matching funds and encourages community involvement in the design and implementation of restoration projects. The permitting assistance provided by the CRP is also key in helping ensure that these environmentally beneficial projects are successfully implemented.

For more than 20 years, San Diego Coastkeeper has partnered with landowners, community organizations, restoration scientists and regulatory agencies to implement an support habitat restoration and erosion control projects in San Diego County.

In Southern California, the NOAA RC has funded a number of important riparian, estuarine and marine habitat restoration projects. Through the efforts of many cooperating partners, habitat for sensitive species such as Southern California steelhead was enhanced and stream and coastal water quality was improved due to reduced erosion. We hope to see many more habitat projects funded and implemented in the coming years – part of the ongoing effort San Diego Coastkeeper leads to improve coastal resources in this region.

NOAA is an important environmental partner in Southern California. This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We urge your concurrence with the NOAA RC's decision.

Sincerely,

Matt O'Malley
Legal & Policy Director

Exhibit 4
CD-0004-15
Page 18 of 23

2825 Dewey Road #200
San Diego, CA, 92106
619.758.7743
www.sdcoastkeeper.org

RESOURCE
CONSERVATION DISTRICTS

Larry Simon, Federal Consistency Coordinator
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

February 16, 2016

Dear Mr. Simon:

The California Association of Resource Conservation Districts (CARCD) would like to express its strong support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) regarding the Community-based Restoration Program (CRP). The Coastal Development Permit process is resource intensive and limits opportunity for voluntary and restoration projects in Southern California's Coastal Zone. The CARCD agrees that NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration in this critical area while ensuring the highest levels of resource protection in the Coastal Zone.

The CRP provides funding and technical assistance to important restoration work in coastal communities throughout California where Resource Conservation Districts (RCDs) work. NOAA's CRP leverages their matching funds and encourages community involvement in the design and implementation of restoration projects for maximum success. The permitting assistance provided by the CRP is critical in helping ensure that these environmentally beneficial projects are successfully implemented.

Resource Conservation Districts have a 70 year history working with landowners, community organizations, restoration scientists and regulatory agencies to implement conservation on the ground. The RCDs conduct habitat restoration projects that benefit the Coastal Zone including: rural road restoration and decommissioning, erosion control on working lands, forest health and fire restoration, invasive species control, community outreach and permit coordination for landowners.

Funding from the NOAA RC has supported a number of partners to complete riparian, estuarine and marine restoration in Southern California. These efforts enhanced significant habitat for sensitive species and improved coastal water quality through reduced erosion. We hope that coastal communities will continue to benefit by habitat projects funded and implemented in the coming years – part of the ongoing effort California's Resource Conservation Districts are a proud part of to improve coastal resources.

We want to recognize and thank NOAA for being a critical conservation partner in Southern California. This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We urge your concurrence with the NOAA RC's decision.

Sincerely,

Karen Buhr
California Association of Resource Conservation Districts

CALIFORNIA ASSOCIATION OF RESOURCE CONSERVATION DISTRICTS
801 K Street, 18th Floor Sacramento, CA 95814
Phone: (916) 457-7904 **Fax:** (916) 457-7934
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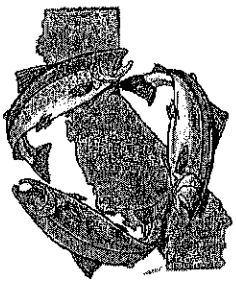

Larry Simon, Federal Consistency Coordinator
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

February 16, 2016

Dear Mr. Simon:

The Salmonid Restoration Federation (SRF) would like to express its strong support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP). The process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone.

The cooperative habitat restoration projects for which the CRP provides funding and technical assistance bring important restoration work to coastal locations throughout California, including the North Coast where our SRF works. NOAA's CRP leverages additional and matching funds and encourages community involvement in the design and implementation of restoration projects. The permitting assistance provided by the CRP is also key in helping ensure that these environmentally beneficial projects are successfully implemented.

For more than 34 years, the Salmonid Restoration Federation has been working to advance the art and science of habitat restoration for California's precious salmonid species. SRF has been a facilitator in the evolution of watershed restoration, bringing the restoration community, scientists, funders, and land managers together to share advances in science and approaches to restoration for native salmon, steelhead, and trout populations and their habitat throughout California.

In Southern California, the NOAA RC has funded a number of important riparian, estuarine and marine habitat restoration projects. Through the efforts of many cooperating partners, habitat for sensitive species such as Southern California steelhead was enhanced and stream and coastal water quality was improved due to reduced erosion. We hope to see many more habitat projects funded and implemented in the coming years – part of the ongoing effort the Salmonid Restoration Federation leads to improve coastal resources in this region.

NOAA is an important environmental partner in Southern California. This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We urge your concurrence with the NOAA RC's decision.

Sincerely,

Dana Stolzman

Dana Stolzman
Salmonid Restoration Federation

Exhibit 4
CD-0004-15
Page 20 of 23

Ojai Valley Land Conservancy

Protecting your views, trails, water and wildlife

February 16, 2016

Jack Ainsworth, Interim Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

Dear Mr. Ainsworth,

The Ojai Valley Land Conservancy (OVLC) would like to express its firm support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP). The process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone.

The cooperative habitat restoration projects for which the CRP provides funding and technical assistance bring important restoration work to coastal locations throughout California, including the Ventura River watershed where our organization works. NOAA's CRP leverages additional and matching funds and encourages community involvement in the design and implementation of restoration projects. The permitting assistance provided by the CRP is also crucial in ensuring that these environmentally beneficial projects are successfully implemented.

For more than 28 years, the OVLC has partnered with landowners, community organizations, restoration scientists and regulatory agencies to plan, design and implement/support habitat restoration and erosion control projects in Ventura County. Our work has resulted in construction of over 9 acres of wetlands and restoration of 15 acres of riparian habitats. We are currently engaged in a large-scale project to restore 4 miles of a stream that is listed as critical habitat for southern steelhead.

NOAA is an important environmental partner in Southern California. This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We urge your concurrence with the NOAA RC's decision.

Sincerely,

Brian B. Stark
Executive Director

Exhibit 4
CD-0004-15
Page 21 of 23

PO Box 1092 Ojai, CA 93024 Phone: (805) 649-6852 Fax: (805) 649-8913 email: info@ovlc.org www.ovlc.org

TRI COUNTY FISH TEAM

FUNDING FOR IMPROVED SALMONID HABITAT

February 16, 2016

Larry Simon, Federal Consistency Coordinator
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

Dear Mr. Simon:

The Tri County FISH Team (TCFT) would like to express its strong support to the California Coastal Commission for the general consistency determination made by the NOAA Restoration Center (NOAA RC) for its Community-based Restoration Program (CRP). The process of obtaining Coastal Development Permits (CDPs) for voluntary habitat restoration projects has limited the opportunities for restoration in Southern California's Coastal Zone, as CDP permitting can be complex and time-consuming, and can affect grant funding and disrupt project timing and tight budgets. The NOAA RC's consistency determination is an appropriate way to accelerate habitat restoration while ensuring the highest levels of resource protection in the Coastal Zone.

The cooperative habitat restoration projects for which the CRP provides funding and technical assistance bring important restoration work to coastal locations throughout California, including San Luis Obispo, Santa Barbara and Ventura County Watersheds where our partners work to improve steelhead habitat. NOAA's CRP leverages additional and matching funds and encourages community involvement in the design and implementation of restoration projects. The permitting assistance provided by the CRP is also key in helping ensure that these environmentally beneficial projects are successfully implemented.

For more than 10 years, the Tri County FISH Team has partnered with landowners, community organizations, restoration scientists and regulatory agencies to collaborate and support habitat restoration and erosion control projects in San Luis Obispo, Santa Barbara and Ventura Counties. Our work has resulted in numerous on-the-ground restoration projects including improving fish passage and riparian corridors, stabilizing creek banks and restoring estuarine conditions.

In Southern California, the NOAA RC has funded a number of important riparian, estuarine and marine habitat restoration projects. Through the efforts of many cooperating partners, habitat for sensitive species such as Southern California steelhead was enhanced and stream and coastal water quality was improved due to reduced erosion. We hope to see many more habitat projects funded and implemented in the coming years – part of the ongoing efforts of the Tri County FISH Team leads to improve coastal resources in this region.

MISSION STATEMENT: *To work with federal, state, and local agencies and non-governmental groups to secure funding and execute projects in support of salmonid recovery and habitat enhancement, improve information about restoration and recovery activities, and enhance public understanding and support for such actions.*

NOAA is an important environmental partner in Southern California. This consistency determination will encourage greater CRP funding and technical assistance for restoration proponents. We urge your concurrence with the NOAA RC's decision.

Sincerely,

Stephnie Wald

Stephnie Wald
Tri-County FISH Team Coordinator

MISSION STATEMENT: To work with federal, state, and local agencies and non-governmental groups to secure funding and execute projects in support of salmonid recovery and habitat enhancement, improve information about restoration and recovery activities, and enhance public understanding and support for such actions.