

**CALIFORNIA COASTAL COMMISSION**

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**CD-0006-22 (NOAA RC)**

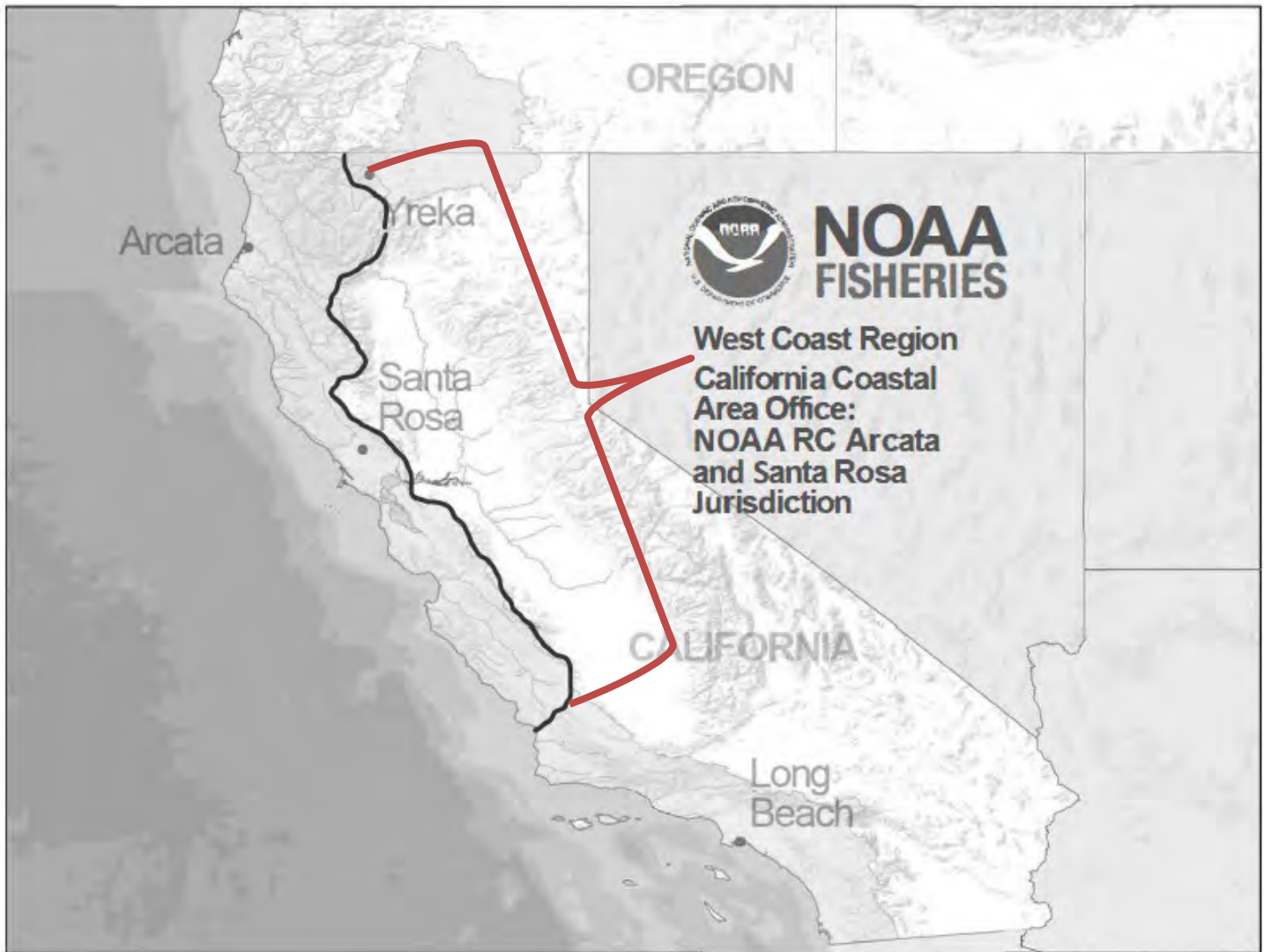
**NOVEMBER 23, 2022**

## EXHIBITS

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**Exhibit 1**



**Exhibit 2**

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

Resource Area	NOAA Review Process	NOAA Restoration Center California Region - General Requirements and Protection Measures <sup>1</sup>
<b>General Requirements/ Project Limits</b>	Application reviewed by NOAA 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.	<ul style="list-style-type: none"> <li>- In addition to general conditions, site specific conditions are required as needed for each project</li> <li>- Projects must clearly demonstrate habitat restoration benefits</li> <li>- Engineering review required for complex projects</li> <li>- All other permits must be obtained before the project may commence</li> <li>- Contractors must be briefed in advance by qualified biologist on all protection measures</li> <li>- Impact evaluation criteria must be followed: first avoidance, then minimization, and mitigation</li> <li>- Detailed success criteria required for revegetation projects</li> <li>- Prohibited activities include, but are not limited to gabions, treated wood, migration obstruction, projects with toxic sediments</li> <li>- NOAA retains right of reasonable access to property to monitor effectiveness of project</li> <li>- Monitoring and reporting required (see section below)</li> <li><i>BOs also Specify:</i></li> <li>- Specific protection measures for species, water quality, and several other resources areas (see below)</li> <li>- Maximum stream dewatering length: 1000' at a time</li> <li>- Consistency w/ 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)</li> <li>- Construction work windows, typically limited to June 15-November 1 with planting allowed beyond November 1</li> </ul>
<b>Water Quality</b>	<p>NOAA requires both project-specific and general measures for WQ protection.</p> <p>401 WQ Cert from RWQCB, 1600 Agreement from CDFW, USACE Permit, and compliance w/local ordinances also required.</p>	<ul style="list-style-type: none"> <li>- Detailed water quality protection and erosion control requirements during and following construction</li> <li>- Dewatering for in-channel work, with specific rules for how dewatering shall occur</li> <li>- Specific avoidance of impacts from poured concrete</li> <li>- Specific requirements for access road maintenance and road decommissioning</li> <li>- 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.</li> </ul>

<sup>1</sup> Note: All projects are subject to site- and project-specific conditions, as specified in either the NOAA RC Programmatic BOs, (Arcata and Santa Rosa offices), other Program 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 PEIS, Arcata and Santa Rosa Programmatic Biological Opinions (BOs), and NOAA RC Staff.

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		<ul style="list-style-type: none"> <li>- 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.</li> <li>- Cease work under high flows or seasonal conditions that threaten to disturb turbidity reduction measures, except for efforts to avoid or minimize resource damage.</li> </ul> <p><i>General On-site Pollution Controls:</i></p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- 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.</li> <li>- 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.</li> <li>- Use procedures to contain and control a spill of any hazardous material generated, used or stored on-site, including notification of proper authorities.</li> <li>- 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.</li> </ul>
<b>Listed Species</b>	<p>NOAA mission to protect species</p> <p>ESA sec. 7 consultations required with FWS and NOAA; CDFW CESA compliance also required</p>	<p><i>Project and species specific avoidance measures required by NOAA, including measures in BOs:</i></p> <ul style="list-style-type: none"> <li>- Work windows for all listed species</li> <li>- Detailed fish capture and relocation and dewatering requirements; qualified biologist required; reporting all encounters with listed species.</li> <li>- Water quality, water quantity, sensitive habitat protection, and other general measures also serve to protect species.</li> </ul>
<b>Sensitive Habitat Protection</b>	<p>Review projects for benefits to habitat and conditions required for avoidance of temporary and long-term impacts.</p>	<p><i>In addition to site specific measures; typical BO requirements:</i></p> <ul style="list-style-type: none"> <li>- Flagging required around sensitive areas and buffers</li> <li>- Specific measures to minimize impacts to riparian vegetation</li> <li>- Tree size removal limits</li> <li>- Construction access point must minimize vegetation and soil disturbance and compaction</li> </ul> <p><i>General Measures for Reduction of Soil Compaction:</i></p> <ul style="list-style-type: none"> <li>- 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.</li> </ul>

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		<ul style="list-style-type: none"> <li>- 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).</li> <li>- 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.</li> </ul> <p><i>Site Restoration</i> - 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 streambanks, 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.</p> <p><i>Planting or installing vegetation</i> - 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.</p> <p><i>Adequate Training of Volunteers</i> - 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.</p> <p><b>Invasive Species Removal</b></p> <ul style="list-style-type: none"> <li>- <i>Herbicide Application Controls</i> - 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. Chemicals used should be appropriate for the location.</li> <li>- <i>Additional Information and Guidelines</i> - 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 the NOAA Restoration Center Best Management Practices for Invasive Species at: <a href="http://www.habitat.noaa.gov/restoration/programs/invasivespecies.html">http://www.habitat.noaa.gov/restoration/programs/invasivespecies.html</a></li> </ul> <p><b>Wetlands</b> - 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.</p>
<b>Water Quantity</b>	Any projects approved for NOAA RC program that affect flows will conserve water for habitat.	<ul style="list-style-type: none"> <li>- Existing diversions only; must be in compliance with SWRCB water rights requirements; only allowed if water conservation benefit for species.</li> <li>- Additional hydrological data/water flow data information required for water conservation projects.</li> <li>- Pipe developments must decrease stream diversion and include permitted instream flow dedication (10 years).</li> </ul>

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<b>Visual Resources</b>	<p>Not directly reviewed by NOAA; typically beneficial impacts.</p> <p>Addressed through CEQA and local ordinances.</p>	<ul style="list-style-type: none"> <li>- All other permits/approvals must be acquired before project commences.</li> <li>- Not likely to be visual impacts because most projects are on private lands, and result in a net benefit to visual impacts by restoring degraded habitat and vegetation.</li> <li>- Project applications are also evaluated and ranked based on their level of public and landowner support.</li> </ul>
<b>Public Access</b>	<p>Evaluated during application review process.</p> <p>Addressed through CEQA process and local ordinances.</p>	<ul style="list-style-type: none"> <li>- 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.</li> <li>- Public access not likely impacted because many projects are on private lands. Projects on public lands often include partners with shared mission of maintaining public access for educational and/or recreation purposes (USFWS).</li> <li>- Project applications are also evaluated and ranked based on their level of public and landowner support.</li> </ul>
<b>Estuarine and Marine Resources</b>	<p>Review projects for habitat/species benefits, and require avoidance of potential negative effects to estuarine habitat.</p>	<ul style="list-style-type: none"> <li>- Project/site specific protection measures required by NOAA RC; all measures for water quality/sensitive habitat/species listed above also apply in estuarine areas.</li> <li>- Existing BOs are utilized where applicable and project specific BOs (with project specific protection measures) are developed as needed for marine species.</li> <li>- Project- and species-specific conditions imposed by NOAA.</li> </ul> <p>- <i>Assessment, Research, and Monitoring Techniques</i> - 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.</p> <p><b>Living Shorelines</b> - Protection measures for living shorelines include those mentioned for wetlands, sea grasses, and oyster restoration since many of the techniques are used simultaneously.</p> <p><b>Kelp Restoration</b> - 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.</p> <p><b>Submerged Aquatic Vegetation</b> - All measures to protect both the donor beds and the newly restored beds are implemented. 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 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.</p>

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		<p>All efforts to reduce any 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.</p> <p><b>Shellfish Restoration</b>  <i>General</i> - 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.</p> <p><i>Shell sources</i> - 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.</p> <p><i>Native species and disease</i> - 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.</p> <p><b>Rock Breakwaters</b> (<i>developed for habitat protection purposes</i>) - All rock or shell breakwaters will be designed with appropriate ingress and egress for fish in consultation with local regulatory agencies.</p>
<b>Coastal Agriculture</b>	<p>NOAA ranks projects based on public/landowner support, as well as watershed studies and prioritized actions from Integrated Regional Water Management Programs.</p> <p>Ag impacts included in CEQA analysis.</p>	<p>All other permits/approvals must be acquired before project commences.</p> <p>Projects evaluated in part by level of public support and coordination with local agencies, landowners, and other stakeholders.</p> <p>The majority of floodplain reconnection projects have mutual benefits that provide improved habitat conditions for fish and reduce flooding on agricultural lands, making ag land more productive.</p>
<b>Cultural Resources</b>	<p>Considered during NOAA RC project review.</p> <p>Also included in CEQA analysis.</p>	<p>- NOAA RC complies with Section 106 NHPA on a case-by-case basis. NOAA RC or designee will consult with SHPO and tribal officers for projects that may impact cultural or historic resources. NOAA has staff Cultural Resource Specialist.</p>
<b>Cumulative Impacts</b>	<p>NOAA reviews for avoidance of cumulative impacts; BOs specify limits on number of projects in each watershed and minimum distance between projects.</p>	<p>BOs have restrictions built in to avoid cumulative impacts:</p> <ul style="list-style-type: none"> <li>- Buffers required between projects in one watershed per year</li> <li>- Numerical limits on projects per watershed per year, based on size of watershed (Arcata), 3 total for Santa Rosa</li> <li>- Max 50 projects/year Santa Rosa region, 60/year Arcata region</li> </ul>

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	Also addressed in CEQA compliance by SWRCB/CDFW/local agencies.	
<b>Monitoring, Success Criteria, and Reporting</b>	Pre- and post-construction and success monitoring, and annual reports required.	<ul style="list-style-type: none"> <li>- Pre- and post-construction monitoring plan required of all projects; monitoring protocol typically follows CDFW FRGP</li> <li>- Development of success criteria</li> <li>- BOs require photo-monitoring</li> <li>- Annual report required and prepared by NOAA RC</li> <li>- Pre-construction reporting for qualifying projects in the Coastal Zone provided to Coastal Commission by May 15; qualifying projects in the Coastal Zone funded later in the year will be reported to Coastal Commission on a project-by-project basis</li> </ul>
<b>General Application and Review Process *</b>  *(some variations exist between funded and non-funded projects)	NOAA RC directly involved in project review, funding (where available), technical assistance, design, protection measures, monitoring and reporting.  NOAA also coordinates with other agencies on project permitting.	<i>General Process:</i> NOAA RC reviews project, assesses project qualifications and BO coverage; after approval for program inclusion. <ul style="list-style-type: none"> <li>- NOAA RC is alerted to projects through project partnerships, funding opportunities, and through their involvement in technical assistance and project development.</li> <li>- Team of NOAA RC, NMFS, CDFW, USACE assists NOAA RC with project oversight</li> <li>- Projects submitted to other agencies and NOAA Section 7 biologists throughout the year, as applications come in.</li> <li>- All specific information requirements must be met before project is eligible to proceed under program</li> <li>- Pre-project reporting for qualifying projects required</li> <li>- Monitoring and reporting required; evaluation of success criteria</li> </ul>