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STAFF REPORT: REGULAR CALENDAR

Application No.: **1-20-0422**

Applicant: **California Department of Transportation (Caltrans) District 1**

Project Location: Highway 101 at Dr. Fine Bridge, between Lake Earl Drive at post mile (PM) 35.8 and Fred D. Haight Drive at PM 36.5; with associated development on Assessor Parcel Numbers (APNs) 105-020-14 and 105-020-20; 105-700-01; 105-020-36; 105-020-87; 105-260-14; 105-070-04, Del Norte County

Project Description: Demolish and replace the existing two-lane U.S. Highway 101 (Dr. Fine) bridge over the Smith River with a 51-foot-wide bridge consisting of two 12-foot-wide lanes, two 8-foot-wide shoulders, and a six-foot-wide separated pedestrian walkway along the western (downriver) side of the bridge. Associated development includes constructing a temporary detour bridge east of the existing bridge to carry traffic while the new bridge is completed along the existing alignment; relocating utility lines; installing temporary stream crossings; replacing/rebuilding culverts; and invasive species removal.

Staff Recommendation: Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

Commission staff recommends **approval** of CDP application 1-20-0422, as conditioned.

Caltrans proposes to replace the existing U.S. Highway 101 bridge (known as the Dr. Fine Bridge) over the Smith River in Del Norte County. Constructed in 1940, the bridge has exceeded its design life and is physically deficient and functionally obsolete. The new bridge would have two 12-foot-wide lanes, two 8-foot-wide shoulders, and a six-foot-wide separated pedestrian walkway and would improve the safety, connectivity, and reliability of the bridge for all users. Bridge construction and demolition work is anticipated to take four years beginning in 2021, with three years of in-water construction beginning in 2022.

The new bridge would feature aesthetic elements designed to be visually compatible with the character of the surrounding area, including fewer piles in the river, a less obtrusive structural design than the current bridge, and see-through bridge railings with a cultural design element created in coordination with the Tolowa Dee-Ni' Nation and Elk Valley Rancheria tribes.

The major issues raised by this application include the project's consistency with the Commission's wetlands protection, and public access policies.

Wetlands in the project area include the riverine habitat of the Smith River itself, plus several streams, a small pond, riparian areas, and various forested, scrub-shrub, and herbaceous wetlands. The proposed development would result in a total of approximately 3.67 acres of permanent wetland dredging and fill impacts and an additional approximately 1.13 acres of temporary wetland impacts. Caltrans proposes to mitigate for these wetland impacts through a combination of on-site and off-site wetland creation and enhancement. Caltrans proposes to restore approximately 0.07 acre of wetland area on site within the right-of-way at the south end of the bridge off of South Bank Road by grading and recontouring the site to create conditions conducive to wetland establishment. In addition, Caltrans proposes to enhance wetland habitats at an off-site property located south of Crescent City (referred to as the "Hambro parcel" and owned by CA Department of Fish and Wildlife (CDFW)) by removing invasive plants over an approximately 45-acre area. The Hambro parcel contains a 120-year-old stand of rare Sitka Spruce-dominated forested wetlands currently threatened by a heavy infestation of invasive plants, particularly English ivy (*Hedera helix*), which, if left uncontrolled, can overwhelm the forest by girdling, suffocating, and toppling trees under the weight of its heavy vines. **Special Condition 9** requires Caltrans submit a Final Revegetation Plan to carry out the proposed mitigation. In combination with the on-site mitigation, the removal of invasive plants threatening the viability of the rare forested wetland will provide adequate mitigation for the dredging and filling of wetlands for the proposed development. Caltrans has not yet completed the final design details for the proposed on-site mitigation site. Therefore, **Special Condition 10** requires Caltrans submit a final onsite wetland mitigation and monitoring plan.

The Smith River and associated wetland habitats support several wildlife uses, including migration corridors for anadromous populations of federally and state-listed threatened Coho Salmon and other fish species. The Smith River also provides critical rearing and staging habitat for non-natal salmonids migrating through the estuary. In addition, a rare Western Pearlshell mussel bed extends along the southern side of the river for

approximately 500 feet in the project area. For construction purposes, temporary gravel berms and construction trestles would be constructed in the channel. To minimize impacts to aquatic species, in-water work would be limited to June 15 to October 15 each year. **Special Condition 14A** limits the timing of in-water construction work accordingly. Additionally, to ensure the mussel bed is protected during construction activities, **Special Condition 13** requires Caltrans to submit a final mussel monitoring and mitigation plan that (1) establishes baseline monitoring protocols needed to inform real-time monitoring and responses during in-water construction (2) provides for long-term monitoring post-construction, and (3) requires Caltrans to submit a mitigation program in the form of a permit amendment to compensate for documented mussel mortality post construction.

Piles associated with trestles and falsework would be installed in-water using a combination of vibratory and impact pile-driving methods. In order to complete in-water construction work within three seasons, all pile driving will occur within the first in-water construction season, which will cause exceedance of cumulative sound thresholds for impact pile driving within close proximity to the pile driving, resulting in injury and take (mortality) of juvenile salmonids. However, limiting construction to three in-water seasons with this one-year sound exceedance would avoid a fourth year of injury and take to aquatic species, which the resource agencies believe would result in greater injury and take overall of juvenile salmonids and other aquatic species.

To ensure sound thresholds aren't exceeded beyond the minimum distance needed to accommodate the three-year in-water construction period, Caltrans has proposed preparation and implementation of a hydroacoustic monitoring plan that would require pile driving to stop and deployment of additional sound attenuation measures if sound levels exceed injury thresholds outside of the expected area of impact. **Special Condition 16** requires that Caltrans submit for approval and implement the proposed hydroacoustic monitoring plan. To mitigate for impacts to fish species, Caltrans proposes to facilitate two fish passage improvement projects along two nearby tributaries to the Smith River that would greatly expand salmonid habitat on the streams. At Dominie Creek, Caltrans would modify an existing culvert structure within the Highway 101 right-of-way. At Rowdy Creek, Caltrans would contribute funds to a fish passage improvement project being planned by the Tolawa Dee-ni Nation. **Special Condition 18** requires Caltrans to submit documentation demonstrating that Caltrans has entered into an Intergovernmental Cooperative Agreement with the Tolowa Dee-ni' Nation to provide for the contribution of funds and the subsequent implementation of the project. **Special Condition 19** requires Caltrans to implement the proposed fish passage restoration work at Dominie Creek.

Existing vehicular access underneath the bridge adjacent to South Bank Road will be closed to the public during all construction activities. To further protect the rare mussel bed, and as recommended by CDFW, Caltrans proposes to close the area underneath the bridge adjacent to South Bank Road to the informal vehicular access that has occurred at this location in the past for launching boats. To mitigate for the reduction in public access at this location, Caltrans proposes to contribute $90,000 in matching funds towards improvements to a CDFW public boat launch located less than one mile

away along Fred Haight Drive. Caltrans also would provide signage directing people wishing to launch boats to the CDFW facility. To ensure equivalent public access is maintained as proposed, **Special Condition 27** requires establishment of a cooperative agreement between Caltrans and CDFW to provide for contribution of the funds and their use for the proposed boat launch improvements**.**

Staff believes that the project, as conditioned, includes all feasible mitigation measures necessary to find the project consistent with the Chapter 3 policies of the Coastal Act.

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I. MOTION AND RESOLUTION

Motion:

I move that the Commission **approve** Coastal Development Permit No. 1-20-0422 pursuant to the staff recommendation.

Staff Recommendation of Approval:

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

Resolution to Approve the Permit:

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

II. STANDARD CONDITIONS

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the applicant or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration**. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation**. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment**. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land**. These terms and conditions shall be perpetual, and it is the intention of the Commission and the applicant to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. **Evidence of Legal Ability of Applicant to Undertake Development on Property Owned by Others and Comply with Conditions of Approval.** PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT 1-20-0422, the applicant shall submit, for the review and approval of the Executive Director, (a) a copy of the Temporary Construction Easement (TCE) for development activities that will occur on APN 105-700-01 (Steinruck) and (b) evidence that clearly demonstrates that the legal owner(s) of APNs 105-020-14, 105-020-20, 105-700-01, 105-020-36, 105-020-87, 105-070-04, and the CDFW property to be used for off-site mitigation (APN 115-020-18) have agreed in writing that the applicant may undertake development on their property pursuant to Coastal Development Permit 1-20-0422 and as conditioned by the Commission herein. The agreement of CA Department of Fish and Wildlife shall be signed by an authorized representative.

2. **U.S. Army Corps of Engineers Approval.** PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT NO. 1-20-0422, the permittee shall provide to the Executive Director a copy of a permit issued by the Army Corps of Engineers, or letter of permission, or evidence that no permit or permission is required. The permittee shall inform the Executive Director of any changes to the project required by the Army Corps of Engineers. Such changes shall not be incorporated into the project until the permittee obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

3. **California Department of Fish and Wildlife (CDFW) Approval.** PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT NO. 1-20-0422, the permittee shall provide to the Executive Director a copy of a Streambed Alteration Agreement, California Endangered Species Act (CESA) consistency determination, and Incidental Take Permit issued by the CDFW or evidence that no Streambed Alteration Agreement, consistency determination, Incidental Take Permit ,or other permission is required. The permittee shall inform the Executive Director of any changes to the project required by the CDFW. Such changes shall not be incorporated into the project until the permittee obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

4. **Regional Water Quality Control Board (RWQCB) Approval.** PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT NO. 1-20-0422, the

permittee shall provide to the Executive Director a copy of a water quality certification issued by the RWQCB, or evidence that no water quality certification or permission is required. The permittee shall inform the Executive Director of any changes to the project required by the RWQCB. Such changes shall not be incorporated into the project until the permittee obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

5. **State Lands Commission Approval. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-20-0422**, the applicant shall provide to the Executive Director a copy of a lease and formal authorization for use of sovereign land and/or map prepared pursuant to the provisions of Section 101.5 of the California Streets and Highways Code approved by the State Lands Commission, or evidence that no permit or permission is required. The applicant shall inform the Executive Director of any changes to the project required by the State Lands Commission. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

6. **Permit Responsibility.** This permit authorization requires, and by accepting the benefits of CDP 1-20-0422, Caltrans agrees to and accepts the following:

   A. All activities associated with performing the development authorized pursuant to CDP 1-20-0422 shall at all times be undertaken in full accordance with the terms and conditions imposed by the Commission in conditionally approving CDP 1-20-0422. It shall be Caltrans' responsibility to ensure such compliance by any party to whom Caltrans assigns the right to construct or undertake any part of the activities authorized herein; this requirement does not relieve other parties of responsibility for compliance with the permit or immunize such parties from enforcement action by the Coastal Commission's enforcement program.

   B. Caltrans shall ensure that the relevant bidding documents and eventual contract and construction oversight by Caltrans include: a) sufficient and accurate provisions for Caltrans to ensure the obligation of the winning bidder to comply with all of the conditions of CDP 1-20-0422 and to construct the project in accordance with the approved project description, including all measures protective of coastal resources imposed by all state and federal agencies with review authority over the subject project; and b) the specific legal requirement that the contractor and any employees, subcontractors, agents, or other representatives of the contractor or contractors who are responsible for constructing any portion of the project, shall undertake all related activities in full compliance with the project approved pursuant to CDP 1-20-0422, including all terms and conditions imposed by the Commission in approving the permit, and the requirements of other state and federal agencies.

C. A copy of CDP No. 1-20-0422 and a copy of all final approved plans or other measures required to be completed prior to issuance of CDP No. 1-20-0422 shall be attached to the bidding documents for reference by potential bidders.

D. It shall be Caltrans' responsibility to ensure that the bidding documents contain general and special provisions necessary to fully and accurately incorporate all requirements imposed by the Commission or other state or federal agencies with regulatory authority over the project, including timelines for review of documents and other potentially limiting measures that may affect construction scheduling and the timing of construction. Further, before awarding the project contract, Caltrans shall verify that the apparent winning bid is adequate to ensure that the contractor has taken into consideration and provided for the full cost of compliance with the requirements set forth herein.

E. After the contract is awarded, Caltrans shall ensure that the contractor(s), subcontractor(s), and other parties selected by Caltrans or otherwise designated to implement any portion of the project approved pursuant to CDP No. 1-20-0422, are fully informed of, and continuously comply with, the obligations set forth in the findings and special conditions adopted and imposed by the Coastal Commission in approving CDP No. 1-20-0422. Nothing in these provisions shall prevent the Commission from taking enforcement action against the contractor or subcontractor(s) for non-compliance with the terms and conditions of CDP 1-20-0422, either individually or in addition to enforcement action against Caltrans in any instance of non-compliance.

F. Caltrans shall ensure that any contractor, subcontractor, or other representative of Caltrans, and Caltrans employees, understand and accept the terms and conditions of CDP 1-20-0422 and all other applicable permits and authorizations imposed or granted by other state and federal agencies, and shall submit evidence to the satisfaction of the Executive Director, prior to commencement of construction by any selected contractor, that all of the above-referenced parties have received and reviewed the applicable permits, agreements, and authorizations and understand and agree to comply with the requirements set forth therein.

7. Final Construction Plans. NOT LESS THAN SIXTY (60) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT 1-20-0422, the permittee shall submit for the review and written approval of the Executive Director, final site and construction plans that are consistent with the Project Description and plans submitted to the Commission in the permit application, and consistent with all special conditions of Coastal Development Permit 1-20-0422. The plans shall include, at a minimum:

A. Plan and profile architectural drawings for all elements of construction.

B. Revised bridge demolition and design plans demonstrating that the existing bridge pier numbers 12, 13, 14, and 15 shall be cut off at minimum to a depth of 4.5 feet below channel bottom.

C. Identification of the specific location of all construction areas, all staging areas, and all construction access corridors in site plan view.

D. Specifications of in-water gravel berm design. For in-water gravel berms used to provide access to construction equipment and support falsework needed for bridge construction, the plans shall specify in graphic and narrative form, at a minimum: (a) the layout and footprint of gravel berm configurations used for each in-water season; (b) demonstration that gravel berms will avoid the mussel bed; (c) gravel berm containment methods near mussel beds; and (d) quantity, size, and layout of pass-through culverts in the gravel berm that will be used to achieve permeability sufficient to accommodate distribute flows from the 95th percentile high summer flow evenly across the channel and avoid diverting most flows to the portion of the channel adjacent to the mussel bed. The plans shall include a plan note specifying the minimum gravel berm permeability needed to accommodate the 95th percentile high summer flow shall be maintained at all times. The approved configuration of the gravel berm may be modified from year to year with the prior written approval of the Executive Director and provided the reconfigured gravel berm meets the above criteria.

E. Specification of all visual elements, including design and colors, of the project including guardrails, bridge rails, retaining walls, aesthetic treatments, signage and any other visual elements. The specifications shall demonstrate use of a tribal motif railing theme design acceptable to the Tolowa Dee-Ni' Nation and Elk Valley Rancheria, and a color compatible to the surrounding area, as depicted in **Exhibit 7**.

F. Demonstration that the final plans are consistent with the identified seismic and hazards minimization design criteria as discussed in **Exhibit 19**.

The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

8. Final Plans.

A. NOT LESS THAN 60 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit for the review and approval of the Executive Director copies of all final plans prepared as proposed by the permittee in the "Project Features, Standard Measures, and Best Management Practices," and "avoidance, minimization, and mitigation measures" included in the Final EIR CEQA document adopted March 19, 2020 for the project (compiled in **Appendix C** to the staff report for CDP 1-20-0422), and including at minimum the following:

a. Debris management plan. In conformance with measure HF-2, the plan shall include provisions requiring the contractor to conduct inspections of the construction site on a regular basis as well as after major storm events

to monitor debris loading and implement measures, as determined feasible, to remove debris that poses a threat to temporary and permanent infrastructure and channel/bank stability. Measures would include the use of onsite equipment (e.g., cranes) to dislodge or remove debris caught on project-related structures in the river, when site conditions allow the safe removal of debris.

b. **Debris Containment Plan**. In conformance with measure WQ-5 and as further specified in **Special Condition Nos. 31 and 33** below, the Debris Containment Plan shall detail temporary containment systems that would be used to prevent falling debris from entering the river during bridge demolition and bridge construction, including but not limited to the use of steel or timber posts and girders, timber decking, and heavy tarps. The plan shall further specify that any construction debris entering the river and contained by booms shall be removed as soon as possible, but no later than the end of the day.

c. **Construction Site Dewatering Diversion and Discharge Plan**. The plan shall demonstrate that the dewatering area is appropriately sized sufficiently and managed to accommodate the volume of water generated and discharged. The plan shall also document and describe proposed non-storm water discharges and the types of BMPs that would be implemented to eliminate and/or minimize potential water quality impacts on receiving waters.

d. **Aquatic Species Relocation Plan.**

   i. In conformance with measure Species-5, the plan shall include: (a) the triggering events and provisions for relocating amphibians, reptiles, and lamprey, and salmonids in accordance with CDFW, NMFS, and in the case of lamprey, FWS protocols and guidelines to avoid impacts to animals during dewatering and instream; and (b) protocols for electrofishing salmonids consistent with the "Guidelines for Electrofishing Waters Containing Salmonids listed under the Endangered Species Act" published by NMFS.

   ii. In conformance with NMFS "Reasonable and Prudent Measure" 3(a)(ii), the plan shall specify reporting provisions that at minimum include the following: (a) A written report shall be submitted to NMFS and to the Executive Director by January 15 of the year following construction of the project; (b) The report shall include a description of the location from which fish were removed and the release site including photographs; (c) the date and time of the relocation effort; (d) a description of the equipment and methods used to collect, hold, and transport salmonids; (e) the number of fish relocated by species; (f) the number of fish injured or killed by species and a brief narrative of the circumstances surrounding salmonid injuries or mortalities; and (g) a description of any problems which may have arisen during the relocation activities and

a statement as to whether or not the activities had any unforeseen effects.

e. **Marine Mammal Monitoring Plan.** In conformance with Measure Species-3, the Marine Mammal Monitoring Plan shall specify adaptive measures to protect marine mammals, such as but not limited to: (a) defining a safety zone around in-river activities (b) prohibiting initiation of impact pile driving when marine mammals are detected within, or about to enter defined safety zones, and (c) further specifying that impact pile driving shall be halted and not resumed until the animal was seen to leave the safety zone on its own, or 30 minutes elapsed since the animal was last seen.

f. **Lead Compliance Plan**. In conformance with Measure HW-1, the lead compliance plan shall include protocols for environmental and personnel monitoring, requirements for personal protective equipment, other health and safety protocols and procedures for the handling of lead impacted soil, and requirements for addressing and disposal of lead-containing paint in traffic striping and on the existing bridge.

g. **Dust Control Plan.** In conformance with Measures HW-3 and AQ-2, the dust control plan shall specify dust control measures that will be implemented as part of the approved project such as but not limited to: (a) sprinkling, temporary paving, speed limits, and timely re-vegetation of disturbed slopes; (b) track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic; (c) provisions for covering transported loads of soils and wet materials before transport or increasing truck freeboard to minimize emission of dust during transportation; (d) provisions requiring prompt and frequent removal of dust and mud that are deposited on paved, public roads due to construction activity and traffic; and (e) a plan for managing dust containing hazardous materials such as naturally-occurring asbestos.

B. **Discrepancies between Approved Plans and Special Conditions**. In case of any discrepancy between final approved plans and special conditions of this authorization, the special conditions shall prevail. The permittee is responsible for assuring that all plans accurately and fully reflect the special conditions of this authorization.

C. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

9. Final Plan for Revegetation of Disturbed Areas.

A. NOT LESS THAN 60 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT NO. 1-20-0422, the permittee shall submit, for the review and approval of the Executive Director, final revised plans for revegetation of disturbed areas. The plan shall substantially conform to the plan prepared by Caltrans, revision date December 1, 2020, and entitled "Draft Coastal Onsite Revegetation Plan," except the revised final plan shall include the following:

i. A final map at a legible scale depicting the location of the onsite mitigation area as generally depicted in the site plan November 11, 2020 and as shown in **Exhibit 11**;

ii. Provisions specifying that prior to commencement of construction, a qualified biologist shall conduct baseline sampling and record species occupancy and relative cover by species of all species present within all areas where vegetation will be disturbed;

iii. Specifications of the sampling methodology (e.g., transects, quadrats, etc.; and sampling intervals) that will be used for pre-construction baseline surveys;

iv. Provisions for replanting disturbed areas with the same species composition as existed prior to disturbance and as documented during baseline sampling as specified in subsection A above;

v. Provisions for submitting the final planting palette to the Executive Director for review and approval no later than June 1, 2021;

vi. In addition to replanting areas upon completion of construction activities and prior to October 1, the usual onset of the rainy season, consistent with Caltrans measure IS-1 all bare soil areas shall be seeded with fast-growing native vegetation and adequately mulched with weed-free rice straw. Revegetation shall be performed only with sterile non-native grasses and/or native vegetation obtained from local genetic stocks within Humboldt or Del Norte Counties within 30 miles of the coast. Sterile non-native annual grasses shall comprise no more than 50% of the erosion control seed mixture to be planted (by weight of seed), with the remaining seed composed of native species. If documentation is provided to the Executive Director that demonstrates that native vegetation from local genetic stock is not available, native vegetation obtained from genetic stock outside the local area, but from within the adjacent region of the floristic province, may be used. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or by the State of California shall be planted or allowed to naturalize or persist on the parcel. No plant species listed as a 'noxious weed' by the State

of California or the U.S. Federal Government shall be utilized within the property;

vii. Revised success criteria that include, at a minimum (a) at least 80% native vegetative cover; (b) zero (0) percent cover of Cal-IPC High-rated invasive species; (c) no more than 10% non-native vegetative cover; and, (d) evidence of wetland vegetation and wetland hydrology according to the protocols of the Army Corps of Engineers;

viii. WITHIN 60 DAYS of installation of plantings, the permittee shall submit photos to the Executive Director demonstrating that all revegetation planting has been installed consistent with the specifications of the final revegetation plan;

ix. A revised monitoring schedule that includes monitoring and reporting for survival counts, species cover, wetland rating, and, between November and April, hydrology monitoring following significant rainfall events annually for five years;

x. Provisions for submittal of annual reports by January 31 each year of monitoring results to the Executive Director for the duration of the required monitoring period, beginning the first year after planting of vegetation. Each report shall document the condition of the revegetation with photographs taken from the same fixed points in the same directions. Each report shall also include a “performance evaluation” section where information and results from the monitoring plan are used to evaluate the status of the revegetation efforts in relation to the performance standards and final success criteria specified above;

xi. Provisions for the submittal of a final monitoring report to the Executive Director at the end of the five-year reporting period. The final report must evaluate whether the revegetated areas conform to the goals, objectives, and performance standards set forth in the approved final revegetation plan. The report must address all of the monitoring data collected over the five-year period; and

xii. Provisions specifying that if the final monitoring report indicates that the revegetation has been unsuccessful, in part, or in whole, based on the approved performance standards, the permittee shall submit a revised or supplemental revegetation plan to compensate for those portions of the original plan that did not meet the approved performance standards. The revised revegetation plan shall be processed as an amendment to CDP No. 1-20-0422, unless the Executive Director determines that no amendment is legally required.

B. The permittee shall implement the project in accordance with the approved final restoration plans. Any proposed changes from the approved final restoration plans shall be reported to the Executive Director. No changes to the approved final restoration plans shall occur without a Commission

amendment to CDP No. 1-20-0422, unless the Executive Director determines no amendment is legally required.

10. Final Onsite Wetland Mitigation and Monitoring Plan.

A. NOT LESS THAN 60 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT NO. 1-20-0422, the permittee shall submit, for the review and approval of the Executive Director, final revised plans for onsite compensatory mitigation of impacted wetlands through creation of wetlands within the right-of-way south of South Bank Road. The plans shall substantially conform to the onsite compensatory mitigation plan prepared by Caltrans, revision date December 1, 2020, and entitled "Draft Coastal Onsite Revegetation Plan" except the revised final plans shall include the following:

i. A final map at a legible scale depicting the location of the onsite mitigation area as generally depicted in the site plan dated November 11, 2020 and as shown in **Exhibit 11**;

ii. Final grading specifications and soil amendment composition at sufficient detail to demonstrate that the proposed site could maintain hydrology and minimum soil conditions necessary to support the successful creation of compensatory wetlands.

iii. Provisions for submitting the final planting palette to the Executive Director for review and approval no later than June 1, 2021;

iv. In addition to replanting areas upon completion of construction activities and prior to October 1, the usual onset of the rainy season, consistent with Caltrans measure IS-1 all bare soil areas shall be seeded with fast-growing native vegetation and adequately mulched with weed-free rice straw. Revegetation shall be performed only with sterile non-native grasses and/or native vegetation obtained from local genetic stocks within Humboldt or Del Norte Counties within 30 miles of the coast. Sterile non-native annual grasses shall comprise no more than 50% of the erosion control seed mixture to be planted (by weight of seed), with the remaining seed composed of native species. If documentation is provided to the Executive Director that demonstrates that native vegetation from local genetic stock is not available, native vegetation obtained from genetic stock outside the local area, but from within the adjacent region of the floristic province, may be used. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or by the State of California shall be planted or allowed to naturalize or persist on the parcel. No plant species listed as a 'noxious weed' by the State of California or the U.S. Federal Government shall be utilized within the property;

v. Revised success criteria that include, at a minimum (a) at least 80% native vegetative cover; (b) zero (0) percent cover of Cal-IPC High-

rated invasive species; (c) no more than 10% non-native vegetative cover; and (d) evidence of wetland vegetation and wetland hydrology following protocols of the Army Corps of Engineers.

vi. WITHIN 60 DAYS of installation of plantings, the permittee shall submit photos to the Executive Director demonstrating that all restoration planting has been installed consistent with the specifications of the final mitigation plan.

vii. A revised monitoring schedule that includes monitoring and reporting for survival counts, species cover, wetland rating, and, between November and April, hydrology monitoring following significant rainfall events annually for five years;

viii. Provisions for submittal of annual reports by January 31 each year of monitoring results to the Executive Director for the duration of the required monitoring period, beginning the first year after planting of vegetation. Each report shall document the condition of the revegetation with photographs taken from the same fixed points in the same directions. Each report shall also include a "performance evaluation" section where information and results from the monitoring plan are used to evaluate the status of the restoration efforts in relation to the performance standards and final success criteria specified above;

ix. Provisions for the submittal of a final monitoring report to the Executive Director at the end of the five-year reporting period. The final report must evaluate whether the restored areas conform to the goals, objectives, and performance standards set forth in the approved final mitigation plan. The report must address all of the monitoring data collected over the five-year period; and

x. Provisions specifying that if the final monitoring report indicates that the restoration project has been unsuccessful, in part, or in whole, based on the approved performance standards, the permittee shall submit a revised or supplemental revegetation plan to compensate for those portions of the original plan that did not meet the approved performance standards. The revised mitigation plan shall be processed as an amendment to CDP No. 1-20-0422, unless the Executive Director determines that no amendment is legally required.

B. The permittee shall implement the project in accordance with the approved final restoration plans. Any proposed changes from the approved final restoration plans shall be reported to the Executive Director. No changes to the approved final restoration plans shall occur without a Commission amendment to CDP No. 1-20-0422, unless the Executive Director determines no amendment is legally required.

11. **Final Offsite Wetland Mitigation and Monitoring Plan.** NOT LESS THAN 60 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE

DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT NO. 1-20-0422, the permittee shall submit, for the review and approval of the Executive Director, final revised plans for offsite mitigation at APN 115-020-18 (owned by CA Department of Fish and Wildlife) for temporal losses of impacted wetlands. The plans shall substantially conform to the July 9, 2020 "Offsite Mitigation and Monitoring Plan" ("MMP") except the revised final plans shall include the following:

A. **Acknowledgment.** Although a Management Entity may implement the invasive plant species removal and monitoring specified in the Offsite Mitigation Monitoring Plan ("MMP") through a binding co-operative agreement (or similar agreement), the Permittee (Caltrans) shall remain responsible for implementation of the MMP and compliance with all terms and conditions of this CDP. The Permittee shall also ensure the submittal of the regular monitoring reports as required herein.

B. **Final Implementation, Monitoring, and Reporting Plan Components.** The final MMP shall additionally include, at minimum, the following:

   i. A final map at a legible scale depicting the location of the offsite mitigation area as generally depicted in the site plan labeled Figure 2 and as shown on page 4 of **Exhibit 10**;

   ii. An executed copy of a Memorandum of Understanding (MOU), cooperative agreement, or similar legally binding agreement, with CDFW and any other landowner of property subject to the MMP that provides for: (a) the implementation of the invasive plants removal over an approximately 45-acre area, (b) monitoring and maintenance for five years after meeting the removal success criteria, (c) subsequent long term monitoring and maintenance conducted in perpetuity, and (d) the permanent protection of the areas of invasives removal from future development as defined by Section 30106 of the Coastal Act except for the ongoing removal of non-native invasive species, maintenance of native vegetation, and habitat restoration. The final MOU or agreement shall be submitted for the review and written approval of the Executive Director prior to its execution to ensure that it provides sufficient guarantees that all elements of the MMP will be carried out and that the Plan areas are permanently protected consistent with all terms and conditions of this CDP.

   iii. Executed copies of MOUs, cooperative agreements, or similar legally binding agreements, with a designated "Management Entity" or Entities that will be responsible for the long-term monitoring and ongoing invasive species removal that will be conducted in perpetuity after the permittee conducts invasive plant removal during the first five years and meets the invasive plant removal success criteria. The entity or entities must have experience in invasive species removal and habitat restoration. The final MOUs or agreements shall be submitted for the review and written approval of the Executive Director prior to its

execution to ensure that they provide sufficient guarantees that all elements of the MMP will be carried out and that the Plan areas are permanently protected consistent with all terms and conditions of this CDP.

iv. A detailed description of the methods that will be used after primary removal and during long-term monitoring to estimate the ground cover of invasive species. After primary removal and during long-term monitoring, estimation of invasive species ground cover shall include methods for intensively searching for invasive species (including but not limited to English Ivy (*Hedera helix*), Tansy ragwort (*Senecio jacobaea*), English holly (*Ilex aquifolium*), Cotoneaster (*Cotoneaster spp*.), jubata grass (*Cortaderia jubata*), French broom (*Genista monspessulana*), Himalaya berry (*Rubus armeniacus*), and Cape Ivy (*Delairea odorata*) within delineated polygons of known area, visually estimating invasives cover by species within areas of infestation and the size of the areas infested, and documenting the search tracks with a global positioning system (GPS). The entire treatment area must be visually examined along tracks that are sufficiently narrow that small invasive plants can be recognized. This task could be done in conjunction with the maintenance removal of invasive plants.

v. A description of the methods that will be employed if on-the-ground sampling is used to estimate ground cover of the native Sitka Spruce forest vegetation in order to assess whether the success criterion has been met. The sampling plan must insure more-or-less uniform spatial coverage of the removal areas, randomized placement of the sampling units, and shall include replication sufficient to provide an estimate of mean ground cover of native Sitka Spruce forest vegetation with a margin of error of 10% ground cover with 90% confidence. These methods must be described in sufficient detail to enable an independent scientist to apply them in the field.

vi. Success criteria for removal of invasive plants that include: 1) < 1 % ground cover of invasive plants after primary removal, after five years following primary removal, and during maintenance removal; and 2) ≥ 80% ground cover of native species within five years following primary removal with no unvegetated areas >2.5 m^2.

vii. Five years of annual monitoring and maintenance following the achievement of the success criteria for primary removal. During this period an accurate record shall be maintained of annual field efforts and expenditures to aid in the final calculation of the amount of the non-wasting endowment necessary to provide sufficient proceeds to fund long-term monitoring and removal of invasive species in all restoration areas in perpetuity.

viii. A long-term monitoring and maintenance plan to be implemented after the first five years of monitoring and maintenance following successful

primary invasive species removal. The Permittee shall establish a non-wasting endowment to fund the long-term monitoring and removal of invasive species in perpetuity.

ix. A Reporting Plan that includes 1) an "initial removal report" after the two years of removal implementation, and 2) a "final monitoring report" for the invasive species removal at the end of the subsequent five years of monitoring and maintenance following successful primary removal. The final monitoring report shall include the actual costs of maintenance and monitoring for the five years after successful primary removal. This information shall be used to determine the funding necessary for the endowment in Subsection C, below.

x. A provision that if the "final monitoring report" described in Subsection B(viii) above, indicates that the invasive species removal project has been unsuccessful, in part or in whole, based on the approved success criteria, the Permittee shall submit a revised or supplemental plan to compensate for those portions of the original plan that did not meet the approved performance standards. The revised plan shall be processed as an amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

C. **Non-wasting endowment fund.**

i. The Permittee shall establish a non-wasting endowment to fund the long-term monitoring and removal of invasive species in perpetuity. The long-term monitoring and removal of invasive species that will be funded by the non-wasting endowment fund shall commence five years after the Permittee has demonstrated restoration success pursuant to Special Condition 11B(vi) of CDP 1-20-0422. Coincident with the Permittee demonstrating restoration success pursuant to Special Condition 11B(vi) of CDP 1-20-0422, the Permittee shall submit evidence that within 2 years they will have established a non-wasting endowment to fund the long-term monitoring and removal of invasive species in the 45-acre enhancement area in perpetuity as is required by CDP 1-20-0422. The non-wasting endowment that is established shall be consistent with all terms and conditions of Special Condition 11 of CDP 1-20-0422 and shall include the following:

a) The non-wasting endowment fund shall be held, managed, invested, and disbursed solely for, and permanently restricted to, the long-term monitoring and removal of invasive species in perpetuity as is required by Special Condition 11 of CDP 1-20-0422. The fund shall be operated and administered in accordance with the Uniform Prudent Management of Institutional Funds Act.

b) The non-wasting endowment fund shall be calculated to include a principal amount that, when managed and invested, generates interest reasonably anticipated to cover the annual costs of the long-term

monitoring and removal of invasive plants in perpetuity as is required by Special Condition 11 of CDP 1-20-0422. The total annual expenses shall include investment and administration costs/fees. The non-wasting endowment shall be established in a manner that ensures that necessary disbursements are provided three years after the non-wasting endowment fund has been funded.

c) The entity holding the non-wasting endowment fund shall have the capacity to effectively manage the non-wasting endowment fund, including the capacity to achieve reasonable rates of return. The entity holding the non-wasting endowment shall submit an annual report to the Executive Director at the end of every year detailing the compliance with Special Condition 11 of CDP 1-20-0422. The entity holding the non-wasting endowment also shall use generally accepted accounting practices and provide an annual fiscal report to the Executive Director.

D. The Permittee shall undertake development in accordance with the approved final revised Offsite Mitigation and Monitoring Plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

12. **Submittal of Final Racking Debris Management Plan.** NOT LESS THAN SIXTY (60) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit for the review and written approval of the Executive Director, a final Racking Debris Management Plan consistent with Project Feature HF-2 as described in **Appendix C**. The plan shall include at a minimum the following:

A. The contractor shall conduct inspections of the construction site on a regular basis as well as every time the National Weather Service issues a flood risk warning for the lower Smith River to monitor debris loading and implement measures, as determined feasible, to remove debris that poses a threat to temporary and permanent infrastructure and channel/bank stability. Measures would include the use of onsite equipment (e.g., cranes) to dislodge or remove debris caught on project-related structures in the river, when site conditions allow the safe removal of debris. To the extent feasible, man-made debris contained within the debris to be removed or dislodged shall be collected and disposed of at an authorized disposal site

B. All activities associated with the development authorized herein shall be undertaken in continual conformance with the approved plan. Any proposed changes to the approved plan shall be reported to the Executive Director. No changes to the approved plan shall occur without a Coastal Commission-approved amendment to the coastal development permit, unless the Executive Director determines that no amendment is legally required.

13. Final Mussel Mitigation and Monitoring Plans.

A. **Pre-Project Mussel Monitoring Plan.** PRIOR TO MAY 1, 2021, the Permittee shall submit for the review and approval of the Executive Director a Pre-Project Mussel Monitoring Plan that contains the following elements:

i. A map or annotated aerial photograph that shows the location and extent of the Western Pearlshell mussel bed and the potential reference mussel bed sites and relocation sites.

ii. A description of the criteria for choosing potential relocation sites, including substrate characteristics and presence of resident mussels.

iii. A sampling plan for estimating the density of mussels at the Western Pearlshell mussel bed at the Dr. Fine bridge and at the reference sites and potential relocation sites during the summer of 2021. The sampling plan shall include sample design (e.g., stratified random sampling), description of sampling units, sampling methods, provisions for recording the measurement of the length of individual living and dead mussels, and density estimates of 1. surface mussels, and 2. All mussels within 15 cm of the substrate surface. Sampling shall be done with sufficient replication to produce a margin of error of 10% of the mean density with 90% confidence. A preliminary sample at each site will be necessary to estimate the variance about the mean.

iv. A physical characterization (water velocity and turbidity) of the site of the mussel bed at the Dr. Fine bridge, the mussel reference sites and the potential relocation sites, including the type of instruments that will be used, the number and physical placement of instruments at each site, the manner in which measurements will be recorded, and the frequency of measurements.

B. **Seasonal Observational Study Plan for the Dr. Fine Bridge Replacement Project.** PRIOR TO July 1, 2021, the Permittee shall submit for the review and approval of the Executive Director a Seasonal Observational Study Plan that contains the following elements:

i. A sampling plan for an observational study to be conducted during critical periods of the fall and winter of 2021 and the spring and summer of 2022. The study shall be designed to capture critical velocity and/or temperature thresholds at which mussel behavioral change is observed. Observations shall include threshold values at which mussels shift from the surface to burrowing in the substrate, from substrate burrowing to surficial congregation, and mussel dislodgement, as well as the timing of completion of mussel reproductive behavior. The result of the observational study shall be used to set the date of in-water construction onset, or, alternatively, if construction is initiated before reproduction is complete, to estimate 'take' of mussels during the overlapping period. Further, observations of the flow velocities that lead to behavioral change or mussel

dislodgement will be used to determine if flow velocity is approaching critical thresholds that would cause unseasonal substrate burrowing, which may also lead to 'take', or necessitate relocation, and to initiate the relocation planning process.

ii. The sampling design shall include a description of the type of instruments that will be used, the number and physical placement of instruments at each site, the manner in which measurements will be recorded, and the timing of measurements in relation to precipitation parameters, (*i.e.* during or immediately following the first fall/winter storm that records 1 inch of rainfall.)

C. **Mussel Monitoring Plan for the Dr. Fine Bridge Replacement Project.** PRIOR TO THE COMMENCEMENT OF IN-WATER CONSTRUCTION, the Permittee shall submit for the review and approval of the Executive Director a final revised Mussel Monitoring Plan that substantially conforms to the plan dated November 2020, except as modified herein. The Final Revised Mussel Monitoring Plan shall include, at a minimum, the following:

i. Maps or annotated aerial photographs that show 1. the location and extent of the Western Pearlshell mussel bed, the location of the gravel berm with different lines for different years if necessary, the location of all piers, pilings and temporary trestles, and 2. the location and extent of the chosen reference sites and potential relocation sites.

ii. Description of long-term population monitoring sampling plan at the site of the mussel bed at the Dr. Fine bridge and the mussel reference sites. This sampling plan shall be substantially the same as the Pre-Project sampling plan, including sample design (e.g., stratified random sampling), description of sampling units, sampling methods, frequency of sampling, and reporting intervals. Population monitoring shall be based on measurements of the length of individual living and dead mussels, and density estimates of 1. surface mussels, and 2. All mussels within 15 cm of the substrate surface. Sampling shall be done with sufficient replication to produce a margin of error of 10% of the mean density with 90% confidence. Changes to the Pre-Project plan shall be noted and explained. Population monitoring shall take place throughout the construction period and annually for ten years following construction completion.

iii. A detailed description of the physical monitoring (water velocity and turbidity), including the sites that will be monitored, type of instruments that will be used, the number and physical placement of instruments at each site, the manner in which measurements will be recorded, the frequency of measurements, and the procedure used to compare the results of the proposed 20-minute monitoring at the Dr. Fine mussel bed with conditions at the reference sites.

iv. A description of the visual monitoring of mussels to document dislodgement from the substrate, gaping behavior, and the presence of

dead individuals, including the periodicity of such monitoring, the reference sites monitored in addition to the Dr. Fine bridge site, the manner in which data will be recorded, and whether the whole area of interest will be examined or whether it will be sampled (e.g., along transects). The location of the areas or transects examined shall be recorded using a Global Positioning System (GPS).

a) Included in the description of visual monitoring shall be a description of the conditions that will trigger relocation of the mussel bed, and the methods by which relocation will occur. Mussel bed monitoring shall be coupled with monitoring of physical conditions (water velocity, water depth, water temperature and turbidity). If water velocity increases beyond established thresholds determined to cause unseasonal substrate burrowing or dislodgement, construction will cease until the high water velocity event has passed if of brief duration, or mussels are relocated. If changes in mussel burrowing behavior or signals of mussel distress (e.g. mussel gaping or lying on their sides) can be attributed to heightened turbidity, construction will cease until turbidity can be reduced or mussels are relocated.

b) Mussel bed monitoring during the first year of in-water construction shall be coupled with monitoring of hydroacoustic and vibration parameters for determination of thresholds that cause changes in behavior, signs of stress, or mussel dislodgement. This monitoring will include a description of the type of instruments that will be used for hydroacoustic and vibrational monitoring, the number and physical placement of instruments at each site, the manner in which measurements will be recorded, and the frequency of measurements. If during the initial monitoring phase and in subsequent monitoring years the sound level of hydroacoustic measurements or the level of vibration increases beyond established thresholds, construction will cease until further sound and vibration mitigation measures are in place. If additional mitigation measures are infeasible, and stress-related behaviors or dislodgement continue, construction will cease until mussels are relocated.

v. A description of the methods used to relocate mussels salvaged from the Western Pearlshell mussel bed at the Dr. Fine bridge, including method of collection (e.g., depth of excavation), method of transport, and tagging protocol.

vi. Provision for stopping construction while mussels are collected from the Western Pearlshell mussel bed at the Dr. Fine bridge, should mussel relocation be required.

vii. Establishment of a clearly marked buffer zone extending into the Smith River 10 meters from the edge of the delineated Western Pearlshell

mussel bed at the Dr. Fine bridge within which no construction can take place.

viii. An acknowledgement that all mortality of translocated mussels is a result of construction activities and must be mitigated.

ix. A detailed description of the use of Passive Integrated Transponders (PIT) tags for 1. documenting movement of individuals, and 2. for estimating apparent survival. In each case the following shall be described: locations monitored, manner of placement of the PIT tags (internal or external), the method of attachment of external tags, the manner by which the location of tagged mussels will be marked, identification of the type and sizes of PIT tags to be used for mussels of different sizes, the brand of waterproof, handheld reader or other reader type to be used, the number of mussels to be tagged at each site to estimate movement, the number of relocated mussels to be tagged at each relocation site, the estimated time required for tagging, data to be recorded for each tagged mussel (e.g. tag number, shell length, whether relocated, etc.), the area to be searched for tagged individuals, and the frequency of searches.

x. The permittee shall submit monitoring reports to the Executive Director by January 31st following each monitoring year.

xi. Provision for Possible Further Action. Acknowledgement that if the final monitoring report indicates that the Western Pearlshell mussel bed has been significantly impacted by the bridge construction based on approved success criteria or that mussels that were salvaged and relocated suffered greater than ten percent mortality, the Permittee shall submit within 90 days a mitigation program to compensate for the documented mussel mortality. The proposed mitigation program shall be processed as an amendment to the original CDP.

D. The permittee shall undertake development in accordance with the approved final mitigation and monitoring plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

14. Construction Requirements to Protect Coastal Resources. All measures proposed by the permittee as "Project Features, Standard Measures, and Best Management Practices" shall be implemented, including all avoidance, minimization, and mitigation measures included in the Final EIR CEQA document adopted March 19, 2020 for the project (compiled in **Appendix C** to the staff report as amended for CDP 1-20-0422) as modified by the other special conditions of CDP 1-20-0422, including, but not limited to, the following:

A. Timing of Work. All in-stream work shall only occur from June 15 through October 15. Construction activities restricted to this period include any work within the bed, bank, or channel of the Smith River.

B. Pile-driving Methods. The following measures shall be implemented to minimize potential impacts from pile driving:

   i. Installation of the permanent piles, which will occur within cofferdams, shall occur using an oscillation technique, minimizing barotrauma effects on fish.
   ii. Vibratory pile driving shall be used in lieu of impact pile driving whenever feasible.
   iii. Impact driving and hoe-ram operations shall be minimized to the extent practicable.
   iv. Impact driving and hoe ram operations shall be limited to daylight hours only.
   v. Attenuation methods (e.g., bubble curtains) will be applied where feasible.
   vi. Pile driving will cease when measured sound levels reach the injury thresholds at the predicted attenuation distances. The assumed installation rate per day will not be exceeded even if sound levels remain below the injury thresholds.

C. Fish and Herpetofauna Protection:

   i. All measures required for fish handling and protection imposed by CDFW and NMFS under their respective permits and consultations shall be implemented.

   ii. Any stream flow diversions and dewatering of the Smith River shall follow CDFW and NMFS protocols and guidelines to avoid impacts to fish and herpetofauna.

   iii. Prior to dewatering the aquatic work area, surveys for fish and herpetofauna (e.g., lamprey, red-legged frog, western pond turtle, etc.) shall be conducted by a qualified biologist(s) in consultation with CDFW and NMFS. Fish and herpetofauna within the work area shall be relocated in accordance with CDFW, NMFS, and in the case of lamprey, FWS protocols and guidelines to avoid impacts to animals during dewatering and instream work.

D. Bridge Bird Nesting Exclusion:

   i. Exclusionary netting against bird nesting shall not be used unless installed prior to March 1 but not earlier than February 1 of any pertinent year in which exclusion of nesting birds is required, under the immediate supervision of the Caltrans biological monitor in accordance with the requirements of these special conditions. Bridge netting that is installed, shall be removed at the end of the nesting season and disposed. New netting without tears or holes shall be required for each subsequent installation. The biological monitor shall inspect the netting

prior to installation to ensure that it is of the kind, and size necessary to exclude bridge nesting species with no risk of trapping birds. The biological monitor shall inspect the bridge netting daily between March 15 and August 31 every year of construction, or until the nets are removed, if the nets are removed at an earlier date, to ensure that the nets are fully secured and have not trapped birds. If trapped birds are observed, project activities shall be interrupted for as long as necessary to allow the biological monitor and others under her supervision to rescue and release net-trapped birds of any species. The biological monitor shall also ensure that the openings that have allowed any birds into the netted areas are secured against repeat occurrences. The biological monitor shall log all daily observations, inspections, and interventions to release trapped birds, noting the number and species of birds affected by the nets. These logs shall be included in the monitoring reports and shall be included in the permanent project files retained by Caltrans. The biological monitor shall ensure that the netting is fully removed not later than August 31 of any year, or within three (3) days after cessation of any annual construction activities that require the exclusion of nesting birds, whichever occurs first.

15. Measures to Minimize Impacts to Chinook & Coho Salmon and Steelhead

A. The permittee shall comply with the "Terms and Conditions," "Reporting Requirements," and "Conservation Recommendations" specified in the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service's Biological Opinion letter of March 19, 2020, attached as **Exhibit 15** of the staff report for Coastal Development Permit 1-20-0422. The permittee shall also submit copies of all required notifications, plans, and/or reports to the Executive Director.

B. In addition to other measures that may be required by NMFS, all in-water construction work shall at a minimum be subject to the following provisions:

   i. A qualified biologist with expertise in the areas of anadromous salmonid biology shall be on-site at all times during all in-water construction work including installation of cofferdams, excavation around bridge footings, and pile driving to monitor behavior of and disturbance to fish in the project area. The biologist shall capture any salmonids that may become stranded in the residual wetted areas as a result of project activities and relocate the individuals to areas of the river outside the project vicinity. Only NMFS approved methods shall be used to capture and relocate covered salmonids.

   ii. The fisheries biological monitor shall also verify compliance with water quality requirements of CDP 1-20-0422, particularly with requirements prohibiting the discharge of debris, chemicals, and other unauthorized

materials to the stream channel, or to locations that drain to the stream corridor.

16. **Hydroacoustic Monitoring Plan.** AT LEAST 30 DAYS PRIOR TO THE COMMENCEMENT OF IN-WATER CONSTRUCTION AUTHORIZED BY COASTAL DEVELOPMENT PERMIT NO. 1-20-0422, the Permittee shall submit, for the Executive Director's review and written approval, a Hydroacoustic Monitoring Plan. Prior to submitting the plan to the Executive Director, Caltrans shall submit copies of the plan to the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and the National Marine Fisheries Service for their review and consideration. The plan shall include the following components:

    A. The plan shall be based on the "dual metric exposure criteria" set forth below and shall state that exceedance of either criterion shall be deemed injurious or lethal to exposed fish The 2014 dual criteria for injury to fish recommended by the American National Standards Institute-Accredited Standards Committee for Animal Bioacoustics are: 1. a peak Sound Pressure Level (SPL) above 207 dB (re 1µPa) from a single hammer strike; or 2. an accumulated Sound Exposure Level (SEL) at or above 203 dB (re: 1µPa^2-sec). To estimate the sound energy to which a fish is exposed during multiple hammer strikes, NMFS uses the simple summation procedure where Total SEL = Single Strike SEL + 10 log (number of strikes). At a minimum, the Plan shall include all of the following:

        i. Establish the field locations of hydroacoustic monitoring stations that will be used to document the extent of the hydroacoustic hazard footprint during pile-driving activities and measure hydroacoustic noise at the distances from pile driving specified in Subsection (B)(1) below.

        ii. Describe the method of hydroacoustic monitoring that will continuously assess the actual conformance of the proposed pile-driving with the dual metric exposure criteria up- and down-stream of the pile-driving locations on a real-time basis, including relevant details such as the number, location, distances, and depths of hydrophones and associated monitoring equipment.

        iii. For all pile-driving activities that may produce measurable acoustic affects in the aquatic environment of Smith River, include provisions to continuously record pile strikes in a manner that tracks the time of each strike, the number of strikes, and the interval between strikes to be determined.

        iv. Include provisions for real-time identification and reporting of any exceedance of the dual metric exposure criteria at the distances from pile driving specified in Subsection (B)(1) below, clear action and notification protocols to stop pile-driving in case of such exceedance, including the authority of the fisheries biological monitor to order pile-driving to stop immediately, and procedures to notify pertinent parties including the Executive Director and other pertinent state and federal

agencies immediately after any exceedance of the dual metric exposure criteria.

v. Include a provision for instituting a “soft start” procedure that is believed to provide some protection by giving fish a chance to leave the area before the hammer operates at full capacity. For impact driving, contractors shall be required to provide an initial set of three strikes from the impact hammer at forty percent energy, followed by a one-minute waiting period, then two subsequent three strike sets.

vi. Include a monitoring and reporting program that will be coordinated with the fisheries biological monitor and will include provisions to provide daily summaries of the hydroacoustic monitoring results to the Executive Director and to other agencies requesting such summaries, as well as more comprehensive summary reports on a monthly basis during the pile-driving season.

B. Compliance with the Dual Metric Exposure Criteria.

1. At Smith River, the Permittee shall avoid hydroacoustic noise above the 207 dB peak Sound Pressure Level threshold or at or above the 203 dB cumulative SEL threshold measured at the estimated distance from the pile at which the hydroacoustic noise will have attenuated to the threshold level. This varies by pile type and location: (a) In water, trestle pile driving: 21m; (b) On land, trestle pile driving: 10m; (c) in water, falsework pile driving: 38m; (d) on land, falsework pile driving: 18m. It is assumed that fish closer to the pile being driven will be injured or killed.

2. If the accumulated SEL reaches 202 dB or the peak sound pressure level reaches 207 dB at the distances from pile-driving specified in Subsection (B)(1) above, pile-driving will be stopped to avoid exceeding the criterion and will not commence again for at least 12 hours.

3. In the event of an exceedance of either criterion of the dual metric exposure criteria, pile-driving operations shall be immediately stopped and shall not recommence unless the Executive Director, in consultation with the fisheries biologists of the California Department of Fish and Wildlife and the National Marine Fisheries Service, so authorizes based on the deployment of additional sound attenuation or other measures deemed likely by qualified technical experts to return the pile-driving to conformance with the dual metric exposure criteria.

4. If the return to pile-driving after the implementation of the additional measures discussed in Subsection B(2) above results in an exceedance of the accumulated sound exposure level criteria, pile-driving shall be stopped immediately and shall not re-commence until or unless the Commission approves an amendment to the Coastal Development Permit that proposes substantial changes to the proposed project that are

deemed by the Executive Director to offer a high likelihood of success in preventing further exceedances of the dual metric exposure criteria.

C. Project activities shall be conducted at all times in accordance with the provisions of the final approved plan. Any proposed changes to the final approved plan shall be reported to the Executive Director. Changes to the final approved plan shall require an amendment to the Coastal Development Permit unless the Executive Director determines that no amendment is legally required.

17. **Submittal of Hydroacoustic Monitoring Reports.** Upon commencement of pile-driving, Caltrans shall timely submit monthly monitoring summaries, annual monitoring reports, and a final monitoring report prepared for NOAA Fisheries, and/or any similar reports to be prepared for the California Dept. of Fish and Wildlife, to the Executive Director for review.

18. **Cooperative Agreement for Rowdy Creek Fish Passage Mitigation**

A. WITHIN ONE YEAR OF APPROVAL OF CDP 1-20-0422, and with prior document review and approval by the Executive Director based on consistency with this special condition, the permittee shall submit written documentation that demonstrates authorized representatives of Caltrans and Tolowa Dee-ni' Nation have entered into an Intergovernmental Cooperative Agreement consistent with the requirements of this CDP and its Special Conditions, including subsections B and C below.

B. WITHIN ONE YEAR OF APPROVAL OF CDP 1-20-0422, the Permittee shall submit to the Executive Director evidence that a nonrefundable fisheries mitigation fee of $755,000 has been transferred to Tolowa Dee-ni' Nation and deposited into an interest-bearing account specifically established by Tolowa Dee-ni' Nation to underwrite Tolowa Dee-ni' Nation's design and construction of the fish passage improvements associated with the Rowdy Creek Fish Hatchery located on parcels identified as Del Norte County Assessor's Parcel Numbers 103-080-26 and 103-080-043, consistent with the Cooperative Agreement described herein.

C. The Cooperative Agreement between Caltrans and Tolowa Dee-ni' Nation shall comply with the following minimum provisions:

i. The Cooperative Agreement shall indicate that the Rowdy Creek Hatchery fish passage improvements known as the Rowdy Creek Project will be designed and constructed to meet the following minimum objectives as presented in Caltrans' revised project description included as **Exhibit 5** to the Commission's findings for this CDP:

1. Restore fish passage on Rowdy Creek when the Hatchery is not collecting fish and flow is sufficient to allow fish passage;
2. Restore fish passage on Dominie Creek at its confluence with Rowdy Creek when flow is sufficient;

3. Limit the handling of fish not to be captured for Hatchery broodstock, and meet NMFS diversion screen guidelines for protection of fish; and
4. Establish methods for the hatchery to generate the water needed for operation.

ii. The Cooperative Agreement shall include provisions to address any failure by Caltrans and/or the Tolowa Dee-ni' Nation to implement the Cooperative Agreement consistent with the requirement of this permit, including but not limited to transfer of the funds to an Alternate Entity able to implement the Agreement, or if approved by an amendment to this CDP, to apply the funds to alternative fish passage improvements or other fisheries mitigation commensurate with the level of impact.

iii. Unless resolved by the Executive Director of the Commission, any dispute concerning compliance with or interpretation of any provision of the Cooperative Agreement affecting the implementation of the Cooperative Agreement consistent with the requirements of this CDP shall be resolved by the Coastal Commission.

iv. The Cooperative Agreement shall provide for annual written reports to be submitted to the Executive Director on the progress made toward the completion of the overall Rowdy Creek Project until such time that the full $755,000 balance of Caltrans' in lieu-fee funds is expended.

v. The Cooperative Agreement shall describe the roles and responsibilities of Tolowa Dee-ni' Nation as the administrator of the Rowdy Creek Project fund; affirm that Tolowa Dee-ni' Nation will be responsible for overseeing the CEQA and permitting requirements of the Rowdy Creek Project and commits Tolowa Dee-ni' Nation to maintain the new fish passage improvements upon their completion.

vi. The Cooperative Agreement shall commit Tolowa Dee-ni' Nation to commence construction on fish passage improvements no later than July 1, 2024; and explains their responsibility to manage bidding and construction processes throughout the completion of the project.

19. Dominie Creek Fish Passage Mitigation. This permit authorization requires, and by accepting the benefits of CDP 1-20-0422, Caltrans agrees to implement the fish passage improvements at Dominie Creek proposed in Caltrans revised project description included as **Exhibit 5** to the Commission's findings for this CDP and accepts the following:

A. AT LEAST 30 DAYS PRIOR TO THE COMMENCEMENT OF IN-WATER CONSTRUCTION, the permittee shall submit, for the review and written approval of the Executive Director, final plans for the proposed fish passage improvements at Dominie Creek that substantially conform with the improvement detailed in the Biological Assessment/ Essential Fish Habitat: Dominie Creek Fish Passage Project dated August 2018, and prepared by ICF on behalf of Caltrans.

B. The final plan shall include evidence that all necessary approvals from other agencies and local governments have been obtained for development of the fish passage improvement project.

C. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

D. The permittee shall complete construction of the Dominie fish passage improvement project no later than July 1, 2024.

E. The permittee shall submit annual written reports to the Executive Director by July 1 of each year detailing the progress made toward the completion of the Dominie fish passage improvement project until completion of the project.

20. Construction Responsibilities.

A. This permit authorization requires, and by accepting the benefits of CDP 1-20-0422, Caltrans agrees to and accepts the following:

1. The permittee shall notify planning staff of the Coastal Commission's North Coast District Office at least three working days in advance of (1) commencement of construction or maintenance activities, and immediately upon completion of construction or maintenance activities, and (2) of any anticipated changes in the schedule based on site conditions, weather or other unavoidable factors;

2. No vegetation removal, including clearing, grubbing, limbing, trimming, or other disturbance of existing riparian vegetation may occur between March 1 and August 31 of any year of construction unless a qualified biologist provides a survey undertaken to the satisfaction of the Executive Director not less than ten (10) days prior to proposed commencement of such activities, demonstrating conclusively that no birds are nesting in the area that would be affected, and the results of the survey have been provided to the Executive Director's satisfaction not less than five (5) days prior to proposed commencement of such activities, and the vegetation removal has additionally been authorized by a California Department of Fish and Wildlife biologist familiar with the bird species likely to nest in the subject area; and

3. All debris, materials, equipment, vehicles, staging and storage features, concrete washout areas, de-watering facilities, the fueling/fuel storage location, and any other material or temporary feature associated with project construction shall be removed immediately after project completion and the affected areas returned to pre-construction conditions and restored in accordance with other special conditions set forth herein.

B. All project activities shall be undertaken at all times in full compliance with these requirements. Any proposed changes to these requirements shall be reported to the Executive Director. No changes to these requirements may be approved without a Commission amendment to CDP 1-20-0422 unless the Executive Director determines that no amendment is legally required.

21. Flood Warning and Bridge Closure Safety Plan.

A. NOT LESS THAN 60 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE TEMPORARY BRIDGE AUTHORIZED BY COASTAL DEVELOPMENT PERMIT NO. 1-20-0422, the permittee shall submit, for the review and approval of the Executive Director, a plan for mitigating the risk of flooding hazards to the temporary detour bridge. The plan shall identify the steps that would be taken in the event of forecasted flood conditions to: (a) warn the traveling public of possible flood conditions, (b) monitor the rise of flood waters, (c) physically close the temporary bridge, and (d) detour traffic to alternate routes.

B. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

22. Pier Exposure and Scour Monitoring Plan.

A. NOT LESS THAN 60 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT NO. 1-20-0422, the permittee shall submit for review and approval of the Executive Director, a pier exposure and scour monitoring program. The pier exposure and scour monitoring program shall include provisions for monitoring for exposure above grade of remnant portions of partially removed former bridge piers of the existing bridge and shall at a minimum include the following:

1. Provisions to ensure the remnant portions of partially removed piers of the existing bridge shall be monitored, at a minimum, on a bi-annual basis for the life of the development authorized by CDP No. 1-20-0422, except as otherwise provided in subsection 4 below. Measurements of the extent (height, width and depth) of any exposed pier and/or scour observed around abandoned and/or newly-constructed piers shall be recorded. Photo documentation of the condition of any exposed pier structure shall be taken from GPS coordinate-tied locations upstream, downstream and laterally from the bank opposite of the exposed pier(s).

2. Provisions to ensure the remainder of abandoned piers shall be monitored, at a minimum, on a biannual basis in perpetuity, except as otherwise provided in subsection 4 below. Measurements of the extent (height, width and depth) of any exposed pier and/or scour observed around abandoned

and/or newly-constructed piers shall be recorded. Photo documentation of the condition of any exposed pier structure shall be taken from GPS coordinate-tied locations upstream, downstream and laterally from the bank opposite of the exposed pier(s).

3. Provisions to ensure monitoring reports shall be submitted to the Executive Director over the course of the monitoring period. Bi-annual monitoring reports shall be submitted to the Executive Director by February 1 of each respective year for five (5) years following completion of bridge demolition and construction. If after the first three monitoring reports no remnant portions of the former bridge piers become exposed above grade, the monitoring and reporting frequency maty be increased to five-year increments, with monitoring reports to be submitted by February 1 of each respective year. The monitoring reports shall document any changes that have occurred in the condition of abandoned-in-place piers and any scour pool dynamics and bathymetry in the vicinity of the piers, and identify any maintenance responses or adaptive management actions needed to be undertaken to address the removal of exposed piers consistent with the requirements of **Special Condition 23**.

4. Provisions for reducing the frequency of monitoring and reporting: if, after the first three monitoring reports, exposure of the of the old bridge foundations does not exist, the monitoring and reporting frequency may be increased to five-year increments.

B. The permittee shall monitor abandoned piers in accordance with the approved monitoring program. Any proposed changes to the approved monitoring program shall be reported to the Executive Director. No changes to the approved monitoring program shall occur without a further Commission amendment to this coastal development permit unless the Executive Director determines no further amendment is legally required.

23. Remnant Structural Debris Exposure Due to River Scour or Erosion.

A. In accepting the Commission's approval of Coastal Development Permit 1-20-0422, Caltrans agrees that if any subsurface remnant structural debris from the existing bridge, such as remnant pilings, footings, or abutments that are not fully excavated and removed should become exposed below the Ordinary High Water (OHW) line within the river channel as it exists at that time in the future for any reason, Caltrans accepts responsibility for undertaking removal of such debris within one year of observed exposure. All development required for the removal shall require a Coastal Commission approved amendment to the coastal development permit.

B. PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT NO. 1-20-0422, Caltrans shall submit a written agreement, in a form and content

acceptable to the Executive Director, evidencing Caltrans' agreement to be bound by the requirements of Subsection A.

24. Assumption of Risk, Waiver of Liability and Indemnity. By acceptance of this permit, the permittee acknowledges and agrees (i) that the site may be subject to hazards, including but not limited to flooding, erosion, and earth movement, all of which will likely worsen with future sea level rise; (ii) to assume the risks to the permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

25. Area of Archaeological Significance.

Measures the Permittee Shall Implement as Proposed in the Application:

A. The permittee shall comply with all recommendations and mitigation measures contained in the Monitoring Plan attached to the Supplemental Historic Property Survey Report (HPSR) dated May 23, 2019 and prepared by Caltrans Senior Environmental Planner (Archaeology) Timothy O'Keefe (hereafter referred to as "Monitoring Plan"), including but not limited to the following:

1. PRIOR TO COMMENCMENT OF CONSTRUCTION, all responsible parties, including the Caltrans Prehistoric Archaeology Planner (PQS), will review the 90% Design Specifications Package to ensure monitoring provisions requiring a tribal and archaeological monitor during ground disturbing activities are included.

2. This Monitoring Plan will be part of the Resident Engineer File and Caltrans archaeologist will attend pre-construction meeting to ensure that monitoring commitments are addressed.

3. Monitoring requirements will be discussed during the pre-construction meeting. Additionally, construction personnel shall be informed of historic preservation laws that protect archaeological sites against any disturbance or removal of artifacts.

4. NOT LESS THAN THREE (3) WEEKS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Resident Engineer shall notify Caltrans PQS of pending construction to ensure that a tribal monitor can be arranged with the Tolowa Dee-ni' Nation (Tribe) and the consultant archaeological monitor can be notified.

5. NOT LESS THAN THREE (3) WEEKS PRIOR TO COMMENCEMENT OF CONSTRUCTION, Caltrans PQS shall notify the Tolowa Dee-ni' Nation Tribal Historic Preservation Officer (THPO) that project will be entering construction so that a tribal monitor can be arranged.

6. NOT LESS THAN ONE (1) WEEK PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Resident Engineer shall notify Caltrans PQS of pending construction and will confirm the construction start date with Tolowa Dee-ni' Nation Tribal Historic Preservation Officer (THPO) and the consultant archaeological monitor.

Additional Measures the Permittee Shall Implement:

B. If an area of cultural deposits is discovered during the course of the project, all of the following shall occur:

1. The consultant archaeological monitor shall immediately notify the Resident Engineer and the Caltrans PQS of the discovery.

2. The consultant archaeological monitor shall immediately designate a 30-foot diameter area around the unanticipated discovery as off limits to further ground disturbing activities and the provisions set forth in 36 CFR 800.13(b) shall be followed. As part of these procedures, the Caltrans PQS shall notify the Tribe, the Caltrans Cultural Studies Office (CSO) the California State Historic Preservation Officer (SHPO), and the Executive Director of the unanticipated discovery within 48 hours.

3. The project archaeologist shall prepare and submit a Significance Testing Plan, for review and approval of the Executive Director, identifying measures to be undertaken to determine the significance of the find. The Plan shall be prepared in consultation with the Native American monitors, and the Native American most likely descendant (MLD) when State Law mandates the identification of a MLD. The Executive Director shall determine the adequacy of the Plan and if it is found to be de minimis, it can be implemented without further Commission action. The Significance Testing Plan results, along with the project archaeologist's recommendation as to whether the discovery should be considered significant, and the comments of the Native American monitors and MLD when State Law mandates the identification of a MLD, shall be submitted to the Executive Director for a determination of the significance of the discovery. If the Executive Director determines that the discovery is significant, development shall not recommence and the permittee shall submit to the Executive Director a Supplementary Archaeological Plan in accordance with subsection D, below.

4. A permittee seeking to recommence construction following discovery of cultural deposits determined to be significant pursuant to the process established in the Significance Testing Plan in subsection C(3) shall submit

a Supplementary Archaeological Plan for the review and written approval of the Executive Director, prepared by the project archaeologist in consultation with the Native American monitor(s) of the Tolowa Dee-ni' Nation, and the Native American most likely descendent (MLD) when State Law mandates identification of a MLD. The Supplementary Archaeological Plan shall identify proposed investigation and mitigation measures, which can range from in-situ preservation to recovery and/or relocation/reburial. A good faith effort shall be made to avoid impacts to cultural resources through methods such as, but not limited to, project redesign, capping, and placing cultural resource areas in open space. In order to protect archaeological resources, any further development may only be undertaken consistent with the provisions of the approved Supplementary Archaeological Plan, as well as, to the extent applicable, the original approved archaeological plan.

5. If the Executive Director approves the Supplementary Archaeological Plan and determines that the Supplementary Archaeological Plan's recommended changes to the proposed development or mitigation measures are de minimis in nature and scope, construction may recommence after this determination is made by the Executive Director.

6. If the Executive Director approves the Supplementary Archaeological Plan but determines that the changes therein are not de minimis, construction may not recommence until after an amendment to this permit is approved by the Commission to authorize a new archaeological approach.

7. A report verifying compliance with this condition shall be submitted to the Executive Director for review and written approval, upon completion of the mitigation measures detailed in the approved archaeological monitoring plan and/or Supplementary Archaeological Plan required to protect significant archaeological finds.

26. Protection of Shoulder and Bridge Walkway Public Access.

A. By acceptance of Commission approval of CDP 1-20-0422, Caltrans acknowledges and agrees that continued public access for bicyclists and pedestrians to the paved shoulder and separated pedestrian walkway bridge crossing provided within the bounds of the portion of the Highway 101 right-of-way subject to this coastal development permit shall be provided by Caltrans upon completion of construction of the bridge. No signage shall be installed within the bounds of the project approved pursuant to CDP 1-20-0422 that would restrict pedestrians or bicyclists from the use of these transportation facilities. Any proposed change to these access amenities shall require an amendment to CDP 1-20-0422, and such amendment shall not be accepted for processing unless accompanied by a proposal to provide equivalent or superior access alternatives within the same corridor.

B. PRIOR OF ISSUANCE OF CDP 1-20-0422, Caltrans shall submit a written agreement, in a form and content acceptable to the Executive Director, evidencing Caltrans' agreement to be bound by the requirements of subsection A.

27. Public Access Mitigation

A. **WITHIN ONE YEAR OF APPROVAL OF CDP 1-20-0422**, and with prior document review and approval by the Executive Director based on consistency with this special condition, the permittee shall submit written documentation that demonstrates authorized representatives of Caltrans and CA Department of Fish and Wildlife (CDFW) have entered into an Interagency Cooperative Agreement consistent with the requirements of this CDP and its Special Conditions, including subsections B and C below.

B. **WITHIN ONE YEAR OF APPROVAL OF CDP 1-20-0422**, the Permittee shall submit to the Executive Director evidence that a nonrefundable public access mitigation fee of $90,000 has been transferred to CDFW and deposited into an interest-bearing account specifically established by CDFW to underwrite CDFW's design and construction of the public access improvements on California Department of Fish and Wildlife's property known as Saxton Boat Ramp (aka Smith River Public Fishing Access), and identified as Del Norte County Assessor's Parcel Number 105-050-002, consistent with the Cooperative Agreement described herein.

C. The Cooperative Agreement between Caltrans and the Department of Fish and Wildlife shall comply with the following minimum provisions:

i. The Cooperative Agreement shall indicate that the public access and recreation improvements known as the Saxton Boat Ramp (aka Smith River Public Fishing Access), Improvement Project will be designed and constructed consistent with the Coastal Act and the Del Norte County certified LCP and include modernizing and extending the boat ramp, parking lot and ADA improvements, replacing location signs, rehabilitating restrooms, adding refuse/recycling bins, adding new interpretive panels, installing a DIDSON/sonar fish counting station into site, adding picnic tables/benches, a covered kiosk, kayak launch feature, bird observation shelter, lighting, and fencing as generally depicted in **Exhibit 20**.

ii. The Cooperative Agreement shall include provisions to address any failure by Caltrans and/or the Department of Fish and Wildlife to implement the Cooperative Agreement consistent with the requirement of this permit, including but not limited to transfer of the funds to an Alternate Entity able to implement the Agreement, or if approved by an amendment to this CDP, to apply the funds to alternative Public Access improvements.

iii. Unless resolved by the Executive Director of the Commission, any dispute concerning compliance with or interpretation of any provision of the Cooperative Agreement affecting the implementation of the Cooperative

Agreement consistent with the requirements of this CDP shall be resolved by the Coastal Commission.

iv. The Cooperative Agreement shall provide for annual written reports to the Executive Director of the Coastal Commission on the progress made toward the completion of the overall Saxton Boat Ramp (aka Smith River Public Fishing Access), Improvement Project until such time that the full $90,000 balance of Caltrans' in lieu-fee funds is expended.

v. The Cooperative Agreement shall describe the roles and responsibilities of CDFW as the administrator of the Saxton Boat Ramp (aka Smith River Public Fishing Access) Improvement Project fund; affirm that CDFW will be responsible for overseeing the CEQA and permitting requirements of the Saxton Boat Ramp (aka Smith River Public Fishing Access) Improvement Project and commits CDFW to operate and maintain the new access facilities upon their completion.

vi. The Cooperative Agreement shall commit CDFW to include new location signs in its budget plans for FY 2021-22, with the goal of initiating installation of the signs in Spring 2022; commits CDFW to include rehabilitation and construction of the boat launching facility in its budget plans for FY 2022-23, with the goal of initiating construction in Spring 2023; and explains their responsibility to manage bidding and construction processes throughout the completion of the project.

D. WITHIN 60 DAYS OF COMPLETION OF BRIDGE CONSTRUCTION, Caltrans shall install a sign off of South Beach Road underneath the new bridge directing members of the public desiring to launch boats to the CDFW boat launching facility off of Fred Haight Drive. Plans for the sign shall be submitted for the review and approved of the Executive Director prior to of installation.

28. Demolition/Construction Debris Removal. NOT LESS THAN SIXTY (60) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the review and approval of the Executive Director, a demolition/construction debris removal plan for the construction phase of the project designed by a licensed engineer or other qualified specialist. The plan shall incorporate the following Best Management Practices (BMPs) and other requirements:

A. Detailed description of phasing and scheduling of demolition/construction and staging of demolition/construction machinery and materials.

B. No demolition/construction materials, debris, or waste shall be placed or stored where it may be subject to dispersion by waves, wind, or rain and may consequently enter coastal waters or a storm drain.

C. All debris resulting from demolition/construction activities shall be removed from the project site and disposed of within 24 hours of completion of construction.

D. The applicant shall dispose of all demolition and construction debris outside of the coastal zone or at a site within the coastal zone permitted to receive the debris from the proposed project. The applicant shall provide evidence to the Executive Director of the location of the disposal site prior to the commencement of the development. Should the disposal site be located in the coastal zone, the applicant shall confer with the Executive Director to determine whether a separate coastal development permit is required.

29. Post-Construction Stormwater Management Plans. NOT LESS THAN SIXTY (60) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the written approval of the Executive Director, the final Stormwater Data Report and other relevant final project plans that detail the project's post-construction stormwater management Best Management Practices (BMPs). The final plans shall comply, at a minimum, with the following requirements:

A. Specify the number, location, size, design, and stormwater management function of all Treatment Control BMPs, including the proposed biofiltration swales and biofiltration strips.

B. Provide calculations documenting that all Treatment Control BMPs have been sized and designed to retain on-site (via infiltration, uptake by plants, or evaporation) the runoff produced by the 85th percentile 24-hour design storm, to the extent technically feasible. Indicate the values used in the calculations, and the source of data for each variable.

C. If flow-based Treatment Control BMPs are implemented to remove pollutants of concern, provide calculations documenting that these BMPs have been sized and designed to treat the runoff flow produced by the 85th percentile 1-hour design storm, multiplied by a safety factor of 2. Indicate the values used in the calculations, and the source of data for each variable.

D. Document the expected pollutant removal effectiveness for the identified pollutants of concern for each Treatment Control BMP.

E. Provide site-specific data verifying site suitability for all proposed Treatment Control BMPs that will infiltrate runoff, including the following:

i. Soil type and results of infiltration rate testing in the footprint of each proposed infiltration BMP.

ii. Site investigations of depth to groundwater and depth to any confining layer in the footprint of the proposed infiltration BMPs.

iii. Soil contamination, including aerially-deposited lead, in the footprint of the proposed infiltration BMPs.

F. Document that the project will implement Hydromodification Control BMPs that prevent the post-development runoff peak flow rate discharged from the site from exceeding the pre-project peak flow rate for the 2-year through 10-year

storm events. Provide calculations documenting the sizing and design of these BMPs, and indicate the values used in the calculations and the source of data for each variable.

30. Construction Pollution Prevention Plan. NOT LESS THAN SIXTY (60) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the written approval of the Executive Director, a final Construction Pollution Prevention Plan (CPPP) that details the project's plans to protect coastal water quality during construction and demolition activities. The final plan shall comply with the following requirements:

A. Minimize construction-phase water quality impacts by implementing BMPs to minimize erosion and sedimentation, the discharge of other pollutants resulting from construction activity, non-stormwater runoff, land disturbance, and soil compaction. Specify the description and location of all construction-phase BMPs to be implemented, and all methods and equipment to be used for construction and demolition.

B. All BMPs shall be maintained in a functional condition throughout the duration of the construction and demolition activities and shall be promptly removed when no longer required.

C. No construction materials, debris, graded soils, waste, concrete washout residues, chemicals, fuels, drilling muds or additives thereto, or noncompliant dewatering effluent (i.e., effluent with turbidity, pH, or other water quality parameter that does not comply with the requirements of the Regional Water Quality Control Board, or other state or federal agencies), or any other substance or material capable of degrading coastal waters, shall be stored, placed, or discharged where such releases may potentially reach the Smith River, any tributary thereto (whether flowing or intermittent), seep, or adjacent riparian or other sensitive habitat area, unless specifically and affirmatively authorized by CDP 1-20-0422, including by reference in these special conditions.

D. The use of temporary erosion and sediment control products (such as fiber rolls, erosion control blankets, mulch control netting, and silt fences) that incorporate plastic netting shall be prohibited, in order to minimize wildlife entanglement and plastic debris pollution. Only 100% biodegradable (not photodegradable) natural fiber netting shall be allowed.

E. Concrete work shall employ methods to avoid the placement of cement products, cement-laden wash water, or concrete debris where it may potentially enter coastal waters, except where concrete is of a type suitable for in-water curing and is registered for such purposes. All other concrete shall be fully cured, and concrete debris and construction materials shall be completely removed, prior to re-watering the construction site. No concrete work shall be conducted when rain is likely to occur.

F. No work below the Ordinary High Water Mark (OHWM), including but not limited to fish removal and installation of in-river work pads, shall be undertaken outside of the annual June 15 through October 15 work window.

G. All grading activities shall be conducted during the annual dry season period of June 1 through November 15 and shall be subject to the following condition:

   a. All work shall cease upon the onset of precipitation at the project site and shall not recommence until the predicted chance of rain is less than 50 percent for the Smith River area portion of the Del Norte Coast segment of the National Weather Service's forecast for Northwestern California.

H. Temporary erosion and sediment control BMPs shall be implemented if construction or site preparation ceases for a period of more than 30 days, and during winter work cessation periods. These BMPs shall be monitored and maintained until demolition or construction operations resume.

I. All lead-contaminated soils that will be disturbed within the project area shall be excavated, managed, and disposed of in a manner that is authorized by and compliant with the requirements of the California Department of Toxic Substances Control as being protective of coastal waters and resources. The Caltrans resident engineer shall note the manner in which such compliance is achieved, and such records shall be retained by Caltrans as part of the permanent project files. The permanent project files shall be made available at the request of any state or federal agency with review authority over the subject.

31. BMPs for Overwater and In-Water Construction Activities.

A. Tarps or other devices shall be used to capture all debris, sawdust, oil, grease, rust, dirt, drips, and spills resulting from overwater construction and demolition activities, to protect the quality of coastal waters.

B. Floating booms shall be used to contain any floating debris accidentally discharged into coastal waters during construction and demolition activities. Non-buoyant debris discharged into coastal waters shall be recovered by divers as soon as possible. The collected debris shall be removed as soon as possible, but no later than the end of each day.

C. A silt curtain shall be used to control turbidity if sediment or silt is stirred up during construction or demolition activities taking place in or over coastal waters, where coastal resources (such as benthic communities or eelgrass) may be at risk.

D. Machinery or construction materials not essential for project activities shall not be allowed at any time within the river.

E. Any paint, coating, wrapping, sealant, adhesive, caulk, or other product used in construction of overwater and in-water structures shall be inert when fully dried and cured, and therefore not leach chemicals that could contribute to aquatic toxicity. The applicant shall specify the product to be used and the location of

its use and shall provide any available information on the product's aquatic toxicity.

F. Vegetable-oil-based hydraulic fluids and biodiesel fuel shall be used in heavy equipment used in construction lasting one week or longer overwater or adjacent to coastal waters, if feasible.

G. The footprint of areas within which demolition and construction activities are to take place (including staging and storage of equipment, materials, and debris; and equipment fueling and maintenance) shall be minimized to the extent feasible. Construction activities shall be prohibited outside of designated construction, staging, storage, and maintenance areas.

32. Use of Preservative-Treated Wood Near Aquatic Environments. NOT LESS THAN SIXTY (60) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the applicant shall submit, for the written approval of the Executive Director, a plan documenting the type and amount of preservative-treated wood proposed to be used to construct all structures that are overwater, in-water, or adjacent to coastal waters, and Best Management Practices specific to the use of treated wood near aquatic environments. The applicant shall comply with the following requirements:

A. **Type of Preservative-Treated Wood.**

i. For the temporary construction trestle decks, soldier piles, "falsework" constructed in preparation for concrete pourings, and other structures, the applicant shall prioritize the use of alternative materials instead of preservative-treated wood, such as concrete, fiberglass, metal, plastic (e.g., polyethylene, polypropylene, or PVC), fiberglass-plastic composites (e.g., fiber-reinforced polymer), wood-plastic composites, or naturally decay-resistant untreated wood (e.g., redwood, red cedar, ipe, greenheart, and in some cases Douglas fir), where feasible. An analysis of potential alternative materials shall be submitted if treated wood is proposed for any component of structures that are overwater, in-water, or adjacent to coastal waters.

ii. The use of treated wood shall be avoided in locations where especially copper-sensitive aquatic organisms (such as salmon, trout, herring, Dungeness crab, blue mussels, abalone, oysters, sea urchins, and certain zooplankton) may be present.

iii. If treated wood is used, the preservative Ammoniacal Copper Zinc Arsenate (ACZA) shall be used to treat components where frequent contact with humans or marine mammals is not expected. Wood treated with the arsenic-free preservatives Alkaline Copper Quaternary (ACQ) or Copper Azole Type C (CA-C) shall only be used for components where frequent human or marine mammal contact will occur.

iv. To minimize the amount of preservatives that may leach into coastal waters, ensure that treated wood does not exceed the minimum preservative retention level by selecting wood treated to the standards of the lowest

appropriate Use Category (as specified by the American Wood Protection Association) for each component.

v. The amount of treated wood to be used for each structural component (e.g., the surface area of trestle decks) shall be specified.

vi. Where available, only treated wood shall be used that has been certified as produced for use in aquatic environments (as indicated by a BMP Quality Mark or Certificate of Compliance), in accordance with industry standards such as the Best Management Practices for the Use of Treated Wood in Aquatic and Wetland Environments by the Western Wood Preservers Institute, et al.

vii. Any fill, coating, wrapping, sealant, adhesive, grout, or other materials used in construction of structures that are overwater, in-water , or adjacent to coastal waters shall be composed of materials that are inert when fully dried and cured, and will not leach chemicals that could contribute to aquatic toxicity.

B. **BMPs for Use of Treated Wood in Aquatic Environments.** Employ all appropriate construction-phase BMPs to minimize the discharge of treated wood sawdust and debris to coastal waters. Construction-phase BMPs shall specifically address the use of treated wood in aquatic environments, including materials selection, materials storage, cutting or drilling treated wood, preservative field-treatment, and coating application. BMPs shall include, but are not limited to:

i. Treated wood sawdust and debris shall be kept out of the water.

ii. Field-treatment of Copper Naphthenate preservative shall be applied sparingly to cut ends and drilled holes in treated wood, because it does not bond as strongly to wood compared to pressure-treatments. Drips or spills of Copper Naphthenate into the water shall be avoided.

iii. Treated wood and treated wood debris shall be stored a minimum of 50 feet from coastal waters, drainage courses, and storm drain inlets. The treated wood and treated wood debris shall be stored on impervious pavement or an impervious tarp and covered during rain events.

iv. If treated wood is sanded or sawcut during demolition, installation, or maintenance, all sawdust and debris generated shall be contained and removed.

33. BMPs for Stockpile and Debris Management.

A. All demolition and construction materials, equipment, debris, and waste shall be properly stored and contained, and shall not be placed or stored where it may be subject to wave, wind, rain, or tidal dispersion, to prevent pollutants from entering coastal waters, sensitive habitats, and the storm drain system.

B. All stockpiles, construction materials, and demolition debris shall be enclosed on all sides, covered during rain events, and not stored in contact with the soil, and shall be located a minimum of 50 feet from coastal waters, sensitive habitat, and storm drain inlets.

C. Sediment control BMPs shall be installed at the perimeter of staging and storage areas, to prevent sediment in runoff from construction-related activities from entering coastal waters.

D. Demolition or construction debris and sediment shall be removed from work areas each day that demolition or construction occurs, to prevent the accumulation of debris, sediment, and other pollutants that may potentially be discharged into coastal waters.

E. All trash and debris shall be disposed of in the proper trash and recycling receptacles at the end of every construction day.

F. The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or construction.

G. Debris shall be disposed of at a legal disposal site or recycled at a recycling facility. If the disposal site is located in the coastal zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place unless the Executive Director determines that no amendment or new permit is legally required.

H. Demolition of the existing bridge or roadbed shall not be undertaken through the use of explosives, and no portion of the existing bridge or roadbed may be removed in a manner that allows debris to fall into any area of the river channel of Smith River or other watercourses, streams, and seeps within the project area, whether or not surface water is present in the subject locations at the time of demolition. Construction debris shall be captured by rigging methods undertaken from the top of the bridge deck or by crane, and the resultant debris shall be removed without relying on dropping the material to the ground for collection. Visible amounts of concrete dust and small rubble shall not be released into the air or water during construction and dust suppression measures shall be implemented. Dust control via water spray shall be implemented cautiously and monitored by the biological monitor, and all measures necessary to ensure that water contaminated by concrete dust does not drain into the banks, channel, or waters within the project area shall be undertaken.

I. All temporary construction berm fill, and any associated trestles and piles, shall be completely removed at the end of bridge construction.

J. At the end of the demolition/construction period, the applicant shall conduct visual inspections of the project area to ensure that no debris, trash, or construction material has been left on the shoreline or in the water, and that the project has not created any hazard to navigation.

34. BMPs for Spill Prevention and Equipment Maintenance.

A. Spill prevention and control measures shall be implemented to ensure the proper handling and storage of construction products or materials that may have adverse environmental impacts. The discharge of any construction products or materials into coastal waters shall be prohibited.

B. Leaks or spills of fuel, oil, grease, lubricants, hydraulic fluid, chemicals, preservatives, paints, or other construction products or materials shall be immediately contained on-site and disposed of in an environmentally-safe manner as soon as feasible.

C. Construction vehicles, machinery, and equipment operating at the project site shall be inspected daily to ensure there are no leaking fluids and shall be serviced immediately if a leak is found.

D. Fueling and maintenance of construction equipment and vehicles shall be conducted off-site, if feasible. Any fueling and maintenance of mobile equipment conducted on-site shall take place at a designated area located at least 50 feet from coastal waters, sensitive habitat, and storm drain inlets (unless these inlets are blocked to protect against fuel spills). The fueling and maintenance area shall be designed to fully contain any spills of fuel, oil, or other contaminants. Equipment that cannot be feasibly relocated to a designated fueling and maintenance area (such as cranes) may be fueled and maintained in other areas of the site, provided that procedures are implemented to fully contain any potential spills.

E. Machinery, equipment, and vehicles shall be maintained and washed in confined areas specifically designed to control runoff. If thinners, petroleum products, or solvents must be used on-site, they shall be properly recycled or disposed of after use, and shall not be discharged into storm drains, sewers, receiving waters, or onto the unpaved ground.

F. Sufficient oil absorbent booms and/or pads shall be on-site at all times during project construction to ensure an immediate, effective response to any spill with the potential to reach coastal waters or sensitive habitat areas. Site personnel shall be verified as fully trained to deploy such equipment. The presence of the booms/pads/equipment and the adequacy of personnel training shall be periodically verified by the Caltrans site supervisor and noted in the permanent project records retained by Caltrans.

G. All equipment used during construction that is parked or operated within or over the river channel (from top of bank to top of bank) shall have oil pans or other containment materials or devices continuously placed beneath such equipment to ensure that leaks that do arise will not enter the river environment. Vehicles or machinery cleared to enter the wetted channel, such as for construction of temporary crossings, shall be fully steam-cleaned, including the undercarriage, and inspected and verified to be free of leaks by the Caltrans site supervisor or designated representative, before the subject vehicles or machinery are allowed to enter the wetted channel. No vehicles or

machinery shall enter the wetted channel at any time unless under the constant supervision of the monitoring fisheries biologist and the Caltrans site supervisor.

IV. FINDINGS AND DECLARATIONS

A. Project Description

Caltrans proposes to replace the existing, functionally obsolete U.S. Highway 101 bridge over the Smith River, known as the Dr. Fine Bridge. The existing 1,050-foot-long, 32-foot-wide two-lane bridge, which was constructed in 1940 and seismically retrofitted in 1993, would be replaced with a 51-foot-wide two-lane bridge in the same alignment. The existing bridge has two 12- foot-wide lanes, 1-foot-wide non-standard shoulders, and a 21-inch-wide elevated maintenance walkway. The new bridge would have two 12-foot-wide lanes, two 8-foot-wide shoulders, and a six-foot-wide separated pedestrian walkway. The new bridge would feature aesthetic elements designed to be visually compatible with the character of the surrounding area, including fewer piles in the river, a less obtrusive structural design than the current bridge, and see-through bridge railings with a cultural design element. The applicant's complete project description is provided in **Exhibit 5**.

Roadway improvements are also proposed at the north and south approaches to the bridge. Improvements would include widening the shoulders, constructing retaining walls, and extending the bridge's pedestrian walkway, steel railing, and pedestrian rail.

A Temporary Bridge would be constructed approximately 48 feet upstream to carry traffic while the existing bridge is demolished, and the new bridge is constructed. This detour bridge would be demolished once the new bridge is put into service. As detailed in **Finding K** below, temporary soldier pile retaining walls would be constructed at the northeast and southeast sides of the existing bridge alignment to support the temporary detour bridge. The slopes on the northeast and southeast sides of the bridge associated with the temporary retaining walls would be re-contoured to the existing grade once the detour bridge is removed. To minimize the amount of embankment fill and resulting landform alteration, retaining walls would be installed at the northwest and southwest sides of the bridge and would receive an aesthetic treatment such as colored and/or textured concrete to help blend with the environment.

The proposed project will require the relocation of telephone, cable, and electric utilities to accommodate construction-related activities. As detailed in **Finding K** below, as part of the final relocation of utilities, several portions of the lines would be undergrounded, thereby improving views along the Highway 101 corridor.

Other associated development within the project area includes replacing/rebuilding culverts; clearing and grubbing vegetation; installing temporary stream crossings; constructing temporary access roads and a detour alignment; and creating construction staging areas. Temporary crossings would be removed and channels restored to pre-project conditions following construction activities. Staging areas, temporary

construction roads, and drainage crossings would be cleared and revegetated following project activities.

Additionally, in-water construction activities would include constructing temporary gravel berms and construction trestles, installing new pier foundations, conducting channel dewatering operations, and demolishing and disposing of the existing bridge. To allow access under the existing bridge and around piers during construction and to construct the new bridge as well as demolish the existing bridge, temporary gravel berms would be constructed in the channel. Temporary construction trestles would be built to span the thalweg (the deepest part of the channel) and a rare Western Pearlshell mussel bed that extends through the project area along the southern side of the river. Piles associated with trestles and falsework would be installed using a combination of vibratory and impact pile driving methods, as discussed further in **Finding E** below. The vertical trestle piles (24- or 30-inch steel shell piles or H-piles) would remain in the river year-round, while the trestle deck and beams would be removed by October 15th each year.

Construction of the detour panel bridge would begin on land during the first winter season and would include construction of the north and south approaches, piers above the ordinary high water mark (OHWM), and temporary retaining walls that support the 3-foot increase in roadway grade. The main spans of the steel panel bridge would be constructed and launched from the south approach over the river to the north approach during the summer season. Falsework needed to temporarily support the bridge superstructure construction would be installed within the footprint of the gravel berm and removed after bridge construction has cured and prior to October 15. To minimize impacts to sensitive aquatic species as discussed further in **Finding E** below, all in-water construction work would be limited to June 15-October 15.

Demolition of the existing bridge would involve the removal of the bridge's nineteen foundations, which include fourteen concrete bents and five piers, three of which are located in the Smith River channel. There are also two abutments and seismic retrofit piles on land to be removed. The fourteen bents outside the river channel would be removed, and backfilled and graded to finish grade. The in-water piers would be removed by removing the pile caps and cutting off the existing steel H-piles below channel bottom at a depth of 4.5 feet below the channel bottom to avoid exposure from scour, as discussed further in **Finding F**.

Equipment staging, materials storage, and dewatering operations will rely on the use of nearby properties outside of Caltrans right-of-way. As detailed in **Finding L** below, Caltrans has been working with the owners of six privately-owned parcels (APNs 105-020-14, 105-020-20, 105-020-36, and 105-070-04, 105-700-01 and 105-070-04) to obtain temporary construction easements for project-related activities. As part of dewatering operations, water from construction activities in the cofferdams would likely be transferred by pumps and a double-walled dewatering pipe to an infiltration basin proposed on the property approximately 450 feet downstream of the bridge, on the south side of the Smith River. The pipe would be placed along an access road, between

the bridge and the infiltration basin and staging area. Properties used for the project would be restored to pre-project conditions upon completion of all work.

To protect water quality, the project as proposed would also include a number of best management practices (BMPs) during construction activities, and post-construction treatment BMPs, as detailed further in **Finding I** below. Several new permanent stormwater infiltration bioswales have been added to the project to retain and infiltrate stormwater following bridge construction.

The proposed development would result in a total of nearly five (5) acres of permanent wetland dredging and fill impacts and an additional 1.13 acres of temporary wetland impacts. Caltrans proposes to mitigate for these wetland impacts through a combination of on-site and off-site wetland creation and enhancement. Caltrans proposes to restore and enhance approximately 0.071 acre of wetland areas on site within the right-of-way at the south end of the bridge off of South Bank Road by grading and recontouring the site to create conditions conducive to wetland establishment. In addition, Caltrans proposes to enhance wetland habitats at an off-site property located south of Crescent City (referred to as the "Hambro parcel" and owned by CDFW) by removing invasive plants over an approximately 45-acre area. Details are provided in **Finding E** below.

Caltrans has prepared a Mussel Monitoring Plan that proposes to begin baseline monitoring in the summer of 2021, in coordination with CDFW and an on-call contractor (likely the Xerces Society). The plan also outlines proposed emergency relocation protocol, follow-up monitoring, and reporting following construction work. Caltrans would also monitor the condition of the mussel bed and reference site during construction to ensure mussels do not become dislodged or distressed during construction operations.

Caltrans has also proposed a number of other BMPs and avoidance and mitigation measures to minimize the potential for other project-related adverse effects such as revegetating temporarily impacted areas. These measures are included in **Appendix C**.

To mitigate for impacts to fish species, Caltrans proposes enhancing and restoring fish passage at Dominie and Rowdy Creeks. Caltrans proposes to implement a fish passage improvement project as mitigation for fish passage and impacts to Other Waters. In addition to fish passage mitigation, the Dominie Creek project would provide over 0.03 acres of Other Waters mitigation by removing a 10-foot-wide and 80-foot-long concrete box culvert, as discussed in **Finding E** below. At Rowdy Creek Fish Hatchery, Caltrans would contribute funding towards fish passage improvements about to be undertaken by Tolowa Dee-ni' Nation.

Caltrans has submitted a Transportation Management Plan dated September 18, 2020 that outlines temporary traffic control measures for the proposed project (**Exhibit 21**). Timing of construction as proposed would avoid peak use weekend periods and special events, and Caltrans estimates a maximum of 15-minute traffic delays during construction activities. Because the river channel within the project area would be inaccessible to the public during in-water construction, Caltrans has also prepared a public outreach plan (page 12 of **Exhibit 5**) identifying methods Caltrans would

undertake to notify the public (including but not limited to kayakers, fishermen, and other river users) of seasonal access limitations. Existing vehicular access underneath the bridge adjacent to South Bank Road would be closed to the public during all construction activities.

To further protect the rare mussel bed and as recommended by CDFW, Caltrans proposes to place boulders at this informal boat-launching access point after construction work to permanently close the site to vehicular access. To mitigate for the reduction in public access at this location, Caltrans proposes to contribute $90,000 in matching funds towards improvements to a public boat launch located less than one mile away along Fred Haight Drive, which is owned and managed by CDFW. Caltrans also would provide signage directing people wishing to launch boats to the CDFW facility.

Caltrans proposes to complete all bridge construction within four years, including three years of in-water construction work. Limiting construction to three in-water seasons would minimize injury and take to aquatic species that include, but are not limited to, federally and state threatened Coho Salmon. To help maintain construction schedules, Caltrans proposes the use of limited nighttime lighting for brief periods of time (less than two weeks total, not consecutive). **Table 1** below presents a brief summary of the proposed construction schedule.

Table 1. Dr. Fine Bridge Replacement Construction Sequence Overview. (*Caltrans 2020*)

Season	Winter (Oct 16-Jun 14)	Summer (Jun 15-Oct 15) [1]
1	Construct Abutment 1 Detour retaining walls and detour bridge launching/staging pad. Construct Abutment 6 Detour retaining walls. Construct Detour Piers 2 and 3. Begin assembly launch of Detour Bridge.	Place gravel access berm. Construct in-channel detour foundations (Pier 4 and 5); launch remainder temporary detour panel bridge; switch traffic to temporary panel bridge; remove three existing in channel bridge spans; construct Pier 4 piles and columns. Remove gravel access berm.
2	Remove remaining existing bridge. Build falsework not in river. Construct abutments. Construct Pier 2 and 3 piles and columns.	Place gravel access berm. Install sheet pile cofferdams around existing Piers 13, 14, and 15[2]; Remove existing piers and footings. Remove cofferdams. Install piles for trestle and falsework. Place remaining falsework on gravel berms and on land. Place bridge (stem & soffit pour, deck pour, post-tensioning, falsework release, falsework removal). Remove gravel access berm.
3	Place barriers, retaining walls, approach slabs. Finish roadway work for transition. Switch traffic to new bridge. Begin removal of temporary panel bridge.	Place gravel access berm. Remove remainder of detour panel bridge. Remove detour piers 2,3, and 4 to 3' below OG. Remove gravel access berm.
4	Remove temporary retaining walls and abutments. Grade new bridge approaches to FG contours shown in roadway plans.	None

[1] All in-channel work will follow the June 15-October 15 window

[2] One or more of the in-river piers may be removed in the 1st summer.

B. Environmental Setting, Project Purpose and Background

Environmental Setting

As detailed in **Finding G** below, the project is situated within the aboriginal territory of the Tolowa people. These Tolowa ancestral lands (known as “Taa-laa-waa-dvn”) remain inhabited by citizens of the polity (known as “Dee-ni”) that is the federally recognized Tolowa Dee-ni’ Nation (formerly referred to as the Smith River Rancheria). The nearby federally recognized Elk Valley Rancheria is also situated on Tolowa ancestral territory and includes Tolowa citizens among its membership.

The Dr. Ernest Fine Memorial Bridge (commonly referred to as Dr. Fine Bridge) is situated over the Smith River on Highway 101 in Del Norte County, approximately 10 miles northeast of Crescent City. The Dr. Fine Bridge is the only crossing of the Smith River over approximately the first ten miles of the river upstream from the ocean, and thus is a critical transportation link between areas north and south of the river. Highway 101 in this area is an integral part of the Pacific Coast Bike Route. In addition to touring cyclists, local bicycle commuters use the Dr. Fine Bridge as a connection to Lake Earl Drive and Fred D. Haight Drive.

Construction of the existing bridge was completed in 1940, replacing a previous bridge located just upriver. According to the Archaeological Survey Report prepared for the project, the bridge was named after Dr. Ernest M. Fine, a local physician that founded the first hospital in Crescent City and was well known throughout the area for his availability to make house calls at all hours.

The bridge is situated within the Smith River Valley, a rural area within the floodplain with a long history of agricultural land uses that include grazing, flower bulb production, and hay production. The area is noted for its scenic qualities. In its Final Environmental Impact Report/Environmental Assessment-Finding of No Significant Impact adopted March 2020 (“FEIR”), Caltrans describes the environmental setting in part as follows:

> The Smith River is part of the National Wild and Scenic Rivers System, a federal system created by Congress to recognize and protect rivers across the country. More than 300 miles of the Smith River system are designated as a Wild and Scenic River—a longer stretch than any other river in the United States. The Smith River system is also undammed for its entire length, making it the only major river system in California without dams. The Smith River Wild and Scenic River System was designated in January 1981 and re-designated in November 1990 with the creation of the Smith River National Recreation Area. The Smith River system is also part of the California Wild and Scenic Rivers System. Of its 325.4 miles of Wild and Scenic River designation, 78 miles are classified as wild, 31 miles as scenic, and 216.4 miles as recreational.
>
> The Smith River system drains a rugged area of the Pacific Coast ranges just south of the Oregon border, west of the Siskiyou Mountains, and north of the Klamath River Watershed. The segment of the Smith River that encompasses the project

area is designated “Recreational” under the federal and state Wild and Scenic River Acts. The designated segment is approximately 20 miles long, begins at the confluence of the Smith River Middle and South Forks, and runs to the mouth at the Pacific Ocean (NWSRS 2017). The Dr. Fine Bridge crosses the Smith River at the point where the river is transitioning into the coastal plain. Within the project limits, the river’s riparian areas are bordered by a gravel plant, farmlands, wooded residential parcels, and a church.

The Del Norte County certified LCP recognizes a number of scenic view corridors within the project area for their aesthetic value, including along Highway 101, Fred Haight Drive to the north, and Lake Earl Drive to the south (**Appendix B**). A designated viewpoint exists at the CDFW Smith River Public Fishing Access Area (less than one mile downstream along Fred D. Haight Drive).

The Smith River area is a popular destination for visitors to and along the coast with its many park and recreation areas, including Tolowa Dunes State Park, Lake Earl Wildlife Area, and Jedediah Smith Redwood State Park, located approximately 2.5 miles, 2.8 miles, and 4.4 miles away from the project, respectively (**Figure 1**). Recreational uses of the river include kayaking, fishing, drift boating and bird watching, to name a few. As discussed further in **Finding H**, informal pedestrian and vehicular access currently exist underneath the bridge adjacent to South Bank Road. However, to protect the rare mussel bed that occurs just offshore of this access area, future access would be limited to pedestrian-only use by placing boulders across the access point near the road.

Wetlands in the project area include the riverine habitat of the Smith River itself, plus several streams, a small pond, riparian areas, and various forested, scrub-shrub, and herbaceous wetlands. As detailed in **Finding E**, the Smith River and associated wetland habitats support several wildlife uses, including but not limited to food and cover for small animals, migration corridors for fish and larger wildlife, foraging and breeding habitat for songbirds, and stopover habitat for migratory birds.

Project Purpose and Need

Replacement of the existing Dr. Fine Bridge is needed to address several critical issues associated with the existing bridge. Constructed in 1940, the bridge has exceeded its design life and is vulnerable to steel degradation, scour, seismic deficiencies, and functional obsolescence. In 2005, a Fatigue Analysis conducted by the Caltrans Office of Structures Maintenance and Investigations Ratings Unit estimated that the remaining service life of the bridge was eight years. The steel’s degradation is the result of long-term (80 years) repeated flexing of the structure by the daily use of vehicles. The repeated flexing and bending over time will weaken and eventually break the steel. According to the FEIR, Caltrans’ Fatigue Analysis indicated that the bridge’s steel components are “fracture critical,” meaning that a break or “fracture” in one of the critical structural components could result in a catastrophic failure of the bridge. The bridge has also been designated as “scour critical,” meaning that the bridge piers and foundation in the river are at risk of being undermined and failing. The scour critical state increases the bridge’s structural deficiencies, reducing seismic load capacities and the ability to

withstand large earthquake events. Although portions of the bridge were seismically retrofitted in 1996, the bridge foundations were not reinforced as part of those efforts, and the bridge no longer meets current seismic code requirements. Lastly, the bridge is classified as functionally obsolete based on the deck geometry (two 12-foot lanes, 1-foot shoulders and 21-inch elevated maintenance walkway) and concrete bridge rails that do not meet current standards, posing safety risks to motorists, bicyclists, and pedestrians.

Background

Planning efforts for the bridge replacement project have been underway for several years, and the bridge design concept has evolved substantially over time. Early in the planning and environmental design process, Caltrans proposed the construction of a three-lane bridge east or west of the existing alignment, with the third lane to be used for traffic turning left onto Lake Earl Drive and State Route 197 from Highway 101. As the lead agency, Caltrans determined that potential project impacts necessitated the preparation of an Environmental Impact Report (EIR). After Caltrans circulated a Notice of Preparation (NOP) of an EIR, the project design was modified to remove the third (center) lane to reduce impacts to coastal resources and avoid conflicts with Coastal Act limitations on permissible uses in wetlands. Caltrans also determined there was not adequate length available for a third lane to allow safe merging distance between the intersections at either end of the bridge.

In 2017, Caltrans circulated an Initial Study with Mitigated Negative Declaration (IS/MND)/Environmental Assessment (EA) that evaluated impacts from one preferred Cast In Place (CIP) on-alignment build alternative[1] and the no-build alternative. The bridge design under the on-alignment build alternative would have necessitated leaving hundreds of piles in the Smith River over winter. Several resource agencies commented that due to the high winter flow velocities and dynamic nature of the Smith River system, leaving hundreds of piles in the river over winter would pose significant risk of adverse environmental effects. In response to agency comments received on the 2017 IS/EA, Caltrans prepared an EIR (**Appendix A**) to fully evaluate multiple alternatives for the bridge replacement design.

The selected alternative for constructing the bridge superstructure obviates the need to leave falsework in the river over winter. As proposed, falsework to temporarily support the bridge superstructure construction would be installed at the beginning of the in-water construction season, would be in place until the bridge is cured, and is anticipated to come out before October 15. Caltrans adopted the FEIR for the proposed project on March 19, 2020.

[1] The DED preferred alternative proposed an Existing Alignment Cast In Place bridge using a Jack and Slide Detour, i.e., “Jack and Slide East” or Alternative 4 in the 2017 IS/EA, Alternative 3 in the FEIR

C. Jurisdiction and Standard of Review

The proposed project area is located within both Del Norte County's coastal permit jurisdiction and the Coastal Commission's retained CDP jurisdiction area. Pursuant to Coastal Act Section 30601.3, Caltrans, the County, and the Commission (through its Executive Director) have all agreed to process the required CDP as a consolidated CDP application before the Commission. Thus, the policies of Chapter 3 of the Coastal Act provide standard of review for this proposed project is the Coastal Act. Del Norte County's LCP may be used as non-binding guidance.

D. Other Agency Approvals

The project requires review by a number of other agencies. Caltrans has already obtained approvals from several agencies, including from the National Marine Fisheries Service[2], U.S. Fish and Wildlife Service[3], National Park Service[4], and State Historic Preservation Office[5]. To ensure that Caltrans obtains the remaining required agency approvals from the U.S. Army Corps of Engineers, California Department of Fish and Wildlife; Regional Water Quality Control Board, and State Lands Commission, **Special Conditions 2**, **3**, **4** and **5** require that all these approvals be obtained and presented to the Commission's Executive Director before any construction begins.

E. Wetland/ Habitat Resources

1. Applicable Coastal Act Provision

Section 30233 of the Coastal Act addresses the filling of coastal waters and states, in relevant 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;

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[2] NMFS issued a "No Jeopardy" opinion and Incidental Take Statement for salmonids March 19, 2020
[3] USFWS sent a Letter of Concurrence on Informal Consultation for yellow-billed cuckoo February 14, 2020
[4] NPS issued a Wild and Scenic Rivers Concurrence April 15, 2013
[5] SHPO issued a "No Historic Properties Affected" determination on October 21, 2014, in accordance with Caltrans' 2014 Programmatic Agreement

2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basin, vessel berthing and mooring areas, ad 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.

(b) Dredging and spoils shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation…

(c) In addition to the other provision of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary…

2. Consistency Analysis

Permissibility

Section 30108.2 defines fill as the placement of earth or other substance or material in a submerged area. As proposed and detailed in **Finding A** above, the proposed project involves placement of bridge piers and footings within the wetlands of the Smith River. Additional in-water construction activities would include constructing temporary gravel berms and construction trestles, installing new pier foundations, the temporary bridge conducting channel dewatering operations, and demolishing and disposing of the existing bridge. Falsework needed to temporarily support the bridge superstructure construction would be installed within the footprint of the gravel berm and removed after bridge construction has cured and prior to October 15. Other activities associated with the bridge replacement project to be performed within the river and within the adjoining streams and riparian wetland areas include, but are not limited to, replacing culverts, relocating utilities, clearing and grubbing vegetation, and constructing temporary access roads, stream crossings, retaining walls, and temporary detour alignment. **Exhibit 9** presents an overview of project activities in relation to wetlands.

Following bridge construction activities, Caltrans would revegetate temporarily impacted areas, enhance wetland habitats at the off-site Hambro parcel, and restore and enhance wetland areas on site within the right-of-way south of South Bank Road. Caltrans

proposes to enhance 1-parameter Coastal Act wetlands[6] within the on-site mitigation area to satisfy mitigation requirements of the Army Corps and RQWQB. Caltrans would also create riparian wetlands within adjacent upland areas. Wetland enhancement and restoration would entail grading and recontouring the site and adding soil amendments to facilitate development of conditions conducive to wetland establishment. With the exception of wetland enhancement on the Hambro parcel and as discussed further in **Finding L** below, all of these activities constitute dredging and filling in wetlands.

The Coastal Act recognizes the importance and scarcity of wetlands. Filling, diking, or dredging in wetlands is permissible under section 30233 if: (1) it is for one of the seven allowable uses listed under section 30233(a)(1)-(7), (2) there is no feasible less environmentally damaging alternative, and (3) feasible mitigation measures have been provided to minimize adverse environmental effects. A project must meet all three tests to be authorized pursuant to section 30233(a). In addition, under Section 30233(c), the development must maintain or enhance the functional capacity of the wetlands.

1. Allowable Uses.

i. Dredging and Filling Wetlands for an Incidental Public Service

In the past, the Commission has determined that the fill for certain highway safety improvement projects that did not increase vehicular capacity could be considered an "incidental public service" pursuant to the requirements of Coastal Act section 30233(a)(4). These actions have included such road improvements as turning lanes, shoulder widening, minor road realignments, and bridge retrofits, realignments and replacements.[7]

The Commission has typically determined that a bridge replacement is a public safety project and, thus, is undertaken for a public purpose and, further, that the project is incidental to "something else as primary." That is, the project is a public safety project incidental to the primary transportation service provided overall by the existing highway. This finding is supported in part on the basis that the subject bridge project is not part of a new route or highway capacity expansion.

Similarly, the proposed project, the replacement of the existing bridge crossing of Dr. Fine Bridge on Highway 101, is for an incidental public service purpose within the meaning of section 30233(a)(4). First, the proposed fill has a public purpose because it is being undertaken by a public agency to safely serve the public's transportation needs

[6] The three wetland parameters include hydric soils, wetland hydrology, and a predominance of hydrophytic (wetland-oriented) vegetation. Under the Coastal Act, only one of the three wetland parameters (a preponderance of hydrophytic vegetation, hydric soils, or wetland hydrology) need to be present for an area to be considered wetland.

[7] See, e.g., CDP 1-18-1078 (Eureka-Arcata 101 Corridor Improvement Project), CDP 6-15-1975 (San Diego West Mission Bay Drive Bridge Replacement), CDP 1-09-027 (Greenwood Creek Bridge Replacement), CDP 1-07-038 (Alton Interchange), CDP 1-07-013 (Mad River Bridge Replacement), CDP 1-90-295 (Highway 1 Widening and Realignment).

along this corridor. Secondly, the proposed fill is incidental to the primary public purpose of providing safe transportation on the existing highway. Furthermore, there will be no increase in vehicular capacity because the existing two-lane bridge will be replaced by a two-lane bridge. Although the replacement bridge will be wider than the existing bridge (51 feet versus the existing 32 feet), the increased width of the bridge deck will provide for 8-foot-wide shoulders, a 6-foot-wide separated pedestrian walkway, and associated guard rails, thereby increasing safety while facilitating multi-modal access for the public.

Therefore, the Commission finds that for the reasons discussed above, the proposed fill in coastal wetlands for the proposed bridge replacement constitutes an incidental public service purpose, and thus is an allowable use pursuant to section 30233(a)(4) of the Coastal Act.

ii. Dredging and Filling Wetlands for Restoration Purposes

As indicated above, Caltrans proposes to enhance and restore wetland features to habitat occurring within its right-of-way south of South Bank Road as part of its mitigation needed to satisfy Regional Water Board requirements. As proposed, grading and recontouring would be necessary to remove fill from upland areas and to establish hydrologic connectivity between current upland areas and adjacent Coastal Act jurisdictional one-parameter riparian wetlands. To encourage hydric soil development, Caltrans would add soil amendments to 0.029 acre of Coastal Act jurisdictional riparian wetlands and 0.071 acre of adjacent upland areas then revegetate the areas with locally native wetland species. The proposed dredging and filling for habitat enhancement is for a restoration purpose allowable pursuant to section 30233(a)(6) of the Coastal Act.

2. Alternatives Analysis.

For projects involving diking, dredging, and filling of wetlands, the Commission must ensure that the approved project has no feasible less environmentally damaging alternative, consistent with section 30233 of the Coastal Act. Coastal Act section 30108 defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors.”

Caltrans analyzed multiple alternatives to address the seismic, structural and safety deficiencies of the current bridge. During the early design phases of the project, Caltrans evaluated sixteen (16) alternatives, including the “no build” alternative, retrofit alternative, and fourteen (14) alternatives with various combinations of design alignments, temporary detour alignments, and bridge types. A number of fundamental considerations were evaluated through analysis of these alternatives, including but not limited to avoiding and/or minimizing wetland fill. Caltrans described six alternatives and evaluated two (“no-build” and Jack and Slide East) in the draft environmental document circulated in 2017. In response to agency comments received in 2017, Caltrans revised the project proposal as described in **Finding A** and selected three main alternatives, (including one with two construction options “A” and “B”) plus a “no-build” alternative, for review in the draft EIR for this project.

Caltrans found that none of the alternatives could meet the purpose and objectives of the project without requiring some temporary and permanent wetland fill, given the presence of wetlands throughout the project area and the need to continue the highway through that area, and the Commission concurs. Several of these alternatives are discussed further below.

i. New Western Alignment Alternatives

Alternatives 1 and 2 would entail construction of a new bridge west of the existing alignment. Under both alternatives, the existing bridge would continue to carry traffic while the new bridge is constructed. Once construction of the bridge and other components (grading, fill, roadway tie-ins, and retaining walls) is completed and traffic is moved over, the existing bridge would be demolished and removed. Both alternatives would also require construction of two viaducts (northwest and southwest of the bridge) and three soldier pile retaining walls to support the transition of traffic from the bridge to the highway.

Under Alternative 1, the new bridge type would be a Cast-in-Place (CIP) Box Girder on isolation bearings[8] with three piers (one entirely within the wetted channel, one partially within the wetted channel, and one above the OHWM). Under Alternative 2, the new bridge type would be a pre-cast, pre-tensioned concrete girder bridge supporting a concrete slab with five piers (two piers in the active Smith River channel, one partially below the OHWM, and two above the OHWM). While Alternative 2 would have more piers in the river channel than Alternative 1, the diameter of the piers would be smaller, resulting in essentially the same amount of permanent impacts under both alternatives.

Although Alternatives 1 and 2 would not require construction of a temporary detour bridge, as the proposed development does, the need for a larger work area would result in greater wetland impacts overall. When compared with the proposed project, construction access needed for the new westerly alignment under both Alternatives 1 and 2 would require more temporary and permanent impacts to several wetland habitats northwest of the bridge and a larger temporary work area in riparian wetlands southwest of the bridge. Northwest of the bridge, impacts would include temporary stream diversion, dewatering of the area, and additional vegetation removal for equipment access to construct the new viaduct and retaining wall.

The volume of gravel needed for temporary berm construction would be less under Alternatives 1 and 2, than for the proposed project, however both alternatives would require a greater number of driven piles than the proposed project, resulting not only in more permanent fill but also an increase in potential hydroacoustic impacts to fisheries. Acquisition of land for right-of-way use and permanent conversion of prime agricultural land would also be necessary under Alternatives 1 and 2. Therefore, the Commission

[8] Isolation bearings allow bridge movement during a seismic event while minimizing the foundation footprints and associated impacts.

finds that the new western alignment alternatives are not feasible less environmentally damaging alternatives to the proposed project, as conditioned.

ii. Existing Alignment Alternatives

Caltrans describes on-alignment alternatives in the FEIR as follows:

> Under Alternative 3, the new bridge would be a CIP Box Girder on isolation bearings with three piers (one pier in the active Smith River channel). A temporary detour bridge would be constructed east of the existing bridge and used to carry traffic while the new bridge is completed along the existing alignment. This alternative considers two construction options for completing the temporary detour bridge. Option A (referred to as 3A hereinafter) would use a Jack and Slide method where the main spans of the existing bridge would be relocated to the east and would be used as part of a temporary detour while the new bridge is built along the existing alignment. Option B ([*the proposed project*] referred to as 3B hereinafter) would use a temporary panel bridge for the detour.

Alternative 3 would avoid temporary and permanent impacts to most wetlands northwest of the bridge, however construction of a temporary equipment access road to the river would necessitate trimming some wetland vegetation. Other temporary and permanent wetland impacts would occur east of the bridge where construction of equipment access and the approach to the temporary bridge are planned to occur. Despite these impacts, Alternatives 1 and 2 would have a greater impact on wetlands in the project area due to the need for a larger work area to accommodate bridge construction work. Both Alternatives 3A and 3B would also avoid the need to acquire land for the right-of-way or to convert prime agricultural land.

While Alternatives 3A and 3B would have similar impacts to terrestrial wetlands, Alternative 3B would require fewer and smaller in-water temporary foundations for the detour bridge and substantially fewer driven piles (134 versus 200), resulting in fewer hydroacoustic impacts to aquatic species.

Furthermore, Alternative 3B would have fewer impacts to the traveling public than 3A, because Alternative 3A would necessitate road closure and a temporary detour to Route 197 during installation of the bridge structure. The detour associated with Alternative 3A could increase travel times by up to an hour for a duration of three weeks under a best-case scenario.

iii. Retrofit Existing Bridge

A bridge retrofit alternative was also considered for this project but eliminated from further consideration under the EIR. The retrofit alternative would have involved increasing the size of the pier walls for the five main piers (Pier Nos. 11 through 15), three of which are in the river channel. The width of each pier wall would be increased by 10 feet and the length increased by 16 feet. Piles would be driven into the river channel (or riverbank) around the existing piers. New pile caps would then be constructed on the piles to support the pier wall extensions. In the river channel, the work would occur within coffer dams and use of temporary construction trestles on

either side of the bridge. Sheet piles would contain the pier extensions on the riverbank. In addition to retrofitting the five main piers, four of the bents on the south end of the bridge would be strengthened by increasing their size.

Although retrofitting the bridge would temporarily extend the life of the bridge and would avoid some of the temporary or permanent wetland fill of the proposed project in the short term, the retrofit would not extend the life of the bridge for more than a few years, after which the bridge would still need to be replaced, with resulting impacts similar to the proposed project. In addition, this alternative does not address the bridge's functional obsolescence. Safety and multimodal concerns, such as narrow 1-foot-wide shoulders, lack of a pedestrian walkway, and a non-standard bridge railing, would not be resolved with a bridge retrofit. Therefore, the Commission finds that retrofitting the bridge is not a feasible less environmentally damaging alternative to the proposed project, as conditioned.

iv. The "No Build" Alternative

The No-Build (No-Action) Alternative would not replace the existing bridge. The current bridge would remain in place, remaining in a condition of fracture critical, seismically deficient, scour critical, and functionally obsolete. As discussed above, the existing bridge is well past its design life and vulnerable to bridge failure if no corrective measures are taken. Improvements for non-motorized users would not occur. The existing bridge shoulders and railings also fail to meet current design safety standards, posing safety risks to motorists, bicyclists, and pedestrians. This alternative would not address these critical deficiencies but instead would allow the public safety risk to continue to increase over time. Additionally, if the bridge eventually fails, emergency work within the wetland habitat area may be required and would not necessarily be undertaken in accordance with the seasonal restrictions and other mitigation measures possible under planned, non-emergency conditions. The bridge would then still need to be replaced, with resulting impacts similar to the proposed project. Therefore, the Commission finds that the "no project alternative" is not a feasible less environmentally damaging alternative to the proposed project, as conditioned.

Alternatives Conclusion

Of the feasible alternatives reviewed, Caltrans selected the project alternative with the least impacts to wetlands. As proposed, the bridge design and alignment would also meet the purpose and need of the project. Therefore, the Commission finds that the proposed new bridge design minimizes disturbance to wetlands and is the least environmentally damaging feasible alternative available, consistent with section 30233(a).

3. Feasible Mitigation Measures.

The third test set forth by section 30233 is whether feasible mitigation measures have been provided to minimize significant adverse environmental impacts.

Wetlands in the project area include the riverine habitat of the Smith River itself, plus several streams on both sides of the river, a small pond, riparian areas, and various forested, scrub-shrub, and herbaceous wetlands (**Exhibit 9**). The longest of the streams appears to be fed from a spring south of Fred Haight Drive. As it travels through the project area, the stream fans into a ponded area before ultimately discharging to the Smith River. Riparian, forested, and scrub-shrub wetlands in the project area include a mix of Arroyo willow thickets, Sitka willow thickets, and red alder forest, among others.

The Smith River and associated wetland habitats support a number of wildlife uses and species, including , migration corridors for anadromous and other fish, a rare mussel bed, marine mammals including and harbor seals and sea lions, (although there are no known haul-out areas for either species within the vicinity of the bridge), small animals, larger wildlife, foraging and breeding habitat for songbirds, and stopover habitat for migratory birds.

Depending on the manner in which the proposed project is undertaken, as discussed above, the project could have significant adverse impacts on a variety of coastal resources of the Smith River, including but not limited to: (1) wetlands/riparian habitat, (2) Western Pearlshell mussels, (3) anadromous fish, (4) other wildlife, and (5) water quality. Caltrans has incorporated a number of project features and minimization and mitigation measures to protect water quality, restore wetland habitats, and minimize impacts to wetlands and related coastal resources (**Appendix C**). The potential impacts and their mitigation are discussed in the following five sections.

i. Measures to Avoid Significant Degradation of Wetlands

According to wetland delineations conducted by Caltrans and its consultants (**Appendix A**), the proposed project will result in impacts to nearly five acres of wetlands, including permanent impacts to approximately 3.67 acres, and temporary impacts to approximately 1.13 acres. For the purposes of this discussion, temporary impacts are defined here as those in which restoration of the impacted habitat to its pre- disturbance state will have occurred within 12 months of the onset of construction. The impacts to any impacted habitat areas not restored to pre-project conditions within 12 months of the onset of construction are recognized as permanent impacts which require increased mitigation ratio requirements to address the temporal losses associated with the impacts.

The temporary placement of gravel berms within the Smith River between June 15 and October 15 each year for three in-water construction seasons is anticipated to temporarily displace approximately 1.13 acres of riverine wetlands. Clean, washed, spawning sized gravel will be used to construct the bed of the gravel berm each construction season: gravel berms will be removed each year prior to October 15 and reinstalled each subsequent year. The size of gravel berms would be the greatest in the first year and would decrease each year as bridge construction progresses. To reduce impacts to riverine habitat, Caltrans has included standard measure HF-1, which specifies that temporary construction trestle decks and gravel berms will be removed from the river prior to October 15 each year.

Certain project features will provide for avoidance and enhancement of wetlands. Caltrans proposes as part of avoidance measure NC-1 to protect the pond feature northwest of the bridge from potential impacts during construction activities by placing "ESA" (environmentally sensitive area) exclusion fencing around the pond during all construction work. ESA fencing would also be placed along the boundaries of all riparian areas outside of work areas to avoid impacts to riparian habitat. **Special Condition 14** requires that Caltrans adhere to these proposed measures.

The proposed project will also result in a net gain of riverine habitat through the reduction of bridge foundations in the river. The existing bridge has three piers within the wetted channel of the Smith River, whereas the proposed bridge would have only one pier in the channel.

Revegetation of Disturbed Areas

The majority of permanent wetland impacts in the project area (approximately 3.67 acres) will be to riparian and herbaceous wetlands, and perennial and ephemeral streams (approximately 0.083 acre) that cannot be restored to pre-project conditions within one year. Revegetation and wetland reestablishment will occur in these areas following bridge construction activities to avoid a net loss of wetlands but will nonetheless result in temporal loss. Revegetation of impacted areas would occur as proposed in the Draft Onsite Revegetation Plan dated July 2020 and revised December 1, 2020. As part of its Draft Onsite Revegetation Plan, Caltrans proposes to inventory, prior to disturbance, the number of woody riparian plants to be cut, and replant impacted areas with species and quantities intended to closely resemble what is currently present. In addition to replanting efforts, Caltrans also proposes to treat disturbed soil areas with an erosion control seed mix "using regionally appropriate native species and a non-persistent annual grass (i.e., common barley, *Hordeum vulgare*)."

To ensure that impacted areas are restored to pre-project conditions, the Commission attaches **Special Condition 9**, which requires submittal of a final revised revegetation plan prior to commencement of construction that substantially conforms with the proposed revegetation plan with certain revisions. Caltrans proposes to evaluate the success of restoring impacted areas based on survivorship of 85% of planted and volunteer individuals present within impacted areas by the fifth year following replanting efforts. Commission staff have expressed concerns that successful restoration of impacted areas should instead be based on matching in cover and species composition the conditions that existed prior to disturbance. Without assurances to reestablish pre-disturbance cover classes, exposed ground surrounding immature but surviving native seedlings and saplings could be displaced by establishment of non-native species. On December 1, 2020, Caltrans staff responded to Commission staff concerns by commenting in part:

> The performance and success criteria can be tied to species composition, but cover in the planting areas cannot reasonably match the cover of the existing forest at the end of monitoring, since the existing forest is quite mature and took many years (decades) to achieve that canopy cover. As long as plants are surviving in year 5

and showing an increase in canopy cover between planting and year 5, the planting should be considered successful.

While a mature forested condition may not reasonably be expected within a five-year monitoring period, not all areas of proposed project impacts are dominated by mature forests, and in fact the FEIR describes forests in impacted wetland areas as red alder riparian forests containing only one mature (defined as greater than 36-inch dbh) tree present (FEIR Tables 2-13 and 2-17). Because red alder is a fast-growing, early-successional species, it is reasonable to anticipate rapid growth of newly-planted trees within the same habitat where it exists currently. The FEIR also describes a complex understory within red alder forests that includes native subshrubs[9] and herbaceous species[10]. Thus, a target condition of early-successional native species composition and cover similar to understory vegetation is reasonable and achievable, even within mature forests. Therefore, **Special Condition 9A(vii)** requires revisions to the success criteria to at minimum require: (a) at least 80% native vegetation cover, (b) zero (0) percent cover of Cal-IPC High-rated invasive species, and (c) no more than 10% non-native vegetative cover.

Special Conditions 9A(ii) and 9A(iii) require Caltrans to conduct baseline sampling and include in the revised plan specifications on the sampling methodology that will be used to document species occupancy and cover by species prior to commencement of construction. **Special Conditions 9A(iv) through 9A(vi)** impose requirements and restrictions related to revegetation and reseeding to ensure that the restoration areas are properly revegetated and seeded with native species as proposed. **Special Condition 9A(viii)** requires submittal of photo-documentation within 60 days of installation of plants. Although Caltrans proposed monitoring and reporting in years one, three, and five, the Commission finds it necessary to ensure monitoring is on a trajectory towards success more frequently to afford opportunities for adaptive management earlier in the restoration process. Therefore, **Special Condition 9A(ix)** requires Caltrans submit a revised monitoring schedule that includes monitoring and reporting for survival counts, species cover, wetland rating, and hydrology monitoring annually for five years. **Special Condition 9A(x)** requires reports be provided to the Executive Director by January 31 following each monitoring year.

Furthermore, **Special Condition 9A** requires remediation if the final monitoring report indicates the identified objectives have not been achieved, to ensure that the goals and objectives of the restoration project are met. In that case, the permittee must prepare a supplemental revegetation plan to address the failures of the original project that would be reviewed by the Commission in the form of a permit amendment. The condition also requires the permittee to undertake development in accordance with the approval final

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[9] Native subshrub species described in the FEIR within red alder riparian forests include twinberry (*Lonicera involucrata*), thimbleberry (*Rubus parviflorus*), and California blackberry (*Rubus ursinus*)

[10] Native herbaceous species described in the FEIR within red alder riparian forests include slender-footed sedge *Carex leptopoda*), hedge nettle (*Stachys chamissonis*), lady fern (*Athyrium filix-femina*), slough sedge, and sword fern (*Polystichum munitum).*

plans, and no changes to the approved final plans shall occur without an amendment to this CDP.

Some unavoidable impacts to wetlands cannot be restored within their original footprint. As part of the mitigation program included in the FEIR, Caltrans presented measures Riparian-1 ("Riparian Habitat") and Wetlands-1 ("Wetlands") with a variety of potential on-site and off-site mitigation options identified. As discussed further below, after certification of the FEIR Caltrans modified its proposal to include on-site compensatory (1:1 minimum ratio) mitigation in the form of wetlands creation within the right-of-way south of South Bank Road, and off-site mitigation in the form of wetland enhancement on state-owned property located adjacent to Crescent City Marsh.

On-site Mitigation: South Bank Road Right-of-Way

Of the 3.67 acres of permanent wetland habitat impact, a total of 0.012 acres results from the construction of structural elements of the bridge, such as bridge piers and foundations. The balance of the 3.67 acres of permanent wetland habitat consists of areas that will ultimately be restored, but will not be restored to pre-project conditions within one year as discussed above. To mitigate for the direct impacts to wetlands resulting from the 0.012 acre of permanent structural fill, Caltrans proposes to create 0.071 acre of compensatory Coastal Act jurisdictional wetland on site within a portion of its right-of-way at the south end of the bridge south of South Bank Road. The proposal is described in the Draft Onsite Revegetation Plan dated July 2020 and revised December 1, 2020, with general planting proposals, monitoring, and success criteria. The site is located adjacent to an active gravel processing facility and has been used for stockpiling gravel in the past. Caltrans has conducted geotechnical borings in the vicinity and has determined that the topsoil was previously removed from the site and replaced with approximately three feet of compacted nutrient-poor fill. Caltrans indicates nearby soil samples show silty sand and gravel soils to a depth of 10 feet, and groundwater at a depth of 20 feet below ground surface. Commission staff have raised questions regarding the feasibility of establishing wetlands within such a constrained site. In response, Caltrans has prepared a "Wetland Mitigation Site Water Budget" dated November 2, 2020, demonstrating that sufficient hydrology in the form of precipitation exists at the site and wetland vegetation can be established through grading, wetland plantings, soil amendments, and other restoration management tools.

To ensure successful creation of compensatory wetlands within Caltrans' right-of-way on site as proposed, **Special Condition 10** requires submittal of a final On-site Revegetation Plan, grading specifications, and details on proposed soil amendment composition sufficient to support a prevalence of hydrophytic vegetation before construction can begin. **Special Condition 10** also establishes minimum success criteria, monitoring, and reporting requirements similar to **Special Condition 9** discussed above but specific to the on-site restoration area.

As proposed and conditioned, the Commission finds the proposed development will avoid a net loss of wetlands that would otherwise result from project impacts.

Off-site Mitigation: Hambro Parcel

Caltrans proposes to mitigate for temporal wetland impacts on approximately 44.8 acres of land within a 132.8-acre parcel owned and managed by CDFW. The off-site property (APN 115-020-18) is located less than one mile south of Crescent City, east of Highway 101 and adjacent to the Crescent City Marsh Wildlife Area that is managed by CDFW (**Exhibit 10**). In 2018 Caltrans purchased the property and transferred ownership to CDFW as part of a Stipulated Judgment to address alleged unpermitted discharges of cement and grout to Waukell Creek in an area outside of the coastal zone and to secure future mitigation opportunities for impacts associated with the proposed bridge replacement project, among others. The Cooperative Agreement signed between Caltrans and CDFW[11] provides Caltrans the authority to conduct wetland enhancement mitigation activities on the property. As part of its arrangement with CDFW, Caltrans has also established an endowment in the amount of $297,148 to provide CDFW necessary funding to manage the entire property in perpetuity, including adjacent wetlands that support federally-endangered Western lily (*Lilium maritimum*).

The property, commonly referred to as the "Hambro Parcel", was formerly owned by Hambro Forest Products, Inc. and was acquired to preserve a 120-year-old stand of rare Sitka Spruce-dominated forested wetlands whose timber was at risk of being logged under an approved timber harvest plan. The stand is also threatened by a heavy infestation of invasive plants, particularly English ivy (*Hedera helix*), which if left uncontrolled can overwhelm a forest by girdling, suffocating, and toppling trees under the weight of its heavy vines. Other non-native invasive plants threatening the site include Tansy ragwort (*Senecio jacobaea*), English holly (*Ilex aquifolium*), Cotoneaster (*Cotoneaster spp*.), jubata grass (*Cortaderia jubata*), French broom (*Genista monspessulana*), Himalaya berry (*Rubus armeniacus*), and Cape Ivy (*Delairea odorata*).

Caltrans proposes to remove invasive plants to enhance the Sitka Spruce forested wetland as mitigation for temporal losses associated with the Dr. Fine Bridge replacement project. The stated restoration goals include the following:

> (1) to accomplish restoration of a Special Status plant community- the Sitka Spruce Forest (S3) which is also an ESHA;
>
> (2) Enhance the function and quality of coastal wetlands and USACE 3-parameter wetlands within and adjacent to the forest; and
>
> (3) Prevent a worsening problem that, if gone unmanaged, could severely impact this rare coastal resource and ecosystem…"

Caltrans has prepared an Offsite Mitigation and Monitoring Plan ("MMP") dated July 9, 2020 (**Appendix A**) that proposes to remove English ivy and other invasive plants by hand from the 44.8 acres of Sitka Spruce forested wetland. As proposed, a Caltrans Mitigation Specialist would oversee a field restoration crew of 12 to 16 people (likely contracted through California Conservation Corps or similar entity) for approximately

[11] Cooperative Agreement No. 01-0391; **Exhibit 12**

eight days (anticipated to occur twice the first year) removing invasive plants from the property. Invasive plants would be bagged and disposed of offsite at an authorized disposal facility. The proposed removal of invasive plants from nearly 45 acres of forested wetlands would result in off-site out-of-kind mitigation at a direct ratio of approximately 12:1. The Commission finds that given the severe damage that will result to the forested wetland from the toppling of trees and displacement of native vegetation if the ivy and other invasive plants infestation remains unchecked, the permanent removal of the ivy and other invasives over the entire 44.8 acres of Sitka Spruce forested wetland would result in significant habitat enhancement value that would offset the temporal wetland impacts of the Dr. Fine Bridge replacement project.

Caltrans proposes removing invasive plants and monitoring for a period of five years. Caltrans has prepared success criteria that propose less than 5% cover of live invasive plants in trees and on the ground by Year 5. However, any amount of invasive species allowed to persist at the site subjects the site to risk of future spread and infestations of invasive species. Therefore, to ensure that mitigation efforts accomplish the stated goals, the Commission attaches **Special Condition 11** requiring Caltrans to submit a revised Offsite Mitigation and Monitoring Plan defining success as 100% removal of English ivy and other invasive plants by Year 5. If after five years Caltrans is unsuccessful at achieving the success criteria, **Special Condition 11** requires the applicant to submit a revised mitigation plan and obtain an amendment to the CDP unless the Executive Director determines that an amendment is not required.

Ultimately, for removal of English ivy and other invasive plants to be meaningful, it must be long-lasting. Unless English ivy is completely eradicated from all properties surrounding the Hambro parcel and from the general vicinity, which is unlikely, keeping the site free of invasives means monitoring and maintenance removal in perpetuity. Caltrans has acknowledged the need for maintenance in perpetuity and describes in the July 2020 Offsite MMP long-term management responsibilities for ensuring protection of the Hambro parcel's Sitka Spruce forested wetlands in part as follows:

> The Hambro mitigation parcel and the compensatory mitigation wetlands would be protected in perpetuity. Caltrans has transferred the mitigation property to the CDFW Lands and Wildlife Program. The endowment in the amount of $297,148 was deposited in the National Fish and Wildlife Foundation (NFWF) in CDFW's name via the existing Cooperative Agreement dated August 16, 2018. The analysis that was developed for this endowment amount is detailed in Appendix G. CDFW will use the interest earned on the endowment to perform long-term management of the site as enhanced wetlands to ensure they maintain the anticipated compensatory wetland functions and services in perpetuity. Management costs projected to be associated with this project include personnel costs for land management and periodic inspections, and administrative costs including project management, insurance, and legal costs. If this management plan requires additional funding, an additional PARS analysis would be submitted to the resource agencies for review.

Caltrans also describes the proposed long-term managing and reporting responsibilities in Section 5.4 of the Offsite MMP report, in part as follows

> The land manager is CDFW. The land manager, upon Caltrans achieving success criterion for Year 5, will implement this long-term management plan. Long-term management tasks will be funded through a non-wasting endowment. An endowment in the amount of $297,148 was deposited in the National Fish and Wildlife Foundation (NFWF) in CDFW 's name via the existing Cooperative Agreement dated August 16, 2018. If necessary, an additional endowment would be deposited for achieving the long-term management plan as part of this MMP. Land Manager responsibilities will include, but are not limited to:
>
> • Coordinating trash removal.
>
> • Conducting invasive plant management, when necessary, with qualified personnel.
>
> • Coordinating general inspections of the mitigation properties per year as required by this MMP.
>
> • Submitting an annual general inspection report regarding the compliance and maintenance status of the mitigation.
>
> • Arranging for any corrective action necessary to drive the performance of the habitat, as required by this MMP.
>
> • Working with the resource agencies when necessary to carry out the long-term management.

Commission staff have discussed with CDFW the commitments described in Caltrans' Offsite MMP and understand from CDFW that the endowment covers costs for CDFW to manage the site in perpetuity by performing activities such as invasive plant removal and the removal of encampments but does not provide funding for, nor does the 2018 Cooperative Agreement establish, responsibility for CDFW to conduct the invasive removal program Caltrans proposed for mitigation for the Dr. Fine Bridge replacement project. In fact, the Caltrans Dr. Fine Bridge mitigation plan had not yet been created at the time the 2018 Cooperative Agreement was established. CDFW is supportive of the proposed removal of invasives from the Hambro parcel and has provided a letter attached as **Exhibit 24** confirming that Caltrans would be allowed to perform the proposed invasive removal work on the CDFW-owned parcel. In addition, the proposed invasive removal work would be complementary to CDFW's own management activities on the property. However, CDFW has not committed to undertaking the long term invasive removal program proposed as part of CDP Application No. 1-20-0422.

Caltrans staff indicates that Caltrans desires to transfer the long term management tasks for invasive plant management, included as part of their mitigation program for the Dr. Fine Bridge replacement project, to a suitable entity such as CDFW. Although CDFW has not at the present time agreed to take on those duties, it's possible that

CDFW or some other qualified entity with experience in invasive plant removal such as a non-profit land trust may be willing to take on the long term management, particularly if adequate funding is provided.

Therefore, **Special Condition 11** requires that Caltrans submit for the review and approval of the Executive Director an MOU/MOUs or similar legally binding agreement or agreements with a designated "Management Entity" or Entities that will be responsible for the implementation of invasive species removal and the on-going monitoring, maintenance and reporting consistent with the requirements of **Special Condition 11**. In addition, a separate endowment would be needed to fund the costs of a Management Entity (which may or may not be CDFW) to conduct long-term monitoring and reporting as proposed. To ensure the mitigation area is monitored for long-term management of the site as enhanced wetlands that maintain the anticipated wetland functions and services in perpetuity as proposed, **Special Condition 11C** requires establishment of a non-wasting endowment, separate from the existing endowment fund, to specifically cover the long-term monitoring and reporting costs. **Special Condition 11** requires Caltrans to track monitoring and reporting costs during its initial five-year monitoring period to inform the amount of funding needed to support long-term monitoring and reporting.

To ensure, however, that Caltrans remains ultimately responsible for successful invasive species removal as mitigation for temporal impacts to wetlands resulting from the proposed bridge replacement project, **Special Condition 11** requires that Caltrans remain ultimately responsible for the success of the enhancement and ensure on-going monitoring reports are properly submitted.

The Commission finds that, as conditioned, the enhancement of nearly 45 acres of off-site forested wetlands and management in perpetuity to prevent future re-establishment of invasive species provides feasible mitigation for temporal losses to wetland habitats resulting from project-related impacts consistent with section 30233 of the Coastal Act.

ii. Measures to Avoid Significant Degradation of Western Pearlshell Mussel Beds

Project components involving in-water and ground-disturbing work could adversely affect a bed of rare[12] Western Pearlshell mussels (*Margaritifera falcata*) extending approximately 500 feet in the river channel and located approximately 83 feet from the shore of the southern riverbank (**Exhibit 8**). The mussel bed begins approximately 200 feet upstream of the Dr. Fine bridge at the southwestern end of two piles from an abandoned bridge and continues for approximately 200 feet downstream of the Dr. Fine bridge, occupying a total surface area of approximately 16,221 square feet (ft^2) (0.37

[12] Western Pearlshell mussels have a state conservation status rank of S1S2, meaning their status is ranked between "imperiled" (at high risk of extirpation) and "critically imperiled" (at very high risk of extirpation) in the state due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors. The species is also identified as a "species of greatest conservation need" in the 2015 California State Wildlife Action Plan (CDFW 2015).

acre). Western Pearlshell mussels are bivalve mollusks that inhabit the substrate of clean, cold streams and rivers and are often found in eddies (flatwater and backwater stream environments). The FEIR describes an analysis of overall mussel populations in California (Blevins et al. 2016, 2017a), indicating a decline by 22% statewide since 2016. CDFW staff identified the mussel bed underneath the bridge during surveys conducted in 2011-2012, and while the species is distributed throughout the lower Smith River, CDFW staff believes the population near the bridge is likely the largest in the river. Because mussels typically occupy the substrate below the surface, surface population estimates could be 30-70% lower than actual population counts. According to data provided by Caltrans in their November 5, 2020 Mussel Monitoring Plan (**Appendix A**), based on limited transect surveys conducted in 2016 of the mussel bed in the project area, the ranges in population size are estimated as: 9,570 (estimate of surface-count only); 12,441 (estimate plus 30% buried); and 16,269 (estimate plus 70% buried).

Western Pearlshell Mussels can live up to 100 years but are vulnerable to sedimentation, and dislodgement from shear stress and scour. Additionally, during reproduction the mussels rely on viable populations of salmonids to serve as hosts, including fall-run Chinook Salmon, winter steelhead, Coho Salmon, and cutthroat trout. Mussel larvae (glochidia) must attach to a fish host within hours to days of release from fertilized eggs, or they will die.

In its 2019 Western Pearlshell Mussel Impact Assessment (**Appendix A**) Caltrans indicates that the species could be affected by construction noise and vibration, changes in water quality and increased turbidity. Construction activities that disturb soil and sediments in stream channels, riparian zones, and floodplains can increase erosion and mobilization of sediments, increasing turbidity and interfering with mussel filtering and feeding. In addition, increases in river flow velocities and changes in flow patterns could cause shear stress, potentially dislodging portions of the mussel bed.

The FEIR summarizes additional potential risks to Western Pearlshell mussels as follows:

- ***Increased velocity and shear stress caused by temporary gravel berms*** – potential dislodgement of mussels due to increased summer flow around gravel berms.

- ***Habitat loss from shear stress caused by temporary piles and gravel berms*** – potential erosion of a portion of the mussel bed beneath Dr. Fine Bridge caused by in-water elements.

- ***Habitat loss from scour around bridge piers*** – potential scouring around trestle piles eroding mussel beds or dislodging individuals.

- ***Pile driving and demolition noise and vibration*** – potential dislodgement of mussels or cobbles or burying by transported sediments.

- ***Direct injury*** – potential injury during pile driving, demolition, and dewatering cofferdams during pier construction.

- ***Debris racking*** – potential dislodgement and shear stress created by woody debris racking on in-water trestle piles.

- ***Relocation risks*** – potential mortality of relocated mussels.

Temporary in-water structures such as construction trestles, gravel berms, falsework, and detour bridge foundations would temporarily modify channel hydraulics during summer in-water construction (June 15 – October 15). Gravel berms would be seasonally placed across approximately 75-80 percent of the river cross-section to provide access to construction equipment and support falsework needed for bridge construction. Constriction of the river flow resulting from gravel berm placement would increase flow velocities through the open channel spanned by temporary construction trestles. Caltrans describes the anticipated effects of changes to water flow velocities as follows:

> Under all build alternatives, hydraulic modeling of flow velocities under existing conditions and with the temporary gravel berm in place (based on two general configurations assumed for construction and demolition seasons) indicates that the maximum (5% exceedance values) water velocities in the narrowed channel under summer low flow conditions would increase from 0.6 feet per second under existing conditions to a range of 2.2 to 3.8 feet per second under summer low flow conditions, and from 2.7 feet per second under existing conditions to a range of 6.5 to 7.3 feet per second during summer high flow conditions (Caltrans 2019c). These conditions would temporarily increase shear stress from 0.014 to 0.16 pounds per square foot under existing conditions to 1.08 pounds per square foot under the worst-case configuration and potentially cause scour within the constricted channel. The worst-case shear stress resulting from constricted summer flows are similar to or below that experienced under normal winter flows (e.g., 0.8 to 1.3 pounds per square foot under 2-year and 10-year flows, respectively).

Although the modeling suggests that flow rates could be similar to naturally-high winter flows, studies have indicated that mussels adapt to winter higher flows and colder temperatures in part by burrowing deeper below the surface.[13] A risk of dislodgement and potential resulting mortality exists during in-water summer work because mussels are actively feeding and reproducing during this time of year. Alternatively, mussels may refrain from surface feeding and burrow in the substrate in response to increased flows in summer. This would mean their energetic and metabolic needs would go unmet during this time period, perhaps leading to mortality as a result.

Caltrans has proposed “Avoidance, Minimization, and/or Mitigation Measures” to minimize impacts on Western Pearlshell mussels. Among those, measure Mussel-1a presents options for salvaging and relocating mussels, depending on considerations such as the extent of permeability of gravel berms, the effects of vibrations from

[13] Balfour and Smock 1995, Amyot and Downing 1997, Perles et al. 2003, Haley et al. 2007 in Caltrans 2020 FEIR

installing trestle and falsework piles over multiple years, and the potential for scour at piles with or without racked debris. However, relocating mussels also introduces high risks of mortality, and the FEIR acknowledges that avoidance and minimization measures are preferable over relocation. Measure Mussel-1a acknowledges that "If a permeable-type of gravel berm river crossing can be designed, then relocation may not be necessary." Additionally, Caltrans has proposed measure Mussel-1c as follows:

> ***Normalize summer flows across the river.*** To reduce increases in velocity and shear stress (and avoid potential impacts) within the mussel bed associated with the impermeable gravel berm that was modeled in the Mussel Impact Analysis (Caltrans 2019j: **Appendix A**), measures should be implemented to distribute flows evenly across the channel rather than diverting most flows adjacent to the mussel bed ESA where possible, including designing downstream and upstream gravel berms to be permeable to river flows to the extent practicable. Caltrans proposes requiring a percentage of permeability criteria for the berms into the construction contract to ensure the berms maintain normal flows over the mussel bed during summer construction seasons, a feature that would also allow for the additional passage of aquatic life. Permeability design criteria and constraints would be established with assistance of regulatory agencies, including CCC, CDFW and NMFS, as well as hydrologists and mussel biologists. Permeability modeling will take place to determine berm configuration to normalize summer flows across the river. Recording flow prior to construction and establishing a baseline of flow velocities to be monitored under *Mussel-1b* may provide enforcement of this measure. In addition to permeability designs, softening the gravel berm corners at the southernmost ends of the proposed gravel berm may reduce the impacts of increased velocity and shear stress over the mussel bed ESA habitat.

Although the measure proposes permeable berms based on minimum permeability criteria, the measure does not provide specific criteria and instead defers to regulatory agencies, hydrologists, and biologists for specificity. During interagency meetings held in 2019 that included staff from Caltrans, NMFS, DFW, and the Coastal Commission, consensus feedback from resource agencies suggested that gravel berms should be permeable to ensure protection of the mussel bed. Caltrans is delegating the specific design of the gravel berms to the contractor but notes, in the November 2020 Mussel Monitoring Plan, potential performance standards for gravel berm permeability, stating in part:

> It is expected that the berm would take approximately two weeks to construct, with an anticipated start date of June 15th.To remain conservative, openings in the berm would be at least 15% of the total area of the berm to normalize to the summer flow rate. This is based on the date in which the berm is anticipated to be completed (June 22nd) and the river's 88-year average of 957 cfs with a 95th percentile flow rate—expected to be 2,060 cfs. Construction of a sufficiently permeable berm would obviate the potential need to relocate the mussels prior to the second in-water construction season.

To ensure that impacts to Western Pearlshell mussels are avoided and minimized to the maximum extent possible, **Special Condition 7E** requires the applicant to provide final

gravel berm design plans prior to commencement of construction. The plans must demonstrate that the gravel berms will be sufficiently permeable to distribute flows from the June 15th 95th percentile high summer flow across the river channel, (*i.e.* 3,000 ft^3/s), to avoid directing most of the flow into the parts of the channel abutting the mussel bed. As the effects of climate change increase the risk of unusually large summer storms, the potential for high summer river flows must be given greater consideration to ensure the mussel bed is protected. Therefore, this design standard requires greater permeability than the standard proposed by Caltrans to ensure that even at the highest summer flows, water will not be diverted against the mussel bed in a manner that would dislodge mussels and cause mussel mortality.

Other measures proposed in the FEIR to mitigate for potential impacts to Western Pearlshell mussel include: establishing and protecting an Environmental Sensitive Area around the mussel bed ("Mussel 1b"), implementing standard best management practices (BMPs; "Mussel 1d") minimizing erosion impacts ("Mussel 1e"), and monitoring the mussels during construction ("Mussel 1f"). Some of these measures provide for preparing plans that would incorporate more specific measures to reduce impacts to mussels, including a Debris Management Plan, a Storm Water Pollution Prevention Program, a Dewatering Construction and Management Plan, and a Debris Containment System. To ensure that the plans are prepared and implemented as proposed to minimize the potential for significant adverse effects to Western Pearlshell mussels, **Special Condition 8** requires the applicant to submit final plans for the review and approval of the Executive Director 60 days prior to commencing construction. **Special Condition 8(C)** requires the applicant to implement all plans as proposed.

Caltrans has prepared a November 2020 Mussel Monitoring Plan, which builds upon and replaces a draft monitoring plan prepared in July 2020 by its consultants and also updates mitigation measures proposed in FEIR measure Mussel 1a. Caltrans indicates in Section 1.1 of the November 2020 plan the following:

> The final Plan provides the methodology and success criteria, as indicated in the Draft Plan, that Caltrans has committed to. Caltrans will manage this plan through an on-call contract with consultants who would employ subject-matter experts to assist with the monitoring components.

The November 2020 monitoring plan provides some, but not all, the details needed to ensure the project is designed to minimize significant adverse impacts to the mussels. The monitoring plan describes in general terms the pre-construction, construction period, and post-construction monitoring that will occur. However, the plan lacks a clear approach to gathering baseline information on mussel densities and demography. Specifically, the plan lacks details in mussel population sampling design, physical condition sampling methodology and protocols, instrumentation to be used, and the statistical framework that will be used to accurately monitor and account for any impacts to mussels.

Additionally, the plan does not clearly establish physical thresholds (such as, but not limited to sound and vibrational impacts) leading to behavioral changes in mussels and to thresholds that would trigger responses such as halting construction and/or relocating

mussels. The plan also proposes unusually high thresholds of 20% mortality "compared to baseline sampling" (which has yet to occur) as an indicator that would trigger emergency salvage operations, without explaining the significance of the 20% mortality as the threshold triggering further action. Furthermore, although the plan describes the presence of a biological monitor during in-water work and identifies several elements that would be monitored, the plan does not clearly detail the number of biological monitors and how they will be distributed between the main mussel site and reference sites, the locations of camera stations, how monitoring will be coupled with measurements of vibration, noise, turbidity and flow velocity around gravel berms, which stress responses of the mussels they will be monitoring for in real time.

Given the uniqueness of the Western Pearlshell mussel, and its status as imperiled-critically imperiled, it is essential that ecologically sound impact avoidance and minimization measures are designed and implemented throughout all project phases, including but not limited to pre-construction baseline population data collection, construction design and monitoring, and post-construction monitoring. Therefore, to resolve deficiencies in data collection and monitoring methodology, **Special Condition 13** requires submittal of final mussel monitoring plans subject to review and approval by the Executive Director. **Special Condition 13A** requires submittal by May 1, 2021 of a pre-project mussel monitoring plan that establishes baseline monitoring protocols needed to inform real-time monitoring and responses during in-water construction and long-term monitoring post-construction. **Special Condition 13B** requires a seasonal observational study plan be submitted prior to July 1, 2021 to determine specific physical thresholds at the project site that lead to behavioral changes or dislodgement in mussels. **Special Condition 13B** establishes requirements for sampling plans and designs to observe mussels for stress responses during critical velocity and/or high temperature events. Monitoring conducted pursuant to **Special Condition 13B** would additionally document the timing of completion of reproductive behavior to inform whether potential impacts may result from overlaps in construction season and mussel reproductive activity. **Special Condition 13C** requires submittal of a final revised Mussel Monitoring plan, prior to commencement of in-water construction, that substantially conforms to the plan dated November 2020. Among other things, **Special Condition 13C** requires details be provided on construction and post-construction monitoring protocols, methods, instrumentation to be used, and reporting requirements. **Special Condition 13D** requires the permittees to undertake development in accordance with the approved final plans, and no changes to the approved final plans shall occur without an amendment to this CDP.

The Commission finds the proposed avoidance, minimization, and mitigation measures, as modified by **Special Conditions 7C, 8, and 13**, ensure all feasible measures to minimize and mitigate against potentially significant adverse effects to Western Pearlshell mussels will be implemented, consistent with Coastal Act section 30233.

iii. Measures to Avoid Significant Degradation of Fisheries

Fish species using the Smith River are at risk of direct and indirect adverse impacts resulting from any bridge replacement activities that create water quality changes, noise and visual disturbance, changes to river hydraulics, habitat modifications, or direct

injury. The Smith River supports anadromous populations of Chinook salmon (*Oncorhynchus tshawytscha*), Coho Salmon (*Oncorhynchus kisutch*), steelhead (*Oncorhynchus mykiss irideus*), and Coastal Cutthroat Trout (*Oncorhynchus clarkii clarkii*) and provides critical rearing and staging habitat for non-natal salmonids migrating through the estuary (Walkley and Garwood 2017, in Caltrans FEIR). The river supports many other kinds of fish as well, including various species of sturgeon, shad, lamprey, and sculpin among others. The Smith River Coho Salmon population is identified as a core, independent population of the Southern Oregon Northern California Coast (SONCC) Ecologically Significant Unit (ESU). The SONCC Coho Salmon ESU is federally and state listed as threatened and its habitat within the Smith River is federally designated as critical habitat. Additionally, steelhead, coastal cutthroat trout, and the northern Distinct Population Segment (DPS) of Green Sturgeon (*Acipenser medirostris*) are state listed as Species of Special Concern (SSC). Pacific Lamprey (*Entosphenus tridentatus*)[14] is also a federally listed Species of Concern and state listed SSC.

The FEIR summarizes some of the potential risks to fish species within the area of bridge replacement activities as follows:

- ***Water Quality—***temporary increases in turbidity, suspended sediment, and contaminant risk during in-water construction and demolition activities.

- ***Noise and Visual Disturbance—***potential behavioral effects from general construction/demolition noise and visual disturbance (e.g., artificial light).

- ***Direct Injury—***potential injury/mortality from direct contact with construction equipment/materials and capture/relocation.

- ***Fish Passage—***potential migration delays (adults and juveniles) and increased exposure of juveniles to predation during passage through the constricted portion of the main channel.

- ***Pile Driving and Demolition Noise—***potential injury and mortality of fish from exposure to impact pile driving noise exceeding established thresholds for the onset of injury.

- ***Habitat Impacts—*** Temporary and permanent losses of riparian habitat from clearing of vegetation for construction access and staging areas; temporary losses of riverine and benthic habitat from riverine fill (temporary gravel berms); and temporary shading of riverine and riparian habitat from temporary trestles.

Water Quality

Bridge construction could impair water quality by increasing suspended sediments and water turbidity as a result of in-water activities such as installation and removal of the

[14] Federally listed Species of Concern

temporary trestle piles, detour bridge piles, sheet piles for cofferdams, installation and removal of gravel berms, and operation of heavy equipment on the gravel berm. Clearing and grubbing of vegetation in work areas could also contribute to turbidity and suspended sediment. Elevated sediment levels could interfere with feeding and other behaviors of juvenile and adult salmonids and other aquatic species. As detailed in **Finding I** incorporation of BMPs and other measures will reduce the risk of sediment discharge and resulting turbidity. Additionally, National Marine Fisheries Service (NMFS) notes the following in its March 19, 2020 Biological Opinion (BO) and Incidental Take Statement (ITS) completed for the project[15]:

> NMFS estimates that turbidity pulses during the summer construction seasons would persist for no more than one or two hours and would vary in intensity during those periods. These turbidity pulses are unlikely to occupy the full channel width at high concentration, so any juvenile Coho Salmon downstream may be able to avoid prolonged exposure. Therefore, NMFS believes that minor and incidental turbidity discharges during project activities will not result in a decrease in fitness or survival of individual Coho Salmon.

Contaminants from accidental spills could also affect water quality and aquatic habitat for special status and common fish species. As noted in the FEIR, "accidental spills could also harm or kill lamprey ammocoetes, which are thought to have a higher propensity for accumulating toxins given they spend three to seven years filter feeding." These potential impacts will be avoided and minimized through water quality protection measures detailed in **Finding I** below.

Noise, Visual, and Physical Disturbances

Temporary alterations to the physical channel, and construction-related background noise and lighting could adversely affect fish within the project area during in-water construction work. The FEIR indicates that during construction, fish may temporarily avoid this reach of the river to some extent due to underwater noise, reduced riparian cover (resulting from vegetation removal for construction access), and other disturbances. The narrowing of the river channel caused by the installation of temporary gravel berms for construction access could also increase flow velocities for fish traveling through the project area. However, the FEIR indicates increased velocities would remain within the range of sustained swimming speeds for adult salmonids. The altered physical and hydraulic conditions associated with the narrowed channel could also increase the vulnerability of juvenile fish to predators, and the use of artificial lighting for proposed nighttime construction operations could compound this risk.

To minimize the potential for such adverse impacts to fish species, in-water construction work will be limited in the time of the season and temporary in duration over time. For example, potential adverse effects on juvenile Coho Salmon would be

[15] NMFS Consultation Number WCRO-2020-00584

minimized by installing the temporary gravel berm after June 15 and removing the berm before October 15, thereby avoiding the primary juvenile and adult migration periods in the project area. Caltrans mitigation measure Species-6 and Species 8 propose seasonal in-stream limitations accordingly. Once in-water construction begins, juveniles would be expected to be rearing upstream and downstream of the construction footprint in vegetated areas along the banks, thus avoiding areas of higher water velocity. As proposed by measures VA-8 and AS-1, Caltrans will minimize the use of artificial lighting to the extent practicable by limiting nighttime construction activities in or near the river to critical activities and directing light to only those locations that are actively under construction.

Caltrans has also proposed measures to avoid and minimize potential fish stranding or injury that could occur during dewatering activities, including but not limited to during installation of cofferdams and construction of retaining walls. As part of measure Species-5 ("Aquatic Species Relocation"), the contractor will be required to provide to Caltrans for approval an Aquatic Species Relocation Plan as part of the Construction Site Dewatering and Diversion Plan to be prepared by the contractor under measure WQ-3. NMFS has included as a condition of their BO/ITS "Reasonable and Prudent Measure" 1a requiring Caltrans or their contractor to submit to NMFS a Construction Site Dewatering Plan and an Aquatic Species Relocation Plan for review a minimum of 30 days prior to implementing the plans. Pacific lamprey larvae are especially vulnerable during dewatering activities because they may not emerge until after the substrate begins to desiccate, which often occurs at night after other fish salvage operations have ceased. As part of measure Species-9 ("Lamprey Protection"), dewatering and relocation efforts for lamprey will be performed in accordance with Best Management Practices to Minimize Adverse Effects to Pacific Lamprey (USFWS 2010).

Special Condition 14 requires Caltrans to implement the various measures as proposed by Caltrans to minimize fish impacts. To further ensure that the project provides all feasible mitigation measures to minimize the adverse environmental effects to fish species resulting from filling coastal wetlands consistent with Section 30233, **Special Conditions 14**, **15**, and **16** establish requirements consistent with the measures proposed by Caltrans that among other things: (a) limit timing of in-water construction work to June 16 through October 15; (b) establish measures for handling and protecting fish and herpetofauna (e.g., frogs and turtles, among others); and (c) establish monitoring and reporting requirements.

Pile Driving and Demolition Noise

Perhaps the greatest risk to aquatic species could result from pile driving and demolition noise. In-water construction activities are anticipated to begin in 2022 with demolition of in-water piers of the existing bridge. The existing bridge will be demolished using an excavator-mounted hoe-ram, jackhammers, concrete saws, and cutting torches. Additionally, gravel pads and a temporary construction trestle that will span the mussel bed will be installed as described above. Caltrans estimates that 18 steel pipe piles (24 or 30-inch diameter, with 12 installed in the channel and 6 on land)

will be needed for two construction trestles and 24 piles for the supporting falsework (12 in water and 12 on land), for a total of 42 total driven piles for the temporary structures. Piles associated with the falsework will be removed prior to October 15 of the first in-water season, while the trestle piles will remain through the winter season. The piles will be installed with a combination of vibratory and impact techniques.

Pile driving with an impact hammer generates hydroacoustic pressure impulses and particle velocities that can cause effects on fish ranging from altered behavior, hearing loss, and tissue injuries, to immediate mortality. These underwater sound impacts can be measured by “Peak Sound Pressure Level (SPL),” the maximum value of an instantaneous sound pressure, such as that generated by a single strike on a pile by a pile driver, and “Cumulative Sound Exposure Level (SEL),” the summation of the sound energy associated with all pile strikes that occur over a given day.

Potential injury and mortality of fish are anticipated to occur from exposure to impact pile driving noise exceeding established thresholds for the onset of injury. In 2008, a Fisheries Hydroacoustic Working Group, composed of staff from federal and state agencies and supported by a panel of hydroacoustic and fisheries experts, generally agreed in principal to interim criteria to protect fish from pile driving activities. These criteria were a 206 peak dB for peak SPL and a Cumulative SEL limit of 187 dB, except in the case of fish weighing equal to or less than 2 grams, in which case the Cumulative SEL was set to a maximum of 183 dB. The peak SPL is seldom reached, so pile driving is generally constrained by the cumulative SEL.

In order to avoid the most critical periods for salmonids, Caltrans will only conduct pile driving between June 15 and October 15, when only larger (> 2 g) individuals are expected to be present. As proposed, Caltrans will also prepare a hydroacoustic monitoring plan for monitoring all construction activities that have the potential to produce impulsive sound waves, including, but not limited to, pile driving, hoe-ramming, or jackhammering. The hydroacoustic monitoring will enable Caltrans to stop pile driving and the other noise generating activities prior to exceedance of the acoustic thresholds at which injury and mortality to fish would occur. The monitoring will also provide the opportunity to employ additional noise attenuation measures to avoid or minimize project impacts where feasible.

For their analysis of impact pile driving noise and hydroacoustic effects associated with the proposed project, Caltrans and NMFS relied on the 2008 guidelines. The analysis of biological impacts was based on a cumulative SEL threshold of 187 dB. NMFS has indicated in its BO/ITS that if in-water construction is limited to three seasons, “…given the coho salmon three-year life history, no single cohort would be impacted twice in subsequent generations.” In order to limit in-water construction work to no more than three seasons, Caltrans proposes to drive the 12 falsework piles within two days, resulting in an estimated 7,500 strikes per six piles per day. In their biological opinion, NMFS calculated that the cumulative SEL threshold would be exceeded in a radius of up to 158 m (520 ft), and all young-of-year Coho Salmon residing in the area would be killed on the first day such that no additional deaths would be expected in subsequent days. While most smolts would likely have migrated through the project area by June

15, it is possible that a few could remain at the onset of in-water construction. Unlike young-of-year Coho Salmon, smolts would be expected to hold in place during the day as a stopover during their evening migration though the project area. Thus, new fish traveling through the area could be exposed to pile driving impacts each day.

Based on the expected number of individuals in various areas that will be exposed to lethal levels of underwater noise, NMFS predicts that pile driving will result in the death of up to 108 young-of-year and 11 smolt Coho Salmon. An additional 54 young-of-year individuals may be killed the first season due to injurious sound levels resulting from demolition activity. However, impacts may be less than has been projected based on calculations using the 2014 guidelines.

Recent studies have shown that there is no clear necessity for the stricter criteria of 183 dB SEL compared to the 203 SEL dB recommended in the 2014 guidelines and that the 183 SEL dB limit is overly conservative. These studies conducted by an international panel of technical experts convened in 2009 by NOAA Fisheries are discussed in more detail in the Dr. Dixon Hydroacoustic Impacts Memo (**Exhibit 14**). In summary, the 2008 interim criteria were intentionally conservative in the direction of protecting sensitive fish species in light of limited evidence and studies available at the time. More recent studies resulted in new recommended 2014 guidelines that have been published in the scientific literature. As discussed in Dr. Dixon's memo, the recommended 2014 guidelines and more recent assessments indicate that injury to fish with a swim bladder (such as salmonids) occurs when the cumulative SEL threshold at which fish are thought to suffer injury would be over 203 db. These recommended guidelines, which are based on the best available science, have not been adopted by Caltrans or NMFS, because they are signatories to the 2008 Agreement and the Hydroacoustic Working Group ceased meeting regularly and has not convened to consider and formally adopt them.

Commission staff, including staff ecologist Dr. John Dixon, have met with biologists at Caltrans, NMFS, and CA Department of Fish and Wildlife (CDFW) to discuss the methods used to evaluate hydroacoustic impacts at the site, and Dr. Dixon has independently reviewed the conclusions of recent reviews of the scientific literature on hydroacoustic impacts to fish conducted by members of the international panel of technical experts convened by NOAA Fisheries in 2009. At the request of Commission staff, Caltrans produced a supplemental hydroacoustic analysis dated October 22, 2020 (**Appendix A**) and an analysis dated October 28, 2020 on "Take" using the 2014 guidelines. Assuming six piles per day are driven, the distance over which the 203 dB cumulative SEL threshold would be exceeded varies between 10 m (33 ft) and 38 m (125 ft), depending on the type and location of the pile. This is estimated to result in the death of between 9 and 26[16] resident young-of-year and 11 smolt Coho Salmon that are moving through the area.

[16] The estimated "Take" was based on the assumption that the "Take" is proportional to the area impacted. NMFS (Van Atta 2020) estimated that the maximum area within which the 187 dB cumulative SEL threshold would be exceeded is within a 158-m radius from the pile driving and that 108 YOY Coho

In considering measures to avoid injury or take of aquatic species, Commission staff requested that Caltrans consider the consequences of not exceeding the 203 cumulative SEL threshold at 10 meters (the standard distance at which sound is monitored), thereby avoiding most "Take." Caltrans staff responded that staying within the threshold would add 21 days of pile driving for a total of 28 days.[17] With 28 days of pile driving being required, the work could not be accomplished in one season because the sequence of work is very constrained.[18] Pile driving in two seasons would delay the bridge construction and could potentially have a greater impact on Coho Salmon and other fish species[19] because it would result in four (rather than three) seasons of in-water construction, thereby impacting more cohorts from the same generation of spawning fish. Caltrans and the resource agencies believe that minimizing the construction period and the number of seasons of possible Coho Salmon loss is more protective overall than minimizing the area of impact but having impacts during two seasons. Additionally, NMFS and Caltrans discussed the possibility of using fish exclusion methods and structures to isolate fish from exposure to pile driving sounds. However, this approach was eliminated from further consideration because of the high injury and mortality that resulted from fish exclusion efforts used on the Highway 101 Mad River Bridges replacement project in Humboldt County that was constructed in recent years (CDP 1-07-013).

Dr. Dixon recommends that the Commission accept the recommendation that pile driving be confined to a single season to minimize acoustic impact to fish species, as pile driving in two seasons would potentially have a greater impact on Coho and other fish species than the take projected to occur by performing all the pile driving as proposed in one season. Based on the above analysis of distances from the piles to be driven over which the acoustic thresholds would exceed levels that will result in fish injury and mortality, Dr. Dixon further recommends that Caltrans monitor underwater noise levels 38 meters from the pile being driven. This distance is the maximum distance at which the 203 db cumulative SEL threshold is exceeded and the onset of physical injury could occur. If the 203 db cumulative SEL threshold is reached, pile driving should cease for at least 12 hours.

Salmon would be killed. Assuming take is proportional to impact area and assuming a maximum impact radius of 38 m for the 203 dB threshold, 26 YOY would be killed.

[17] Estrada, R. (Caltrans). November 5, 2020. E-mail to T. Gedik (CCC) regarding "Dr. Fine Bridge: Hydroacoustic Impacts Analysis and BMP narrative," transmitting technical information from Ryan Pommerenck and Susan Leroy.

[18] Estrada, R. (Caltrans). November 12, 2020. E-mail to T. Gedik (CCC) regarding "Dr. Fine Bridge: Hydroacoustic Impacts Analysis," transmitting technical information from Ryan Pommerenck and Susan Leroy.

[19] The Coho Salmon (*Oncorhynchus kisutch*) has been the primary focus of the resource agencies because the southern Oregon and northern California coastal populations (SONCC Evolutionary Significant Unit) are designated "threatened" under the Endangered Species Act. However, many other species are also at risk, including chinook salmon (Threatened in other ESUs), cutthroat trout, other unidentified salmonids, and the Klamath smallscale sucker that were observed within the impact area during snorkel surveys in 2011 and 2012 (Garwood nd).

Therefore, **Special Condition 16** requires Caltrans to prepare a hydroacoustic monitoring plan incorporating Dr. Dixon's recommendations. **Special Condition 16** requires monitoring of designated metrics for sound exposure and sets designated limits, including limiting accumulated Sound Exposure Level to less than 203 dB. Special Condition 15 also requires the plan to include proposed monitoring methods and real-time monitoring and provides for record-keeping and reporting. If the Cumulative Sound Exposure Level is reached or exceeded, pile-driving must be stopped, as recommended, for at least 12 hours and cannot resume unless the Executive Director, in consultation with the fisheries biologists at NMFS and CDFW authorizes resumption based on the deployment of additional sound attenuation or other measures deemed likely to return the pile-driving to conformance with the acoustic thresholds.

Additionally, the BO/ITS prepared by NMFS (**Exhibit 15**) outlines a number of measures to reduce adverse impacts to salmonids during all phases of the proposed project and related activities. The BO/ITS concludes that while some take is expected to occur as a result of project activities, the amount or extent of anticipated take, coupled with other effects of the proposed action, is not likely to result in jeopardy to Coho Salmon or adversely modify designated critical habitat. The BO/ITS also attached "reasonable and prudent measures" and special conditions to further minimize take of Coho Salmon. **Special Condition 15** incorporates the protective recommendations of NMFS and therefore, fully implemented, will ensure that maximum feasible mitigation for fisheries impacts are undertaken. In addition, measures discussed below to protect water quality will also benefit salmonid habitat within the river.

Improvement of Fish Habitat as Mitigation.

In addition to consultations with NMFS, Caltrans has been working to obtain the necessary authorizations from CDFW, who has regulatory jurisdiction over the project pursuant to the California Fish and Game Code and the California Endangered Species Act (CESA). Caltrans has applied to CDFW for a Consistency Determination (CD) and is working with CDFW to address CESA mitigation requirements. As part of its FEIR, and the March 2020 Biological Assessment/ Essential Fish Habitat Assessment prepared for its consultations with NMFS and CDFW, Caltrans proposed to mitigate for direct take of all Coho Salmon impacted by various project activities[20] by improving fish passage at Dominie Creek (see FEIR measure Coho-1) at its crossing with Highway 101 (located approximately 3.5 miles northwest of the project site and outside the coastal zone). CDFW has indicated that enhancement of existing fish passage at Dominie Creek would not fully mitigate for direct impacts to Coho Salmon[21] and is thus requiring additional mitigation.

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[20] The NMFS BO/ITS estimated total impacts for pile driving, demolition, and other construction activities as resulting in lethal take of 174 juvenile Coho Salmon, and non-lethal take of 29 juvenile Coho Salmon.
[21] CDFW indicated to Caltrans in a memo dated September 30, 2020 that the proposed Dominie Creek Fish Passage Project would mitigate incidental take to 40 juvenile SONCC Coho Salmon.

Caltrans is now also proposing to contribute funding towards fish passage enhancement opportunities at Rowdy Creek Fish Hatchery at its crossing with Highway 101, located approximately 3.3 miles northwest of the project site and outside the coastal zone on land owned by Tolowa Dee-ni' Nation. A partial barrier to adult salmon and total barrier to juvenile salmon at the hatchery limits the immediate benefits of the fish passage enhancements that would result from the Dominie Creek enhancement project described above. The barrier removal at Rowdy Creek is on CDFW's 2018 Fish Passage Priority List.[22] As part of its revised project description (**Exhibit 5**), Caltrans proposes contributing funding to the Tribe towards implementation of the Rowdy Creek Fish Weir Removal Project (Rowdy Project) to earn the remaining fish mitigation credit required as determined by CDFW.

In memos dated September 30, 2020 and October 27, 2020 (**Exhibit 16**), CDFW has calculated mitigation credits and associated funding requirements in part as follows:

> According to the 2019 NMFS Biological Opinion, the lethal take estimate for juvenile Coho Salmon due to Dr. Fine bridge replacement is 174. The current mitigation proposed is to replace the box culvert at U.S. Highway 101 over Dominie Creek, projected to result in an estimated 40 juvenile Coho Salmon (23% of mitigation needs). Additional mitigation has been proposed in the form of funding fish passage elements of Rowdy Creek Hatchery Project sufficient to create an additional 134 juvenile Coho Salmon. Caltrans requested CDFW assistance in determining how much of the project to fund to fulfill the additional mitigation needs. CDFW determined the following:
>
> **Expected Coho Salmon Mitigation Benefit Analysis**
> Assumptions:
>
> 1. At least one additional Coho Salmon redd is needed to generate 134 additional juvenile Coho Salmon.
>
> 2. Based on the most recent available survey year (2018-19), estimated Coho Salmon red densities in the Smith River are at 3 redds/km based on survey data in Mill Creek, Smith River basin.
>
> 3. Instantaneous adult Coho Salmon stray rate from the existing Smith River population (colonization post weir removal) into Rowdy Creek is 5%.
>
> We used the most recent number of estimated Coho Salmon redds in Mill Creek from 2018-19 winter. The population has been declining over the duration of this study so it is prudent to use the most recent estimate of 103 redds across 33.5 km (3 Coho redds/ km) as a reasonable donor population density to expect during the early onset of a restored Rowdy Creek. Given a population level stray rate of approximately 5%, we can expect approximately 5 new Coho Salmon redds in Rowdy Creek directly after weir removal. Given just one of the five new redds would fulfill the remaining mitigation

[22] PAD ID 721887

needs, Caltrans could fund 1/5 (20%) of the fish passage project costs to achieve the full mitigation required pursuant to CESA.

Caltrans has provided Commission staff with an August 2018 cost assessment for Rowdy Creek Fish Passage Improvements that estimates total project costs at $3,775,000. Using the 20% funding requirement calculated by CDFW, Caltrans is proposing to contribute $755,000 towards total project costs.

The Commission finds that by enhancing the opportunity for the impacted fish species to more effectively utilize longer reaches of nearby tributaries of the Smith River as habitat, thereby increasing the expected numbers of fish in the watershed as discussed above, the combination of the Dominie Creek and Rowdy Creek Fish passage improvement projects will provide feasible mitigation for the loss of fish from the acoustic and other impacts of the bridge replacement project. To ensure that the fish passage enhancement project at Dominie Creek is implemented as proposed, **Special Condition 19** requires Caltrans to submit final plans for the proposed fish passage improvement project for the review and approval of the Executive Director within one year of approval of this CDP and complete construction no later than July 1, 2024. Caltrans is also required to submit annual reports detailing the progress made toward the completion of the Dominie fish passage improvement project until completion of the project. **Special Condition 18** requires in part that (a) within one year of permit issuance that authorized representatives of Caltrans and Tolowa Dee-ni' Nation have entered into an Intergovernmental Cooperative Agreement to implement the project, and (b) evidence be provided to the Executive Director that a nonrefundable fisheries mitigation fee of $755,000 has been transferred to Tolowa Dee-ni' Nation and deposited into an interest-bearing account created specifically by Tolowa Dee-ni' Nation to underwrite Tolowa Dee-ni' Nation's efforts to commence and complete fish passage enhancement milestones by certain specified timeframes. **Special Condition 18C(ii)** also specifies that the cooperative agreement shall provide that if the Improvement Project cannot be carried out as required by this condition, the funds shall be transferred to an entity able to complete the project, or for an alternative project to be proposed as an amendment to this CDP.

As conditioned in the manner discussed above, the Commission finds the development will provide feasible mitigation to minimize the adverse environmental effects of wetland fill impacts on fish species and their habitat associated with the proposed bridge replacement project, consistent with Coastal Act section 30233.

iv. Measures to Avoid Significant Impacts to Wildlife

Depending on the manner in which the proposed project is undertaken, as discussed above, the development within the wetland habitats at the project site could have significant adverse impacts on wildlife uses, such as food and cover for small animals, migration corridors for larger wildlife, foraging and breeding habitat for songbirds, and stopover habitat for migratory birds. Black-tailed deer (*Odocoileus hemionus*), Roosevelt elk (*Cervus canadensis roosevelti*), coyote (*Canis latrans*), grey fox (*Urocyon cinereoargenteus*), otter (*Lutra canadensis*), black bear (*Ursus americanus*), beaver

(*Castor canadensis*), muskrat (*Ondatra zibethicus*), raccoon (*Procyon lotor*), and smaller carnivores and rodents are all known to occur in the project vicinity and likely use the project area. Bats (*Chiroptera* spp.) have also been observed using the bridge for night roosting. Northern red-legged frogs (*Rana aurora*) have been observed in the ponded area northwest of the bridge. Other species with the potential to use the ponded area include coastal giant salamander (*Dicamptodon tenebrosus*), rough-skinned newt (*Taricha granulosa*), northwestern salamander (*Ambystoma gracile*), foothill yellow-legged frog (*Rana boylii*), coastal tailed frog (*Ascaphus truei*), and western pond turtle (*Clemmys marmorata*). Section 2.3.3 of the FEIR provides details about the various animal species that are known to occur or have the potential to occur in the project area.

Caltrans proposes to implement all the mitigation measures included in **Appendix C** as part of the project. Direct effects to nesting birds would be minimized by avoiding vegetation removal during the avian nesting season, as proposed by measure AS-2. Other avoidance and minimization measures designed to prevent impacts to wildlife include such measures as avoiding in-water construction if marine mammals are present,(Species-3), conducting pre-construction surveys and relocating amphibians and reptiles (Species-4), minimizing construction noise (NO-1), symbolically fencing sensitive habitat areas that workers must avoid (NC-1), limiting the size of areas to be disturbed by construction activities (NC-3), and training workers to employ the mitigation measures (NC-4). **Special Condition 8** requires the implementation of the various measures.

The Commission finds that the project as proposed and conditioned as described above provides feasible mitigation measures to minimize the project's impacts to wildlife using the wetland habitat, consistent with section 30233 of the Coastal Act.

v. Measures to Avoid Significant Adverse Impacts on Water Quality

Depending on the manner in which the proposed project is undertaken, as discussed above, the project could have significant impacts on water quality. The potential impacts to water quality and the mitigation measures proposed by Caltrans and required as special conditions of this permit are discussed in **Finding I** below. As proposed and conditioned, impacts to water quality would be appropriately avoided, minimized or mitigated to ensure the quality and productivity of coastal wetlands and waters are protected.

Biological Productivity and Functional Capacity.

Another general limitation set by section 30233(c) of the Coastal Act is that any proposed dredging or filling in coastal wetlands or estuaries must maintain or enhance the functional capacity of the wetland or estuary.

The mitigation measures incorporated into the project and required by the special conditions discussed above will ensure that the project will not have significant adverse impacts on coastal waters or wetlands in and around the project vicinity.

Therefore, the Commission finds that the project, as conditioned, will maintain and enhance the biological productivity, quality, and functional capacity of coastal waters and wetlands consistent with the requirements of section 30233 of the Coastal Act.

3. Conclusion

For all of the reasons set forth above, the Commission thus finds that the project, as proposed and conditioned, is an allowable use, that there is no feasible less environmentally damaging alternative, that feasible mitigation will be provided to minimize all significant adverse impacts associated with the dredging and filling of coastal wetlands, that wetland habitat values will be maintained or enhanced, and that coastal water quality will be protected. Therefore, the Commission finds that the proposed development, as conditioned, is consistent with section 30233 of the Coastal Act.

F. Geologic/ Flood Hazards

1. Applicable Coastal Act Provision

Coastal Act section 30253 requires that new development minimize risk to life and property in areas of high flood hazard areas, ensure long-term stability and structural integrity, and avoid landform altering protective measures such as coastal armoring. Section 30253, in pertinent part, states:

> **Section 30253.** New development shall do all of the following:
>
> (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
>
> (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that will substantially alter natural landforms along bluffs and cliffs.

2. Consistency Analysis

To accomplish the proposed replacement of the Dr. Fine Bridge, the applicant will construct a temporary detour bridge approximately 48 feet upstream of the existing bridge, then demolish the existing bridge that was constructed in 1940 and construct the new bridge on the existing alignment and according to current seismic design standards.

The FEIR describes the existing bridge structure as follows:

> The existing bridge consists of 20 spans (portions between abutments and/or piers) with two bridge types. The south and north ends of the bridge (220 feet long and 70 feet long, respectively) are cast-in-place (CIP)/reinforced concrete and the middle section (760 feet long) consists of riveted steel plate girders with a cast-in-

place/reinforced concrete deck [**Exhibit 17**]. Five piers support the steel girder section of the bridge over water, with each pier having two columns with web walls on H-Piles. The bents supporting the concrete spans at both the south and north ends of the bridge each have three columns of reinforced concrete in a "bent-type" configuration. At the south end, the foundations are cast in-drilled-hole concrete piles, while the north end has reinforced concrete spread footings. The concrete spans at the south and north ends of the bridge have parabolic shaped soffits.

The bridge substructure consists of nineteen (19) supports, including fourteen (14) concrete bents (see **Exhibit 17** for example) and five (5) piers, three of which are below the Smith River OHWM. Portions landward of the OHWM also include two abutments and seismic retrofit piles.

Seismic Hazards

The project area is not located within an Alquist-Priolo Earthquake Fault Zone, and there are no known active faults in the immediate project area. However, the project is in an area subject to major earthquakes, and a large earthquake on one of the active faults in the region has the potential to cause high intensity ground-shaking at the project site during the lifespan of the proposed development, which is anticipated to be 75 years. Seismic hazards are of particular concern at the project site due to its proximity to the Cascadia Subduction Zone (CSZ), the tectonic plate boundary where, over geologic time, the oceanic Pacific Plate is being forced beneath the continental North American plate. Earthquakes along the subduction zone, though relatively infrequent, have the potential to be very large, with magnitudes of greater than M8.0. Based on an evaluation of the potential for activity on local faults, Caltrans' Seismic Hazard Analysis prepared by Kleinfelder Associates (November 3, 2017; **Appendix A**) determined the intensity of ground-shaking that could occur during very large, low-probability seismic events, with estimated recurrence intervals from 975-years up to 2,475-years. This analysis captured the ground-shaking expected to occur during ruptures of the CSZ. Caltrans has confirmed that the seismic design of the Dr. Fine Bridge structure will follow the recommendations of the Seismic Hazard Analysis, and the critical structural components of the bridge will be engineered to withstand the intense ground-shaking associated with a 2,475-year (2% probability of exceedance in 50 yr) event. Based on the provided analysis, the Commission concludes that the proposed bridge design will minimize seismic hazards to life and property.

Flood Hazards

The project site is situated within the mapped 100-year floodplain of the Smith River and thus subject to flood hazard risks. Highway 101 on either side of the bridge is located on fill elevated above the floodplain. The Smith River reacts rapidly to rainfall events, reaching peak flows within six to eight hours of the most intense rainfall of a storm. Average annual precipitation in the area is 103 inches, and Caltrans describes average river flows (2015 Water Quality Assessment Report; **Appendix A**) as ranging from 336 cubic feet per second (cfs) in September to a high of 8,432 cfs in January. Caltrans describes in its September 23, 2016 Final Hydraulic Report (FHR) that the largest flood on record occurring in 1964 increased from 20,000 cfs to a peak of 228,000 cfs in

approximately 36 hours and remained above 100,000 cfs for 30 hours. However, there is no record of flood waters overtopping the existing bridge.

Caltrans has conducted modeling to evaluate whether the existing, interim, and/or future bridge decks will have adequate freeboard (distance between the water surface and the bottom of the bridge soffit) in the event of a 50-year design flood of 216,900 cfs or 100-year flood base flood event of 250,000 cfs. Within the wetted channel, the 2016 FHR describes the minimum soffit elevation of the existing bridge at approximately 54.01 feet, 30 feet for the assumed interim condition, and 58.20 feet for the proposed structure. Caltrans describes in the FEIR a low risk of flood impacts to the bridge infrastructure, stating in part the following:

> The minimum soffit elevation of 58.2 feet for the proposed replacement structure would provide more than 18 feet of freeboard for a 50-year flood, and more than 16 feet for a 100-year flood. Exact projections of changes in regional precipitation are not readily available. However, the Caltrans District 1 Climate Change Pilot Study (2014) estimates an increase of from 5% to more than 10% (2.0 to more than 2.5 inches) in daily precipitation in the project area between 2035 and 2099 under a wet global climate model, compared to the 1970–1999 historic period (Caltrans and Humboldt County Association of Governments 2014). Given the substantial freeboard available under the replacement bridge design, and the presence of an overflow, or "relief," bridge (BR. No. 01- 0046) 1,200 feet south of the Dr. Fine Bridge, it is anticipated that the new bridge would be resilient to future potential higher flood flows without any additional adaptive measures. The low point of the overflow bridge is higher in elevation than the year 2100 H++ scenario and would not see any flow due to the tides.

In addition, the proposed permanent bridge will also have fewer piers in the channel, reducing the potential to capture floating debris and thus improving flow conditions as compared to the existing bridge.

The proposed temporary detour bridge will not be constructed at as high an elevation as either the existing or proposed permanent bridge. The 2016 FHR calculates the modeled minimum soffit elevation will be 30.0 feet for the East Construction Trestle as part of the temporary bridge construction and concludes there will be no available freeboard for a 2-Year Flood Event or any event greater than a 2 Year Flood Event. The temporary bridge is anticipated to be used for a period of fewer than three years. Caltrans characterizes the lack of freeboard as an "acceptable risk" for a temporary structure. During high-flood events, large woody debris traveling downriver could rack against the bridge in the absence of freeboard, significantly threatening the integrity of the bridge itself and the safety of travelers across the bridge. To minimize this risk, Caltrans has proposed Best Management Practice Measure HF-2 requiring the contractor to prepare and implement a Debris Management Plan. Under the Debris Management Plan, the contractor would be required to regularly inspect the site, including after major storm events, and monitor for and remove any debris loading at the site. **Special Conditions 8** and **12** ensure the Debris Management Plan is submitted and implemented as proposed.

The required debris management provisions will help maintain the integrity of the bridge in the event of a significant flood event, but even if all debris that racks against the bridge is removed in a timely fashion, flood waters that overtop the deck of the temporary bridge would still clearly be very hazardous to travelers using the bridge. To help minimize this risk of flood waters affecting travelers using the bridge, **Special Condition 21** requires that a flood warning and bridge closure plan be submitted for the approval of the Executive Director. The plan is required to identify the steps that will be taken in the event of forecasted flood conditions to warn the traveling public of possible flood conditions, monitor the rise of flood waters, physically close the temporary bridge, and reroute traffic to alternate routes. As conditioned, the Commission finds that the development will minimize flood hazards to life and property, consistent with the requirements of Coastal Act section 30253(a).

Sea Level Rise

The project site is located approximately 8 miles upstream from the Pacific Ocean. The site has historically received tidal influence only during the most extreme tides exceeding 13.8 feet[23]. However, rising sea levels will increase tidal action to this portion of the Smith River in the future. As discussed in numerous recent Commission CDP findings, the State of California has undertaken significant research to understand how much sea level rise to expect over this century and to anticipate the likely impacts of such sea level rise. Primarily, state agencies, including the Coastal Commission, use the findings and projections of the Ocean Protection Council's (OPC) Science Advisory Team and their State of California Sea-Level Rise Guidance 2018 Update. This Guidance document provides high-level, statewide recommendations and projections for state agencies and other stakeholders to follow when analyzing sea level rise (SLR). Although SLR projections are inherently uncertain, especially as far out as the 2100 time-frame for the anticipated life-span of major infrastructure projects, the OPC guidance and projections provide the current best available science on SLR for California planning. The Coastal Commission's Sea Level Rise Policy Guidance, updated in 2018 ("Commission SLR Guidance"), relies on and recommends using the OPC guidance.

[23] Caltrans reviewed the historical high tide data available at Station 9419750 in Crescent City for the period between 1950 and 2007, which showed two highest tide events with tides greater than 13.8 feet occurred in 1983.

Table 2. Sea-Level Rise Projections using 2000 as the Baseline
(As presented in Caltrans March 2020 Final Environmental Impact Report for Dr. Fine Bridge Replacement Project)

Year	High Emissions Scenario (RCP 8.5) 66% probability SLR is between (feet)	H++ Scenario (feet) (no probability)	The maximum height reached by rising Sea Tide (feet) NAVD88 (H+++ Scenario)	Possible tidal effect water depth at the bridge streambed 13.85 (feet) NAVD88 based on (H+++ Scenario)
2019	0	0	10.66	N/A
2040	0.1–0.4	1.4	12.06	N/A
2070	0.4–1.2	4.5	15.16	1.31
2100	0.7–2.5	9.3	19.96	6.11

Source: Ocean Protection Council 2018
RCP = Representative Concentration Pathway. RCPs are emissions scenarios used by the Intergovernmental Panel on Climate Change that represent different levels of future expected GHG concentrations based on a family of possible underlying socioeconomic conditions, policy options, and technological considerations. RCP 8.5 is often considered the "business-as-usual" scenario. H++ is the most extreme scenario considered in the 2018 Guidance Update (Ocean Protection Council 2018:13).

While uncertainty will remain regarding exactly how much sea levels will rise and when, the direction of sea level change is clear, and it is critical to continue to assess sea level rise vulnerabilities when planning for future development. Importantly, maintaining a precautionary approach that considers high or even extreme sea level rise rates and includes planning for future adaptation will help ensure that decisions are made that will result in a resilient coastal California. Here, the highway improvements comprise critical infrastructure serving the public where failures could have significant coastal resource consequences. In such cases, the OPC Guidance and Coastal Commission SLR Guidance recommend that applicants for critical infrastructure understand the risks associated with the medium-high risk aversion scenario and extreme risk aversion scenario and anticipate the need to plan for those scenarios.

Using the thalweg of the channel (i.e. the deepest part of the channel) measuring 13.8 feet NAVD88, Caltrans has calculated the possible tidal effect during an extreme H+++ Scenario in 2100, which would result in an additional 6.11 feet of flow at the project site. The highest historical tide at the Crescent City tidal station was recorded at 14.35 feet NAVD88, which results in 0.55 feet of tidal flow at the project site. Under the worst case sea level rise scenario, during a high tide event corresponding with a 100-year flood (see above), river flow could be 6.66 feet higher than the current flood level[24]. Available freeboard could drop to 11.3 feet of freeboard for a 50-year flood, and to 9.3 feet for a 100-year flood; with these freeboard amounts based on a minimum soffit elevation of 58.20 feet, the proposed bridge would not be expected to flood.

[24] Calculation of 6.66 feet is based on 6.11 feet tidal flow from 2100 H+++ SLR effect at the bridge per Table 2, plus 0.55 feet additional tidal flow projected from historic highest tide event.

Erosion Hazards

As described in the "Purpose and Need" section of the FEIR, the existing bridge is designated scour critical. According to the Caltrans Bridge Maintenance Records, there is a long history of gravel mining both upstream and downstream of the bridge. The FEIR describes the overall degradation rate at the bridge site over time as relatively small (approximately one foot every ten years). However, Caltrans indicates that "the combination of degradation, channel migration, hydraulic skew, local pier scour, unpredictable and rapid fluctuation in vertical stability due to gravel mining, drift and the potential seismic instability makes this bridge scour critical."

Demolition of the existing bridge will occur after temporary bridge construction and traffic detours are completed. Demolition will include removing the concrete columns and foundations of the 14 bents that are outside the river channel. Excavations for the foundations of the bents will be backfilled with native material and graded. Within the river channel, only portions of the pier foundations will be removed because of the difficulty of removing driven H-piles in their entirety from the bed of the river. The highly mobile gravel bed of the Smith River dominated by high discharge events creates a risk for future exposure of any remnants of piers left in place by scouring of the river bottom. The exposure of any abandoned-in-place pier infrastructure over time could adversely impact wildlife and the public's ability to safely access and navigate the river. In addition, once remnant infrastructure left in place below the river bed is exposed by river scour, the exposed infrastructure could exacerbate localized scour effects. To avoid exposure of the river bottom to scour around pile infrastructure that will remain in the river channel, Caltrans originally proposed to remove a portion of the five piers by "removing the pile caps and cutting off the existing steel H-piles below channel bottom at a depth of three feet below the thalweg."

Recognizing the greater risk of scour both within the Smith River itself and between new and abandoned-in-place pier infrastructure, Commission staff and State Lands Commission (SLC) staff inquired about the potential to cut off in-water piers at a greater depth below the riverbed. Concerns about scour and potential pier exposure are underscored by the Caltrans September 23, 2016 Final Hydraulic Report (**Appendix A**), which includes excerpts from Bridge Inspection Reports dating back to 1974 describing scour, channel degradation, and pier exposure events, and scour countermeasures undertaken around the bridge supports. Caltrans prepared a memo dated November 30, 2020 regarding pier cutoff considerations (**Exhibit 18**). The memo provides recommendations overall for removing most piers at a cutoff depth of three feet below the surface, but cutting off piers 12 and 13 at 4.5 feet below the surface. The memo acknowledges some uncertainties about potential scour risk due to mining activities upriver and thalweg movement within the channel. Following further discussions with Commission staff, Caltrans has since updated its proposal to excavate existing in-water bridge Piers 12, 13, 14, and 15 to 4.5 feet below original grade. Therefore, **Special Condition 7B** (Final Construction Plans) requires Caltrans to submit final plans depicting final pier cutoff depths at a minimum 4.5 feet below original grade at existing Piers 12, 13, 14, and 15.

Although Caltrans proposes measures that will reduce the risk of remnant pier exposure due to erosion or flood events, a risk for future exposure nonetheless remains. As discussed above, if remnant piers were exposed in the future, they could present a danger to kayakers or swimmers, adversely affect wildlife, and exacerbate local scour effects. Therefore, **Special Condition 22** (Scour Monitoring Plan) requires Caltrans to submit for the Executive Director's review and approval a pier exposure and scour monitoring plan. The plan shall outline routine monitoring and reporting measures to document any changes in exposure of remnant piers in the river channel in the future. Should abandoned pier infrastructure become exposed in the future**,** **Special Condition 23** requires Caltrans to remove exposed remnant structural debris after first obtaining any necessary permits.

For the reasons discussed above, replacing the bridge as proposed with a seismically stable and scour resistant design will minimize risk to life and property in areas of high geologic and flood hazards, assure structural integrity and stability, and neither create nor contribute significantly to erosion. Therefore, the Commission finds the proposed development as conditioned is consistent with Coastal Act section 30253.

Assumption of Risk

Considering the aforementioned hazards, the Commission also attaches **Special Condition 24**, which requires Caltrans to assume the risks of flooding and geologic hazards to the property and waive any claim of liability on the part of the Commission. Given that Caltrans has chosen to implement the project despite flooding and geologic risks, Caltrans must assume the risks. **Special Condition 24** notifies the Applicant that the Commission is not liable for damage as a result of approving the permit for development. The condition also requires indemnification of the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand the hazards.

3. Conclusion

Therefore, for all the reasons set forth above, the Commission finds that the proposed project, as conditioned, assures geologic stability and structural integrity and minimizes risks of geologic and flood hazards consistent with the requirements of Coastal Act section 30253.

G. Archaeological Resources/ Tribal Consultation

1. Applicable Coastal Act Provisions

Section 30244. Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

2. Consistency Analysis

Caltrans acknowledges in its Final EIR that the project site is situated in an area of high sensitivity for buried archaeological deposits and tribal cultural resources. The proposed

project is situated on Tolowa ancestral lands (known as “Taa-laa-waa-dvn”) that remain inhabited by citizens of the polity (known as “Dee-ni”) that is the federally recognized Tolowa Dee-ni’ Nation (formerly known as the Smith River Rancheria). The Taa-laa-waa-dvn extend along the Pacific Coast in California between the watersheds of Wilson Creek to the southwest and Smith River to the southeast, and continuing into Oregon along the Winchuck, Chetco, Pistol, Rogue, Elk and Sixes Rivers, and inland up the Rogue River throughout the Applegate Valley in Oregon.[25] According to the Tolowa Dee-ni’ Nation website, their Taa-laa-waa-dvn roughly covers what are today Curry, Josephine, and Del Norte Counties. The nearby federally recognized Elk Valley Rancheria is also situated on Tolowa ancestral territory and includes Tolowa citizens among its membership.

The Tolowa Dee-ni’ Nation website (https://www.tolowa-nsn.gov/who-we-are/) describes a highly developed culture of the early Dee-ni’ that resulted from its use of rivers, sea, and land for thousands of years. The early Dee-ni’ relied on salmon, whale, seal, clams, deer, elk, eggs and duck, and acorns, berries, seaweed, and vegetables for sustenance. Current Tolowa citizens continue to live off the land, relying on sustenance fishing from the Smith River and harvesting of native nuts and berries and agricultural cultivation, among other uses.

Caltrans prepared a Historic Property Survey Report (HPSR) dated October 21, 2014, and Supplemental HPSR dated May 23, 2019, as part of its analysis of cultural resources pursuant to Assembly Bill 52 CEQA requirements. Section 3 of the Supplemental HPSR includes a description of initial outreach efforts in 2007 including to the Native American Heritage Commission (NAHC) and between representatives of the Tolowa Dee-ni’ Nation and the Elk Valley Rancheria. The Supplemental HPSR also indicates that updated consultation efforts between Caltrans and tribal entities began in 2018 and continue to occur. During a supplemental archaeological survey conducted on October 11, 2018, on a portion of the proposed project area, a member of the Tolowa Dee-ni’ Nation and adjacent property owner raised concerns regarding the potential for the presence of known sensitive cultural resources nearby. As a result of that conversation, Caltrans staff consulted with the Tribal Historic Preservation Officer of the Tolowa Dee-ni’ Nation who recommended a conversation with the Tolowa Dee-ni’ Tribal Council. According to a supplemental archaeological survey report prepared in March 2019, Caltrans staff met with the Tolowa Dee-ni’ Tribal Council in January 2019. The report states in part the following:

> The Council, considering the knowledge they held about this location and the findings of the past investigations, recommended that a tribal monitor be present during ground disturbing construction activities over the life of the project. Caltrans agreed that this was an appropriate approach for this project considering these same factors. Both parties agreed that a monitoring agreement would need to be

[25] Accessed November 9, 2020 from Tolowa Dee-Ni Nation website at: https://www.tolowa-nsn.gov/who-we-are/

> drafted previous to [*sic*] construction occurring to ensure proper notification, payment, and safety standards of the tribal monitor.

During the circulation of the Draft Environmental Document, Caltrans received comments from a neighboring property owner who stated in part the following:

> Two of the three residences on the south west portion of the project area are tribal families and citizens of the Federally Recognized Tribes of the Tolowa Dee-ni' Nation, and the Absentee Shawnee. The Tolowa Dee-ni' descend from this land since time immemorial, and these families have resided in the project area for the last five generations. All impacts temporary and permanent will affect our tribal family…
>
> …
>
> The project area encompasses Tribal Cultural Resources and is the site of a historical Tolowa Village- T'uu-yaa-sdvm-dvn. Currently the land is still inhabited by Tolowa citizens whom live off this specific land, including but not limited to agriculture…sustenance harvesting of resources…agriculture water supply and domestic water supply. We support plans to include cultural monitors throughout the project implementation, especially during ground disturbance activities. And would like it to be recognized that this is still an inhabited village of Tolowa Dee-ni' people whom will be impacted by this project (Reference to Richard Gould, 1964 and Philip Drucker, 1937 and Tolowa Dee-ni' TEK [*traditional ecological knowledge*].

The neighboring property owner raised additional concerns regarding, among other things, recreational and sustenance fishing, lead contamination, and water quality, which are addressed in **Findings H** (Coastal Access and Recreation) and **I** (Water Quality).

Additionally, as part of the Commission's review process, on August 31, 2020, Commission staff reached out to the following tribal contacts (listed in no particular order) including those obtained from the Native American Heritage Commission:

> Elk Valley Rancheria
> Karuk Tribe
> Resighini Rancheria
> Tolowa Dee-ni' Nation
> Yurok Tribe
> Northwest Information Center, Sonoma State University

Commission staff received comments on November 12, 2020, in a letter transmitted by Chairperson McCallum of the Tolowa Dee-ni' Nation on behalf of Tribal Council (**Exhibit 25**). The comments largely reflected those sent by affiliated members commenting on the Draft EIR as described above and are similarly addressed herein. No other comments have been received as of the date of publication of the staff report. Coastal Act section 30244 requires that reasonable mitigation measures be employed where

development could adversely impact archaeological or paleontological resources. Caltrans has included in Section 1.7.1.17 of its FEIR proposed "Project Features, Standard Measures, and Best Management Practices…" that include, among other things, the presence of an archaeological and tribal monitor during all ground-disturbing construction activities, consistent with the Monitoring Plan adopted as part of the 2019 Supplemental HPSR (**Appendix C**). **Special Condition 25** requires the applicant to comply with all recommendations and mitigation measures contained in the Monitoring Plan attached to the Supplemental HPSR.

Additionally, to ensure protection of any prehistoric cultural resources that may be discovered at the project site during construction activities, the Commission attaches **Special Condition 25B**. This condition further requires that if an area of prehistoric cultural deposits is discovered during the course of the project, all activity must cease, and the discovery shall be immediately reported to the Tribe, the Caltrans Cultural Studies Office (CSO) and the California State Historic Preservation Officer (SHPO), and the Executive Director. **Special Condition 25B** also establishes procedures under which a qualified cultural resource specialist must analyze the significance of the find. To recommence activity following discovery of any cultural deposits determined to be significant, the applicant is required to submit a supplementary archaeological plan to identify proposed investigation and mitigation measures for the review and approval of the Executive Director to determine whether the changes are *de minimis* in nature and scope, or whether an amendment to this permit is required.

As conditioned, the project is consistent with Coastal Act section 30244 regarding the protection of archaeological resources.

H. Coastal Access and Recreation

1. Applicable Coastal Act Provisions

Section 30210. In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211. Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30213 requires in part the following:

> Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. …

Section 30214 requires in part (Emphasis added):

> (a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:
>
> (1) Topographic and geologic site characteristics.
>
> (2) The capacity of the site to sustain use and at what level of intensity.
>
> (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.
>
> (4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.
>
> (b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article X of the California Constitution.

Section 30220. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Section 30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Section 30224. Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and preclude boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.

Further, Coastal Act section 30240(b) protects sensitive habitat, as well as parks and recreation areas, such as the Smith River and nearby recreational facilities:

Section 30240(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.

2. Consistency Analysis

Existing Conditions

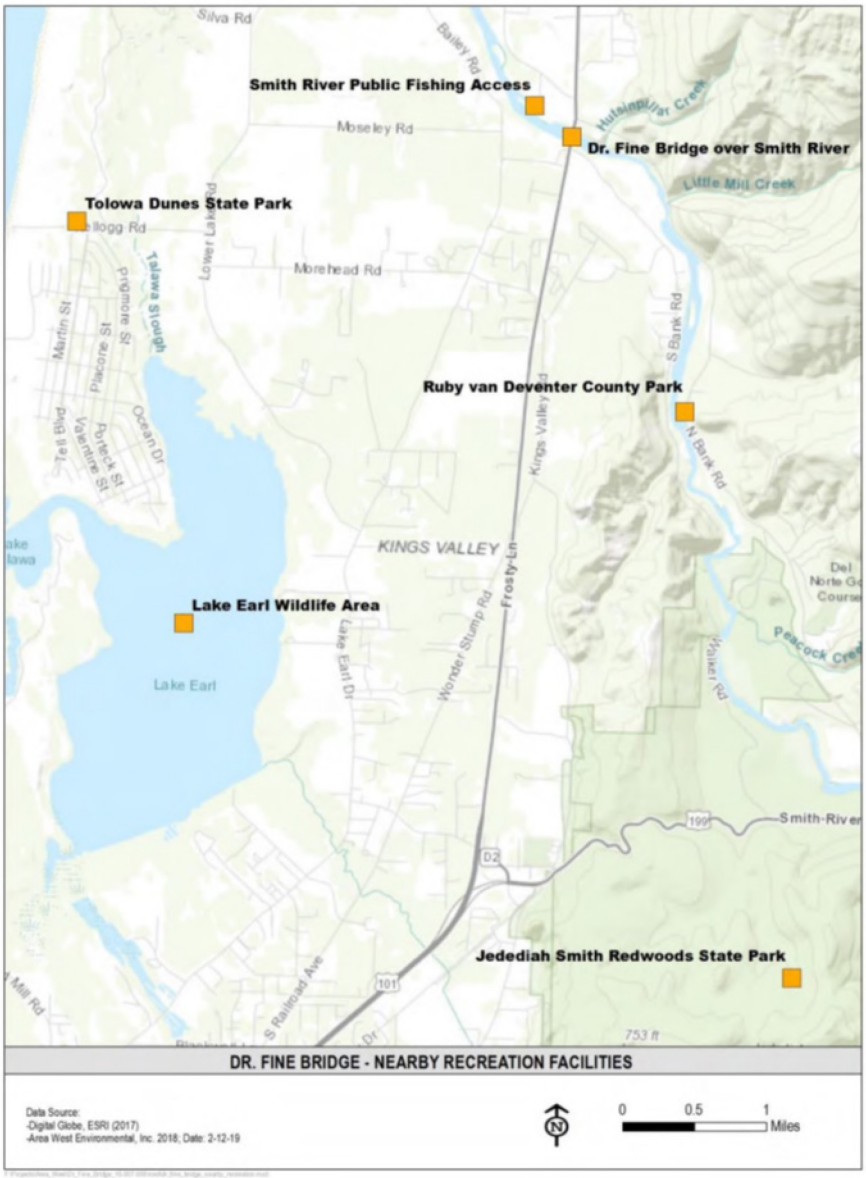
The Dr. Fine Bridge spans the Smith River in Del Norte County approximately eight (8) miles inland from the river's outlet to the Pacific Ocean. Despite this distance from the coast, the Dr. Fine Bridge provides the first crossing of the Smith River for pedestrians, bicyclists and vehicles combined and provides critical connectivity along the coast for the traveling public The next crossing of the river is approximately five miles upstream along Highway 199 at its junction with State Route 197. Highway 101 in this area is an integral part of the Pacific Coast Bike Route. In addition to touring cyclists, local bicycle commuters use the Dr. Fine Bridge as a connection to Lake Earl Drive and Fred D. Haight Drive.

The Smith River is a designated Wild and Scenic River and the only major river system in California that is undammed for its entire length. Within the project area, the Smith River is designated "Recreational" under the federal and state[26] Wild and Scenic River Acts, thereby affording additional protections for preservation in its free-flowing state, together with its immediate environments, for the benefit and enjoyment of the people of the state.[27] The Smith River is popular to recreationists for day-camping, swimming, snorkeling, boating, fishing, and bird watching, among other uses. The river also supports sustenance fishing of local Native American people, including citizens of the Tolowa Dee-ni' Nation who still inhabit their ancestral lands within which the current bridge and proposed project are situated.

The coastal zone in the project area extends to the eastern edge of the state highway right-of-way along the Dr. Fine Bridge (**Exhibits 1, 2**). Both informal and formal access to the river occurs within the project area. Lands bordering the banks of the Smith River within the project area are primarily held in private ownership, however, evidence exists throughout the area of a network of informal pedestrian and vehicular access points connecting to the river. The area underneath the bridge within the Caltrans right-of-way between South Bank Road and the south bank of the river is a common access point for pedestrians, fishermen, vehicular, and informal boat launching activities. Although there is no constructed boat ramp, kayakers and boaters use the gradual slope of the shoreline at this location to launch their vessels by hand or from boat trailers attached to vehicles. The closest formal managed boat launching sites along the Smith River are located at the CDFW Smith River Public Fishing Access (less than 1 mile downstream along Fred D. Haight Drive) and Ruby van Deventer County Park (approximately 2 miles upstream) (**Figure 1**).

[26] Public Resources Code section 5093.545
[27] Public Resources Code section 5093.50

Figure 1. Recreational Facilities Near Dr. Fine Bridge



(*Source: Caltrans*)

In addition, a dedicated public access easement has been recorded that could in the future provide a 25-foot-wide vertical right-of-way for public recreational access from Fred Haight Drive to the north bank of the Smith River (on APN 105-020-87) and a lateral accessway that will extend westward along the northern riverbank for approximately 1/3 mile. The public access easement (PAE) was required as part of the Coastal Commission's conditional approval of CDP 79-P-47 for an office building development and was recorded in 1979[28]. The County of Del Norte accepted the

[28] Offer to Dedicate Public Access Easement recorded on July 25, 1979, as Instrument Number 3317, Book 234, Pages 361-365, Del Norte County Recorder's Office.

easement in 2004[29], but the accessway, which is situated within an area of riparian vegetation that drops steeply to the Smith River, has not yet been developed or opened to the public.

Direct Benefits of Proposed Project to Maintain and Improve Public Access

The proposed bridge replacement will include significant public coastal access improvements. As described in **Finding A** above, Caltrans proposes to replace the existing eighty-year-old bridge because it has outlived its design life and is now structurally and seismically deficient, and functionally obsolete. The project will protect the integrity of this critical coastal highway link, providing access up and down the coast in this region. In addition, the project will improve bicycle and pedestrian access. The current means for pedestrians and bicyclists to cross the 1,050-foot-long and 50-foot-high bridge is unsafe. Bicyclists and pedestrians must share the narrow paved shoulder (currently limited to 1-foot-wide shoulders and a 21-inch-wide elevated maintenance walkway), and there is no location where a disabled car can pull safely over to a shoulder without blocking part of a traffic lane and forcing pedestrians and bicyclists into traffic. The new two-lane bridge will replace the existing substandard bicycle and pedestrian access with 8-foot-wide shoulders and a 6-foot-wide separated pedestrian walkway on the western (downriver) side, thereby increasing safety while facilitating multi-modal access for the traveling public. Caltrans proposes to complete the separated pedestrian walkway, and to install the guard rail separating pedestrians from the paved shoulder and traffic lanes, outer pedestrian rails, and other safety features, by the end of the construction period. Caltrans proposes to open the separated walkway to the public by the end of the construction period and keep the separated walkway and highway shoulder open permanently for pedestrian and bicycle use. **Special Condition 26** (Protection of Shoulder and Bridge Walkway Public Access) requires Caltrans to permanently protect and provide public access for pedestrians and non-motorized vehicles on the highway shoulders and proposed separated walkway. The Commission finds that **Special Condition 26** will ensure that public coastal access amenities included in the proposal will be permanently provided consistent with the pertinent policies and provisions of Chapter 3 of the Coastal Act.

Potential Adverse Impacts to Public Access

The proposed project will adversely impact public access use both temporarily during construction and permanently under the bridge. As discussed below, however, these impacts will be mitigated to ensure the impacts are not significant. As detailed in **Finding E** above, the proposed bridge construction will require a total of four construction seasons, including three seasons of in-water construction-related activity. Land-based construction is anticipated to begin in the Fall of 2021, with in-channel work beginning the Summer of 2022. Gravel berms constructed in the channel each year from June 15 through October 15 will extend across as much as 350 feet of the total channel width (approximately 80% of the wetted channel). During this time, temporary

[29] Certificate of Acceptance recorded on June 14, 2004, as Document Number 20044101, Del Norte County Recorder's Office.

seasonal access prohibitions will be imposed on fishing and boating activities underneath and around the bridge. After October 15th, the temporary gravel berms will be removed so the channel will be available again for boat passage. Caltrans proposes to conduct outreach to the boating and recreationist community with noticing of project activities and alternative access options prior to and during construction, as detailed in a Public Outreach Plan prepared by Caltrans (page 12 of **Exhibit 5**)**.** Noticing efforts include, among other things, press releases, radio announcements, signage at upstream boat ramps and access points directing boaters to the Ruby van Deventer County Park as a final take-out, outreach to local recreational retail stores and guide services, and coordination and outreach with the local sheriff's office.

Seasonal in-water activities also have the potential to adversely impact sustenance fishing of Native American people, including citizens of the Tolowa Dee-ni' Nation. Caltrans received comments during circulation of the draft environmental document expressing concerns that the land is currently inhabited by Tolowa citizens who live off the land, relying on sustenance fishing and other natural resources. The comments raised concerns in part that "…the late proposed construction timelines of October 15th for in water construction have potential to negatively impact fish passage up the river for adult spawning fish." On November 12, 2020, Commission staff received similar comments in a letter transmitted by Chairperson McCallum of the Tolowa Dee-ni' Nation on behalf of Tribal Council (**Exhibit 25**), noting in part that the placement of temporary gravel berms within the river until October 15 "…overlaps with the movement of spawning fish up the river as noted by local fisheries biologists, having an impact on recreational and sustenance fishing, negatively effecting [*sic*] local economy. The Nation support build alternatives that result in less in-water barriers for recreational and wildlife passage…" In its FEIR (**Appendix A**), Caltrans responded to initial public comments on the topic stating in part (in "Response to FORD-6"):

> If Caltrans shrinks the summer work window, additional years of construction and in-water work would be required, which would have longer-term effects on fish and recreational/subsistence fishing. Fishing access upstream and downstream of the project area would still be available. Multiple fishing access points exist upstream and downstream from the project area as explained in Appendix A, *Section 4(f).* Portage around the project area would be necessary from June 15th to October 15th. Passage through the project area would be available after October 15th and before June 15th for all recreationalists and subsistence fishing. Gravel berms would have pass-through structures (e.g., culverts or other openings) that would allow for fish passage, and there is only one in-channel season where the berm would extend across most of the river.

In addition to in-water impacts, public access (vehicular, including boat launching, and pedestrian) to the Smith River under the existing bridge on the southern bank from South Bank Road will be temporarily closed to all public access during construction activities and will have more limited public access use (pedestrian only) following project construction. This area is on state-owned property and is not formally designated or actively managed for public access. The area has been frequently used for illegal dumping of trash that enters the waterway. As detailed in **Finding E** above, a rare

Western Pearlshell mussel bed beginning upstream of the bridge and continuing 500 feet downstream is located less than 20 feet from the shoreline. The mussel bed is vulnerable to direct harm from boat launching and turbidity impacts from shoreline erosion caused by vehicular use at this location. In response to recommendations from CDFW and to protect the fragility of the natural resources in the area, Caltrans proposes to prohibit future vehicular access to this site while maintaining pedestrian access by installing boulders along South Bank Road following construction activities.

Although the project will result in temporary in-water impacts and the permanent elimination of vehicular access from the site, the project has been sited and designed to ensure compatibility with the continuance of surrounding habitat and recreation areas, consistent with section 30240(b). Pedestrian access will still be available at the South Bank Road site. Prohibiting vehicle access will benefit biological resources (including but not limited to the Western Pearlshell mussel bed) by reducing direct ground disturbance and erosion at the edge of the channel in this area, allowing regrowth of riparian vegetation in the area that is currently used as an informal dirt road, and limiting the ability to dump garbage and refuse near the sensitive Western Pearlshell mussel bed. Limiting vehicular use to the area is consistent with the requirements of section 30214 of the Coastal Act that public access be implemented In a manner that protects the fragility of natural resources in the area. Furthermore, formal access at the nearby CDFW Smith River Public Fishing Access and the Ruby van Deventer County Park will continue to provide public pedestrian, vehicular, and boat launching access to the Smith River during and following completion of the project.

To mitigate for the permanent elimination of vehicular access underneath the bridge, Caltrans will help improve public access and recreational facilities exists at the nearby CDFW Smith River Public Fishing Access facility (also known as the “Saxton facility”, “Saxton Boat Ramp,” “Smith River Public Fishing Access,” and “Smith River Access Area”). The Saxton facility is located about one mile downstream from the Dr. Fine Bridge and is owned by the State of California and managed by CDFW. The Saxton Boat Ramp is a popular river access point and is commonly used as a take-out point for drift boat fishermen who launch their vessels upstream at different locations and float several miles through redwood forest in what is considered a unique, world class experience.

The Saxton facility has a boat ramp, parking that includes 28 drive-through spaces, and a restroom that is open on an intermittent basis. The site lacks prominent signage directing visitors to the facility. In addition, the site needs modernization, refurbishment, and additional visitor improvements to increase public access, safety, comfort, and recreational opportunities. CDFW is in the process of pursuing grant funding that requires matching funds to cover the proposed improvements, which include but are not limited to the following: installation of interpretive panels and new signage, modernizing and extending the boat ramp, adding kayak put-in elements, improving the parking lot to ADA standards, rehabilitating restrooms, adding picnic tables, benches, a bird observation shelter, and a covered kiosk. Caltrans proposes to contribute $90,000 to provide the matching funds to ensure improvements at the facility are realized. Caltrans will also provide signage at the South Bank Road site directing the public to nearby sites

that provide vehicular access and boat launching opportunities to the Smith River. The proposed improvements to the Saxton facility will require separate coastal development permit authorization. The Commission finds that the project as proposed with the $90,000 contribution by Caltrans to the CDFW Smith River Public Fishing Access facility will offset the loss of occasional informal boat launching activities off of South Bank Road underneath the south side of the Dr. Fine Bridge. The enhancements supported by the contribution will facilitate greater boat launching use at a close by facility in a location that better supports the needs of boaters in a location that will avoid environmental degradation of water quality and the rare mussel bed at the Dr. Fine Bridge location. Such improvements to boat launching facilities are encouraged by the Coastal Act public access and recreation policies, including, but not limited to section 30224 which states that increased recreational boating use of coastal waters shall be encouraged. In addition, such improvements are encouraged by the policies of the certified LCP. Although the standard of review for the proposed project is the Coastal Act, the Del Norte County certified LCP may be used as guidance. LCP policies promoting public access and recreational opportunities to and along the coast are summarized in **Appendix B**. The Smith River Access Area is designated as a Public Park in the certified LCP. According to general Public Access policies III(C)(1) and – (8), the County encourages the continued maintenance of existing recreation areas and recreational boating facilities, respectively, by private operators and public agencies.

To ensure the timely completion of public access improvements, the Commission attaches **Special Condition 27.** As conditioned, **Special Condition 27** requires, among other things: evidence within one year of permit issuance that authorized representatives of Caltrans and CA Department of Fish and Wildlife (CDFW) have entered into an Interagency Cooperative Agreement; evidence that a nonrefundable public access mitigation fee of $90,000 has been transferred to CDFW and deposited into an interest-bearing account created specifically by CDFW to underwrite CDFW's design and construction of the proposed public access and recreation improvements at the boat launching facility; and implementation of access improvements by certain specified timeframes. Furthermore, **Special Condition 27C(ii)** specifies that the cooperative agreement will provide that if the Improvement Project cannot be carried out as specified in this condition, and subject to the review and approval of the Executive Director, the funds shall be transferred to an entity able to complete the project, or for an alternative project to be proposed as an amendment to this CDP.

Potential impacts to public access along Highways 101 and 199 during construction activities will be temporary and minimal. Caltrans has submitted a Transportation Management Plan (TMP) dated September 18, 2020 (**Exhibit 21**). Timing of construction as proposed would avoid peak use weekend periods and special events (County Fair during the first weekend in August, and Sea Cruise during the first weekend in October), and Caltrans estimates a maximum of 15-minute traffic delays during construction activities. The TMP requires that bicyclists be accommodated through the work zone. In addition, the TMP requires special bicycle regulatory or warning signs to alert road users of potential motorist/bicyclist conflicts and requires push-buttons that adjust traffic lights for one-way closures to accommodate bicyclists.

Therefore, the Commission finds that the impact on public access use of the highway during construction will not be significant.

3. Conclusion

The proposed project will improve coastal access by increasing safety, connectivity, and reliability of the bridge for hikers, bicyclists, travelers, commuters, and freight carriers. With implementation of **Special Condition 27**, the project will be carried out in a manner that will protect existing, and facilitate expanded, free coastal access and recreation opportunities at the project site and at the nearby CDFW Smith River Public Fishing Access facility. The Commission therefore finds that the proposed project, as conditioned, protects and provides maximum public recreational access opportunities (30210), protects existing public access (30211), provides for public access from the nearest public roadway to the shoreline (30212), protects and provides lower cost visitor and recreational facilities (30213), protects a coastal area suited for water-oriented recreational activities (30220), protects oceanfront land suitable for recreational use (30221), and ensures state land remains open for public recreation (30609.5) in a manner that protects the fragility of the rare and sensitive Western Pearlshell mussel habitat (30214). Thus, as conditioned, the proposed project is consistent with the coastal access and recreation policies of the Coastal Act.

I. Water Quality

1. Applicable Coastal Act Provisions

Section 30231. 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.

Section 30232. Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containments and cleanup facilities and procedures shall be provided for accidental spills that do occur.

2. Consistency Analysis

Due to the project's location adjacent to and within the Smith River, the proposed project has the potential to adversely impact water quality within the riverine environment. Potential impacts on water quality could occur during construction activities, including gravel berm and coffer dam construction and demolition, stream

diversions, dewatering for pier construction, temporary trestle and falsework construction and demolition, bridge demolition, and highway drainage work.

As detailed in **Finding E**, a rare Western Pearlshell mussel bed exists within the project area, beginning upstream of the bridge and continuing 500 feet downstream. The mussel bed is vulnerable to sediment discharge and water turbidity. Construction activities that disturb soil and sediments in the river could mobilize sediments, increasing turbidity and interfering with mussel filtering and feeding. Clearing and grubbing of vegetation in work areas could also contribute to turbidity and suspended sediment. Elevated sediment levels could interfere with feeding and other behaviors of juvenile and adult salmonids and other aquatic species as well.

Although no municipal or domestic water supply reservoirs or groundwater percolation facilities exist within the project limits, private supply wells do occur throughout the groundwater basin and are used for domestic, irrigation, and industrial purposes. Domestic water is identified as a beneficial water use of the Smith River.

The potential water quality impacts from the proposed project include three general categories: (1) increased turbidity in riverine waters during installation and removal of gravel berms, cofferdams, and trestle piles, and during excavation around pier footings, (2) accidental spills or release of pollutants, such as concrete and equipment fluids, contaminated stormwater runoff from access road construction, mobilization of contaminated sediments, and release of construction debris into river waters, and (3) post-construction stormwater runoff. The risks, and measures to minimize the potential for adverse impacts to water quality, are discussed below.

Turbidity

To prevent discharges to the river, dewatering of the project site will occur during in-water operations including excavations, cofferdam installation and removal, and drilling operations. The dewatering basin will be constructed by excavating to a depth of up to approximately 2.5 – 4.0 feet below the surface of the ground. Water will be pumped from cofferdams and/or excavations to tanks. The water will then be tested, and treated if required, prior to discharging to the dewatering basin and/or being used for onsite dust control. Excess fill material will be stockpiled with appropriate Best Management Practices (BMPs) (such as, but not limited to Temporary Water Pollution Control Sheet T53) and used to restore the basin area to its original contour and grade. Caltrans proposes to implement measures WQ-2 (“Pollution Prevention and Design Measures”) and WQ-3 (“Prepare and Implement Dewatering Construction and Management Plan”) to ensure that the dewatering area is appropriately sized and managed for the volume of water to be generated and discharged.

Other measures to control erosion will also reduce turbidity caused by mobilization of sediments. Caltrans proposes to implement BMPs such as temporary use of mulches or blankets, straw bale barriers or fiber rolls, jute fiber netting, and silt fences, and more permanent measures such as biofiltration, mulch, and revegetation. Areas cleared during construction activities will be revegetated with appropriate locally-native plant species in accordance with Caltrans’ proposal and as required by **Special Condition**

9. Additionally, Caltrans will finalize and submit for Executive Director approval, a Final Construction Pollution Prevention Plan (CPPP) pursuant to **Special Condition 30** prior to commencement of construction. The CPPP incorporates water pollution control practices, including soil stabilization, sediment control, control of other pollutants, and non-stormwater management. These measures include practices that will reduce turbidity, by avoidance of discharge of soils and silts, and minimize the discharge of other potential pollutants either directly or indirectly into the Smith River. Fully implemented, this condition will therefore ensure that turbidity and discharge of other pollutants are minimized, consistent with sections 30231and 30232, in addition to other water quality protection measures discussed below.

Release or Mobilization of Pollutants or Debris

The proposed project involves ground disturbance, paving, and the use of heavy equipment that could result in sediment, debris, or hazardous materials entering coastal waters and impacting sensitive aquatic species and their habitat. Also, project actions that involve the storage, use, or discharge of toxic and other harmful substances near the river can result in pollution of these waterbodies and adverse effects on mussels and other aquatic organisms.

During construction, hazardous materials (e.g., gas, oil, and solvents) will not be stored within the bed, bank, or channel of the river. Cranes and other large equipment that cannot be easily moved will be checked daily for leaks. Hazardous material clean-up kits will be onsite at all times. In addition, BMPs will be used during and after construction to minimize any potential water quality impacts associated with stormwater runoff and erosion, and all disturbed areas will be revegetated with native species. **Special Condition 34** establishes BMPs for spill prevention and equipment maintenance accordingly.

Additionally, Caltrans proposes that portions of the existing reinforced concrete bridge may be allowed to drop onto the temporary gravel berms outside the wetted channel during bridge demolition activities but that the contractor will be required to prevent material from entering the Smith River. The long girder sections of the existing bridge will be cut into sections and removed with the use of cranes, then lowered to the gravel bar outside of the active stream channel. A containment system will be used to prevent cuttings from entering the river. Caltrans has proposed to implement measure WQ-5 (“Implement Debris Containment System”), requiring the contractor to prepare a Debris Containment Plan detailing proposed temporary containment systems that will be used to prevent falling debris from entering the river during bridge demolition and bridge construction.

Aerially deposited lead (ADL) is known to occur in the surface and near-surface soils of the project area from the historical use of leaded gasoline. However, overall levels detected during surveys were low. ADL is typically concentrated in the top two feet of soil adjacent to the highway. Caltrans has indicated that small amounts of lead present throughout the soils in the project area will be disturbed during construction activities involving ground disturbance. For example, lead in the traffic striping will be disturbed when the final alignment is constructed, and lead in the paint on the bridge may be

disturbed during bridge demolition. Public comment received during circulation of the DEIR expressed strong concern over the potential to reuse lead-contaminated soil in the project area, regardless of the level of content, as there are young children living nearby. On November 12, 2020 Commission staff received a letter from Chairperson McCallum of Tolowa Dee-ni' Nation expressing the same concern. Caltrans responded to the concern in the FEIR by stating:

> All work will be done pursuant to Health and Safety Code Section 25187(b)(5) and in agreement with the 2016 Soil Management Agreement for Aerially Deposited Lead- Contaminated Soils between Caltrans and California Department of Toxic Substance Control Soil Management (California EPA DTSC 2016).

Additionally, Section 2.2.5.2 of the FEIR states in part:

> This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met. The nominal ADL issue identified would be handled with the inclusion of a Lead Compliance Plan contract item and Caltrans Standard Special Provisions.

If ADL-contaminated soils are stored near the Smith River and are not properly identified, controlled, and disposed of, rainwater and winds may re-introduce ADL-contaminated material into the waters of the river. **Special Condition 30(I)** requires that all lead-contaminated soils disturbed within the project area be excavated, managed, and disposed of in a manner that is authorized by and compliant with the requirements of the Department of Toxic Substances Control. Caltrans has also proposed measure HW-1 ("Lead Compliance Plan") requiring the contractor to prepare a plan establishing protocols for environmental and personnel monitoring, use of proper safety equipment, protocols for handling ADL-contaminated soils, and requirements for addressing disposal of lead-containing paint in traffic striping and on the existing bridge.

Caltrans also proposes the temporary placement of construction trestles over the river during bridge construction work. This component of the proposed project is subject to all other conditions, including **Special Condition 32,** which requires the applicant to submit a plan documenting the type and amount of preservative-treated wood proposed to be used to construct all structures that will be over, in, or adjacent to the Smith River and other coastal waters. **Special Condition 32** states that such structures, and other temporary project components such as the "falsework" constructed in preparation for concrete pourings, if they are made of wood and are in, over, or adjacent to waters of the Smith River, shall avoid where feasible the use of preservative-treated wood. Rainwater or contact with river waters can potentially leach wood preservative chemicals into the water column, where the chemicals can be absorbed by fish and other aquatic organisms, with potentially adverse consequences. **Special Condition 32(B)** further specifies BMPs that shall be implemented when using preservative-treated wood. Fully implemented, this condition will ensure that the use of preservative-treated wood is minimized, and toxic chemicals from preservative-treated wood do not

inadvertently contaminate the waters of the river, consistent with sections 30231 and 30232.

Post-Construction Stormwater Management

Stormwater runoff within the project area currently discharges to the Smith River from the bridge surface, roadway infrastructure, and surrounding lands. Stormwater accumulated on the existing bridge structure is currently discharged directly to the Smith River. Stormwater from the surrounding land is discharged to the river via culverts, streams, and wetlands.

As proposed, the total Disturbed Surface Area, including staging areas, will be approximately 27.5 acres, and the total impervious area following project completion will be increased by 0.35 acre. The existing roadway and bridge drainage systems will be replaced to provide improved interception and treatment of stormwater discharges from the new bridge deck and roadway areas. For example, the existing bridge has scuppers (drain openings) that allow stormwater to discharge directly into the Smith River. The new bridge drainage will consist of through-deck drains, discharging stormwater straight down to the ground below the deck drain. The bridge will also have a crest vertical curve to convey the water towards both the north and south banks of the river; thus the drains will discharge to the ground and not the river within the seasonal (2.5 year) ordinary high water elevation.

Caltrans proposes the use of permanent stormwater treatment Best Management Practices (BMPs) due to increases in impervious roadway surfaces and to comply with the 401 Certification Program of the North Coast Regional Water Quality Control Board (RWQCB). Design Pollution Prevention BMPs will be incorporated into the project where appropriate to minimize impacts on water quality by preventing erosion and stabilizing disturbed soil areas. Treatment BMPs will provide water quality benefits including the settlement of soil particles, pollutant removal, and increased stormwater retention by promoting infiltration. In addition to the construction of biostrips and bioswales as Treatment BMPs, Caltrans proposes the following pollution prevention measures be included in the project design:

• Slopes will be graded to 1.5:1 and vegetated to blend with the natural terrain and promote sheet flow and infiltration;

• Drainage ditches and channels will be vegetated where feasible; and,

• Re-vegetation will use seed mixture mulch and compost materials to promote growth and infiltration.

Special Conditions 29 (“Post-construction Stormwater Management Plans”) and **31** (“BMPs for Overwater and In-Water Construction Activities”) require the applicant to submit plans detailing the project’s post-construction stormwater management BMPs accordingly.

Therefore, as proposed, bioswales and/or biostrips will be installed in multiple locations to treat stormwater discharges post-construction. Preliminary drainage and erosion control plans provided by Caltrans on November 2, 2020, depict eight bioswales, including one existing "vegetated v-ditch" ("Bioswale #8") that will treat runoff from 0.2 acre of post-construction treatment area. However, the plans do not specify the calculations used to determine the size, design, and treatment volume for this bioswale. The plans also indicate that "Bioswale #3" "[d]oes not fulfill all the requirements." Therefore, **Special Condition 29** requires the applicant to submit, prior to commencement of construction, for the written approval of the Executive Director, the final Stormwater Data Report and calculations for sizing the relevant post-construction BMPs.

Although Caltrans has proposed to dispose of all trash and debris at an appropriately permitted upland disposal facility, Caltrans has not yet identified a feasible disposal location. Therefore, the Commission also attaches **Special Condition 28** requiring the applicant to submit a final debris management and disposal plan prior to commencement of construction for the Executive Director's review and approval, to ensure that the contractor disposes of the debris at a lawful upland disposal site instead of in an area that could adversely affect coastal resources.

Caltrans has indicated that efforts are underway to obtain 404 certification from the U.S. Army Corps of Engineers, a Streambed Alteration Agreement from CDFW, and a 401 certification from the Regional Water Quality Control Board. **Special Conditions 2, 3, and 4** require the applicant to provide copies of these permits from each respective agency. **Special Conditions 2-4** further require the applicant to notify the Executive Director of any changes to the project required by each respective agency, and such changes shall not be incorporated into this approval without an amendment to this permit. Lastly, **Special Condition 8** requires the applicant to adhere to all measures as proposed and included in **Appendix C,** and requires the applicant to provide to the Executive Director copies of all plans referenced in the measures included as **Appendix C,** including but not limited to measures HF-2, HW-1, and WQ-5.

3. Conclusion

As conditioned in the manner discussed above, the Commission finds that the proposed development will maintain the biological productivity and quality of coastal waters consistent with section 30231 of the Coastal Act. The Commission further finds that the proposed development will provide protection against the spilling of gas, petroleum products, and hazardous substances and provide effective containment and cleanup for accidental spills that do occur consistent with section 30232 of the Coastal Act.

J. Agricultural Resources

1. Applicable Coastal Act Provisions

Section 30241. The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas'

agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

(a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.

(b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.

(c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.

(d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.

(e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.

(f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.

Section 30242. All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (l) 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.

Section 30243 states, in applicable part:
The long-term productivity of soils and timberlands shall be protected…

2. Consistency Analysis

Coastal Act sections 30241 and 30242 require the protection of agricultural lands and limit the conversion of agricultural lands to non-agricultural uses. Section 30243 requires that the long-term productivity of soils shall be protected.

Agriculture is the major land use in the Smith River area, especially west of Highway 101 along flat-lying lands spanning both sides of the Smith River downstream of the Dr. Fine Bridge. Within the project area, primary agricultural land uses include hay production and seasonal grazing. According to the Final Environmental Impact Report (FEIR) prepared for the subject project, temporary staging and dewatering activities will

occur on approximately 26 acres within parcels zoned as Agriculture General and Agriculture Exclusive (APNs 105-020-014, 105-020-020, 105-020-036, and 105-020-084; **Exhibits 3, 22**). In particular, FEIR Section 2.1.2.3 describes that "agricultural land would be temporarily used for equipment staging, materials storage, parking, and water infiltration for dewatering activities." The FEIR describes dewatering activities as involving the excavation within one acre of up to 4 feet of soil that will be temporarily stockpiled around the dewatering basin. Construction of temporary roads to access the properties will entail the placement of fabric upon compacted original ground and placement of rock on top.

The landowners have signed temporary construction easements granting temporary access and use of their lands through October 3, 2025. Although construction staging activities will result in the temporary disruption to agricultural activities, the project will not result in a permanent conversion of agricultural lands to non-agricultural uses. Caltrans has included Standard Measures FT-1 limiting temporary construction staging areas to the minimum area necessary, and FT-2 specifying that all temporarily occupied lands will be restored to pre-project conditions following construction. The temporary use of the agricultural lands for staging and construction access could nonetheless cause long term damage to the productivity of the agricultural soils, contrary to the requirements of section 30243, through removal of fertile topsoil, compaction of the soil, and erosion of soils. Caltrans proposes certain measures to avoid such impacts. Stockpiled soils will be used to restore excavated areas to original contour and grade, and soils that have been compacted will be loosened and reseeded for continued hay production and grazing upon completion of the project. **Special Condition 14** requires Caltrans to adhere to these proposed measures and all other project features, standard measures, and best management practices included in the FEIR and as included in **Appendix C**.

Therefore, the Commission finds that the proposed project does not constitute a conversion of agricultural lands and ensures the continued productivity of soils consistent with sections 30241, 30242, and 30243 of the Coastal Act.

K. Visual Resources

1. Applicable Coastal Act Provision

Section 30251. 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.

2. Applicable LCP Policies

While the polices of Chapter 3 of the Coastal Act provide the legal standard of review for a consolidated coastal development permit application submitted pursuant to Section 30601.3, the local government's certified LCP may be used as guidance. The visual resource protection policies of the Del Norte County certified LCP are included in **Appendix B**. The Del Norte County certified LCP recognizes a number of scenic view corridors within the project area for their aesthetic value, including along Highway 101, Fred Haight Drive to the north, and Lake Earl Drive to the south (**Appendix B**). A designated viewpoint exists at the CDFW Smith River Public Fishing Access Area (less than one mile downstream along Fred Haight Drive).

3. Consistency Analysis

Coastal Act section 30251 requires in part that all new development be sited and designed to (a) protect views to and along scenic coastal areas, (b) minimize the alteration of natural landforms, and (c) be visually compatible with the character of the surrounding area.

Environmental Setting

The project is situated within an area noted for its scenic quality and beauty. As indicated in **Findings B and H** above, the Smith River is a designated Wild and Scenic River. The river's stunning clear emerald-green and vibrant blue waters remain undammed for its entire reach beginning at its headwaters approximately 317 miles upriver of the Dr. Fine Bridge and extending to its outlet eight miles downriver at the Pacific Ocean. The scenic beauty, combined with nearby parks and recreational facilities described above, make the Smith River system a popular destination for visitors to and along the coast.

Travelers and commuters crossing the Dr. Fine Bridge are afforded views of the Smith River and the surrounding landscape of riparian, coniferous, and deciduous vegetation, as well as open landscapes of agricultural lands. As described in **Finding H** above, within the project area the Smith River is designated "Recreational" under the federal and state Wild and Scenic River Acts. The highway is not designated as a California State Scenic Highway; however, it is eligible to obtain Scenic Highway status. The project area features a tree-lined viewshed surrounding Highway 101 north and south of the Dr. Fine Bridge. Along the Smith River approximately 42 feet below Highway 101 at the Dr. Fine Bridge, tree-lined riverbanks transition northeastward into forested mountains sloping gradually up to 1,000 feet. West of the Dr. Fine Bridge, riparian vegetation lines the riverbanks before the landscape opens downriver to flat-lying, intermittently-flooded agricultural lands adjacent to the river. The area is sparsely developed but includes scattered rural residential structures, mobile home/RV parks, a few commercial uses, a gravel processing plant on South Bank Road east of the bridge, and a chapel at the intersection of Highway 101 and Fred D. Haight Drive. As detailed in **Findings I** and **J** above, the Smith River and surrounding environs are also culturally significant to local Native American people, including citizens of the Tolowa Dee-ni'

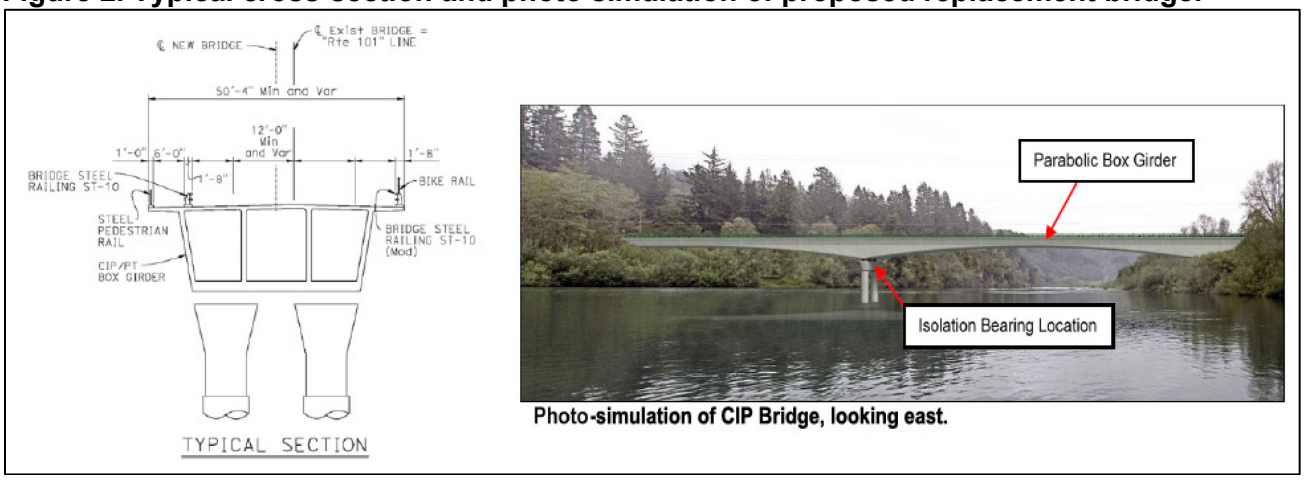
Nation who still inhabit their ancestral lands within which the current bridge and proposed project are situated.

Aesthetic Elements of Proposed Bridge

Caltrans proposes to replace the existing 1,050-foot-long, 32-foot-wide bridge with a 51-foot-wide bridge in the same alignment. The new bridge will have two 12-foot-wide lanes, two 8-foot-wide shoulders, and a six-foot-wide separated pedestrian walkway. The new bridge will feature aesthetic elements designed to be visually compatible with the character of the surrounding area, including fewer supporting bridge piers in the river, a less obtrusive structural design than the current bridge, and see-through bridge railings with a cultural design element.

1. Bridge Design. The new bridge type will be a cast-in-place box girder with three piers (one below the OHWM of the Smith River, one partially below the OWHM, and one entirely above the OHWM). The bridge's soffit will be uniform between Abutment 1 and Pier 2 and parabolic between Pier 2 and Abutment 5. Parabolic soffits will allow for longer spans (up to 335-feet long for this bridge) while maximizing the clearance underneath. The new structure will be basic grey, consistent with the shade of concrete. **Figure 2** provides a visual simulation and cross-sectional view of the new bridge design.

Figure 2. Typical cross-section and photo simulation of proposed replacement bridge.



(*Source: Caltrans)*

By using a design that has fewer piers and appears less massive and more curvilinear than the existing bridge, the bridge will conform better to, and be more compatible with, the natural character of the project setting. **Special Condition 7** (Final Construction Plans) requires that the final construction plans submitted for the project be consistent with the preliminary plans submitted with the application to ensure that the proposed bridge design will be implemented and that the bridge will be compatible with the character of its setting.

2. Railing Design. The proposed bridge railing will be the most visually-permeable rail presently available, which is the "see through" ST-75 metal beam guard rail, topped by

a bicycle safety rail with a matching design that blends with the pedestrian corridor rail. The bridge railing has been designed with a motif that reflects a tribal pattern in coordination with Tolowa Dee-Ni' Nation and Elk Valley Rancheria tribes (see **Figure 3**). New pedestrian railings along the roadway approaches to the bridge will match the bridge railing design. Caltrans has not yet determined the color of the "see through" barrier rail and pedestrian railing, but color choices (including green-coated steel, as depicted in Figure 3, or leaving the rail galvanized) are anticipated to be in harmony with the existing natural environment. The railing as proposed protects views to and along the scenic coastal area of the project setting and are visually compatible with the character of the surrounding area consistent with section 30251. To ensure that the railings are installed as proposed, **Special Condition 7E** (Final Construction Plans) requires Caltrans to submit final plans consistent with the preliminary plans submitted with the application and depicting the approved bridge railings and all visual elements, including the railing design and colors.

Figure 3. Photo-simulations of the Proposed Pedestrian Bridge Railing and Design Motif Known as "Friendship Design Pattern" (Left photo is view looking upriver to the east, and right photo is looking downriver, to the west of bridge)

(*Source: Caltrans)*

3. Retaining Walls. At the north end, the bridge will flare from a width of 51-feet to 60-feet to accommodate a taper and a right turn pocket from Highway 101 to Route 197. Caltrans proposes to use retaining walls at transition points as an alternative to larger fill prisms to minimize the footprint of development on the surrounding environment. There will be two "Type 1" retaining walls in the northwest and southwest corner of the bridge. Additionally, temporary soldier pile ground anchor retaining walls would be constructed on the northeast and southeast sides for the temporary detour bridge. As part of temporary bridge demolition work, temporary soldier pile walls would be removed, and the ground re-contoured to the existing grade. Retaining walls would have a visual aesthetic treatment, such as colored concrete or texture, so they would blend with the natural environment. As proposed, the retaining walls will help ensure the development is compatible with the character of its setting. **Special Condition 7** requires that the final construction plans be consistent with the preliminary plans submitted with the application to ensure that the retaining walls are installed instead of larger fill prisms and that the proposed aesthetic treatments of the retaining walls will be implemented.

4. Utilities. The proposed project will also require the relocation of telephone, cable, and electrical utilities within the project area, including the installation of new temporary and permanent poles. The Visual Resources chapter, Policy V(C)(10) of the Del Norte County certified LCP requires that "New or relocated utility lines shall be placed underground, whenever feasible and when warranted in highly scenic coastal areas." Within the project limits, overhead utilities west of and parallel to Highway 101 would be relocated east of the highway and undergrounded using directional boring. Along the bridge, utilities currently in view overhead would be placed within conduit outside of view on the eastern side of the superstructure underneath bridge deck . Overhead utilities northwest of the bridge that run parallel to the river would also be undergrounded, thereby reducing the number of utility poles and overhead lines within the viewshed. A new 70-foot-tall two-pole wooden utility structure and an associated utility cabinet would be installed along South Bank Road on the outside of the tight curve west of the bridge. The pole will be installed in line with existing overhead utilities. The placement of the new pole in line with existing utilities will not visually detract from the character of the surrounding area. To resolve a conflict in minimum height clearances for equipment passing underneath power lines, three existing utility 29-foot-tall poles will be replaced with 39-foot-tall poles along Fred Haight Drive at the access to the staging area. Lastly, an existing pole would be relocated eastward from its current location northeast of the bridge and just south of the Highway 101/ State Route 197 intersection. Relocating the power pole is expected to maintain, and possibly enhance, the character of the surrounding area as it will be sited further inland and away from viewers traveling along the highway. As discussed above, Special Condition 6 will ensure these visually beneficial utility changes are implemented.

5. Temporary Nighttime Lighting. No new permanent lighting will be installed, however nighttime lighting will be needed during construction to ensure construction and particularly in-water construction activities do not exceed three seasons. The bridge approach roadway work will require night lighting for a maximum of two weeks (not consecutively). As discussed further in **Finding E** above, Caltrans has included standard measures VA-8 (Construction Lighting) and AS-1 (Minimize Nighttime Lighting), along with avoidance and minimization measure Species 2 (Roosting Bat Protection), specifying among other things that nighttime lighting will be: (a) limited to the extent practicable, (b) focused specifically on the portion of the bridge actively under construction and/or to satisfy safety requirements, and (c) shielded. These measures will help minimize obtrusive nighttime lighting during project construction that would not be compatible with the nighttime character of the surrounding area. To ensure nighttime lighting measures are implemented as proposed, the Commission attaches **Special Condition 14** requiring Adherence to applicant's proposed "Project Features, Standard Measures, and Best Management Practices" and "Avoidance, Minimization, and/or Mitigation Measures".

6. Tree and Vegetation Removal. The linear form of trees on the west and east sides of Highway 101 at both ends of the bridge function as a visual screen of the chapel, residences, and active quarry. The proposed project will result in the removal of numerous trees and other vegetation due to construction access, roadway widening, alignment shifts, and other project-related earthwork. The removal of trees could

potentially be incompatible with the character of the surrounding area. For example, construction of a temporary access road to the river on the northern bank will require the removal of sixteen (16) mature redwood trees and two (2) mature sitka spruce trees next to Highway 101, all over 36 inches diameter at breast height (dbh).[30] Other temporary impacts to vegetation would include removal of riparian wetland species such as, but not limited to alders and willow as detailed in **Finding E** above.

Removal of trees and other vegetation adjacent to Highway 101 will create a gap in the continuity of vegetation screening of the development and temporary gaps in the continuity of riparian vegetation near the river. However, as explained in **Finding E** above, the replacement of the Dr. Fine Bridge is a necessary safety project, and the trees over 36 inches dbh that will be removed constitute a small amount of the overall habitat cover in the area.

In addition, while impacts to vegetative screening will be adverse in the short-term, long term restoration will occur through re-planting with locally native plant materials and stock (except where agricultural operations otherwise occur, and these will be planted in accordance with the property owner's agricultural use). Caltrans has included in the FEIR a number of "Project Features, Standard Measures, and Best Management Practices" (**Appendix C**) aimed at avoiding and minimizing tree removal and revegetating impacted areas following construction activities, including but not limited to VA-2 ("Revegetate Riparian and Wetland Areas"), VA-5 ("Avoid and Minimize Tree Removal"), NC-2 ("Restoration of Temporary Impact Areas"), and IS-1 ("Reseed Disturbed Areas with Native Species"). Additionally, Caltrans has included Mitigation Measure Riparian-1 (**Appendix C**) that provides in part for restoration and replanting of temporarily disturbed areas to enhance riparian habitat. Caltrans also prepared an Onsite Revegetation Plan dated July 2020 and revised December 1, 2020. The plan focuses on revegetation of riparian and wetland areas but does not include details for replanting upland areas that will be disturbed and where redwood trees and other vegetation now occur. Additionally, Project Feature NC-2 describes in part that "replanting would be subject to a plant establishment period as defined by project permits, which would require Caltrans to adequately water plants, replace invasive and otherwise unsuitable plants, and control pests." To ensure all impacted areas are successfully reestablished with vegetation on a trajectory towards long term restoration, the Commission attaches **Special Condition 9** (Final Revegetation Plan).

Special Condition 9requires submittal of a final revised revegetation plan prior to commencement of construction that substantially conforms with the proposed revegetation plan as revised December 1, 2020 with certain revisions. Special Condition 9 additionally requires: (a) at least 80% native vegetation cover, (b) zero (0) percent cover of Cal-IPC High-rated invasive species, and (c) no more than 10% non-native vegetative cover.

[30] Diameter at breast height (DBH) is measured 4.5 feet above the ground

To ensure that the revegetation of disturbed area occurs in a timely manner as proposed in the revegetation plan, **Special Condition 9A(viii)** requires that the permittee submit photo documentation that all revegetation plantings have been installed as proposed within 60 days of the replanting. To ensure that disturbed areas are successfully revegetated within 5 years and consistent with the performance standards presented in the revegetation plan, the Commission attaches **Special Condition 9A(xii).** Special Condition 9A(xii) requires that, if revegetation efforts are unsuccessful after the fifth year following installation of plantings, the permittee shall submit a coastal development permit amendment application.

Implementation of the final approved revegetation plan prepared in accordance with the requirements of Special Condition 9 will restore the visual character of the river corridor and surrounding landscape after construction ends, thus limiting the adverse impacts of the proposed project on the visual resources of the Smith River crossing.

3. Conclusion

The development is sited and designed consistent with the requirements of section 30251 for several reasons. First, the new bridge would protect views to and along a scenic coastal area by eliminating visually obtrusive overhead power lines across the river and along a portion of the highway. The number of bridge piers fully in the water will be reduced from three to one, leading to a more unified and uninterrupted landscape under the bridge both from views along South Bank Road and the river. Context-sensitive design and color of railings and retaining walls will be visually compatible with the surrounding area, and the use of retaining walls rather than a larger fill prism will minimize the alteration of natural landforms. The Commission finds that the proposed project, as conditioned to (a) use a rail design that maximizes views through the railing; (b) use colors and aesthetic treatments compatible with the character of the surrounding area; (c) minimize the illumination of habitat areas and the night sky; and (d) replant construction areas with native plants will protect views to and along the scenic coastal setting of the development and ensure the development will be compatible with the character of its setting consistent with the Chapter 3 policies of the Coastal Act concerning visual resources.

L. Environmentally Sensitive Habitat Areas (ESHAs)

1. Applicable Coastal Act Provision

Section 30240(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.

2. Applicable LCP Policies

Coastal Act Section 30240 is reiterated in LCP Policies Section VI.C.6 of the LUP's Marine and Water Resources chapter:

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

Section IV-C of the Marine and Water Resources Chapter of the County of Del Norte LUP states:

> Sensitive Habitat Types: Several biologically sensitive habitat types, designated through the application of the above criteria, are found in the Coastal Zone of Del Norte County. These include: offshore rocks; intertidal areas; estuaries; wetlands; riparian vegetation systems; sea cliffs; and coastal sand dunes…

Designation Criteria Section IV.B of the County of Del Norte LUP Marine and Water Resources chapter provides that:

The following criteria are proposed for designating biologically sensitive habitats in the marine and coastal water environments and related terrestrial habitats of Del Norte County:

> 1. Biologically productive areas important to the maintenance of sport and commercial fisheries.
>
> 2. Habitat areas vital to the maintenance and enhancement of rare and/or endangered species.
>
> 3. Fragile communities requiring protective management to insure their biological productivity, species diversity and/or continued maintenance.
>
> 4. Areas of outstanding scientific or educational value that require protection to insure their viability for future inquiry and study.

Coastal habitat areas meeting one or more of these criteria may be considered biologically sensitive and therefore given particular attention in the planning process.

3. Consistency Analysis

Section 30240(a) of the Coastal Act limits development within ESHA to only resource-dependent uses. As discussed above, Caltrans proposes to enhance wetland habitats at an off-site property located south of Crescent City (referred to as the “Hambro parcel” and owned by CDFW) by removing invasive plants over an approximately 45-acre area. Caltrans is proposing the wetland enhancements to mitigate for temporal losses resulting from wetland impacts associated with the proposed bridge replacement project.

The Hambro parcel contains a 120-year-old stand of rare Sitka Spruce[31]-dominated forested wetlands adjacent to the Crescent City Marsh Wildlife Area, which supports populations of the federally-endangered Western lily. In addition to wetland habitats that Del Norte County recognizes as ESHAs in their certified LCP, Sitka spruce forest is recognized as an environmentally sensitive habitat area due to its rarity and ecological significance.

The forest is currently threatened by a heavy infestation of invasive plants, particularly English ivy (*Hedera helix*), which, if left uncontrolled, can overwhelm the forest by girdling, suffocating, and toppling trees under the weight of its heavy vines, thereby destroying the rare forest community and its habitat values.

The proposed major vegetation removal of invasive plants would involve hand removal and disposal of bagged material at an authorized disposal facility. The removal of the English ivy will prevent further degradation of the forested wetland and will help restore habitat values. As the proposed removal of invasive plants is a resource-dependent restoration use that will serve to protect the forested wetland ESHA from significant disruption of habitat values, the Commission finds the proposed enhancements of the Hambro parcel are consistent with section 30240(a) of the Coastal Act.

M. Applicant's Legal Interest in the Properties

Section 30601.5 of the Coastal Act states:

> Where the applicant for a coastal development permit is not the owner of a fee interest in the property on which a proposed development is to be located, but can demonstrate a legal right, interest, or other entitlement to use the property for the proposed development, the commission shall not require the holder or owner of any superior interest in the property to join the applicant as coapplicant. All holders or owners of any other interests of record in the affected property shall be notified in writing of the permit application and invited to join as coapplicant. In addition, prior to the issuance of a coastal development permit, the applicant shall demonstrate the authority to comply with all conditions of approval.

Under section 30601.5 of the Coastal Act, an applicant for a CDP does not need to be the owner of a fee interest in the property on which the proposed development is located as long as the applicant can demonstrate a legal right, interest, or other entitlement to use the property for the proposed development, and as long as all holders or owners of any other interests of record in the affected property are notified in writing of the permit application and invited to join as co-applicants. In addition, section 30601.5 of the Coastal Act requires that the applicant demonstrate authority to comply with all conditions of approval prior to issuance of a CDP.

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[31] Sitka spruce forest (*Picea sitchensis*) has a state rarity ranking of S2, meaning it is considered imperiled.

The proposed bridge replacement project will take place on a number of land ownerships, including the following: (1) within Caltrans right-of-way on property that it owns, (2) on state sovereign and public trust lands within and along the river, and (3) temporarily on nearby privately-owned lands during project construction, as discussed further below. Additionally, mitigation for temporal loss resulting from project-related impacts to wetlands will occur on property owned and managed by CDFW. As required by section 30601.5 of the Coastal Act, the applicant has submitted evidence that (a) each property owner has been notified of the project as proposed in the CDP application, and (b) each private property owner has been invited to join the CDP application as a co-applicant.

The project involves development on lands subject to the public trust, including development over and within State-owned sovereign lands[32] and in areas with a public trust easement.[33] During circulation of Caltrans' Draft Environmental Document (DED) in 2017, State Lands Commission (SLC) commented in a letter dated August 23, 2017 that "a lease and formal authorization for use of sovereign land will be required from the Commission for the portion of the Project encroaching over State-owned land." The letter states that in the alternative, Caltrans may submit an acceptable map pursuant to the provisions of section 101.5 of the California Streets and Highways Code. On July 22, 2020, Caltrans applied to SLC to obtain the necessary authorization(s).

To ensure that Caltrans has a sufficient legal property interest in the portion of the site within and along the river to carry out the project consistent with the terms and conditions of this permit prior to issuance of the CDP as required by section 30601.5, the Commission attaches **Special Condition 1**. This condition requires that Caltrans submit evidence that the necessary lease and other required authorizations from State Lands have been obtained prior to issuance of the CDP or that no such authorizations are necessary.

Caltrans will also rely on the temporary use of approximately 31 acres of privately-owned land adjacent to and near the right-of-way during construction. Project activities proposed on privately-owned properties are summarized in **Table 1** and depicted on **Exhibits 3 and 22** and include such activities as materials and equipment staging, construction of the temporary bridge and access roads, and revegetation of impacted areas.

Caltrans has submitted copies of Temporary Construction Easements (TCEs) already obtained for activities that will occur on four of the six privately-owned parcels (APNs 105-020-14, 105-020-20, 105-020-36, and 105-070-04). Efforts are underway to obtain TCEs for the remaining parcel (APN 105-700-01) and, pursuant to recommended

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[32] The State's sovereign fee ownership extends from the bed of the Smith River landward to the ordinary low water mark.

[33] The State holds a Public Trust easement over private property landward to the ordinary high water mark.

Special Condition No. 1, must be obtained and submitted for the review and approval of the Executive Director prior to issuance of the CDP.

Table 1. Summary of Project-Related Activities Occurring on Privately-Owned Properties

APN	Owner	Project Activities
105-020-14	Palmer Westbrook, Inc.	Equipment and materials staging, construction of dewatering and infiltration basin
105-020-20	Palmer Westbrook, Inc.	Construction of temporary detour bridge, revegetation
105-700-01	Steinruck	Access road, construction of retaining wall, revegetation
105-020-36	Holt	Potential equipment and materials staging
105-020-87	Calvary Chapel of the Redwoods	Access road, revegetation
105-070-04	Quick	Access to construct temporary detour bridge, construction of temporary retaining wall associated with detour, revegetation

Additionally, project-related off-site mitigation for temporal wetland impacts will occur on approximately 44.8 acres of land within a 132.8-acre parcel owned and managed by CA Department of Fish and Wildlife (CDFW), as detailed in **Finding F** above. The off-site property (APN 115-020-18) is located less than one mile south of Crescent City, east of Highway 101 and adjacent to the Crescent City Marsh Wildlife Area that is managed by CDFW (**Exhibit 11**). In 2018 Caltrans purchased the property in coordination with CDFW to mitigate for certain specified project-related impacts associated with the proposed bridge replacement project, among others. The Cooperative Agreement signed between Caltrans and CDFW[34] provides Caltrans the authority to conduct wetland enhancement mitigation activities on the property.

Finally, section 30601.5 requires that the applicant shall demonstrate the authority to comply with all conditions of approval as adopted by the Commission. Most, if not all of the TCEs and the Cooperative Agreement were obtained by Caltrans prior to approval of the CDP with the conditions adopted by the Commission. To ensure the requirements of section 30601.5 are met, **Special Condition 1** further requires that the applicant, prior to permit issuance, show evidence that all affected property owners have agreed in writing that the applicant may undertake development on their properties pursuant to CDP 1-20-0422 as conditioned by the Commission.

[34] Cooperative Agreement No. 01-0391; **Exhibit 12**

The Commission finds that as conditioned, the development is consistent with the requirements of section 30601.5 of the Coastal Act.

N. California Environmental Quality Act (CEQA)

Caltrans, as the lead agency for the project for CEQA purposes, on June 30, 2017, circulated an Initial Study with Mitigated Negative Declaration (IS/MND) and Environmental Assessment (EA) that evaluated impacts from one preferred build alternative[35] and the no-build alternative. In response to agency comments received on these documents, Caltrans subsequently prepared and approved a Final Environmental Impact Report (FEIR) under CEQA and a Finding of No Significant Impact (FONSI) under the National Environmental Policy Act (NEPA) that fully evaluated multiple alternatives for the bridge replacement. Caltrans has prepared a draft Environmental Commitment Record that includes Avoidance, Minimization, and/or Mitigation Measures specific to the proposed project that are presented in **Appendix C**.

Section 13096 of the Commission's administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant impacts that the activity may have on the environment. The Coastal Commission's regulatory program for reviewing and granting CDPs has been certified by the Secretary of the Natural Resources Agency as being the functional equivalent of environmental review under CEQA (Section 15251(c)).

The Commission incorporates its findings on Coastal Act consistency as if set forth in full herein. All public comments received to date have been addressed in the findings above, which are incorporated herein in their entirety by reference. As discussed above, the project has been conditioned to be consistent with the policies of the Coastal Act. As specifically discussed in these above findings, mitigation measures that will minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no other feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impacts which the activity may have on the environment. Therefore, the Commission finds that the proposed development, as conditioned to mitigate the identified impacts, can be found to be consistent with the requirements of the Coastal Act to conform to CEQA.

[35] Existing Alignment CIP using a Jack and Slide Detour, i.e., "Jack and Slide East" or Alternative 4 in the 2017 IS/EA, Alternative 3 in the FEIR