STATE OF CALIFORNIA - THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, *Governor*

CALIFORNIA COASTAL COMMISSION
North Coast Area Office
710 E Street, Suite 200
Eureka, CA 95501
(707) 445-7833

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CALIFORNIA
COASTAL COMMISSION

Page: 1
Date: **December 20, 2004**
Permit Application No.: **1-04-014**

COASTAL DEVELOPMENT PERMIT

On **October 14, 2004**, the California Coastal Commission granted to

California Department Of Transportation, Attn: Deborah L. Harmon

this permit subject to the attached Standard and Special conditions, for development consisting of

Replacement of the southbound Route 101 Van Duzen River Bridge by the installation of cofferdams and falsework; relocation of utilities; removal of existing bridge piers and abutments; construction of new piers, abutments and a cast-in-place 42 ft wide by 809 ft long concrete box girder bridge, and placement of rock slope protection

more specifically described in the application filed in the Commission offices.

The development is within the coastal zone at

Highway 101 bridge over the Van Duzen River, 5 miles south of Fortuna, Humboldt County

Issued on behalf of the California Coastal Commission by

PETER M. DOUGLAS
Executive Director

Melanie Faust
By: **Melanie Faust**
Senior Staff Analyst

ACKNOWLEDGMENT:

The undersigned permittee acknowledges receipt of this permit and agrees to abide by all terms and conditions thereof.

The undersigned permittee acknowledges that Government Code Section 818.4 which states in pertinent part that: "A Public entity is not liable for injury caused by the issuance. . . of any permit. . . " applies to the issuance of this permit.

IMPORTANT: THIS PERMIT IS NOT VALID UNLESS AND UNTIL A COPY OF THE PERMIT WITH THE SIGNED ACKNOWLEDGMENT HAS BEEN RETURNED TO THE COMMISSION OFFICE. 14 Cal. Admin. Code Section 13158(a).

12/20/04
Date

Linda Pardee for Jon Ashley
Signature of Permittee
Acting Environmental Branch Chief

Exhibit A
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

CALIFORNIA COASTAL COMMISSION
North Coast Area Office
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Date _____ Signature of Permittee _____

COASTAL DEVELOPMENT PERMIT

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 permittee 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 or 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 permittee to bind all future owners and possessors of the subject property to the terms and conditions.

SPECIAL CONDITIONS:

1. State Lands Commission Review

PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall provide to the Executive Director a copy of a permit issued by the California State Lands Commission, or letter of permission, 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 California 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.

2. Army Corps of Engineers Approval

PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit to the Executive Director written evidence that all necessary approvals from the Army Corps of Engineers have been obtained.

COASTAL DEVELOPMENT PERMIT

3. Final Construction Clearance

NOT LESS THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF ANY PROJECT-RELATED PHYSICAL ACTIVITIES, including but not limited to preliminary vegetation removal, temporary access improvements, equipment staging, or any other project-related activity, the applicant shall obtain written confirmation from the Executive Director that the applicant has fully complied with all prior-to-commencement conditions set forth in Coastal Development Permit 1-04-014. Project-related physical activities shall not commence until the Executive Director is satisfied that the applicant has fully complied with all prior-to-construction conditions, and has issued the subject written confirmation. This condition shall be prominently stated on the final project plans provided by CALTRANS for final approval by the Executive Director pursuant to Special Condition 5.

4. (Note: this condition was deleted)

5. Final Plans; Amendments; On Site Briefings

A. PRIOR TO ISSUANCE of Coastal Development Permit 1-04-014, the applicant shall provide two complete sets of the final project plans, drawn to scale, reflecting the final approved project description and conditions of approval as set forth in this permit, including the specific Terms and Conditions and related measures set forth in other agency requirements and herein incorporated by reference in Special Conditions 6, 7, 8 and 9. The final plans shall include site plans, grading plans, cross sections and elevation views, and landscape and erosion control plans, including planting plans. The plans shall include final designs and notations of seasonal placement and removal restrictions for temporary construction ("falsework") and temporary crossings. The conditions of approval of CDP 1-04-014 shall be set forth on the cover sheet of the subject plans and one original set of the approved plans, executed by the Executive Director or his designated representative, shall be present on the construction site at all times while project-related activities are in progress. The proposed project shall be constructed strictly in accordance with the approved plans. Any future modification of the approved development, including but not limited to the bridge, railings, sidewalks, shoulders, traffic lanes or median area shall require a Commission amendment to this coastal development permit.

B. Prior to commencement of construction, the permittee shall ensure that all construction personnel are fully familiarized with the terms and conditions of this coastal development permit and that a qualified biologist briefs the construction personnel on the measures necessary to protect resources as all applicable restrictions and obligations relevant to their activities. Continuous briefings throughout the term of the construction activities authorized by this permit shall be qualified biologists, site monitors, and construction managers to ensure that all personnel remain current on the applicable requirements.

COASTAL DEVELOPMENT PERMIT

6. 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 11, 2002, and as amended November 5, 2002, attached as Exhibit 4 of the staff report for Coastal Development Permit 1-04-014. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

B. Should stream diversion or dewatering methods proposed for the subject project fail to ensure a dry environment for pile-driving and other construction activities in the manner anticipated, the permittee shall immediately contact the nearest field office of the National Marine Fisheries Service to develop a construction plan that will avoid "barotrauma" (damage to fish due to propagation of acoustic waves due to percussion) to potentially affected fish. Any subsequent construction activities, in addition to other measures that may be required by NMFS, shall at a minimum include the following provisions:

(1) A qualified biologist 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 bay outside the project vicinity. Only NMFS approved methods shall be used to capture covered salmonids.

(2) If lethal take occurs, other than that expected during handling of entrapped fish, FHWA/CALTRANS shall immediately notify the National Marine Fisheries Service to review the circumstances surrounding the lethal take and develop modification to project activities necessary to prevent further lethal take. If modification to project activities is necessary to prevent further lethal take, all in-water construction shall cease and shall not recommence except as provided in subsection (3) below.

(3) A permittee seeking to recommence in-water construction following notification to NMFS of lethal take and determination that modification to project activities is necessary to prevent further lethal take, shall submit a supplementary construction and work plan for the review and approval of the Executive Director.

(a) If the Executive Director reviews the Supplementary Construction and Work Plan and determines that the supplementary 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.

(b) If the Executive Director reviews the Supplementary Construction and Work 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.

7. Measures to Minimize Impacts to Snowy Plover

The permittee shall comply with the "Terms and Conditions," "Reporting Requirements," and "Conservation Recommendations" specified in the U.S. Fish and Wildlife Service Biological Opinion letter of March 12, 2003, attached as Exhibit 5 of the staff report for Coastal Development Permit 1-04-014. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

8. Measures to Minimize Impacts to Van Duzen River riparian corridor

The permittee shall comply with the "Work Conditions" specified in the California Department of Fish and Game Stream Alteration Agreement, dated September 13, 2004, attached as Exhibit 6 of the staff report for Coastal Development Permit 1-04-014. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

9. Measures to Protect Quality of the Waters of the Van Duzen River

A. The permittee shall comply with the conditions specified in the Clean Water Act Section 401 Certification (Water Quality Certification) of the California Regional Water Quality Control Board, North Coast Region, dated May 5, 2004, attached as Exhibit 7 of the staff report for Coastal Development Permit 1-04-014. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

B. PRIOR TO COMMENCMENT OF CONSTRUCTION, the permittee shall submit, for the review and approval of the Executive Director, a Final Storm Water Pollution Prevention Plan that is consistent with the requirements of Special Condition Nos.10, 11, and 12 and the draft Plan, dated June 30, 2004. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

C. The permittee shall conduct all project activities in accordance with the requirements of the Section 401 Certification and the final Storm Water Pollution Prevention Plan (SWPPP). Any proposed changes to the Section 401 Certification or to the final SWPPP 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.

10. Temporary Structures

Where temporary structures such as "falsework" and temporary crossings may contact the waters of the Van Duzen River, such structures shall not include creosote-treated members. Only

concrete, steel, composite, untreated timber, or timber treated with a wood preservative approved by the Department of Fish and Game for use in marine waters may be used. All temporary structures shall be completely removed upon project completion. Any piles shall be pulled up and completely removed without digging them out or cutting them off at the mudline.

11. Construction Responsibilities, Material Containment, Demolition, and Disposal of Debris

A. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the permittee shall submit for the review and approval of the Executive Director a plan for the demolition and capture of the old bridge and related components, and for the identification (testing) and disposal of construction-related debris and contaminated sediments. The plan shall be consistent with the requirements of Special Condition No. 12 and shall include (but not be limited to) the following elements:

(1) Detailed description of the means and method of all demolition activities required to remove the existing bridge and associated structures, including measures to ensure full removal of all associated piers and footings;
(2) Outline of all protective measures to insure the integrity of the northbound bridge and the safety of pedestrians, bicyclists and drivers using the northbound bridge and any affected areas beneath and adjacent to the bridge (such as for recreational fishing, hiking);
(3) Prohibition of the use of any explosives for any aspect of project construction or demolition;
(4) Measures to prevent debris and waste from falling into the riverbed or adjacent areas;
(5) Identification on final project plans required pursuant to Special Condition 5 of all temporary storage sites for debris, graded spoils, contaminated sediments, construction materials, waste materials, etc., including any temporary stockpiling sites for any materials;
(6) Evidence that all locations identified in the plan for stockpiling, staging, or storage of materials, equipment or wastes is located upland of the Van Duzen River corridor and that berming, cleanup materials or other measures have been designed and set forth on final construction plans to ensure that such locations do not drain into coastal waters;
(7) Final disposal locations for all forms of debris, waste, and grading spoils, contaminated sediments and evidence that these locations are either a) licensed to accept such wastes and located outside of the coastal zone or b) licensed to accep such wastes and hold valid Coastal Development Permit to accept such materials.

B. In addition, the permittee shall comply with the following construction-related requirements:

(1) No construction debris or waste shall be placed or stored where it may enter coastal waters;
(2) Any and all debris resulting from construction activities shall be removed from the project site within 10 days of project completion and in accordance with the construction debris removal and disposal plan required herein;

(3) No machinery or construction materials not essential for project construction shall be allowed at any time within the Van Duzen River corridor;

(4) Debris discharged into coastal waters shall be recovered as soon as possible after loss and a permanent record of such incidents and resolution shall be kept and at all times made available for on-the-job inspection and the log shall be submitted to the Executive Director upon project completion;

(5) Silt curtains appropriate for use in riverine waters shall be installed around the areas to be excavated;

(6) No contaminated sediments shall be returned to the Van Duzen River. Any contaminated sediments shall be legally disposed of at an appropriate upland facility in accordance with the final plan authorized pursuant to Special Condition 12 and in accordance with other specific requirements set forth herein and in the final approved plan required pursuant to this special condition;

(7) Particular care shall be exercised to prevent foreign materials (for example, construction scraps, wood preservatives, other chemicals, etc.) from entering the Van Duzen River corridor, or areas that drain into the river. Where additional wood preservatives must be applied to cut wood surfaces, the materials, wherever feasible, shall be treated at an upland area to preclude the possibility of spills into the river or other state waters. A designated staging area shall be used for all refueling equipment and vehicles, mixing and storing materials, debris collection and disposal, and containing runoff from any materials that may be used or stockpiled during the project. A floating containment boom shall be placed around all active portions of a construction site where wood scraps or other floatable debris could enter the water. For any work on or beneath fixed bridge decks, heavy-duty mesh containment netting shall be maintained below all work areas where construction discards or other material could fall into the water. The floating boom and net shall be cleared daily or as often as necessary to prevent accumulation of debris. Contractors shall insure that work crews are carefully briefed on the importance of observing the appropriate precautions and reporting any accidental spills. Construction contracts shall contain appropriate penalty provisions, sufficient to offset the cost of retrieving or clean up of foreign materials not properly contained.

C. 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.

12. <u>Hazardous Materials Management Plan</u>

A. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the review and written approval of the Executive Director, a plan for the use and management of hazardous materials on the site to reduce impacts to water quality. The

plan shall be prepared by a licensed engineer with experience in hazardous material management.

1. The plan, at a minimum, shall incorporate all applicable requirements of the special conditions of Coastal Development Permit 1-04-014, and in addition shall provide for the following:

   (a) Equipment fueling shall occur only during daylight hours in designated fueling areas;

   (b) Oil absorbent booms and/or pads shall be on site at all times during project construction. All equipment used during construction shall be free of oil and fuel leaks at all times;

   (c) Provisions for preparing and pouring cement in a manner that will prevent discharges of wet cement into coastal waters including, but not limited to, placement of measures such as catch basins, mats or tarps beneath the construction area to prevent spills or overpours from entering coastal waters;

   (d) Provisions for the testing, handling, cleanup, temporary storage and containment, interim identification (such that contaminated materials or debris, including sediments, may be so identified at any time by site inspectors, and that such materials cannot be inadvertently mingled with or confused with non-contaminated stored materials) and disposal of any hazardous or non-hazardous materials used during the construction project including, but not limited to, cement, equipment fuel and oil, and contaminated sediments (including lead-contaminated sediments);

   (e) A schedule for maintenance of containment measures on a regular basis throughout the duration of the project;

   (f) Provisions for the containment of rinsate from the cleaning of equipment, including cement mixing equipment, and methods and locations for disposal off- site. Containment and handling shall be in upland areas and otherwise outside of any environmentally sensitive habitat area;

   (g) A site map detailing the location(s) for hazardous material storage, equipment fueling and maintenance, and concrete wash-out facilities;

   (h) Reporting protocols to the appropriate public and emergency services/agencies in the event of a spill;

   (i) Record-keeping measures to insure consistent, complete accounting for identification, handling, storage (both short- and long-term), and disposal of

contaminated materials and wastes in a manner that can be immediately audited by site inspectors.

B. The applicant 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 legally required.

13. Erosion Control and Revegetation Plan

A. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the review and approval of the Executive Director, an erosion control and revegetation plan for all areas disturbed by construction of temporary access roads. The plan shall provide for (1) the use of geotextile fabric and gravel to cover temporary access roads and newly placed fill slopes, and adjacent disturbed areas during construction, (2) the replanting with appropriate locally native species of any disturbed areas sufficient to prevent erosion at maturity and including short-term plantings to prevent erosion until slower growing species mature, (3) subsequent complete removal of all geotextile fabric and gravel in coordination with the replanting plan, (4) placement of erosion control measures such as mulch or rice straw, (5) placement of straw bales or other sediment control measures to protect against sediment loss if other erosion control measures fail, (6) monitoring, weed control, maintenance, and adaptive management measures designed to ensure successful establishment of native species and full control of erosion in the previously disturbed areas, and (7) annual reports and photographic documentation of erosion control and revegetation measures implemented, to be submitted annually to the Executive Director for a minimum of five (5) years following commencement of construction.

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. To the extent that the measures required in the final approved plan do not achieve permanent erosion control (for example, if plantings fail to thrive), the applicant shall pursue adaptive management, replanting, and further monitoring and reporting to the Executive Director's satisfaction until successful compliance is achieved.

14. Public Access and Safety

During construction, the applicant shall maintain existing public access to the Van Duzen River to the extent that such access is ordinarily available, consistent with the protection of public safety and the provisions of Special Conditions 6, 7, and 8 protective of sensitive resources. Where project activities would pose significant public safety hazards within the active project construction area, pedestrian detour routes shall be made available where feasible, and temporary signage shal be placed at public access closure points to indicate the nature and timing of any restrictions on

access that may be necessary. Such signage shall additionally include directions to detour routes where detours are feasible, and directions to the nearest alternative public accessways. Where construction activities pose temporary safety risks to the public, associated access points shall be clearly barricaded and posted with warnings and to the extent necessary to protect the public, a construction monitor shall be posted to protect the public from hazards posed by heavy equipment in operation and other potential construction hazards. Following project construction, or immediately after temporary closures while construction proceeds, previously existing public accessways shall be fully restored, consistent with necessary erosion control measures.

15. Nesting Birds

A. PRIOR TO COMMENCEMENT of construction, and in accordance with the applicant's proposal, the applicant shall submit for the review and approval of the Executive Director, a final plan prepared by a qualified biologist or resource specialist with appropriate experience, to provide equivalent replacement nesting site(s) for migratory birds presently utilizing the southbound bridge, in an alternative location or a combination of locations either attached to or suspended from the adjacent northbound bridge, or on a separate but adjacent structure as close as practicable to the southbound bridge site but outside of the area of anticipated construction disturbance. The permittee shall provide documentation, including photographic evidence, of the habitat installation prior to commencement of construction and prior to implementing nesting exclosure techniques on the bridge proposed for demolition.

B. By July 1 of the first calendar year following project completion, the permittee shall submit a written report supplemented by photographic evidence, prepared by a qualified biologist or resource specialist, documenting the success of the nesting habitat alternatives and, if the timing of nesting season allows, evidence of whether nesting on the new bridge is occurring. If nesting has not occurred successfully, the report shall include recommendations for adaptive management that may better ensure successful use of the nesting sites by migratory birds. Upon implementation of these measures, the applicant will undertake follow-up monitoring and reporting to the Executive Director annually for three (3) consecutive years thereafter. At the end of the third year, the final report shall include a summary of measures that have proven successful and recommendations for implementation of similar, or potentially improved measures in other project locations where similar nesting habitat impacts may arise.

16. Timing of Construction

Consistent with the proposed project description and the requirements of the National Marine Fisheries Service protective of salmonid species (Exhibit 4), project activities in the Van Duzen River channel outside the low flow channel are prohibited before June 1 or after October 15 of a given calendar year. Project activities in the Van Duzen River low flow channel, including temporary stream crossing and dike construction shall be prohibited before June 15 or after October 15 of a given calendar year.

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ARNOLD SCHWARZENEGGER, GOVERNOR

TH17c

Date Filed:	March 8, 2004
Hearing Date:	October 14 2004
49th Day:	April 26, 2004
180th Day:	September 4, 2004
Staff Report:	September 30, 2004
Staff:	MKF
Commission Action:	

EXHIBIT NO. 1
APPLICATION NO.
1-04-014-A1
CALTRANS
STAFF REPORT FOR CDP 1-04-014, DATED 9/30/04 (APPROVED PER STAFF)

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.:	**1-04-014**
APPLICANT:	**California Dept. of Transportation (CALTRANS), District 1**
PROJECT LOCATION:	Highway 101 bridge over the Van Duzen River, 5 miles south of Fortuna, Humboldt Co.
PROJECT DESCRIPTION:	Replace the southbound Highway 101 bridge.
RECOMMENDATION:	Approval with Conditions.
MOTION & RESOLUTION:	Page 3
LOCAL APPROVALS RECEIVED:	None required.
OTHER APPROVALS RECEIVED:	Regional Water Quality Control Board Certification; California Department of Fish and Game Stream Alteration Agreement; U.S. Fish & Wildlife Service & National Marine Fisheries Service Section 7

Consultations under the Endangered Species Act.

OTHER APPROVALS REQUIRED: State Lands Commission; Army Corps of Engineers

SUBSTANTIVE FILE DOCUMENTS: CDP 1-93-05 (CALTRANS, northbound Highway 101 bridge replacement, Van Duzen River); CDP 1-01-67 (CALTRANS, geotechnical borings for southbound bridge replacement, Van Duzen River); Conceptual Storm Water Pollution Prevention Plan for Van Duzen River Bridge Replacement, dated June 30, 2004; Clean Water Act Section 401 Certification for Highway 101 – Van Duzen River Southbound Bridge Replacement, prepared by North Coast Region, California Regional Water Quality Control Board, dated May 5, 2004; California Department of Fish and Game Stream Alteration Agreement (04-0097), dated September 13, 2004; Wild and Scenic Rivers Act Section 7 Consultation Determination for Van Duzen River Bridge Replacement, prepared by National Park Service, dated October 16, 2002; Biological Opinion (Snowy Plover), U.S. Fish and Wildlife Service, Formal Consultation, Section 7 of Endangered Species Act, dated March 12, 2003; Biological Opinion (Chinook Salmon, Coho Salmon, Steelhead), National Marine Fisheries Service, Formal Consultation, Section 7 of Endangered Species Act, dated March 11, 2002; Negative Declaration (CEQA), 01-HUM-101/01-31440, prepared by State Department of Transportation (CALTRANS), June 2003.

SUMMARY OF STAFF RECOMMENDATION

Staff recommends approval of the proposed project with conditions for the coastal development permit application submitted by the California Department of Transportation (CALTRANS) for replacement of the State Route 101 southbound bridge over the Van Duzen River, south of Fortuna, in Humboldt County. The Commission approved a Coastal Development Permit for the northbound bridge component of this project in 1993, and the project was completed in 1995 (Exhibit 3). The present proposal is to construct the southbound bridge along the same alignment as the existing southbound bridge, in the "mirror image" of the northbound bridge, with the same configuration, width, length, etc. The southbound bridge will include a new, highly transparent bridge rail (Type ST-20) that is currently undergoing final technical approval at CALTRANS.

Staff believes that the project, as conditioned by the sixteen (16) special conditions set forth below, is the preferred project alternative and is fully consistent with the Chapter 3 policies of the Coastal Act. The project has the potential to adversely impact riverine wetland habitat; however, the National Marine Fisheries Service and U.S. Fish and Wildlife have reviewed the project extensively and determined that if applicable

conditions (incorporated into the recommended special conditions below) are imposed, the project's significant adverse impacts on riverine wetland habitat will be minimized.

STAFF NOTES:

1. Standard of Review

The proposed project is located within the Commission's area of retained permit jurisdiction. Therefore, the standard of review that the Commission must apply to the project is the Chapter 3 policies of the Coastal Act.

2. Commission Action Required at October, 2004 Meeting.

Due to Permit Streamlining Act considerations, the Commission must act at the October hearing.

I. MOTION and RESOLUTION

The staff recommends that the Commission adopt the following resolution:

Motion: **I move that the Commission approve Coastal Development Permit 1-04-014, with conditions, pursuant to the staff recommendation.**

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 the 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 permittee 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 or 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 permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. State Lands Commission Review

PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall provide to the Executive Director a copy of a permit issued by the California State Lands Commission, or letter of permission, 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 California 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.

2. Army Corps of Engineers Approval

PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit to the Executive Director written evidence that all necessary approvals from the Army Corps of Engineers have been obtained.

3. Final Construction Clearance

NOT LESS THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF ANY PROJECT-RELATED PHYSICAL ACTIVITIES, including but not limited to preliminary vegetation removal, temporary access improvements, equipment staging, or any other project-related activity, the applicant shall obtain written confirmation from the Executive Director that the applicant has fully complied with all prior-to-commencement conditions set forth in Coastal Development Permit 1-04-014. Project-related physical activities shall not commence until the Executive Director is satisfied that the applicant has fully complied with all prior-to-construction conditions, and has issued the subject written confirmation. This condition shall be prominently stated on the final project plans provided by CALTRANS for final approval by the Executive Director pursuant to Special Condition 5.

4. (Note: this condition was deleted)

5. Final Plans; Amendments; On Site Briefings

A. PRIOR TO ISSUANCE of Coastal Development Permit 1-04-014, the applicant shall provide two complete sets of the final project plans, drawn to scale, reflecting the final approved project description and conditions of approval as set forth in this permit, including the specific Terms and Conditions and related measures set forth in other agency requirements and herein incorporated by reference in Special Conditions 6, 7, 8 and 9. The final plans shall include site plans, grading plans, cross sections and elevation views, and landscape and erosion control plans, including planting plans. The plans shall include final designs and notations of seasonal placement and removal restrictions for temporary construction ("falsework") and temporary crossings. The conditions of approval of CDP 1-04-014 shall be set forth on the cover sheet of the subject plans and one original set of the approved plans, executed by the Executive Director or his designated representative, shall be present on the construction site at all times while project-related activities are in progress. The proposed project shall be constructed strictly in accordance with the approved plans. Any future modification of the approved development, including but not limited to the bridge, railings, sidewalks, shoulders, traffic lanes or median area shall require a Commission amendment to this coastal development permit.

B. Prior to commencement of construction, the permittee shall ensure that all construction personnel are fully familiarized with the terms and conditions of this coastal development permit and that a qualified biologist briefs the construction personnel on the measures necessary to protect resources as all applicable restrictions and obligations relevant to their activities. Continuous briefings

throughout the term of the construction activities authorized by this permit shall be qualified biologists, site monitors, and construction managers to ensure that all personnel remain current on the applicable requirements.

6. 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 11, 2002, and as amended November 5, 2002, attached as Exhibit 4 of the staff report for Coastal Development Permit 1-04-014. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

B. Should stream diversion or dewatering methods proposed for the subject project fail to ensure a dry environment for pile-driving and other construction activities in the manner anticipated, the permittee shall immediately contact the nearest field office of the National Marine Fisheries Service to develop a construction plan that will avoid "barotrauma" (damage to fish due to propagation of acoustic waves due to percussion) to potentially affected fish. Any subsequent construction activities, in addition to other measures that may be required by NMFS, shall at a minimum include the following provisions:

(1) A qualified biologist 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 bay outside the project vicinity. Only NMFS approved methods shall be used to capture covered salmonids.

(2) If lethal take occurs, other than that expected during handling of entrapped fish, FHWA/CALTRANS shall immediately notify the National Marine Fisheries Service to review the circumstances surrounding the lethal take and develop modification to project activities necessary to prevent further lethal take. If modification to project activities is necessary to prevent further lethal take, all in-water construction shall cease and shall not recommence except as provided in subsection (3) below.

(3) A permittee seeking to recommence in-water construction following notification to NMFS of lethal take and determination that modification to project activities is necessary to prevent further lethal take, shall submit a supplementary construction and work plan for the review and approval of the Executive Director.

(a) If the Executive Director reviews the Supplementary Construction and Work Plan and determines that the supplementary 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.

(b) If the Executive Director reviews the Supplementary Construction and Work 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.

7. Measures to Minimize Impacts to Snowy Plover

The permittee shall comply with the "Terms and Conditions," "Reporting Requirements," and "Conservation Recommendations" specified in the U.S. Fish and Wildlife Service Biological Opinion letter of March 12, 2003, attached as Exhibit 5 of the staff report for Coastal Development Permit 1-04-014. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

8. Measures to Minimize Impacts to Van Duzen River riparian corridor

The permittee shall comply with the "Work Conditions" specified in the California Department of Fish and Game Stream Alteration Agreement, dated September 13, 2004, attached as Exhibit 6 of the staff report for Coastal Development Permit 1-04-014. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

9. Measures to Protect Quality of the Waters of the Van Duzen River

A. The permittee shall comply with the conditions specified in the Clean Water Act Section 401 Certification (Water Quality Certification) of the California Regional Water Quality Control Board, North Coast Region, dated May 5, 2004, attached as Exhibit 7 of the staff report for Coastal Development Permit 1-04-014. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

B. PRIOR TO COMMENCMENT OF CONSTRUCTION, the permittee shall submit, for the review and approval of the Executive Director, a Final Storm Water Pollution Prevention Plan that is consistent with the requirements of Special Condition Nos.10, 11, and 12 and the draft Plan, dated June 30, 2004. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

C. The permittee shall conduct all project activities in accordance with the requirements of the Section 401 Certification and the final Storm Water Pollution Prevention Plan (SWPPP). Any proposed changes to the Section 401 Certification or to the final SWPPP 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.

10. Temporary Structures

Where temporary structures such as "falsework" and temporary crossings may contact the waters of the Van Duzen River, such structures shall not include creosote-treated members. Only concrete, steel, composite, untreated timber, or timber treated with a wood preservative approved by the Department of Fish and Game for use in marine waters may be used. All temporary structures shall be completely removed upon project completion. Any piles shall be pulled up and completely removed without digging them out or cutting them off at the mudline.

11. Construction Responsibilities, Material Containment, Demolition, and Disposal of Debris

A. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the permittee shall submit for the review and approval of the Executive Director a plan for the demolition and capture of the old bridge and related components, and for the identification (testing) and disposal of construction-related debris and contaminated sediments. The plan shall be consistent with the requirements of Special Condition No. 12 and shall include (but not be limited to) the following elements:
(1) Detailed description of the means and method of all demolition activities required to remove the existing bridge and associated structures, including measures to ensure full removal of all associated piers and footings;
(2) Outline of all protective measures to insure the integrity of the northbound bridge and the safety of pedestrians, bicyclists and drivers using the northbound bridge and any affected areas beneath and adjacent to the bridge (such as for recreational fishing, hiking);
(3) Prohibition of the use of any explosives for any aspect of project construction or demolition;
(4) Measures to prevent debris and waste from falling into the riverbed or adjacent areas;
(5) Identification on final project plans required pursuant to Special Condition 5 of all temporary storage sites for debris, graded spoils, contaminated sediments, construction materials, waste materials, etc., including any temporary stockpiling sites for any materials;

(6) Evidence that all locations identified in the plan for stockpiling, staging, or storage of materials, equipment or wastes is located upland of the Van Duzen River corridor and that berming, cleanup materials or other measures have been designed and set forth on final construction plans to ensure that such locations do not drain into coastal waters;
(7) Final disposal locations for all forms of debris, waste, and grading spoils, contaminated sediments and evidence that these locations are either a) licensed to accept such wastes and located outside of the coastal zone or b) licensed to accept such wastes and hold valid Coastal Development Permit to accept such materials.

B. In addition, the permittee shall comply with the following construction-related requirements:

(1) No construction debris or waste shall be placed or stored where it may enter coastal waters;
(2) Any and all debris resulting from construction activities shall be removed from the project site within 10 days of project completion and in accordance with the construction debris removal and disposal plan required herein;
(3) No machinery or construction materials not essential for project construction shall be allowed at any time within the Van Duzen River corridor;
(4) Debris discharged into coastal waters shall be recovered as soon as possible after loss and a permanent record of such incidents and resolution shall be kept and at all times made available for on-the-job inspection and the log shall be submitted to the Executive Director upon project completion;
(5) Silt curtains appropriate for use in riverine waters shall be installed around the areas to be excavated;
(6) No contaminated sediments shall be returned to the Van Duzen River. Any contaminated sediments shall be legally disposed of at an appropriate upland facility in accordance with the final plan authorized pursuant to Special Condition 12 and in accordance with other specific requirements set forth herein and in the final approved plan required pursuant to this special condition;
(7) Particular care shall be exercised to prevent foreign materials (for example, construction scraps, wood preservatives, other chemicals, etc.) from entering the Van Duzen River corridor, or areas that drain into the river. Where additional wood preservatives must be applied to cut wood surfaces, the materials, wherever feasible, shall be treated at an upland area to preclude the possibility of spills into the river or other state waters. A designated staging area shall be used for all refueling equipment and vehicles, mixing and storing materials, debris collection and disposal, and containing runoff from any materials that may be used or stockpiled during the project. A floating containment boom shall be placed around all active portions of a construction site where wood scraps or other floatable debris could enter the water. For any work on or beneath fixed bridge decks, heavy-duty mesh containment netting shall be maintained below all work areas where construction discards or other

material could fall into the water. The floating boom and net shall be cleared daily or as often as necessary to prevent accumulation of debris. Contractors shall insure that work crews are carefully briefed on the importance of observing the appropriate precautions and reporting any accidental spills. Construction contracts shall contain appropriate penalty provisions, sufficient to offset the cost of retrieving or clean up of foreign materials not properly contained.

C. 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.

12. Hazardous Materials Management Plan

A. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the review and written approval of the Executive Director, a plan for the use and management of hazardous materials on the site to reduce impacts to water quality. The plan shall be prepared by a licensed engineer with experience in hazardous material management.

1. The plan, at a minimum, shall incorporate all applicable requirements of the special conditions of Coastal Development Permit 1-04-014, and in addition shall provide for the following:

(a) Equipment fueling shall occur only during daylight hours in designated fueling areas;

(b) Oil absorbent booms and/or pads shall be on site at all times during project construction. All equipment used during construction shall be free of oil and fuel leaks at all times;

(c) Provisions for preparing and pouring cement in a manner that will prevent discharges of wet cement into coastal waters including, but not limited to, placement of measures such as catch basins, mats or tarps beneath the construction area to prevent spills or overpours from entering coastal waters;

(d) Provisions for the testing, handling, cleanup, temporary storage and containment, interim identification (such that contaminated materials or debris, including sediments, may be so identified at any time by site inspectors, and that such materials cannot be inadvertently mingled with or confused with non-contaminated stored materials) and disposal of any hazardous or non-hazardous materials used during the construction

project including, but not limited to, cement, equipment fuel and oil, and contaminated sediments (including lead-contaminated sediments);

(e) A schedule for maintenance of containment measures on a regular basis throughout the duration of the project;

(f) Provisions for the containment of rinsate from the cleaning of equipment, including cement mixing equipment, and methods and locations for disposal off- site. Containment and handling shall be in upland areas and otherwise outside of any environmentally sensitive habitat area;

(g) A site map detailing the location(s) for hazardous material storage, equipment fueling and maintenance, and concrete wash-out facilities;

(h) Reporting protocols to the appropriate public and emergency services/agencies in the event of a spill;

(i) Record-keeping measures to insure consistent, complete accounting for identification, handling, storage (both short- and long-term), and disposal of contaminated materials and wastes in a manner that can be immediately audited by site inspectors.

B. The applicant 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 legally required.

13. <u>Erosion Control and Revegetation Plan</u>

A. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the review and approval of the Executive Director, an erosion control and revegetation plan for all areas disturbed by construction of temporary access roads. The plan shall provide for (1) the use of geotextile fabric and gravel to cover temporary access roads and newly placed fill slopes, and adjacent disturbed areas during construction, (2) the replanting with appropriate locally native species of any disturbed areas sufficient to prevent erosion at maturity and including short-term plantings to prevent erosion until slower growing species mature, (3) subsequent complete removal of all geotextile fabric and gravel in coordination with the replanting plan, (4) placement of erosion control measures such as mulch or rice straw, (5) placement of straw bales or other sediment control measures to protect against sediment loss if other erosion control measures fail, (6) monitoring, weed control, maintenance, and adaptive management measures designed to ensure successful establishment of native species and full control of erosion in the previously

disturbed areas, and (7) annual reports and photographic documentation of erosion control and revegetation measures implemented, to be submitted annually to the Executive Director for a minimum of five (5) years following commencement of construction.

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. To the extent that the measures required in the final approved plan do not achieve permanent erosion control (for example, if plantings fail to thrive), the applicant shall pursue adaptive management, replanting, and further monitoring and reporting to the Executive Director's satisfaction until successful compliance is achieved.

14. Public Access and Safety

During construction, the applicant shall maintain existing public access to the Van Duzen River to the extent that such access is ordinarily available, consistent with the protection of public safety and the provisions of Special Conditions 6, 7, and 8 protective of sensitive resources. Where project activities would pose significant public safety hazards within the active project construction area, pedestrian detour routes shall be made available where feasible, and temporary signage shall be placed at public access closure points to indicate the nature and timing of any restrictions on access that may be necessary. Such signage shall additionally include directions to detour routes where detours are feasible, and directions to the nearest alternative public accessways. Where construction activities pose temporary safety risks to the public, associated access points shall be clearly barricaded and posted with warnings and to the extent necessary to protect the public, a construction monitor shall be posted to protect the public from hazards posed by heavy equipment in operation and other potential construction hazards. Following project construction, or immediately after temporary closures while construction proceeds, previously existing public accessways shall be fully restored, consistent with necessary erosion control measures.

15. Nesting Birds

A. PRIOR TO COMMENCEMENT of construction, and in accordance with the applicant's proposal, the applicant shall submit for the review and approval of the Executive Director, a final plan prepared by a qualified biologist or resource specialist with appropriate experience, to provide equivalent replacement nesting site(s) for migratory birds presently utilizing the southbound bridge, in an alternative location or a combination of locations either attached to or suspended from the adjacent northbound bridge, or on a separate but adjacent structure as close as practicable to the southbound bridge site but outside of the area of anticipated construction disturbance. The permittee shall provide

documentation, including photographic evidence, of the habitat installation prior to commencement of construction and prior to implementing nesting exclosure techniques on the bridge proposed for demolition.

B. By July 1 of the first calendar year following project completion, the permittee shall submit a written report supplemented by photographic evidence, prepared by a qualified biologist or resource specialist, documenting the success of the nesting habitat alternatives and, if the timing of nesting season allows, evidence of whether nesting on the new bridge is occurring. If nesting has not occurred successfully, the report shall include recommendations for adaptive management that may better ensure successful use of the nesting sites by migratory birds. Upon implementation of these measures, the applicant will undertake follow-up monitoring and reporting to the Executive Director annually for three (3) consecutive years thereafter. At the end of the third year, the final report shall include a summary of measures that have proven successful and recommendations for implementation of similar, or potentially improved measures in other project locations where similar nesting habitat impacts may arise.

16. Timing of Construction

Consistent with the proposed project description and the requirements of the National Marine Fisheries Service protective of salmonid species (Exhibit 4), project activities in the Van Duzen River channel outside the low flow channel are prohibited before June 1 or after October 15 of a given calendar year. Project activities in the Van Duzen River low flow channel, including temporary stream crossing and dike construction shall be prohibited before June 15 or after October 15 of a given calendar year.

IV. FINDINGS AND DECLARATIONS

1. Site & Project Description

The Highway 101 Van Duzen River bridge is located approximately five miles south of Fortuna and approximately one-half mile upstream, or east, of the confluence of the Van Duzen and Eel Rivers in Humboldt County. The rural area surrounding the site is mainly flat agricultural land used for grazing and open space. (Exhibit Nos. 1 & 1A; see also Exhibit 8)

The proposed project includes removal of the existing bridge piers and abutments, and construction of new piers, abutments and bridge superstructure. Other associated work includes construction of sedimentation basins, cofferdams, falsework and replacement of rock slope protection at abutments.

The northbound bridge was replaced in 1993 under CDP No. 1-93-05; construction was completed in 1995 (Exhibit 3). CALTRANS proposes to replace the southbound

bridge because foundation investigations established that the Van Duzen River channel has degraded and scour is occurring at the piers, thereby posing an eventual threat to the structural integrity of the bridge. In addition, CALTRANS has determined that the bridge requires extensive repairs and has reached the end of its useful life.

The existing bridge consists of two separate bridges located side by side, one carrying northbound traffic and the other southbound traffic. An historic railroad bridge carrying the main line of the North Coast Railroad also crosses the Van Duzen in this location, in an alignment parallel to and less than 50 feet east of the northbound highway bridge. From bank to bank, the bridges are both approximately 800 feet long. However, the width of the river channel in this location is only about 400 feet at ordinary high water and less than 50 feet during low flow conditions in the summer.

The proposed project is located in an area commonly known as the Van Duzen River 'gravel extraction reach.' This reach is composed of broad, flat aggraded alluvial deposits with a stream gradient of 1% or less. Extensive riparian woodlands exist along the north bank of the river, extending several hundred feet back from the shoreline and a much narrower band of riparian woodland, approximately 50 feet wide, flanks the south bank of the river. Federally listed anadromous salmonid species within the Van Duzen River watershed include Chinook salmon, Coho salmon, and steelhead trout. The northbound segment of the bridge was completed before local Ecologically Significant Units (ESUs) of Pacific salmonids were proposed for Endangered Species Act listing. In addition, the U.S. Fish & Wildlife Service states that the nearby gravel bars may be used by the Western Snowy Plover. CALTRANS also indicates that surveys conducted during the past three years indicate that migratory cliff swallows (*Hirundo pyrrhonoto)* nest on the existing southbound bridge, and proposes to construct equivalent alternative nesting habitat on site for migratory bridge-nesting birds.

CALTRANS does not propose to remove any riparian habitat, including trees, to access the proposed project site. CALTRANS will utilize existing access roads and will grade temporary accessways within the gravel bars in the construction area. These accessways will be regraded to natural contours seasonally and at the end of the project, as applicable.

Proposed Project Details

CALTRANS proposes to replace the existing 809-ft. long southbound bridge across the Van Duzen River and elevate the profile grade by a maximum of eight feet on Highway 101 at post mile 56.3 to 57.4, approximately 5 miles south of Fortuna, in unincorporated Humboldt County. The new bridge will be a cast-in-place concrete box girder bridge, 809-ft. long, and 42-ft. wide. The centerline of the new bridge will match the centerline of the existing bridge. The elevation will be raised to match the northbound structure. The bridge will have three piers (replacing five older piers), with a net reduction in permanent wetland fill. Each pier will have a six-foot thick, 78-sq.-ft.

spread footing with 36 sheet piles (similar to the northbound bridge). The abutments will also be constructed on spread footings with 50 sheet piles for each abutment. There will be no change in the number of lanes or highway capacity as the result of the bridge replacement. The elevation of the bridge takeoffs to match that of the northbound bridge requires placement of 20,000 cubic yards of fill, which will be placed in the same location as the existing roadbed, outside of the wetland and riparian upland areas.

The proposed bridge replacement will have fewer, narrower, and more rounded support piers and the abutments will be setback. The piers and deck of the replacement bridge will mirror the northbound bridge with respect to the river cross-section. The proposed bridge will be constructed in the same alignment as the existing bridge. The profile of the highway, bridge approach and replacement bridge will be brought up to the elevation of the northbound bridge. Rock slope protection is proposed at each abutment and on the side of the naturally degraded channel on the north bank.

The bridge structures will have negligible lasting impacts on existing topography or geomorphic processes. In addition, CALTRANS engineers have concluded that the replacement of the southbound bridge, upon project completion, will have no impact on flood potential, bank erosion or channel stability.

Use of ST-20 (see through) Bridge Rail

CALTRANS originally proposed Type 80 concrete bridge rail, but has since amended the proposed project description to use the more visually permeable "ST-20" bridge rail (see illustration in Exhibit 8). The Commission has typically required the use of the most transparent bridge railings possible, and ST-20 bridge rail affords the best visibility from the bridge, even with mandatory bike railings atop the guardrail component. The Van Duzen River is designated as Recreational in the Wild and Scenic River System, in part because of the river's notable scenic and wildlife values. Thus, it is appropriate to use the most visually permeable railing possible, as the applicant proposes. CALTRANS staff have noted that ST-20 rail is undergoing final internal administrative clearance review for use in California projects, but that final approval is anticipated prior to commencement of construction.

Temporary Construction Access

Access to the work site is proposed via an existing road on the northwest side of the existing southbound bridge. No riparian vegetation will be disturbed for construction access. Equipment will cross the low flow channel on a temporary crossing constructed of a flat-car bridge that will fully span the low channel. Construction of the crossing may require that a piece of heavy equipment cross the channel in the water once to install and once to remove the temporary bridge, annually, for up to two anticipated construction seasons. Footings for the bridge will be either pre-cast

concrete, log stringers, or some other solid material and approaches will be made from gravel collected from the adjacent bar or imported. The footings and approaches will not contact the water. The crossing will be removed at the end of the construction season, prior to increased fall flows. Equipment and material will be moved along temporary roads graded on the gravel bar to the work site. The gravel bar will be regraded to its original configuration at the close of each construction season.

Water diversion; dry work area

Diversion of the Van Duzen River at the construction site is required to remove the existing piers, construct the new piers, and to place the false work. A temporary dike constructed of clean, washed, salmonid spawning-sized gravel is proposed to divert the flow and maintain dry conditions around Pier 4 (the only pier in the flowing stream channel). After all water is diverted to avoid entrapping fish, sheet pile coffer dams will be placed into the dry work area. Subsurface flow may percolate into the coffer dam requiring that water be pumped out to maintain dry conditions. Since there will not be any direct connection between the river and cofferdam, and the area will be above the low-flow water when the cofferdam is placed, there is no possibility of entrapping fish within the excavation and no need to screen the pump intake to protect fish.

Pumping within the excavations at the various pier footings will be required to maintain de-watering. The effluent will be pumped into a settling basin, constructed either by digging a hole or building a berm around the basin area using native materials. The settling basin will be located on a large gravel bar downstream, west of the southbound structure and on the gravel bar within the CALTRANS right-of-way. After construction, any residual silt or fine materials within the settling basin will be removed to a disposal site above the high water level, and the gravel bar will be re-graded to its previous condition.

Construction Year #1: In the first year, the existing southbound bridge will be dismantled and removed. Remnant pilings left in the streambanks from the demolition and replacement of the northbound bridge will also be removed. No explosives will be used to dismantle the existing bridge and no portion of the bridge will be allowed to drop into the river.

The first step in dismantling the bridge will be removing the traveled way. The long girder sections of the superstructure will then be removed. Next, the existing columns will be removed to accommodate the construction of the new bridge columns. The columns will be removed to below grade and below potential river degradation.

Construction of the new bridge abutments and piers will also take place in this season. To construct the footings of the new columns, river diversion and cofferdams may be needed to create a dry work area. For cofferdams, sheet piles are first driven around the footing area to confine the excavation. The footing area is excavated and the footing piles are driven to the required depth. If water is present from groundwater, it is

pumped to the settling basin. A seal course of concrete is placed to slow water intrusion in the forms. The footing is then formed and poured to cap the piles. The columns are then ready to be formed and poured. At the end of the first construction season, the diversion, cofferdams, and settling basin are removed and the river bar is recontoured to resemble natural contours.

Construction Year #2: In the second year, the superstructure, bridge approach and departure roadway will be built. To build the structure, the river may again need to be diverted, a settling basin would be reestablished and the falsework constructed in place. The superstructure will then be built from the falsework. The falsework will be removed upon completion of the superstructure.

After completion of construction, all dikes, berms, construction material, falsework, debris, temporary roads, and the settling basin will be removed and the contours of the gravel bar will be restored to natural elevations.

Debris Disposal

The proposed project will generate lead-contaminated dredged sediments based on an initial survey (Preliminary Site Investigation – PSI) undertaken by CALTRANS. The source of the lead contamination is most likely from the sloughing off of older lead based paints from the bridge. CALTRANS proposes to allow the subsequently selected contractor to temporarily store lead-contaminated sediments in the contractor's staging and work area for as long as 270 days after excavation. In addition, the demolition of the bridge will generate substantial amounts of debris, which CALTRANS proposes that a subsequently selected contractor elect to dispose in accordance with the successful bidder's proposal.

2. Filling and Dredging in Coastal Waters and Wetlands; Water Quality

Section 30106 of the Coastal Act defines development, in part, as the "*removing, dredging, mining, or extraction of any materials.*" Section 30108.2 defines fill as the placement of earth or other substance or material in a submerged area. The proposed project involves placement of piers and footings within the wetlands of the Van Duzen River, in addition to temporary excavations, gravel bar contouring, and other measures necessary to construct the proposed project. Therefore, the proposed project constitutes dredging and filling in wetlands.

Section 30233 of the Coastal Act provides as follows, in pertinent 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:*

> *(5) 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.*

Section 30231 of the Coastal Act address the protection of coastal water quality and marine resources in conjunction with development and other land use activities. Section 30231 states:

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

The above policies set forth a number of different limitations on what development projects may be allowed in coastal wetlands. For analysis purposes, the limitations can be grouped into four general categories or tests. These tests are:

- that the purpose of the filling, diking, or dredging is for one of the eight uses allowed under Section 30233;
- that the project has no feasible less environmentally damaging alternative;
- that feasible mitigation measures have been provided to minimize adverse environmental effects; and
- that the biological productivity and functional capacity of the habitat shall be maintained and enhanced where feasible.

a. Permissible Use for Fill

The first test for a proposed wetland fill/dredging project is whether the fill/dredging is for one of the eight allowable uses under Section 30233(a). The relevant category of use listed under Section 30233(a) that relates to the proposed bridge replacement is subcategory (5), stated as follows:

> (5) 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.

In order for the Commission to find that the fill associated with the proposed project is for a use allowable under Section 30233(a)(5), i.e., is for an incidental public purpose, the Commission must first evaluate the purpose of the project. The replacement of the existing southbound bridge is required because of the age and failing condition of the bridge and because scour is occurring at the piers in the riverbed. The project is necessary to ensure the continuing safety of the public transportation system. Since the project would be conducted by a public agency to improve public safety on an existing public highway bridge, the Commission finds that the proposed fill/dredging is a public service purpose consistent with Section 30233(a)(5).

The Commission must next determine if the fill is "incidental." The Commission has in the past determined that the fill for certain highway safety improvement projects was for "incidental" public service purposes under Section 30233(a)(5). In the present case, the Commission finds the public safety purpose of the proposed project is incidental to "something else as primary," that is, the transportation service provided by the existing highway. The expressed purpose and need for the project is to ensure that the existing capacity of Highway 101 remains safe by protecting the structural integrity of the bridged component of the highway in the subject location. There will be no increase in vehicular capacity because the existing two-lane bridge will be replaced by a two-lane bridge of similar configuration, with identical lane widths and shoulders to those of the northbound component of the same bridge crossing of Highway 101. The project is thus solely needed to maintain existing traffic capacity with a higher degree of safety for motorists.

Therefore, the Commission finds that for the reasons discussed above, the proposed fill in coastal wetlands for the proposed project constitutes an incidental public service, and thus is an allowable use pursuant to Section 30233(a)(5) of the Coastal Act.

b. Alternatives

Alternative Analysis

The second test of Section 30233(a) is whether there are feasible less environmentally damaging alternatives to the proposed project. Coastal Act Section 30108 defines "feasible" as follows:

> *'Feasible' means capable of being accomplished in a successful manner within a reasonable time, taking into account economic, environmental, social, and technological factors.'*

Divert All Traffic Onto the Northbound Bridge

As stated previously, the northbound side of the bridge was replaced in 1995 pursuant to Coastal Development Permit No. 1-93-05 (Exhibit 3), and contains two northbound

lanes and 8-ft.-wide paved shoulders adjacent to the outermost lane. This alternative would require rededication of one lane to southbound traffic and would reduce shoulder clearances and require lane reconfiguration. Such changes would reduce the existing level of safety on the bridge because traffic traveling in opposing lanes at highway speed would be further congested, would have less room to maneuver or to allow slower cars to travel in the right hand lane. These problems could potentially result in higher traffic accident rates. In addition, this alternative would still require the removal of the southbound bridge with attendant construction activities within the wetland. Additionally, the proposed bridge has fewer piers and will result in a net reduction of wetland fill that would not be achieved if this alternative were implemented. Therefore, this alternative would not meet project goals or result in significant benefits to the environment in contrast to the proposed project.

Retrofit Existing Southbound Bridge

This alternative involves retrofitting the existing southbound bridge and thus retaining the existing bridge in the existing location and at the existing profile grade. This alternative would not avoid wetland fill because the existing piers would require reinforcement under this alternative, resulting in a net increase in wetland fill compared to the proposed project which will utilize fewer piers within the wetland area. Additionally, this alternative would not be environmentally less damaging because stripping and replacing the existing bridge deck and conducting the under-bridge work necessary to perform the required upgrades would still require the use of heavy equipment in the riverbed area. This alternative would not achieve the matching of bridge decks so as to improve line of sight for drivers traveling at highway speeds on Highway 101. Therefore, this alternative would not meet project goals or result in significant benefits to the environment in contrast to the proposed project.

Construct New Bridge West of the Existing Bridge

This alternative would require the same level of disturbance within the river channel as the proposed project, but would also adversely affect a historic farmhouse property built in 1884, called "East House" located southwest of the Van Duzen River bridges. CALTRANS has verified that this property is eligible for the National Register of Historic Places. Thus, this alternative would not be a less environmentally damaging alternative in contrast to the proposed project.

No Project Alternative

As stated previously, CALTRANS has determined that significant scour is occurring at the bridge piers and that if the scour is not addressed, the bridge may eventually fail. In addition, the bridge requires extensive repairs and has reached the end of its useful life. No one has argued that the project is unnecessary to provide for the continued safe use of this section of Highway 101.

Therefore, the "no project" alternative would not meet the project goal of improving the safety of Highway 101 at this location. Additionally, if the bridge eventually fails, emergency work within the wetland habitat area may be necessary and would not necessarily be undertaken in accordance with the seasonal restrictions and other mitigation measures possible under planned, non-emergency conditions.

Conclusion

Therefore, the Commission finds that this alternative is not a feasible less environmentally damaging alternative to the proposed project, and that no other feasible, less environmentally damaging alternative to the proposed project exists.

C. 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. Depending on the manner in which the proposed bridge replacement is undertaken, the portions of the proposed project to be conducted below the ordinary high water mark could have potential significant adverse effects to (1) wetland (riverine) habitat, (2) anadromous fish, (3) western snowy plover, and (4) water quality of the Van Duzen River. The potential impacts and their mitigation are discussed in the following four sections:

(1) Wetland Habitat

Proposed pier excavation and construction areas are located in areas below the ordinary high water mark (OHW) and are located within a riverine wetland. Riverine wetlands play an important role in a river ecosystem and provide, among other things, areas of lower velocity during flooding periods, which is critical to the survival of fish species, especially juvenile salmon. Because riverine wetlands serve as migratory corridors, connecting upland with coastal and other aquatic habitat, species richness tends to be higher than that of other terrestrial habitat.

Construction activities within a riverine wetland can potentially damage wetland habitat through a number of mechanisms which affect wetland hydrology and/or hydric soils and/or hydrophytic vegetation. Wetland hydrology can be adversely impacted through soil compaction, such as that resulting from operating heavy equipment in wetland areas, which can alter the physical functions of the wetlands. Additionally, direct impact to wetlands from heavy equipment can adversely impact wetland vegetation, particularly during the wet season.

According to CALTRANS, the proposed project will result in a net reduction of approximately 100 cubic yards in the overall amount of fill within the riverine wetlands of the Van Duzen River, through the excavation and removal of existing piers and the placement of fewer piers within wetland or riparian upland habitat. Disturbance to wetland habitat within the riverbed area will be limited mostly to operation of equipment

within the relatively dry gravel bar area, and to temporary fill due to localized grading of gravels for sediment control, dewatering, and diversion of streamflow from construction areas. No riparian or riparian buffer vegetation is proposed for removal. Access will be via existing roads or via temporary use of the mostly-dry gravel bar areas during low flow season. At the completion of construction, the applicant proposes to return and/or regrade all dewatering areas, sediment basins, temporary gravel bar roads, etc., to the same condition that existed prior to project implementation. In addition, the California Department of Fish and Game has approved a Streambed Alteration Agreement for the proposed project (Exhibit 6). The Agreement specifies measures to ensure that the impacts of the proposed project on riverine wetland habitat are minimized, including measures to restrict concrete, truck washings, fuel, debris, etc., from entering the wetland environment, and the Agreement further restricts removal of riparian vegetation, and requires erosion control measures. The Commission finds that these measures are protective of wetland habitat consistent with the requirements of Coastal Act Section 30233 and therefore has incorporated compliance with these measures into Special Condition 8.

Further, Special Condition 11 (Construction Responsibilities...) contains restrictions that, fully implemented, will ensure that the proposed project activities do not degrade wetland habitat. These measures are discussed in more detail below. Similarly, measures set forth in special conditions protective of anadromous fish species, western snowy plover, and water quality, as discussed below, will afford additional protections and benefits to wetland habitat.

Therefore, for the reasons set forth above, the Commission finds that the proposed project, as conditioned, will minimize significant adverse impacts on riverine wetland habitat consistent with Section 30233 of the Coastal Act.

(2) Anadromous Fish Species

According to the National Marine Fisheries Service, the Van Duzen River estuary functions primarily as a migratory corridor and as juvenile rearing habitat (with limited function as spawning habitat) for Chinook salmon, Coho salmon, and steelhead trout, which are federally (and for Coho salmon, state-) listed threatened species.

The proposed bridge construction project could adversely impact sensitive fish species by increasing water turbidity through the grading, demolition, equipment operation, and release of disturbed sediments and/or contaminants into coastal waters. Specific activities that could create adverse effects to salmonids include: site preparation and construction activity; placement/use/removal of temporary bridge crossing; removal of old bridge and piers; alteration of riverbed by equipment access; installation of new bridge pilings; and pollutant spills and waste discharge.

According to NMFS, suspended sediments can make salmonid prey and predator detection difficult, reduce feeding opportunities, and induce behavioral modifications.

Suspended sediments may also cause respiratory problems for fish, smother incubating eggs or juvenile fish, and reduce habitat by reducing the volume of interstitial spaces within substrate. Additionally, direct impact and/or vibrations resulting from driving the piers or other materials into the aquatic environment could be injurious to fish.

CALTRANS proposes to avoid construction in the active, low flow channel, either by waiting until the channel is dry, or by redirecting channel waters where even low flow requires this, and by using other dewatering techniques. In this manner, CALTRANS proposes to avoid "barotrauma" or the injury to fish that may arise through the propagation of acoustic waves caused by percussion in an aquatic environment. According to the Biological Opinion prepared for the project, the de-watering activities proposed by CALTRANS will avoid the possibility of entrapping fish within the excavation areas of pier construction and removal and where placement of falsework is undertaken.

Pumping within the excavations at the various pier footings will be required to maintain de-watering. The effluent will be pumped into a settling basin, constructed either by digging a hole or building a berm around the basin area using native materials. The settling basin will be located on a large gravel bar downstream, west of the southbound structure and on the gravel bar within CALTRANS' right-of-way. After construction, any residual silt or fine materials within the settling basin will be removed to a disposal site above the high water level. Depending on changes to channel geometry, pools may form around some piers before construction commences. CALTRANS will remove any listed Pacific salmonids before construction activities begin in an isolated pool, in accordance with NMFS requirements.

At the end of construction year two, and project completion, all dikes, berms, construction material, debris, temporary roads, and the settling basin will be removed and the contours of the gravel bar will be restored to natural elevations.

Additionally, CALTRANS proposes, in accordance with the requirements of NMFS protective of fisheries, to perform work in the low flow channel between June and October (as further required by Special Condition 16). In this manner, construction activities would avoid the period during which eggs and alevins are likely to be present, and will avoid the period of peak salmonid migration and minimize the need to undertake activities in the wet channel area. Thus, the construction schedule proposed by CALTRANS, required by NMFS, and as imposed by Special Condition 16, will avoid impacts to salmonids.

The Biological Opinion prepared by NMFS (Exhibit 4) outlines a number of measures to reduce adverse impacts to salmonids during all phases of the proposed project and related activities. The Biological Opinion concludes that avoiding all impacts to listed salmonids is not possible, but that if the proposed project is implemented in accordance with the recommended mitigation measures, residual impacts will not

adversely affect survival or long-term viability of salmonids utilizing the Van Duzen River. NMFS further states that the bridge replacement project is "not likely to jeopardize the continued existence of listed Pacific salmonids, or destroy or adversely modify designated critical habitat." Special Conditions 6 and 16 incorporate 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. Therefore, the Commission finds that as conditioned, the proposed project will minimize significant adverse effects on riverine wetland habitat.

(3) **Western snowy plover**

The U.S. Fish and Wildlife Service has determined that the western snowy plover may be present within the vicinity of the project site because (1) potentially suitable nesting habitat exists at the Van Duzen River Bridge site; (2) in May 2002, two snowy plovers were detected at the confluence of the Van Duzen and Eel rivers approximately 0.25 mile from the bridge site; (3) plovers have nested at a site on the Eel River approximately 0.25 to 0.50 mile downstream from the confluence with the Van Duzen River (the proposed project site is located 0.50 mile upstream or east of the confluence of the Eel and Van Duzen Rivers); and (4) as many as 39 breeding plovers have been documented along the Eel River.

Habitat suitability may fluctuate at the project site and along the Eel River during the construction period, since habitat quality and availability can change annually. Plovers typically nest in the open, gravel bars of the river. In high water years, many gravel bars may still be submerged early in the nesting season. In low water years, more gravel bars will be exposed; however, vegetation may become established earlier in the year and reduce the amount of available habitat.

Proposed bridge construction activities, such as grading, riprapping, or deposition of spoil material, will physically modify suitable western snowy plover nesting habitat. Construction activities may increase human-associated disturbance which may reduce the functional suitability of nesting, foraging, and roosting areas, according to the USFWS. Degradation of habitat may also occur as a result of activities that promote unnatural rates of predation, such as human-generated litter, according to USFWS.

The proposed project will require the use of heavy equipment within the riverbed area, and the noise generated by these activities, as well as the disturbance of human presence, may disrupt the species breeding behaviors by disrupting breeding activity or nests, separating adults from their broods, and causing adults and broods to stay away from favored foraging areas. Pedestrians and vehicles may crush highly cryptic eggs or chicks and flush plovers off their nests. Separation of plover adults from their nests and broods can cause mortality through exposure of eggs or chicks to heat, cold, blowing sand, and/or predators.

CALTRANS proposes to minimize entrance of non-construction vehicles into the riverbed area (via new access roads within the gravel bar areas for use by construction equipment operators) by placing barricades and restrictive signage at such locations. In addition, USFWS has developed a number of measures to protect plovers during project construction, as set forth in the Biological Opinion, prepared by USFWS and dated March 12, 2003 (Exhibit 5). These measures include notification of USFWS if plover nesting is detected within the work area, placement of exclosures as necessary, placement of exclusionary fencing between any observed adult plovers or chicks and the active work area, restrictions on trash and food scraps in the area to avoid predator attraction, briefing of construction personnel, and associated monitoring and reporting requirements. The Commission finds these measures protective of the western snowy plover and therefore requires Special Condition 7, which incorporates these requirements by reference. The Commission finds, therefore, that as conditioned, the project will minimize significant adverse effects on riverine wetland habitat.

(4) **Water Quality**

Due to the project's location adjacent to and within the Van Duzen River, the proposed project has the potential to adversely impact water quality within the riverine environment. The potential water quality impacts from the proposed project include two general categories: (1) increased turbidity in riverine waters during installation and removal of cofferdams and trestle piles and excavation around pier footings, and (2) accidental spills or release of contaminants, 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.

Turbidity

CALTRANS proposes to exclude the use of explosives for dismantling the bridge. No portion of the bridge will be allowed to drop into the river. The long girder sections of the existing bridge will be removed with the use of cranes, and lowered to the gravel bar outside of the active stream channel. As discussed previously, steamflow will be diverted by a temporary dike constructed of river-run gravel so that a dry work area is maintained during installation and removal of other construction-related materials. In addition, construction activities will be limited to the driest season, from June to October as required reduce impacts to fisheries, pursuant to Special Conditions 6 (Fisheries) and 16 (Timing).

Other measures to control erosion will also reduce turbidity caused by mobilization of sediments. CALTRANS proposes to undertake Best Management Practices 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. Fill slopes placed to elevate the bridge takeoffs and highway to the same elevation as the northbound bridge will be revegetated with appropriate locally-

native plant species in accordance with CALTRANS' proposal and as required by Special Condition 13. In addition, CALTRANS will finalize and submit for Executive Director approval, a Final Storm Water Pollution Prevention Plan pursuant to Special Condition 9 prior to commencement of construction. The SWPPP incorporates water pollution control practices, including soil stabilization, sediment control, wind erosion control, tracking control, non-storm water management, waste management and material's pollution control. These measures include practices that will reduce turbidity. Additionally, Special Condition 9 incorporates water quality protection measures set forth by the California Regional Water Quality Control Board, North Coast Region, in its May 5, 2004 Clean Water Act Section 401 Certification for the proposed project. These measures include avoidance of discharge of soils and silts, as well as other potential contaminants either directly or indirectly into the Van Duzen River, and therefore, fully implemented, will additionally ensure that turbidity is minimized, in addition to other water quality protection measures discussed below.

Release or Mobilization of Contaminants or Debris

The proposed project involves the use of potentially hazardous materials on site and near bay waters. Potential contaminants include vehicle and heavy equipment fluids such as oil, grease, petroleum, hydraulic fluids, fuels, and coolants. In addition, the project requires the use of substantial amounts of concrete that would be poured from construction trestles or the bridge deck into the river area into pre-cast forms to retrofit the footings and columns. Wet concrete or cement power and heavy equipment fluids can be toxic to marine life if they were to come in contact with coastal waters. CALTRANS has not provided specific measures to prevent concrete from coming into contact with river waters, but has indicated that their contractor would be responsible for preparing a hazardous materials management and spill response plan that would provide measures for minimizing potentially hazardous and toxic materials from entering the Van Duzen River. Special Conditions 11 and 12 set forth specific requirements for such plans and require that the final plans be submitted to the Executive Director for review and approval prior to commencement of construction. This allows CALTRANS to include the selected contractor in the preparation of such plans but ensures that the plans incorporate all specified measures to protect coastal waters.

CALTRANS has submitted a conceptual Stormwater Pollution Prevention Plan that addresses only general Best Management Practices for concrete washout facilities, but does not provide site-specific measures for containing concrete, responding to accidental spills, or for locating fueling, or concrete wash-out and maintenance facilities. As discussed further below, Special Condition 11 provides additional guidance and specifications on construction management practices and requirements that, fully implemented, will reduce any potential for concrete or other spills into the Van Duzen River. Additionally, Special Condition 12 requires a final hazardous material management plan subject to the review and approval of the Executive Director that sets forth measures to prevent the intrusion of potentially hazardous

materials into the river corridor. Special Condition 9 requires submittal of the Final Storm Water Pollution Prevention Plan, for the review and approval of the Executive Director, prior to the commencement of construction, and further incorporates the requirement that all project activities be conducted in accordance with the requirements of the Section 401 Certification (Exhibit 7) and the Final SWPPP.

CALTRANS indicates that sediments in the riverbed that must be excavated to undertake the project are known to contain lead and other contaminants that have degraded from bridge paint flakings and bridge maintenance activities. The Mitigated Negative Declaration, prepared by CALTRANS in June 2003, contains some measures to address the recovery and disposal of such contaminated sediments as stated previously, but defers much of the determination of a final plan to the contractor eventually selected. If contaminated sediments are stored near the Van Duzen River and are not properly identified, controlled, and disposed of, rainwater and winds may re-introduce contaminated material into the waters of the river. Special Condition 12 requires, among other measures, that specific provisions for testing, cleanup, containment, and disposal of such contaminated materials be incorporated into a final Hazardous Materials Management Plan to prevent re-contamination of the Van Duzen River or other accidental or deliberate potential disposal locations.

Special Condition 11, as stated above, sets forth specific construction site practices and disposal standards designed to prevent contamination of coastal waters. These measures include prohibiting machinery or construction materials within the river corridor unless essential for project construction, prohibiting the discharge of debris into coastal waters and requiring immediate recovery of materials or wastes accidentally discharged, establishing protocols for storage and removal of debris, and requiring that all debris be finally disposed either in a licensed facility lawfully able to accept such wastes, or, if disposal is in the coastal zone, at a facility so licensed and subject to a coastal development permit.

In addition, Special Condition 12 requires the applicant to submit for the review and approval of the Executive Director, a Hazardous Materials Management Plan. The Plan is required to provide for the following: (1) equipment fueling must occur only during daylight hours in designated fueling areas; (2) oil absorbent booms and/or pads are required to be on site at all times during project construction; and (3) all equipment used during construction shall be free of oil and fuel leaks at all times. Additionally, Special Condition No. 12 requires the plan to include: (1) provisions for preparing and pouring cement over coastal waters in a manner that will prevent spills or overpours from entering coastal waters, including placement of protective measures such as catch basins, mats or tarps beneath the construction trestle area; (2) a schedule for maintenance of containment measures on a regular basis throughout the duration of the project; (3) provisions for the handling, cleanup and disposal of any hazardous or non-hazardous materials used during the construction project including, but not limited to, cement, equipment fuel and oil, and contaminated sediments; (4) provisions for the containment of rinsate from the cleaning of equipment, including cement mixing

equipment, and methods and locations for disposal off site; (5) a site map detailing the location(s) for hazardous material storage and equipment fueling and maintenance and, (6) reporting protocols to the appropriate public and emergency services/agencies in the event of a spill.

CALTRANS also proposes the temporary placement of a bridge for construction access/crossings of the river annually. This component of the proposed project is subject to all other conditions, including Special Condition 10 which requires 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 could contact the waters of the Van Duzen River, shall not include creosote- or other chemical preservative-treated members, which may discharge pollutants. Wood preservatives can potentially leach out of piles and into the water column where they can be absorbed by fish and other aquatic organisms with potentially adverse consequences. Special Condition 10 further requires that where materials may contact the waters of the river, only materials deemed safe for such use by the California Department of Fish and Game may be used. Fully implemented, this condition will ensure that chemical contaminants arising as a by-product of wood treatment do not inadvertently contaminate the waters of the river and affords the opportunity to utilize materials composed of concrete, steel, composite, untreated timber or timber treated with a preservative approved by CDFG for use in marine waters.

Consistency with Section 30412 of the Coastal Act

Coastal Act Section 30412 states in pertinent part:

> (a) In addition to Section 13142.5 of the Water Code, this section shall apply to the commission and the State Water Resources Control Board and the California regional water quality control boards.
> (b) The State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality. The State Water Resources Control Board has primary responsibility for the administration of water rights pursuant to applicable law. The commission shall assure that proposed development and local coastal programs shall not frustrate this section. The commission shall not, except as provided in subdivision (c), modify, adopt conditions, or take any action in conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality or the administration of water rights.
>
> Except as provided in this section, nothing herein shall be interpreted in any way either as prohibiting or limiting the commission, local government, or port governing body from exercising the regulatory controls over development pursuant to this division in a manner necessary to carry out this division.

Section 30412 prevents the Commission from modifying, adopting conditions, or taking any action in conflict with any determination by the State Water Resources Control Board or any California Regional Water Quality Control Board in matters relating to water quality.

Staff consulted with the Regional Water Quality Control Board (RWQCB) about permitting requirements and potential impacts resulting from the proposed project. CALTRANS has received approval from the Regional Water Quality Control Board, including a Clean Water Act Section 401 Certification (Exhibit 7) and a National Pollution Discharge Elimination System (NPDES) General Permit for the retrofit project. In addition, the project is subject to a general State Wide Storm Water Permit issued to CALTRANS for all of its construction projects. The specific requirements of these permits and approvals have been incorporated by reference in the applicable special conditions discussed above.

The Clean Water Act Section 401 Certification sets forth seven project conditions. The conditions generally prohibit the discharge of any construction-related debris or other waste including oil or petroleum products, wash waters, or concrete treatment chemicals into the Van Duzen River. In addition, the conditions require that disturbance and/or removal of vegetation and soil be minimized and that disturbed areas be revegetated following project construction, and that CALTRANS implement Best Management Practices for control of sediment and turbidity.

CALTRANS has previously been issued a State Wide Storm Water Permit (State Wide Permit) and has additionally prepared a Conceptual Storm Water Pollution Prevention Plan for the Van Duzen River Bridge replacement project. The NPDES general permit sets forth general discharge prohibitions, receiving water limitations, solids disposal requirements, and provisions for monitoring and reporting to the RWQCB. The NPDES permit reiterates several conditions contained in the 401 Certification regarding turbidity and pH limitations of waste discharge. The NPDES permit also requires that all solids disposal be disposed of at a legal disposal site approved by the RWQCB, and sets forth monitoring and reporting provisions that must be adhered to during the course of the project.

The Commission finds that requiring the Special Conditions discussed above to minimize adverse impacts to water quality does not conflict with any determination by the State Water Resources Control Board or any California Regional Water Quality Control Board in matters relating to water quality as required by Section 30412 of the Coastal Act. In acting on the project, the Regional Water Quality Control Board determined that the project as proposed could have significant water quality impacts and as a result, imposed various water quality control requirements in its permit approvals for the project to address the water quality impacts. The Commission's action to impose water quality conditions does not conflict with the Regional Board's determinations on water quality as the special conditions imposed by the Commission to address water quality reiterate mitigation measures proposed by the applicant

and/or would help ensure that the water quality standards established by the Regional Board for the project are implemented and realized through the incorporation of specific water quality control measures.

Conclusion

For all of the reasons set forth above, the Commission thus finds that the project is an allowable use, that there is no feasible less environmentally damaging alternative, that feasible mitigation is required 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 against degradation as the result of the proposed project. Therefore, the Commission finds that the proposed development, as conditioned, is consistent with Sections 30233 and 30231 of the Coastal Act.

3. Protection of Adjacent Environmentally Sensitive Habitat Area (ESHA)

Section 30240 of the Coastal Act states:

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

CALTRANS has provided a supplemental review of sensitive species that may potentially utilize the general area of the proposed project, received on September 23, 2004. The Supplement states:

Foothill yellow-legged frog (*Rana boylii*)
This species is a California Department of Fish and Game Species of Concern on north coast. It has no federal special status. Yellow-legged frogs inhabit shallow, flowing water. They prefer small to moderate-sized streams with some cobble-sized substrate for egg laying that also provide refuge habitat for larvae and sub-adults. Since yellow-legged frogs inhabit shallow streams with gentle flow of water, the lower reaches of the Van Duzen are not suitable habitat. The reach of the river that would be impacted by this project has swift, deep flows in the winter rainy season. In the summer dry season, the river shrinks to a narrow channel through wide gravel bars. Observational surveys of the river conducted in spring and summer of 2003 within the project impact area found no amphibian species.

Northern red-legged frog (*Rana aurora aurora*)

A Species of Special Concern with DFG (but not the same species as the more southerly, federally threatened California red-legged frog), the northern red-legged frog has no special status federally. In northwestern California, northern red-legged frogs inhabit streamside flats within coastal redwood forest. This habitat is characterized by a dense undergrowth ferns, sedges and other herbaceous vegetation. The Van Duzen River at Route 101 offers no habitat suitable for red-legged frogs.

Northwestern pond turtle (*Clemmys marmorata marmorata*)
Northwestern pond turtles are a DFG Species of Special Concern with no federal special status. They inhabit slower-moving, low gradient streams with basking sites. The high winter flows in the Van Duzen are unsuitable for northwestern pond turtles. Observational surveys conducted up and downstream of the project impact area of the river in spring and summer of 2003 found no northwestern turtles.

Coastal cutthroat trout (*Oncorhynchus clarki clarki*)
This species is a DFG Species of Special Concern with no federal status. Coastal cutthroat inhabit small, low gradient coastal streams and estuarine habitats. They can be found in cool, well shaded streams with an abundance of instream cover. The anadromous form of this species could pass through this reach of the Van Duzen River. The impact avoidance measures outlined on the NOAA Fisheries Biological Opinion for listed salmonids would also minimize impacts to coastal cutthroat trout.

California red tree vole (*Arborimus pomo*)
A CDFG Species of special concern, the California red tree vole has no federal special status. Red tree voles spend nearly their entire life in the upper canopy of Douglas fir forest. They eat needles almost exclusively. They nest in the high canopy on branches near the trunk. Since there is no suitable forested habitat in the project impact area, tree voles will not be affected by this project.

Bank swallow (*Riparia riparia*)
This species is State listed as threatened, it has no federal listing. Bank swallows nest in colonies. They burrow into vertical banks of fine-texture soils to make nest cavities. There is suitable habitat for bank swallows on the Eel River more than a mile downstream of the project location. The river banks are more sandy there. However there is no suitable habitat for this species in the project area. Observational surveys of the river banks up and downstream of the project impact area of the river in spring and summer of 2003 and 2004 found no bank swallows or nests.

Cliff swallow (*Petrochelidon pyrrhonota*)
No special state or federal status. Cliff swallows make mud nests attached to sheltered vertical surfaces such as rock overhang or cliffs. They also build nests on human-made structures such houses, barns, and bridges. Surveys conducted in the spring and summer of 2002, 2003, and 2004 found cliff swallow nests present under the bridge in the seismic cable restrainers are attached to the underside of the bridge superstructure. The nest sites under the bridge will be blocked prior to the birds' arrival

in the spring to avoid impacts to nesting birds when the bridge is demolished. . To minimize impacts to cliff swallows, alternative permanent nest sites will be provided by installing posts near the piers.

Northern rough-winged swallow (*Stelgidopteryx serripennis*)
No special state or federal status. These swallows nest in cavities in river banks, cliffs, or crevices in man-made structures, usually near water. They breed from April to August. When the project area site was surveyed in the summer of 2002, 2003 and 2004, northern rough-winged swallows were found nesting in the holes on the concrete piers where the seismic cables go through. The nest sites under the bridge will be blocked prior to the birds' arrival in the spring to avoid impacts to nesting birds when the bridge is demolished. To minimize impacts to rough-winged swallows, alternative permanent nest sites will be provided on posts near the piers.

The only identified species that may be impacted by the proposed project, other than as discussed in findings set forth above, therefore, are migratory nesting birds such as cliff or rough-winged swallows. Except for bank swallows, which have not been found on the project site, as stated above these species have no special state or federal status. The applicant proposes, as part of the subject project, to provide alternative nesting habitat for migratory nesting birds at the project site. Accordingly, Special Condition 15 incorporates the applicant's proposal and ensures that performance of the mitigation measures as well as a follow-up study of success are undertaken systematically.

Finally, as stated previously, placement of fill to support the raised roadbed and bridge ends will be undertaken in areas adjacent to, but not located within, wetland areas or other environmentally sensitive habitat areas. The applicant does not propose to undertake any project activities that would adversely affect the upland riparian woodlands along the north and south banks of the river. No riparian vegetation will be removed. Additionally, CALTRANS has proposed a number of mitigation measures as part of the proposed project to minimize impacts to water quality and the aquatic habitat of the Van Duzen River itself. Mitigation measures proposed and required to protect wetland habitat, anadromous fish species, and water quality are discussed in Finding #2 above, and in this section. These mitigation measures will also ensure that the riparian woodlands above the level of ordinary high water line along both banks of the river are protected from significant disruption, consistent with the applicable requirements of Coastal Act Section 30240.

With the mitigation measures that are proposed and required, the project as conditioned will not significantly degrade ESHA or habitat areas adjacent to ESHA, and will be compatible with the continued use of the habitat areas in and adjacent to project operations. Therefore, the Commission finds that the project as conditioned is consistent with Section 30240 of the Coastal Act.

4. Public Access; Visual

Public Access

Section 30210 of the Coastal Act requires that maximum public access shall be provided consistent with public safety needs and the need to protect natural resource areas from overuse. Section 30212 of the Coastal Act requires that access from the nearest public roadway to the shoreline be provided in new development projects except where it is inconsistent with public safety, military security, or protection of fragile coastal resources, or adequate access exists nearby. Section 30211 requires that development not interfere with the public's right to access gained by use or legislative authorization. Section 30214 of the Coastal Act provides that the public access policies of the Coastal Act shall be implemented in a manner that takes into account the capacity of the site and the fragility of natural resources in the area. In applying Sections 30210, 30211, 30212, and 30214, the Commission is also limited by the need to show that any denial of a permit application based on these sections, or any decision to grant a permit subject to special conditions requiring public access, is necessary to avoid or offset a project's adverse impact on existing or potential access.

Recreational use of the river in this particular section of the river is very limited, largely because there are very few access points to the river. The principal public access use of the project site that does occur is by fishermen who use the river channel for recreational fishing. Other public access and recreational uses of this stretch of the river include canoeing and recreational boating, which would be interrupted occasionally during heavy equipment operation. Traffic on Route 101 would be re-routed to the northbound lanes, which would cause some slowing, but would not significantly inhibit public access to or along the coast via this major coastal access transportation artery. Special Condition 14 requires that to the extent feasible and consistent with public safety and the protection of sensitive resources, the applicant provide detour routes and signage indicating directions to nearest alternative accessways when trail or access road closures are necessary. Special Condition 14 also requires that after project completion, all public accessways be fully restored, consistent with necessary erosion control measures. Fully implemented, Special Condition 14 will ensure that public access impacts are limited and of short-term duration. In addition, Special Condition 11 (Construction responsibilities...) requires submittal of a demolition plan that includes measures to ensure public safety for pedestrians, bicyclists, and drivers on the northbound bridge and in the riverine area during potentially hazardous construction activities. Therefore, the Commission finds that as conditioned, the proposed project is consistent with the public access and recreation requirements of the Coastal Act.

Visual

Coastal Act Section 30251 states:

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

The Van Duzen River is designated as a Wild and Scenic River by the US Department of the Interior, National Park Service. According to the NPS, the Van Duzen River was designated in part for its notable scenic and wildlife values. Views from the bridge are panoramic, and will be improved by raising the southbound deck to the same elevation as the northbound deck (replacement of the northbound bridge was completed in 1995). In addition, CALTRANS proposes to utilize a newly approved bridge rail (final approval within CALTRANS' technical review units is pending, but anticipated prior to commencement according to CALTRANS staff), known as type "ST-20." (See Exhibit 8). This bridge rail is the most visually permeable bridge rail type yet utilized by CALTRANS within the state, and represents the current "state-of-the art" for providing maximum open viewing area for those utilizing the bridge. Therefore, the Commission finds that the proposed project, utilizing ST-20 bridge railing, is consistent with the requirements of Coastal Act Section 30251.

5. State Lands Commission

The State Lands Commission has granted right-of-way to the California Department of Transportation for purposes of establishing rights-of-way for highways and for use in protecting highways from damage or destruction by natural forces. Such a grant of right of way covers the streambed of the Van Duzen River up to the mean high water mark. According to CALTRANS, the proposed bridge replacement project will require additional authorization by the State Lands Commission, which has been scheduled for review at the October 2004 CSLC hearing. Special Condition 1 requires CALTRANS to provide evidence that final authorization has been received from CSLC for the bridge replacement proposal, prior to issuance of Coastal Development Permit 1-04-014.

6. U.S. Army Corps of Engineers Review

The project is within and adjacent to a navigable waterway and is subject to review by the U.S. Army Corps of Engineers (USACE). Pursuant to the Federal Coastal Management Act, any permit issued by a federal agency for activities that affect the coastal zone must be consistent with the coastal zone management program for that

state. Under agreements between the Coastal Commission and the USACE, the Corps will not issue a permit until the Coastal Commission approves a federal consistency certification for the project or approves a permit. To ensure that the project ultimately approved by the Corps is the same as the project authorized herein, the Commission attaches Special Condition No. 2 that requires the applicant, prior to the commencement of construction, demonstrate that all necessary approvals from the USACE for the proposed project have been obtained.

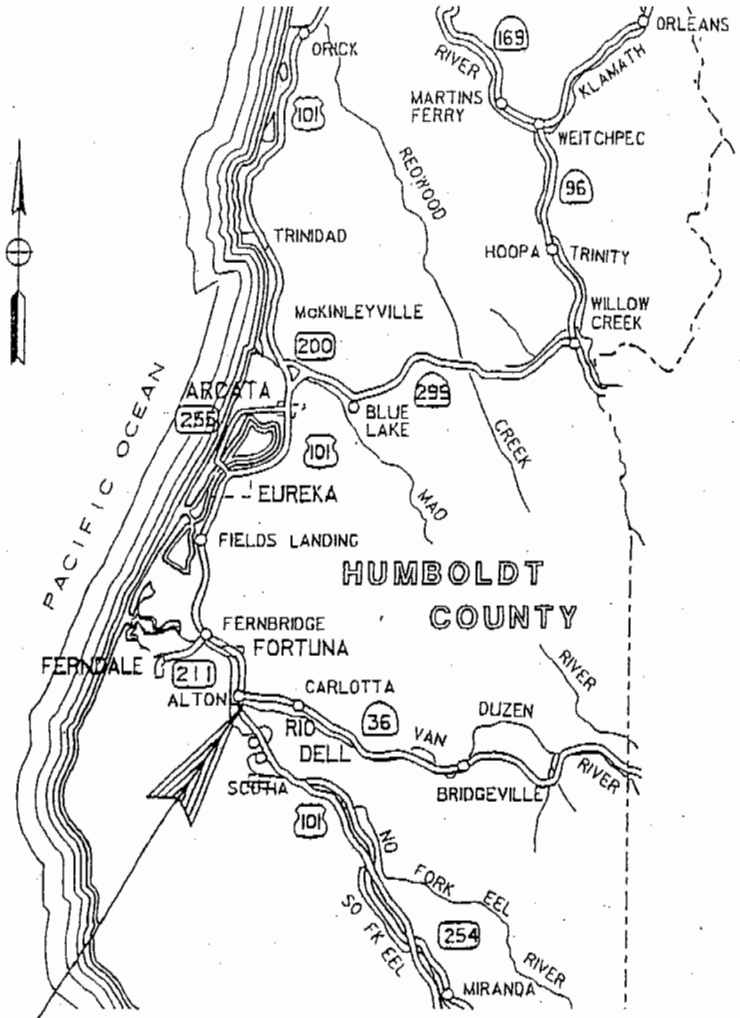
7. California Environmental Quality Act

Section 13096 of the Commission's administrative regulations requires Commission approval of a coastal development permit application to be supported by findings showing that the application, as modified by any conditions of approval, is consistent with any applicable requirement of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. As discussed above, the proposed project has been conditioned to be found consistent with the policies of the Coastal Act. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. Mitigation measures that will minimize or avoid all significant adverse environmental impact have been required. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity would have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act and to conform to CEQA.

DIST	COUNTY	ROUTE	KILOMETER POST	MILE POST
01	Hum	101	90.4/92.5	56.2/57.5

PROJECT LOCATION MAP



PROJECT LOCATION

ROUTE 101
POST MILE 56.2/57.5

EXHIBIT NO. 1
APPLICATION NO. 1-04-014
CALTRANS
LOCATION MAPS (1 of 2)

NO SCALE

Exhibit A
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

FIGURE I

LOCATION MAP

VAN DUZEN RIVER BRIDGE REPLACEMENT PROJECT

DATE: 2/2/04

Caltrans

Caltrans, District 1
P.O. Box 3700
Eureka, CA 95502

DIST	COUNTY	ROUTE	KILOMETER POST	MILE POST
01	Hum	101	90.4/92.5	56.2/57.5

VICINITY MAP

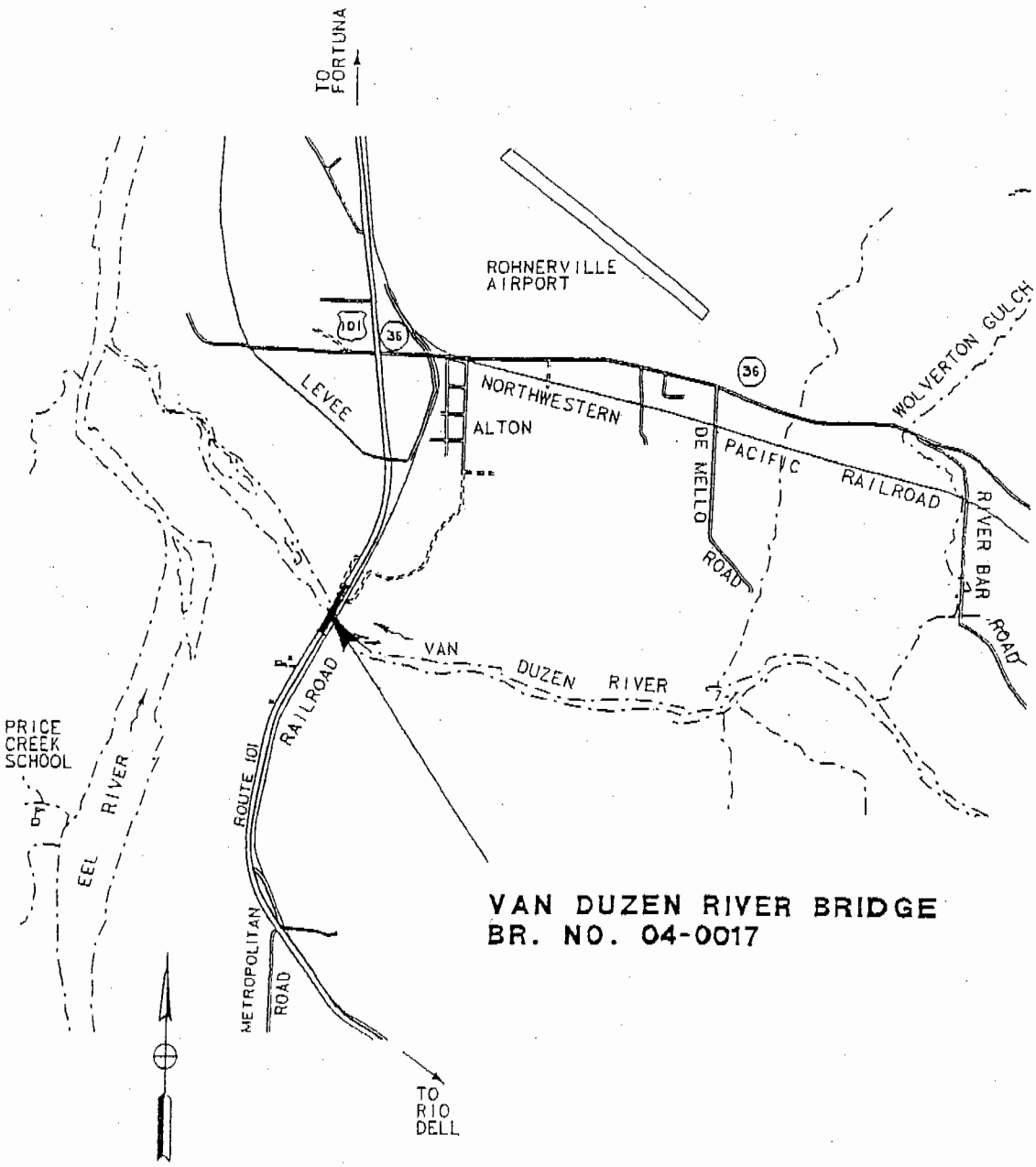


FIGURE 2

VICINITY MAP

VAN DUZEN RIVER BRIDGE REPLACEMENT PROJECT

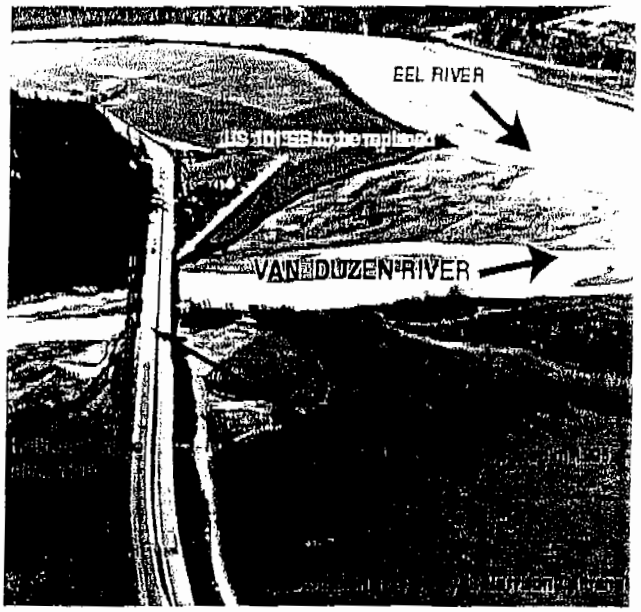
Caltrans

Caltrans, District 1
P.O. Box 3700
Eureka, CA 95502

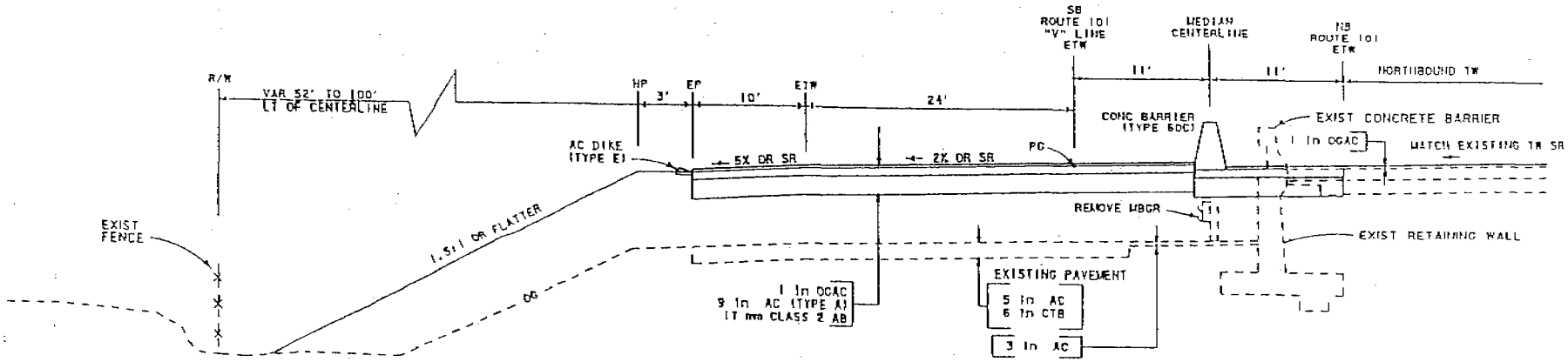
Exhibit A
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

NO SCALE

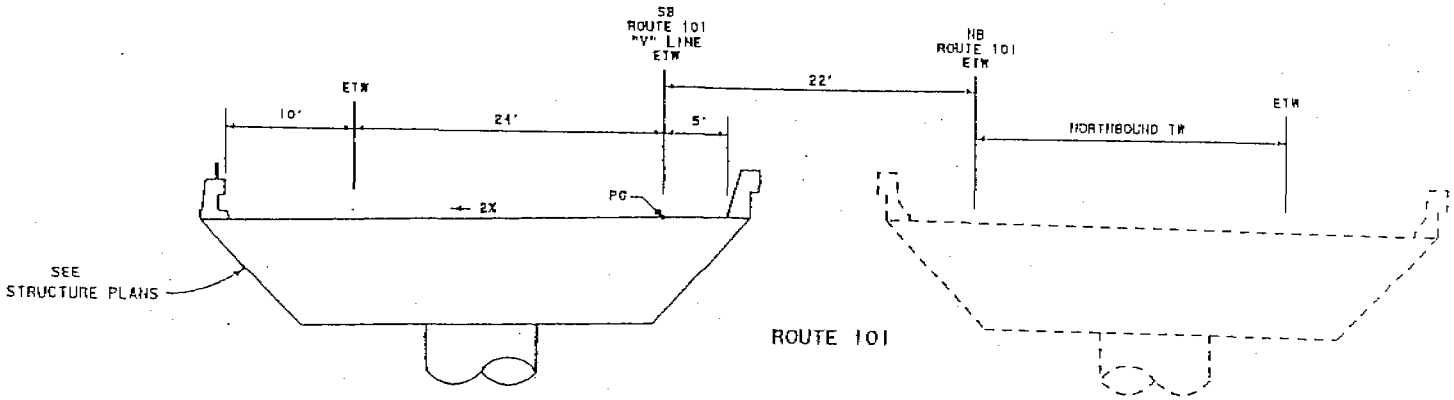
Exhibit 1A
Oblique aerial photo of proposed project area
Southbound Van Duzen River Bridge Replacement
Highway 101, So. of Fortuna,
Humboldt County



DIST	COUNTY	ROUTE	KILOMETER POST	MILE POST
01	Hum	101	90.4/92.5	56.2/57.5



ROUTE 101
NEW SOUTHBOUND ROADWAY AND MEDIAN



ROUTE 101

NEW SOUTHBOUND BRIDGE
STA "V" 108+47.722 BB TO "V" 110+94.608 EB

EXISTING NORTHBOUND BRIDGE

NO SCALE

Caltrans, District 1
P. O. Box 3700
Eureka, CA 95502

Caltrans

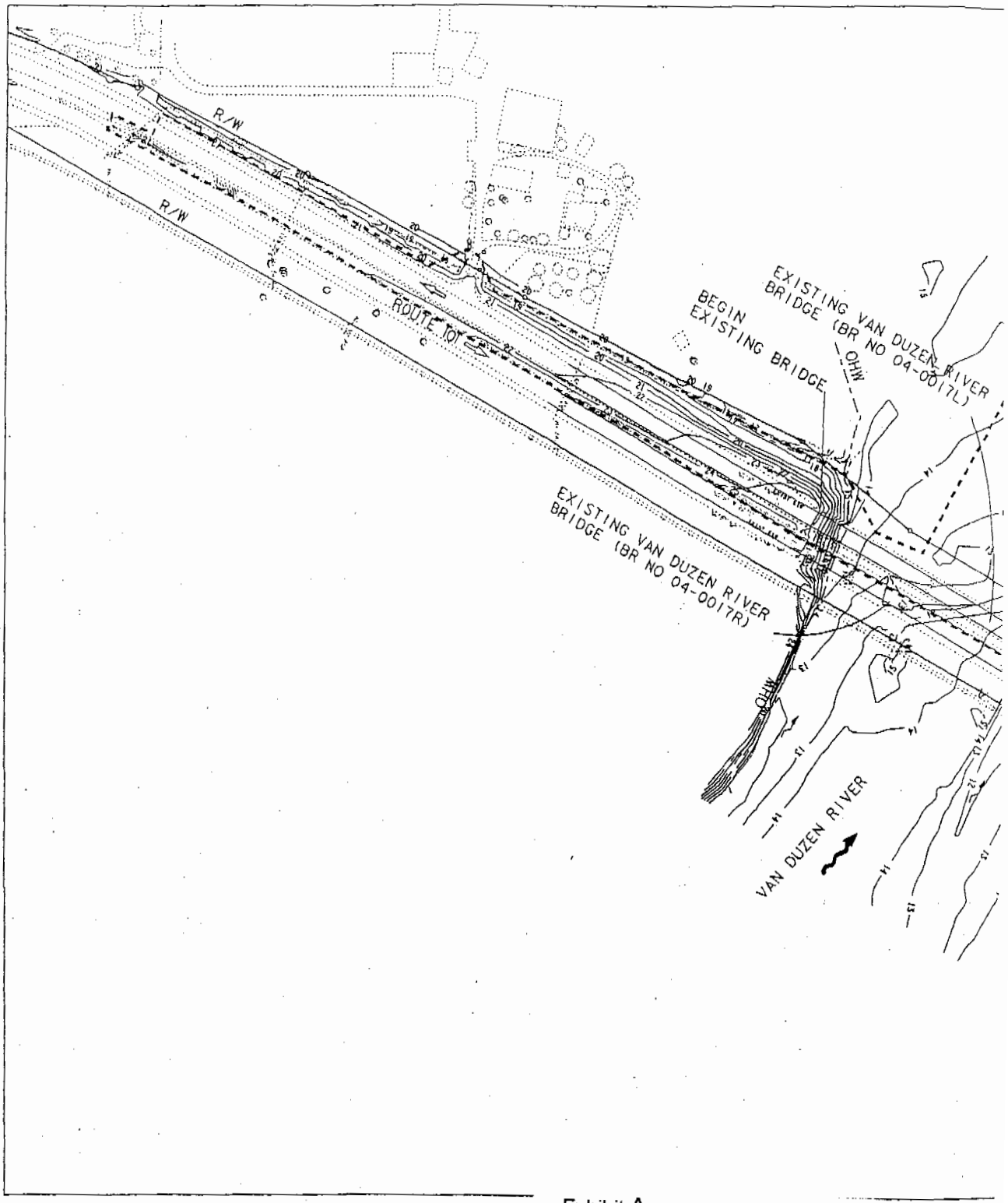
DATE: 2/2/04

FIGURE 3

TYPICAL CROSS SECTIONS

VAN DUZEN RIVER BRIDGE REPLACEMENT PROJECT

Exhibit A
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)



LEGEND

ORDINARY HIGH WATER = 48' (14.7m) (NAVD 88) — — — —
CONTOURS ARE METRIC (NAVD 88)
FOOTPRINT OF PROJECT - - - - - - - - - -

Exhibit A
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

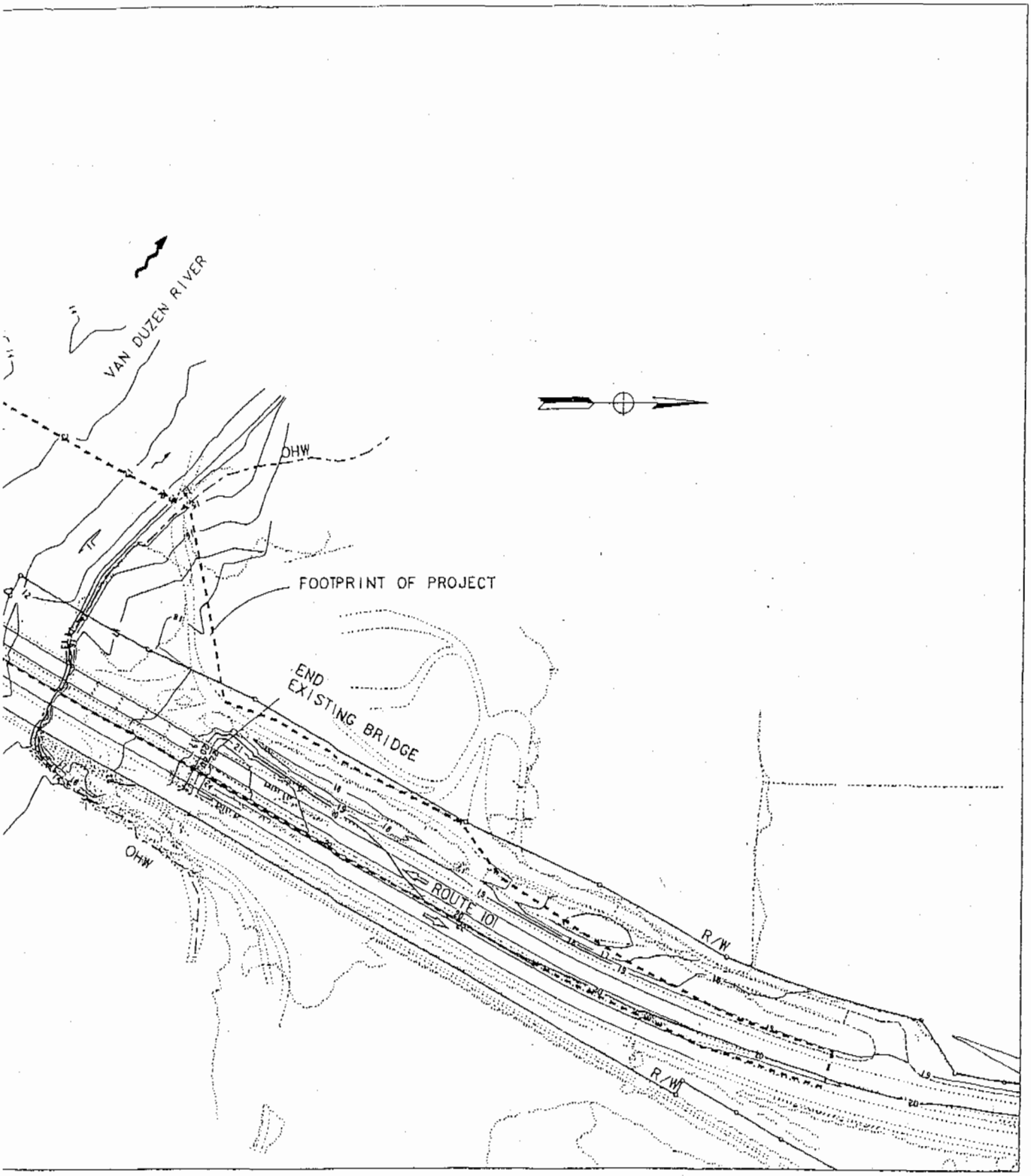
PROJECT ENGINEER
MARK F. SOBOTA

Caltrans, District 1
P.O. Box 3700

0 50
METERS

DATE:

DIST	COUNTY	ROUTE	KILOMETER POST	MILE POST
01	Hum	101	90.4/92.5	56.2/57.5



CONTOUR MAP & FOOTPRINT OF PROJECT AREA

VAN DUZEN RIVER BRIDGE REPLACEMENT PROJECT

DATE PLOTTED => 21-SEP-2004
TIME PLOTTED => 16:02

Exhibit A
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

CALIFORNIA COASTAL COMMISSION
NORTH COAST AREA
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
(415) 904-5260

Staff: Robert Merrill
Staff Report: April 2, 1993
Hearing Date: April 16, 1993
Commission Action: Approved with Condition 4/16/93

EXHIBIT NO. 3
APPLICATION NO.
1-04-014
CALTRANS
1-93-05 ADOPTED FINDINGS (1 of 19)

ADOPTED FINDINGS

APPLICATION NO.: 1-93-05

APPLICANT: CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 1

PROJECT LOCATION: Highway 101 bridge over the Van Duzen River, five miles south of Fortuna, Humboldt County.

PROJECT DESCRIPTION: Replace the north bound Highway 101 bridge over the Van Duzen River.

LOCAL APPROVALS RECEIVED: County approval not needed.

OTHER APPROVALS RECEIVED: California Dept. of Fish and Game 1601 streambed alteration agreement.

OTHER APPROVALS REQUIRED: State Lands Commission lease; California Regional Water Quality Control Board waste discharge requirements, and U.S. Army Corps of Engineers Section 404 permit.

SUBSTANTIVE FILE DOCUMENTS: Humboldt County LCP.

STAFF NOTE: The Commission held a public hearing and approved this permit at the meeting of April 16, 1993. The adopted findings for approval differ from those contained in the written staff recommendation dated April 2, 1993. At the public hearing, the staff revised its recommendation to delete a finding entitled, "Coastal Commission Jurisdiction," and to slightly revise the wording of the second to the last paragraph of the finding entitled, "Protection of Biological Productivity, Water Quality, and Environmentally Sensitive Habitat Areas."

The following resolution, conditions, and findings were adopted by the Commission on April 16, 1993, upon conclusion of the public hearing.

I. Approval with Conditions.

The Commission hereby grants a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to implement a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, is located between the sea and

the first public road nearest the shoreline and is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions. See attached.

III. Special Conditions.

1. State Lands Commission Review.

PRIOR TO THE ISSUANCE of the coastal development permit, the applicant shall submit to the Executive Director a written determination from the State Lands Commission that:

a. No State lands are involved in the development; or

b. State lands are involved in the development and all permits required by the State Lands Commission have been obtained; or

c. State lands may be involved in the development, but pending a final determination an agreement has been made with the State Lands Commission for the project to proceed without prejudice to that determination.

2. U.S. Army Corps of Engineers Review.

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the applicant shall submit to the Executive Director a copy of a U.S. Army Corps of Engineers permit or letter of permission for the project authorized herein.

3. Grading Operations.

The project's grading operations shall not permanently alter the size or configuration of the Van Duzen River.

4. Disposal of Excess Materials.

All surplus material, spoils, and debris shall be removed from the site upon completion of the project. Placement of any surplus material or debris in the coastal zone at a location other than in a licensed landfill will require a coastal development permit.

5. Fisheries Mitigation

The applicant shall implement the mitigation measures designed to minimize impacts on fishery resources as proposed in the application (including but not limited to maintaining a corridor for migrating fish, minimizing sedimentation, and recontouring the river channel following construction) and as contained in the Department of Fish and Game 1601 streambed alteration agreement.

6. Riparian Mitigation

The applicant shall implement the riparian mitigation and monitoring plan submitted with the application.

7. Public Access

To allow for continued use of the river by fishermen and other public access users, the applicant shall (a) not close the existing entry onto Highway 101 of the dirt access road north of and nearest the bridge on the west side of the highway, until the roadway has been extended north and a new entry onto the highway has been established; and (b) allow fishermen and other users of the river to pass through the construction staging area during the entire construction period.

IV. Findings and Declarations.

The Commission hereby finds and declares as follows:

1. Site Description.

The Highway 101 Van Duzen River Bridge is located approximately five miles south of Fortuna, approximately one-half mile upstream or east of the confluence of the Van Duzen and Eel Rivers. The rural area surrounding the site is mainly flat bottom land used for grazing and open space.

The Highway 101 Van Duzen River Bridge consists of two separate bridges located side by side, one carrying northbound traffic and the other southbound traffic. An historic railroad bridge carrying the main line of the North Coast Railroad also crosses the Van Duzen in this location, in an alignment parallel to and less than 50 feet east of the northbound highway bridge.

The northbound bridge is a concrete arch structure built in 1924. The northbound bridge provided two-way traffic until the southbound bridge was constructed in 1952. At that time the northbound bridge was converted to two northbound lanes. However, the narrowness of the older northbound bridge (21 feet of clear roadway width) contributed to a high accident rate on the bridge, and in 1974 the northbound bridge was restricted to a single lane of northbound traffic. The northbound bridge is the only section of single line highway within a 104-mile stretch of Highway 101.

From bank to bank, the bridges are both approximately 800 feet long. However, the width of the river channel in this location is only about 400 feet at ordinary high water (OHW), and less than 50 feet during low flow conditions in the summer.

The river bottom is entirely composed of river run gravel. Extensive riparian woodlands exist along the north bank of the river, extending several hundred feet back from the shoreline. A much narrower band of riparian woodland,

the existing southbound bridge. The span of the new northbound bridge will be supported by three supporting piers, which will require the placement of approximately 570 cubic yards of concrete in sealed forms for footings and the piers themselves, plus 108 steel piles below the footings. An additional 600 cubic yards of rock backing and rock slope protection will be placed at the bridge abutments.

To improve sight distances and traffic safety, the new bridge will be constructed at a slightly higher level than the existing bridge. Raising the height of the bridge will require raising the height of the approaches to the bridge. A total of approximately 30,000 cubic yards of earthern material will be placed in upland areas to raise the approaches.

To construct the project, the river channel will need to be temporarily diverted and temporary construction access roads will need to be constructed within the riverbed. Up to 4,000 cubic yards of gravel may need to be excavated for a bypass channel to divert the low flow of the river around the work area and to facilitate access to the new bridge piers and abutments. Temporary bridges or culverts may also need to be installed. The excavated gravel will be temporarily stockpiled at the construction site above ordinary high water until the project is completed. After bridge construction is complete, the gravel will either be backfilled into the bypass channel, the natural channel, or spread out on the unvegetated river bar, filling in all holes and depressions from construction, as required by the Department of Fish and Game. A temporary sediment retention basin may also be excavated on a dry, unvegetated portion of the river bar to contain muddy waters pumped from pier or abutment foundations. The basin would be backfilled and smoothed over upon project completion.

As noted, raising the height of the northbound bridge will require raising the grade of the roadway north of the bridge. Raising the grade will not allow access from the northbound lanes of the highway to the private dirt road along the west side of the highway that is used by the public for fishing and river access. To retain the capability of turning onto and off of the northbound highway from this access road, and to consolidate highway access openings, the applicant proposes to extend the dirt access road northward parallel to the highway to where it would join with another existing access to the highway. The more southerly access point to the highway would then be eliminated.

Extending the dirt access road will result in the removal of approximately one-half acre of non-wetland riparian vegetation. Loss of the vegetation will be mitigated by replacement-in-kind on an approximately one-acre property just across the highway and slightly north of the affected area.

3. Fill in Coastal Waters and Wetlands

The Coastal Act defines fill as including "earth or any other substance or material...placed in a submerged area." The proposed project includes placing fill in coastal waters and wetlands. The permanent fill to be placed below

the ordinary high water line (OHWL) consists of the two new bridge columns and their associated footings and piles, as well as the rock slope protection and backfill to be placed at the south bridge abutment. The total volume of new fill proposed below the OHWL is 570 cubic yards for the columns and their associated footings and piles, and 644 cubic yards for the south bridge abutment, yielding a grand total of 1,214 cubic yards. This total is comparable to the 1,310 cubic yards of structural and earthen fill which will be removed below the OHWL through removal of the old bridge.

In terms of surface area, the proposed project would result in a total of 720 square feet of fill at the OHWL compared to the approximately 850 square feet of fill at the OHWL to be removed. The project also includes approximately 4,000 cubic yards of temporary gravel fill during construction to create water diversions, access roads, and a sediment basin. All of this temporary fill material will consist of gravel from the gravel bar on-site which will be regraded to restore the pre-existing contours upon completion of the project. Thus, there will be no net increase in fill associated with the project. In fact, the project will slightly decrease the amount of total fill below the OHWL by approximately 96 cubic yards or 130 square feet.

Section 30233 of the Coastal Act provides as follows, in applicable 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 [eight purposes, including...]
>
> (5) 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....

Coastal Act Section 30233(a) sets forth a three part test for all projects involving the filling of coastal waters and wetlands. These are:

1. that the project is limited to one of the eight stated uses.
2. that feasible mitigation measures have been provided to minimize adverse environmental effects; and
3. that the project has no feasible less environmentally damaging alternative;

With regard to the first test, the proposed project is for an incidental public service purpose. A primary objective of the project is to improve public safety by replacing an existing, structurally deficient bridge that would be vulnerable to collapse in the event of a strong earthquake. The Highway 101 bridge provides access to and along a portion of the coastal zone for residents and visitors. As such, the bridge provides a public service and the proposed project is necessary to ensure that this public service will

continue to be available. Therefore, the Commission finds that the purpose of the fill is consistent with subsection (5) of Section 30233(a).

With regard to the second test, feasible mitigation measures can be employed to minimize the project's adverse environmental effects. With regard to the impacts of the proposed permanent fill on the habitat values of coastal waters, the project is self-mitigating in the sense that more fill will be taken out of the river with removal of the earthen fill and the larger columns associated with the existing bridge than will be placed in the river with installation of the rock slope protection on the south bridge abutment and the narrower columns of the new bridge. As noted above, the project will result in a net decrease of fill in the river at the OHWL of approximately 96 cubic yards or 130 square feet.

The proposed temporary fill for the access roads, water diversions, and sediment basin, however, could result in short term impacts on fisheries, water quality, and stream habitat. To reduce these impacts on fisheries, the applicant has proposed to maintain a corridor for migrating fish during the anticipated two year construction period by either using culverts or bridged bypass channels for construction access road crossings of the river. To reduce sedimentation impacts the applicant proposes to do any necessary excavation during the low flow period, install coffer dams as needed, and avoid construction activity in flowing streams. To prevent any impacts on river habitat, the applicant proposes to recontour the site to the approximate configuration of the natural channel.

The Department of Fish and Game in its 1601 streambed alteration agreement recommended a number of additional mitigation measures including (a) limiting construction operations in flowing water to the period of June 1 through September 30; (b) stabilizing and maintaining areas of disturbed soils with appropriate erosion control measures to prevent soil erosion; and (c) removing all construction debris from the worksite at the end of the work period.

Therefore, to minimize the adverse environmental impacts and ensure consistency with the second test of Coastal Act Section 30233(a), the Commission attaches Special Condition No. 5, which requires the mitigation measures proposed by the applicant noted above, and the other mitigation measures recommended by the Department of Fish and Game noted above to be implemented.

With regard to the third test of Section 30233(a), it appears that there are no other feasible less environmentally damaging alternatives to the proposed fill. The no-project alternative is unacceptable because the substandard characteristics of the bridge would eventually make the structure seismically unsafe to use. Investigations were made into the feasibility of rehabilitating the existing bridge, but it was determined that the original integrity of the bridge cannot be restored. Widening the southbound bridge to accommodate two-way traffic was determined to be economically infeasible. Finally, building the bridge in another location would not result in less

7 of 19

environmental damage to the river, as the bridge would need to be at least as long as the proposed bridge, and realigning the highway would cause significant disturbance of the riparian woodlands that are found in the area. Therefore, the Commission finds that the proposed project involves the least environmentally damaging feasible alternative.

4. Protection of Biological Productivity, Water Quality, and Environmentally Sensitive Habitat Areas.

Section 30231 of the Coastal Act provides as follows, in applicable part:

> The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes...shall be maintained and, where feasible, restored...

Section 30107.5 of the Coastal Act defines "environmentally sensitive area" as:

> Any area in which plant or animal life or their habitat are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and development.

Section 30240 of the Coastal Act provides as follows, in applicable part:

> (a) 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.
>
> (b) 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.

Within the vicinity of the project, there are well-developed stands of woodland riparian habitat. The proposed extension of the access road along the west side of the highway will result in the loss of approximately 0.5 acres of upland riparian vegetation consisting of red alder, black cottonwood, and willow trees, as well as thimbleberry, poison oak and blackberry shrubs.

The damage to the riparian vegetation from extension of the access road is unavoidable, and alternative locations for such a road are not available. Section 30240(a) strictly limits the uses allowable in areas of sensitive habitat, including riparian corridors. For instance, dwellings and other structures and roads can ordinarily be located outside riparian corridors and are therefore not dependent on such resources. However, a river like the Van Duzen forms a unified ecological system with its riparian vegetation in the sense that the riparian vegetation is dependent on the river. To gain access to the riverbank to fish or swim, a person must cross through the riparian corridor. Therefore, facilities such as paths which are designed to allow

access to the water are dependent on the resource; without a river and its associated riparian vegetation, there would be no need for a path.

In this instance, the existing dirt access road serves as such a path to allow fishermen and swimmers access to the water, and the lengthened access road proposed as part of the project will serve the same function. The Commission therefore concludes that this project is consistent with the resource-dependent limitation of Section 30240(a).

Section 30240(a) also requires that significant disruption of habitat values shall be avoided when locating project within riparian corridors. In this case, the applicant has minimized the impacts of the access road extension on the riparian habitat by (1) locating it as close as possible to the highway, (2) not raising the elevation of the access road extension which would have required widening the base of the roadway and resulted in the removal of a wider swath of riparian vegetation, (3) decreasing lane width to 10 feet from the customary 12 feet, and (4) eliminating shoulders. The roadway cannot be moved closer to the highway because of the presence of various utility lines between the access road and the highway.

It should be noted that approximately half or more of the 1/2-acre riparian area to be affected is periodically cut by the utility company to maintain its lines. (Such vegetation clearing qualifies under Coastal Act Section 30610 as a form of repair and maintenance that is exempt from coastal development permit requirements.)

To mitigate for the loss of riparian habitat, the applicant proposes to create 0.8-acres of new riparian woodland at an adjacent upland pasture. The applicant has submitted a mitigation planting and monitoring plan (see Exhibit 11) that calls for the planting of red alder, cottonwood, and willow plants. Approximately 500 plants will be planted in clusters equivalent to planting on ten-foot centers. Caltrans will monitor plant survival over a three year period and submit monitoring reports annually to the Commission. The mitigation will be considered successful if at least 74 trees survive, which is twice the number of trees to be removed by extension of the access road. If success is not attained, Caltrans will replant as necessary until the 74 trees have become established.

For several reasons, the Commission finds that the extension of the access road will not result in significant disruption of habitat values in the environmentally sensitive habitat areas. First, the trees affected are located on the fringe of a very large and well established riparian woodland that extends approximately half a mile westward to the Eel River. Second, as previously noted, much of the affected area is periodically cut by utility companies for utility line maintenance. Third, by mitigating for the loss of riparian vegetation at an approximately 2:1 ratio, in a nearby location, the applicant will ensure that the habitat value provided by the area to be disturbed will continue.

9 of 19

To ensure that the proposed mitigation and monitoring plan is implemented and new habitat values are created, the Commission attaches Special Condition No. 6. This Special Condition requires the applicant to implement the submitted plan. The Commission finds that, as conditioned, the proposed project is consistent with Section 30240(a) as the riparian habitat values of the site will not be significantly disrupted.

The Commission notes that the proposed mitigation site is located just east of Highway 101, immediately adjacent to the coastal zone. While the Commission does not ordinarily approve mitigation outside the coastal zone, the Commission finds that the proposed mitigation site is appropriate in this case for several reasons. First, the mitigation is being provided on-site, in the sense that it is immediately adjacent to the highway being repaired, and is within several hundred feet of the riparian area to be disturbed by the project. Second, the birds and other wildlife using the area to be affected by the riparian removal will be able to utilize the mitigation site because of its close proximity. Third, no closer mitigation site within the coastal zone appears to be available for that purpose.

The two potential alternative mitigation sites include agricultural land to the north of the area to be disturbed and open areas within the other riparian habitat closer to the river. The agricultural land north of the area of disturbance is part of a sizable grazing operation. Use of portions of this agricultural land could adversely affect coastal agriculture. Although the proposed mitigation site is also used for grazing, its overall value for coastal agriculture is severely limited by its small size (about an acre) and its isolation from other agricultural lands. Use of the open areas within the other riparian woodlands closer to the river would impair their current use as a staging area for river and fishing access. Therefore, the Commission finds that use of the proposed area for mitigation is appropriate in this case.

5. Public Access.

Section 30212 of the Coastal Act requires that access from the nearest public roadway to the shoreline be provided in new development projects except where it is inconsistent with public safety, military security, or protection of fragile coastal resources, or adequate access exists nearby. Section 30211 requires that development not interfere with the public's right to access gained by use or legislative authorization. In applying Section 30211 and 30212, the Commission is also limited by the need to show that any denial of a permit application based on this section, or any decision to grant a permit subject to special conditions requiring public access is necessary to avoid or offset a project's adverse impact on existing or potential access.

As noted previously, the privately owned existing dirt road along the west side of the highway just north of the bridge is used extensively by the public for access to the river and fishing, as it connects to cleared areas and a network of trails along the north bank of the river. The proposed project will eliminate this access road's current connection to the northbound lanes

of Highway 101. Replacement of this access road's intersection with Highway 101 as proposed by the applicant will ensure that public access to the river will be maintained. Furthermore, Caltrans indicates that the existing access road entry will not be closed until the new entry and road extension are completed.

The proposed construction staging area for the approximately two year project will be located within the major clearing west of the highway that is also used by fishermen and other users of the river. Thus, the project could have a temporary impact on access if use of this area were completely blocked. However, the applicant indicates that Caltrans Standard Specifications state that all public traffic shall be permitted to pass through the work area with as little inconvenience and delay as possible.

In sum, the Commission finds that the project as proposed by the applicant will not adversely affect public access. To ensure that the project is carried out in this manner, the Commission attaches Special Condition No. 7 which requires (a) that the entrance of the existing access road nearest the bridge not be closed until the new entry and road extension are completed, and (b) that the applicant allow public access users to pass through the construction staging area during the construction of the project. As conditioned, the Commission finds that the proposed project is consistent with the public access policies of the Coastal Act.

6. Public Trust.

The project site is located in an area that has been tentatively mapped by the State Lands Commission as being subject to the public trust. The Commission therefore attaches Special Condition No. 1, which requires the applicant to submit to the Executive Director a final written determination that all necessary approvals have been obtained from the State Lands Commission prior to issuance of the coastal development permit. The Commission attaches this condition to ensure that the applicant has obtained all the necessary property rights to carry out the project.

7. U.S. Army Corps of Engineers Review.

The project requires review and approval by the U.S. Army Corps of Engineers. Pursuant to the Federal Coastal Zone Management Act, any permit issued by a federal agency for activities that affect the coastal zone must be consistent with the coastal zone management program for that state. Under agreements between the Coastal Commission and the U.S. Army Corps of Engineers, the Corps will not issue a permit until the Coastal Commission approves a federal consistency certification for the project or approves a permit. To ensure that the project ultimately approved by the Corps is the same as the project authorized herein, the Commission attaches Special Condition No. 2 which requires the permittee to submit to the Executive Director evidence of U.S. Army Corps of Engineers approval of the project prior to the commencement of work.

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8. Humboldt County LCP.

The Humboldt County LCP allows for the construction of bridges in wetland areas provided that the least environmentally damaging alternative has been selected and the impacts of the project have been appropriately mitigated. As discussed above, the submitted project has been designed as the least environmentally damaging alternative, and as conditioned by the Commission, includes mitigation for the adverse impacts of the fill in a manner consistent with the Humboldt County LCP.

9. California Environmental Quality Act (CEQA).

The project, as conditioned, will not have a significant adverse effect on the environment, within the meaning of CEQA. As discussed above, the project has been mitigated to ensure consistency with the Coastal Act to maintain and restore the biological productivity and water quality of coastal streams and wetlands and to avoid the significant disruption of environmentally sensitive, riparian habitat values. The applicant is the lead agency for the project under CEQA. Caltrans adopted a Final Environmental Impact Report for the project in 1991.

RSM/ltc
4424p

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ATTACHMENT A

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 permittee 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.

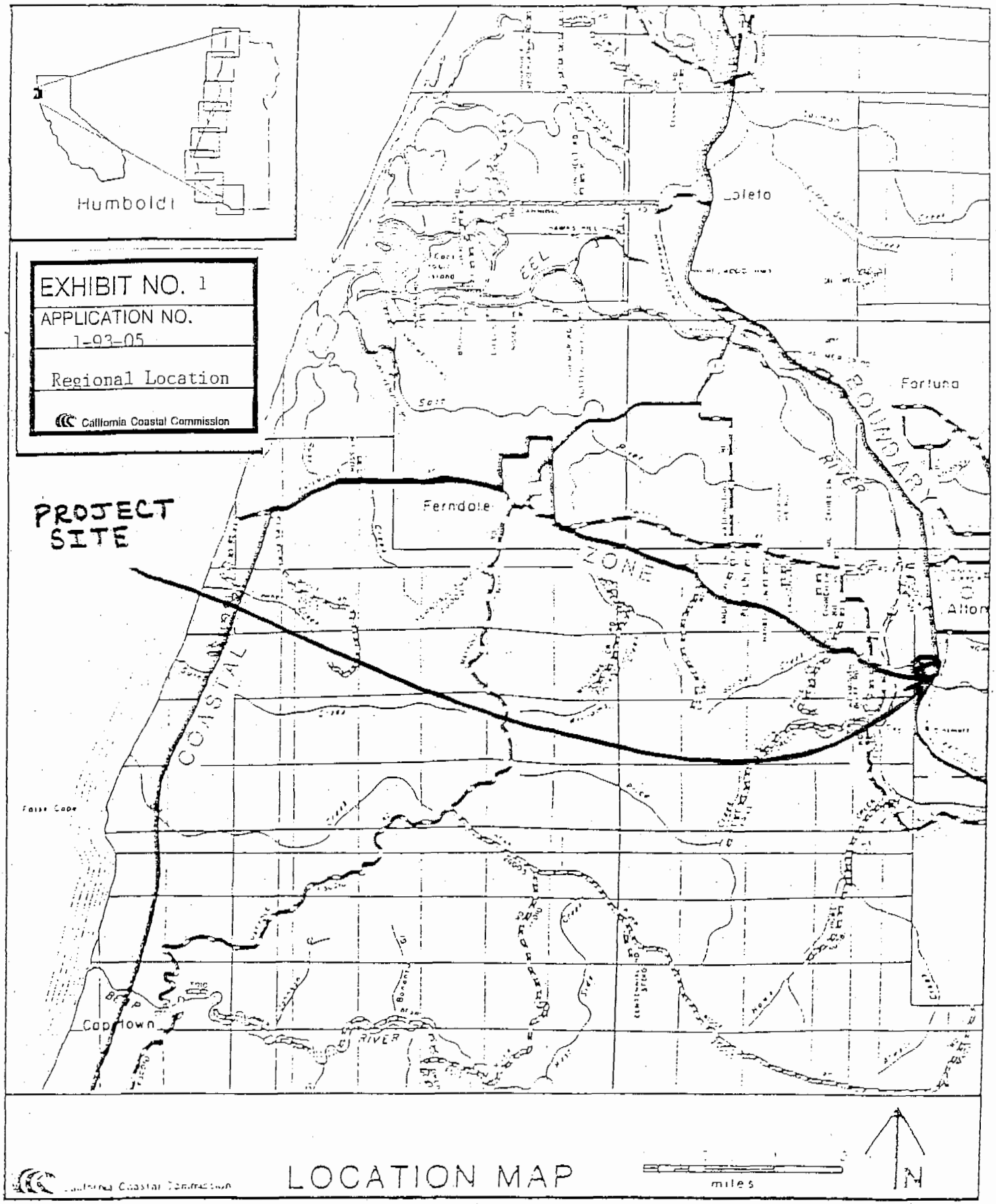
3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.

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

5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.

6. 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.

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


Humboldt
EXHIBIT NO. 1
APPLICATION NO.
1-93-05
Regional Location
California Coastal Commission
PROJECT SITE
Loleta
Fortuna
Ferndale
Alton
Capetown
COASTAL
ZONE
BOUNDARY
RIVER
LOCATION MAP
miles
N

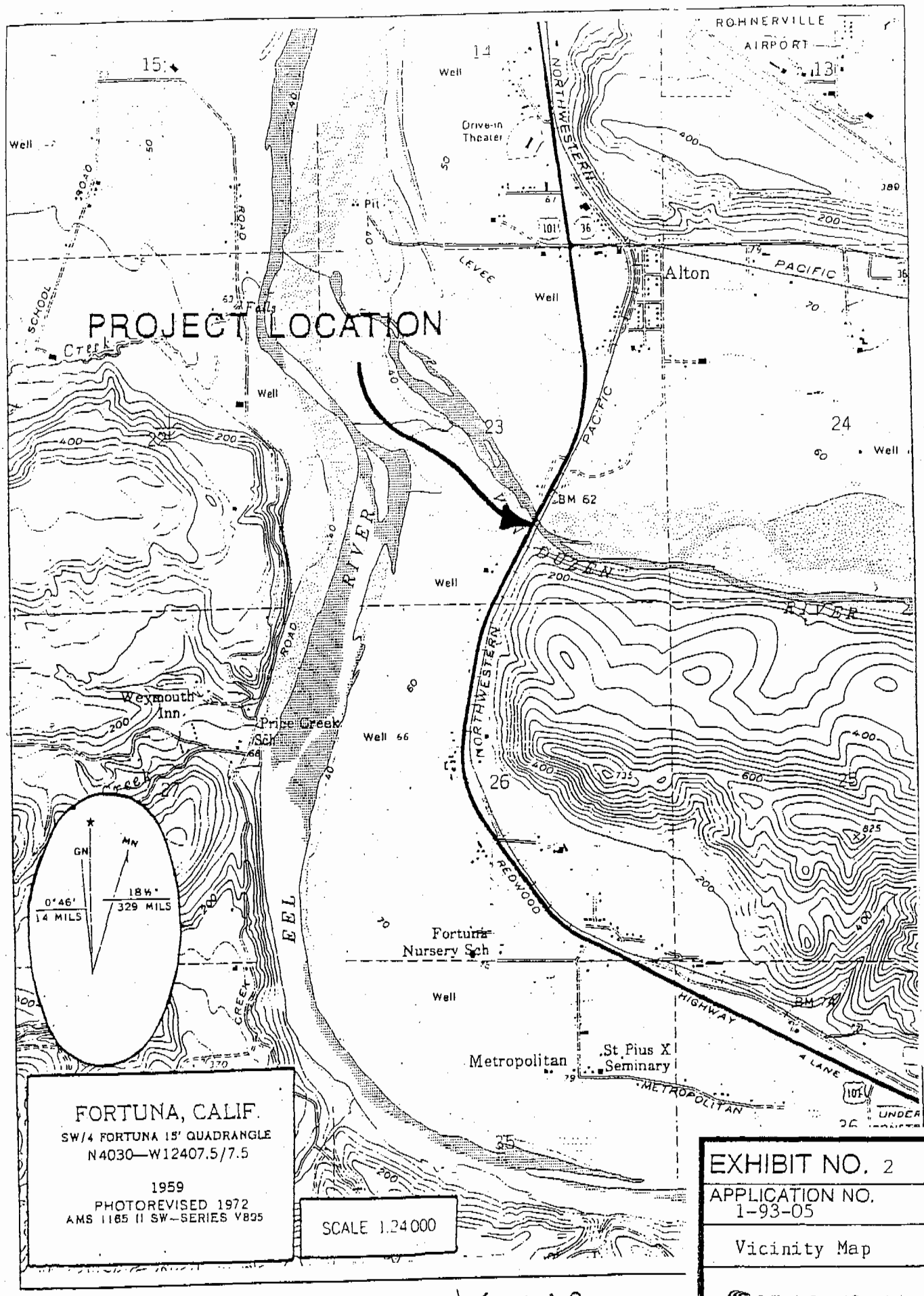


EXHIBIT NO. 2

APPLICATION NO. 1-93-05

Vicinity Map

California Coastal Commission

15 of 19

Exhibit A
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

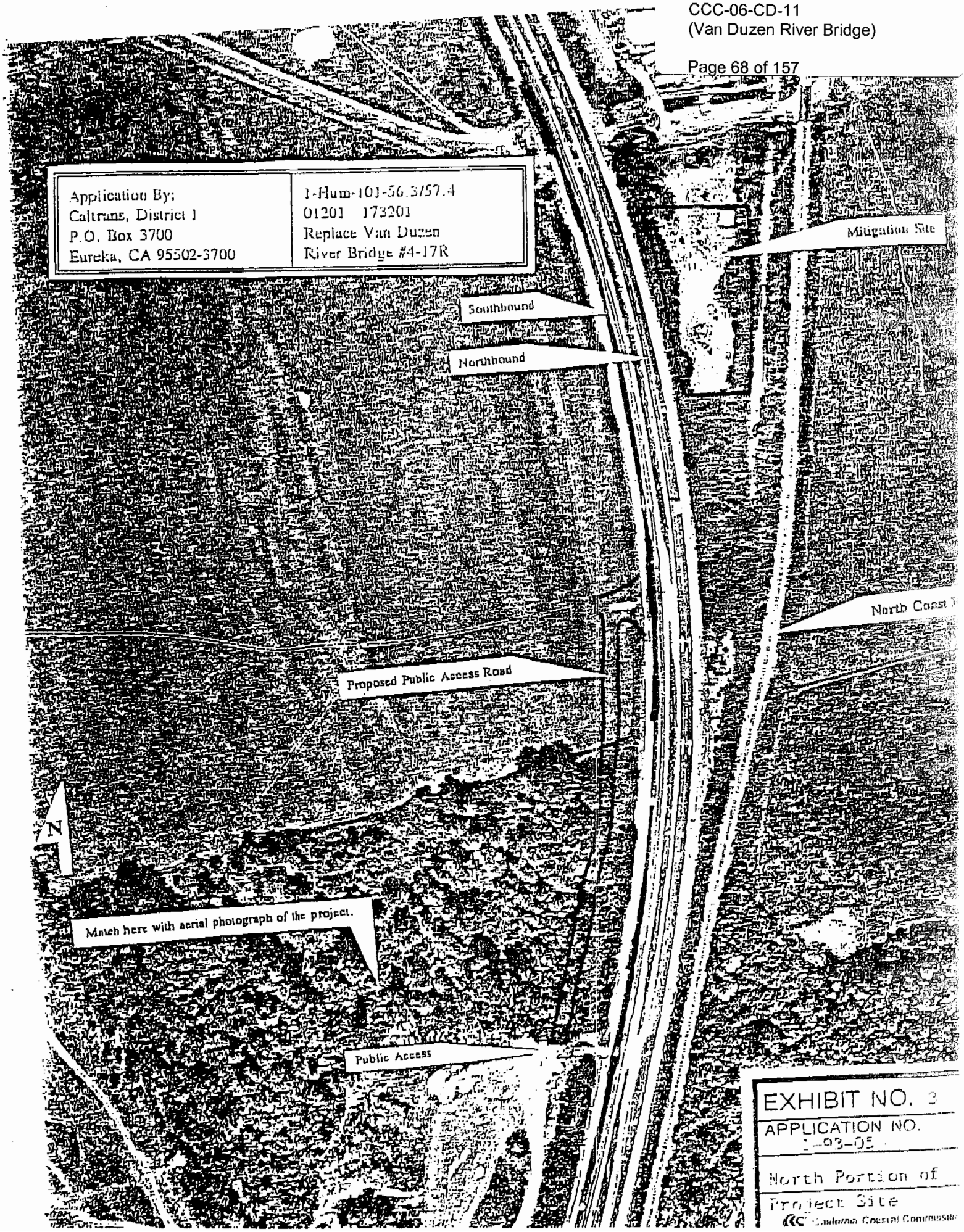


EXHIBIT NO. 3
APPLICATION NO.
1-03-05
North Portion of
Project Site
California Coastal Commission

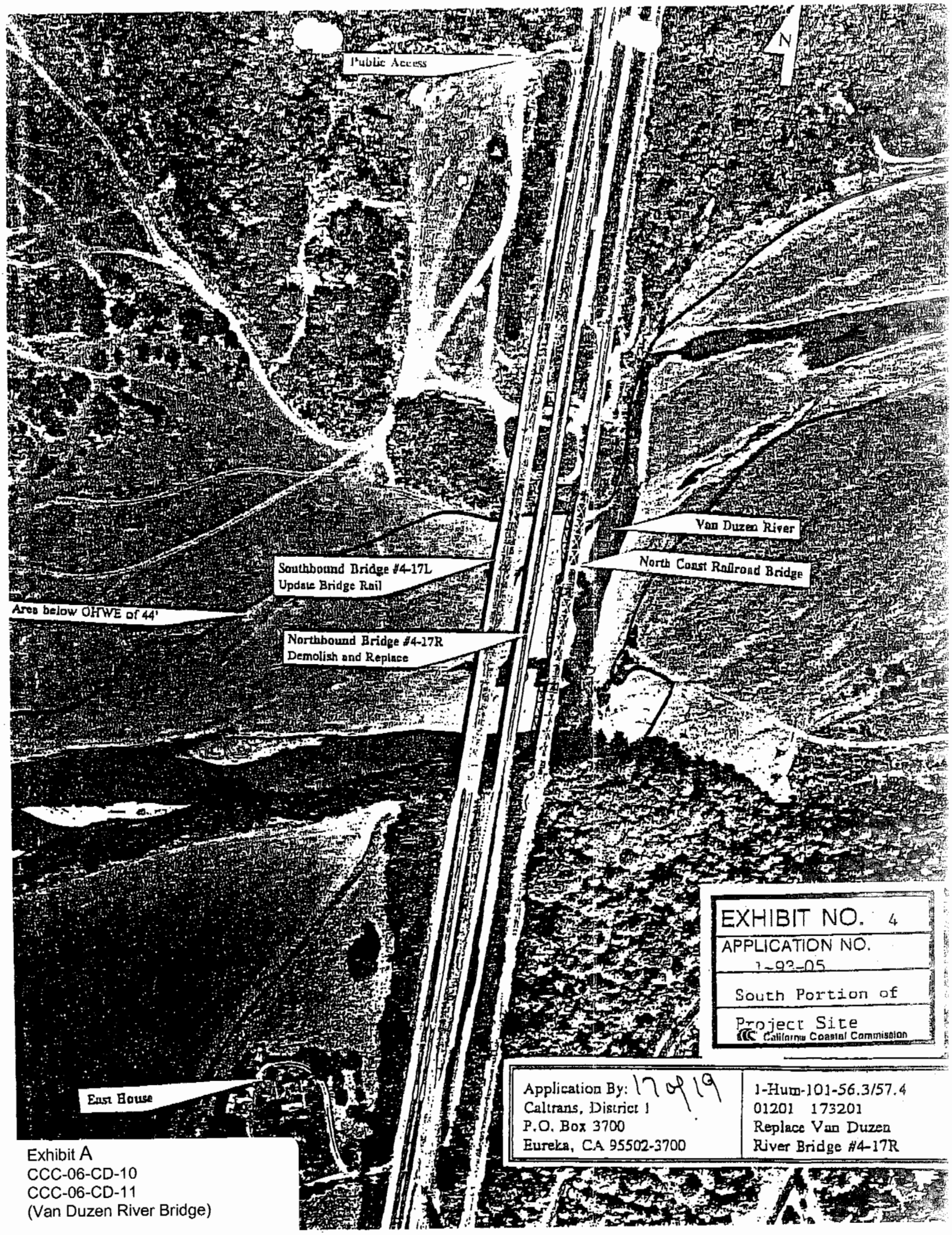


EXHIBIT NO. 4
APPLICATION NO.
1-93-05
South Portion of
Project Site
California Coastal Commission

Application By: 17 of 19
Caltrans, District 1
P.O. Box 3700
Eureka, CA 95502-3700

1-Hum-101-56.3/57.4
01201 173201
Replace Van Duzen
River Bridge #4-17R

Exhibit A
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

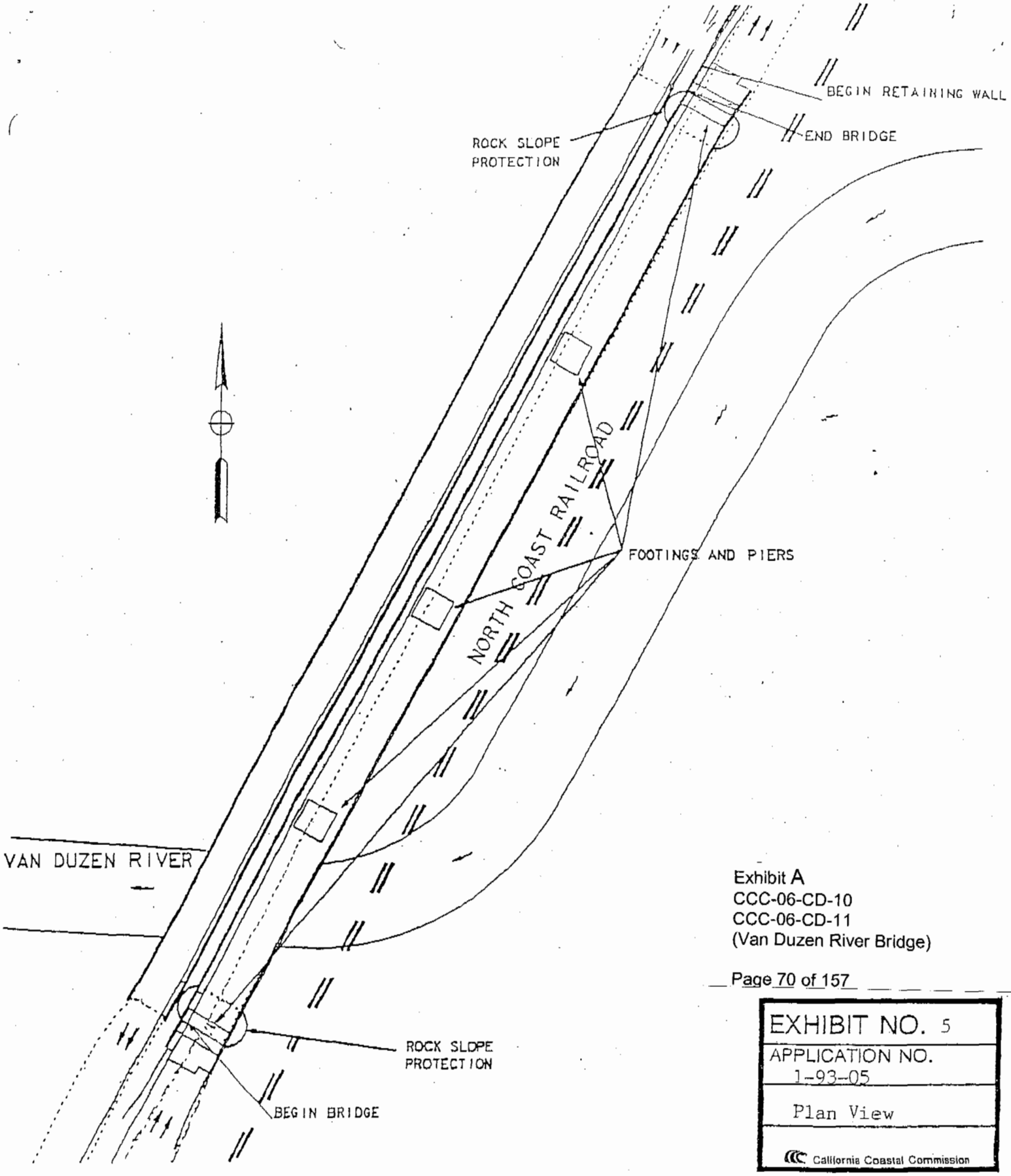


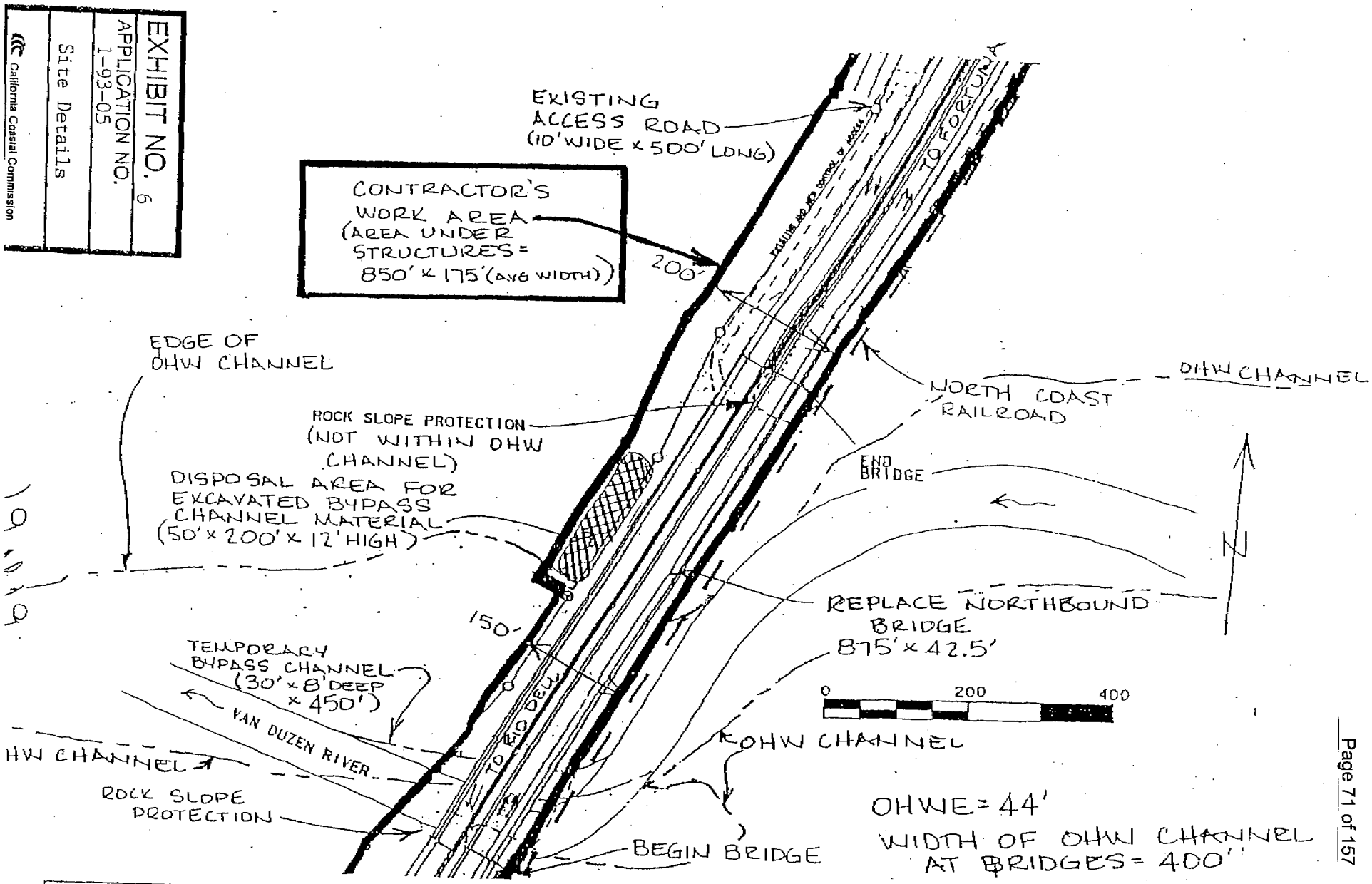
Exhibit A
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

EXHIBIT NO. 5
APPLICATION NO. 1-93-05
Plan View
California Coastal Commission

PURPOSE: Replace Northbound Bridge #4-17R
DATUM: NGVD
ADJACENT PROPERTY OWNERS:
1. Mossoe, 507 Sunset Dr. Paradise CA 95969
2. Dwelley, 56625 US101, Fortuna CA 95540

PLAN VIEW
PROJECT CONDITIONS
CalTrans, District 1
1656 Union Street
Eureka, CA 95501

VAN DUZEN RIVER BRIDGE
REPLACEMENT
IN: Van Duzen River
AT: Van Duzen River Bridge #4-17R
COUNTY OF: Humboldt, CA APPLICATION BY: CalTrans



Purpose: Replace Northbound Bridge #4-17R Datum: NGVD Adjacent Property Owners: 1.Massae, 507 Sunset Dr, Paradise CA 95969 2.Dwelley, 56625 US101, Fortuna CA 95540	PLAN VIEW Caltrans, District 1 1656 Union St. Eureka, CA 95501	VAN DUZEN RIVER BRIDGE In: Van Duzen River At: Van Duzen River Bridge #4-17R County of: Humboldt, CA Application By: Caltrans Sheet : 2 of 6 Date:11-15-92

EXHIBIT NO. 6
APPLICATION NO. 1-93-05
Site Details
California Coastal Commission

SOUTHBOUND VAN DUZEN
RIVER BRIDGE REPLACEMENT
EA 014401

COPY OF
NMFS
BIOLOGICAL OPINION
03-11-2002

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

MAR 11 2002

151422SWR01AR6195:MK

EXHIBIT NO. 4
APPLICATION NO.
1-04-014
CALTRANS
NMFS BIOLOGICAL OPINION (1 of 42)

Mr. Michael G. Ritchie, Division Administrator
Federal Highway Administration
California Division
980 Ninth Street, Suite 400
Sacramento, California 90802-4213

Dear Mr. Ritchie:

This document transmits the National Marine Fisheries Service's (NMFS) biological opinion (Opinion) regarding the Highway 101 Van Duzen River Bridge Replacement Project (HDA-CA, 01-HUM-101-56.3/57.4) and its effects on listed Pacific salmonids in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). This Opinion (Enclosure 1) is primarily based on NMFS' review of your March 12, 2001, letter and Biological Assessment (BA). As required by the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), as amended (16 U.S.C. 1801 *et seq.*), NMFS' Essential Fish Habitat (EFH) Conservation Recommendations for Pacific coast salmon that may be affected by the proposed action are also enclosed (Enclosure 2).

Endangered Species Act Consultation

NMFS has determined that the Highway 101 Van Duzen River Bridge Replacement Project may affect the following listed species and designated critical habitat.

Chinook Salmon (*Oncorhynchus tshawytscha*)
California Coastal Evolutionarily Significant Unit (ESU); threatened, 16 September 1999, 64 FR 50394; critical habitat, 16 February 2000, 65 FR 7764

Coho Salmon (*Oncorhynchus kisutch*)
Southern Oregon/Northern California Coast ESU; threatened, 6 May 1997, 62 FR 24588; critical habitat, 5 May 1999, 64 FR 24049

Steelhead (*Oncorhynchus mykiss*)
Northern California ESU; threatened, 7 June 2000, 65 FR 36074

The description of the project and the analysis of effects to listed Pacific salmonids are based on the present configuration and geometry of the Van Duzen River channel at the project site. While the channel may shift before the onset of construction, we believe that any likely channel

The description of the project and the analysis of effects to listed Pacific salmonids are based on the present configuration and geometry of the Van Duzen River channel at the project site. While the channel may shift before the onset of construction, we believe that any likely channel configuration will not result in more serious adverse effects due to the project than the present configuration. For example, we analyze adverse effects due to removal of pier 4, which is presently in the low flow channel. Should the low flow channel shift away from pier 4, it will most likely either be located away from any piers, or will capture pier 2 or 3, resulting in either fewer or essentially equal effects. In the unlikely event that the low flow channel splits and captures more than one pier, or requires that more than one temporary crossing be constructed, a new analysis of effects will be required.

The following description of the Proposed Action is based on a description provided in the Biological Assessment prepared for this project (Caltrans 2001).

Caltrans proposes to replace the southbound Van Duzen River Bridge (Bridge No. 04-0017L), on Highway 101 in Humboldt County, California from post miles 56.3 to 57.4, south of Fortuna. The existing bridge is a 246.84-meter (809-foot) concrete girder on steel beam bridge constructed in 1950. It is 7.3 meters (24 feet) wide, and consists of a 6.1-meter (20-foot) traveled way and two .6-meter (2-foot) wide maintenance walkways. The support of the bridge consists of four piers, five bents and two abutments. The bridge currently has a 102-millimeter (4-inch) PG&E gas line and four Pacific Bell telephone lines located on the west side of the structure. The structure in recent years has required extensive repairs and is considered to be at the end of its useful life.

Replacement of the northbound bridge (Bridge No. 04-0017R), widening the southbound bridge, and replacement of the railing was approved in January of 1992. In May of 1992, the focus shifted from the widening of the southbound bridge to a replacement project after foundation investigations revealed that the Van Duzen River channel had degraded, and scour was occurring at the piers. Due to the additional work required for the southbound bridge, it was proposed to initiate a separate project to replace the southbound bridge within five years. The bridge rail replacement and minimal seismic upgrade work for the southbound bridge was done during the replacement of the northbound bridge beginning in 1992. The northbound bridge project was completed before local ESUs of Pacific salmonids were proposed for ESA listing.

The scope of the Proposed Action includes removal of existing bridge piers and abutments, and construction of new piers, abutments and bridge superstructure. Other work includes construction of sedimentation basins, cofferdams, falsework and placement of rock slope protection at abutments.

Specific Project Components

Construction will utilize Best Management Practices to control silt and erosion of exposed soils. A copy of Caltrans' 1997 Storm Water Quality Handbook will be provided to the contractor for use in the preparation of a Storm Water Pollution Prevention Plan. Construction disturbance will be restricted to the minimum necessary for completion of the project. Construction within the

river is to be scheduled between June 15 and October 15 to minimize impacts to listed Pacific salmonids and to avoid impacts to adult salmonids. Water will be diverted using clean, washed, spawning-sized gravel to block the flow and gradually displace the water away from the work area. No reaches of the river or pools will be de-watered or enclosed in a manner that is likely to result in stranding or entrapping fish. Sheet pile coffer dams will be needed to maintain a de-watered work site and to provide shoring. Sheet pile will be placed into the dry work area after all water has been diverted to avoid entrapping fish. Upon completion, all material used for diversion will be leveled to conform to natural topography or removed from the riverbed. Pumping is required to maintain a de-watered work site. Water pumped from the work site shall be allowed to flow into a settling basin then percolate into the ground. A spill plan will be developed for potentially hazardous materials including concrete. No concrete washings or water from concrete will be allowed to enter the river. No wet concrete will contact river water. No equipment staging or refueling will take place within the river channel.

The project will take two construction seasons beginning in the spring of 2003. All information relates to work to be completed during each of the two construction seasons (5/2003 to 1/2004) & (1/2004 to 9/2004), as well as pre-project geotechnical test drilling to be completed between 5/2002 and 8/2002.

Geotechnical test drilling: Caltrans proposes to do geotechnical drilling at five locations beneath the southbound Van Duzen bridge to evaluate soil and bedrock conditions for design purposes. Some locations may require drilling in the waters of the Van Duzen River. First, using a circular drill bit, five five-inch diameter holes will be drilled through the existing southbound bridge decking along the bridge's centerline and parallel with the northbound bridge piers. Several of the five-inch diameter concrete cylinders of bridge decking created by this drilling may fall into the active river channel beneath the bridge. They will be retrieved if they land on the dry river bed or in shallow water, otherwise they will be left in the water. No additional material will enter the river channel. Next, five-inch diameter casings (PW casing) will be driven through the bottom of the channel to a depth that allows sealing. Then a four-inch inner casing will be inserted to a greater depth to obtain core samples. Initial drilling through gravels will be accomplished using clean water as a lubricant. Once bedrock or consolidated material is reached, drilling mud (bentonite clay) will be used to lubricate the bit inside the casing. No other additives will be used in the bentonite drilling mud when drilling within the active river channel, including the dry gravel beds and bars away from flowing water. The drilling mud will be contained on the deck in a metal container. After drilling is completed and the four-inch inner casing and core samples are removed, the five-inch outer casings will be flushed out until the water runs clear. Then the outer casings will be removed from the river channel. The spoils will be contained at all times and transported to the nearest Caltrans maintenance station for proper disposal. As an extra precaution, straw wattles will be placed on the bridge deck insuring that no material from the drilling process will enter the river water.

Caltrans will avoid drilling in water if possible, either by waiting until the channel is dry, or choosing locations out of the water. Caltrans will contact NMFS in advance of any drilling activities in the water so that a NMFS biologist can observe the methods and management practices for future reference.

The total anticipated time for drilling one test bore may be up to two weeks due to the depth of drilling. It will take eight to ten weeks to complete the project. This drilling is scheduled to begin May 15, 2002; however, drilling in flowing water will not begin until after June 15, 2002.

New bridge: The proposed bridge will be a cast-in-place concrete box girder bridge, 12.95 meters (42 feet) wide and 246.88 meters (809 feet) long. The centerline of the proposed bridge will match the centerline of the existing bridge and the elevation will be raised a maximum of 2.44 meters (8 feet) to match the northbound structure. The proposed bridge will have three piers. Each pier will have a six-foot thick, 7.3-square meter (78-square foot) spread footing with 36 sheet piles. The abutments will also be constructed on spread footings (approximately. 5.5 meters by 14.6 meters) with 50 sheet piles for each abutment.

Access: Access to the work site is proposed via an existing road on the northwest side of the existing southbound bridge. Therefore, no riparian vegetation will be disturbed for access, or by any other construction activity, although some vegetation near the existing abutments will be disturbed in order to place additional fill that is needed to raise the bridge. Equipment will cross the low flow channel on a temporary crossing constructed of a flat-car bridge that will fully span the low flow channel. Construction of the crossing may require that a piece of heavy equipment cross the channel in the water once to install and once to remove. Footings for the bridge will either be pre-cast concrete, log stringers, or some other solid material; and approaches will be made from gravel collected from the adjacent bar or imported. The footings and approaches will not contact the water. The crossing will be removed at the end of the construction season, prior to increased fall flows. Equipment and material will be moved along temporary roads graded on the gravel bar to the work site. The gravel bar will be regraded as close as possible to its original configuration at the close of each construction season.

De-watering: Diversion of the Van Duzen River at the construction site is required to remove existing piers, construct the new piers and to place the false work. A temporary dike constructed of clean, washed, spawning-sized gravel is proposed to be used to divert the flow and maintain dry conditions around pier 4. After all water is diverted to avoid entrapping fish, sheet pile coffer dams will be placed into the dry work area. Subsurface flow may percolate into the coffer dam requiring that water be pumped out to maintain dry conditions. Since there will not be any direct connection between the river and cofferdam, and the area will be above the low-flow water when the cofferdam is placed, there is no possibility of entrapping fish within the excavation and no need to screen the pump intake to protect fish.

Pumping within the excavations at the various pier footings will be required to maintain de-watering. The effluent will be pumped into a settling basin, constructed either by digging a hole or building a berm around the basin area using native materials. The settling basin will be located on a large gravel bar downstream, west of the southbound structure and on the gravel bar within the Caltrans right-of-way. After construction, any residual silt or fine materials within the settling basin will be removed to a disposal site above the high water level.

Depending on changes to channel geometry, pools may form around piers 2 and/or 3 before construction is due to begin. Caltrans will remove any listed Pacific salmonids before construction activities begin in an isolated pool.

Construction year #1: In the first year the old bridge will be dismantled and removed. No explosives will be used to dismantle the existing bridge and no portion of the bridge will drop into the river. The first step in dismantling the bridge will be removing the traveled way. The long girder sections of the superstructure will be removed by crane.

Next, the existing columns will be removed to accommodate the construction of the new bridge columns. The footings of bents 2, 5 and 7 will be removed to below grade and below river degradation to an elevation determined by Structures Hydraulics staff. The footings of bents 3, 4, and 6 will be removed because they would be in conflict with the placement of the new piers. The structural engineer will determine which technique to use to remove the bents and footings in conflict with the new bridge.

In this season, construction of the new bridge abutments and new piers will also take place. To construct the footings of the new columns, cofferdams will be required in order to create a dry work area. First, the sheet piles will be hydraulically driven to the required depth and then the footings will be formed. Next, the columns will be erected.

Construction year #2: In the second year, the superstructure will be built. To build the roadway the river will once again need to be diverted, and the false work constructed and moved into place.

All dikes, berms, construction material, debris, temporary roads, and the settling basin will be removed and the contours of the gravel bar will be restored to natural elevations.

Action Area

An action area is defined as: "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50 CFR § 402.02). The action area for this consultation is within Humboldt County, California and includes the area of the Van Duzen River immediately under the bridge on Highway 101, and the surrounding area in which construction would take place, equipment would operate, and disturbed sediment may disperse (including the potentially sediment-affected area downstream of the confluence with the Eel River, which is approximately 1/4 mile downstream of the 101 bridge, and on to the estuary, which is approximately 10 miles downstream). The legal description of the area within which the center of the Proposed Action occurs is Section 23, Township 02 North, Range 01 West.

STATUS OF THE SPECIES/CRITICAL HABITAT

The following federally listed species and designated critical habitat may be adversely affected by the Proposed Action:

Chinook Salmon (*Oncorhynchus tshawytscha*)
California Coastal ESU; threatened, 16 September 1999, 64 FR 50394; critical habitat, 16 February 2000, 65 FR 7764

Coho Salmon (*Oncorhynchus kisutch*)
Southern Oregon/Northern California Coast ESU; threatened, 6 May 1997, 62 FR 24588; critical habitat, 5 May 1999, 64 FR 24049

Steelhead (*Oncorhynchus mykiss*)
Northern California ESU; threatened, 7 June 2000, 65 FR 36074

A description of the species and available historical and most recent published abundance information for listed Pacific salmonids, as well as life history and biological requirements, are summarized in Status Review of Chinook Salmon from Washington, Idaho, Oregon, and California (Meyers et al.1998), Status Review of Coho Salmon from Washington, Idaho, Oregon, and California (Weitcamp et al.1995), and Status Review of West Coast steelhead from Washington, Idaho, Oregon, and California (Busby et al.1996). Detailed status information on the listed species and their habitat is contained in the final rules for each particular species and habitat, published in the Federal Register. The following discusses the status under the ESA, general life history, population status, and designated critical habitat for each of the species.

Southern Oregon/Northern California Coast coho salmon

Status Under the ESA

The SONCC coho salmon ESU was proposed for listing as threatened on July 25, 1995 (60 FR 38011). On May 6, 1997, NMFS listed the SONCC coho salmon ESU as threatened (62 FR 24588). The SONCC coho salmon ESU ranges from Cape Blanco in Oregon to Punta Gorda in Northern California and includes the Klamath River and Trinity River which historically supported abundant coho salmon runs.

General Life History

In contrast to the life history patterns of other Pacific salmonids, coho salmon generally exhibit a relatively simple three-year life cycle. Most coho salmon enter rivers between September and February and spawn from November to January (Hassler 1987), and occasionally into February and March (Weitkamp *et al.* 1995). Coho salmon river entry timing is influenced by many factors, one of which appears to be river flow, in which they enter rivers on all but peak flood

flows and migrate upstream primarily in daylight. In addition, many small California stream systems have their mouths blocked by sandbars for most of the year except winter. In these systems, coho salmon and other Pacific salmonid species are unable to enter the rivers until sufficiently strong freshets open passages through the bars (Weitkamp *et al.* 1995).

Preferred water temperatures during the spawning migration range from 7.2°to 15.6°C (Bell 1991). Spawning is concentrated in riffles or in gravel deposits at the downstream end of pools with suitable water depth and velocity. Spawning depth range from 4 to 35 cm and velocities range from 25 to 91 cubic meters per second. The preferred range of water temperature during spawning is from 4.4°to 9.4°C (Reiser and Bjornn 1979; Bell 1991). Spawning substrate size ranges from 1.3 to 10.2 cm with 12% fines (Reiser and Bjornn 1979). After spawning, the female guards the nest for a short time, but both parents die soon after spawning (Scott and Crossman 1973).

Coho salmon eggs incubate for approximately 35 to 50 days, with incubation time varying inversely with temperature. Preferred temperatures for incubation range from 4.4° to 13.3°C (Reiser and Bjornn 1979; Bell 1991). Alevins remain in the gravel for two to three weeks after hatching (Hassler 1987) and newly emerged fry have been observed from March to July. Following emergence, fry move into shallow areas near the stream banks. As coho salmon fry grow, they disperse upstream and downstream and establish and defend territories (Hassler 1987).

Juvenile rearing usually occurs in tributary streams with a gradient of 3% or less, although they may move up to streams of 4% or 5% gradient. Juveniles have been found in streams as small as one to two meters wide. At a length of 38-45 mm, the fry may migrate upstream a considerable distance to reach lakes or other rearing areas (Godfrey 1965; Nickelson *et al.* 1992). During the summer, coho salmon fry prefer pools and riffles featuring adequate cover such as large woody debris, undercut banks, and overhanging vegetation with optimal water temperatures ranging from 12° to 14°C and the upper lethal temperature equal to 25.8°C (Reiser and Bjornn 1979). Juvenile coho salmon prefer to over-winter in large mainstem pools, backwater areas and secondary pools with large woody debris, and undercut bank areas (Hassler 1987; Heifetz *et al.* 1986). Juveniles primarily prey on aquatic and terrestrial insects (Sandercock 1991). Johnson (1970) indicated that coho salmon juveniles fed on various life stages of aquatic insects such as dipterans, ephemeropterans, plecopterans, and other insects, as well as crustaceans and fishes. Coho salmon rear in fresh water for up to 15 months, then migrate to the sea as smolts between March and June (Weitkamp *et al.* 1995).

Little is known about residence time or habitat use in estuaries during seaward migration, although it is usually assumed that coho salmon spend only a short time in the estuary before entering the ocean (Nickelson *et al.* 1992). While living in the ocean, coho salmon remain closer to their river of origin than do chinook salmon (Weitkamp *et al.* 1995). Nevertheless, coho salmon have been captured several hundred to several thousand kilometers away from their natal stream (Hassler 1987). After about 12 months at sea, coho salmon gradually migrate south and along the coast, but some appear to follow a counter-clockwise circuit in the Gulf of Alaska (Sandercock 1991). Coho salmon typically spend two growing seasons in the ocean before

returning to their natal streams to spawn as three year-olds. Some precocious males, called "jacks," return to spawn after only six months at sea.

Population Status

Available historical and most recent published coho salmon abundance information are summarized in NMFS coast-wide status review (Weitkamp *et al.* 1995). The following are some excerpts from this document.

> Gold Ray Dam adult coho passage counts provide a long-term view of coho salmon abundance in the upper Rogue River. During the 1940s, counts averaged approximately 2,000 adult coho salmon per year. Between the late 1960s and early 1970s, adult counts averaged fewer than 200. During the late 1970s, dam counts increased, corresponding with returning coho salmon produced at Cole Rivers Hatchery. Coho salmon run size estimates derived from seine surveys at Huntley Park near the mouth of the Rogue River have ranged from ca. 450 to 19,200 naturally-produced adults between 1979 and 1991. In Oregon south of Cape Blanco, Nehlsen *et al.* (1991) considered all but one coho salmon population to be at "high risk of extinction." South of Cape Blanco, Nickelson *et al.* (1992) rated all Oregon coho salmon populations as "depressed."
>
> Brown and Moyle (1991) estimated that naturally-spawned adult coho salmon returning to California streams were less than one percent of their abundance at mid-century, and indigenous, wild coho salmon populations in California did not exceed 100 to 1,300 individuals. Further, they stated that 46% of California streams which historically supported coho salmon populations, and for which recent data were available, no longer supported runs.
>
> No regular spawning escapement estimates exist for natural coho salmon in California streams. California Department of Fish and Game (CDFG 1994) summarized most information for the northern California region of this ESU. They concluded that "coho salmon in California, including hatchery populations, could be less than six percent of their abundance during the 1940's, and have experienced at least a 70 percent decline in the 1960's." Further, they reported that coho salmon populations have been virtually eliminated in many streams, and that adults are observed only every third year in some streams, suggesting that two of three brood cycles may already have been eliminated.
>
> The rivers and tributaries in the California portion of this ESU were estimated to have average recent runs of 7,080 natural spawners and 17,156 hatchery returns, with 4,480 identified as "native" fish occurring in tributaries having little history of supplementation with non-native fish. Combining recent run-size estimates for the California portion of this ESU with Rogue River estimates provides a rough minimum run-size estimate for the entire ESU of about 10,000 natural fish and 20,000 hatchery fish.

California Coastal chinook salmon

Status Under the ESA

The NMFS proposed listing the Southern Oregon and California Coastal (SOCC) chinook salmon ESU as threatened on March 9, 1998 (63 FR 11482). New information gathered led to the splitting of the ESU into two ESUs, the CC chinook salmon and the Southern Oregon and Northern California Coast (SONCC) chinook salmon. On September 16, 1999, NMFS listed the CC chinook salmon ESU as threatened. (64 FR 50394).

The CC chinook salmon ESU includes coastal populations that range from Redwood Creek in Humboldt County, California, to and including the Russian River in Sonoma County, California. This includes Redwood Creek, the Eel River, the Mattole River, and the Russian River which historically supported large numbers of chinook salmon.

General Life History

Of the Pacific salmon, distinct runs of chinook salmon exhibit arguably the most diverse and complex life history strategies. Healey (1986) described 16 age categories for chinook salmon, seven total ages with three possible freshwater ages. Two generalized freshwater life-history types were described by Healey (1991): (1) "stream-type" chinook salmon, which reside in freshwater for a year or more following emergence, and (2) "ocean-type" chinook salmon, which migrate to the ocean within their first year.

Chinook salmon mature between 2 and 6+ years of age (Myers *et al.* 1998). Freshwater entry and spawning timing are generally thought to be related to local water temperature and flow regimes (Miller and Brannon 1982). Runs are designated on the basis of adult migration timing; however, distinct runs also differ in the degree of maturation at the time of river entry, thermal regime and flow characteristics of their spawning site, and actual time of spawning (Myers *et al.* 1998). Spring-run chinook salmon tend to enter freshwater as immature fish, migrate far upriver, and finally spawn in the late summer and early autumn. Fall-run chinook salmon enter freshwater at an advanced stage of maturity, move rapidly to their spawning areas on the mainstem or lower tributaries of the rivers, and spawn within a few days or weeks of freshwater entry (Healey 1991).

Spring-run chinook salmon spawn between early-August through early-October, and fall-run chinook salmon spawn between October through November. Spring-run chinook salmon eggs generally incubate between October to January, and fall-run chinook salmon eggs incubate between October and December (Bell 1991). Emergence of spring- and fall-run chinook salmon fry begins in December and continues into mid-April (Leidy and Leidy 1984; Bell 1991).

Preferred water temperatures during chinook salmon spawning migration range from 3.3° to 19.4°C (Bell 1991). Spawning is concentrated in riffles or in gravel deposits at the downstream end of pools with suitable water depth and velocity. Minimum water depth at chinook spawning

areas is 24 cm (Thompson 1972). Suitable water velocities at spawning areas range from 30 to 91 cubic meters per second (Thompson 1972). The preferred range of water temperature during spawning is from 5.6° to 13.9°C (Bell 1986). Spawning substrate size ranges from 1.3 to 10.2 cm with 12% fines (Reiser and Bjornn 1979).

Fry use woody debris, interstitial spaces in cobble substrates, and undercut banks as cover (Everest and Chapman 1972). As the fry grow, habitat preferences change. Juveniles move away from stream margins and begin to use deeper water areas with slightly higher water velocities.

CC chinook salmon exhibit an ocean-type life history, and smolts outmigrate predominantly as sub-yearlings, generally during April through July. Chinook salmon spend between 2 and 5 years in the ocean (Bell 1991; Healey 1991), before returning to freshwater to spawn. Some chinook salmon return from the ocean to spawn one or more years before full-sized adults return, and are referred to as "jacks" (males) and "jills" (females).

Population Status

Rivers within this ESU contain severely reduced populations or their populations have been extirpated (September 16, 1999, 64 FR 50394). Available historical and most recent published chinook salmon abundance information are summarized in NMFS coast-wide status review (Myers *et al.* 1998). The following are some excerpts from this document.

> Estimated escapement of this ESU was estimated at 73,000 fish, predominantly in the Eel River (55,500) with smaller populations in; Redwood Creek, Mad River, Mattole River (5,000 each), Russian River (500), and several small streams in Del Norte and Humboldt Counties.
>
> Within this ESU, recent abundance data vary regionally. Dam counts of upstream migrants are available on the South Fork Eel River at Benbow Dam from 1938 to 1975. Counts at Cape Horn Dam, on the upper Eel River are available from the 1940s to the present, but they represent a small, highly variable portion of the run. No total escapement estimates are available for this ESU, although partial counts indicate that escapement in the Eel River [currently] exceeds 4,000.
>
> Data available to assess trends in abundance are limited. Recent trends have been mixed, with predominantly strong negative trends in the Eel River Basin, and mostly upward trends elsewhere. Previous assessments of stocks within this ESU have identified several stocks as being at risk or of concern. Nehlsen *et al.* (1991) identified seven stocks as at high extinction risk and seven stocks as at moderate extinction risk. Higgins *et al.* (1992) provided a more detailed analysis of some of these stocks, and identified nine chinook salmon stocks as at risk or of concern. Four of these stock assessments agreed with Nehlsen *et al.* (1991) designations, while five fall-run chinook salmon stocks were either reassessed from a moderate risk of extinction to stocks of concern (Redwood Creek, Mad River, and Eel River) or were additions to the Nehlsen *et al.* (1991) list as stocks of

special concern (Little and Bear rivers). In addition, two fall-run stocks (Smith and Russian Rivers) that Nehlsen *et al.* (1991) listed as at moderate extinction risk were deleted from the list of stocks at risk by Higgins *et al.* (1992), although the U.S. Fish and Wildlife Service reported that the deletion for the Russian River was due to a finding that the stock was extinct.

Northern California steelhead

Status Under the ESA

On June 7, 2000, NMFS listed the Northern California steelhead ESU as threatened (65 FR 36074). The NC steelhead ESU occupies rivers and basins from Redwood Creek in Humboldt County, California, to the Gualala River in Mendocino County, California, inclusive.

General Life History

Biologically, steelhead can be divided into two basic run-types, based on the state of sexual maturity at the time of river entry and duration of spawning migration (Burgner *et al.* 1992). The stream-maturing type, or summer steelhead, enters fresh water in a sexually immature condition and requires several months in freshwater to mature and spawn. The ocean-maturing type, or winter steelhead, enters fresh water with well-developed gonads and spawns shortly after river entry (August 9, 1996, 61 FR 41542; Barnhart 1986). Variations in migration timing exist between populations. Some river basins have both summer and winter steelhead, while others only have one run-type. South of Cape Blanco, Oregon, summer steelhead are known to occur in the Rogue, Smith, Klamath, Trinity, Mad, and Eel rivers, and Redwood Creek (Busby *et al.* 1996).

Summer steelhead enter fresh water between May and October (Busby *et al.* 1996; Nickelson *et al.* 1992). They require cool, deep holding pools during summer and fall, prior to spawning (Nickelson *et al.* 1992). They migrate inland toward spawning areas, overwinter in the larger rivers, resume migration in early spring to natal streams, and then spawn (Meehan and Bjornn 1991; Nickelson *et al.* 1992).

Winter steelhead enter fresh water between November and April (Busby *et al.* 1996; Nickelson *et al.* 1992), migrate to spawning areas, and then spawn in late winter or spring (Nickelson *et al.* 1992). Some adults, however, do not enter some coastal streams until spring, just before spawning (Meehan and Bjornn 1991).

There is a high degree of overlap in spawn timing between populations within an ESU regardless of run type (Busby *et al.* 1996). Difficult field conditions at that time of year and the remoteness of spawning grounds contribute to the relative lack of specific information on steelhead spawning. Unlike salmon, steelhead usually do not die soon after spawning and some, mainly females, may spawn two or three times before dying (Busby *et al.* 1996).

Steelhead spawn in cool, clear streams featuring suitable gravel size, depth, and current velocity. Intermittent streams may be used for spawning (Barnhart 1986; Everest 1973). Eggs generally incubate between February and June (Bell 1991), and typically emerge from the gravel two to three weeks after hatching (Barnhart 1986). After emerging from the gravel, fry usually inhabit shallow water along perennial stream banks. Older fry establish and defend territories.

Juvenile steelhead migrate little during their first summer and occupy a range of habitats featuring moderate to high water velocity and variable depths (Bisson *et al.* 1988). Juvenile steelhead feed on a wide variety of aquatic and terrestrial insects, and emerging fry are sometimes preyed upon by older juveniles. Juveniles live in freshwater from one to four years (usually two years in the California ESU's), then smolt and migrate to the ocean in March and April (Barnhart 1986).

Steelhead can spend between one and four years in the ocean (usually two years in the Pacific southwest). Variations in this pattern do occur (Busby *et al.* 1996). Some steelhead return to fresh water after only two to four months in the ocean and are termed "half-pounders" (Snyder 1925). Half-pounders generally spend the winter in fresh water and then outmigrate again the following spring for several months before returning to fresh water to spawn. Half-pounders occur over a relatively small geographic range in southern Oregon and northern California, and are only reported in the Rogue, Klamath, Mad, and Eel rivers (Snyder 1925; Barnhart 1986; Kesner and Barnhart 1972; and Everest 1973).

Population Status

Available historical and most recent published steelhead abundance are summarized in NMFS west coast steelhead status review (Busby *et al.* 1996). The following are some excerpts from this document.

> Prior to 1960, estimates of abundance specific to this ESU were available from dam counts in the upper Eel River (Cape Horn Dam–annual average of 4,400 adult steelhead in the 1930s), the South Fork Eel River (Benbow Dam–annual average of 19,000 adult steelhead in the 1940s), and the Mad River (Sweasey Dam–annual average of 3,800 adult steelhead in the 1940s).
>
> In the mid-1960s, estimates of steelhead spawning populations for many rivers in this ESU totaled 198,000. The only current run-size estimates for this area are counts at Cape Horn Dam on the Eel River where an average of 115 total and 30 wild adults were reported.
>
> Adequate adult escapement information was available to compute trends for seven stocks within this ESU. Of these, five data series exhibit declines and two exhibit increases during the available data series, with a range from 5.8% annual decline to 3.5% annual increase. Three of the declining trends were significantly different from zero. We have little information on the actual contribution of hatchery fish to natural spawning, and little information on present total run sizes for this ESU. However, given the preponderance of

significant negative trends in the available data, there is concern that steelhead populations in this ESU may not be self-sustaining.

Schiewe (1997) summarizes updated and new data on trends in abundance for summer and winter steelhead in the Northern California ESU. The following are some excerpts from this document.

- Updated spawner surveys of summer steelhead in Redwood Creek, the Van Duzen River (Eel River Basin), and the Mad River suggest mixed trends in abundance: the Van Duzen fish decreased by 7.1% from 1980-96 and the Mad River summer steelhead have increased by 10.3% over the same time period. The contribution of hatchery fish to these trends in abundance is not known.

- New weir counts of winter steelhead in Prairie Creek (Redwood Creek Basin, Humboldt County) show a dramatic increase (over 36%) in abundance during the period 1985-1992. This increase is difficult to interpret because a major highway construction project during this time period resulted in intensive monitoring of salmonids in the basin and Prairie Creek Hatchery was funded to mitigate lost salmonid production. Therefore, it is unclear whether the increase in steelhead reflects increased monitoring effort and mitigation efforts or an actual recovery of Prairie Creek steelhead.

Critical Habitat

Section 4(a)(3)(A) of the ESA requires that, to the maximum extent prudent and determinable, critical habitat be designated concurrently with the determination that a species is threatened or endangered. Essential features of critical habitat may include (1) substrate, (2) water quality, (3) water quantity, (4) water temperature, (5) water velocity, (6) cover/shelter, (7) food, (8) riparian vegetation, (9) space, and (10) safe passage conditions. Each life history stage may have unique requirements of the preceding essential features. In general, life history stages include the following: (1) Egg incubation, (2) juvenile rearing, (3) juvenile migration, (4) adult migration, and (5) spawning. Activities that may require special management considerations for freshwater and estuarine life stages of listed salmon and steelhead include, but are not limited to: (1) land management, (2) timber harvest, (3) point and non-point water pollution, (4) live stock grazing, (5) habitat restoration, (6) beaver removal, (7) irrigation and domestic water withdrawals and returns, (8) mining, (9) road construction, (10) dam operation and maintenance, (11) diking and streambank stabilization, and (12) dredge and fill activities (May 5, 1999, 64 FR 24049; February 16, 2000, 65 FR 7764).

SONCC Coho Salmon Designated Critical Habitat

The NMFS designated critical habitat for SONCC coho salmon on May 5, 1999 (64 FR 24049) to include all accessible reaches of all rivers (including estuarine areas and tributaries) between the Mattole River in Northern California and Elk River in Oregon, inclusive. Excluded are areas above specific dams identified in Table 6 of the critical habitat Federal Register Notice (May 5,

1999, 64 FR 24049) or above any long standing, naturally impassable barriers (i.e., natural waterfalls in existence for at least several hundred years).

CC Chinook Salmon Designated Critical Habitat

The NMFS designated critical habitat for CC chinook salmon on February 16, 2000 (65 FR 7764) to include all river reaches and estuarine areas accessible to listed chinook salmon from Redwood Creek (Humboldt County, California) to the Russian River (Sonoma County, California), inclusive. Excluded are all tribal lands, areas above specific dams identified in Table 12 of the critical habitat Federal Register Notice (February 16, 2000, 65 FR 7764) or above any long standing, naturally impassable barriers (i.e., natural waterfalls in existence for at least several hundred years).

NC Steelhead Critical Habitat

Critical habitat has not been proposed or designated for this ESU.

Factors Affecting Salmonid ESUs and Designated Critical Habitat

Salmonid populations within California were listed as threatened due to numerous factors including several long-standing, human-induced factors (e.g., habitat degradation, harvest, water diversions, and artificial propagation) that exacerbate the adverse effects of natural environmental variability (e.g., floods, drought, poor ocean conditions). Habitat factors that may have contributed to the decline of these populations include changes in channel morphology, substrate changes, loss of instream roughness and complexity, loss of estuarine habitat, loss of wetlands, loss and/or degradation of riparian areas, declines in water quality, altered stream flows, impediments to fish passage, and elimination of habitat. The major activities identified as responsible for the decline of salmonids include logging, road building, grazing, mining, urbanization, stream channelization, dams, wetland loss, beaver trapping, water withdrawals, and unscreened diversions for irrigation. Water diversions for agriculture, flood control, domestic supply, and hydropower purposes have greatly reduced or eliminated historically accessible habitat. Forestry, agriculture, mining, and urbanization have degraded, simplified, and fragmented habitat. Sedimentation, from extensive and intensive land use activities such as timber harvesting, road building, livestock grazing, and urbanization, degrades the essential features and functions of salmonid habitat.

Salmon require habitat conditions that meet the spawning, rearing, migrating, feeding, and sheltering needs of the species. Parameters that affect the ability of the habitat to provide for these conservation needs include water quality and quantity, habitat access, physical habitat elements, channel condition, hydrology, and upslope conditions. These essential habitat features must be healthy, or in properly functioning condition (PFC), in order for the biological requirements of salmonids to be met.

Water quality factors essential to salmonids include cool temperatures, low turbidity, and pollutant-free water. The ability of salmonids to access various habitats during different life

stages is also essential. Physical structural elements such as the presence of large woody debris (LWD), clean, properly sized substrate, large, deep pools, and the presence of side channels and off-channel habitats are also essential for salmonids. Many of the physical and water quality elements vital to salmonids are provided by the riparian vegetation adjacent to streams. Riparian buffer integrity is therefore also an essential habitat feature. This element includes a mature, well stocked riparian forest to provide large trees for recruitment into the stream, overstory canopy to provide shade, downed wood and an undisturbed humic layer to filter overland sediment flow, snags, and stable banks. Without properly functioning habitat, the ability of the species to persist in an area is significantly compromised.

Tribal harvest is not considered a major factor in the decline of salmonid populations. In contrast, over-fishing in non-tribal fisheries is believed to have been a significant factor. Chinook salmon still undergo tribal, commercial, and recreational fisheries throughout their range. Disease and predation are not believed to be major causes in the species decline; however, they may have substantial impacts in local areas. For example, Higgins et al. (1992) and CDFG (1994) reported that Sacramento River pikeminnow have been found in the Eel River basin and are considered to be a major threat to native salmon. Furthermore, California sea lions and Pacific harbor seals, which occur in most estuaries and rivers where salmonid runs occur on the West Coast, are known predators of salmonids. In the final rules listing the affected ESUs, NMFS indicated that it was unlikely that pinniped predation was a significant factor in the decline of these species on the west coast, although ongoing predation levels may be a threat to existing depressed local populations or preclude recovery of these populations (NMFS 1997).

Artificial propagation was also a factor in the decline of salmonid populations. This is due to the genetic impacts on indigenous, naturally-reproducing populations, disease transmission, predation of wild fish, depletion of wild stock to enhance brood stock, and replacement rather than supplementation of wild stocks through competition and the continued annual introduction of hatchery fish.

Existing regulatory mechanisms, including land management plans (e.g., National Forest Land Management Plans, State Forest Practice Rules), Clean Water Act section 404 activities, urban growth management, and harvest and hatchery management all contributed to varying degrees to the decline of salmonid populations due to lack of protective measures, the inadequacy of existing measures to protect salmonids and/or their habitat, or the failure to carry out established protective measures.

Some land and water management policies (e.g., Northwest Forest Plan, PACFISH, CALFED) are probably beneficial to salmon populations, but the confined scope of these management plans limit their effectiveness. Current state forestry rules in California likely do not adequately protect salmon or provide for PFC.

ENVIRONMENTAL BASELINE

The environmental baseline includes the past and present impacts of all Federal, state, tribal, local, and private actions within the action area. The "Environmental Baseline" summarizes the effects of past and present human and natural phenomena on the current status of threatened and endangered species and their habitat in an action area; and establishes the base condition for natural resources, human usage, and species usage in an action area. NMFS' evaluation of the effects of a proposed action is added to this baseline.

The Van Duzen River, a tributary to the Eel River, drains 429 square miles (Halligan 1997a) and enters the Eel River approximately 14 miles from its mouth at the Pacific Ocean. The headwaters of the Van Duzen River watershed originate at over 5,000 feet elevation in the northern California Coast Ranges, and is 50 feet in elevation at its confluence with the Eel River. The geology of the Van Duzen River watershed is comprised of Franciscan, Yager, and tertiary and quaternary sediments. The climate is typical of northern California–with cool wet winters and warm dry summers. Annual precipitation ranges from 50 inches near the confluence with the Eel River to 70 inches at the headwaters. Flows within the Van Duzen River watershed vary considerably, with 75% of the rainfall occurring between November and April. August through September stream flows are less than 1.5% of the total. Bankfull discharge is 17,700 cfs at Bridgeville, with peak discharges of 48,700 cfs in 1964 and 34,600 cfs in 1974. Bankfull discharge is 37,400 cfs at its confluence with the Eel River, with peak discharges of 74,300 cfs in January 1995 and 57,000 cfs in March 1995 (Halligan 1997a). Agriculture (e.g., grazing), timber harvest and gravel extraction are the primary land uses in the watershed.

The Proposed Action is located in an area known as "the Van Duzen River gravel extraction reach," which is located from its confluence with the Eel River upstream to near the town of Carlotta - a distance of approximately five miles. This reach is composed of broad flat aggraded alluvial deposits with a stream gradient of 1% or less. The Highway 101 bridge forms a constriction that results in sediment being deposited immediately upstream (Halligan 1997a). Jensen (2000) described the habitat in the extraction reach as 49% pools (averaging 828 feet long and 96 feet wide), 23% flatwater (averaging 558 feet long and 105 feet wide), and 28% riffles (averaging 512 feet long and 110 feet wide). Sand was the dominant substrate in the pools. Cobble with lesser amounts of sand and gravel dominated the flatwater and riffles.

Jensen (2000) found that fluctuations in daily water temperatures generally ranged from 17°C (62°F) to 21°C (66°F) during the summer of 1999. Maximum sustained water temperatures ranged from 21°C (66°F) to 24°C (75°F). Halligan (1999) documented cool water seeps in subsurface flow from the confluence of the Van Duzen River into the Eel River. These cold water seeps, upwellings, and stratified pools are important thermal refugia, when maximum summer temperatures are stressful, for rearing and holding salmonids.

Anadromous salmonids within the Van Duzen River watershed include chinook salmon, coho salmon, and steelhead. A spawning reconnaissance survey of chinook salmon carried out by the USFWS in 1959 indicated that the watershed had the capability to support a run of 7,000 chinook salmon and reported 1,500 occupied redds. Chinook spawning was documented within the

"gravel extraction reach" in 1995 after CDFG opened the mouth of the river and fish were able to migrate past the shallow riffles. Adult anadromous salmonid migration into the Van Duzen River appears to be controlled by rainfall and begins after the first rains in the fall. Halligan (1997b) reported that a few juvenile steelhead were observed in the lower Van Duzen River and that thousands of pikeminnow were present. On June 30, 1999, Jensen (2000) documented age 2+ and 3+ steelhead and two summer steelhead adults at the upstream end of a lateral scour pool in the "gravel extraction reach."

Historic land and water management practices contributed to loss of habitat diversity within the Van Duzen River. Functioning aquatic habitat is limited in the Van Duzen watershed due to low abundance of pools, low abundance of LWD (instream and for recruitment), low instream cover levels, and high levels of fine sediment (USFWS and NMFS 1999). Spawning habitat is present, as evidenced by previous documentation of spawning activity. Existing conditions indicate that the Van Duzen River has limited rearing habitat due to elevated water temperatures. Cool water seeps, thermal stratification, and habitat complexity all play critical roles in sustaining micro-habitat for juvenile and adult salmonids. Fishery observations indicate that natural populations of anadromous salmonids persist at low levels within the Van Duzen River watershed.

The Van Duzen River has been listed under section 303(d) of the Clean Water Act as water quality limited due to sediment problems. Essential habitat feature problems include high levels of sediment, low percent of pools, high water temperatures, and low instream cover levels.

Factors Affecting Species Environment in the Action Area

Gravel mining

Sand and gravel mining in riparian areas may have substantial effects on stream channels and hydraulic characteristics of areas essential for salmonids. In addition to the immediate morphological changes in stream channels caused by excavation, channels continue to exhibit instability, accelerated erosion, and altered substrate composition and structure after erosion has ceased (Spence et al. 1996). The associated downcutting of stream channels that frequently follows gravel mining may result in increased flood peaks, increased sediment transport, increased temperatures, and decreased base flows. The most direct impacts to salmonids are degradation and simplification of spawning and rearing habitats, and increased turbidity (Spence et al. 1996).

Existing gravel and rock extraction activities that affect the action area include near-stream gravel mining at five sites on the lower Van Duzen River (Table 1). These gravel operations are under the jurisdiction of Humboldt County, the California Coastal Commission (for those activities conducted within the Coastal Zone) and the Army Corps of Engineers (COE). Gravel operations are conducted under a Letter of Permission (LOP) adopted by the COE for all navigable waters of the United States within Humboldt County. Under the LOP, the number of operators, location of gravel operations, and amount of material removed varies from year to year, based on annual cross-section surveys and other information, as determined by the County of Humboldt Extraction Review Team (CHERT). Take of listed Pacific salmonids is permitted

under an Incidental Take Statement issued to the COE for activities involving the near-stream gravel mining.

Table 1. Gravel bar sites are listed from the most upstream site to the most downstream site, and are not necessarily contiguous. The length of each site is measured along the center line of the stream, adjacent to each bar. Data was provided by Humboldt County Planning Division (April 26, 2000).

Length (feet)	Gravel Bar Site Name
2304	Pacific Lumber Bar (near the town of Carlotta)
661	Thomas Bess Ranch
15506	Van Duzen Ranch
1890	Leland Rock Gravel Bar
755	Hauck Bar (at confluence with Eel River)

Timber Harvest

Past and present timber harvest on both public and private lands have contributed to the degradation and destruction of salmonid habitat in the Van Duzen River watershed. Past harvest, on both public and private lands, has left a legacy of altered habitats that still require considerable time for recovery. Timber harvest practices were not regulated in riparian zones until the 1970s; thus, there were more than 120 years of human activity and 50 to 70 years of intensive harvest before mandated consideration of streamside protection. Forest practices that contributed to the decline of riparian habitat include timber harvest to the streambank; railroad and road building along riparian corridors; and splash damming. Additionally, removal of LWD was a biologically recommended practice until the mid-1970s. All of these practices led to a considerable reduction in riparian zone function.

On March 1, 1999, the USFWS and NMFS approved Pacific Lumber Company, Scotia Pacific Company LLC and Salmon Creek Corporation's (collectively known as "PALCO") Habitat Conservation Plan (HCP) under Section 10 of the ESA. PALCO has forested lands in the Van Duzen River basin. The PALCO HCP is intended to establish long-term sustained yield timber harvest levels; to avoid or mitigate potentially significant adverse impacts on listed and other species; to avoid or mitigate potentially significant adverse impacts upon water quality, fisheries, and aquatic wildlife; and to establish procedures to document implementation and evaluate the efficacy of the HCP measures. The PALCO HCP should result in improvements to the baseline condition of the Van Duzen River watershed.

Grazing

In general, livestock grazing has deteriorated significant areas of the western States. Since the 1930s, rangelands in the Pacific Northwest have benefitted from less intensive grazing; however, the majority of western rangelands are in deteriorated conditions (Spence et al. 1996). Poor

upland conditions may increase sediment loads to streams and alter hydrologic regimes, leading to channel incision, channel widening, and further deterioration of riparian zones. Hydrologic changes may occur in response to loss of vegetation or change in soil permeability brought on by reduced organic content, splash erosion, and trampling by livestock. Similarly, sediment transport processes are linked to vegetation cover and the routing of water from the hillslope to the stream (Spence et al. 1996). Since livestock tend to concentrate in areas near water, shade, preferred vegetation, salt and a relatively level topography, essential riparian areas for salmonids may be heavily utilized and become over grazed and trampled, leading to erosion and hydrologic disruptions.

Cattle and sheep grazing has occurred within the Van Duzen River watershed since the early 1900s. The extent of grazing and effects on salmonid habitat in the action area are currently unknown.

Predation by introduced Sacramento pikeminnow

Sacramento pikeminnow (*Ptychocheilus grandis*; formerly known as "squawfish") were introduced in 1979 to the Eel River basin. A high abundance of Sacramento pikeminnow has been reported recently in the Eel River Basin (Brown and Moyle 1991). Since their introduction, the pikeminnow have expanded their range to the entire basin including the Van Duzen River (SEC 1989, Halligan 1997b). Pikeminnow are known predators of salmonids. While quantitative estimates of impacts are not available, biologists generally agree that the introduced pikeminnow are causing a serious adverse impact to salmonids in the Eel River basin.

Status of the Species in the Action Area

The following discussion provides past and current estimates, if available, of listed and proposed salmonid populations in the Van Duzen River. In addition, a description of the species' presence is given; however, this is general information and not intended to reflect the exact periods when salmonids may be present in the action area.

Population Abundance

CDFG (1965) estimated that the annual runs in the Van Duzen River numbered 2,500 chinook salmon and 500 coho salmon. The summer steelhead run is generally considered to be less than 100 (Higgins *et al.* 1992).

Species Presence

SONCC coho salmon adults migrate into the lower Van Duzen River from November through February with a peak in December. Spawning occurs between November and February. Juveniles rear year-round in the lower Van Duzen River, while smolts emigrate to the Pacific Ocean from April through May.

CC chinook salmon adults migrate into the lower Van Duzen River from September through December. Spawning occurs from November through January. Juvenile chinook rear in the lower Van Duzen River between March and June, while smolts emigrate to the Pacific Ocean from March through June with a peak in April.

Winter run NC steelhead adult migrations occur between mid-October and April in the lower Van Duzen River, and summer run NC steelhead adults enter fresh water between May and October. Spawning occurs from November through March. Juveniles rear in the lower Van Duzen River all year long. Smolts emigrate to the Pacific Ocean from March through June with a peak between mid-April and mid-May.

The action area functions primarily as a migratory corridor for these salmonid species in the freshwater reaches. The lowest reach of the Van Duzen River at its confluence with the Eel River typically flows subsurface in late summer until the first significant rains in the fall. On November 12, 2001, a pulse of river flow connected the Van Duzen to the Eel River just long enough to attract a large number of adult chinook to enter the lower Van Duzen from the Eel River. As the flow dropped after the storm event, approximately 140 adult chinook were stranded and died in isolated shallow pools. While gravel mining has taken place for the past five years in this area, the Van Duzen carries a large natural sediment load, which is amplified by land management activities upstream. All of these conditions, independently or in aggregate, can lead to braiding and shallow/wide channel conditions downstream. The function of the migratory corridor for adult salmonids in the lower Van Duzen is therefore impaired. The corridor for juvenile salmonids most likely functions properly in most years as the outmigration period is completed before the channel goes dry.

Some summer rearing, mostly likely of steelhead juveniles, may occur in the action area. However, habitat conditions during the summer and fall in drier years can be unsuitable for rearing due to low water and poor water quality. The estuary functions as a migratory corridor and as juvenile rearing habitat. Like most large coastal rivers, the Eel River estuary has been impacted by various land use practices and development; however, we do not have specific information about the quality of rearing habitat it provides.

One may expect some spawning, most likely by chinook, in the lower Van Duzen and Eel River mainstems. However, due to the unstable nature of the substrate in the action area, the area likely does not provide proper function for spawning, and is probably not an historically important spawning reach.

EFFECTS OF THE ACTION

The Proposed Action may affect SONCC coho, CC chinook, and NC steelhead due to its location, timing, and construction activities. Some of these listed Pacific salmonids are very likely to be in the action area during construction activities. Predictions of the likelihood of salmonid presence in the action area at their various life stages are based on observations

averaged over several years. The actual timing of the occurrence of salmonids in a given year may be influenced by a variety of factors.

The Proposed Action's low flow channel altering activities will take place between June 15 and October 15, in 2003 and 2004. Based on the discussion provided above in the "Status of the Species" and "Status of the Species in the Action Area" sections, SONCC coho adults are not expected to be present during the proposed in-water construction season. SONCC coho smolts are likely to have migrated through the action area before any in-water construction. SONCC coho fry may rear in the action area during the in-water construction season. CC chinook adults are not expected to be present during the proposed in-water construction season. CC chinook juveniles may be present in June during the final stage of their rearing and outmigration period. Adult NC summer-run steelhead may be present in the action area throughout the in-water construction season, while winter-run adults may enter the action area at the very end of the in-water construction season. Juvenile NC steelhead are expected in the action area during the entire in-water construction season. Therefore, the most vulnerable species and life stages will be coho fry, juvenile steelhead and adult summer-run steelhead. The most numerous life stage will be juveniles, predominantly NC steelhead.

The effects of the project may include harm and/or harassment in the form of loss or degradation of pools or spawning habitat, changes in substrate size distribution, increases in turbidity, and temporary loss of habitat. Gravel extraction, which has similar effects, will also take place in the vicinity of the Proposed Action during the same period during which the project is proposed. Some effects of the Proposed Action will be added to effects of gravel mining in the "gravel extraction reach." However, it is not possible to quantify these additive effects because the number of operators, location of gravel operations, and amount of material removed varies from year to year, based on annual cross-section surveys and other information, as determined by CHERT. Regardless of contemporaneous gravel extraction operations, we believe that the Proposed Action is not likely to worsen long-term channel instability in the chronically impacted "gravel extraction reach." Other than possible harassment of fish due to possible adjacent equipment operation, the only immediate short term impact of gravel mining (as described in the Biological Opinion on the U.S. Army Corps of Engineers Letter of Permission Procedure Gravel Mining and Excavation Activities within Humboldt County, CA (LOP Opinion)) that could produce immediate additive effects in the action area is fine sediment mobilization during installation of temporary stream crossings at nearby gravel operations. The LOP Opinion concludes that, "During the installation and removal process (*of temporary crossings*), fine sediment may be mobilized in the stream, however this increase would be localized and of short duration, and not expected to be of sufficient intensity to impact rearing, holding, or migrating behaviors." We believe that the effects of the additional stream crossing (harassment and short term turbidity) due to the Proposed Action will not appreciably add to the effects of stream crossings installed by gravel extraction operations.

The following activities that could create adverse effects to listed Pacific salmonids or designated critical habitat during the Proposed Project were identified by NMFS during consultation:

- Pier 4 site preparation and construction activity

- Placement, use, and removal of temporary stream crossing
- Removal of old bridge and piers
- Alteration of river bed by equipment access
- Installation of new bridge pilings
- Pollutant spills and discharge
- Geotechnical drilling

Analysis for Effects of the Action

In this section of the Opinion, as required by the ESA and its implementing regulations (50 CFR § 402), NMFS assesses the direct and indirect effects of the Proposed Action, and any interrelated and interdependent actions, on SONCC coho salmon and their designated critical habitat, CC chinook salmon and their designated critical habitat, and NC steelhead. The purposes of this assessment are twofold: First, to determine if the Proposed Action is likely to have effects on SONCC coho salmon, CC chinook salmon, or NC steelhead that appreciably reduce their likelihood of both survival and recovery in the wild (the "jeopardy" standard identified in 50 CFR § 402.02). Second, to determine if the Proposed Action is likely to appreciably diminish the value of designated critical habitat for both the survival and recovery of SONCC coho salmon and CC chinook salmon in the wild (the "destruction or adverse modification" standard identified in 50 CFR § 402.02).

To conduct our assessment of the Proposed Action, NMFS considered the direct and indirect effects, and any effects of interrelated and interdependent actions, of each activity associated with the Proposed Action on the area, connectivity, and quality of habitats that support listed species. NMFS uses published and unpublished data and studies of interactions between the project operations and listed species or their habitats to estimate the likelihood of future effects. There is an extensive amount of published literature on the relationship between changes in habitat quantity, quality, and connectivity and the persistence of animal populations. For detailed summaries of this literature, readers can refer to the work of Fiedler and Jain (1992), Gentry (1986), Gilpin and Soule (1986), Nicholson (1954), Odum (1971, 1989), and Soule (1986, 1987). With respect to listed species, NMFS bases its assessment on the relationship between habitat, individuals, and populations and assumes that an activity that destroys or modifies habitat of listed species will be followed by a response by an individual or population. The current baseline, the size and duration of the habitat effect, the degree of potential harm to an individual(s), and the demographic effect expected to result are factored into our assessment.

Pier 4 site preparation and construction activity

It will be necessary to divert the flow away from the construction area around pier 4. (Only pier 4 presently requires work within the active low flow channel of the Van Duzen River). Preparation of the pier 4 site will require construction of a dike/platform of approximately 50 feet or less on a side. The dike/platform will be made of clean, washed spawning-sized gravel that will be pushed slowly into the water to displace any salmonids that may be in the area. Once this dike/platform is in place, a sheet pile cofferdam will be constructed around the pier footing so that excavation to the bottom of the footing will be performed in the dry. This method will

prevent the possibility of fish being trapped within the coffer dam. The gravel will be removed at the end of construction.

Some harassment of fish and a minor amount of temporary edge habitat loss would be likely to occur in association with site preparation at pier 4. Yearling and older listed Pacific salmonids are likely to quickly move away from disturbances and not be in danger of being crushed by the placement of gravel. Placement of the gravel would be done slowly enough and in such a way that crushing of very young (small) listed Pacific salmonid juveniles would not be anticipated to occur. The amount of harassment anticipated would not be expected to stress any listed Pacific salmonids enough to kill or injure them. The placement of the dike/platform might result in the temporary loss of habitat and might cause a temporary narrowing of the stream channel that results in increased stream velocity past the diversion. However, the area to be filled is presently a shallow, silty margin with no in-water cover, which may function as low quality rearing habitat. Our opinion is that the temporary filling of this site represents a biologically insignificant loss. Also, potential increased stream velocities in this low gradient reach are not expected to impede the migration of salmonids.

During water diversion and dike/platform construction, a minor amount of increased turbidity is expected to occur and then subside. As the gravel comes in contact with the live stream, fine sediment will be entrained and suspended in the water, affecting the water quality. However, this fill will be of clean gravel; therefore, turbidity is expected to be faint and not pervasive enough to harm listed Pacific salmonids present at that time.

Water that seeps into the coffer dam will be pumped into a settling basin to prevent sediment from entering the flowing water and to keep the area dry. The settling basin will be located out of the high flow channel, and will be cleaned and removed prior to the onset of fall rains. Therefore, fine sediment mobilized within the coffer dam should not reach flowing water, and will not affect listed Pacific salmonids.

The use of heavy equipment above or adjacent to the channel may harass fish in the channel and/or nearby locations. Salmonids are alert to activities, bodies, shadows, etc, that may represent a predator. Noise and vibrations may also cause similar responses. A normal reaction for salmonids is to leave the area, and if that is not possible they will hide. If they are unable to do either of these reactions, they may swim in circles until they become exhausted. This same response would be likely if a person entered the water to retrieve an object.

Harassment by equipment crossing or operating near the channel is of particular concern with summer run NC steelhead adults who are attracted to deep pools and enter fresh water between May and October–overlapping the construction window of the Proposed Action. CC chinook salmon and winter-run NC steelhead may start entering the project area as early as the first week of September, as well. Therefore, some harassment of CC chinook and NC steelhead adults is possible from disturbance by heavy equipment, which may disrupt migration and holding patterns. While we are concerned that adult migration could be delayed during equipment operation, the disturbance events will be associated with periodic movement of equipment and

vibratory activities such as coffer dam installation. These activities are likely to be of short enough duration so as to not represent a threat to spawning success.

The level of adverse impacts to listed Pacific salmonids caused by placing the dike/platform, and operating equipment at the pier will depend on how carefully the fill is placed, the size and shape of the fill, the depth and amount of cover in the channel, the amount of water flowing through the channel, the routes available for salmonids to leave affected reach, and the habitat available to which they may escape. The present configuration of the channel leads us to believe that the preparation at pier 4 can be performed with a minimal amount of adverse impact. While we cannot predict the future configuration of the channel or flows at the time of construction, we believe that it is unlikely to change in such a way to appreciably increase the likelihood of adverse impacts.

If the appropriate management practices described in the BA (FHWA 2001) are followed, we do not expect the preparation and use of the pier 4 site to reduce the numbers, reproduction, or distribution of listed salmonids in the Van Duzen watershed.

Placement, use, and removal of temporary stream crossing

Equipment will cross the low flow channel on a temporary crossing constructed of a flat-car bridge that will fully span the low flow channel. Construction of the crossing may require that a piece of heavy equipment cross the channel in the water once during installation and once during removal. Footings for the bridge will either be pre-cast concrete, log stringers, or some other solid material, and approaches will be made from gravel collected from the adjacent bar or imported. The footings and approaches will not contact the water. The crossing will be removed at the end of the construction season, prior to increased fall flows. The project's construction season is timed to coincide with the summer period of low stream flow and low rainfall, and avoids the majority of downstream juvenile migration and upstream spawning migration, and occurs after alevin have emerged from redds.

Adherence to these measures is expected to reduce the potential that salmonids will be killed during project installation and removal of the crossing. NMFS expects that adults, smolts, and juveniles should be able to avoid or flee affected areas during construction of the channel crossing. However, very young juveniles without an established flight response may still be killed. The NMFS expects that the number of young juveniles that may die will be very low to zero and should not result in reductions in population abundance, reproduction, or distribution of listed salmonids in the Van Duzen watershed.

During the installation and removal process, fine sediment may be mobilized in the stream, however this increase would be localized and of short duration, and not expected to be of sufficient intensity to impact rearing, holding, or migrating behaviors.

Access to the crossing is proposed via an existing road on the northwest side of the existing southbound bridge. Therefore, no riparian vegetation will be disturbed for access, or by any other construction activity. Equipment and material will be moved along temporary roads graded

on the gravel bar to the work sites. The gravel bar will be regraded as close as possible to its original configuration at the close of each construction season.

If the appropriate management practices described in the BA (FHWA 2001) are followed, we do not expect the level of incidental take due to the temporary stream crossing to reduce population numbers, reproduction, or distribution of listed salmonids in the Van Duzen watershed.

Removal of old bridge and piers

The superstructure of the old bridge will be removed using cranes such that no portion of the bridge will drop into the river. Removal of the remaining two in-channel piers will also require coffer dams and pumping of water, as described above for pier 4. Neither of these sites are presently connected to the low flow channel; however, there was an isolated pool around the base of pier 3 during a site visit on June 11, 2001. We did not observe any fish in the pool, though there was some woody and rocky cover in which fish could hide. We found the pool dry on September 5, 2001. Depending on changes to channel geometry, similar pools may form around piers 2 and/or 3 before construction is due to begin. While salmonids may not survive in these isolated pools for an extended period due to water quality conditions and predators, it is possible that they may survive for longer periods during wetter conditions than we have experienced in 2001. Caltrans proposes to remove any listed Pacific salmonids before construction activities begin in an isolated pool. If present in an isolated pool, juvenile NC steelhead, SONCC coho, and CC chinook would be stressed by the capture, handling, and relocation that would be required prior to dewatering. NMFS anticipates that this stress may result in some injury or mortality of captured salmonids, although no more than 10% of the fish captured.

As explained in the "Description of the Proposed Action" section, should the low flow channel shift away from pier 4, it will most likely either be located away from any piers, or will capture pier 2 or 3, resulting in either fewer or essentially equal effects. In the unlikely event that the low flow channel splits and captures more than one pier, or requires that more than one temporary crossing be constructed, then a new analysis of effects will be required.

Placement of structures (e.g., coffer dams) in both the low flow channel and the adjacent river bed may alter hyporheic flow, which could affect downstream upwelling of cool water. These upwelling areas provide thermal refugia for rearing juvenile salmonids. It will not be possible to predict the location or magnitude of these effects, or whether they will occur.

Apart from the speculative effect to hyporheic flow, no direct adverse impacts are expected due to removal of existing piers that are not connected to the low flow channel. Adverse impacts at piers connected to the channel are related to site preparation as analyzed above for pier 4. NMFS does not expect additional incidental take due to this project element, unless capture and relocation of listed salmonids is necessary to preserve those fish from possible harm due to in-water bridge removal activities.

Alteration of river bed by equipment access

Construction activities in the dry part of the stream channel may result in the immediate degradation of structural habitat by heavy equipment obliterating the topography of and/or compacting the channel bed. All dikes, berms, construction material, debris, temporary roads, and the settling basin will be removed and the contours of the gravel bar will be restored to natural elevations; however, the potential exists for some adverse impact to channel geometry and associated function during higher flows.

Deep pools in the action area are particularly important to adults migrating upstream. Pools provide space for resting and hiding and often, cool water refugia. Aside from possible minor impacts caused by the diversion of water away from pier 4, NMFS does not expect the proposed activities in the dry channel to result in the permanent loss of pool habitat.

LWD is an important component in pool formation, in providing cover for salmonids; and for habitat complexity in general. If LWD is in the action area where heavy equipment is utilized, construction activities may result in the removal of important LWD. The effects to listed Pacific salmonids will depend on the function that the LWD is providing at the location where it is found. Loss of cover in pools may make adult listed Pacific salmonids less inclined to use that habitat, or subject them to more stress while using it, thus reducing survival and productivity. Loss of LWD that is stabilizing the stream bed can add to increased bedload mobility that may subject redds to scour downstream of the project site. Redds that are scoured out of the stream bed are lost and result in the death of the eggs within those redds. This promotes loss of resiliency in listed Pacific salmonid populations in the Van Duzen River. Equipment will avoid disturbing LWD when possible, and necessarily disturbed LWD area will be stockpiled on the edges or upstream of the site to allow for the natural redistribution during winter storms. Based on our observations of the construction site, we expect the potential for adverse effects associated with disturbance of LWD to be minor.

Construction in the stream channel disrupts the layering of sediments in the stream bed which results in more fine sediments becoming available for transport when stream flows inundate the disturbed area. An increase in the availability of fine sediments in the channel usually leads to elevated turbidity. Activities occurring due to the Proposed Action that disturb the stream bed and thus are likely to increase the availability of fine sediments are: placing, using, and removing the diversion dike and settling basin; placement and use of the temporary crossing; spilling turbid pump-water; and the grading of temporary roads.

Elevated turbidity levels can affect the entire foodweb in streams in numerous ways. Stream photosynthesis and primary production can be reduced if sunlight does not reach the substrate. The resulting hindrance of benthic macro-invertebrate production is a reduction in species on which listed Pacific salmonids forage. In general, effects of sedimentation on salmonids are well documented (Meehan 1991, Spence et al., 1996). Suspended sediments cloud otherwise clear waters making salmonid prey and predator detection difficult, reducing feeding opportunities, and possibly inducing behavioral modifications. Suspended sediments may cause clogging and abrasion of gills and other respiratory surfaces, providing conditions conducive to entry and

persistence of disease related organisms, which, in turn, may provoke behavioral modifications. Redds may be harmed when suspended sediment deposits on them, affecting inter-gravel permeability and dissolved oxygen levels, adhering to the chorion of eggs, suffocating incubating salmonid eggs, and/or entombing different life stages. Physical habitat may be degraded by pools filling with sediment and losing volume and by the settling of fine sediment into the interstitial spaces of the substrate in riffles.

When the areas disturbed by the construction activities become inundated by the first flows of the season, they will provide an additional source of easily transported fine sediments. The additional pulse of fine sediment that would occur during the first winter storms is expected to add moderately to the turbidity of the existing sediment regime. The extent of the adverse effects in the Van Duzen and Eel rivers from this extra turbidity will depend on the level of its increase, its duration, its pervasiveness, and the life history stages of listed Pacific salmonids affected. The new sediment, in combination with existing sediment in transport, will contribute to any physical or behavioral impacts that the turbidity is causing listed Pacific salmonids. Any migratory disruption of listed Pacific salmonid adults occurring due to raised turbidity levels might be temporarily worsened some small, but unknown, amount. Some additional loss of CC chinook eggs downstream of the action area may occur the first year after the project.

Overall, the construction activities associated with the Proposed Action will temporarily add slightly to habitat degradation over roughly one to three years time after which the disturbed portions of the channel are expected to have stabilized and the effects of the additional contribution of fine sediments dispersed.

If the appropriate management practices described in the BA (FHWA 2001) are followed, NMFS expects short term and minimal reductions in numbers and reproduction of listed salmonids in the Van Duzen watershed due to the temporary stream crossing. However, these minor reductions are not expected to affect survival or recovery of listed salmonid populations in the Van Duzen watershed.

Installation of new bridge piers

The piers for the new bridge will be constructed outside of the low flow channel; therefore, there should be no adverse effects due to their construction, apart from effects described above for alteration of the dry channel bed. The total area of the pier footings in the bankfull channel will be slightly less than the area of the existing pier footings (12 feet total vs. 13+ feet total); therefore, effects to river hydrology will not worsen the baseline condition.

Pollutant spills and discharge

Listed Pacific salmonids holding in this channel are also particularly vulnerable to water quality degradation from concrete or fuel spilling into the water, and reduction of flow into and/or out of the channel. Suspended concrete changes the pH of the water and can be lethal to fish. Listed Pacific salmonid juveniles that may be along the water's edge in the project vicinity or nearby downstream are most susceptible to spills. Concrete spills are unlikely to happen, but do occur

occasionally. Listed Pacific salmonids may be sickened or killed if exposed to a sudden pH change caused by spilled concrete. However, Caltrans requires the use of certain best management practices, a Water Pollution Control Plan, and emergency spill controls. These practices, as described in the BA (FHWA 2001), appear to be adequate to minimize potential adverse effects. Adverse effects to forage species are likely to be localized and should not result in a significant reduction of food availability to salmon. Therefore, we do not expect adverse effects to salmonids due to pollutant spills or discharge.

Geotechnical drilling

NMFS and Caltrans are currently working together to determine what adverse effects to listed salmonids may result from geotechnical drilling in or adjacent to flowing water. Specifically, we are exploring possible effects due to discharge of "drilling muds" into flowing water. Our present understanding is that bentonite is a clay mineral with a very small particle size, which, while it is generally considered to be non-toxic, may have an adverse effect on listed salmonids. Patin (1999) in his review of the environmental effects of offshore oil drilling says that water-based drilling muds (including bentonite), while preferred over oil-based muds or synthetic-based muds (including polymers) for environmental reasons, can still damage marine life. Patin (1999) also concludes that water-based drilling muds deposited on seabed sediments may smother benthic animals and, if in the form of very fine particles suspended in the water, can interfere with respiration in small marine animals and pelagic fish. Additionally, various additives such as surfactants and oils are sometimes included in bentonite drilling mud. Until we are better able to define effects to listed salmonids from polymer drilling muds and additives to bentonite, NMFS and Caltrans have agreed that the drilling mud used shall be bentonite without additives when drilling occurs within the river channel. Should bentonite drilling mud be accidentally discharged into flowing waters of the Van Duzen River, we expect effects to be similar to discharge of fine sediment from other sources, which typically include clay particles such as bentonite. These effects were described above in *Alteration of river bed by equipment access*.

Geotechnical test drilling is required at five locations under the existing bridge within the Van Duzen River channel. NMFS anticipates that one or more of the drilling locations may be within flowing water. NMFS expects there to be some unknown amount of turbidity associated with this drilling, as well as some vibration of substrate during installation of the casing. NMFS and Caltrans explored the possible benefits of working within a coffer dam if drilling takes place in the water. A coffer dam could help contain disturbed sediment and any spill of bentonite drilling mud or drill spoils. However, coffer dam installation could potentially trap fish, perturb fish through vibrations during installation and removal, and disturb fine sediments and gravels. We decided that the small amount of material within the casing at any one time, including approximately five gallons of bentonite slurry, and the relatively minor disturbance caused by drilling within the casing, would likely be less damaging than the use of a coffer dam.

Caltrans will avoid drilling in water if possible, either by waiting until the channel is dry, or choosing locations out of the water. NMFS believes, based on Caltrans' project description, that turbidity will be minor. All drilling is accomplished inside of a casing so that all spoils are

recovered on the bridge deck. Management practices appear to be adequate to ensure that material will not enter the water. Effects of short term elevations in turbidity are described above. Vibrations resulting from driving the casing could be injurious to eggs and alevins in the gravel; however, the timing of the work will avoid the period during which eggs and alevins are likely to be present. Caltrans will contact NMFS in advance of any drilling activities in the water so that a NMFS biologist can observe the methods and management practices for future reference.

Based on the location, scale, duration, and timing of the proposed geotechnical drilling, as well as Caltrans' management practices intended to minimize the chance of spills and other disturbance, we do not expect incidental take due to this project element.

Interrelated and interdependent actions

No interrelated or interdependent actions that may have adverse effects are expected as a result of the Proposed Action. Replacement of the bridge is strictly intended to replace a bridge that has reached the end of its usable life; therefore, no increased traffic or development is expected.

Project elements in aggregate

Individual project elements, as discussed above, are not expected to reduce the reproduction, numbers, or distribution of the listed salmonid populations or diminish the value of critical habitat. All project elements' expected effects on salmonids and designated critical habitat, when considered in aggregate, are also not expected to reduce reproduction, numbers, or distribution of the listed salmonid populations or diminish the value of critical habitat. Most project effects are minor and temporary in nature and are expected to affect few if any listed fish or their habitats.

Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." Future Federal actions are not considered in this Opinion because they require separate consultations pursuant to section 7 of the ESA.

Conditions in riparian and instream areas, and activities upstream of the action area, will have an influence on the quality and quantity of habitat within the action area. In addition to gravel extraction, the dominant land-use activities upstream of and within the action area are timber management, agriculture, and urban development.

Timber Management

Future timber harvest levels in the action area cannot be precisely predicted, but NMFS expects that harvest levels on tribal and private lands in the Van Duzen River watershed will continue to occur at current levels. Within the action area, direct, indirect, and cumulative effects of timber

harvesting may degrade habitat features identified as essential to coho and chinook designated critical habitat and to their ability to survive and recover.

Water Development and Diversion Operation

An unknown number of permanent and temporary water withdrawal facilities affect the action area. These include diversions for urban, agriculture, commercial, and residential use. Impacts from water withdrawals include entrapment and impingement of younger salmonid life stages, localized dewatering of reaches, and depleted flows necessary for migration, spawning, rearing, flushing of sediment from spawning gravels, reduced gravel recruitment, and transport of large woody debris. These activities are expected to continue into the foreseeable future.

Agriculture

Agricultural activities include grazing, dairy farming and the cultivation of crops. These activities are expected to continue into the foreseeable future. The impacts of this land use on aquatic species include decreased bank stability, loss of shade- and cover-producing riparian vegetation, increased sediment inputs, and elevated coliform bacteria levels.

Urban Development

Impacts to salmonids from urban and suburban development include loss of riparian vegetation, changes in channel morphology and dynamics, altered watershed hydrology, increased sediment loading, and elevated water temperatures. Impacts in the Van Duzen River watershed are not expected to increase substantially over current levels because relatively slow growth is anticipated.

Road Construction and Maintenance

Construction of private and county unsurfaced roads are a significant source of sediment input into streams that are habitat for listed and proposed salmonids. The level of new road construction cannot be anticipated, but it is expected to continue at a slightly lower level than has occurred in the recent past. Impacts from roads associated with timber harvest operations should decline due to the increased emphasis on protection of aquatic resources and implementation of higher standards for road construction, maintenance and use.

Pikeminnow Control Measures

A private group known as the Upper Eel Watershed Forum, has submitted a grant proposal to the Mendocino County Fish and Game Commission for financial support of a pikeminnow control effort on the Eel River. The proposal is to establish a pikeminnow fishing derby and offer anglers bounties for pikeminnow turned in to receiving stations. The fishing derby will be scheduled at times of the year, and conducted in areas such that impacts to anadromous salmonids are minimized. The effects of this program are expected to be beneficial to listed and proposed species in the Eel River system.

Chemical Use

It is anticipated that chemicals such as pesticides, herbicides, fertilizers, and fire retardants will continue to be used in the action area. Impacts to salmonids may include changes to riparian vegetation and associated organic input into aquatic systems, changes in aquatic invertebrate communities, direct physiological effects to salmonids, and increased algae and phytoplankton. Due to the lack of specific information we are unable to determine the effects of chemical applications in the action area. Use of chemicals is expected to be conducted under applicable State and Federal laws.

California Stream Bed Alteration Agreements

CDFG is in the process of strengthening the permitting process for activities taken place in, or in the vicinity of, rivers and streams by requiring environmental review. Henceforth, stream bed alteration agreements will be reviewed in accordance with the California Environmental Quality Act. Implementation of this program is expected to result in lessened impacts to salmonids from projects such as temporary summer crossings, culvert installation, gravel extraction, and stream bank stabilization projects within the action area.

CONCLUSION

After reviewing the best scientific and commercial data available, the current status of SONCC coho salmon, CC chinook salmon, and NC steelhead, the environmental baseline for the action area, the effects of the Proposed Action, and the cumulative effects, it is NMFS' biological opinion that the Proposed Action is not likely to jeopardize the continued existence of SONCC coho salmon, CC chinook salmon, or NC steelhead.

The potential effects described and discussed above in relation to the habitat features that listed Pacific salmonids require for survival and recovery include the potential effects to critical habitat. The levels of potential adverse effects are not expected to reach the level of destruction or adverse modification of critical habitat.

INCIDENTAL TAKE STATEMENT

Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. NMFS defines the term "harm" as an act which kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the

ESA provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by FHWA so that they become binding conditions of funds issued to Caltrans for the exemption in section 7(o)(2) to apply. FHWA has a continuing duty to regulate the activity covered by this incidental take statement. If FHWA (1) fails to assume and implement the terms and conditions or (2) fails to require Caltrans to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the funds issuance document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, FHWA, or Caltrans, must report the progress of the action and its impact on the species to NMFS as specified in the incidental take statement. [50 CFR §402.14(i)(3)].

Amount or Extent of Take Anticipated

NMFS anticipates that the Highway 101 Van Duzen River Bridge Replacement Project may have more than a negligible likelihood of resulting in incidental take of CC chinook, SONCC coho, and NC steelhead. Incidental take associated with this type of project is expected from short-term detrimental effects on aquatic habitat parameters including substrate quality, turbidity, and suspended sediment levels, all of which may result in incidental take in the form of habitat modification or degradation that could kill or injure fish by impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering. Incidental take, including lethal take, is also possible due to capture and direct handling of individual listed salmonids, as well as resulting from avoidance behavior caused by construction activities. No more than ten percent of salmonids captured and handled are expected to die. Medium- and long-term detrimental effects resulting in incidental take may result from temporary loss of aquatic habitat.

Even though NMFS expects some low level of incidental take to occur due to the actions covered by the Opinion, the best scientific and commercial data available are not sufficient to enable NMFS to estimate a specific amount of incidental take to the species. In instances such as these, NMFS designates the expected level of take through surrogates such as physical effects to habitat that may be expected to translate into take of listed species by harassment, harm, injury, or mortality, for example.

NMFS expects that habitat impacts will be consistent within the expected effects of project related actions as described in the Opinion. For example, very young juvenile salmonids without an established flight response would be killed during installation of temporary stream crossings. Anticipated incidental take may be exceeded if the project related actions are not in compliance with the terms and conditions of this incidental take statement or the effects of the actions exceed the effects anticipated by this Opinion. Anticipated incidental take may also be exceeded if incorrect placement of the gravel fill and temporary crossing occurs; if the sediment basin fails; if any spill of contaminants occurs; if any salmonids are killed (other than the 10% expected during handling of captured fish); or if use of the temporary crossing causes prolonged stress to salmonids holding in the channel that is obvious to a fishery biologist.

Effect of the Take

Take resulting from actions such as these is largely unquantifiable in the short term, and is not expected to be measurable as long-term effects on listed salmonid habitat or population levels. In the accompanying biological opinion, NMFS has determined that the level of anticipated take is not likely to jeopardize the continued existence of listed SONCC coho salmon, CC chinook salmon, or NC steelhead or to result in the destruction or adverse modification of critical habitat.

Reasonable and Prudent Measures

NMFS believes the following reasonable and prudent measures are necessary and appropriate to minimize incidental take of the above species.

1. To minimize the amount and extent of incidental take from project activities within and adjacent to the Van Duzen River, measures shall be taken to limit the duration and extent of instream work.

2. To minimize the amount and extent of incidental take from construction activities near the river, effective erosion and pollution control measures shall be developed and implemented to minimize the movement of soils and sediment both into and within the creek.

3. To minimize the amount and extent of take from loss of instream habitat and to minimize impacts to critical habitat, measures shall be taken to ensure correctly implemented impact minimization practices.

4. To minimize the amount of injury and mortality of salmonids during capture and relocation activities, measures shall be taken to use techniques that have less impact on the sampled fish.

5. To minimize the amount and extent of take from project activities on the temporary crossing, measures shall be taken to protect all salmonids present.

6. To ensure effectiveness of implementation of the reasonable and prudent measures, and erosion control measures, monitoring and evaluation shall be conducted and reported both during and following construction.

Terms and Conditions

FHWA must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. To Implement Reasonable and Prudent Measure #1, above (*To minimize the amount and extent of incidental take from project activities within and adjacent to the Van Duzen River,*

measures shall be taken to limit the duration and extent of instream work), FHWA shall ensure that:

a. Project activities in the Van Duzen River channel, but not in the low flow channel, will not occur before June 1 or after October 15 of a given calendar year. Project activities in the Van Duzen River low flow channel, including temporary stream crossing, in-water geotechnical drilling, and dike construction, will not occur before June 15 or after October 15 of a given calendar year.

b. If lethal take occurs, other than that expected during handling of entrapped fish, FHWA/Caltrans will immediately notify Mike Kelly of Arcata Field Office of NMFS, at 707-825-5178, or call the general office line at 707-825-5163 if Mr. Kelly is not available. The purpose of this call shall be to review the circumstances surrounding the lethal take and develop modification to project activities necessary to prevent further lethal take. Exceeding the take limit requires reinitiation of section 7 consultation. The following information will be supplied initially: The location of the carcass or injured specimen, and apparent or known cause of injury or death, and any information available regarding when the injury or death likely occurred.

2. To Implement Reasonable and Prudent Measure #2, above (*To minimize the amount and extent of incidental take from construction activities near the creek, effective erosion and pollution control measures shall be developed and implemented to minimize the movement of soils and sediment both into and within the creek, and to stabilize bare soil over both the short-term and long-term)*, the FHWA/Caltrans shall ensure that applicable BMPs are implemented to minimize adverse effects to aquatic habitat, and listed Pacific salmonids.

a. Vehicle maintenance, re-fueling of vehicles and storage of fuel shall be done at least 150 feet from the 2-year flood elevation or within an adequate fueling containment area.

b. At the end of each work shift, vehicles shall be stored greater than 150 feet (horizontal distance) ~~from the 2-year flood elevation~~.

c. Excavation spoils, such as gravels from the channel bed that are stockpiled for reuse in the stream channel, may be stored in or near the stream channel. Excavation spoils that contain soils, such as from stream banks, may not be stockpiled in the stream channel. RSP can be stockpiled in the dry stream channel. Excavation spoils that will not be placed back into bank and channel construction will not be stored or stockpiled on site and will be end-hauled to an approved disposal site.

d. The settling basin shall be sized appropriately to allow percolation of the effluent through the bottom and sides rather than overflow. The settling basin shall be cleaned out each time it reaches 2/3 of capacity and be clean prior to recontouring the site.

e. Materials placed to aid in the containment of or contain materials escaping from the construction activities may not be allowed to contact water flowing in the stream channel.

f. When concrete is poured to construct bridge footings, work must be conducted within a coffer dam (or similar structure) so the pH of the water is not affected through contact with "green" concrete. Any effluent containing concrete slurry will be pumped into a tank and disposed of at an offsite location without the possibility of flowing into the stream channel.

g. The Contractor will develop and implement site-specific best management practices, a Water Pollution Control Plan, and emergency spill controls, and is responsible for containment and removal of any toxins released. Plans shall be submitted to NMFS for approval prior to construction activities. The Contractor will be monitored by the Caltrans Resident Engineer to ensure compliance.

h. Appropriate monitoring measures shall be implemented by FHWA/Caltrans to document compliance with BMPs, e.g. turbidity monitored below the work site following the California State Regional Water Quality Control Board criteria.

i. Geotechnical drilling mud shall be bentonite without additives when drilling takes place within the river channel, including on dry gravel beds and bars. Initial drilling through gravels will be accomplished using clean water as a lubricant. Once bedrock or consolidated material is reached, drilling mud (bentonite clay) may be used.

j. Caltrans shall contact Mike Kelly at 707-825-5178 a minimum of two weeks in advance of any drilling activities in the water so that a NMFS biologist can observe the methods and resulting conditions in the channel.

3. To Implement Reasonable and Prudent Measure #3, above *(To minimize the amount and extent of take from loss of instream habitat and to minimize impacts to critical habitat, measures shall be taken to ensure correctly implemented impact minimization practices)*, the FHWA shall ensure that:

a. Disturbance of Large Woody Debris (LWD) shall be avoided when possible. Stockpiling of necessarily removed LWD material from the construction area shall occur and LWD will be stockpiled on the edges or upstream of the site which may allow for the natural redistribution of LWD during winter storms.

b. Any bank riprap that may be placed in conjunction with the Proposed Action, and receives sunlight, will be planted with local riparian vegetation and monitored and replanted until 75 percent cover with live tree and shrub vegetation is achieved.

c. Pools shall be maintained to provide resting and rearing habitat for salmonid migrants.

d. All fill used to form dikes or berms that will contact water will be placed such that salmonids will not be crushed during its construction or removal. All such fill shall be formed from washed, spawning-size gravel, between 10 and 100 millimeters in diameter.

e. Removal of existing trees or shrubs from the banks of the Van Duzen River will not occur in the project area.

f. FHWA/Caltrans shall ensure that if bladders are used to divert flow instead of a gravel berm that the bladders are placed in such a way as to prevent listed Pacific salmonids from being trapped and/or crushed.

4. To Implement Reasonable and Prudent Measure #4, above *(To minimize the amount of injury and mortality of salmonids during capture and relocation activities, measures shall be taken to use techniques that have less impact on the sampled fish)*, the FHWA shall ensure that:

a. Caltrans shall contact NMFS before work begins to notify NMFS as to the specific conditions for water diversion and dewatering.

b. Caltrans shall conduct visual surveys for listed Pacific salmonids prior to any dewatering, diversion, or work in isolated pools, and notify NMFS two weeks prior to the survey so that NMFS may choose whether to participate.

c. Caltrans shall share the results of the survey for listed Pacific salmonids with NMFS.

d. A qualified fisheries biologist shall continuously monitor the placement and removal of any diversion needed to isolate work spaces from flowing water for the purpose of removing any salmonids that would be adversely affected. The fisheries biologist shall capture salmonids stranded in residual wetted areas as a result of streamflow diversion and work space dewatering, and relocate the salmonids to a suitable location immediately upstream or downstream of the work area. The fisheries biologist shall note the number of salmonids observed in the affected area, the number of salmonids relocated, and the date and time of collection and relocation. One or more of the following methods shall be used to capture salmonids: dip net, seine, throw net, minnow trap, hand. Electrofishing may be used after the methods listed above are employed and found not successful in capturing all the fish present.

e. NMFS shall be notified 2 weeks prior to, and each morning that, capture and relocation activities take place to allow a NMFS biologist to be on site during those activities..

5. To Implement Reasonable and Prudent Measure #5, above *(To minimize the amount and extent of take from project activities on the temporary crossing, measures shall be taken to protect all salmonids present)*, the FHWA shall ensure that:

a. A person shall wade the stream ahead of heavy equipment crossing the wetted low-flow channel to scare any rearing juvenile salmonids out of the crossing area.

b. The stream crossing must be spanned to the maximum length possible using either a flatcar or bridge span, and must maintain a three foot elevation above the water surface.

6. To Implement Reasonable and Prudent Measure #6, above *(To ensure effectiveness of implementation of the reasonable and prudent measures, and erosion control measures, monitoring and evaluation shall be conducted and reported both during and following construction)*, the FHWA shall ensure that:

a. A post-construction report shall be sent to NMFS by December 31, of each year the project is implemented. This report shall include the final status of the project, best management practices used to avoid or minimize impacts to listed species during construction; fish habitat enhancement or preservation measures incorporated; photographs of the completed project; and information about the numbers, species, general size class, and disposition (relocated, injured, killed) of all captured salmonids as can be obtained by brief observation and little to no extra handling during capture and relocation efforts. The report shall be submitted to:

Irma Lagomarsino, Supervisor Arcata Field Office
National Marine Fisheries Service
1655 Heindon Road
Arcata, California, 95521

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a Proposed Action on listed species or critical habitat, to help implement recovery plans, or to develop information:

1. The NMFS recommends that FHWA encourage Caltrans to chart project locations and type of changes to the channel, i.e. channel stabilization, bridge work, etc., and extent of modification to the existing habitat, i.e. reductions in length, width and depth within the channel in the Van Duzen River, in order to track the progression of stream modifications implemented by Caltrans, and to keep the resultant chart available as public records.

2. The NMFS recommends that FHWA encourage Caltrans to continue working with NMFS to further define possible effects to listed salmonids from geotechnical drilling, and to include geotechnical drilling in their biological assessments for proposed actions.

In order for NMFS to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, we request notification of the implementation of any conservation recommendations.

REINITIATION OF CONSULTATION

This concludes formal consultation on the action outlined in the Caltrans Biological Assessment and for the Highway 101 Van Duzen River Bridge Replacement Project (HDA-CA, 01-HUM-101-56.3/57.4). As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this Opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this Opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, formal consultation shall be reinitiated immediately.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arcata Fish and Wildlife Office
1655 Heindon Road
Arcata, CA 95521
(707) 822-7201
FAX (707) 822-8411

In Reply Refer To:
1-14-2002-1211

March 12, 2003

Mr. Gary N. Hamby
Division Administrator
Federal Highway Administration
980 Ninth Street, Suite 400
Sacramento, California 95814-2724

EXHIBIT NO. 5
APPLICATION NO.
1-04-014
CALTRANS
USFWS BIOLOGICAL OPINION (1 of 36)

Dear Mr. Hamby:

Subject: Formal Consultation on the Proposed Southbound Van Duzen River Bridge Replacement, Highway 101, Humboldt County, California

This document transmits the Fish and Wildlife Service's (Service) biological opinion based on our review of the proposed Southbound Van Duzen River Bridge Replacement Project on Highway 101, Humboldt County, California, and its effect on the Federally threatened western snowy plover (*Charadrius alexandrinus nivosus*), in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Your September 19, 2002, request for formal consultation was received on September 23, 2002.

This biological opinion is based on information provided in the July 2002, biological assessment prepared by the California Department of Transportation's (Caltrans) District 1 office and other sources of information. A complete administrative record of this consultation is on file at the Arcata Fish and Wildlife Office.

Consultation History

In a letter dated April 24, 2002, the Federal Highway Administration (FHWA) designated Caltrans as their non-Federal representative for purposes of conducting informal consultation and preparation of biological studies under section 7 of the Act. The ultimate responsibility for section 7 obligations remains with the FHWA. Informal consultation on the proposed action was initiated on April 1, 2000, through a telephone conversation between Caltrans biologist Steve Hanson and Service biologist Jim Watkins. On March 27, 2002, Service biologists Ray Bosch and Jim Watkins met with Caltrans biologist Gail Popham at the Van Duzen River Bridge to discuss potential impacts and minimization measures. On April 10, 2002, Ray Bosch met with Caltrans staff Gail Popham, Steve Hanson, and Linda Evans to discuss the consultation process

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and possible terms and conditions. On April 11, 2002, the Service received a draft biological assessment. On April 25, 2002, the Service provided Caltrans comments on the draft biological assessment.

Time-frame of Biological Opinion

This biological opinion is valid through December 31, 2005 and covers two consecutive construction years during this time period.

BIOLOGICAL OPINION

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1.0 Description of the Proposed Action

1.1 Project Elements

Caltrans, acting as FHWA's non-Federal representative, proposes to replace the southbound 2-lane steel girder Van Duzen River Bridge with a 2-lane concrete box girder bridge. The Van Duzen River Bridge is located on the Van Duzen River approximately 0.25 mile upstream of it's confluence with the Eel River. The bridge site is approximately 10 miles inland from the Pacific Ocean.

The proposed bridge will be a cast-in-place concrete box girder bridge, 42 feet wide and 809 feet long with three piers. Each pier will have a 6-foot deep, 90 square-foot footing with cast-in-steel-shell piles. The abutments will be built on reinforced concrete footings with cast-in-steel-shell piles. Rock slope protection will be placed at each abutment along the channel. Existing piers on a former bridge structure will be removed as well as the piers of the existing southbound structure to below grade. No explosives will be used during bridge dismantling.

The existing roadbed will be reconstructed approximately 1,200 feet to the north and south. In these reconstructed areas, the fill slopes will be extended to the west approximately 10 feet. During construction, a detour for highway traffic will be utilized. Traffic will be reduced to one lane in each direction and detoured onto the northbound structure.

Construction personnel will use an existing road on the northwest side of the bridge and temporary roads graded on the gravel bar to access the work site. An additional temporary easement will be acquired on the northwest side of the bridge for access. On the southwest side, improvements will be made to an existing road to allow an adjacent property owner access. Portions of the gravel bar west of the bridge will be used for access and for a temporary sedimentation basin. An upland area on the northwest side, currently used as a staging area for gravel mining, may be used for activities such as storage of materials, equipment, refueling, and concrete washout activities. A California Highway Patrol weigh station on Highway 101 may also be used as a staging area.

Diversion of the Van Duzen River, at the construction site, will be required during some parts of the construction. A temporary dike will be constructed with existing river gravel to divert flow around the bridge piers. Excavations around the pier footings will need to be de-watered. The pumped water will go into a sedimentation basin, constructed by either digging a hole or building a berm.

Construction activities will be restricted to the areas within the Caltrans right-of-way and the temporary construction easement. The Caltrans right-of-way extends on the east approximately 33 feet upstream of the existing northbound bridge and on the west approximately 80 feet downstream from the existing southbound bridge. The temporary construction easement will extend approximately 230 feet beyond the existing right-of-way (encompassing approximately three acres) on the downstream side of the bridge. After construction, all dikes, berms,

construction material, debris, temporary roads, and the sedimentation basin will be removed and the contours of the gravel bar restored. Any residual silt or fine material in the sedimentation basin will be removed to a disposal site.

The following measures will be implemented during each construction year to minimize potential impacts to the western snowy plover:

1. Bi-weekly (two times per month) plover surveys will start March 1, when river levels are such that suitable nesting habitat is not inundated, and continue until work activities commence. Surveys will extend from 0.25 mile downstream of the project site to at least 0.25 mile upstream of the project site.

2. After construction activities (including pre-construction on-foot activities) begin on the gravel bar, daily plover surveys will be conducted prior to any work activities. Surveys will extend from 0.25 mile downstream of the project site to at least 0.25 mile upstream of the project site. In addition to this survey data, Caltrans will have same-day access to snowy plover survey data collected on the Leland gravel bar by LBJ Enterprises.

3. Daily plover surveys will continue through July 31, unless nesting plovers or chicks are found within 0.25 mile of the project site. If chicks or nests are present within 0.25 mile, then surveys will continue until all nest have failed, all chicks have fledged from the area, all chicks have died, or all chicks have left the area. Chicks will be considered to have left the area if they are not detected within approximately 0.25 mile of the project site during five consecutive daily surveys. Surveys will not continue after September 30 or cessation of the year's construction activities.

4. If successful plover nests/chicks are detected within 0.25 mile of the edge of the work area footprint, then exclusionary fencing will be installed at the edge of the footprint between the plovers and the work area. The fencing will be installed within 24 hours of detecting the plovers. The fencing will be a silt fence fabric not less that 24 inches tall. The fabric will be keyed-in to the gravel bar so that no gaps greater than 0.5 inch exist below the fabric. The fabric will extend across the open gravel area from the riparian vegetation or channel embankment to the edge of the wetted river channel. If daily surveys detect chicks on the work side of the fence, then the chicks will be herded back onto the side of the fence where they were first detected. The silt fence will remain in place until September 15 or until no chicks are detected within 0.25 mile of the fence.

1.2 Implementation Schedule

During year one, the old bridge will be dismantled and removed and the new abutments and piers will be constructed. During year two, the superstructure of the new bridge will be constructed. Construction activities may occur at night.

1.3 Conservation Measures

When used in the context of the Act, "conservation measures" represent actions pledged in the project description that the action agency will implement to further the recovery of the species under review. The FHWA is not proposing to include any conservation measures as part of the proposed action.

1.4 Definition of the Action Area

The action area is defined at 50 CFR 402.02 to mean "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action". For the purposes of this consultation, the Service recognizes the action area to include the Van Duzen River from 0.25 mile upstream of the project site to the confluence of the Eel River and the Eel River from the confluence with Van Duzen River downstream to the mouth. This analysis area enables the FHWA and the Service to more fully understand the cumulative, interrelated, and interdependent effects of the action within a more appropriate landscape context.

2.0 Status of the Western Snowy Plover

2.1 Background

2.1.1 *Legal Status*

The Pacific coast population of the western snowy plover was Federally listed as threatened on March 5, 1993 (U.S. Department of the Interior 1993) and critical habitat was designated on December 7, 1999 (U.S. Department of the Interior 1999). In California, the western snowy plover has been classified by the California Department of Fish and Game as a "species of special concern" throughout all of California since 1978 (California Natural Diversity Database 2001).

2.1.2 *Taxonomy and Life History*

Accounts of the taxonomy, ecology, and reproductive characteristics of the western snowy plover are found in the following recent publications: final rule listing the western snowy plover as threatened (U.S. Department of the Interior 1993); final rule designating critical habitat (U.S. Department of the Interior 1999); the draft recovery plan and appendices (U.S. Fish and Wildlife Service 2001); and *Snowy Plover* (Page, et al. 1995).

2.1.3 *Threats*

The primary threats that warranted listing of the Pacific coast population include loss of nesting sites due to European beachgrass (*Ammophila arenaria*) encroachment and urban development; disturbance from human recreational activities; and predation exacerbated by human disturbance (U.S. Department of the Interior 1993).

2.2 Current Conditions (Rangewide)

The current conditions of the species incorporates the effects of all past human and natural activities or events that have led to the present-day status of the species (USDI Fish and Wildlife Service and USDC National Marine Fisheries Service 1998). The current western snowy plover

Pacific coast population breeds from Damon Point, Washington, to Bahia Magdalena, Baja California, Mexico and winters mainly in coastal areas from southern Washington to Central America (U.S. Fish and Wildlife Service 2001). The draft recovery plan identifies the following six recovery units for the Pacific Coast population of the western snowy plover: Unit 1 (Washington and Oregon); Unit 2 (Del Norte to Mendocino Counties, California); Unit 3 (San Francisco Bay, California); Unit 4 (Sonoma to Monterey Counties, California); Unit 5 (San Luis Obispo to Ventura Counties, California); and Unit 6 (Los Angeles to San Diego Counties, California) (U.S. Fish and Wildlife Service 2001).

2.2.1 *Breeding*

2.2.1.1 Habitat. The Pacific coast population breeds primarily above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries (U.S. Fish and Wildlife Service 2001). Suitable nesting habitat is distributed throughout the listed range.

2.2.1.1.1 *Acreage.* The Service has identified 109 breeding locations that are important for recovery (U.S. Fish and Wildlife Service 2001). Acreage and miles of coastline by recovery unit are estimated as follows: Recovery Unit 1 (135 miles of coastline and 15,098 acres); Recovery Unit 2 (77 miles of coastline and 6,922 acres); Recovery Unit 3 (2 miles of coastline and 2,200 acres); Recovery Unit 4 (51 miles of coastline and 3,870 acres); Recovery Unit 5 (93 miles of coastline and 9,255 acres); and Recovery Unit 6 (30 miles of coastline and 7,112 acres) (U.S. Fish and Wildlife Service 2001).

2.2.1.1.2 *Quality.* The Pacific coast plover population has experienced widespread loss and degradation of nesting habitat at many nesting locations due to development and encroachment of introduced European beachgrass. European beachgrass was introduced to the west coast around 1898 and now occurs from British Columbia to southern California (U.S. Fish and Wildlife Service 2001).

The final rule designating plover critical habitat states that habitat can be adversely affected by activities that: 1) cause or increase human-associated disturbance, such as day and nighttime off-road vehicles use, camping, walking, jogging, equestrian use, kite flying, and driftwood removal; 2) promote unnatural rates or sources of predation, such as presence of predator perches and/or garbage; 3) promote the invasion of nonnative vegetation; 4) maintain or operate salt ponds; 5) facilitate dredge spoil disposal; 6) control shoreline erosion; and 6) produce contamination events (U.S. Department of the Interior 1999).

2.2.1.2 Numbers. The draft recovery plan provides an estimate of approximately 2,000 snowy plovers breeding along the U.S. Pacific coast (Table 1). This estimate is based on window surveys, breeding surveys, and data used in the population viability analysis. Window surveys are a one-time pass of a single surveyor or team of surveyors through potential snowy plover nesting habitat during May or June. In 2002, the rangewide breeding season window survey

counted 1,465 adult birds (Table 2). About 50 percent of the birds were located within San Luis Obispo to Ventura Counties, California.

Along the California coast the size of the western snowy plover population was first estimated at 1,593 adults, based on window surveys completed during the period 1977 to 1980 (Table 3). Subsequent window surveys have all documented a decline in the number of adults plovers counted during the breeding season window survey. The observed decline has ranged from a low of 976 birds in 2000 to a high of 1,593 birds in the 1977/1980 survey (Table 3). In 2002, 1,379 birds were counted (Point Reyes Bird Observatory 2002 unpublished data).

2.2.1.3 Distribution. The current Pacific coast breeding population ranges from Damon Point, Washington, to Bahia Magdelena, Baja California, Mexico (U.S. Fish and Wildlife Service 2001). Historical records indicate that nesting plovers were once more widely distributed throughout the listed range. In Washington, plovers formerly nested at five locations; compared to only three current locations (U.S. Fish and Wildlife Service 2001). In Oregon, plovers historically nested at 29 sites, compared to nine recent locations (U.S. Fish and Wildlife Service 2001). In California, plovers were known to nest at 53 general nesting areas prior to 1970 (Page and Stenzel 1981); as of 1991, no evidence of breeding birds had been found at 33 of those 53 areas (Page, et al. 1991). During the 2002 window surveys in California, plovers were recorded at 48 sites during the breeding season (Point Reyes Bird Observatory, 2002 unpublished data). Plovers have disappeared from significant parts of the coastal California breeding range including locations in San Diego, Orange, Los Angeles, Ventura, Santa Barbara, Santa Cruz, San Mateo, Sonoma, Mendocino, Humboldt, and Del Norte counties (U.S. Fish and Wildlife Service 2001).

The U.S. Fish and Wildlife Service (2001) identifies the following gaps in the breeding distribution of the plover: Leadbetter Point/Gunpowder Sands, Washington south to Bayocean Spit, Oregon; Bayocean Spit south to Heceta Head, Oregon; Bandon State Park, Oregon south to Humboldt County, California; Humboldt County south to MacKerricher State Park, California; MacKerricher State Park south to Salmon Creek or Marin County, California; and Point Sur, California south to San Carpoforo Creek, California.

2.2.1.4 Reproduction. The fledging success of snowy plovers (percentage of hatched young that reach flying age) varies greatly by location and year (U.S. Fish and Wildlife Service 2001). The draft recovery plan uses the annual number of young fledged per adult male to assess reproductive success. Reproductive success for various sites was as follows: 1) Monterey Bay without predator control and exclosures, males averaged 0.85 fledglings annually (1984 to 1991); with predator control and exclosures, males averaged 1.11 fledglings (1992 to 1997); 2) San Diego County with some indirect management activities, males averaged 0.92 fledged young (1995 to 1997); and 3) Oregon with intensive management, males averaged 1.04 fledglings (1993 to 1997) (Nur, et al. 1999).

2.2.2 *Wintering*

2.2.2.1 Habitat. Wintering (winter is defined as November 1 through February) plovers are found on many beaches used for nesting and some beaches where they do not nest (U.S. Fish and Wildlife Service 2001). In California, the majority of wintering plovers utilize sand spits and dune-backed beaches (U.S. Fish and Wildlife Service 2001). Suitable wintering habitat is distributed throughout the listed range of the snowy plover.

2.2.2.1.1 *Acreage*. The Service has identified 143 wintering locations that are important for recovery (U.S. Fish and Wildlife Service 2001). We also estimated the following acreage and miles of coast line for each of these locations: Recovery Unit 1 (91 miles of coastline and 10,446 acres); Recovery Unit 2 (80 miles of coastline and 8,336 acres); Recovery Unit 3 (2 miles of coastline and 2,200 acres); Recovery Unit 4 (64 miles of coastline and 4,654 acres); Recovery Unit 5 (107 miles of coastline and 9,785 acres); and Recovery Unit 6 (79 miles of coastline and 9,931 acres) (U.S. Fish and Wildlife Service 2001).

2.2.2.1.2 *Quality*. The Pacific coast plover population has experienced widespread loss and degradation of wintering habitat due to human disturbance, development, and encroachment of introduced European beachgrass.

2.2.2.2 Numbers. Fewer than 40 plovers winter on the Washington coast, fewer than 100 winter on the Oregon coast, and more than 2,500 winter along the California coast (U.S. Fish and Wildlife Service 2001). In 1986, the estimated winter population for the California and Oregon coast was 3,100 plovers (Page, et al. 1986).

2.2.2.3 Distribution. Plovers winter at two locations on the Washington coast, at nine locations on the Oregon coast, and at various locations along the California coast (U.S. Fish and Wildlife Service 2001). The majority of wintering birds in California are found from Sonoma County southward.

2.2.3 *Conservation Needs/Strategy*

The draft western snowy plover recovery plan provides a strategy for recovery of the listed population. Recovery objectives in the draft recovery plan (U.S. Fish and Wildlife Service 2001) include: (1) achieving well-distributed increases in numbers and productivity of breeding adult birds, and (2) providing for long-term protection of breeding and wintering plovers and their habitat.

The draft recovery plan states that delisting will be considered when the following criteria have been met: (1) maintain for 10 years an average of 3,000 breeding adults distributed among 6 recovery units as follows: Washington and Oregon, 250 breeding adults; Del Norte to Mendocino Counties, California, 150 breeding adults; San Francisco Bay, California, 500 breeding adults; Sonoma to Monterey Counties, 400 breeding adults; San Luis Obispo to Ventura Counties, California, 1,200 breeding adults; and Los Angeles to San Diego Counties, California, 500 breeding adults; (2) maintain a 5-year average productivity of at least 1.0 fledged chick per male

in each recovery unit in the last 5 years prior to delisting; and (3) have in place participation plans among cooperating agencies, landowners, and conservation organizations to assure protection and management of breeding, wintering, and migration areas listed in Appendix B of the draft plan to maintain the subpopulation sizes and average productivity specified in criteria 1 and 2 above.

Appendix B of the draft recovery plan identifies specific breeding and wintering locations important for recovery (U.S. Fish and Wildlife Service 2001). The draft plan identifies management goals for the number of adults at each of the breeding sites and recommends that managers consistently aim to achieve these goals annually. The management goal breeding numbers represent population targets that, in the view of the snowy plover recovery team's technical subteam, can be achieved under a very intensive management scheme. These numbers are about 15 percent higher than the recovery criteria subpopulation sizes, but lower than potential carrying capacity.

The Service considers the Pacific coast plover population to be a single management entity (U.S. Fish and Wildlife Service 2001). The recovery team recommended that no state, geographic region, or subpopulation be considered for delisting separately from the others. To consider delisting the population the recovery criteria will need to be achieved in each recovery unit.

A population viability analysis was conducted to aid the recovery team in developing recovery criteria for the draft recovery plan (Nur, et al. 1999). The analysis makes the following conclusions. "Under status quo scenarios, even with intensive management in some areas, the population is almost certain to decline. Without question, ceasing current management efforts (area closures, predator exclosures, and predator control) would be disastrous for the Pacific coast population." "Recovery is plausible. It will require, however, short-term intensive management and long-term commitments to maintaining gains." These conclusions emphasize the immediate need for intensive management.

The role of Federal agencies in achieving recovery of the plover is described in the draft recovery plan as follows. Lands managed by Federal agencies are extremely important to the conservation of the snowy plover. Under section 7(a)(1) of the Act, Federal agencies are required to actively promote the conservation of listed species. The snowy plover cannot be recovered simply through general habitat protection or compliance with required section 7 consultations. The snowy plover must be actively monitored and managed for the full purposes of recovery or its population size will continue to decline. Federal agencies alone cannot assure recovery of the snowy plover, but they need to significantly increase their current monitoring and management efforts now to assure survival and recovery of this species. Federal agencies should take the lead role in conserving this species and serve as examples to non-Federal landowners.

2.3 Current Conditions (Recovery Unit 2 - Del Norte, Humboldt, and Mendocino Counties)

2.3.1 *Breeding*

2.3.1.1 Habitat.

2.3.1.1.1 *Acreage*. The draft plan identifies 12 breeding locations in Recovery Unit 2 that are important for recovery (Table 4). Nesting has only been documented at the following five locations since 1999 (LeValley 1999; Mad River Biologists 2000; Colwell, et al. 2001): Clam Beach/Little River; South Spit; Eel River Wildlife Area; Eel River gravel bars, and MacKerricher State Park. Since 2000, nesting has only occurred at three of these sites (Clam Beach/Little River, Eel River Wildlife Area; and Eel River gravel bars).

2.3.1.1.2 *Quality*. The three current nesting areas in Recovery Unit 2, Clam Beach/Little River, Eel River Wildlife Area, and the Eel River gravel bars all allow vehicles in or adjacent to nesting habitat. The Clam Beach/Little River area is heavily used by recreationists. On Clam Beach/Little River, street-licensed 4-wheel drive vehicles are allowed to drive on the waveslope and vehicle play is prohibited. The southern portion of this beach is closed to recreational vehicles during the nesting season; however, permitted commercial fishermen are allowed to drive vehicles during the day and night. Tire tracks above the waveslope showing evidence of vehicle play are frequently observed on this beach. Vehicle tracks indicating regular driving in tight circular tracks have been noted in areas where adults tend broods (Colwell, et al. 2001). It is not unusual after a holiday weekend for the entire area on the northern portion of the beach from the waterline to the foredunes to be covered by vehicle tracks. Ruts created by vehicle tracks make it difficult for plover chicks to avoid oncoming vehicles, horses, unleashed dogs, predators, or other hazards. The Eel River Wildlife Area currently receives less foot traffic and/or unleashed dogs than Clam Beach/Little River, but has significant vehicular traffic by woodcutters and fishermen (Mad River Biologists 2000). No restrictions on recreational vehicle use or the types of vehicles allowed in the nesting areas exist for the Eel River gravel bars. Vehicle use related to gravel mining along the Eel River is governed by permits from the California Coastal Commission and the U.S. Army Corps of Engineers.

2.3.1.2 Numbers. In 2002, the estimated number of breeding plovers in Humboldt County was 63 (30 females and 33 males) (Colwell, et al. 2002). In 2001, the estimated number of breeding adult plovers was 60 birds (29 females and 31 males) (Colwell, et al. 2001). The 2002 estimate is 58 percent higher than the 2000 estimate of 40 birds (Mad River Biologists 2001a). The 2002 population represents 39 percent of the draft recovery plan management goal of 162 breeding adults in Humboldt County (Table 1) and 32 percent of the management goal for Recovery Unit 2.

Since 1977, window surveys in Recovery Unit 2 have documented birds during the breeding season at the following 12 locations: Del Norte County - Smith River mouth and Lake Earl/Lake Talawa; Humboldt County - Big Lagoon, Clam Beach/Little River, Mad River mouth, Elk River spit, north spit of Humboldt Bay, South Spit, Eel River gravel bars, Eel River Wildlife Area, and south spit of Eel River; and Mendocino County - MacKerricher Beach (Table 5). Clam Beach/Little River is the only site in Humboldt County where breeding birds were sighted during

every survey year. Since at least 1991, breeding birds have not been present during the window survey period in the following five locations: Lake Earl; Big Lagoon; north spit of Humboldt Bay; Elk River spit; and the South Spit. Since 1998, breeding birds have consistently only occurred at three locations (Clam Beach/Little River; Eel River Wildlife Area; and the Eel River gravel bars).

Based on the 2002 window survey, breeding plovers were only sighted on 4 (30 percent) of the 12 breeding sites in Recovery Unit 2 identified as important for recovery (Table 6). The four sites are Clam Beach/Little River; Eel River Wildlife Area; Eel River gravel bars; and the south spit of the Eel River. The 2002 number of breeding birds at only one (Clam Beach/Little River) of the 12 sites met or exceeded the draft recovery plan's management goal (Colwell, et al. 2002). In summary, the number of recent plover breeding season locations has declined 67 percent since the late 1970's.

2.3.1.3 Distribution. Since 1977, plovers have nested at only 12 locations in Recovery Unit 2. Since 1999, only the following five locations in Recovery Unit 2 have had documented nesting (LeValley 1999; Mad River Biologists 2000; Colwell, et al. 2001): Clam Beach/Little River; South Spit; Eel River Wildlife Area; Eel River gravel bars, and MacKerricher State Park. No documented nesting has occurred at the South Spit or MacKerricher State Park since 1999. The number of nesting locations in 1999 has declined 58 percent since 1977 and the number of locations in 2001 and 2002 declined 75 percent. No nesting has been documented in Del Norte County, north spit of Humboldt Bay, or Elk River spit since 1977; Big Lagoon since 1989; Centerville Beach since 1994; or Mad River since 1997. In summary, the number of recent nesting locations declined 75 percent since the late 1970's.

2.3.1.4 Reproduction. In 2001 and 2002, males on beaches in Recovery Unit 2 fledged the following number of chicks: Clam Beach/Little River in 2001 (1.4± 0.5 chicks) and in 2002 (0.29±0.76 chicks); and at the Eel River Wildlife Area in 2001 (1.2±1.3 chicks) and in 2002 (0.25±0.50 chicks) (Colwell, et al. 2001; Colwell, et al. 2002). The 2-year average productivity for beaches in Recovery Unit 2 was well below the recovery plan targets for an increasing or stable population (Clam Beach/Little River, 0.85 chicks and Eel River Wildlife Area 0.73 chicks). Males nesting along the Eel River fledged the following number of chicks: 2001 (1.6±1.6 chicks) and in 2002 (1.46±1.13 chicks).

In 2002, a total of 75 chicks hatched in Humboldt County and 23 survived to 28 days (Colwell, et al. 2002). In 2002, nests on Clam Beach/Little River survived for a shorter period of time than on the other two nesting areas in the recovery unit (Eel River Wildlife Area and Eel River gravel bars) (Colwell, et al. 2002).

In 2002, the number of breeding males (33) in Recovery Unit 2 was well below the recovery target of 75 males (population target of 150 and assuming a 1:1 sex ratio). Therefore, in addition to producing few chicks per male, the recovery unit had a low number of males. Increasing the

current population will require relatively high productivity and adult survival. To achieve this objective, intensive management of nesting areas will be required.

2.3.2 *Wintering*

2.3.2.1 Habitat.

2.3.2.1.1 *Acreage*. The draft plan identifies 14 wintering locations in Recovery Unit 2 that are important for recovery (Table 7). Potential winter habitat is distributed in Recovery Unit 2 as follows: 12 miles of coastline (1,700 acres) in Del Norte County; 45 miles of coastline (5,450 acres) in Humboldt County; and 11 miles of coastline (1,170 acres) in Mendocino County (U.S. Fish and Wildlife Service 2001).

2.3.2.1.2 *Quality*. Habitat quality at wintering locations has been lost or degraded due to human disturbance and European beachgrass.

2.3.2.2 Numbers. Between 1979 and 1985, 89 wintering plovers were recorded in Recovery Unit 2, based on the median of the maximum number of plovers counted (Table 7) (Page, et al. 1986). Winter window surveys in Recovery Unit 2 recorded 155 adult plovers in 2001 and 123 plovers in 2002 (Table 7).

2.3.2.3 Distribution. The draft recovery plan identifies 14 wintering locations in Recovery Unit 2 that are important for recovery (Table 7). During the 2001 winter window surveys, adult plovers were sighted at only 6 of the 14 winter sites (43 percent). During the 2002 winter window surveys, plovers were sighted at only 4 of the 14 winter sites (29 percent).

2.3.3 *Conservation Needs/Strategy*

The draft plan identifies management goals for the number of breeding adults in Recovery Unit 2 (U.S. Fish and Wildlife Service 2001, Appendix B, Table B-1) (Table 1). Management goals are about 15 percent higher than the recovery criteria subpopulation sizes. The overall management goal for Recovery Unit 2 is 200 breeding adults, this includes 162 breeding adults in Humboldt County.

The draft recovery plan describes the following recovery task specific to important breeding and wintering locations in Recovery Unit 2:

(Task 3.1.3) "Provide intensive management and protection of snowy plovers on all Federal and State lands." Federal and State land managers should protect and intensively manage all breeding and wintering locations listed in Appendix B of the draft recovery plan.

(Task 3.1.4) "Develop and implement management plans for all Federal and State lands." Federal and State land managers should develop and implement management plans for all breeding and wintering locations listed in Appendix B. These plans

should address threats to plovers and adopt management measures for habitat protection and enhancement.

(Task 3.1.10) "Ensure that section 10(a)(1)(B) and section 7(a)(2) permits contribute to Pacific coast western snowy plover conservation. When evaluating impacts to plovers under section 7 we should consider each of the breeding and wintering locations listed in Appendix B as important for recovery and should refer to the management goal breeding numbers and determine how the proposed project will affect those goals. No short- or long-term losses to plover habitat should be allowed.

3.0 Environmental Baseline (in the Action Area)

Regulations implementing the Act (50 CFR 402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed State or Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation process.

3.1 Breeding

In California, pre-nesting bonds and courtship activities are observed as early as mid-February (U.S. Fish and Wildlife Service 2001). The earliest nest initiation dates in Humboldt County have been as follows: 2001 (March 25) and 2002 (March 19) (Colwell, et al. 2002). Plovers have been observed along the Eel River from early April until early September (Mad River Biologists 2002). Plovers were first documented nesting on the gravel bars along the Eel River in 1996 (Tuttle, et al. 1997).

3.1.1 *Habitat.*

3.1.1.1 Acreage. The Service has identified the Eel River from the mouth to the Van Duzen River as a breeding area that is important for the recovery of the snowy plover (U.S. Fish and Wildlife Service 2001, Appendix B). In 2002, the amount of potentially suitable nesting habitat along the Eel River was estimated to be approximately 806 acres (Mad River Biologists 2002). The amount of available gravel bar habitat varies each year depending on river flow levels (Mad River Biologists 2002).

3.1.1.2 Quality. The gravel bars include substrates ranging from pea-sized gravel to bowling ball-sized cobble mixed with sand and/or silt (Mad River Biologists 2000). From 1996-2000, approximately 12 percent (range 11-15 percent) of the potentially suitable habitat along the Eel River was mined for gravel in any one year (Mad River Biologists 2002). Generally, plovers along the Eel River select low gradient, topographically uniform sites for nesting (Mad River Biologists 2002). Plovers have been documented nesting in locations where gravel mining occurred in the previous year (Mad River Biologists 2001b).

Depending on public access, significant disturbance of the nesting areas along the Eel River may occur due to four-wheel drive vehicles, motorcycles, wood collecting, target shooting, and homeless encampments (Mad River Biologists 2000). Little or no enforcement of these activities exists (Mad River Biologists 2000).

3.1.2 *Numbers*

Plover numbers are difficult to compare from year-to-year because of variations in survey efforts. Annual survey efforts in the action area have ranged from one-day window surveys to bi-monthly, weekly, or daily surveys. The window survey results are not comparable to the more frequent surveys efforts; therefore, these results are discussed separately. Breeding season window surveys in 1991 and 1995 did not record plovers on the Eel River (Point Reyes Bird Observatory 2000 and 2002 unpublished reports). However, 22 and 26 adult plovers were recorded during window surveys along the Eel River in 2000 and 2002, respectively.

The Eel River gravel bars have been surveyed during the breeding season daily to weekly since 1999. The peak number of adults observed during these surveys were 5 in 1999 and 20 in 2000 (Mad River Biologists 2001a). An estimated 39 adults and 34 adults were observed along the Eel River gravel bars in 2001 and 2002, respectively (Colwell, et al. 2001 and Colwell 2002). The observed 34 breeding birds in 2002 represent 85 percent of the draft recovery plan's population target of 40 breeding adults for the Eel River. It also represents 54 percent of the total number of breeding birds (63) in Humboldt County during 2002.

3.1.3 *Distribution*

Plovers occur on virtually all gravel bars with suitable habitat along the Eel River from Cock Robin Island upstream to the mouth of the Van Duzen River (Mad River Biologists 2002). The majority of the breeding activity has been near Fernbridge (Mad River Biologists 2002). Broods are typically observed at or near the edge of the river, presumably where prey items are most available (Mad River Biologists 2002).

In 2002, two western snowy plovers were detected within the Leland Rock gravel bar site along the Eel River at the confluence with the Van Duzen River, but no nests have yet been recorded at this site (Mad River Biologists 2002). These detections were 0.25 to 0.5 mile upstream from the nearest known nest site (Mad River Biologists 2002). To date, no plovers have been detected upstream of the confluence of the Eel and Van Duzen Rivers.

3.1.4 *Reproduction*

Nesting was documented on the Eel River gravel bars from 1999 to 2002. Surveys detected the following reproductive effort on the Eel River gravel bars: 1999, 6 nests; 33 percent of which hatched (LeValley 1999); 2000,18 nests; 78 percent of which hatched (Mad River Biologists 2001a); 2001, 39 nests; 64 percent of which hatched (Colwell, et al. 2001); and 2002, 30 nests; 53 percent of which hatched (Colwell, et al. 2002).

In 2001, males breeding on the Eel River gravel bars fledged 33 chicks (1.6±1.6 chicks per male (Colwell, et al. 2001). In 2002, 20 chick successfully fledged (1.46±1.13 chicks per male) (Colwell, et al. 2002).

3.2 Wintering

We assume that snowy plovers leave the gravel bars after the last broods fledge (Mad River Biologists 2002). To date, no plovers have been documented wintering in the action area.

4.0 Effects of the Action

This section presents an analysis of the direct and indirect effects of the proposed action, including interrelated and interdependent actions, on the western snowy plover. The effects of the proposed replacement of the southbound Van Duzen Bridge will be evaluated with respect to the numbers, distribution, and reproduction of western snowy plovers in the action area.

4.1 Scientific Basis for Evaluating Potential Effects on the Western Snowy Plover

The proposed project has the potential to result in adverse effects to the western snowy plover through habitat modification, harassment, and direct mortality. These mechanisms are discussed in more detail below.

4.1.1 *Habitat Modification*

Proposed bridge construction activities, such as grading, riprapping, or deposition of spoil material, will physically modify suitable western snowy plover nesting habitat. Construction activities will increase human-associated disturbance which may reduce the functional suitability of nesting, foraging, and roosting areas (U.S. Department of Interior 1999). Degradation of habitat may also occur as a result of activities that promote unnatural rates of predation, such as human-generated litter (Fish and Wildlife Service 1999).

4.1.2 *Harassment*

The proposed activities will require the use of personnel, construction equipment, and vehicles, all of which introduce high levels of noise and activity into the environment. Disturbance from human presence or activities during the breeding season may potentially disrupt the species' essential breeding behaviors by causing: 1) abandonment of the breeding effort by failure to initiate nesting or to complete incubation; 2) separation of adults from their broods; and 3) adults and broods to stay away from favored foraging areas. The potential effects of disturbance will depend on the frequency, timing, location, and intensity of activities.

4.1.3 *Injury or Mortality*

The draft recovery plan (U.S. Fish and Wildlife Service 2001) summarizes potential ways activities may cause mortality of plovers. Pedestrians and vehicles may crush highly cryptic eggs or chicks and flush plovers off their nests. Separation of plover adults from their nests and broods can cause mortality through exposure of eggs or chicks to heat, cold, blowing sand, and/or

predators. Repeated disturbances may cause plovers to nest in marginal habitat where their chances of reproductive success are reduced.

Vehicle traffic presents a very real threat to the survival of plover eggs and chicks. Circumstantial evidence indicates that vehicles crushed nests at Clam Beach/Little River in 1998 and 2002, although that has not been confirmed. A vehicle crushed an active nest on the Eel River gravel bar in 2002 (U.S. Fish and Wildlife Service unpublished data). Vehicles crushed adult plovers at Vandenberg Air Force Base and Oceano Dunes State Vehicular Recreation Area in 1994 and 1998, respectively. A snowy plover chick was stepped on during the 1998 nesting season by a pedestrian at Oceano Dunes State Vehicular Recreation Area, in a portion of the park closed to vehicle use (U.S. Fish and Wildlife Service unpublished data).

4.2 Analysis of Project Effects

4.2.1 *Likelihood of Species Presence*

The Service believes plovers may be present in the vicinity of the project site for the following reasons: 1) potentially suitable nesting habitat exists at the Van Duzen River Bridge site; 2) in May 2002, two snowy plovers were detected at the confluence of the Van Duzen and Eel rivers approximately 0.25 mile from the bridge site; 3) plovers have nested at the Hauk Bar site on the Eel River approximately 0.25 to 0.50 mile downstream from the confluence with the Van Duzen River; and 4) as many as 39 breeding plovers have been documented along the Eel River. Habitat suitability may fluctuate at the project site and along the Eel River during the construction period, since habitat quality and availability can change annually. In high water years, many gravel bars may still be submerged early in the nesting season. In low water years, more gravel bars will be exposed; however, vegetation may become established earlier in the year and reduce the amount of available habitat (Mad River Biologists 2002).

4.2.2 *Habitat Modification*

Modification of suitable plover nesting habitat will occur at the project site during each of the two consecutive years of construction. Construction of facilities on the gravel bar, such as temporary roads, sedimentation basin, dikes, and berms, will physically modify suitable nesting habitat. As a result of construction activities, the topography of the natural gravel bar, adjacent to the bridge site, will be altered. An estimated two acres of gravel bar will be modified during each year of construction. At completion of the project, all dikes, berms, construction material, debris, temporary roads, and the sedimentation basin will be removed and the contours of the gravel bar restored to natural elevations. We do not anticipate that snowy plovers will be adversely affected due to habitat modification for the following reasons: 1) the topography of the gravel bar will be restored to it's natural contours; 2) nesting habitat will be altered only during two nesting seasons; 3) plovers along the Eel River have nested successfully in areas mined for gravel in the previous year (Mad River Biologists 2001b); 4) the two acres of habitat altered during two breeding seasons represent only 0.2 percent of the 806 acres of suitable nesting habitat along the Eel River; 5) during all but a low water year, it is expected that water levels during the winter will redeposit gravel in the modified gravel bar; and 5) no long-term significant habitat impacts are anticipated.

Construction activities at the bridge site may attract potential plover predators, such as corvids and gulls, in the suitable nesting area. This is especially true if deliberate feeding of potential predators occurs or if food scraps or trash are left on-site. These activities can result in adverse affects to plovers by encourage greater numbers of predators and increasing the plovers' risk of predation.

4.2.3 *Harassment*

Project-generated noise and activities including the presence of workers and use of equipment, such as pile drivers, vibratory hammers, jack hammers, hydraulic hammers, cranes, and vehicles, may disturb adults and/or chicks within 0.25 mile of the bridge site. Repeated disturbances can interrupt brooding, incubating, and foraging of adults and cause chicks to be separated from their parents.

The project includes measures to reduce impacts. If chicks are located within 0.25 mile of the edge of the work area, a fence will be constructed to prevent plovers from utilizing the work area. If chicks are located on the work side of the fence, they will be herded back to the other side of the fence. This measure will help prevent direct injury or mortality, but will result in disturbance to chicks by hazing. Adult plovers and chicks within 0.25 mile of the work area will be subject to disturbance due to project-generated noise and activities within the work area. As a result of the potential hazing and construction activities, we anticipate that the level of activity associated with the proposed construction will likely result in adverse affects due to harassment to all plover adults or chicks in or within 0.25 mile of the project site during the two-year construction period.

Vehicle traffic on the existing northbound steel girder bridge-generates relatively high levels of noise, while noise levels under the existing southbound concrete box girder bridge are relatively quiet. The proposed project will replace the steel girder bridge with a concrete box girder bridge. We anticipated that after construction of the new bridge, noise levels on the gravel bar under the bridge will be generally less than existing background levels.

4.2.4 *Injury or Mortality*

Mortality of adults, chicks, and eggs may occur as a result of collisions with construction equipment and/or workers. The cryptic coloring of chicks and their habit of crouching in depressions make them especially vulnerable to vehicles. Construction activities will be restricted to the Caltrans right-of-way area and the temporary construction easement area. Project-related injury or mortality of western snowy plovers (adults, chicks, and eggs) is not expected to occur outside of the right-of-way and easement areas because all construction activities will be confined to these areas.

Within the construction areas the likelihood of injury or mortality will be minimized by the following protective measures in the project description: 1) daily plover surveys will be conducted within 0.25 mile of the project during all construction activities; 2) if successful nests/chicks are detected within 0.25 mile of the edge of the work area footprint, then a fence will

be constructed to exclude the adults and chicks from the work area; and 3) if chicks are detected on the work side of the fence, they will be herded to the other side of the fence.

Plover eggs in the gravel bar environment are especially difficult to detect. It is possible that chicks from an undetected nest or adults may enter the construction area prior to installation of the exclusionary fence. We believe that any nest, chicks, or adults in the right-of-way and easement areas will be highly vulnerable to injury or mortality. If the fence is not installed until after chicks are detected, then we believe there will be a risk of chicks entering the work area prior to detection and of undetected nest occurring within the work area. However, if the fence is installed when adult plovers are first detected within a 0.25 mile of the work area, this risk will be minimized. It is unlikely that more than one nest would be established within the construction area during the two-year construction period for the following reasons: 1) to date, no nesting plovers have been documented in the project site; 2); the 2002 plover sighting 0.25 mile downstream from the project site represents the most upstream known sighting of plovers along the Eel River (Mad River Biologists 2002); 3) only two plovers were observed during the 2002 sighting 0.25 mile from the project site; and 3) the suitable habitat within the construction area represents a small percentage of the available habitat along the Eel River (0.2 percent of the 806 acres of suitable nesting habitat). The typical plover clutch size is three. Therefore, if the fence is installed when adult plovers are first detected within 0.25 mile of the work area, we expect that three eggs associated with one nest could be lost either directly or indirectly due to construction activities.

4.2.5 *Effects on Numbers*

The proposed action could affect the number of snowy plovers by disturbing reproductive efforts and by injury or mortality. The Eel River is identified in the draft recovery plan as a breeding location important for recovery. Current plover use (34 breeding adults in 2002) along the Eel River is only slightly below the draft recovery plan's population target of 40 breeding adults for recovery. The proposed two-year construction activities will not likely prevent achievement of the draft recovery plan's population target for the following reasons: 1) the project site is located upstream of the area where all the documented nesting has occurred along the Eel River; 2) in 2002, only two plovers were documented near the project site (approximately 0.25 mile downstream); 3) the 2002 plover sighting is the farthest upstream record of plovers, to date; and 4) during the two-year construction period, we anticipate, at most, harm of one nest.

4.2.6 *Effects on Distribution*

The draft recovery plan identifies 12 breeding sites in Recovery Unit 2 that are important for recovery (Table 1). For the past three years, nesting has only occurred at three of these locations (Clam Beach/Little River, Eel River Wildlife Area, and Eel River gravel bars). The proposed construction activities will reduce the suitability of two acres of habitat during two breeding seasons. The natural contours of the gravel bar will be restored at completion of the project. The two acres of altered habitat represent 0.2 percent of the suitable nesting habitat along the Eel River and are located 0.25 mile upstream of the nearest known plover sighting. Due to the short-term nature of the habitat impacts and the project's location on the edge of the currently utilized

nesting areas, it is unlikely that the project will influence the long-term distribution of breeding plovers along the Eel River.

4.2.7 *Effects on Reproduction*

In 2002, 47 percent of the nests (14 of 30) along the Eel River did not successfully hatch and 50 percent (20 of 40) of the hatched chicks failed to fledge (Colwell, et al. 2002). The cause of most of the clutch failures is unknown; however, predation is suspected in most cases and vehicles in three (Colwell, et al. 2002).

In 2002, 87 percent (20 of 23) of the chicks fledged in Humboldt County came from nests on the Eel River gravel bars (Colwell, et al. 2002). Males on the Eel River fledged 1.46±1.13 chicks in 2002 (Colwell, et al. 2002) and 1.6±1.6 chicks in 2001 (Colwell, et al. 2001). This represents a 2-year average productivity of 1.5 fledged chicks per male along the Eel River. The draft recovery plan indicates that a productivity of 1.2 or more chicks fledged per male should increase population size at a moderate rate. The delisting criteria is to maintain a 5-year average productivity of at least 1.0 fledged chicks per male. This level of productivity should result in a stable population.

We do not anticipate that the potential loss of one nest (three eggs) during the two years of construction will hinder the long-term attainment of the draft recovery plan's target for productivity. Since plovers readily renest after loss of their eggs, it is possible that if a nest is destroyed the adults may still be successful at fledging chicks that year. The 2-year average productivity for male plovers along the Eel River, during 2001 and 2002, was 1.5 fledged chicks. If one additional nest had failed in one of these two years the average productivity level would still have been above the level (1.0 fledged chicks per male) necessary to maintain a stable population. Therefore, assuming that the productivity during the two-year construction period is similar to the rates in 2001 and 2002, the potential lost of one additional nest is not expected to hinder the long-term attainment of the plan's target for productivity on the Eel River.

4.2.5 *Summary*

Snowy plovers are currently known to nest along the Eel River; however, no nesting has been documented within 0.25 mile of the project site. The proposed construction activities may harass plover adults and chicks within 0.25 mile of the project during two breeding seasons. Plovers will not be adversely affected due to habitat modification, since the topography of the gravel bar will be restored after construction and plovers are known to have successfully nested in areas mined for gravel the previous year. During the two-year construction period, a maximum of three eggs associated with one nest may be harmed. We do not expect the proposed project to effect any of the following: 1) attainment of the draft recovery plan's population target for the Eel River; 2) long-term distribution of breeding plovers along the Eel River; or 3) achievement of the draft recovery plan's target for productivity. Given that all known nesting of plovers along the Eel River has occurred downstream from the project site, the proposed project is not expected to impede recovery of plovers in this important breeding location.

4.2.6 *Interrelated and Interdependent Activities*
Regulations implementing the Act require the Service to consider the effect of activities which are interrelated and interdependent to the proposed action (50 CFR 402.02). The Act defines interrelated activities as those which are part of a larger action and depend upon the larger action for their justification, and interdependent activities as those projects which have no independent utility apart from the action that is under consideration. No interrelated or interdependent activities are associated with this project.

5.0 Cumulative Effects

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. The majority of the suitable nesting habitat along the Eel River is under private ownership; however, gravel mining and associated vehicle use along the Eel River is permitted through the U.S. Army Corps of Engineers.

6.0 Conclusion

After reviewing the current status of the western snowy plover, the environmental baseline for the action area, and the effects of the proposed replacement of the southbound Van Duzen Bridge in Humboldt County, and the cumulative effects, it is the Service's biological opinion that the bridge replacement, as proposed, is not likely to jeopardize the continued existence of the western snowy plover. Critical habitat for the western snowy plover has been designated; however, this action does not affect any designated critical habitat. No destruction or adverse modification of that critical habitat is anticipated.

The Service reached this conclusion based on the following factors:

1. Project measures will minimize the likelihood of injury, mortality, or harassment of snowy plovers.

2. Habitat alterations will be short-term (two nesting seasons) and the topography of the gravel bars will be restored to the pre-project conditions.

3. The relatively small number of plovers expected to occur and be affected within the vicinity of the project during the construction period.

4. Attainment of the draft recovery plan's management goals for the Eel River and Recovery Unit 2 will not be compromised by the proposed project.

5. Potential long-term decrease in noise levels in suitable nesting habitat from vehicle traffic on the bridge, as a result of replacement of the existing steel girder bridge with a concrete box girder bridge.

INCIDENTAL TAKE STATEMENT

1.0 Introduction

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act, prohibit the take of endangered and threatened species, respectively, without a special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under that Act provided that such taking is in compliance with this Incidental Take Statement.

The measure described below is non-discretionary, and must be undertaken by the FHWA so that it becomes a binding condition of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The FHWA has a continuing duty to regulate the activity covered by this incidental take statement. If the FHWA (1) fail to assume and implement the terms and conditions or (2) fail to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the FHWA must report the progress of the action and its impact on the species to the Service as specified in the Incidental Take Statement [50 CFR §402.12(I)(3)].

2.0 Amount or Extent of Incidental Take

Western snowy plovers are small, cryptically-colored birds that are difficult to detect. The Service anticipates four adult western snowy plovers, six chicks, and three eggs could be taken as a result of this proposed action. The incidental take is expected to be in the form of harm of one plover nest containing three eggs as a result of construction activities within the Caltrans right-of-way. This amount of take (one nest containing three eggs) is the total amount of take due to harm for the two-year construction period. In addition, the Service anticipates take in the form of harassment of two adult plovers and three chicks in or within 0.25 mile of the project site during

each of the two years of construction. We based this anticipated amount of take on past surveys of annual breeding plovers on the Eel River.

3.0 Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the western snowy plover or destruction or adverse modification of critical habitat.

4.0 Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measure is necessary or appropriate to minimize impacts of incidental take of western snowy plovers:

Minimize construction related impacts to adult plovers and their nests, chicks, and eggs.

5.0 Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the FHWA must comply with the following terms and conditions, which implement the reasonable and prudent measure described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

1. To protect nests, the FHWA will contact Ray Bosch ~~of~~ the Service's Arcata Fish and Wildlife Office immediately if a nest is detected within the work area. If the Service determines that construction of a nest exclosure would reduce the likelihood of mortality of eggs or chicks, then FHWA or their non-Federal representative will facilitate timely construction of the nest exclosure. Nest exclosures will only be installed by qualified biologists with an appropriate recovery permit (section 10(a)(1)(A) permit) from the Service. Mad River Biologists.

2. If *adult* plovers *or chicks* are detected in or within 0.25 mile of the edge of the work area footprint, then exclusionary fencing will be installed at the edge of the footprint between the plovers and the work area. The fencing will be installed within 24 hours of detecting the plovers. The fencing will be a silt fence fabric not less than 24 inches tall. The fabric will be keyed-in to the gravel bar so that no gaps greater than 0.5 inch exist below the fabric. The fabric will extend across the open gravel area from the riparian vegetation or channel embankment to the edge of the wetted river channel. The exclusionary fencing will remain in place until September 15 or until no plovers are detected within 0.25 mile of the fence.

3. All trash and food scraps brought into the project area will be removed daily from the site and secured in covered receptacles. Feeding wildlife, including corvids and gulls, will be prohibited.

4. Barricade signs will be placed on new temporary construction access routes during non-working hours and weekends to discourage additional public vehicle access to the gravel bars.

5. FHWA or their non-Federal representative will ensure that workers are aware of the boundaries of the construction area, plover protective measures described in the project description, and terms and conditions 1, 2, 3, and 4 in this biological opinion.

6. Prior to January 31st of each year for the duration of project, the FHWA shall provide the Service with an annual report. The report shall discuss plover survey results including but not limited to adult plover use of the survey area, nest numbers and locations, nest fates, brood activity, and reproductive success. This report shall include a complete list of survey dates, weather conditions, names of surveyors, and survey results, even for surveys when no plovers were detected.

6.0 Reporting Requirements

Upon locating a dead or injured western snowy plover, initial notification must be made to the Service's Division of Law Enforcement in Chico, California at (530) 342-8724 and the Field Supervisor of the Arcata Fish and Wildlife Office at (707) 822-7201 immediately, and in writing within three (3) working days. Notification must include the date, time, and location of the carcass; cause of death or injury, if known; and any other pertinent information. Care must be taken in handling injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state for later analysis of cause of death. The finder has the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed, unless to remove it from the path of further harm or destruction. Should any treated listed species survive, the Service should be contacted regarding the disposition of the animal. In the case of take or suspected take of western snowy plovers not exempted in this biological opinion, the Arcata Fish and Wildlife Office and the Division of Law Enforcement shall be notified within 24 hours.

7.0 Coordination of Incidental Take with Other Laws, Regulations, and Policies

The Service will not refer the incidental take of any migratory bird or bald eagle for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), of the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the terms and conditions (including amount and/or number) specified herein.

8.0 Closing Paragraph

The Service believes that no more than two adults and three chicks will be incidentally taken as a result of harassment during each of the two construction years and that no more than three eggs will be incidentally taken as a result of harm during the two year period. The reasonable and prudent measure, with its implementing terms and conditions, is designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measure provided. The FHWA must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measure.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

> Annually submit western snowy plover survey data to the Northern California western snowy plover recovery unit 2 working group.

To keep the Service informed of actions which minimize or avoid adverse effects or which benefit listed, proposed, or candidate species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the action outlined in your September 19, 2002, request. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat is designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions regarding this biological opinion, please contact staff biologists Ray Bosch or Robin Hamlin at (707) 882-7201.

Sincerely,

for Amedee Brickey

Michael M. Long
Field Supervisor

cc:
CDFG, Eureka, CA (ATTN: K. Kovacs)

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TABLES

Table 1. Estimated numbers of breeding western snowy plovers by recovery unit from the draft recovery plan (Nur, et al. 1999).

Recovery Unit	Estimated Breeding
Washington and Oregon (Unit 1)	134
Del Norte through Mendocino Counties (Unit 2)	50
San Francisco Bay (Unit 3)	264
Sonoma through Monterey Counties (Unit 4)	300
San Luis Obispo through Ventura Counties (Unit 5)	886
Los Angeles through San Diego Counties (Unit 6)	316
Total	1,950

Table 2. Rangewide breeding season window survey results for 2002 (Point Reyes Observatory 2002 unpublished data; Washington Department of Fish and Wildlife 2002 unpublished data; U.S. Fish and Wildlife Service unpublished data).

Recovery Unit	Adult Plovers
Washington and Oregon (Unit 1)	86
Del Norte through Mendocino Counties (Unit 2)	49
San Francisco Bay (Unit 3)	78
Sonoma through Monterey Counties (Unit 4)	312
San Luis Obispo through Ventura Counties (Unit 5)	745
Los Angeles through San Diego Counties (Unit 6)	195
Total	1,465

Table 3. Number of adult snowy plovers counted during breeding season window surveys along the California coast during surveys from 1977 to 2002.

Year	Adult Plovers Counted
1977-1980[1]	1,593
1989[1]	1,376
1991[1]	1,384
1995[1]	977[2]
2000[3]	976
2001	no data
2002[3]	1,379

[1] U.S. Fish and Wildlife Service 2001
[2] The 1995 survey did not include San Francisco Bay. In 1977/1980, 1,242 plovers were counted in survey area, excluding San Francisco Bay.
[3] Point Reyes Bird Observatory 2002

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[1] U.S. Fish and Wildlife Service 2001
[2] The 1995 survey did not include San Francisco Bay. In 1977/1980, 1,242 plovers were counted in survey area, excluding San Francisco Bay.
[3] Point Reyes Bird Observatory 2002

Table 4. Site specific management goals for the number of breeding adult birds for locations in Recovery Unit 2, as taken from Appendix B (Table B-1) in the draft western snowy plover Pacific coast population recovery plan (U.S. Fish and Wildlife Service 2001).

Western Snowy Plover Management Goals for Recovery	
Location	Breeding Numbers
DEL NORTE COUNTY	
Smith River Mouth	8
Lake Earl	10
Subtotal	18
HUMBOLDT COUNTY	
Big Lagoon	16
Clam Beach/Little River	6
Mad River Mouth and Beach	12
Humboldt Bay, North Spit	8
Humboldt Bay, South Spit	30
Eel River Wildlife Area	20
Eel River Mouth to Van Duzen	40
Eel River, South Spit and Beach	20
McNutt Gulch	10
Subtotal	162
MENDOCINO COUNTY	
MacKerricher Beach	20
Subtotal	20
TOTAL	200

Table 5. Number of adult snowy plovers and number of sites where adults were located during the breeding season window surveys, 1977 to 2002.

Location	Number of Adults/Number of Sites by Year					
	1977 to 1980	1989[1]	1991	1995	2000	2002
Del Norte County	11/2	8/?	3/1	0/0	0/0	0/0
Humboldt County	54/6	32/?	30/6	19/4	39/3	49/4
Mendocino County	15/1	2/?	0/0	4/1	1/1	0/0
TOTAL	80/9	42/?	33/7	23/5	40/4	49/4

[1] Adult plover numbers are from Page, et al. (1991). Data were presented by county with no site specific information.

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Table 6. Management goals for number of breeding adult birds at important nesting locations in Recovery Unit 2 and the number of adult plovers counted during the 2002 window survey (U.S. Fish and Wildlife Service 2001; Point Reyes Bird Observatory 2002 unpublished data).

Western Snowy Plover Recovery Unit 2			
Location	Management Goal Breeding Numbers (adult birds)	2002 Window	
		adult birds	% of goal
DEL NORTE COUNTY			
Smith River Mouth	8	0	0
Lake Earl	10	0	0
Subtotal	18	0	0
HUMBOLDT COUNTY			
Big Lagoon	16	0	0
Clam Beach/Little River	6	12	150
Mad River Mouth and Beach	12	0	0
Humboldt Bay, North Spit	8	0	0
Humboldt Bay, South Spit	30	0	0
Eel River Wildlife Area	20	9	45
Eel River Mouth to Van Duzen	**40**	**26**	**65**
Eel River, South Spit and Beach	20	2	10
McNutt Gulch	10	0	0
Subtotal	162	49	30
MENDOCINO COUNTY			
MacKerricher Beach	20	0	0
Subtotal	20	0	0
TOTAL	200	49	25

Table 7. Wintering locations in Recovery Unit 2 identified as important for recovery (U.S. Fish and Wildlife Service 2001, Appendix B). Survey data presented are of varying efforts, for example window surveys and monthly surveys.

Wintering Location	Number of Adult Plovers					
	1979-1985 [1]	1992 [2]	1993 [3]	1998 [4]	2001 [5]	2002 [5]
DEL NORTE COUNTY						
Smith River Mouth					1	0
Lake Earl	1	blank [6]			0	0
HUMBOLDT COUNTY						
Gold Bluffs Beach	2				0	0
Stone Lagoon	9			0	0	0
Big Lagoon				0	6	5
Clam Beach/Little River	11	30	16	40	32	55+
Mad River Mouth and Beach					0	0
Humboldt Bay, North Spit	2				0	0
Humboldt Bay, South Spit	27		9		0	0
Eel River Wildlife Area	6	2	6		0	0
Eel River, Spit and Beach	6	5			75	22
McNutt Gulch					0	0
MENDOCINO COUNTY						
MacKerricher Beach	23				37	41
Manchester Beach	2				4	

[1] Median of the maximum bird numbers (Page, et al. 1986). This paper mentions a report of 6 wintering birds at the mouth of the Smith River; Mad River beach was not completely surveyed.
[2] Median number per survey Humboldt County surveys in January (Fisher 1992).
[3] Monthly means Humboldt County surveys in February (Fisher 1993)
[4] Maximum observed. Surveys were only conducted at Big Lagoon, Stone Lagoon, and Clam Beach/Little River (Griggs 1998).
[5] Window survey data.
[6] Blanks represent no data.

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State of California - The Resources Agency
DEPARTMENT OF FISH AND GAME
Northern California-North Coast Region
619 Second Street
Eureka, CA 95501
(707) 445-6493

EXHIBIT NO. 6
APPLICATION NO.
1-04-014
CALTRANS
CDFG STREAM ALTERATION AGREEMENT
(1 of 5)

GRAY DAVIS, Governor

RECEIVED
SEP 15 2004
CALIFORNIA COASTAL COMMISSION

NOTIFICATION NO.: 04-0097

AGREEMENT REGARDING PROPOSED STREAM ALTERATION

THIS AGREEMENT, entered in between the State of California, Department of Fish and Game, hereafter called the Department, and Ms. Gail Popham/Caltrans hereafter called the operator, is as follows:

WHEREAS, pursuant to Division 2, Chapter 6 of California Fish and Game Code, the operator, on 4-26-04 notified the Department that he intends to substantially divert or obstruct the natural flow of, or substantially change the bed, channel, or bank of, or use material from the streambed of, the following water: Van Duzen River in the County of HUMBOLDT, State of California.

WHEREAS, the Department, represented by **DFG WARDEN *Jon Dunn*** has conducted an onsite inspection on5-7-04 and has determined that such operations may substantially adversely affect existing fish and wildlife resources including: SALMON, STEELHEAD TROUT, and OTHER AQUATIC AND RIPARIAN SPECIES.

THEREFORE, the Department hereby proposes the following measures to protect fish and wildlife during the operator's work and the operator hereby agrees to accept these recommendations as part of his work. The operator, as designated by the signature on this agreement, shall be responsible for the execution of all elements of this agreement. A copy of this agreement must be provided to any contractor and/or subcontractor and must be in their possession at the worksite.

If the operator's work changes from that stated in the notification specified above, this agreement is no longer valid and a new notification shall be submitted to the Department of Fish and Game. **Failure to comply with the provisions of this agreement and with other pertinent DFG Code sections may result in prosecution and/or cancellation of this agreement.**

Nothing in this agreement authorizes the operator to trespass on any land or property, nor does it relieve the operator of responsibility for compliance with applicable federal, state, or local laws.

THIS AGREEMENT IS NOT INTENDED AS AN APPROVAL OR ENDORSEMENT OF A PROJECT OR OF SPECIFIC PROJECT FEATURES BY THE DEPARTMENT OF FISH AND GAME. INDEPENDENT REVIEW AND RECOMMENDATIONS WILL BE PROVIDED BY THE DEPARTMENT AS APPROPRIATE ON THOSE PROJECTS WHERE LOCAL, STATE, OR FEDERAL PERMITS OR OTHER ENVIRONMENTAL REPORTS ARE REQUIRED.

1. The following work conditions apply to the proposed replacement of the Hwy. 101 southbound bridge over the Van Duzen River near its confluence with the Eel River.

2. All work in or near the stream shall be confined to the period June ~~1~~ 15 through October 15.

3. Except where noted in this Agreement, all construction shall be in accordance with work plan submitted with Notification #04-0097.

4. Rock, riprap, or other erosion protection shall be placed in areas where vegetation cannot reasonably be expected to become re-established. All other areas of disturbed soil which drains toward the stream channel shall be seeded with native plant seed and mulched.

5. This agreement shall be in effect for five (5) years from date of signature of both parties or for the life of the Caltrans project to which it pertains, whichever term may end first, and the conditions outlined herein shall remain the same throughout the term of the agreement. If conditions change substantially either to the river bed, bank or channel or the operator wishes to substantially change the construction plans as outlined in the Project Description the operator shall notify the Dept. and amend this agreement or prepare a new Notification describing the new work plan.

6. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. The disturbed portions of any stream channel shall be restored to as near their original condition as possible. Restoration shall include the mulching of stripped or exposed dirt areas at crossing sites prior to the end of the work period

7. During construction in flowing water which can transport sediment downstream, the flow shall be diverted around the work area by pipe, pumping, or temporary diversion channel. When any dam or artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain fish life below the dam. Equipment may be operated in the stream channel of flowing live streams only as necessary to construct the described construction. The operator may channel the low flow into a pipe of adequate size to hold low flows and place native gravels over it to create an equipment work area.

8. Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the high water mark before such flows occur.

9. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from any logging, construction, or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream.

10. No servicing of equipment shall take place within the stream bed and all equipment shall be staged and stored when not in use out of the stream bed. No petroleum products shall be allowed to enter the stream channel. If a spill occurs, the Dept. shall be notified immediately and cleanup and containment shall commence. All work to the project shall cease until the spill has been cleaned to the Dept.'s satisfaction. Operator shall have onsite the necessary materials to begin removal of any spilled material. No concrete or washing of concrete trucks shall be allowed to take place within the stream channel

11. Operator/Caltrans shall provide access to the work area through any gates by assigning keys or lock

combinations to the appropriate Dept. personel.

Operator		DFG	
			DONALD B. KOCH Regional Manager
Title	Project Manager		
Organization	Caltrans		Department of Fish and Game
Date	8-5-04		9/13/04

NOTICE OF DETERMINATION

TO: Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

FROM: California Department of Fish and Game
1416 Ninth Street
Sacramento, CA 95814

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

PROJECT TITLE: Lake or Streambed Alteration Agreement for Notification #04-0097. Project proposes to replace the southbound two-lane bridge crossing the Van Duzen River at the mouth of the Eel River, Humboldt County.

STATE CLEARINGHOUSE NUMBER: 2003042067

LEAD AGENCY: California Department of Transportation
Environmental Management Office
Post Office Box 3700
Eureka, CA 95502-3700

CONTACT: Deborah Harmon
Chief, Environmental Management

RESPONSIBLE AGENCY: Department of Fish and Game
601 Locust Street
Redding, CA 96001

CONTACT: Bruce Webb
Environmental Scientist
(530) 225-2675

PROJECT LOCATION/DESCRIPTION: The California Department of Fish and Game is issuing a final Lake or Streambed Alteration Agreement pursuant to Section 1602 of the Fish and Game Code to the project applicant, **[Ms. Gail Popham representing the California Department of Transportation]**. The applicant proposes to replace the southbound two-lane bridge crossing the **Van Duzen River near the mouth of the Eel River, Humboldt County.**

This is to advise that the California Department of Fish and Game as a Responsible Agency approved the project described above on **September 9, 2004**, and has made the following determinations regarding the above described project:

1. The project will not have a significant effect on the environment.
2. A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures were not made a condition of the approval of the project.
4. A Statement of Overriding Considerations was not adopted for this project.
5. Findings were made pursuant to the provisions of CEQA.

This is to certify that a copy of the ND prepared for this project is available to the general public and may be reviewed at:

California Department of Transportation
Environmental Management Office
Post Office Box 3700
Eureka, CA 95502-3700, or

California Department of Fish and Game
601 Locust Street
Redding, CA 9600, or
Contact the person listed above.

Signed: _____ Date: September 9, 2004

DONALD B. KOCH
Regional Manager, Northern California-North Coast Region
California Department Fish and Game

4 of 5

CALIFORNIA DEPARTMENT OF FISH AND GAME
CEQA FINDINGS FOR THE
AGREEMENT REGARDING PROPOSED LAKE OR STREAMBED
ALTERATION, NO. 04-0097

Introduction

The California Environmental Quality Act (CEQA) (Public Resources Code section 21000, *et seq.*) and the State CEQA Guidelines (**Guidelines**) (Section 15000, et seq., Title 14, California Code of Regulations) require that no public agency shall approve or carry out a project for which a Negative Declaration (ND) has been completed unless a finding can be made that no significant effects will result from the project, or that changes in the project agreed to by the applicant will fully avoid any significant impacts that might otherwise result from the project.

As the lead agency for the Project, the California Department of Transportation (Caltrans) adopted the ND for the Project on **December 24, 2003.** Caltrans found that the Project will not result in significant environmental effects and that no mitigation measures were required.

The California Department of Fish and Game (Department) is issuing a Lake or Streambed Alteration Agreement (Agreement) to the project applicant **[Ms. Gail Popham representing the California Department of Transportation].** The project is located on the **Van Duzen River near the mouth of the Eel River, Humboldt County**, in Section 23, Township 2 North, Range 1 East, HB&M.

Because the Department is issuing the Agreement, it is a "responsible agency" under CEQA for the Project. As a CEQA Responsible Agency, the Department is required by Guidelines §15096 to review the environmental document certified by the lead agency approving the projects or activities addressed in the Agreement and to make certain findings concerning a project's potential to cause significant, adverse environmental effects. However, when considering alternatives and mitigation measures approved by the lead agency, a responsible agency is more limited than the lead agency. In issuing the Agreement, the Department is responsible only for ensuring that the direct or indirect environmental effects addressed in the Agreement are adequately mitigated or avoided. Consequently, the findings adopted or independently made by the Department with respect to the approval of Agreements Regarding Proposed Lake or Streambed Alterations are more limited than the findings of the lead agency funding, approving, or carrying out the project activities addressed in such Agreements.

Findings

The Department has considered the ND adopted by Caltrans. The Department has independently concluded that the Agreement should be issued under the terms and conditions specified therein. In this regard, the Department hereby adopts the findings of Caltrans, as set forth in the ND and record of project approval, insofar as those findings pertain to the Project's impacts on biological resources.

Signed: _____ Date: September 8, 2004

DONALD B. KOCH
Regional Manager, Northern California-North Coast Region
California Department Fish and Game

5 of 5

Exhibit A
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

California Regional Water Quality Control Board
North Coast Region
William R. Massey, Chairman

Terry Tamminen
Secretary for Environmental Protection

http://www.swrcb.ca.gov/rwqcb1/
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone 1-877-721-9203 Office (707) 576-2220 FAX (707) 523-0135

Arnold Schwarzenegger
Governor

May 5, 2004

RECEIVED
SEP 1 5 2004
CALIFORNIA
COASTAL COMMISSION

Ms. Deborah Harmon
California Department of Transportation
P.O. Box 3700
Eureka, CA 95502-3700

Dear Ms. Harmon:

Subject: Issuance of Clean Water Act Section 401 Certification (Water Quality Certification) for the Highway 101 – Van Duzen River, Southbound Bridge Replacement

File: CDOT – Hwy 101, Van Duzen River, Southbound Bridge Replacement
WDID No. 1B04029WNHU

This Order by the California Regional Water Quality Control Board, North Coast Region (Regional Water Board), is being issued pursuant to Section 401 of the Clean Water Act (33 USC 1341). The Order is being issued in response to your request, on behalf of the California Department of Transportation, for a Water Quality Certification to remove and replace the Van Duzen River Bridge on southbound Highway 101 in Humboldt County. The Regional Water Board received a complete application and processing fee in the amount of $1,575 on March 17, 2004. Information describing the proposed project was noticed for public comment for a 21-day period starting on March 13, 2004, on the Regional Water Board's web site. No comments were received.

Project Description: The purpose of the proposed project is to replace the southbound State Route 101 bridge over the Van Duzen River in Humboldt County. The project involves removal of the existing bridge piers and abutments and construction of new piers, abutments and a cast-in-place concrete box girder bridge superstructure. Approximately 3,400 cubic yards of rock slope protection will be placed at the new bridge abutments for bank protection and approximately 1,300 cubic yards of concrete will be used to construct the new piers and abutments. Access to the construction area and river will be from existing roads on either side of the existing bridge. Equipment and materials will also be transported along temporary roads graded on the gravel bar. An upland area on the northwest side of the bridge will be used for storage of materials and equipment, refueling operations, and concrete washout activities.

The proposed project requires temporary diversion of the Van Duzen River. A temporary dike will be constructed of river-run gravel to divert the river around the work areas. Sheet piles will be placed around footings to create cofferdams. Water pumped from

EXHIBIT NO. 7
APPLICATION NO.
1-04-014
CALTRANS
RWQCB SECTION 401 CERTIFICATION (1 of 6)

Exhibit A
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

within the footings will be placed in a sediment-settling basin created with native gravel bar material. The sediment settling basin, temporary dikes, berms, and roads will be graded back to the preconstruction elevation contours of the gravel bar. Fine sediment collected in the settling basin will be removed and disposed above the high water level.

The National Marine Fisheries Service concurs that this project may affect, and is likely to adversely affect steelhead, coho salmon, chinook salmon and western snowy plover. An incidental take permit was issued for these listed species. The project is not anticipated to have any impact on any additional listed species. All in-stream work activities will be conducted between June 1 and October 15 to minimize impacts to juvenile salmonids and to avoid impacts to adult salmonids. The project is scheduled to begin in August 2004 and be completed by October 15, 2006.

Receiving Water:	Van Duzen River
Hydrologic Unit:	Ferndale Hydrologic Subarea No. 111.11
Filled or Excavated Area:	Area Temporarily Impacted: 0.50 acre Area Permanently Impacted: 0.30 acre
Federal Permits:	U.S. Army Corps of Engineers Nationwide Permits 14, 23 and 33
Compensatory Mitigation:	None
Noncompensatory Mitigation:	Best Management Practices will be implemented to prevent adverse impacts to water quality. No equipment staging or refueling will take place within the river channel. Designated concrete washout areas will be created and used. The concrete washings will be fully contained and no concrete or concrete washings will be allowed to flow directly into the river or onto the gravel bar. The applicant has applied for a Lake or Streambed Alteration Agreement (1601 Permit) from California Department of Fish and Game.
CEQA Compliance:	CDOT, acting as the lead California Environmental Quality Act (CEQA) agency, prepared a Negative Declaration (SCH # 2003042067) for the project dated December 24, 2003.
Standard Conditions:	Pursuant to Title 23, California Code of Regulations, Section 3860 (23 CCR 3860), the following three standard conditions shall apply to this project:

1) This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Section 13330 of the California Water Code and 23 CCR 3867.

2) This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

3) The validity of any nondenial certification action (actions 1 and 2) shall be conditioned upon total payment of the full fee required under 23 CCR 3833, unless otherwise stated in writing by the certifying agency.

Additional Conditions: Pursuant to 23 CCR 3859(a), the applicant shall comply with the following additional conditions:

1) The Regional Water Board shall be notified in writing at least five working days (working days are Monday – Friday) prior to the commencement of the project, with details regarding the construction schedule, in order to allow staff to be present on-site during construction, and to answer any public inquiries that may arise regarding the project.

2) No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, other than that authorized by this permit, shall be allowed to enter into or be placed where it may be washed by rainfall into waters of the State. When operations are completed, any excess material or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream.

3) Best Management Practices for sediment and turbidity control shall be implemented and in place prior to, during, and after construction in order to ensure that no silt or sediment enters surface waters.

4) A copy of this permit must be provided to the contractor and all subcontractors conducting the work, and must be in their possession at the work site.

5) If, at any time, an unauthorized discharge to surface waters occurs, or any water quality problem arises, the project shall cease immediately and the Regional Water Board shall be notified promptly.

6) The project site may be visited and assessed by Regional Water Board staff to document compliance with this certification.

7) This Order is not transferable. In the event of any change in control of ownership of land presently owned or controlled by the Applicant, the Applicant shall notify the successor-in-interest of the existence of this Order by letter and shall forward a copy of the letter to the Regional Water Board at the above address.

To discharge dredged or fill material under this Order, the successor-in-interest must send to the Regional Water Board Executive Officer a written request for transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, address and telephone number of the person(s) responsible for contact with the Regional Water Board. The request must also describe any changes to the Project proposed by the successor-in-interest or confirm that the successor-in-interest intends to implement the Project as described in this Order.

Water Quality Certification: I hereby issue an order [23 CCR Subsection 3831(e)] certifying that any discharge from the CDOT – Hwy 101, Van Duzen River, Southbound Bridge Replacement (Facility I.D. No. 1A04029WNHU) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 (" Toxic and Pretreatment Effluent Standards") of the Clean Water Act [33 USC Subsection 1341 (a)(1)] , and with other applicable requirements of State law. This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017 - DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification" which requires compliance with all conditions of this Water Quality Certification.

Except insofar as may be modified by any preceding conditions, all certification actions are contingent on: a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicant's project description, and b) compliance with all applicable requirements of the Regional Water Board's Water Quality Control Plan for the North Coast Region (Basin Plan).

Expiration: The authorization of this certification for any dredge and fill activities expires on October 15, 2008, or upon completion of the project, whichever occurs first. Conditions and monitoring requirements outlined in this certification are not subject to the expiration date outlined above, and remain in full effect and are enforceable.

Please notify Dean Prat of our staff at (707) 576-2801 prior to construction (pursuant to Additional Condition No. 1 above) so that we can answer any public inquiries about the work.

Sincerely,

Catherine E. Kuhlman
Executive Officer

DLP:js/050504cdothwy101vanduzen401cert041904

Enclosure: State Water Resources Control Board Order No. 2003-0017 - DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification"

cc: Ms. Sheryl Schaffner, SWRCB, Office of Chief Counsel
Mr. Erik Spiess, SWRCB, Office of Chief Counsel
Mr. Oscar Balaguer, 401 Program Manager, Water Quality Certification Unit
State Water Resources Control Board, 1001 I Street, 15th Floor, Sacramento, CA 95814
Mr. Tim Vendlinski, Supervisor of Wetlands Regulatory Office (WTR-8), U.S. Environmental Protection Agency, Region 9, 75 Hawthorne Street, San Francisco, CA 94105
Ms. Jane Vorpagel, California Department of Fish and Game, 601 Locust Street, Redding, CA 96002
U.S. Army Corps of Engineers, District Engineer, P.O. Box 4863, Eureka, CA 95502
Ms. Jane Hicks, U.S. Army Corps of Engineers, Regulatory Functions, 333 Market Street, San Francisco, CA 94599
Mr. Jim Browning, Sacramento Field Office, U.S. Fish and Wildlife Service, 2800 Cottage Way, Room 2605, Sacramento, CA 95815

STATE WATER RESOURCES CONTROL BOARD

WATER QUALITY ORDER NO. 2003 - 0017 - DWQ

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR DREDGED OR FILL DISCHARGES THAT HAVE RECEIVED STATE WATER QUALITY CERTIFICATION (GENERAL WDRs)

The State Water Resources Control Board (SWRCB) finds that:

1. Discharges eligible for coverage under these General WDRs are discharges of dredged or fill material that have received State Water Quality Certification (Certification) pursuant to federal Clean Water Act (CWA) section 401.

2. Discharges of dredged or fill material are commonly associated with port development, stream channelization, utility crossing land development, transportation water resource, and flood control projects. Other activities, such as land clearing, may also involve discharges of dredged or fill materials (e.g., soil) into waters of the United States.

3. CWA section 404 establishes a permit program under which the U.S. Army Corps of Engineers (ACOE) regulates the discharge of dredged or fill material into waters of the United States.

4. CWA section 401 requires every applicant for a federal permit or license for an activity that may result in a discharge of pollutants to a water of the United States (including permits under section 404) to obtain Certification that the proposed activity will comply with State water quality standards. In California, Certifications are issued by the Regional Water Quality Control Boards (RWQCB) or for multi-Region discharges, the SWRCB, in accordance with the requirements of California Code of Regulations (CCR) section 3830 et seq. The SWRCB's water quality regulations do not authorize the SWRCB or RWQCBs to waive certification, and therefore, these General WDRs do not apply to any discharge authorized by federal license or permit that was issued based on a determination by the issuing agency that certification has been waived. Certifications are issued by the RWQCB or SWRCB before the ACOE may issue CWA section 404 permits. Any conditions set forth in a Certification become conditions of the federal permit or license if and when it is ultimately issued.

5. Article 4, of Chapter 4 of Division 7 of the California Water Code (CWC), commencing with section 13260(a), requires that any person discharging or proposing to discharge waste, other than to a community sewer system, that could affect the quality of the waters of the State,[1] file a report of waste discharge (ROWD). Pursuant to Article 4, the RWQCBs are required to prescribe waste discharge requirements (WDRs) for any proposed or existing discharge unless WDRs are waived pursuant to CWC section 13269. These General WDRs fulfill the requirements of Article 4 for proposed dredge or fill discharges to waters of the United States that are regulated under the State's CWA section 401 authority.

[1] "Waters of the State" as defined in CWC Section 13050(e)

6 of 6

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CALIFORNIA COASTAL COMMISSION
NORTH COAST DISTRICT OFFICE
710 E STREET • SUITE 200
EUREKA, CA 95501-6813
VOICE (707) 445-7833
FACSIMILE (707) 445-7877

MAILING ADDRESS:
P. O. BOX 4908
EUREKA, CA 95502-4908

EMERGENCY PERMIT

Lena Ashley
Caltrans
P. O. Box 3700
Eureka, CA 95502-3700

Date March 6, 2006
Emergency Permit 1-05-052-G

LOCATION OF EMERGENCY WORK:

Van Duzen River, adjacent to State Highway 101, south of City of Fortuna, unincorporated Humboldt County

WORK PROPOSED:

Retain two coffer dams installed within the river channel during the 2005 dry season over the winter and place temporary riprap around the outside of the coffer dams to minimize formation of scour pools, instead of removing the coffer dams by October 15, 2005 as required by CDP 1-04-014. Coffer dams will be sealed to prevent fish entrapment over the winter, and the coffer dams will be re-opened and work resumed in accordance with the seasonal restrictions of CDP 1-04-014 during the summer 2006 dry season. The coffer dams and rip rap will be removed prior to October 15, 2006 in accordance with the requirements of CDP 1-04-014.

This letter constitutes written approval of the emergency work you or your representative previously requested be done at the location listed above. I understand from your information and our site inspection that unexpected underground obstacles delayed the conclusion of work within the subject coffer dams (new pier construction to support the new southbound Highway 101 bridge under construction pursuant to CDP No. 1-04-014) and that Caltrans staff concluded that insufficient time remained to remove the coffer dams and stabilize the associated work areas before the onset of winter rains, and that removal of the temporary bridge and other work site winter closure measures would be significantly delayed if removal of the coffer dams was necessary, thereby increasing the risk of erosion, destabilization of river banks, and adverse effects on migratory threatened salmon species. Caltrans has proposed and this permit approves retention of the two coffer dams through the 2005-2006 winter season, including placement of riprap around the coffer dams to reduce formation of scour pools that might trap fish when the river waters recede in the spring. In addition Caltrans proposes to seal the coffer dams in a manner that will prevent fish of any size from entering the coffer dams during the river's high flow winter period, to remove both the riprap and the coffer dams after the low flow work season of 2006 (as required by CDP No. 1-04-014), to prepare a baseline survey of the river channel, including the extent of riprap placement and the location of the coffer dams, to periodically monitor the river channel throughout the winter season, and to provide comparative surveys of the river channel, bank-to-bank prepared between June 1 – June 10, 2006 and submitted for the review of the Executive Director by June 15, 2006.

Pursuant to Title 14 of the California Code of Regulations, Section 13009, the Executive Director of the Coastal Commission hereby finds that:

(a) An emergency exists which requires action more quickly than permitted by the

procedures for administrative or ordinary permits and the development can and will be completed within 30 days unless otherwise specified by the terms of this permit; and

(b) Public comment on the proposed emergency action has been reviewed as time allows; and

(c) As conditioned, the work proposed would be consistent with the requirements of the California Coastal Act of 1976.

The work is hereby approved, subject to the conditions listed on the attached page.

Sincerely,

PETER M. DOUGLAS
Executive Director

By: ROBERT MERRILL
District Manager

Enclosure: Acceptance Form

CONDITIONS OF APPROVAL:

1. The enclosed Emergency Permit Acceptance form must be signed by the PROPERTY OWNER and returned to our office within 15 days.
2. Only that work specifically described in this permit and for the specific property listed above is authorized. The project shall be undertaken in accordance with the plans and other information submitted to the Coastal Commission. Any additional work requires separate authorization from the Executive Director.
3. The work authorized by this permit must be completed by October 15, 2006.
4. Within 60 days of the date of this permit, the permittee shall submit an application for an amendment to CDP No. 1-04-014 for a regular Coastal Permit to have the emergency work be considered permanent. If no such application is received, the emergency work shall be removed in its entirety not later than October 15, 2006, unless this requirement is waived in writing by the Executive Director.
5. In exercising this permit, the applicant agrees to hold the California Coastal Commission harmless from any liabilities for damage to public or private properties or personal injury that may result from the project.
6. This permit does not obviate the need to obtain necessary authorizations and/or permits from other agencies (i.e. Dept. of Fish & Game, U.S. Fish & Wildlife, U.S. Army Corps of Engineers, State Lands Commission.)
7. The permittee shall provide baseline topographic maps of the Van Duzen River corridor, bank to bank, for the area of the corridor beneath the bridge deck to a point not less than 50 feet downstream from the location of the temporary bridge placed during the 2005 construction season, based on field elevations surveyed not later than October 25, 2005 and submitted to the Executive Director with the regular permit application required pursuant to Condition 4 above, and topographic maps of the same area, based on a second set of field elevations surveyed not earlier than May 15, 2006 or later than June 5, 2006 and submitted to the Executive Director not later than June 10, 2006, prior to commencement of the 2006 low flow construction season.

If you have any questions about the provisions of this emergency permit, please call the Commission's North Coast District Office at the address and telephone number listed on the first page.

cc: Kirk Girard, Planning Director, Humboldt County
U.S. Army Corps of Engineers, Eureka Field Office

Enclosure: Emergency Permit Acceptance Form

CALIFORNIA COASTAL COMMISSION
NORTH COAST DISTRICT OFFICE
710 E STREET • SUITE 200
EUREKA, CA 95501-6813
VOICE (707) 445-7833
FACSIMILE (707) 445-7877

MAILING ADDRESS:
P. O. BOX 4908
EUREKA, CA 95502-4908

Hearing Date: 6/16/06
Approved w/Conditions:
Vote: 9-0, 6/16/06

ADOPTED FINDINGS
Revised Staff Report

APPLICATION NO.: **1-04-014-A1**

APPLICANT: **California Dept. of Transportation (Caltrans, District 1)**

PROJECT LOCATION: Highway 101, at bridge over the Van Duzen River, 5 miles south of Fortuna, Humboldt Co.

PREVIOUSLY APPROVED PROJECT: Replace southbound bridged section of Highway 101 at the Van Duzen River. Complete approved project description is set forth in Exhibit 1, Staff report dated September 30, 2004 – see Section IV of the staff report.

DESCRIPTION OF AMENDMENT REQUEST (with Commission action):

1) follow-up permit approval to Emergency CDP No. 1-05-052-G to retain in the Van Duzen River channel, after otherwise-applicable October 15, 2005 deadline for removal pursuant to CDP 1-04-014, two 40 ft. x 40 ft. wide, 40 ft. deep coffer dams, fully sealed against fish entrapment, including placement of an approximately 12-ft.-wide band of rip-rap around the perimeter of each coffer dam. Total streambed area occupied by the coffer dams and rip-rap equals approximately 8,200 square feet (***approved with special conditions***); and
2) after-the-fact and proposed work within the Van Duzen River channel beyond the seasonal restriction of June 1 (for dry gravel bar) or June 15 (wetted channel) through October 15 (as required by Special Condition 16 of CDP 1-04-014) (***denied***); and
3) after-the-fact and proposed work outside of the Ordinary High Water throughout the year, including the construction of Pier 4, Abutment 5 and Abutment 1, fill for bridge approaches, grading aggregate base, paving, and striping (***approved with special conditions***); and
4) after-the-fact and proposed 2006 dry construction season replacement of previously authorized temporary low-flow water crossing design that called for use of a flatcar bridge, with alternate design (***after-the-fact request denied and 2006 dry construction season request approved with conditions***); and

5) after-the-fact and proposed 2006 dry construction season of multiple vehicle and equipment crossings of the wetted channel multiple times during construction and removal of the temporary bridge(***denied***); and

6) after-the-fact and proposed 2006 dry construction season approval to deploy water bladder(s) to isolate coffer dam work area(s) and control sediment discharge if low-flow river channel intersects either coffer dam construction area (***after-the-fact request denied; 2006 dry construction season request approved with conditions***); and

7) after-the-fact approval to install for temporary erosion control approximately 150 to 200 linear-foot section of rip-rap, to top of the affection section of the north bank of the Van Duzen River, downslope from the coffer dam excavation for new Pier 4, consisting of approximately 588 cubic yards of ¼-ton rock and 388 cubic yards of light rock, planted with willow cuttings, and to permanently retain the revetment. (***after-the-fact request for temporary slope erosion control during construction approved with conditions*** *and* ***request to retain the revetment as a permanent structure denied***)*;* and

8) deploy fueling on the gravel bar for less mobile equipment that is difficult to move to an upland fueling location, with Best Management Practices required by the Regional Water Quality Control Board in place, and utilizing a fuel supplier certified by the Department of Fish and Game Office of Spill Prevention and Response. Specific requirements for certified re-fueling operations include minimum two-person crew to staff both the pump valve and the nozzle, ensuring immediate shut-down if spill occurs, and placement of absorbent containment blankets under the fuel tank spout (***The Commission conditionally approved this component of revised amendment request with further condition language requiring implementation of the protective measures proposed and the demonstration of revised Regional Water Quality Control Board and California Department of Fish and Game approvals that reflect similar authorizations)***; and

9) excavate Coffer Dam #3 (northerly-most of the two coffer dams that were installed within the river channel during 2005) during the 2006 in-stream work season. Caltrans estimates that approximately 1,500 cubic yards of material would be excavated, with 500 cubic yards temporarily stored upland for use in final abutment construction and 1,000 cubic yards to be stored temporarily on the adjacent gravel bar within the existing right-of-way, during the 2006 dry season only. Caltrans proposes that if the material cannot be redeposited into the completed Coffer Dam #3 cavity prior to October 15, 2006 end-of-season, the material would be relocated outside of the river channel and temporarily stored in accordance with all sediment-control Best Management Practices . Caltrans further proposes measures to ensure that the stored material on the gravel bar will be easily distinguished from the native gravels when the material is re-collected for final disposal in the cavity left by the coffer dam removal: these measures include marking the surface through deployment of markers designed for this purpose. After the material is removed, silt fences would remain in place while the gravel bar is watered down to ensure that surface sediments sink below the gravel surface (***The Commission conditionally approved most of this component of the revised amendment request subject to all applicable special conditions protective of water***

quality, and applicable to disposal requirements for construction-generated debris.); and

10) combination of additional measures to access the stream channel and to install the temporary crossing(s), including placement of clean-washed gravel on the northern end of the stream channel, removal of wetland vegetation on the streambank adjacent to the 2005 access road to the channel (the road previously used during the 2005 season may be unavailable until river waters recede later in the 2006 low-flow season due to the present depth of the stream channel immediately south of the terminus of the 2005 access road), and re-grading of gravel from the emergent dry gravel bar south of the channel, in a combination of these components as Caltrans deems necessary to support the placement of k-rail abutments for the support and elevation of the deck of the temporary bridge. Caltrans proposes to deploy a water bladder to prevent sediment discharge from leaving the installation area and contaminating down gradient waters. Caltrans also proposes to "spook" fish away to avoid adverse impacts to species (such as juvenile steelhead trout) that may be present during the low-flow construction season. Finally, Caltrans proposes to mitigate the removal of the vegetation by planting willow cuttings at the foot of the slope at the end of the season or in another nearby location – unspecified. ***(The Commission conditionally approved most of this part of Caltrans' revised amendment request. However, the Commission denied the removal of wetland vegetation because the removal could be avoided by allowing the waters of the Van Duzen to recede sufficiently to utilize the existing road alignment utilized in 2005. Keeping the vegetation that remains on the northern bank at the downstream end of the revetment placed in 2005 would limit further disturbance and de-stabilization of the streambank.)***

RECOMMENDATION:	**Denial in part, Approval in part, with Special Conditions.**
MOTION & RESOLUTION:	Page 6
NEW SPECIAL CONDITIONS:	Page 16
LOCAL APPROVALS RECEIVED:	None.

OTHER APPROVALS POTENTIALLY REQUIRED:
Regional Water Quality Control Board: Clean Water Act Section 401 Certification – amended; Army Corps of Engineers 404 Certification – amended; California Department of Fish and Game Stream Alteration Agreement – amended. California Endangered Species Act review by CDFG may be required (Coho salmon have been listed under CESA since CDFG review of 2002). Further consultations with NOAA National Marine Fisheries Service and the U.S. Fish & Wildlife Service may be required.

SUBSTANTIVE FILE DOCUMENTS: CDP 1-04-014 (CALTRANS) (September 30, 2004 staff report, with recommendation approved per staff, with exhibits, is attached

hereto as Exhibit 1); Emergency CDP 1-05-052-G (CALTRANS); CDP 1-93-05 (CALTRANS, northbound Highway 101 bridge replacement, Van Duzen River); CDP 1-01-67 (CALTRANS, geotechnical borings for southbound bridge replacement, Van Duzen River); Conceptual Storm Water Pollution Prevention Plan for Van Duzen River Bridge Replacement, dated June 30, 2004; Clean Water Act Section 401 Certification for Highway 101 – Van Duzen River Southbound Bridge Replacement, prepared by North Coast Region, California Regional Water Quality Control Board, dated May 5, 2004; California Department of Fish and Game Stream Alteration Agreement (04-0097), dated September 13, 2004; Wild and Scenic Rivers Act Section 7 Consultation Determination for Van Duzen River Bridge Replacement, prepared by National Park Service, dated October 16, 2002; Biological Opinion (Snowy Plover), U.S. Fish and Wildlife Service, Formal Consultation, Section 7 of Endangered Species Act, dated March 12, 2003; Biological Opinion (Chinook Salmon, Coho Salmon, Steelhead), National Marine Fisheries Service, Formal Consultation, Section 7 of Endangered Species Act, dated March 11, 2002; Negative Declaration (CEQA), 01-HUM-101/01-31440, prepared by State Department of Transportation (CALTRANS), June 2003.

STAFF NOTES:

COMMISSION ACTION AT JUNE 16, 2006 HEARING.

1. Adopted Findings

The Commission held a public hearing and approved portions of the permittee's application and denied portions of the permittee's application for an amendment of CDP 1-04-014, at the meeting of June 16, 2006. The adopted conditions and findings for approval, and the adopted findings for denial, differ slightly from those contained in the written staff recommendation dated December May 25, 2006 (Attachment A). Prior to the public hearing, staff prepared an addendum dated June 15, 2006 to the recommendation contained in the staff report (Attachment B). At the public hearing, the staff further revised its recommendation to make minor changes to several special conditions, update information in the findings relating to water quality, and clarify language in the special conditions and findings. A few additional changes were made in response to clarifications and requests by Caltrans staff at the hearing.

The Commission adopted the staff recommendation as modified.

The following resolution (Section 1), conditions (Section II), and findings (Section III) were adopted by the Commission on June 16, 2006 upon conclusion of the public hearing.

2. Procedure and Background:

Section 13166 of the California Code of Regulations states that the Executive Director shall reject an amendment request if it lessens or avoids the intent of the approved permit unless the applicant presents newly discovered material information, which he or

she could not, with reasonable diligence, have discovered and procured before the permit was granted.

The CDP proposed to be amendment, Coastal Development Permit (CDP) No. 1-04-014 (Caltrans), was approved by the Commission in October, 2004. The permit contained a specific condition (Special Condition 16) that restricted work within the Van Duzen River channel to the window of time between June 15 and October 15, annually, during the multi-year project. This restriction was also required by other state and federal agencies reviewing the permittee's proposal.

On October 12, 2005, Caltrans requested, among other things, that the Executive Director authorize continued work within the Van Duzen River beyond the then-pending October 15, 2005 deadline. The Executive Director notified the permittee on October 14, 2005 that the work extension would not be approved, but authorized an Emergency Coastal Development Permit for retention of two coffer dams, sealed against fish entrapment and surrounded by rip-rap to prevent the formation of scour pools, over the then-pending rainy season.

The applicant submitted the present amendment request in part to fulfill its requirement that the emergency permit authorization be followed up with a regular permit application (in this case, in the form of an amendment to the existing permit) and has included both after-the-fact development and newly proposed development in the submittal. It was not clear when staff filed the application on April 1, 2006 that the application included both after-the-fact approval <u>and</u> future approval to extend the seasonal work windows for work within the Van Duzen channel and gravel bar beyond the June -- October annual window set forth in Special Condition 16 of the existing CDP 1-04-014. The application appeared only to include an after-the-fact request for approval of the work that occurred after October 15 the previous year, when the Executive Director refused to grant emergency authorization to extend the seasonal work deadline, but work to secure the site for the winter took a few days longer. The applicant subsequently clarified, however, that in fact the application seeks approval to continue work within the river channel beyond the authorized work window <u>in the future</u> as well. Had that part of the amendment application been clear upon submittal, staff would have rejected it outright as lessening or avoiding the intent of a previously imposed permit condition.

Because the application had already been filed when the permittee clarified the intent of the application, staff recommends therefore that the Commission <u>deny</u> this component of the permittee's request as further detailed below.

3. <u>Standard of Review</u>

As stated in the September 30, 2004 staff report for CDP 1-04-014, the proposed project is located within the Commission's area of retained permit jurisdiction. Humboldt County has a certified LCP, but the majority of the site is within an area shown on State Lands

Commission maps over which the state retains a public trust interest. Therefore, the standard of review that the Commission must apply to the project is the Chapter 3 policies of the Coastal Act.

5. Addendum.

On May 24, 2006, two days before the mailing of the staff report, Caltrans submitted a letter making changes to the project description for the subject permit amendment. These changes include changes regarding the use of certain vehicles on the gravel bar during the construction period, where fueling of certain vehicles would occur, where certain stockpiling activity would occur, construction of the construction access road to the development site, and construction of the proposed temporary bridge for construction vehicles. As there was not sufficient time between receipt of the changes to the project description and the mailing of the staff report for staff to analyze the proposed changes and incorporate them into the staff recommendation, staff will prepare an addendum to this report that will be presented at the Commission meeting. The addendum will include changes to the special conditions and additional findings that address the applicant's changes to the project description.

I. MOTION and RESOLUTION:

The Commission adopted the following two-part resolution.

RESOLUTION:

Part 1: Approval with Conditions of a Portion of the Development

The Commission hereby **GRANTS, as conditioned,** an amended coastal development permit for the portion of the project consisting of:

1) retention of Coffer Dams 2 & 3, with surrounding rip-rap within the Van Duzen River channel between October 15, 2005 and October 15, 2006, with possible retention of the coffer dams and rip-rap through October 15, 2007 if necessary; 2) work outside of the Ordinary High Water throughout the year, including the construction of Pier 4, Abutment 5 and Abutment 1, fill for bridge approaches, grading aggregate base, paving, and striping; 3) alternate temporary crossing bridge design for use during 2006 dry construction season; 4) deployment of water bladders to control sediment if low-flow river channel intersects either coffer dam 2 or 3 construction area; 5) temporary placement of approximately 1,000 cubic yards of rip-rap, covering approximately 150-200 linear feet, to top of north bank of the Van Duzen River downslope from coffer dam 4, for erosion control during construction only; 6) deploying fueling on the gravel bar for less mobile equipment that is difficult to move to an upland fueling location, 7) excavating Coffer Dam #3 during the 2006 in-stream work season with temporary storage during the dry

season on the gravel bars; and 8) grading gravel from the emergent dry gravel bar on the south side of the river for use in constructing the southern abutment for the temporary river crossing.

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 and will not have any significant adverse effects on the environment within the meaning of the California Environmental Quality Act.

Part 2: Denial of the Remainder of the Development

The Commission hereby **DENIES** a coastal development permit for the portion of the proposed development consisting of:

1) after-the-fact and proposed work (except for the retention of the sealed coffer dams and protective rip-rap, as noted in Part 1 of this Resolution) within the Van Duzen River channel outside of the seasonal restriction of June 1 (for dry gravel bar) or June 15 (wetted channel) through October 15; 2) after-the-fact construction of temporary bridge composed of unauthorized materials and unauthorized grading of Van Duzen River corridor (narrowing) to install the bridge; 3) after-the-fact multiple crossings of the wetted channel by heavy equipment to place and remove the temporary bridge in 2005; 4) after-the-fact deployment of water bladders during 2005 construction season; 5) permanent retention of after-the-fact revetment placed on north bank of Van Duzen River, downslope of coffer dam 4; and 6) removal of riparian vegetation for installation of the temporary river crossing.

and adopts the findings set forth below, on the grounds that the development will not be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976 and would result in significant adverse effects on the environment within the meaning of the California Environmental Quality Act.

I. 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 permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

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

3. 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.

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

III. SPECIAL CONDITIONS

Special Conditions 1 through 16 of the original permit, set forth below, remain in full force and effect. New Special Conditions commencing with Special Condition 17 are hereby imposed, and set forth below, after Special Conditions 1 through 16.

1. State Lands Commission Review

PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall provide to the Executive Director a copy of a permit issued by the California State Lands Commission, or letter of permission, 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 California 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.

2. Army Corps of Engineers Approval

PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit to the Executive Director written evidence that all necessary approvals from the Army Corps of Engineers have been obtained.

3. Final Construction Clearance

NOT LESS THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF ANY PROJECT-RELATED PHYSICAL ACTIVITIES, including but not limited to preliminary vegetation removal, temporary access improvements, equipment staging, or any other project-related activity, the applicant shall obtain written confirmation from the Executive Director that the applicant has fully complied with all prior-to-commencement conditions set forth in Coastal Development Permit 1-04-014. Project-related physical activities shall not commence until the Executive Director is satisfied that the applicant has fully complied with all prior-to-construction conditions, and has issued the subject written confirmation. This condition shall be prominently stated on the final project plans provided by CALTRANS for final approval by the Executive Director pursuant to Special Condition 5.

4. (Note: this condition was deleted prior to the original Commission approval of CDP No. 1-04-014 in 2004)

5. Final Plans; Amendments; On Site Briefings

A. PRIOR TO ISSUANCE of Coastal Development Permit 1-04-014, the applicant shall provide two complete sets of the final project plans, drawn to scale, reflecting the final approved project description and conditions of approval as set forth in this permit, including the specific Terms and Conditions and related measures set forth in other agency requirements and herein incorporated by reference in Special Conditions 6, 7, 8 and 9. The final plans shall include site plans, grading plans, cross sections and elevation views, and landscape and erosion control plans, including planting plans. The plans shall include final designs and notations of seasonal placement and removal restrictions for temporary construction ("falsework") and temporary crossings. The conditions of approval of CDP 1-04-014 shall be set forth on the cover sheet of the subject plans and one original set of the approved plans, executed by the Executive Director or his designated representative, shall be present on the construction site at all times while project-related activities are in progress. The proposed project shall be constructed strictly in accordance with the approved plans. Any future modification of the approved development, including but not limited to the bridge, railings, sidewalks, shoulders, traffic lanes or median area shall require a Commission amendment to this coastal development permit.

B. Prior to commencement of construction, the permittee shall ensure that all construction personnel are fully familiarized with the terms and conditions of this coastal development permit and that a qualified biologist briefs the construction personnel on the measures necessary to protect resources as all applicable restrictions and obligations relevant to their activities. Continuous briefings throughout the term of the construction activities authorized by this permit shall be qualified biologists, site monitors, and construction managers to ensure that all personnel remain current on the applicable requirements.

6. 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 11, 2002, and as amended November 5, 2002, attached as Exhibit 4 of the staff report for Coastal Development Permit 1-04-014. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

B. Should stream diversion or dewatering methods proposed for the subject project fail to ensure a dry environment for pile-driving and other construction activities in the manner anticipated, the permittee shall immediately contact the nearest field office of the National Marine Fisheries Service to develop a construction plan that will avoid "barotrauma" (damage to fish due to propagation of acoustic waves

due to percussion) to potentially affected fish. Any subsequent construction activities, in addition to other measures that may be required by NMFS, shall at a minimum include the following provisions:

(1) A qualified biologist 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 bay outside the project vicinity. Only NMFS approved methods shall be used to capture covered salmonids.

(2) If lethal take occurs, other than that expected during handling of entrapped fish, FHWA/CALTRANS shall immediately notify the National Marine Fisheries Service to review the circumstances surrounding the lethal take and develop modification to project activities necessary to prevent further lethal take. If modification to project activities is necessary to prevent further lethal take, all in-water construction shall cease and shall not recommence except as provided in subsection (3) below.

(3) A permittee seeking to recommence in-water construction following notification to NMFS of lethal take and determination that modification to project activities is necessary to prevent further lethal take, shall submit a supplementary construction and work plan for the review and approval of the Executive Director.

(a) If the Executive Director reviews the Supplementary Construction and Work Plan and determines that the supplementary 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.

(b) If the Executive Director reviews the Supplementary Construction and Work 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.

7. <u>Measures to Minimize Impacts to Snowy Plover</u>

The permittee shall comply with the "Terms and Conditions," "Reporting Requirements," and "Conservation Recommendations" specified in the U.S. Fish and Wildlife Service Biological Opinion letter of March 12, 2003, attached as Exhibit 5 of the staff report for Coastal Development Permit 1-04-014. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

8. <u>Measures to Minimize Impacts to Van Duzen River riparian corridor</u>

The permittee shall comply with the "Work Conditions" specified in the California Department of Fish and Game Stream Alteration Agreement, dated September 13, 2004, attached as Exhibit 6 of the staff report for Coastal Development Permit 1-04-014. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

9. Measures to Protect Quality of the Waters of the Van Duzen River

A. The permittee shall comply with the conditions specified in the Clean Water Act Section 401 Certification (Water Quality Certification) of the California Regional Water Quality Control Board, North Coast Region, dated May 5, 2004, attached as Exhibit 7 of the staff report for Coastal Development Permit 1-04-014. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

B. PRIOR TO COMMENCMENT OF CONSTRUCTION, the permittee shall submit, for the review and approval of the Executive Director, a Final Storm Water Pollution Prevention Plan that is consistent with the requirements of Special Condition Nos.10, 11, and 12 and the draft Plan, dated June 30, 2004. The applicant shall also submit copies of all required notifications and/or reports to the Executive Director.

C. The permittee shall conduct all project activities in accordance with the requirements of the Section 401 Certification and the final Storm Water Pollution Prevention Plan (SWPPP). Any proposed changes to the Section 401 Certification or to the final SWPPP 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.

10. Temporary Structures

Where temporary structures such as "falsework" and temporary crossings may contact the waters of the Van Duzen River, such structures shall not include creosote-treated members. Only concrete, steel, composite, untreated timber, or timber treated with a wood preservative approved by the Department of Fish and Game for use in marine waters may be used. All temporary structures shall be completely removed upon project completion. Any piles shall be pulled up and completely removed without digging them out or cutting them off at the mudline.

11. Construction Responsibilities, Material Containment, Demolition, and Disposal of Debris

A. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the permittee shall submit for the review and approval of the Executive Director a plan for the

demolition and capture of the old bridge and related components, and for the identification (testing) and disposal of construction-related debris and contaminated sediments. The plan shall be consistent with the requirements of Special Condition No. 12 and shall include (but not be limited to) the following elements:

(1) Detailed description of the means and method of all demolition activities required to remove the existing bridge and associated structures, including measures to ensure full removal of all associated piers and footings;
(2) Outline of all protective measures to insure the integrity of the northbound bridge and the safety of pedestrians, bicyclists and drivers using the northbound bridge and any affected areas beneath and adjacent to the bridge (such as for recreational fishing, hiking);
(3) Prohibition of the use of any explosives for any aspect of project construction or demolition;
(4) Measures to prevent debris and waste from falling into the riverbed or adjacent areas;
(5) Identification on final project plans required pursuant to Special Condition 5 of all temporary storage sites for debris, graded spoils, contaminated sediments, construction materials, waste materials, etc., including any temporary stockpiling sites for any materials;
(6) Evidence that all locations identified in the plan for stockpiling, staging, or storage of materials, equipment or wastes is located upland of the Van Duzen River corridor and that berming, cleanup materials or other measures have been designed and set forth on final construction plans to ensure that such locations do not drain into coastal waters;
(7) Final disposal locations for all forms of debris, waste, and grading spoils, contaminated sediments and evidence that these locations are either a) licensed to accept such wastes and located outside of the coastal zone or b) licensed to accept such wastes and hold valid Coastal Development Permit to accept such materials.

B. In addition, the permittee shall comply with the following construction-related requirements:

(1) No construction debris or waste shall be placed or stored where it may enter coastal waters;
(2) Any and all debris resulting from construction activities shall be removed from the project site within 10 days of project completion and in accordance with the construction debris removal and disposal plan required herein;

(3) No machinery or construction materials not essential for project construction shall be allowed at any time within the Van Duzen River corridor;
(4) Debris discharged into coastal waters shall be recovered as soon as possible after loss and a permanent record of such incidents and resolution shall

be kept and at all times made available for on-the-job inspection and the log shall be submitted to the Executive Director upon project completion;
(5) Silt curtains appropriate for use in riverine waters shall be installed around the areas to be excavated;
(6) No contaminated sediments shall be returned to the Van Duzen River. Any contaminated sediments shall be legally disposed of at an appropriate upland facility in accordance with the final plan authorized pursuant to Special Condition 12 and in accordance with other specific requirements set forth herein and in the final approved plan required pursuant to this special condition;
(7) Particular care shall be exercised to prevent foreign materials (for example, construction scraps, wood preservatives, other chemicals, etc.) from entering the Van Duzen River corridor, or areas that drain into the river. Where additional wood preservatives must be applied to cut wood surfaces, the materials, wherever feasible, shall be treated at an upland area to preclude the possibility of spills into the river or other state waters. A designated staging area shall be used for all refueling equipment and vehicles, mixing and storing materials, debris collection and disposal, and containing runoff from any materials that may be used or stockpiled during the project. A floating containment boom shall be placed around all active portions of a construction site where wood scraps or other floatable debris could enter the water. For any work on or beneath fixed bridge decks, heavy-duty mesh containment netting shall be maintained below all work areas where construction discards or other material could fall into the water. The floating boom and net shall be cleared daily or as often as necessary to prevent accumulation of debris. Contractors shall insure that work crews are carefully briefed on the importance of observing the appropriate precautions and reporting any accidental spills. Construction contracts shall contain appropriate penalty provisions, sufficient to offset the cost of retrieving or clean up of foreign materials not properly contained.

C. 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.

12. <u>Hazardous Materials Management Plan</u>

A. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the review and written approval of the Executive Director, a plan for the use and management of hazardous materials on the site to reduce impacts to water quality. The plan shall be prepared by a licensed engineer with experience in hazardous material management.

1. The plan, at a minimum, shall incorporate all applicable requirements of the special conditions of Coastal Development Permit 1-04-014, and in addition shall provide for the following:

(a) Equipment fueling shall occur only during daylight hours in designated fueling areas;

(b) Oil absorbent booms and/or pads shall be on site at all times during project construction. All equipment used during construction shall be free of oil and fuel leaks at all times;

(c) Provisions for preparing and pouring cement in a manner that will prevent discharges of wet cement into coastal waters including, but not limited to, placement of measures such as catch basins, mats or tarps beneath the construction area to prevent spills or overpours from entering coastal waters;

(d) Provisions for the testing, handling, cleanup, temporary storage and containment, interim identification (such that contaminated materials or debris, including sediments, may be so identified at any time by site inspectors, and that such materials cannot be inadvertently mingled with or confused with non-contaminated stored materials) and disposal of any hazardous or non-hazardous materials used during the construction project including, but not limited to, cement, equipment fuel and oil, and contaminated sediments (including lead-contaminated sediments);

(e) A schedule for maintenance of containment measures on a regular basis throughout the duration of the project;

(f) Provisions for the containment of rinsate from the cleaning of equipment, including cement mixing equipment, and methods and locations for disposal off- site. Containment and handling shall be in upland areas and otherwise outside of any environmentally sensitive habitat area;

(g) A site map detailing the location(s) for hazardous material storage, equipment fueling and maintenance, and concrete wash-out facilities;

(h) Reporting protocols to the appropriate public and emergency services/agencies in the event of a spill;

(i) Record-keeping measures to insure consistent, complete accounting for identification, handling, storage (both short- and long-term), and disposal of contaminated materials and wastes in a manner that can be immediately audited by site inspectors.

B. The applicant 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 legally required.

13. Erosion Control and Revegetation Plan

A. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the review and approval of the Executive Director, an erosion control and revegetation plan for all areas disturbed by construction of temporary access roads. The plan shall provide for (1) the use of geotextile fabric and gravel to cover temporary access roads and newly placed fill slopes, and adjacent disturbed areas during construction, (2) the replanting with appropriate locally native species of any disturbed areas sufficient to prevent erosion at maturity and including short-term plantings to prevent erosion until slower growing species mature, (3) subsequent complete removal of all geotextile fabric and gravel in coordination with the replanting plan, (4) placement of erosion control measures such as mulch or rice straw, (5) placement of straw bales or other sediment control measures to protect against sediment loss if other erosion control measures fail, (6) monitoring, weed control, maintenance, and adaptive management measures designed to ensure successful establishment of native species and full control of erosion in the previously disturbed areas, and (7) annual reports and photographic documentation of erosion control and revegetation measures implemented, to be submitted annually to the Executive Director for a minimum of five (5) years following commencement of construction.

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. To the extent that the measures required in the final approved plan do not achieve permanent erosion control (for example, if plantings fail to thrive), the applicant shall pursue adaptive management, replanting, and further monitoring and reporting to the Executive Director's satisfaction until successful compliance is achieved.

14. Public Access and Safety

During construction, the applicant shall maintain existing public access to the Van Duzen River to the extent that such access is ordinarily available, consistent with the protection of public safety and the provisions of Special Conditions 6, 7, and 8 protective of sensitive resources. Where project activities would pose significant public safety hazards within the active project construction area, pedestrian detour routes shall be made available where feasible, and temporary signage shall be placed at public access closure points to indicate the nature and timing of any restrictions on access that may be necessary. Such signage shall additionally include directions to detour routes where detours are feasible, and directions to the nearest alternative public accessways. Where construction activities pose temporary safety risks to the public, associated

access points shall be clearly barricaded and posted with warnings and to the extent necessary to protect the public, a construction monitor shall be posted to protect the public from hazards posed by heavy equipment in operation and other potential construction hazards. Following project construction, or immediately after temporary closures while construction proceeds, previously existing public accessways shall be fully restored, consistent with necessary erosion control measures.

15. Nesting Birds

A. PRIOR TO COMMENCEMENT of construction, and in accordance with the applicant's proposal, the applicant shall submit for the review and approval of the Executive Director, a final plan prepared by a qualified biologist or resource specialist with appropriate experience, to provide equivalent replacement nesting site(s) for migratory birds presently utilizing the southbound bridge, in an alternative location or a combination of locations either attached to or suspended from the adjacent northbound bridge, or on a separate but adjacent structure as close as practicable to the southbound bridge site but outside of the area of anticipated construction disturbance. The permittee shall provide documentation, including photographic evidence, of the habitat installation prior to commencement of construction and prior to implementing nesting exclosure techniques on the bridge proposed for demolition.

B. By July 1 of the first calendar year following project completion, the permittee shall submit a written report supplemented by photographic evidence, prepared by a qualified biologist or resource specialist, documenting the success of the nesting habitat alternatives and, if the timing of nesting season allows, evidence of whether nesting on the new bridge is occurring. If nesting has not occurred successfully, the report shall include recommendations for adaptive management that may better ensure successful use of the nesting sites by migratory birds. Upon implementation of these measures, the applicant will undertake follow-up monitoring and reporting to the Executive Director annually for three (3) consecutive years thereafter. At the end of the third year, the final report shall include a summary of measures that have proven successful and recommendations for implementation of similar, or potentially improved measures in other project locations where similar nesting habitat impacts may arise.

16. Timing of Construction

Consistent with the proposed project description and the requirements of the National Marine Fisheries Service protective of salmonid species (Exhibit 4), project activities in the Van Duzen River channel outside the low flow channel are prohibited before June 1 or after October 15 of a given calendar year. Project activities in the Van Duzen River low flow channel, including temporary stream crossing and dike construction shall be prohibited before June 15 or after October 15 of a given calendar year.

ADDITIONAL SPECIAL CONDITIONS:

17. Biological Monitoring

The permittee is responsible for ensuring its compliance with all conditions of CDP 1-04-014-A1. In addition to this and all other requirements set forth elsewhere in the permit and special conditions, all activities that are undertaken within the Van Duzen River channel including the banks of the river and the environs of the site immediately adjacent to the top of the river banks, shall be subject to the requirements of this monitoring condition:

A. Qualifications, areas of duty of monitor: The permittee shall ensure that a qualified biologist (hereinafter "monitor") with significant field experience in salmonid ecology, and who is approved by the Executive Director of the Commission as well as by the California Department of Fish and Game and/or NOAA National Marine Fisheries Service to rescue and release trapped salmonids, shall observe project activities undertaken within or adjacent to the Van Duzen river channel during the annual June - October dry construction season, and shall monitor and ensure compliance with CDP 1-04-014, including mendments thereto, until the project is fully completed; and

B. Education of on-site personnel: Prior to each annual commencement of construction, the monitor shall provide copies of and brief all on-site personnel on the requirements of all approved permits, including requirements related to the protection of sensitive habitat and species, and of water quality, and shall provide additional copies and conduct additional briefings as new field personnel join the project, or as the monitor may determine to be additionally necessary, to ensure that all personnel understand and fully implement the applicable requirements; and

C. Non-compliance: First notification and required action by site supervisor: The monitor shall immediately report any non-compliance with permit conditions, including attempts by any equipment operator to drive across the wetted channel (except as specifically authorized in accordance with the plan approved by the Executive Director pursuant to Special Condition #21 for the construction of temporary river crossings) to the Resident Engineer or other designated site supervisor and shall both log the incident in the monitoring notes and document the incident in writing with photographs. Within 24 hours the monitor shall provide an oral report of the incident to the Executive Director of the Coastal commission followed by a written report detailing the incident. If the monitor observes any instance of discharge of sediment or other potentially adverse impacts to fisheries, the monitor shall immediately notify the permittee's Resident Engineer ("site supervisor"), the Resident Engineer's designated substitute, or other site supervisor designated by the permittee, and the site supervisor shall order the immediate cessation of any activities contributing to the reported non-compliance. If the site supervisor is uncertain about the compliance status of

certain activities, the site supervisor shall nonetheless require cessation of such activities if the monitor identified any compliance concern about them. Resolution of any questions of intent or interpretation of any condition is reserved for the Executive Director or the Coastal Commission pursuant to Standard Condition 3, above. Nothing in these requirements shall relieve the site supervisor from additionally monitoring the compliance with permit conditions of any party authorized to perform work on the permittee's behalf and intervening to address or prevent non-compliance whether or not observed by the monitor; and

D. Further Notification and Remedial Action: Immediately notifying the Resident Engineer or other designated site supervisor, the monitor shall additionally notify the permittee's designated District 1 Environmental Unit Construction Liaison ("liaison") or the liaison's designated representative of any incident of non-compliance with the requirements of this permit. In addition, if for any reason the permittee's site supervisor is unavailable, the permittee shall ensure that the liaison shall have the authority to order the immediate cessation of any activity identified by the liaison or the monitor to be potentially non-compliant with the requirements of this permit, and the permittee shall ensure that this authority is clearly understood by all parties undertaking any activities on the subject site. The designated site supervisor or liaison shall not allow the project activities to re-commence until the state and regulatory agencies (which may include: California Department of Fish and Game, Regional Water Quality Control Board, Coastal Commission – North Coast District Office, NOAA National Marine Fisheries Service, U.S. Fish and Wildlife Service, Army Corps of Engineers) with applicable authority have been notified and have had an opportunity to advise the permittee of any remedial action or additional permitting requirements that may be necessary, and such permits have been obtained and such remedial action has been fully implemented, to the satisfaction of the liaison, monitor, and the consulting agency or agencies; and

E. Monitor to verify SWPPP compliance reports: The monitor shall evaluate for accuracy and completeness all Storm Water Prevention Plan (SWPPP) Best Management Practices compliance reports, typically prepared bi-weekly by the permittee's designated representative, during the monitor's term of duty, and the site supervisor shall do so during the balance of the rainy season construction; and

F. Record-keeping, preservation, reporting: The monitor-- and to the extent the liaison observes site conditions and activities, the liaison--- shall keep detailed field notes of all observations, including biological and physical environmental baseline observations daily, and shall document in writing with supporting photographs - any instance of potential non-compliance, including any instance of sediment or other discharge into the Van Duzen corridor, as shall the site supervisor. The monitor shall additionally record a professional estimate of any adverse impact on sensitive habitat, species or water quality that any instance of potential non-compliance imposes. The monitor and liaison shall individually

retain copies of all notes, logs, and photographs, descriptions of any remedial actions taken in the event of non-compliance or accident, and copies of the records and photographs of the monitoring biologists shall be permanently preserved and retained by the permittee with the project records. The monitor and liaison shall additionally submit a complete copy of these materials to the Coastal Commission's North Coast District Office within fifteen days (15) after the end of each dry season construction ending October 15, annually. The monitor shall ensure that river channel work ceases and that the site is appropriately secured for the rainy season on or before October 15, annually, until the construction is completed and the river channel restored to pre-construction conditions. Nothing in these requirements shall relieve the site supervisor from additionally monitoring the compliance with permit conditions of any party authorized to perform work on the permittee's behalf and intervening to address or prevent non-compliance whether or not observed by the monitor; and

G. Future applicability: These monitoring requirements shall also apply in full to any project activities that may continue in the dry season construction periods after 2006; and

H. Availability of site supervisor; authority of liaison: The permittee shall ensure that a site supervisor is continuously available on-site or by telephone for the monitor's benefit, however if the site supervisor is unavailable for any reason, in accepting this amended permit, the permittee shall authorize the liaison or the liaison's designated representative to order immediate cessation of any project activity that the monitor or liaison determine may be non-compliant with the requirements of the coastal development permit. In such cases, the responsibilities of the liaison shall be the same as the site supervisor pursuant to subparagraphs (c) and (d) above. The permittee shall inform, in writing, all contractors working on the project of such designated authorities and ensure that all contractors understand and abide by the authority of the site supervisor or his/her designated representative.

18. Notice

The permittee shall provide a minimum of 24 hours notice to the Coastal Commission's North Coast District staff before commencing installation of the temporary bridge, de-watering structures and water bladders, re-opening or excavating the contents of any coffer dam sealed during the rainy season, retrieving in-stream rip-rap around coffer dams, or commencing the removal of coffer dams.

19. Site Inspections

Coastal commission staff, and other agency staff that the Coastal Commission staff may coordinate site visitation with, shall be authorized to enter the site at any time to observe project activities without prior notice. The permittee shall ensure that a minimum of two sets of protective gear are available on site at all times (including hard hats, goggles,

safety vests, and high visibility rain gear, etc., such as the permittee deems necessary for the safety of site visitors). If activities are underway that could cause a hazard to site visitors, the site supervisor or designee shall require that these activities be temporarily suspended as soon as practicable, for a reasonable amount of time to allow safe site inspection by Commission and agency staff, and the site supervisor or designee shall accompany staff during such site visits.

20. Coffer Dams 2 & 3 and Associated Rip-Rap

A. If the permittee fails to remove the in-stream rip-rap and coffer dams otherwise referred to as Coffer Dams 2 and 3, prior to October 15, 2006, the coffer dams shall be secured for retention in the river channel by covering and sealing the coffer dams fully against entrapment of fish of any size, utilizing materials that are non-toxic to aquatic life. The coffer dams shall be sealed accordingly, the temporary crossings removed, all vehicles, equipment and construction materials removed, and the river channel prepared for the rainy season not later than October 15, 2006; and

B. If Coffer Dams 3 & 4 and associated rip-rap are not removed by October 15, 2006 pursuant to subparagraph A above, the permittee shall submit a detailed plan for the Executive Director's review and approval, not later than January 15, 2007, for removal of the in-stream rip-rap and coffer dams during the June 15-October 15, 2007 dry season. The plan shall implement all requirements of this special condition and shall otherwise be consistent with all other special conditions of CDP 1-04-014-A1. The plan shall also include provisions for the installation of a temporary bridge or bridges (which may be further refined with the approval of the Executive Director based on river conditions in June of 2007) and that portion of the plan shall be prepared in accordance with the same requirements as set forth in Special Condition 21, below. The plan shall include all necessary measures to protect water quality and sensitive species, and shall require further biological monitoring in full accordance with the requirements of Special Condition 17 above, and any other feasible measures that the Executive Director may deem necessary to protect water quality and sensitive species. Project activities of any kind shall not be undertaken in or adjacent to the stream channel during 2007 until the Executive Director approves the 2007 construction plan in writing, and further authorizes any additional changes to the temporary bridge crossing component that the permittee may propose based on the river conditions in June 2007; and

C. The permittee shall ensure that resumption of work within Coffer Dams 2 and 3, and the eventual removal of the coffer dams and surrounding rip-rap, is undertaken in a manner that fully avoids fish entrapment or other adverse impacts on sensitive species, including salmonids at any life stage, or the discharge of sediment to the waters of the Van Duzen River. Any debris trapped on or around the coffer dams shall be removed without discharge to the waters of

the Van Duzen and disposed of in accordance with the requirements of CDP 1-04-014-A1, before the coffer dams are re-opened annually; and

D. The permittee shall ensure that the removal of Coffer Dams 2 and 3 and the rip-rap surrounding the coffer dams is undertaken within a dry gravel bar area or within a fully de-watered containment, depending on the river conditions at the time of removal, and that activities undertaken to prepare the site for such removal do not interfere with the continued adequate flow and clarity of the Van Duzen River necessary to protect fish present in the river waters. The permittee shall ensure that all related activities are undertaken in such a manner that no sediment is discharged to the waters of the Van Duzen River; and

E. The rip-rap around the coffer dams shall be isolated from the waters of the Van Duzen River before activities necessary to locate, excavate, retrieve, and remove the rip-rap commence. The rip-rap shall not be disposed of in the coffer dam excavation areas. No activities associated with the identification, excavation, retrieval, or disposal of the subject rip-rap shall result in the discharge of sediment to the waters of the Van Duzen River. The rip-rap shall be isolated from the waters of the Van Duzen River by a water bladder installed and removed consistent with the requirements of Special Condition No. 22 if the waters of the Van Duzen River intersect the areas where rip-rap was previously placed. Recovered rip-rap may only be stored temporarily at previously approved staging areas and must be properly disposed of by October 15 of the construction year during which the rip-rap was removed, in accordance with the requirements of CDP 1-04-014; and

F. It shall be the permittee's responsibility to ensure that further activities undertaken within Coffer Dams 2 and 3 are staged in a manner that provides access and placement of equipment (such as cranes) without placing unauthorized material within the river area (including, but not limited to excavated spoils). If a platform for cranes or other heavy equipment is required, it shall be constructed of removable materials, such as planks, and the specific manner and type of platform or other support structure shall be installed in full consultation with the permittee's water quality specialists, biologists, site supervisor, monitor, and liaison. In no case shall such structure(s) intrude into the waters of the Van Duzen River, and no wood treated with preservatives may be used within the Van Duzen corridor unless treated in a manner specifically approved by the California Department of Fish & Game as non-toxic to aquatic life.

G. The permittee shall ensure that the areas of the river channel occupied by Coffer Dams 2 and 3 are filled with native materials previously excavated from the coffer dams~~, capped with not less than four (4) feet of clean, washed river gravel of spawning size~~, and the area fully restored to natural river contours not later than October 15 of the final year of use of the coffer dams; and

H. The permittee shall excavate the approximately 1,500 cubic yards of material estimated present within Coffer Dam 3 during the 2006 construction season as follows, in accordance with the permittee's proposal: the permittee shall remove approximately 500 cubic yards of the material to an authorized location outside of the river channel and reserve the material for construction of the bridge abutment; the remaining approximately 1,000 cubic yards shall be stored on the adjacent dry gravel bar in accordance with the following measures: Best Management Practices including full containment of the stockpile area with linear sediment barriers (silt fences) maintained in effective working order at all times shall be in place; the stockpile area will first be surveyed to establish existing (background) grade conditions, the current grade will be marked with stakes called "hubs" driven down approximately one foot below the existing surface; "whiskers" extending from the top of the hubs will serve as a visual marker. At the end of the season, equipment operators shall observe the whiskers emerging as evidence of return to existing grade. A water truck will thereafter water down the regarded surface prior to October 15 of the construction season and prior to removal of the silt fences; and

I. 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.

21. <u>2006 Temporary River Crossing Plan</u>

A. Prior to commencement of construction within the low-flow channel of the river during the 2006 construction season and no later than 30 days after Coastal Commission approval or other such time as the Executive Director may grant for good cause, the permittee shall prepare a 2006 temporary river crossing plan, in consultation with Caltrans engineers, water quality specialists and biologists with expertise in salmonid ecology for the review and approval of the Executive Director in consultation with other state and federal agencies with authority over the subject project. The specific plan shall be based on the conditions of the river channel as the river waters recede in June, 2006. The temporary bridge, or bridges, shall be designed and installed in a manner that spans the active (wetted) channel(s) to the maximum extent feasible and requires minimal crossings of the wetted channel by mechanized equipment. The plan shall also ensure the removal of the temporary crossing(s) not later than October 15, 2006; and

B. The plan shall specify how many live channel crossings are necessary, and for what specific bridge construction purpose, and shall provide measures to ensure that the undercarriage of any vehicle or equipment that will enter the waters of the Van Duzen shall be steam washed and verified free of leaks before entering the river channel or gravel bars. The plan shall ensure that all equipment moves

through the river at the slowest possible speed, with a guide on foot walking through the channel ahead of the equipment to disperse fish; and

C. If fully spanning the wetted channel(s) may be infeasible, the plan shall document the specific river conditions that render fully spanning the channel(s) infeasible, and shall evaluate options for re-directing the river channel to best avoid impacts to fisheries and water quality. If any redirection of the river, or placement of material within the river is incorporated into the plan, the plan shall minimize encroachment into the channel, ensure that the channel will not block fish passage, prevent increases in turbidity in the river, and utilize clean, washed gravel of spawning size, verified to this standard by the monitoring biologist prior to placement in or adjacent to the stream channel. The washed gravel may be stabilized with a minimal use of concrete k-rail to prepare the temporary bridge abutments. Natural unwashed gravel material from the exposed gravel bar on the south side of the river may be graded into place to form the southern abutment of the temporary crossing, but only if (i) gravel is only graded from dry, exposed, unvegetated portions of the bar adjacent to the south side of the low-flow channel, and (ii) a water bladder is installed in the river around the abutment location to minimize sedimentation in a manner consistent with the requirements of Special Condition 22. No excavation or grading from the wetted channel is allowed. The plan shall also specify detailed measures that will be implemented to prevent increased turbidity in the waters of the Van Duzen during installation or removal of the temporary crossing(s); and

D. The installation of the temporary bridge shall not occur until the Executive Director approves the plan required herein.

E. 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. <u>Installation of Water Bladders</u>

In accordance with the permittee's proposal, water bladders may be deployed to assist with sediment control and de-watering as necessary during the 2006 dry season, and may be used during the following 2007 dry season, provided that the installation of the water bladder(s) is performed by parties with experience installing such equipment, and under the continual supervision of the biological monitor required pursuant to Special Condition 17 above. Rescue of trapped fish shall be undertaken immediately upon placement of any water bladder. If de-watering of an area contained by a water bladder is necessary for the protection of sensitive species, habitat or water quality and fish rescue is not complete at the time de-watering commences, the water pump intake shall be screened and pulsed as necessary to avoid impingement of fish against the screen or other injury to fish, and immediate fish rescue and release shall be performed within

the containment area(s) by the monitor (Special Condition 17) or another qualified biologist authorized to perform such activities, acting under the direction and supervision of the monitor. Removal of the water bladder(s) shall be undertaken in a manner that minimizes release of settled fines/sediment or wastes of any kind that may have been discharged within the water bladder containment area, into the Van Duzen River. The monitor required by Special Condition 17 shall verify that all fines/sediment or other foreign materials or wastes that have been trapped by the water bladder(s) have been fully removed and properly disposed before the water bladder(s) may be removed.

23. Temporary Use of Rip-rap to Control Erosion on North Bank

The use of rip-rap on the disturbed North Slope of the Van Duzen River, adjacent to and downslope from the excavated area of coffer dam #4 (Exhibits 2-6) may only be utilized for temporary erosion control during project construction and such placement is not authorized for retention after the end of construction, except for such additional time as the Executive Director shall authorize due to seasonal requirements for restoration success. Within sixty (60) days after Commission approval of CDP 1-04-014-A1, the permittee shall submit a complete application for removal and disposal of the temporary rip-rap and restoration of the affected slope with slope stabilizing materials (such as geotextiles) and planting with appropriate locally-native plants with an emphasis on willows.

24. Other Approvals

Within sixty (60) days after Commission approval of CDP 1-04-014-A1, or within such additional time as the Executive Director may grant for good cause, the permittee shall provide evidence that all state and federal agencies that have previously issued permits or authorizations for the underlying project, or assumed additional authority since earlier authorizations (California Endangered Species Act, Coho salmon listed in 2004) have also authorized the amended development proposed by the permittee and approved by the Commission in CDP 1-04-014-A1, or evidence that such authorizations are not required.

25. Authorized Development Only: Permit Amendment Required

All activities associated with the development authorized herein shall be undertaken in continual conformance with the approved project description and with the terms and conditions of approval of the permit as amended. Any proposed changes to the approved project shall be reported to the Executive Director. No changes to the approved project shall occur without a Coastal Commission-approved amendment to the coastal development permit, unless the Executive Director determines that no amendment is legally required.

26. Permit Expiration and Condition Compliance

Because some of the proposed development has already commenced, this coastal development permit amendment shall be deemed issued upon the Commission's approval and will not expire. Failure to comply with the special conditions of this permit amendment may result in the institution of an action to enforce those conditions under the provisions of Chapter 9 of the Coastal Act.

27. Annual Construction October 15 through June 15

Construction activities may continue at Abutments 1 and 5 outside of the river channel and banks during the October 15 through June 15 period annually provided that the permittee obtains all necessary permits or other authorizations, or written evidence that these are not required, for off-site rainy season de-watering, if such de-watering becomes necessary, including installation and use of associated pumping infrastructure and sediment basin. Such rainy season de-watering may not be undertaken in a manner that encroaches into the sensitive habitat areas such as wetlands or riparian corridors, or their buffers, or that adversely affects sensitive species or visual resources, or reduces the amount of agriculturally-zoned land available for agriculture. In addition, the de-watering must be undertaken in a manner that prevents effluent from entering coastal waters, either directly or indirectly, unless filtration measures adequate to treat and/or remove any contaminants that may be present, including sediment, are successfully deployed and maintained. All Best Management Practices applicable to the subject project would apply also to these activities, such that no release of sediment, waste water, wet concrete, or other constituents to coastal waters shall occur.

28. Activities That Affect the Wet Channel

The permittee shall ensure that during any project activity that may affect the waters of the Van Duzen River, sediment control measures **such as water bladders** are deployed ~~to~~ **in a manner that minimizes the release of settled fine sediments and** ensure**s** that turbidity is not increased **more than 20%** above **naturally occurring** background levels of samples collected not more than one hour prior to commencement of such activities. Water samples shall be collected downstream from such activities, not more than thirty (30) feet directly downstream within the same channel affected by the subject project activities. Water samples shall be collected at hourly intervals during installation activities that encroach into the wetted channel. Any fill material placed within the channel as part of a plan approved by the Executive Director shall be composed exclusively of washed gravel of spawning size. No other material shall be acceptable. All water samples shall be collected by a qualified technician and performed consistent with the requirements of the Regional Water Quality Control Board. Testing results shall be submitted to the Executive Director within five (5) days of receipt by the permittee and shall be permanently preserved with the project records. The biological monitor shall ensure that the testing is conducted in accordance with the requirements of this permit and shall be provided with copies of all test results upon receipt by the permittee.

29. Provisions for Fueling cranes, tracked vehicles, or other heavy equipment that cannot be readily moved from the gravel bar area

In accordance with the permittee's proposal, equipment fueling shall occur only during daylight hours in designated fueling areas, and the gravel bar may be treated as a designated fueling area only for those few vehicles/equipment such as the crane and tracked mounted equipment that would generally stay in place for the duration of the construction season, subject to the following specific requirements: A commercially licensed fueling operator certified by the California Department of Fish and Game Office of Spill Prevention and Response shall provide refueling services in accordance with certified over-water refueling protocols, Best Management Practices, and other requirements for spill prevention and response, including a minimum of two crew members so that personnel simultaneously staff and observe both the fuel pump valve and the nozzle, and with absorbent containment blankets placed under the fuel tank fill spout sufficient to absorb and contain the maximum potential spill that could be generated by the equipment in use for re-fueling. This method of fueling shall not commence until or unless the Regional Water Quality Control Board and the California Department of Fish and Game authorize these measures for implementation.

30. PERMIT OBLIGATIONS

In accepting the Commission's approval of Coastal Development Permit Amendment No. 1-04-014-A1, Caltrans agrees and accepts that:

A. Caltrans shall ensure that a change order is made to the contract with the master contractor responsible for constructing the project that requires 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 such activities in full compliance with the project approved pursuant to CDP Amendment No. 1-04-014-A1, including all terms and conditions imposed by the Commission in approving the permit. A copy of the adopted findings for CDP 1-06-022 shall be provided to Caltrans subsequent to final Commission action, and Caltrans shall provide a complete copy of the adopted findings and final plans approved by the Executive Director to the master contractor.

B. Caltrans shall ensure that the contractor(s), subcontractor(s), or other parties selected by Caltrans or otherwise designated to implement any portion of the project approved pursuant to CDP Amendment No. 1-04-014-A1, are fully informed of, and continuously comply with, the obligations set forth in the adopted findings referenced in Subparagraph A above. Caltrans shall ensure that a complete copy of the adopted findings is maintained on the job site at all times and that each contractor undertaking any portion of the development authorized herein has a copy of the adopted findings upon execution of the contract for the subject project.

C. All activities associated with performing the development authorized pursuant to CDP Amendment No. 1-04-014-A1 shall at all times be undertaken in full accordance with the terms and conditions imposed by the Commission in conditionally approving CDP

Amendment No. 1-04-014-A1. It shall at all times be Caltrans' responsibility to fully ensure such compliance by any party to whom Caltrans assigns the right to construct or undertake any part of the activities authorized herein.

D. Any proposed changes to the approved project shall be reported to the Executive Director. No changes to the approved project shall occur without a Coastal Commission-approved amendment to CDP Amendment No. 1-04-014-A1, unless the Executive Director determines that no amendment is legally required.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares as follows:

A. Location; Background; Proposed Amendment

The project site is located approximately five miles south of Fortuna and approximately one-quarter mile east and upstream of the confluence of the Van Duzen and Eel Rivers, in a rural area of unincorporated Humboldt County. Pastures and open space characterize most of the surrounding lands. State and Federally listed anadromous species found in the Van Duzen River include chinook and coho salmon, and steelhead trout.

Highway 101 crosses the Van Duzen River in Humboldt County on two separate bridges. Caltrans designed the new southbound bridge as a cast-in-place concrete box girder bridge on the same alignment as the old bridge. The new bridge is designed to match the northbound bridge, which was replaced in 1995 pursuant to CDP 1-93-05 (Caltrans). The firm authorized by Caltrans to construct the southbound bridge (MCM Construction, Inc.) was also chosen previously to replace the northbound bridge. Work commenced on the southbound bridge in July 2005.

The project description submitted by Caltrans and approved by the Commission is described on pages 14 - 17 of the staff report dated September 30, 2004, attached as Exhibit 1. The regional, site, and other plans for the southbound bridge are shown in the exhibits to that report, also included in Exhibit 1. The Commission approved CDP 1-04-014 subject to sixteen special conditions, which remain in full force and effect, in addition to twelve new special conditions.

Proposed Amendment:

As outlined on pages 1 and 2 of this report, the permittee seeks the following amendments to CDP 1-04-014. Staff recommendations for each listed component are shown in parentheses. The various components of the permittee's amendment request are addressed below in separate sections of the report (findings for approval, Section B and findings for denial, Section C).

1) follow-up permit approval to Emergency CDP No. 1-05-052-G to retain in the Van Duzen River channel, after otherwise-applicable October 15, 2005 deadline for removal pursuant to CDP 1-04-014, two 40 ft. x 40 ft. wide, 40 ft. deep coffer dams, fully sealed against fish entrapment, including placement of an approximately 12-ft.-wide band of rip-rap around the perimeter of each coffer dam. Total streambed area occupied by the coffer dams and rip-rap equals approximately 8,200 square feet; and (*staff recommends* ***approval with special conditions***);

2) after-the-fact and proposed work within the Van Duzen River channel beyond the seasonal restriction of June 1 (for dry gravel bar) or June 15 (wetted channel) through October 15 (as required by Special Condition 16 of CDP 1-04-014); and (*staff recommends* ***denial***);

3) after-the-fact and proposed work outside of the Ordinary High Water throughout the year, including the construction of Pier 4, Abutment 5 and Abutment 1, fill for bridge approaches, grading aggregate base, paving, and striping; and (*staff recommends* ***approval with special conditions***);

4) after-the-fact and proposed 2006 dry construction season replacement of previously authorized temporary low-flow water crossing design that called for use of a flatcar bridge, with alternate design; and (*staff recommends* ***denial of after-the-fact request and approval with special conditions of the 2006 dry construction season request***);

5) after-the-fact and proposed 2006 dry construction season of multiple vehicle and equipment crossings of the wetted channel multiple times during construction and removal of the temporary bridge; and (*staff recommends* ***denial***);

6) after-the-fact and proposed 2006 dry construction season approval to deploy water bladder(s) to isolate coffer dam work area(s) and control sediment discharge if low-flow river channel intersects either coffer dam construction area; and (*staff recommends* ***denial of the after-the-fact request and approval with special conditions of the 2006 dry construction season*** *request*);

7) after-the-fact approval to install for temporary erosion control approximately 150 to 200 linear-foot section of rip-rap, to top of the affection section of the north bank of the Van Duzen River, downslope from the coffer dam excavation for new Pier 4, consisting of approximately 588 cubic yards of ¼-ton rock and 388 cubic yards of light rock, planted with willow cuttings, and to permanently retain the revetment. (*staff recommends* ***approval of the after-the-fact request for temporary slope erosion control during construction*** *and* ***denial*** *of the request to retain the revetment* ***as a permanent structure***).

8. Fueling.

Caltrans seeks authorization to deploy fueling on the gravel bar for less mobile equipment that is difficult to move to an upland fueling location, with Best Management Practices required by the Regional Water Quality Control Board in place, and utilizing a fuel supplier certified by the Department of Fish and Game Office of Spill Prevention and Response. Specific requirements for certified re-fueling operations include minimum two-person crew to staff both the pump valve and the nozzle, ensuring immediate shut-down if spill occurs, and placement of absorbent containment blankets under the fuel tank spout; (*Staff recommends**: conditional approval of this component of revised amendment request with further condition language requiring implementation of the protective measures proposed and the demonstration of revised Regional Water Quality Control Board and California Department of Fish and Game approvals that reflect similar authorizations.)***

9. Excavate coffer dam #3 and stockpile material on gravel bar.

Caltrans proposes to excavate Coffer Dam #3 (northerly-most of the two coffer dams that were installed within the river channel during 2005) during the 2006 in-stream work season. Caltrans estimates that approximately 1,500 cubic yards of material would be excavated, with 500 cubic yards temporarily stored upland for use in final abutment construction and 1,000 cubic yards to be stored temporarily on the adjacent gravel bar within the existing right-of-way, during the 2006 dry season only. Caltrans proposes that if the material cannot be redeposited into the completed Coffer Dam #3 cavity prior to October 15, 2006 end-of-season, the material would be relocated outside of the river channel and temporarily stored in accordance with all sediment-control Best Management Practices . Caltrans further proposes measures to ensure that the stored material on the gravel bar will be easily distinguished from the native gravels when the material is re-collected for final disposal in the cavity left by the coffer dam removal: these measures include marking the surface through deployment of markers designed for this purpose. After the material is removed, silt fences would remain in place while the gravel bar is watered down to ensure that surface sediments sink below the gravel surface; *(Staff recommends: **approval of this component of the revised amendment request subject to all applicable special conditions protective of water quality, and applicable to disposal requirements for construction-generated debris.)***

10. Temporary access to river channel, temporary bridge

Caltrans proposes to a combination of additional measures to access the stream channel and to install the temporary crossing(s), including placement of clean-washed gravel on the northern end of the stream channel, removal of wetland vegetation on the streambank adjacent to the 2005 access road to the channel (the road previously used during the 2005 season may be unavailable until river waters recede later in the 2006 low-flow season due to the present depth of the stream channel immediately south of the terminus of the 2005 access road), and re-grading of gravel from the emergent dry gravel bar south of the channel, in a combination of these components as Caltrans

deems necessary to support the placement of k-rail abutments for the support and elevation of the deck of the temporary bridge. Caltrans proposes to deploy a water bladder to prevent sediment discharge from leaving the installation area and contaminating down gradient waters. Caltrans also proposes to "spook" fish away to avoid adverse impacts to species (such as juvenile steelhead trout) that may be present during the low-flow construction season. Finally, Caltrans proposes to mitigate the removal of the vegetation by planting willow cuttings at the foot of the slope at the end of the season or in another nearby location – unspecified. *(Staff recommends:* ***conditional approval of most of this part of Caltrans' revised amendment request. However, staff recommends denial of the removal of wetland vegetation because the removal could be avoided by allowing the waters of the Van Duzen to recede sufficiently to utilize the existing road alignment utilized in 2005. Keeping the vegetation that remains on the northern bank at the downstream end of the revetment placed in 2005 would limit further disturbance and de-stabilization of the streambank.)***

B. APPROVAL FINDINGS AND DECLARATIONS

The findings in this section apply only to that portion of the proposed project that is described in Part 1 of the Commission's resolution on this permit application, which portion is therefore being conditionally approved.

Eight components of the permittee's amendment request are recommended for approval, with conditions:

(1) Retention of coffer dams 2 and 3 with riprap placed around the perimeter of each, for the period of October 15, 2005 through June 15, 2006, and including the balance of the dry construction season June 15, 2006 through October 15, 2006 (by Special Condition 20 the Executive Director may approve further retention of either or both coffer dams and surrounding riprap through October 15, 2007 if additional time is needed to complete project construction and removal of the coffer dams and rock).

(2) Work outside of the Ordinary High Water throughout the year, including the construction of Pier 4, Abutment 5, Abutment 1, fill for bridge approaches, grading aggregate base, paving, and striping. (by Special Condition 27 the permittee must obtain all necessary permits or other authorizations, or written evidence that these are not required, for off-site rainy season de-watering, if necessary, including installation and use of associated pumping infrastructure and sediment basin. Such rainy season de-watering may not be undertaken in a manner that encroaches into sensitive habitat areas such as wetlands or riparian corridors, or their buffers, and must be conducted in a manner that does not adversely affect sensitive species or create adverse impacts to visual resources or result in a reduction of lands available for agriculture; in addition, the de-watering must be undertaken in a manner that prevents contaminated effluent from entering coastal waters, either directly or indirectly. All Best Management Practices applicable to the subject project would apply also to these activities, such that no release of sediment or other contaminants to coastal waters shall occur.

(3) Construct and remove new temporary bridge utilizing an alternative design (other than at flatcar bridge, as previously approved) during the June 15 – October 15, 2006 dry season construction window. By Special Condition 21, the permittee must develop a specific proposal for the temporary bridge design, based on emergent gravel bar conditions visible after June 1, 2006. The design must span the live river channel to the maximum extent feasible, or if fully spanning the channel without encroachment into the wetted stream is not feasible, the permittee must develop a specific plan to install the bridge with minimal disturbance to the stream, including minimal crossings of the stream with equipment, in consultation with the Department of Fish and Game, NOAA National Marine Fisheries, Regional Water Quality Control Board, U.S. Fish & Wildlife Service, and Army Corps of Engineers, and subject to the Executive Director's approval. The plan must minimize encroachment into the channel, ensure that the channel will not block fish passage, prevent increases in turbidity in the river, and utilize clean, washed gravel of spawning size. Special Condition 28 requires the permittee to monitor and test upstream and downstream water quality, particularly to measure turbidity levels, during any activity that encroaches into the wetted channel of the Van Duzen River, and requires that any materials placed in the river must be comprised only of washed, spawning sized gravel.

(4) Deploy and remove water bladders during the June 15 – October 15, 2006 dry season construction window as necessary to control sediment during any operations that may affect the water quality of the Van Duzen River (by Special Condition 22, deployment and removal of water bladders must be implemented in consultation with NOAA National Marine Fisheries and the Department of Fish and Game, and under the continuous monitoring of a biologist with fisheries expertise, qualified and permitted to rescue and release trapped salmonids within the areas sequestered by the water bladders; further, if pumping of water within the water bladder(s) is initiated, pumping equipment shall be screened and the force of the pumps modulated, to avoid impingement of fish. No pumping may be undertaken without the continuous presence of the biological monitor specified above, who shall direct installation and removal of water bladder(s) in a manner that provides for immediate rescue and release of any trapped fish).

(5) Temporary placement of riprap on approximately 150—200 linear feet of the north bank of the Van Duzen River immediately downgradient of the excavation for coffer dam #4, to top of bank, until completion of construction. (By Special Condition 23, the permittee may retain the rip-rap through the end of construction to control erosion, but shall submit a proposal to restore the slope thereafter).

(6) deploy fueling on the gravel bar for less mobile equipment that is difficult to move to an upland fueling location, with Best Management Practices required by the Regional Water Quality Control Board in place, and utilizing a fuel supplier certified by the Department of Fish and Game Office of Spill Prevention and Response. Specific requirements for certified re-fueling operations include minimum two-person crew to

staff both the pump valve and the nozzle, ensuring immediate shut-down if spill occurs, and placement of absorbent containment blankets under the fuel tank spout;

(7) excavate Coffer Dam #3 (northerly-most of the two coffer dams that were installed within the river channel during 2005) during the 2006 in-stream work season, including removal of approximately 1,500 cubic yards of material, with 1,000 cubic yards to be temporarily stored on the adjacent gravel bar for return to the cavity after removal of the coffer dam during 2006 construction season (or removal to an authorized upland storage area if the coffer dam cannot be removed until 2007), with 500 cubic yards of the excavated material temporarily stored upland for use in final abutment construction. All sediment-control Best Management Practices would be applicable to the stored material and Caltrans further proposes measures to ensure that the stored material on the gravel bar will be easily distinguished from the native gravels when the material is re-collected for final disposal in the cavity left by the coffer dam removal: these measures include marking the surface through deployment of markers designed for this purpose. After the material is removed, silt fences would remain in place while the gravel bar is watered down to ensure that surface sediments sink below the gravel surface;

(8) place clean-washed gravel on the northern end of the stream channel to construct abutment support pad for temporary crossing, utilizing water bladder to prevent escape of sediment downstream, and re-grade portion of the dry gravel bar to construct abutment support pad on south side of temporary crossing, utilizing water bladder to prevent escape of sediment downstream, and "spook" fish away under supervision of qualified biologist prior to any intrusion into the wetted channel by vehicles or equipment necessary to construct/remove the seasonal crossing.

1. Wetland Fill; Water Quality; Environmentally Sensitive Habitat

Section 30106 of the Coastal Act defines development, in part, as the "*removing, dredging, mining, or extraction of any materials.*" Section 30108.2 defines fill as "*the placement of earth or other substance or material in a submerged area.*" The proposed amendment seeks authorization for the extended retention within the Van Duzen River channel of structures (coffer dams and rip-rap) placed in the channel during construction in 2005, as well as other development, including the seasonal construction of a temporary bridge which may encroach into the wetted stream unlike the previously approved bridge, and placement of one or more water bladders within the waters of the Van Duzen River. Therefore the proposed amendment constitutes dredging and filling in wetlands.

Section 30233 of the Coastal Act provides as follows, in pertinent 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:

...

(5) 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.

Sections 30230 and 30231 of the Coastal Act address the protection of coastal water quality and marine resources in conjunction with development and other land use activities.

Section 30230 states:

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

Section 30231 states:

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

Section 30240 of the Coastal Act addresses the protection of sensitive habitat and species, and states in pertinent part:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

The above policies set forth a number of different limitations on what development projects may be allowed in coastal wetlands, sensitive habitat areas, and coastal

waters, or that may affect sensitive species. For analysis purposes, the limitations can be grouped into four general categories or tests. These tests are:

- that the purpose of the filling, diking, or dredging is for one of the eight uses allowed under Section 30233;
- that the project has no feasible less environmentally damaging alternative;
- that feasible mitigation measures have been provided to minimize adverse environmental effects; and
- that the biological productivity and functional capacity of the habitat shall be maintained and enhanced where feasible.

a. Permissible Use for Fill

The first test for a proposed wetland fill/dredging project is whether the fill/dredging is for one of the eight allowable uses under Section 30233(a). The relevant category of use listed under Section 30233(a) that relates to the proposed bridge replacement is subcategory (5), stated as follows:

(5) 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.

In order for the Commission to find that the fill associated with the proposed project is for a use allowable under Section 30233(a)(5), i.e., is for an incidental public purpose, the Commission must first evaluate the purpose of the project. In findings of approval for Coastal Development Permit 1-04-014 for the underlying bridge project, the Commission previously determined that the replacement of the existing southbound bridge on Highway 101 serves a public service purpose consistent with Section 30233(a)(5). The coffer dams were installed as part of the Commission's previous approval for the construction of the replacement bridge. Although under that approval the coffer dams were required to be removed by October 15, 2005, as previously noted this was not achieved and the Executive Director authorized, by emergency permit, retention of the coffer dams, surrounded by rip-rap, within the river channel during the 2005-2006 rainy season. The coffer dams and rip-rap are associated with an overall bridge replacement project that the Commission has already determined to serve a public service purpose pursuant to Section 30233(a)(5); therefore the coffer dams, and the rip-rap installed to prevent formation of scour pools around the coffer dams, are consistent with the public service purpose section of 30233(a)(5) of the Coastal Act.

The Commission must next determine if the fill is "incidental." The Commission has in the past determined that the fill for certain highway safety improvement projects that did not increase vehicular capacity was for "incidental" public service purposes under Section 30233(a)(5). At the time the Commission approved the underlying permit here proposed to be amended, i.e. CDP 1-04-014, the Commission determined that the

bridge replacement is a public safety project that is incidental to "something else as primary," that is, the transportation service provided by the existing highway. The amended permit approval the applicant seeks is for additional or modified development activities directly associated with completing the construction of the previously approved replacement project. As such, the amendment components listed as items 1—5 in this section (2006 temporary bridge and water bladder deployment & removal, all-season construction above the ordinary high water mark, and temporary placement of riprap to control north river bank erosion during construction), are for an incidental public purpose within the meaning of Section 30233(a)(5).

Therefore, the Commission finds that for the reasons discussed above, the proposed fill in coastal wetlands for the proposed project constitutes an incidental public service, and thus is an allowable use pursuant to Section 30233(a)(5) of the Coastal Act.

b. Alternatives

Alternative Analysis

The second test of Section 30233(a) is whether there are feasible less environmentally damaging alternatives to the proposed project. Coastal Act Section 30108 defines "feasible" as follows:

> *'Feasible' means capable of being accomplished in a successful manner within a reasonable time, taking into account economic, environmental, social, and technological factors.'*

Alternative to Retaining Coffer Dams #2 and #3 during the 2005-2006 rainy season Removal of Coffer Dams by October 15, 2005 as Previously Required

On October 12, 2005 the permittee requested that the Executive Director authorize an extension of the dry season work window that was to end on Saturday, October 15, 2005. The Executive Director did not authorize the extension (which the permittee requested be indefinite and based primarily on continuing weather forecasts at that time); however the permittee provided evidence to the Executive Director's satisfaction, and the Executive Director authorized an emergency coastal development approval on October 14, 2006 based on this evidence, that retaining two coffer dams installed within the Van Duzen River channel over the impending rainy season would be necessary, and likely would impose less impact on coastal resources than removing the coffer dam and reinstalling it the following June (coffer dam #3), and that coffer dam #2 could not be removed regardless, due to the incomplete status of Pier #2 construction within the protective coffer dam (the partial pier could not withstand river forces without potential damage).

If the Executive Director had not authorized the retention of the coffer dams, there would likely have been damage to Pier 2 due to impact by river-carried debris or the force of the river waters on the incomplete construction. Moreover, both coffer dams

would have been re-installed during June of 2006, re-imposing the risk of sediment discharge adversely affecting sensitive species and coastal waters.

The Commission recognizes that emergency authorization to retain the coffer dams and rip-rap around the dams over the rainy season does constitute permanent, after-the-fact authorization of the methods of installation of the coffer dams deployed by the permittee's contractor. Reports of the biological monitors and the Caltrans construction liaison that the coffer dams were installed by methods that were not authorized in the approved permit are contained in the notes and records of the biological monitor, the Caltrans construction liaison, and the Caltrans resident engineer(s). These documents were submitted on request by Caltrans and are on file in the Commission's North Coast District Office. Investigation of these matters by the Commission's Enforcement Unit continues.

Alternative to work outside the Ordinary High Water throughout the year and Temporary use of Rock Slope Protection to protect disturbed north river bank adjacent to excavated construction:

Alternative is to restrict such work to the June 15—October 15 dry season:

The proposed activities (construction of Abutments 1, 5, and Pier 4 above the streambank or high water mark) do not pose a threat to water quality of the Van Duzen River if Best Management Practices (BMPs) are continuously and properly deployed. Commission staff visited the site during the past rainy season and determined that although there was ongoing work, the permittee had required the implementation of Best Management Practices including placement and maintenance of silt fences and other measures to prevent discharge of sediment in the active work areas or from the temporary graded cuttings storage piles, within the approved project area.

Caltrans has explained that the excavation of the coffer dam for Pier #4 destabilized the north river bank downgradient of the excavation site, and removal of the existing bridge may also have exacerbated the soil disturbance. Caltrans determined that no approved BMPs were sufficient to control the erosion that would have resulted during the rainy season. The consulting Caltrans hydrologist recommended placement of a rock slope protection (RSP) revetment along this stretch of the river, which the applicant placed without the benefit of prior permit approval. The applicant's amendment application seeks to keep the revetment both as an erosion control measure, and permanently, as further discussed in Section C (denial findings) below.

Alternative to New Design of Temporary Bridge Crossing 2006 season: Retain Flatcar Design as approved:

The applicant seeks an amendment to authorize installation of some temporary bridge crossing to be determined in the field by the permittee's contractor, other than the flatcar design previously proposed and authorized in CDP 1-04-014. The applicant indicates that the configuration of the Van Duzen River low flow channel as the

conditions of the gravel bar become more apparent in June of 2006 will likely suggest a different design that would more fully span the low flow channel a better option than the more limiting flatcar-style crossing originally proposed by Caltrans. The applicant proposes, however, to encroach into the river channel and potentially place within the channel a variety of potential structures at the contractor's discretion, to facilitate construction of the temporary bridge.

The applicant also seeks authorization to undertake multiple heavy equipment crossings of the live river channel to install and remove the temporary bridge during the 2006 season commencing June 15, 2006, as part of the amendment proposal to revise the temporary bridge crossing design. The Biological Opinion issued by NOAA National Marine Fisheries Service limits such crossings to a maximum of two, one to install and one to remove, the temporary bridge, as does the Coastal Development Permit. This is addressed further in Special Condition 21, subparagraph B.

Alternative to Deployment and Removal of Water Bladders; No Use of Water Bladders:

Water bladders are inflatable barriers that may be placed in-water to contain or exclude particular areas. An area could be contained by water bladders and de-watered to provide a dry work area, or disturbed sediment could be contained within the waters enclosed by the bladders without release of sediment to the greater riverine environment. The deployment of water bladders was not proposed in the original application or proposed as a Best Management Practice by the permittee. However, during significant sediment discharges to the Van Duzen River that resulted during certain activities undertaken during 2005, water bladders were installed by the permittee as a "band-aid" measure, with some difficulty, after significant sediment releases had already occurred. (The Commission evaluates the after-the-fact installation of these water bladders in Section C, below.) Planned installation and removal of water bladders during the forthcoming 2006 dry construction season, properly executed by experienced personnel under the supervision of qualified biological monitor, would ensure better control of sediment and the resultant protection of coastal waters.

The alternative of not using water bladders would likely result in the avoidable release of sediment to the Van Duzen River system during the removal of the coffer dams and rock-slope-protection placed around the dams in October of 2005. Depending on the configurations of the dry gravel bars in June of 2006, water bladders may also be deployed to prevent sediment release into the Van Duzen if temporary bridge installation and removal encroaches at all into the river waters.

No Project Alternative

As stated previously, the five components of the permittee's amendment request considered for approval in this Section B, address project field conditions or

circumstances that have arisen during the previous construction season on a project that was previously approved by the Commission pursuant to CDP 1-04-014.
The "No Project Alternative," in the context of the proposed amendment components addressed in this section, would not address field conditions, provide protection of coastal water quality, or avoid additional impacts to coastal resources that would otherwise be anticipated if the amendment request were fully denied ("no project").

Therefore, the "no project" alternative would not meet the project goal of completing construction of the previously approved safety improvements of Highway 101 at this location, in the manner most protective of coastal resources.

Conclusion

Therefore, the Commission finds that the no-project alternative is not a feasible less environmentally damaging alternative to the proposed amendment, and that no other feasible, less environmentally damaging alternatives exist to the portion of the amended development herein recommended for approval if constructed in accordance with applicable special conditions imposed herein.

c. 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. Depending on the manner in which the proposed bridge replacement is undertaken, as amended by the five components of the applicant's proposal addressed in this section, the portions of the proposed project to be conducted below the ordinary high water mark could have potential significant adverse effects to (1) wetland (riverine) habitat, (2) anadromous fish, and (3) water quality of the Van Duzen River. The potential impacts and their mitigation are discussed in the following four sections:

(1) Wetland Habitat

Several components of the applicant's amendment proposal include work within, or impacts to, areas within or immediately adjacent to a riverine wetland. Riverine wetlands play an important role in a river ecosystem and provide, among other things, areas of lower velocity during flooding periods, which is critical to the survival of fish species, especially juvenile salmon. Because riverine wetlands serve as migratory corridors, connecting upland with coastal and other aquatic habitat, species richness tends to be higher than that of other terrestrial habitat.

Construction activities within a riverine wetland can potentially damage wetland habitat through a number of mechanisms which affect wetland hydrology and/or hydric soils and/or hydrophytic vegetation. Wetland hydrology can be adversely impacted through soil compaction, such as that resulting from operating heavy equipment in wetland areas, which can alter the physical functions of the wetlands. Additionally, direct

impact to wetlands from heavy equipment can adversely impact wetland vegetation, particularly during the wet season.

The applicant stated in the application for CDP 1-04-014 that disturbance to wetland habitat within the riverbed area would be limited mostly to operation of equipment within the relatively dry gravel bar area, and to temporary fill due to localized grading of gravels for sediment control, dewatering, and diversion of streamflow from construction areas. The permittee additionally stated that no riparian or riparian buffer vegetation would be removed, and that the project would result in a net reduction of wetland fill (fewer piers in the channel). The permittee noted that in addition to other representations of mitigation commitments set forth in the permittee's environmental document, the California Department of Fish and Game approved a Streambed Alteration Agreement for the proposed project, which contained specific measures to ensure that the impacts of the proposed project on riverine wetland habitat would be minimized. These measures included prevention of concrete, truck washings, fuel, debris, or other contaminants or wastes from entering the wetland environment. In addition to the CDFG requirements, other protective requirements imposed by federal agencies (NMFS, U.S. Fish & Wildlife Service, and RWQCB) were also incorporated into Special Conditions of CDP 1-04-014 by the Commission.

The applicant determined during project activities in 2005, that riverbank disturbance due to excavation destabilized the north bank adjacent to coffer dam #4 (for Pier #4) so significantly that substantial erosion and sediment release into the river would occur if the bank were not fully stabilized with rip-rap. Approximately 150 to 200 linear feet of rip-rap, extending the entire slope of the river bank, was placed without benefit of an amendment to the coastal development permit and is hereby requested after-the-fact for slope protection. The Commission acknowledges that while the permittee did not evaluate a range of alternatives for controlling erosion at this location prior to placing the rock, removing the rip-rap now, without waiting until construction is complete, would likely destabilize the slope further. Special Condition 19 authorizes the temporary placement of the rip-rap for short-term erosion control and requires submittal of a plan to remove the rip-rap and restore the slope within sixty (60) days after Commission approval of the CDP 1-04-014-A1.

Special Condition 20 requires the permittee to submit evidence of associated amendments to the existing or required permits or authorizations of other state and federal agencies with authority over the proposed development in the Van Duzen River, or evidence that no additional review or authorization is required. Special Condition 17 requires the permittee to re-open, and eventually remove the coffer dams and rip-rap proposed by the permittee in followup to Emergency CDP 1-05-052-G, in a manner that restores the riverine habitat to pre-construction condition, and requires the permittee to prepare and implement a 2006 temporary bridge installation plan that spans the Van Duzen low flow channel <u>or</u>, subject to the Executive Director's review and approval, proposes an alternative method of securing access to Coffer Dams 2 & 3 during 2006 if river conditions prevent fully spanning the low flow channel. If constructed in

accordance with the requirements of these special conditions, the additional development approved herein will be undertaken in a manner protective of wetlands.

Therefore, for the reasons set forth above, the Commission finds that, as conditioned, the portion of the amended development recommended herein for approval will minimize significant adverse impacts on riverine wetland habitat consistent with Section 30233 of the Coastal Act.

(2) Anadromous Fish Species

According to the National Marine Fisheries Service, the Van Duzen River estuary functions primarily as a migratory corridor and as juvenile rearing habitat (with limited function as spawning habitat) for Chinook salmon, Coho salmon, and steelhead trout, which are federally listed threatened species. Coho salmon were additionally listed under the California Endangered Species Act in 2004.

The proposed activities that are the subject of this amendment could adversely impact sensitive fish species by increasing water turbidity through grading, erosion of disturbed streambanks, rainfall runoff from disturbed upgradient construction areas, temporary bridge installation, coffer dam re-opening and removal, deployment of water bladders (if not installed correctly), equipment operation, and release of disturbed sediments and/or contaminants into coastal waters. Deployment of water bladders may trap salmonids, increasing predation of juvenile fish, and inadequately sealed coffer dams could entrap salmonids when rising river waters flood the coffer dams left in the channel during the rainy season.

According to NOAA National Marine Fisheries Service, suspended sediments can make salmonid prey and predator detection difficult, reduce feeding opportunities, and induce behavioral modifications. Suspended sediments may also cause respiratory problems for fish, smother incubating eggs or juvenile fish, and reduce habitat by reducing the volume of interstitial spaces within substrate. Additionally, direct impact and/or vibrations resulting from driving the piers or other materials into the aquatic environment could be injurious to fish.

The applicant proposed in the application for CDP 1-04-014, to avoid construction in the active, low flow channel, either by waiting until the channel is dry, or by redirecting channel waters where even low flow requires this, and by using other dewatering techniques. The permittee failed to do all of these during the 2005 dry season (June 15-October 15) according to the records of the permittee's biological monitors and staff, investigators from RWQCB, NOAA National Marine Fisheries Service, CDFG, and Commission staff.

However, the applicant requests in the subject amendment application, authorization to install a new design of the annual temporary bridge required to span the channel. A different design would potentially require some intrusion into the wetted channel, and additional crossings with equipment (more than presently authorized). Special Condition 17 requires the permittee to fully span the low flow channel not earlier than

June 15, 2006 but provides for Executive Director review and approval of an alternate plan for temporary construction access if river conditions prove this option infeasible. Special Condition 20 addresses requirements for the re-opening and eventual removal of the coffer dams and rip-rap installed within the river channel during 2005, in a manner protective of water quality and fisheries. Special Condition 20 also requires the permittee to verify that the additional development proposed herein has been reviewed for any additional permits or authorizations that may be required by applicable state and federal agencies to ensure that any applicable additional measures protective of sensitive species are identified and required by these agencies. In addition, Special Condition 18 authorizes deployment of water bladders during the 2006 dry construction season (June 15—October 15) provided that the installation is performed by qualified parties under the continuous supervision of a monitoring biologist certified to perform salmonid rescue and release. Special Condition 28 additionally requires monitoring of sediment levels when work is undertaken in the channels, to ensure that water quality is protected. Sediment pollution is a significant detriment to juvenile salmonids that are known to rear in the low flow channels in the project area during the dry season construction period. Therefore, Special Condition 28, if fully implemented, will ensure that sediment pollution is adequately monitored, and that the biological monitor remains appraised of the results.

Measures discussed below to protect water quality will also benefit fish habitat within the river. Therefore, the Commission finds that, as conditioned, the portion of the amended development recommended herein for approval will minimize significant adverse effects on anadromous fish and fish habitat consistent with Section 30233 of the Coastal Act.

(3) Water Quality

Due to the project's location adjacent to and within the Van Duzen River, the proposed amendment has the potential to adversely impact water quality within the riverine environment. The potential water quality impacts from the proposed project include two general categories: (1) increased turbidity in riverine waters during re-opening and removal of cofferdams and during excavation and recovery of rip-rap temporarily placed around the coffer dams in the river, pursuant to Emergency CDP 1-5-052-G, (2) increased turbidity due to runoff and erosion from disturbed river bank adjacent to Coffer Dam #4 excavation, (3) installation and removal of temporary bridge for June 15-October 15, 2006 construction season, (4) Improper deployment of water bladders that results in increased turbidity within the river waters, and (5) disturbance of soil due to construction activities undertaken above the ordinary high water mark outside of the dry construction season, as proposed.

The permittee is responsible for the implementation of the final Stormwater Pollution Prevention Plan that addresses Best Management Practices for control of erosion in all disturbed areas of the site. Best Management Practices (deployment of sediment barriers in excavated areas, etc.) have generally prevented erosion in upper elevation areas of the project site, even during the rainy season, supporting the applicant's

request to complete activities in those areas throughout the year to facilitate project completion. Special Conditions 17 – 20, protective of wetlands and anadromous fish as discussed above, would also prevent the increased release of sediment into the river waters if the proposed amended development is undertaken in compliance with the requirements of these special conditions. Therefore, the Commission finds that as conditioned, the portion of the amended development recommended herein for approval will minimize significant adverse effects on water quality as required by Coastal Act Sections 30230 and 30231.

Consistency with Section 30412 of the Coastal Act

Coastal Act Section 30412 states in pertinent part:

> (a) In addition to Section 13142.5 of the Water Code, this section shall apply to the commission and the State Water Resources Control Board and the California regional water quality control boards.
> (b) The State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality. The State Water Resources Control Board has primary responsibility for the administration of water rights pursuant to applicable law. The commission shall assure that proposed development and local coastal programs shall not frustrate this section. The commission shall not, except as provided in subdivision (c), modify, adopt conditions, or take any action in conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality or the administration of water rights.
>
> Except as provided in this section, nothing herein shall be interpreted in any way either as prohibiting or limiting the commission, local government, or port governing body from exercising the regulatory controls over development pursuant to this division in a manner necessary to carry out this division.

Section 30412 prevents the Commission from modifying, adopting conditions, or taking any action in conflict with any determination by the State Water Resources Control Board or any California Regional Water Quality Control Board in matters relating to water quality.

Staff consulted with the Regional Water Quality Control Board (RWQCB) about permitting requirements and potential impacts resulting from the proposed project. The applicant has received approval from the Regional Water Quality Control Board, including a Clean Water Act Section 401 Certification (Exhibit 7) and a National Pollution Discharge Elimination System (NPDES) General Permit for the bridge replacement project. In addition, the project is subject to a general State Wide Storm Water Permit issued to CALTRANS for all of its construction projects. The specific requirements of these permits and approvals have been incorporated by reference into the applicable special conditions previously imposed by the Commission on CDP 1-04-

014, and which remain in full force and effect. Additionally, Special Condition 20 requires the permittee to provide evidence of additional review and authorization of the amendment project by the RWQCB and other applicable state and federal agencies, or to submit evidence that no further review is required.

The Commission finds that requiring the Special Conditions discussed above to minimize adverse impacts to water quality does not conflict with any determination by the State Water Resources Control Board or any California Regional Water Quality Control Board in matters relating to water quality as required by Section 30412 of the Coastal Act. In acting on the project, the Regional Water Quality Control Board determined that the project as proposed could have significant water quality impacts and as a result, imposed various water quality control requirements in its permit approvals for the project to address the water quality impacts. The Commission's action to impose water quality conditions does not conflict with the Regional Board's determinations on water quality as the special conditions imposed by the Commission to address water quality reiterate mitigation measures proposed by the applicant and/or would help ensure that the water quality standards established by the Regional Board for the project are implemented and realized through the incorporation of specific water quality control measures.

Conclusion

For all of the reasons set forth above, the Commission thus finds that the portion of the proposed amendment herein recommended for approval is an allowable use, that there is no feasible less environmentally damaging alternative, that feasible mitigation is required 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 against degradation as the result of the proposed project, provided the project is constructed in full accordance with the approved project description, including amendments thereto authorized herein, and in accordance with all regular and special conditions imposed by the Commission. Therefore, the Commission finds that the portion of the amended development recommended herein for approval, as conditioned and discussed in this Section of the Commission's findings, is consistent with Sections 30230, 30231, and 30233 of the Coastal Act.

d. Protection of Adjacent Environmentally Sensitive Habitat Area (ESHA)

Section 30240 of the Coastal Act states:

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

would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

As stated previously, the Van Duzen River provides habitat for several state and federally listed salmonid species. The applicant proposes, through the proposed amendment to CDP 1-04-014, to undertake previously permitted development within the Van Duzen River and environs with some changes to the project that may adversely affect salmonid species or habitat unless undertaken in accordance with the Special Conditions 17-20 imposed herein by the Commission. These conditions have been discussed above, and would protect wetland habitat, salmonids, and water quality. If the amended project is undertaken in accordance with these Special Conditions (and with all previously imposed Special Conditions 1-16, which continue to apply to the project), the project as conditioned will not significantly degrade ESHA or habitat areas adjacent to ESHA, and will be compatible with the continued use of the habitat areas in and adjacent to project operations. Therefore, the Commission finds that the portion of the amended development recommended herein for approval, as conditioned, is consistent with Section 30240 of the Coastal Act.

2. Alleged Violation.

During the 2005 construction season the permittee implemented a number of activities associated with the approved project in a manner that was either not previously authorized (after-the-fact) or was undertaken in a manner inconsistent with the standard and special conditions imposed by the Commission in approving CDP 1-04-014. The permittee's amendment application includes after-the-fact authorization for some of these activities, follow-up application for retention of two coffer dams and rip-rap in the river channel over the rainy season, and some proposed development requests. The Commission's Enforcement Unit is actively investigating development that may have been undertaken either without approval, or in a manner that did not comply with the conditions of the coastal development permit.

Other state and federal agencies have also undertaken separate investigations of these violations. These include California Department of Fish and Game, Regional Water Quality Control Board, and NOAA National Marine Fisheries Service. Violations of applicable permits or requirements were substantiated by these investigations. As noted, the Commission's Enforcement Unit has not concluded its own investigation at this time.

Although some of the development proposed by the permittee and considered by the Commission under these findings for approval occurred without required authorizations, consideration of this permit application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Approval of the amended permit does not constitute a waiver of any legal action with regard to the alleged violation, nor does it constitute an admission as to the legality of any development undertaken on the subject site without a coastal permit. Special Condition No. 21 ensures that this amended

permit vests upon issuance, and that it will not expire, as some development has already commenced.

3. California Environmental Quality Act (CEQA)

Section 13096 of the Commission's Code of 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, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are any feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full, including all associated environmental review documentation and related technical evaluations incorporated-by-reference into this staff report. Those findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As discussed above, the proposed project has been conditioned to be consistent with the policies of the Coastal Act. As specifically discussed in these above findings, which are hereby incorporated by reference, 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 portion of the amended development recommended herein for approval, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act and to conform to CEQA.

C. DENIAL FINDINGS AND DECLARATIONS

The findings in this section apply only to that portion of the proposed development that is described in Part 2 of the Commission's resolution on this permit amendment application, which portion is hereby being denied.

1. Wetlands, Water Quality, Environmentally Sensitive Species & Habitat

As analyzed in Section B above, the overall project to replace a highway bridge on a major transportation artery, for safety reasons, has been determined to be an incidental public purpose for which fill of wetlands may be authorized. Section 30233 of the Coastal Act also requires an alternatives analysis and a determination that maximum feasible mitigation has been incorporated into the proposed project. Coastal Act Sections 30230 and 30231 also require that marine resources shall be maintained, enhanced and where feasible restored, and that uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters

and that will maintain healthy populations of all species of marine organisms..., and that the biological productivity and quality of coastal waters, including streams and wetlands, shall be maintained....through ...among other means, controlling runoff, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams. The Commission has considered the components of the amendment that are denied herein and finds that feasible alternatives and mitigation measures exist that would lessen the significant adverse impacts of the proposed permit amendment, and that would better protect the productivity and quality of coastal waters, including streams and wetlands, and more fully preserve and maintain natural vegetation buffer areas that protect the riparian habitat of the Van Duzen River and minimize the alteration of the river, in accordance with the requirements of Sections 30230 and 30231.

After-the-fact installation of temporary bridge, 2005 dry season construction

The portions of the amendment proposal that the Commission is denying include after-the-fact approval for a temporary bridge installation that was not undertaken in accordance with the approved design. The permittee installed the bridge in an unauthorized manner that included excavation of the live stream channel and placement of unauthorized fill within the channel (only washed gravel of spawning size, placed in concert with sediment control measures, could have been acceptable), in a manner that narrowed the channel (the approved project description called for fully spanning the low flow channel), and caused the prolonged and repeated release of substantial amounts of sediment pollution into the waters of the Van Duzen River (Regional Water Quality Control Board investigative report, NOAA National Marine Fisheries investigative report, statements of Caltrans staff and contract biological monitors.

Alternatively, the permittee could have undertaken the installation of the temporary bridge in accordance with the approved permit and applicable conditions, or could have controlled sediment releases through a variety of Best Management Practices and approved measures that were available but were not implemented.

The Commission finds, therefore, that there is at least one feasible less environmentally damaging alternative to the applicant's after-the-fact request to amend the temporary bridge component (2005 installation) of the previously approved project.

Multiple in-water stream crossings with heavy equipment

The applicant also seeks after-the-fact approval for multiple stream crossings of the live waters of the Van Duzen during 2005. The crossings were reportedly undertaken for the installation and removal of the temporary bridge, and also for the convenience of driving tracked vehicles without damaging the plywood decking on the temporary bridge after the seasonal bridge was constructed.

Commission staff determined that heavy equipment was frequently (daily according to the Resident Engineer) driven through the waters of the Van Duzen during the 2005

construction season, and not only for the purpose of installing and removing the temporary bridge. Asked why, the Resident Engineer (on site job supervisor) stated that the contractor discovered that tracked vehicles were "tearing up the plywood decking on the temporary bridge" and decided to drive tracked vehicles through the water to avoid damage to the plywood deck. The Resident Engineer and other Caltrans staff, and the biological monitor, reported to Commission staff that if "the permit did not specifically state that other crossings of the river were forbidden" they concluded that they could undertake live water crossings with heavy equipment.

The alternative of periodically replacing the plywood decking was not implemented, even though the biological monitor reported that state and federally listed fish species were present in the low flow channel through which the equipment was driven.

Therefore, the Commission finds that there is at least one feasible less environmentally damaging alternative to the applicant's after-the-fact request for multiple channel crossings of the Van Duzen River during the 2005 low flow season: the periodic replacement of plywood decking.

After-the-fact and future approval to work in the live stream area and gravel bars outside of the June-October annual season for such work.

The applicant also seeks after-the-fact and future approval to work in the live stream channel area and gravel bars outside of the otherwise applicable (see Special Condition 16) restricted work season in these areas of the river. The authorized season commences June 1 or June 15, depending on location, and ends on October 15 annually. As noted, the permittee's activities have caused numerous substantial, repeated, and unauthorized releases of sediment contamination into the waters of the Van Duzen River. Sediment contamination during otherwise clear-running conditions, in the confined area of the low flow channel, with juvenile anadromous fish species rearing in the stream causes deleterious effects on these species, and combined with the numerous tracked heavy equipment crossings of the river may also have resulted in unauthorized – and avoidable – mortality of state and federally-listed species. An alternative to undertake project activities in a manner consistent with the requirements of the previously approved project description and the conditions imposed by the Commission and other applicable state and federal agencies exists, and would have prevented the impacts of the after-the-fact exceedence of the October 15 deadline in 2005. Further, the permittee's biologists and state and federal agencies confirmed that migrating adult salmonids entered the Van Duzen River soon after the October 15 deadline in 2005, and have pointed out that the restricted season was established to limit the impacts of the project during the most sensitive migration periods.

Therefore, the Commission finds that there is a preferable, and less environmentally damaging alternative to the applicant's proposal: to comply with the existing seasonal restrictions on activities within the Van Duzen River wet channel and gravel bars.

After-the-fact approval for 2005 deployment of water bladders

The applicant seeks after-the-fact approval for the deployment of water bladders within the live river channel in 2005. Water bladders are inflatable structures that can be installed to partition an area of the wetted channel from the rest of the river waters. Proper deployment of water bladders is a technique of limiting sediment discharge under appropriate conditions. However, the permittee only deployed water bladders after substantial sediment had been already been released into the Van Duzen and state and federal investigators were on the project site. The regulatory staff encouraged the permittee to remedy the sediment discharges that were then occurring and recommended the installation of water bladders. The permittee's records indicate that the water bladder installation was not initially undertaken properly, although the biological monitor's reports indicate that eventually the structure was successfully installed. Sediment discharge from active construction areas was successfully controlled after the installation was complete, according to the biological monitors.

Therefore the Commission finds that a feasible, less environmentally damaging alternative to the proposed amendment exists: to timely and proper deploy water bladders to prevent sediment release.

Permanent retention of rip-rap on northern bank of the Van Duzen River

The applicant seeks after-the-fact approval to permanently retain approximately 150 to 200 linear feet of rip-rap placed on top of the north bank of the Van Duzen River, downslope from the excavation for Coffer Dam #4. The Commission's Senior Engineer evaluated the existing rip-rap as placed, in February 2006 (Memorandum, Exhibit 7). In summary, the applicant did not demonstrate the need for permanent streambank hardening at this location. The bridge pier under construction immediately upslope from the subject rip-rap is designed to extend approximately 150 feet below the surface into competent material. Therefore, permanent rip-rap is not needed to protect the completed pier. Even if the need for some form of bank protection at this location could be demonstrated, the staff Senior Engineer noted that a variety of less environmentally damaging alternatives that would incorporate soft solutions exist and should be considered.

Commission staff also noted during the February site visit that a previous abutment from the former bridge that was not excavated and removed by the permittee when that bridge was replaced, has now weathered out and created a "peninsula" just upstream from the subject rip-rap. The old abutment, combined with the recently placed rip-rap, can create scour pockets and end effects that will exacerbate erosion at these points in the future.

Therefore, the Commission finds that one or more less environmentally damaging feasible alternatives to the proposed amendment exists: the use of softer bank stabilization methods instead of complete rip-rap coverage of the stream bank.

Removal of vegetation on northern riverbank

Caltrans seeks authorization to remove an unquantified area of wetland vegetation along a 12-foot-wide corridor that would potentially be cleared to as far as top of bank on the northerly river bank, immediately west of the revetment placed in 2005, to increase access to the riverbed for placement of temporary seasonal bridge crossing.

The Commission finds that there are less environmentally damaging alternatives to this proposal. First, the waters of the Van Duzen River typically recede rapidly during warm weather and low rainfall. Caltrans environmental documents have noted previously in the permit file for this project that the wetted channel of the river is sometimes completely underground in the area of the project during the summer. Thus, it is likely that a waiting period would result in the reduction of flow within the wetted channel sufficient to gain temporary access to the channel without resort to clearing wetland vegetation on the streambank. Leaving the vegetation intact will provide greater streambank stability and reduce the potential for erosion, and will help to soften the end effects that may already be occurring due to the placement of riprap immediately adjacent and upstream of the subject vegetation without benefit of a coastal development permit in November, 2005. The reduced potential for erosion and sediment discharge into the river during the rainy season prevents increased turbidity and degradation of coastal water quality in the Van Duzen River, the Eel River to which the Van Duzen is tributary, and ultimately the Pacific Ocean.

Conclusion: Feasible Alternatives Exist

Under Coastal Act Section 30233, if the evaluation of feasible alternatives demonstrates that less environmentally damaging feasible alternatives to the applicant's proposal exist, the Commission must find that the proposed project is inconsistent with the requirements of Coastal Act Section 30233.

In addition, under Coastal Act Sections 30230 and 30231, the Commission evaluates development proposals to ensure that marine resources shall be maintained, enhanced and where feasible restored, and that uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms..., and that the biological productivity and quality of coastal waters, including streams and wetlands, shall be maintained....through ...among other means, controlling runoff, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The Commission finds that removing the natural wetland vegetation along the streambank as proposed to gain temporary access to the river channel is inconsistent therefore with these requirements, and could lead to increased runoff and erosion, and would not minimize the alteration of natural streams as required by the applicable Chapter 3 policies of the Coastal Act.

Therefore, for all of these reasons, the Commission finds that feasible alternatives exist to the Caltrans proposals to remove wetland vegetation from the river bank and to extend parking on the gravel bar to include pickup trucks that could alternatively be parked upgradient outside of the river channel, and that these alternatives would reduce potentially adverse impacts that may otherwise be imposed on the quality of coastal waters and habitat; therefore these components of the applicant's proposal are inconsistent with Sections 30230 and 30231 of Chapter 3 of the Coastal Act.

For all of the reasons set forth above, the Commission finds that there are feasible less environmentally damaging alternatives to the components of the applicant's amendment proposal that are evaluated in this section and therefore denies these components of the applicant's amendment request.

2. Hazards; Erosion

Coastal Act Section 30253 provides in pertinent part:

New development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
(2) 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 would substantially alter natural landforms along bluffs and cliffs.

The applicant proposes to permanently retain a section of rip rap placed along the north bank of the Van Duzen River in the area downslope from Coffer Dam 4 (see Exhibit 10) and to remove a section of wetland vegetation along the area immediately west (downstream) and adjacent to the new rip rap for purposes of increasing temporary access into the river channel for pending construction season. The Commission's senior civil engineer visited the site and evaluated the rip rap and determined that the rip-rap would have long term effects that could destabilize the north bank, causing end effects and increased erosion, which may already be occurring given the erosional pockets that have appeared immediately upstream and the appearance of additional erosion on the westernmost end of the rock section (see Exhibit 7 of the May 25, 2006 staff report, memorandum dated March 8, 2006). The Commission's civil engineer observed that it appears that piece-meal bank hardening is exacerbating erosion of the unarmored areas from the railroad bridge (upstream of the rip-rap), downstream past the revetment (where Caltrans presently proposes to additionally remove wetland vegetation on the streambank adjacent to the rip-rap)l

If the erosion of the streambank at the ends of the rip-rap continues to worsen, the overall stability of the corridor will degrade, potentially leading to substantially weakened pockets and collapse of some areas of the streambanks during high river flows. Section

30253 requires that new development assure stability and structural integrity and not contribute to erosion or geologic instability. Further, Section 30253 requires that new development not increase risks to property, such as substantial changes in erosional profiles of adjacent streambanks may pose due to increased risk of flooding of affected adjacent properties.

Therefore, for the reasons set forth above, the Commission finds that permanently retaining the rip rap revetment on the north bank of the Van Duzen River channel as currently installed, combined with further removal of natural wetland vegetation that helps to anchor the existing slope that is in danger of further erosion as an end effect of the revetment, would not be consistent with the requirements of Coastal Act Section 30253.

3. Unpermitted Development

The proposed amendment contains after-the-fact components that have had avoidable adverse impacts on coastal resources – particularly to wetlands, sensitive species, and water quality. The Commission's Enforcement Unit continues to investigate these matters, which have also been investigated by other state and federal agencies as noted herein. Although development has taken place prior to submission of this permit application, consideration of this application by the commission has been based solely upon the Chapter 3 policies of the Coastal Act. Review of this permit application does not constitute a waiver of any legal action with regard to the alleged violation nor does it constitute an admission as to the legality of any development undertaken on the subject site without a coastal permit.

4. California Environmental Quality Act (CEQA)

Section 13906 of the California Code of Regulation requires Coastal Commission approval of a coastal development permit application to be supported by findings showing that the application, as modified by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Public Resources Code Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would significantly lessen any significant effect that the activity may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report.

As discussed herein, in the findings addressing the consistency of the above-referenced portions of the proposed amendment with the Chapter 3 policies of the Coastal Act, the

proposed amendment is not consistent with the policies of the Coastal Act that restrict the dredging and filling of coastal waters and wetlands.

As also discussed above in the findings addressing project alternatives, there are feasible alternatives available which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the above-referenced portions of the proposed amendment cannot be found consistent with the requirements of the Coastal Act to conform to CEQA.

5. Violation

As noted herein, portions of the proposed project including the installation of an unauthorized temporary bridge, numerous heavy equipment crossings of the live river channel, delayed and improper placement of a water bladder, and placement of rip-rap on the river bank have occurred at the site in an area of the Commission's retained jurisdiction without the benefit of a coastal development permit. Other unauthorized development that is not part of this amendment application may also have occurred and is the subject of continuing investigation by the Commission's Enforcement Unit.
As discussed in Finding 3 above, portions of the proposed amendment are inconsistent with the Chapter 3 policies of the Coastal Act regarding the protection of coastal wetlands. Specifically, the Commission finds that although specified fill for the replacement of the highway bridge project is for an incidental public safety purpose pursuant to Coastal Act Section 30233, the components of the applicant's amendment request addressed in this section are not the least environmentally damaging feasible alternatives as required under Section 30233 and therefore those components are not consistent with Section 30233 of the Coastal Act. Such portions of the project have been constructed without benefit of a coastal development permit and in a manner inconsistent with the Chapter 3 policies of the Coastal Act regarding the protection of coastal wetlands. As constructed, these components, including the placement of the riprap on the northern bank of the river, continue to cause on going resource damage in the form of de-stabilization of adjoining and downstream portions of the river bank by causing scar and end-effects which in turn causes increased sediment contamination in the Van Duzen River.

Although development has taken place prior to submission of this permit application, consideration of this application by the Commission has been based solely upon Chapter 3 policies of the Coastal Act. Review of this permit application does not constitute a waiver of any legal action with regard to the alleged violations nor does it constitute an admission as to the legality of any development undertaken on the subject site without a coastal permit.

Exhibit List

Exhibit 1: Staff report and exhibits, September 30, 2004, for CDP 1-04-014
Exhibit 2: CDP 1-04-014
Exhibit 3: Application for CDP 1-04-014-A1, submitted March 2, 2006.
Exhibit 4: Amended Application for CDP
Exhibit 5: NOAA National Marine Fisheries Special Investigation Report No. SW060038
Exhibit 6: Memorandum of Coastal Commission Senior Engineer, dated March 8, 2006

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400

Exhibit D
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

Via Certified and Regular Mail

March 10, 2006

Jim Carter, President
MCM Construction, Inc.
6413 32nd Street,
North Highlands, CA 95660
(7005 0390 0001 2128 0408)

Charlie C. Fielder,
Deputy Director, District 1,
California Department of Transportation
1656 Union Street
Eureka, CA 95501
(7005 0390 0001 2128 0415)

Re: **Violation File V-1-06-003:** Alleged violation of the Coastal Act consisting of inconsistencies with and violations of various Special Conditions of Coastal Development Permit 1-04- 014, the project description of the permit and the intent of the permit with regards to feasible mitigation measures

Property Location: Van Duzen River Bridge, Highway 101, Humboldt County

Dear Mr. Carter and Mr. Fielder,

This letter is to notify you that Commission enforcement staff has confirmed reports of activities that are in violation of, or inconsistent with, Coastal Development Permit (CDP) 1-04-014. As you know, the Coastal Commission issued CDP 1-04-014 to the California Department of Transportation (CalTrans) in order to allow the replacement of the southbound section of the Van Duzen River Bridge. As you also know, there were sixteen Special Conditions attached to the Commission's approval of the CDP, and the intent of the Commission's action to approve the conditioned CDP was to authorize work that was specified in the approved Project Description.

The initial unpermitted activity reported to Commission staff in August of 2005 was the dropping of the existing southbound bridge into the unprotected riverbed below. This unpermitted activity created a situation where the discharge of concrete debris, rubble and dust occurred into the riverbed. Special Condition 11A of the CDP required the submittal of a plan for the demolition and capture of the old bridge, and that the plan should include, among other things, measures to prevent debris and waste from falling directly into the riverbed or adjacent areas. Special Condition 11C of the CDP states that the development shall be undertaken in accordance with the approved final plan. Special Condition 11B of the CDP discussed

construction-related requirements imposed on the permittee, and subsection 7 of the Special Condition states, in part, that mesh containment netting will be maintained below work areas, where construction discards or other material could fall into the water, for any work on or beneath fixed decks. It additionally states that particular care should be exercised to prevent foreign materials from entering the Van Duzen River corridor or areas that drain into the river.

In order to begin the bridge replacement project, the project was required to be approved by various other agencies. Prior to Commission action on the CDP, CalTrans received approval from the Regional Water Quality Control Board in the form of a Clean Water Act Section 401 Certification, approval from the California Department of Fish and Game in the form of a Stream Alteration Agreement and submittals of Biological Opinions from the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Special Conditions 8 and 9 of the CDP required compliance with the conditions imposed by the Stream Alteration Agreement and Clean Water Act Section 401 Certification respectively. Condition Number 9 of the Stream Alteration Agreement and Condition Number 2 of the Section 401 Certification both state that no debris shall be allowed to enter into or be placed where it may be washed by rainfall into waters of the State.

The unprotected dropping of the old bridge into the riverbed is also inconsistent with the project description that was approved by the Commission's CDP action. Under a description of the activities to be undertaken during the first construction year, it states that the old bridge will be dismantled and removed, and that no portion of the bridge will be allowed to drop into the river.

Finally, in order to determine whether the project could be approvable, the Commission considered applicable Chapter 3 policies of the Coastal Act. As the project would require filling and dredging in coastal waters or streams, Sections 30231 and 30233 of the Coastal Act were considered. Section 30231 of the Coastal Act states that the biological productivity and quality of these waters must be maintained, minimizing adverse effects of wastewater discharges and entrainment and controlling runoff, and Section 30233 of the Coastal Act describes the limited activities that can take place in open coastal waters that require diking, filling or dredging of these waters. Essentially, both sections require, among other things, that feasible mitigation measures have been provided to minimize adverse environmental effects. Under the section of the adopted findings for the CDP action that discusses feasible mitigation measures, it states that the potential for increased turbidity of the river will be mitigated by the fact that no portion of the bridge will be dropped into the river. As you can see, the work authorized by the Commission clearly did not include dropping the bridge into the riverbed, and in fact there were several conditions that precluded the dropping of the bridge into the riverbed.

On September 7, 2005 Regional Water Quality Board staff conducted a site visit and observed violations of their Section 401 Certification. The violations that were confirmed consisted of the fueling of equipment, the storage of fuel on the gravel bar of the river, the leakage of fuel without an attempt at containment or clean up and the compaction of earthen material onto the gravel bar in order to create a work platform. Condition 2 of the Section 401 Certification, and Condition 9 of the Streambed Alteration Agreement, state that no earthen material, oil or petroleum products shall be allowed to enter into or be placed where it may be washed into

waters of the State. In addition, Condition 10 of the Streambed Alteration Agreement states that no petroleum products shall be allowed to enter the stream channel, and that if a spill occurs, cleanup and containment must occur.

As you know, compliance with the conditions of these approval actions is required under Special Conditions 8 and 9 of the CDP. Furthermore, Special Condition 11B, subsection 7, of the CDP states that equipment must be refueled in a designated staging area, and Special Condition 12A of the CDP requires that a Hazardous Materials Management Plan be submitted that includes provisions that oil absorbent booms and/or pads shall be on site at all times and provisions for cleanup, containment, temporary storage and disposal for all hazardous materials and that all equipment shall be free of oil and fuel leaks. Finally, Special Condition 6 of the CDP also required compliance with the Terms and Conditions of the National Marine Fisheries Service Biological Opinion. Number 2a under this section of the National Marine Fisheries Service Biological Opinion states that storage of fuel must be done at least 150 feet from the 2-year flood elevation or within an adequate fuel containment area. In addition, number 2c of that section states that excavation spoils that contain soils may not be stockpiled in the stream channel and that excavation spoils that will not be placed back into the bank and channel construction will not be stored or stockpiled on site.

During a site visit to the project location on October 13, 2005, Commission staff observed a number of vehicles not involved in construction activities parked or idling in the riverbed area. Special Condition 11B, subsection 3, of the CDP states specifically that no machinery or construction materials not essential for project construction shall be allowed at any time within the Van Duzen river corridor. In addition, as mentioned above, Special Condition 8 required compliance with the conditions of the Stream Alteration Agreement. Condition 10 of the Stream Alteration Agreement states that all equipment shall be staged and stored, when not in use, out of the streambed. The Section 401 Certification also discussed equipment staging, stating in its Noncompensatory Mitigation section that no equipment staging will take place within the river channel. Finally, the National Marine Fisheries Service Biological Opinion states, under its Specific Project Components section that no equipment staging will take place within the river channel.

On October 19, 2005 Commission staff documented that the permittee and its contractor had allowed numerous crossings of the low-flow channel, in the water, by tracked vehicles driven during construction work. The Commission-approved project description for the CDP states that equipment will cross the low-flow channel on a temporary bridge crossing, and that construction of the crossing would only require two crossings of the low-flow channel in water, once to install the crossing and once to remove it. The National Marine Fisheries Service also discussed this mitigation measure in their Biological Opinion, and also stated specifically that equipment should cross the low-flow channel on the temporary bridge crossing, and that crossing of the low-flow channel in water should only occur twice.

You also did not abide by the Commission's requirements to remove all temporary construction devices by October 15, 2005 as required in the CDP. As a result you asked for and received an emergency CDP No. 1-05-052-G that allows you to retain two coffer dams installed within the

river channel during the 2005 dry season over the winter and to place temporary riprap around the outside of the coffer dams to minimize formation of scour pools. You are to seal the cofferdams to prevent fish entrapment over the winter. No other construction activity is authorized until June 15, 2006. The two cofferdams and the riprap will be removed by October 15, 2006 in accordance with the requirements of the CDP. Special Condition 16 of the CDP specifically states that project activities in the river channel outside the low-flow channel are prohibited between October 15th and June 1st of a given year, and project activities in the low-flow channel are prohibited between October 15th and June 15th. In addition, one of the conditions under the Terms and Conditions of the National Marine Fisheries Service Biological Opinion states that project activities are prohibited after October 15th in order to minimize incidental take of salmonids. Finally, Condition 2 of the Streambed Alteration Agreement states that all work in or near the stream shall be confined to the period June 15 through October 15, and the project description given in the Section 401 Certification states that in-stream work activities will be conducted between June 15 and October 15.

Thus, several violations of the terms and conditions of the CDP have occurred. These violations appear to have been undertaken in a knowing and intentional manner in light of the documented restrictions of the CDP issued for this project. Therefore, it is our obligation to notify you of possible remedies, under Chapter 9 of the Coastal Act, that the Commission has available to resolve violations of its permitting requirements.

Under Section 30803 of the Coastal Act, the Commission may maintain a legal action for declaratory and equitable relief to restrain a violation of the Coastal Act. Section 30809 of the Coastal Act allows for a temporary Cease and Desist Order to be issued by the Executive Director of the Commission if a person has undertaken an activity that is inconsistent with a permit previously issued by the Commission or if development has occurred without a permit. Section 30810 allows for a Cease and Desist Order to be issued by the Commission, after a public hearing, if a person has undertaken an activity that is inconsistent with a permit previously issued by the Commission or if development has occurred without a permit. These Cease and Desist Orders may be subject to terms and conditions necessary to ensure compliance with the Coastal Act, including removal of the development or setting of a schedule. Section 30811 of the Coastal Act gives the Commission the authority to issue a Restoration Order to require restoration of the site, after a public hearing, if a person has undertaken an activity inconsistent with a permit previously issued by the Commission or if development has occurred without a permit. If it is determined that an Order issued by the Commission or the Executive Director has been violated, the Commission can seek daily penalties not to exceed $6,000 per day for every day the violation continues.

Section 30820(a) of the Coastal Act provides for civil liabilities in an amount not to exceed $30,000 and not less than $500 to be imposed on anyone who undertakes development in a manner inconsistent with a previously issued CDP. Section 30820(b) provides that additional civil liability may be imposed on any person who performs or undertakes development that is inconsistent with any CDP previously issued by the Commission, when the person knowingly and intentionally performs or undertakes such development, in an amount not less than $1,000 and not more than $15,000 per day for each day in which the violation persists. Section 30822 of

the Act allows a court to award exemplary penalties in situations where it is determined that additional deterrence is necessary to ensure compliance with the Coastal Act.

We will be in further contact with respect to remedies to be sought by the Commission to resolve the noted violations of the Commission's CDP. If you have any questions regarding this matter, please do not hesitate to contact me, either at the address on the above letterhead or at the Commission's San Francisco Office at (415) 904-5290

Sincerely,

Nancy L. Cave

Nancy L. Cave
Northern California Supervisor, Enforcement Program

cc: Lisa Haage, Chief of Enforcement
Robert Merrill, North Coast District Manager
Melanie Faust, Senior Analyst, North Coast District
Amrita Narasimhan, Enforcement Staff

DEPARTMENT OF TRANSI :TATION
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Flex your power!
Be energy efficient!

March 15, 2006

Ms. Nancy Cave, Northern California Supervisor,
Enforcement Program
California Coastal Commission
45 Fremont Street, Suite 200
San Francisco, CA 94105-2219

01-31440401
HUM-101-KP 90.4/92.5
ACNH-Q101(097)E
Replace Van Duzen River Bridge

Dear Ms. Cave:

This is to acknowledge receipt of your letter dated 3/10/06 regarding alleged violations of the Coastal Act by MCM Construction during construction of the southbound Van Duzen River Bridge. I want to assure you that enforcing water quality protections specified in the project permit and other environmental commitments on all Caltrans construction projects are of great importance to the Department. The Resident Engineer and our construction managers are working closely with MCM Construction to address the alleged violations you describe, water quality concerns raised by the North Coast Regional Water Quality Control Board, and to prevent future violations to permit conditions from occurring.

In your letter you describe construction activities that occurred last construction season. I would like to have an opportunity for our Resident Engineer and construction managers to explain the measures they have taken to ensure construction activities are conducted consistent with all environmental commitments. Additionally, I assure you that we have notified MCM Construction of their responsibility to carry out their construction process in a manner that is consistent with all permit conditions and environmental constraints. Our North Region Construction Manager West, Terry Davis will contact you to schedule a meeting to discuss the issues you raised regarding construction of the Van Duzen River Bridge.

Sincerely,

Mark L Suchomel

for CHARLES C. FIELDER
District Director

cc: Jim Carter, President
MCM Construction, Inc.
6413 32nd Street
North Highlands, CA 95660

"Caltrans improves mobility across California"

Exhibit E
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

MCM CONSTRUCTION, INC.
GENERAL ENGINEERING CONTRACTORS
SACRAMENTO, CA

Main Office
P.O. BOX 620 / 6413 32nd Street / North Highlands / CA 95660
(916) 334-1221 Estimating / Engineering FAX (916) 334-0562
Accounting FAX (916) 334-8355

Southern California Regional Office
P.O. BOX 867 / 19010 Slover Ave. / Bloomington / CA 92316
(909) 875-0533 Engineering / Accounting FAX (909) 875-2243

April 7, 2006

Ms. Nancy Cave, No. California
Supervisor, Enforcement Program
California Coastal Commission
45 Fremont Street, Suite 200
San Francisco, CA 94105-2219

Re: Your Violation File V-1-06-003
Alleged Violations of Coastal Development Permit
Van Duzen River Bridge, Highway 101
Humboldt County

Dear Ms. Cave:

We acknowledge receipt of your letter dated March 10, 2006 which was received by MCM Construction, Inc. on March 13, 2006. Reference is also made to the letter of March 15, 2006 addressed to you from Charles C. Fielder, District Director, District 01 of the Department of Transportation.

Contrary to the assertion of Mr. Fielder, MCM Construction, Inc. is not responsible for any of the alleged violations set forth in your letter of March 10, 2006.

Please be assured that all of the construction activities conducted by MCM Construction were consistent with the provisions of the Caltrans Contract No. 01-314404. While we join in the Caltrans staff to assure you that enforcing water quality protections specified in various third party agency permits, MCM Construction cannot be held responsible for environmental commitments made by Caltrans that have not been properly described in our Contract with the Department of Transportation.

MCM Construction continues to work closely with Caltrans, however, we have absolutely no control over the commitments or the negotiations or the terms of the various permits.

The alleged violations described in your letter relate to construction activities that occurred in the 2005 construction season. While we recognize that the activities may not have proceeded in a manner envisioned by the Coastal Commission or in a manner committed to by Caltrans, MCM Construction is not responsible for any of those discrepancies. In addition, we are sensitive to the Coastal Commission's desires, however, as they have been communicated by Caltrans to MCM, these commitments and permit conditions may make it impossible to construct the project as described in our Contract with Caltrans. We have been informally contacted by Mr. Terry Davis regarding a meeting to discuss these issues with you and your staff and we will be happy to participate in hopes of finding a resolution that will enable MCM Construction to complete this project in a timely and efficient manner.

AN EQUAL OPPORTUNITY EMPLOYER / STATE CONTRACTORS LIC. NO. 286430

project in a timely and efficient manner.

Very truly yours,

MCM CONSTRUCTION, INC.

EDMUNDO A. PUCHI
Treasurer & General Counsel

cc: Charles C. Fielder, Director, District 01. Department of Transportation
State of California, P.O. 3700, Eureka CA 95502-3700
Terry Davis, Caltrans
Geoffrey Wright, R.E., Caltrans
Ron Den Heyer, Caltrans
JAC, HDM, Jobsite, E. Paine, R. McCall File

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400

Via Certified and Regular Mail

September 8, 2006

Jim Carter, President
MCM Construction, Inc.
6413 32nd Street,
North Highlands, CA 95660
(7005-1820-0001-3165-5015)

Charlie C. Fielder
California Department of Transportation
1656 Union Street
Eureka, CA 95501
(7002-2030-0002-6358-2819)

Subject: Notification of Intent to Commence Cease and Desist Order Proceedings

Violation No.: V-1-06-003

Subject Property: Van Duzen River Bridge, Highway 101, Humboldt County

Violation Description:

Unpermitted development and development otherwise inconsistent with the Coastal Act and/or the terms of numerous Special Conditions of Coastal Development Permit No. 1-04-014 (as addressed more fully herein), including 1) placement and compaction of earthen material on the gravel bar both within and outside of the active wet channel of the Van Duzen River, 2) dropping of the demolished bridge into the Van Duzen River, 3) dredging of material from the active wet channel and on the gravel bar, 4) crossing of the low-flow channel of the Van Duzen River by tracked vehicles in the water multiple times without using the required temporary bridge crossing, 5) conducting work in the active channel other than for the construction of the temporary bridge crossing, 6) failure to divert the active channel away from construction areas, 7) sedimentation of the Van Duzen and Eel Rivers, 8) the parking and idling in the riverbed of vehicles not directly involved in construction work, 9) the fueling of equipment and the storage of fuel on the gravel bar and the leakage of fuel from vehicles without any cleanup or containment, and 10) the continuance of construction work past the permitted time period.

Dear Mr. Carter and Mr. Fielder:

While we hope to resolve this violation amicably, as we discussed in the May 2, 2006 meeting between staff of the California Coastal Commission (hereinafter, "Commission"), MCM Construction, Inc. (hereinafter, "MCM"), and the California Department of Transportation (hereinafter, "CalTrans"), this letter is to notify you of my intent, as the Executive Director of the Commission, to commence proceedings for

Exhibit G
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

issuance of a Cease and Desist Order to both MCM and the CalTrans. This letter is a procedural requirement prior to the commencement of such proceedings, but it does not preclude our ability to work this matter out amicably. We would like to work with you to resolve this matter and remain willing and ready to discuss negotiating a "Consent Order" that would be presented to the Commission. A Consent Order is similar to a settlement agreement. A Consent Order would provide you with an opportunity to have input into the process and timing of removal of any unpermitted development not already removed and mitigation of the damages caused by the unpermitted activity, and could also allow you to negotiate a penalty amount with Commission staff in order to resolve the complete violation without any further formal action, including the necessity of any litigation to collect fines and penalties pursuant to Chapter 9 of the Coastal Act.

As discussed below, if we are unable to resolve this through a Consent Order, we intend to schedule Commission consideration of a unilateral Cease and Desist Order at the Commission's October 2006 hearing to require you: (1) to cease and desist from conducting any further unpermitted development at the southbound Highway 101 Bridge over the Van Duzen River, approximately 5 miles south of Fortuna, in Humboldt County (hereinafter, the "Subject Property") and (2) to comply with all terms and conditions of Coastal Development Permit (hereinafter, "CDP") No. 1-04-014, as amended on June 16, 2006.

The unpermitted development consists of numerous violations of the Coastal Act and CDP No. 1-04-014 (see attachment) including: 1) placement and compaction of earthen material on the gravel bar both within and outside of the active wet channel of the Van Duzen River, 2) dropping of the demolished bridge into the Van Duzen River, 3) dredging of material from the active wet channel and on the gravel bar, 4) crossing of the low-flow channel of the Van Duzen River by tracked vehicles in the water multiple times without using the required temporary bridge crossing even after the crossing was installed and fully available for use, 5) conducting work in the active channel other than for the construction of the temporary bridge crossing, 6) failure to divert the active channel away from construction areas, 7) sedimentation of the Van Duzen and Eel Rivers, 8) the parking and idling in the riverbed of vehicles not directly involved in construction work, 9) the fueling of equipment and the storage of fuel on the gravel bar and the leakage of fuel from vehicles without any cleanup or containment, and 10) the continuance of construction work past October 15, 2005. The unpermitted development was performed by MCM, on behalf of CalTrans, the permitee. Both MCM and CalTrans undertook the unpermitted development.

CalTrans applied for and obtained Coastal Development Permit 1-04-014 for the replacement of the southbound Highway 101 Bridge over the Van Duzen River. The CDP was conditioned to, protect, among other things, the water quality and biological productivity of the Van Duzen River, the Environmentally Sensitive Habitat Areas (including areas that support numerous State and Federally listed threatened and endangered species, including Coho and Chinook salmon, steelhead trout, and the western snowy plover), the public access to and recreational uses of the Van Duzen

River, and the scenic and visual qualities of the Van Duzen River. The Van Duzen River is designated by the National Park Service as a Wild and Scenic River.

Riparian woodlands exist along the north bank of the river, extending in some locations several hundred feet back from the shoreline. In addition, a much narrower band of riparian woodland, approximately 50 feet wide, flanks the south bank of the river. Federally listed anadromous salmonid species within the Van Duzen River watershed include Chinook salmon, Coho salmon, and steelhead trout. In addition, the U.S. Fish & Wildlife Service states that the Western Snowy Plover, also a Federally listed species, likely uses the nearby gravel bars. CalTrans also has found that surveys conducted during the past three years indicate that migratory cliff swallows nest on the existing southbound bridge.

History of Coastal Development Permit Action

The existing Van Duzen Bridge consists of two separate bridges located side by side, one carrying northbound traffic and the other the southbound traffic. From bank to bank, the bridges are both approximately 800 feet long. Where the bridge is located, the width of the Van Duzen River is approximately 400 feet at ordinary high water and less than 50 feet during low flow conditions in the summer.

In 1993, the Commission approved CDP No. 1-93-05 for the replacement of the northbound bridge over the Van Duzen River, and construction was completed in 1995. On October 14, 2004, the Commission conditionally approved CDP No. 1-04-014 for the replacement of the southbound Highway 101 Bridge over the Van Duzen River. The project included the removal of the existing bridge piers and abutments, and construction of new piers, abutments and bridge superstructure, as well as other associated work, including construction of sedimentation basins, cofferdams, temporary structures, and replacement of slope protection at the abutments. CalTrans met all prior-to-issuance conditions required by the CDP, and therefore, on December 20, 2004, the Executive Director issued CDP 1-04-014 to CalTrans. On December 21, 2004, CalTrans returned a signed copy of the CDP, acknowledging and accepting all terms and conditions of the CDP.

Prior to submitting a CDP application to the Commission for the construction of the southbound Highway 101 Bridge over the Van Duzen River, CalTrans obtained other regulatory approvals which also included conditions on the work to be performed. These included a Stream Alteration Agreement from the California Department of Fish and Game (hereinafter, "DFG"), a Clean Water Act Section 401 Certification from the California Regional Water Quality Control Board (hereinafter, "RWQCB"), and Biological Opinions from the National Marine Fisheries Service (hereinafter, "NMFS") and the U.S. Fish and Wildlife Service (hereinafter, "FWS"). The approvals from DFG, RWQCB, NMFS, and FWS were issued to CalTrans with numerous conditions regarding the protection of the sensitive resources associated with the Van Duzen River. As discussed more fully herein, Special Conditions No. 6, 7, 8, and 9 of CDP No. 1-04-014 incorporated the requirements of the other agency approvals and required CalTrans to

comply with all requirements and conditions of the Stream Alteration Agreement, the Clean Water Act Section 401 Certification, and the Biological Opinions.

MCM also had notice of the various environmental protections placed on the project approvals by regulatory agencies. At the beginning of the bidding process, CalTrans issued a Notice to Contractors and Special Provisions for Construction of State Highway (hereinafter, "Notice to Contractors"), which is available to all contractors wishing to bid on the project. The Notice to Contractors provided contractors with a detailed description of the bridge construction project as approved by the Commission and other regulatory agencies. It described the sensitive resources found in the Van Duzen River and the water quality requirements, and it established restrictions on the construction process, as required by the CDP and the other agency approvals, to avoid impacts to the Van Duzen River, its associated habitats, and the species within those habitats. In addition, the Notice to Contractors included within the contract an "Information Handout", which included complete copies and descriptions of all permits, agreements, and requirements issued, executed, or imposed by all State and Federal agencies that reviewed and approved the Van Duzen Bridge project, including: the Clean Water Act Section 401 Certification by RWQCB, the Streambed Alteration Agreement by DFG, Biological Opinions from FWS and NMFS, the U.S. Army Corps of Engineers' Nationwide Permit, and Coastal Development Permit No. 1-04-014. Therefore, MCM was given copies of all permits and agreements by State and Federal agencies having jurisdiction over the project, including all conditions and requirements of those permits and agreements, prior to bidding on the project.

MCM submitted the lowest priced bid for the construction contract, and therefore CalTrans awarded the project to MCM. On July 11, 2005, CalTrans and MCM signed a contract giving MCM the right to construct the bridge replacement project in accordance with the plans reviewed and approved by all Federal and State agencies having jurisdiction over the project, including the Coastal Commission, and the restrictions and requirements imposed by all such agencies in connection with their approvals.

History of Violation Investigation

On August 3, 2005, a CalTrans biologist monitoring the project notified North Coast Commission staff that MCM had dropped the old bridge directly into the Van Duzen River corridor with no protective measures whatsoever, in direct violation of CDP No. 1-04-014, and causing extensive release of airborne particulates and sedimentation of the Van Duzen River. Additional violations were documented and reported to Commission staff or directly observed by Commission staff in September and October of 2005, including: 1) the parking and idling of vehicles not directly involved in construction work in the riverbed, 2) the crossing of the low-flow channel of the Van Duzen River by tracked vehicles in the water multiple times without using the required temporary bridge crossing, which created sediment plumes that disturbed and impacted salmonid habitat, 3) the fueling of equipment and the storage of fuel on the gravel bar and the leakage of fuel from vehicles without any cleanup or containment, 4) the placement and compaction of fill material directly in the river and on the gravel bar in order to create a

work platform, and 5) the continuance of construction work past permitted time periods, all of which are in direct violation of the CDP conditions specifically designed to protect the natural resources of the area.

As you know, other regulatory agencies have also taken steps to attempt to address the numerous violations at this site. On September 28, 2005, RWQCB, North Coast Region, sent a "Notice of Violation" letter to CalTrans regarding violations of the Clean Water Act Section 401 Certification that RWQCB issued for the Van Duzen Bridge project. The violations described in the letter include actions causing extensive turbidity of the river, petroleum leaks on the gravel bar, storage of a generator on the gravel bar and leaking hose connections coming from the generator, storage of a drum of hydraulic fluid on the gravel bar, and the lack of any secondary containment around the generator or drum and the lack of any containment or clean up of the leaks. Additional violations discovered by RWQCB and described in the letter included stockpiling excavated material on the gravel bar and spreading and leveling fine sediment across the gravel bar. Furthermore, no Best Management Practices had been implemented around these areas to protect against the further sedimentation of the river. The letter concludes by stating that the violations threaten to impact water quality and beneficial uses of the river.[1]

Sedimentation of the Van Duzen and Eel River caused by violations of the CDP between late August 2005 and early September 2005 was also documented in a March 13, 2006 offense investigation report, conducted by NMFS. The investigation report found that MCM and CalTrans were not in compliance with the CDP or with the Stream Alteration Agreement, the Clean Water Act Section 401 Certification, and the Biological Opinions. The investigation report identified several days where MCM, under the direct monitoring by and supervision of CalTrans, was working and excavating in the active river channel of the Van Duzen, creating large sediment plumes that flowed downstream, through the Van Duzen River and into the Eel River. The investigation report also indicated that there were no sediment control devices installed, as required by the CDP, which caused sedimentation of the Van Duzen and Eel Rivers.

The NMFS Biological Opinion found that sedimentation of the Van Duzen River would harm the federally listed salmonids. The Biological Opinion states:

> "Construction in the stream channel disrupts the layering of sediments in the stream bed which results in more fine sediments becoming available for transport when stream flows inundate the disturbed area... [which] leads to elevated turbidity.... Elevated turbidity can affect the entire foodweb in streams in numerous ways. Stream photosynthesis and primary production can be reduced if sunlight does not reach the substrate. The resulting hindrance of benthic macro-invertebrate production is a reduction in species on which listed Pacific salmonids forage.... Suspended sediments cloud otherwise clear waters making salmonids prey and predator detection difficult, reducing feeding

[1] On January 30, 2006, the North Coast Regional Water Quality Control Board collected from CalTrans a $101,000 payment of an Administrative Civil Liability Complaint for violating the requirements of the Section 401 Certification for the Van Duzen River Bridge project.

> opportunities, and possibly inducing behavioral modifications. Suspended sediments may cause clogging and abrasion of gills and other respiratory surfaces, providing conditions conducive to entry and persistence of disease related organisms, which, in turn, may provoke behavioral modifications. [Spawning areas of salmonids] may be harmed when suspended sediment deposits on them, affecting inter-gravel permeability and dissolved oxygen levels, adhering to the chorion of eggs, suffocating incubating salmonid eggs, and/or entombing different life stages. Physical habitat may be degraded by pools filling with sediment and losing volume and by the settling of fine sediment into the interstitial spaces of the substrate in riffles."

On March 10, 2006, Commission enforcement staff sent a letter to MCM and CalTrans notifying them of the Commission's confirmation of violations of the Coastal Act and the CDP. The letter advised MCM and CalTrans that Commission staff was going to take further enforcement action to address the confirmed violations of the CDP, including initiating Cease and Desist Order proceedings, a legal action for declaratory and equitable relief, and/or collecting penalties pursuant to Chapter 9 of the Coastal Act. On March 15, 2006, CalTrans responded to Commission staff's letter and requested to meet with enforcement staff regarding the violations and stated that the cited activities (such as the discharge of concrete debris, rubble and dust into the riverbed due to the unprotected dropping of the old bridge; fueling and storage of equipment, open storage of fuel and leaking of the stored fuel, and compaction of earthen material on the gravelbed; unauthorized crossing of the low-flow channel and failure to cease all construction and remove all temporary construction devices by October 15th of a given calendar year) all happened during the first construction year and that measures had been implemented to ensure compliance with regulatory approvals.

Commission staff also received a response letter dated April 7, 2006 from MCM, alleging that the CDP requirements and requirements from other state and federal agencies were not a part of their contract with CalTrans, and therefore claiming that MCM was not liable for the violations of these requirements.[2] MCM indicated that they would not take responsibility for the matter, and that they allege the permit and regulatory commitments were not part of the contract. Although not relevant to these proceedings, they also allege that compliance with the permit conditions may make it impossible to construct the project as per their contract with CalTrans.

On May 2, 2006, Commission staff met with representatives of MCM and CalTrans to discuss the violations, the responsibility of both MCM and CalTrans under the Coastal Act, and the Commission's authority to resolve violations through Cease and Desist Order proceedings. This letter is the first step in initiating those proceedings, and in the absence of significant movement towards a Consent Agreement and the need for

[2] As previously stated, it was evident from the Contract between MCM and CalTrans that all requirements of the CDP as well as all requirements of the Stream Alteration Agreement by DFG, the 401 Certification by RWQCB, and the Biological Opinions from NMFS and FWS, were incorporated into the Contract; and it is clear from the contract that MCM was, in fact, responsible for complying with these requirements. Moreover, apart from MCM's contractual obligations, as the entity directly implementing the work authorized by CDP 1-04-014, MCM was directly responsible for compliance with the terms of that permit.

additional time to complete it, we plan on scheduling the hearing on a unilateral Cease and Desist Order for the Commission's October 2006 meeting.

Description of Violations

1. Dropping Demolished Bridge into Van Duzen River

On August 3, 2005, a CalTrans biologist notified Commission staff that the old bridge had been dropped directly into the riverbed with no containment of the debris or dust from the demolition whatsoever. As stated previously, Special Conditions No. 8 and 9 of the CDP required that the permittee must comply with the Terms and Conditions of the Streambed Alteration Agreement and the Section 401 Certification, respectively. The terms and conditions of both of those approvals (Condition 9 of the Stream Alteration Agreement and Condition 2 of the Section 401 Certification) state:

> "No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the State."

Special Condition 11.A of the CDP required the submittal and approval of a plan for the demolition and capture of the old bridge that was to include, among other things, measures to prevent waste and debris from falling into the riverbed. In addition, Special Condition 11.B.(7) of the CDP states:

> "Particular care shall be exercised to prevent foreign materials...from entering the Van Duzen River corridor, or areas that drain into the river...For any work on or beneath fixed bridge decks, heavy-duty mesh containment netting shall be maintained below all work areas where construction discards or other material could fall into the water."

In the Commission's adopted findings for the CDP, the impacts to water quality from the project are discussed, and the CDP specifically states that no portion of the bridge or debris from the demolished bridge shall be dropped into the river. In addition, the project description submitted by CalTrans and included in the contract between MCM and CalTrans states that that no portion of the old bridge would be allowed to drop into the river. Despite these prohibitions, MCM did not undertake development in compliance with the CDP, and it dropped the demolished bridge directly into the Van Duzen River and onto the gravel bar, clearly impacting the species that the conditions were designed to protect.

2. Sedimentation of the Van Duzen and Eel Rivers

On August 29, 2005 a Special Agent with NMFS investigative division received a report that the Van Duzen River was running turbid for two days, August 25 and August 26,

2005, due to activities performed by MCM on the CalTrans project, and that the turbid waters were reaching the Eel River and compromising water quality, likely impacting salmonids in the river. Upon receiving this report, NMFS staff conducted a site visit on August 29, 2005 and documented the extent of the sedimentation. From that documentation, it is evident that CalTrans was aware of the issue of sediments being stirred up during construction work because CalTrans engineers and monitors were on site at the time, but did not take appropriate action to stop the activities that were causing the sedimentation of the river. A CalTrans engineer observed, on the morning of August 26th, an excavator go into the wetted channel and dig into the active river channel 8-10 feet down, causing significant sedimentation of the river. CalTrans temporarily stopped the activity but similar work inconsistent with the CDP began again during the afternoon, causing an additional sediment plume to flow all the way to the Eel River. Additional work was observed later in the afternoon, consisting of the dumping of the excavated material into the river so that the excavator could move farther out into the river to excavate an area further out into the wetted channel. As discussed in more detail below, the CDP explicitly required the installation of erosion control measures and strictly prohibited any work in the river (with the exception of two specific occasions provided for in the CDP, once to create a temporary river crossing and once to remove the temporary crossing – which was never constructed at all). These conditions were placed on the CDP specifically to prevent sedimentation of the river and impacts to the river habitat and species that are found in this area.

Special Condition 13.A of the CDP required the submittal of an erosion control and revegetation plan that was to provide for measures such as mulch or rice straw to prevent sedimentation of the river. As mentioned above, the CDP also incorporated the requirements of the other agency approvals. Condition 7 of the Streambed Alteration Agreement, incorporated in the CDP, states that "[d]uring construction in flowing water which can transport sediment downstream, the flow shall be diverted around the work area by pipe, pumping or temporary diversion channel." Condition 3 of the Section 401 Certification, incorporated in the CDP, states that Best Management Practices will be implemented and in place prior to, during, and after construction to prevent adverse impacts to water quality. Condition 2(g) of the National Marine Fisheries Service Biological Opinion, incorporated in the CDP, also required that best management practices be implemented. No such practices had been installed or utilized during the August 2005 inspections.

The CDP required a dry work area in order to construct the footings' new columns without having to work in the active channel. This dry work area was to be created by the use of river diversion and cofferdams and other dewatering techniques in the project areas that encountered the low-flow channel. These CDP requirements were not followed. Instead, MCM installed a cofferdam within the active channel without first diverting the river around the work area and also constructed the cofferdams without sediment controls in place MCM also excavated directly within the river channel, placed fill directly in the river, and did so without any sediment controls, in violation of the CDP requirements and also causing extensive sediment plumes in the river.

In addition, the CDP, and the project reviewed by NMFS, required the creation of a temporary flat-car bridge for crossing the low-flow channel, which would completely span the low flow channel, so that equipment would not be in direct contact with water (see discussion below regarding river crossing). Despite this, MCM did not construct the temporary bridge as required to avoid sedimentation of the Van Duzen River, in direct violation of the CDP.

3. Equipment Storage and Fueling on the Gravel Bar, Storage and Leaking of Fuel, and Compaction of Earth in the Active River Channel

The NMFS Biological Opinion states, under the Specific Project Components section, that no equipment staging or refueling shall take place within the river channel. Special Condition 6 of the CDP requires that the permittee comply with the Terms and Conditions of NMFS Biological Opinion. Condition 2a of the Biological Opinion, as incorporated in the CDP, states that storage of fuel must be at least 150 feet from the two-year flood elevation or within an adequate fueling containment area. In addition, Condition 2c of the Biological Opinion, as incorporated in the CDP, states that excavation spoils that contain soils cannot be stored in or near the stream channel, and that excavation spoils cannot be stored or stockpiled on site. In addition, Condition 10 of DFG's Stream Alteration Agreement, as incorporated in the CDP, states:

> "No servicing of equipment shall take place within the stream bed and all equipment shall be stored when not in use out of the streambed. No petroleum products shall be allowed to enter the stream channel. If a spill occurs, the Dept. shall be notified immediately and cleanup and containment shall commence."

Special Condition 11.B.(3) of the CDP states that machinery or construction materials not essential for project construction may not be allowed within the Van Duzen River corridor. Special Condition 11.B.(7) of the CDP states that a designated staging area shall be used for refueling of equipment and storing of materials. Furthermore, Special Condition 12.A of the CDP states that a hazardous materials management plan must be submitted, and that the plan must provide that oil absorbent booms and/or pads are on site at all times, that all equipment is free of oil and fuel leaks, and that provisions for cleanup, temporary storage and containment and disposal of hazardous materials are provided. Finally, the Section 401 Certification states that no equipment staging or refueling shall take place within the river channel.

On September 7, 2005, RWQCB staff conducted a site visit and observed violations of CalTrans' Section 401 Certification. The violations consisted of the fueling of equipment, storage of equipment and fuel, and compaction of earthen material in order to create a work platform, all occurring on the gravel bar of the Van Duzen River, within the river corridor, river channel, and/or stream channel, and within 150 feet of the two-year flood elevation. In addition, the fuel and equipment stored on the gravel bar was observed to be leaking, and there was not a secondary containment for the stored fuel or equipment, or any attempt to contain or clean up the leak.

During a site visit on October 13, 2005, Commission staff also observed that a number of vehicles that were not directly involved in actual construction activities were parked or idling in the riverbed area.

Neither MCM nor CalTrans employed any of the measures that were required under the CDP (and required by all other agency approvals), again, in direct violation of the CDP.

4. Inadequate Temporary Bridge Construction / Unpermitted River Crossings and Work within Active Channel

The CDP requires that equipment will cross the low-flow channel only on a temporary bridge-crossing above the water, and that construction of the temporary bridge-crossing would only require two crossings of the low-flow channel in water, once to install the temporary crossing and once to remove it. NMFS also required this mitigation measure in its Biological Opinion, as incorporated in the CDP, and also stated specifically that all equipment should cross the low-flow channel on the temporary bridge crossing, and that vehicular crossing of the low-flow channel in water should only occur twice: during installation, and during dismantling of the temporary crossing.

During an October 13, 2005 site visit, Commission staff observed that the temporary bridge that MCM was required to construct did not fully span the low flow channel as required by the CDP. Instead, fill material and k-rail were dumped into the river to narrow the river channel apparently so that MCM could utilize steel beams that they already owned as a cost saving measure. On October 19, 2005, CalTrans fisheries monitors reported to Commission staff that MCM and CalTrans conducted numerous crossings in the river by tracked vehicles, driven during construction work, in direct violation of the CDP.

5. Failure to Cease Construction And Remove All Temporary Construction Devices by October 15, 2005

MCM and CalTrans failed to remove all temporary construction devices by October 15, 2005. Special Condition 16 of the CDP specifically provided that project activities in the river channel outside the low-flow channel are prohibited between October 15th and June 1st of a given year, and that project activities in the low-flow channel are prohibited between October 15th and June 15th. In addition, Condition 1a of the NMFS' Biological Opinion, as incorporated in the CDP and included as a condition of the CDP, states that project activities are prohibited after October 15th in order to minimize incidental take of salmonids. Finally, Condition 2 of the Streambed Alteration Agreement, as incorporated in the CDP and included as a condition of the CDP, states that all work in or near the stream shall be confined to the period June 15th through October 15th, and the project description given in the Section 401 Certification states that in-stream work activities will be conducted between June 15th and October 15th. All agencies involved in the review of the Van Duzen Bridge replacement project were concerned with construction activities occurring outside the low-flow period, during the summertime months, since the migration and spawning of Coho and Chinook salmon and Steelhead Trout occur

between October and May. Clearly, continuing work in this area, in violation of every State and Federal permit issued for the bridge replacement project, would have an enormous impact on these threatened and endangered species and so was clearly prohibited under the CDP.

In response to MCM and CalTrans being unable to remove temporary structures by the October 15th deadline, on October 13, 2005, CalTrans requested an emergency CDP for two specific items: to retain two cofferdams installed within the river channel during the 2005 dry season over the winter and to place temporary riprap around the outside of the coffer dams. Leaving the cofferdams in the river channel after October 15, 2005 and placing riprap protection around the cofferdams were both clear violations of the CDP.

Special Condition No. 16 of the CDP was required to prevent this very outcome, ensuring that no work would occur after October 15th. Since MCM and CalTrans violated Special Condition No. 16 by failing to remove the cofferdams and not preparing to cease work prior to October 15th, the Executive Director was left to determine whether the environmental damage to the Van Duzen River, associated habitat, and salmonids that use this habitat would be greater if work to remove the cofferdams continued beyond October 15th or if the cofferdams were left in place within the active channel through the winter season. It was determined that while the outcome of each option would have significant resource damage to the Van Duzen River ecosystem, leaving the cofferdams in place would have less potential disruption to the Van Duzen River than continuing work to remove the cofferdams beyond October 15th. Because it was determined by the Executive Director that removing the cofferdams after October 15, 2005 would cause more environmental damage than leaving them in place, the Commission's North Coast District Manager orally approved the request for emergency authorization on October 14, 2005.

As required by the Emergency Permit, on March 2, 2006, CalTrans submitted a CDP amendment request, requesting after-the-fact permission to work past the October 15, 2005 to prepare the site for the rainy season and to keep cofferdams in the river and place riprap revetments around the cofferdams. At this time CalTrans also proposed several additions and changes to the original project as approved under CDP No. 1-04-014 including requests for approval of unpermitted development that is the subject of this enforcement proceeding. On June 16, 2006, the Commission conditionally approved the amendment request, in part, but denied the request for after-the-fact approval of the unpermitted development that is the subject of this enforcement action.

Cease and Desist Order

The Commission's authority to issue Cease and Desist Orders is set forth in Section 30810(a) of the Coastal Act, which states the following:

> *If the commission, after public hearing, determines that any person or governmental agency has undertaken, or is threatening to undertake, any activity that (1) requires*

a permit from the commission without securing the permit or (2) is inconsistent with any permit previously issued by the commission, the commission may issue an order directing that person or governmental agency to cease and desist.

The Executive Director of the Commission is issuing this notice of intent to commence Cease and Desist Order proceedings to require both MCM Construction, Inc. and the California Department of Transportation to cease and desist from conducting any further unpermitted development at the Subject Property and to require both parties to comply with all terms and conditions of Coastal Development Permit No. 1-04-014 as amended on June 16, 2006.

Section 30600(a) of the Coastal Act states that, in addition to obtaining any other permit required by law, any person wishing to perform or undertake any development in the coastal zone must obtain a coastal development permit (CDP). "Development" is defined by Section 30106 of the Coastal Act as follows:

"Development" means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land...change in the intensity of use of water, or of access thereto...and the removal or harvesting of major vegetation other than for agricultural purposes...

The above-listed unpermitted activities fit within this definition of development and are therefore subject to the permit requirement of Section 30600(a). A CDP was not issued by the Commission to authorize the subject unpermitted development. Furthermore, the unpermitted development is in direct violation of the terms and conditions of CDP 1-04-014.

For these reasons, the criteria of Section 30810(a) of the Coastal Act have been satisfied, and I am sending this letter to notify you of my intent to initiate proceedings for the Commission to determine whether to issue a Cease and Desist Order.

Based on Section 30810(b) of the Coastal Act, the Cease and Desist Order may be subject to such terms and conditions as the Commission may determine are necessary to ensure compliance with the Coastal Act, including removal of any unpermitted development or material or mitigating for the loss of resources caused by the unpermitted activity.

In accordance with Sections 13181(a) of the Commission's Regulations, you have the opportunity to respond to the Commission staff's allegations as set forth in this notice of intent to commence Cease and Desist Order proceedings by completing the enclosed Statement of Defense (SOD) form. **The SOD form must be returned to the Commission's San Francisco office, directed to the attention of Aaron McLendon, no later than September 28, 2006.**

Please be advised that Section 30820(a) provides for civil liability to be imposed on any person who performs or undertakes development without a coastal development permit and/or that is inconsistent with any coastal development permit previously issued by the Commission in an amount that shall not exceed $30,000 and shall not be less than $500 per violation. Section 30820(b) provides that additional civil liability may be imposed on any person who performs or undertakes development without a coastal development permit and/or that is inconsistent with any coastal development permit previously issued by the Commission when the person intentionally and knowingly performs or undertakes such development, in an amount not less than $1,000 and not more than $15,000 per day for each day in which each violation persists. Section 30821.6 provides that a violation of a cease and desist order can result in civil fines of up to $6,000 for each day in which each violation persists.

The Commission staff intends to schedule the hearing for the Cease and Desist Order during the Commission's October 11-13 meeting in Los Angeles. However, as discussed in our May 2006 meeting and stated previously in this letter, we would like to work with you to resolve these issues amicably and are willing and ready to discuss acceptable terms of a Consent Order. If you are interested in discussing the possibilities of a consent order, please contact Aaron McLendon at (415) 904-5220 or send correspondence to his attention at the address listed on the letterhead when you receive this letter to discuss options to resolve this case.

Sincerely,

Peter Douglas
Executive Director

cc: Lisa Haage, Chief of Enforcement
Aaron McLendon, Statewide Enforcement Analyst
Alex Helperin, Staff Counsel
Nancy Cave, Northern California Enforcement Supervisor
Bob Merrill, North Coast District Manager
Melanie Faust, Senior Staff Analyst, Transportation Specialist

Enc. Statement of Defense Form for Cease and Desist Order
Coastal Development Permit No. 1-04-014

Exhibit G
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

RECEIVED

SEP 29 2006

CALIFORNIA
COASTAL COMMISSION

Memorandum

Flex your power!
Be energy efficient!

To: Aaron McLendon
Statewide Enforcement Analyst
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

Date: September 28, 2006

Exhibit H
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

From: JRC-For
Charles C. Fielder, District 1 Director
California Department of Transportation
1656 Union Street
Eureka, CA 95501

Subject: Statement of Defense V-1-06-003

Following is the official response from the California Department of Transportation (Caltrans) to your office's Notification of Intent to Commence Cease and Desist Order Proceedings letter dated September 8, 2006.

Response to page 7, Item 1, "Dropping Demolished Bridge into Van Duzen River"
The bridge demolition began on August 3, 2005. Bridge concrete and rebar, which dropped on that day, never fell into the wetted channel. The Caltrans Biologist notified California Coastal Commission ("CCC") staff that the old bridge had been dropped onto the river's gravel bar. And, a containment box was placed over the wetted channel days later as the measure to prevent demolition debris from falling into the wetted channel. All demolition debris, which fell on August 3, 2005, fell onto gravel bars.

Caltrans concurs that the Coastal Development Permit ("CDP") requires that the permittee comply with the Department of Fish and Game's ("DFG") Streambed Alteration Agreement and the Regional Water Quality Control Board's ("RWQCB") Section 401 Certification.

Caltrans concurs with the conclusion regarding Special Condition 11.A of the CDP, requiring plan approval for demolition capture of the existing bridge.

For the purpose of the application of Special Condition 11.B (7), which the Notice of Intent for Cease and Desist Order ("NOI for CDO") alleges was violated on August 3, 2005, no bridge decking, concrete or concrete/rebar, ever fell into the water of the Van Duzen River.

With respect to Condition 2 of the RWQCB Section 401 Certification, none of the concrete and rebar which fell onto the gravel bars ever entered waters of the State. In fact, there was no rainfall on August 3, or on any subsequent days, when the contractor cleaned

up and removed the concrete and rebar debris from the gravel bars on or about August 4th through the 15th, 2005. At Caltrans' request and per Section 11.B (2) of the CDP, namely

> "Any and all debris resulting from construction activities shall be removed from the project site within 10 days of project completion ...",

the contractor removed demolition debris from the gravel bars and disposed of said material in accordance with the CCC approved disposal plan. Under the conditions and circumstances at that location and Caltrans' prompt removal actions, between early and mid-August, 2005, there was never a threat that this debris could enter the wetted channel via rainfall or runoff. Finally, prior to the end of August 2005, the remainder of the bridge deck was successfully demolished and removed without further incident.

With respect to the allegation that the bridge demolition on August 3, "clearly impacted the species that the conditions were designed to protect," Caltrans denies this allegation on the following basis: Caltrans personnel involved in inspecting and overseeing the removal of the demolished bridge from the gravel bar, including the Biological Monitor, did not observe any direct impacts to aquatic species. Moreover, the alleged violation is inconsistent with the ongoing, large gravel mining operation in the river and adjacent to the project, as well as those mining operations upstream and downstream of the project.

Response to page 7, Item 2, "Sedimentation of the Van Duzen and Eel Rivers"
On August 25th and 26th of 2005, Caltrans and the Contractor were actively working on installation of the cofferdam at Pier 3, and there was a sediment plume associated with that work. By the morning of August 27th, the plume had cleared. When the sheet piles were driven into the ground, in order to isolate the work area, they came into contact with buried, underground obstructions and were damaged. The cofferdam was effectively in the ground, but would not seal itself against continuous leaks due to separations of the sheet piles that were caused by the obstruction. The contractor began to excavate a portion of the gravel bar, in order to remove the obstruction. It was during this unplanned activity that the gravel berm between the excavation and the low flow channel failed, hydraulically connecting the excavation site to the wetted channel.

The Biological Monitor(s) recorded the sediment discharge in their daily notes on both of the days in question. At the suggestion of the Biological Monitor, a water bladder was installed to hydraulically separate the excavation required to repair and complete construction of the cofferdam. Excavation behind the water bladder was completed and no additional sedimentation occurred.

The activities of specific site personnel are under review, however, the project records indicate that work continued after the berm failure on August 25, 2005, with concurrence of the Biological Monitor. And during the sediment release noted on August 26, 2005, work was temporarily suspended, based on a recommendation of the Biological Monitor.

In the NOI for CDO, Item 2, page 8, paragraph 1, second to the last sentence, CCC staff states that, "[temporary crossing], which was never constructed at all". This statement is incorrect. A temporary crossing was built during the first week of August 2005. Clean washed gravel was used to build the abutments on the edge of both banks, in order to span the river using 80 foot steel girders.

Since CCC staff first notified Caltrans in March 2006, of the violations now identified in the NOI for CDO, the CDP has been amended. The amended CDP number is 1-04-014-A1. The amended CDP clearly defines the role of the Biological Monitor in new SC 17A-H. Both the Environmental Construction Liaison and the Biological Monitor, "have the authority to order the immediate cessation of any activity".

Response to page 9, Item 3, "Equipment Storage and Fueling on the Gravel Bar, Storage and Leaking of Fuel, and Compaction of Earth in the Active River Channel"
The Coastal Commission approved the Storm Water Pollution Prevention Plan ("SWPPP") for the project prior to commencement of construction. The SWPPP indicated that fueling could occur anywhere within the project limits, excluding the low flow channel, provided that proper Best Management Practices ("BMPs") were employed. This SWPPP specifically addresses CCC requirements for containment, as well as storage of fuels and drip protection. During the 2005 construction season, there was an incidental discharge of vegetable-based hydraulic oil, which was cited by the RWQCB. This violation was resolved by payment of fine to the RWQCB.

In regards to the allegation of compaction of earth in the active river channel, the amended CDP allows that those materials originally excavated from the Pier 3 cofferdam, which were intended for backfill of the necessary excavation, may remain on the gravel bar adjacent to the excavation as long as adequate BMPs are in place to ensure containment. During the 2005 construction season, the contractor stockpiled excavation material and compacted it on the gravel bar to construct an equipment work platform. At the end of the 2005 construction season, all the excavated material was removed and relocated to an upland stockpile. This stockpile management practice was cited by the RWQCB; however, no excavated material was washed into the Van Duzen River.

Response to page 10, Item 4, "Inadequate Temporary Bridge Construction/ Unpermitted River Crossings and Work within Active Channel

Ambiguities and inconsistencies existed between the original CDP and the other environmental permits for the project, which the CDP both cross-references and seeks to enforce. Caltrans believes the Commission has acknowledged these problems in its Amended CDP. For example, in the DFG Streambed Alteration Agreement (04-0097), it states,

> "During construction in flowing water which can transport sediment downstream, the flow shall be diverted around the work area by pipe, pumping, or temporary diversion channel. When any dam or artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain fish life before the dam. Equipment may be operated in the stream channel of flowing live streams only as necessary to construct the described construction. The operator may channel the low flow into a pipe of adequate size to hold low flows and place native gravels over it to create an equipment work area."

By contrast, the original CDP did not permit channel diversion. The sediment plumes of August 25th and 26th, identified in Item 2 of the NOI for CDO, could have been avoided had the original CDP been reconciled with the DFG Permit, and not forced the contractor to work needlessly close to the low flow channel thereby increasing the risk of failure.

Moreover, the DFG diversion condition is consistent with the U.S. Army Corps of Engineers Nationwide Permit 33, Temporary Construction, Access and Dewatering (File No. 27762N), which provides,

> "Temporary structures, work and discharges, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites; provided that the associated primary activity is authorized by the Corps of Engineers or the USCG, or for other construction activities not subject to the Corps or USCG regulations. Appropriate measures must be taken to maintain near normal downstream flows and to minimize flooding. Fill must be of materials, and placed in a manner, that will not be eroded by expected high flows. The use of dredged material may be allowed if it is determined by the District Engineer that it will not cause more than minimal adverse effects on aquatic resources."

The same contradiction with the CDP occurs in comparison with the RWQCB 401 Certification (WDID No. 1B04029WNHU),

> "The proposed project requires temporary diversion of the Van Duzen River. A temporary dike will be constructed of river-run gravel to divert the river around the work areas."

Per Section 30412 of the California Coastal Act:

> "(b) The State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality. The State Water Resources Control Board has primary responsibility for the administration of water rights pursuant to applicable law. The commission shall assure that proposed development and local coastal programs shall not frustrate this section. The commission shall not, except as provided in subdivision (c), modify, adopt conditions, or take any action in conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality or the administration of water rights."

Since CCC staff first notified Caltrans in March 2006 of the violations now identified in the NOI for CDO, the CDP has been amended. The Amended CDP, though conditioned, accommodates the same general design of the temporary bridge from 2005, as Caltrans and the contractor demonstrated that a complete span of the low flow channel is not feasible.

Response to page 10, Item 5, "Failure to Cease Construction And Remove All Temporary Construction Devices by October 15, 2005"

On October 7th, 2005, Caltrans met on site with all permitting agencies, excluding the CCC, as they were unable to attend. On October 13, 2005, Caltrans was able to meet with Melanie Faust of the CCC, in order to assess the status of the construction schedule at the job site. All agencies, except the CCC, have informal mechanisms for work window extensions based on favorable weather conditions. The weather predictions indicated favorable conditions and no sign of rain. It was noted at that time by CCC staff that extensions were not allowed informally. Caltrans did not pursue obtaining the informal extensions from other agencies based on the inability to obtain an extension from CCC. The schedule was modified to immediately remove the temporary bridge and sedimentation basin, and to prepare the cofferdams for over-wintering in order to close up the site as quickly as possible. Caltrans and the contractor were completely out of the river channel on October 20th, 2005. All other agencies were aware that work continued past October 15th, in order to prepare for winter, and that no adverse impacts were

observed by the Biological Monitor during winterization. Caltrans requested an emergency CDP to address over-wintering the cofferdams in the river channel and placement of associated temporary RSP, which was granted (1-05-052-G).

U.S. Department of Commerce
NOAA, National Marine Fisheries Service

OFFENSE INVESTIGATION REPORT

1. Computer Control Number	SW060038
2. Date of Report	3/13/06
3. Enforcement Action Report No.	

4. Subject's Name	5. Date of Birth	6. SSN or EIN
CALTRANS ctm		
7. Home Address & Phone Number	**8. Business Address & Phone Number**	**9. Related CCN Number(s)**
1656 Union Street Eureka CA 95501	707 441-3989 Supervisor Ron Den Heyer	
10. Vessel Name	**11. Vessel Type**	**12. Vessel Call Sign or Official Number**
13. Home Port	**14. Country of Registry**	**15. Hailing Port**

16. Vessel Owner or Business (Name, Address, Phone Numbers)

17. Seized Property

(a) Log Sheet/ Receipt No.	(b) Description	(c) Quantity	(d) Total Value	(e) Location Stored	(f) Disposition

18. Violation Summary

Count #	Type Code	Viol. Code	Date / Time	Regulation or Statute	Place of Violation	Fish Plan
N/A	ES	V	8/26/05	16 USC 1538 (a) (1) b ctm	Van Duzen Bridge HWY101	ES

Agent/Officer Name	I.D. Number	Duty Station or Vessel	Status	Source Code
David Reilly	2284	Arcata CA	305	14

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

CALTRANS HWY101 Bridge Van Duzen River	SW060038
CALTRANS	

DATE: 1/9/06

TO: Case File

FROM: (David L. Reilly), Special Agent

SUBJECT: Investigative Report

SYNOPSIS: By failing to follow the (CDFG)California Department of Fish and Games 1600 Stream Bed Alteration Agreement, (CALTRANS) The California Department of Transportation caused a large amount of sediment to enter into the Van Duzen River.

VIOLATIONS: Endangered Species Act of 1973, as amended Title 16 USC, Section 1538 (a) (B).

WITNESSES:

Ron Den HEYER CALTRANS Supervisor P.O. Box 3700 1656 Union Street Eureka, CA 95501 (707)441-3989

Geoffrey WRIGHT CALTRANS Resident Engineer P.O. Box 3700 1656 Union Street Eureka, CA 95501 (707)768-9206

David MORGAN CALTRANS Engineer P.O. Box 3700 1656 Union Street Eureka, CA 95501 (707)768-9206

Melinda MOLNAR CALTRANS Biologist P.O. Box 3700 1656 Union Street Eureka, CA 95501 (707)445-6627

Steve HANSEN CALTRANS Contract Biologist P.O. Box 3700 1656 Union Street Eureka, CA 95501 (707)445-6627

James FROLAND CALTRANS Contract Biologist P.O. Box 3700 1656 Union Street Eureka, CA 95501 (707)445-6627

Ed RAMOS CDFG Game Warden 619 2nd Street, Eureka, CA 95501 (707)725-1050

Mark NEELY NWRWQCB Scientist North Coast Regional Water Quality Control Board 5550 Skylane Boulevard, Suite A Santa Rosa, California 95403 Phone (707) 576-2220

Melanie Faust North Coast District California Coastal Commission 710 E Street, Suite 200 Eureka, CA 95501 (707) 445-7833

NARRATIVE: On 8/29/05 I received an email from NOAA Fisheries (PRD) Protected Resource Division Margaret TAUZER, that someone was complaining about a sediment issue on the Van Duzen River. The email (ATTACHMENT 1) read:

"While surveying the Van Duzen Delta, August 25-26, the Van Duzen River was running turbid for nearly the entire two-days of our work. Depth of visibility into the Van Duzen at the confluence was approx. 4-6 inches for most of the two days. The contractor replacing the Highway 101 Bridge over the Van Duzen is apparently producing the turbidity that is reaching the Eel River and compromising water quality. This project will likely last until the late fall. There must be turbidity management conditions or BMPs that can reduce or eliminate this condition if it is expected to be a lasting effect.

It may be considered to have someone check on the project.

Paul Kraus"

On 8/29/05 at 1pm I met with (CDFG) California Department of Fish and Game, Game Warden Ed RAMOS at the Van Duzen HWY101 Bridge to look into the sediment complaint. While on site I met with the (CALTRANS) California Department of Transportation contract biologist James FROLAND. FROLAND explained that on August 26, a contractor named MCM had been excavating in the wetted part of the Van Duzen River, and they had caused a large sediment plume. FROLAND stated the sediment plume reached the Eel River which is approximately 200 to 300 yards from the HWY101 Bridge site. FROLAND explained that his job is to over see what is going on and to notify CALTRANS if there are any violations or potential violations of the numerous federal and state permits that are needed for the project. According to FROLAND, earlier this morning the contractor was working on one of the bridge piers and the vibrations shook the ground causing the sediment from 8/26/05 discharge to stir again, making the Van Duzen River flow cloudy. Apparently so much sediment was discharged from 8/26 that any movement of the ground near the river was continuing to stir up the sediment.

I also met with a Jeffery WRIGHT who is the CALTRANS Engineer who is responsible for administering the Contracts for CALTRANS at this project site. WRIGHT stated that he had not been on site that day, but now wanted to know what he could do to stop the sediment discharge from continuing. **WRIGHT stated that he knew there was a major problem going on, and that he wanted to work with officials to resolve this issue.** CDFG Game Warden RAMOS and CALTRANS FROLAND and I discussed several possible solutions and it was decided that the Water Bladder system would be the best way to go, in order to prevent future sediment discharges. FROLAND gave WRIGHT the name and number of a person in Carlota who runs a water bladder business and suggested that CALTRANS call this person. CDFG Game Warden Ed RAMOS stated that based on what he observed and had heard he believed that there had been a violation of the CDFG 1600 Stream Bed Alteration Agreement.

I took several photographs of the site (ATTACHMENT 2) I observed much sediment along the banks of the river, it was like a blanket of fine mud, and it coated everything in the water channel and banks. I looked at the bridge pier on the north side of the bank and noticed that there was a partial rock coffer dam

around the pier but it had not been completed. FROLAND explained the rock coffer dam should have been completed before doing work on the pier. If the rock coffer dam had been completed, not as much sediment would have shaken up.

I walked about 50 yards upstream of the bridge construction site and observed a clean river bed and bank with no sediment. From the bridge construction site to the Eel River several hundred yards away there was a fine layer of mud on everything. FROLAND stated that he told the CATRANS engineer on site on 8/26 that he didn't think the heavy equipment should be operating in the wetted channel, because he thought it was a violation of the California Coastal Commission permit. FROLAND stated that he believed his role was to advise and not to shut the project down. The CALTRANS Engineer on site on 8/26/05 was a David MORGAN.

I asked FROLAND what he had seen on 8/26/05. FROLAND stated that in the early morning he looked over the site and he could see that heavy equipment had already been operating in the wetted channel from maybe the day before. FROLAND stated that on August

18th he had explained to CALTRANS MORGAN that when excavating in the wetted channel they will need silt fencing or sediment control. At 07:30 am he watched the Heavy Equipment Excavator start up and go into the wetted channel. He said the Excavator was digging into the river channel 8-10 feet down, feeling around and digging up old rip rap. At this time there was **no containment** to prevent the sediment from going down stream. At 10:30 am FROLAND tells CALTRANS MORGON this is really bad, there is much turbidity being stirred up. MORGAN at this point tells MCM to shut down and to wait for a while to let the river clear up. At 12:30pm the river was clear again. At 1:00pm the Excavator starts digging again causing a large sediment plume to flow all the way to the Eel River. At 2:30pm FROLAND observes the Excavator dumping river rock into the wetted channel so that the Excavator could move out on to the dumped rock to dig further out in the wetted channel. FROLAND stated he asked the MCM Contractor a Jim HAM if he was using washed rock as stated in the permits. HAM responded that it was river rock and that it was the same as washed rock. FROLAND stated that by 3:30pm the mouth of the Van Duzen by the Eel River had cleared but a plume

of sediment was still coming out of the construction site and heading down stream.

On 8/30/05 AquaDam contractor Dave DOOLAEGE starts to install a water bladder dam around the area of the north pier. While installing the water bladder I could see a large sediment discharge caused by the workers walking in the channel. So much sediment is in the river bed now, that just having three workers walking in the water, sent a sediment plume large enough to head 30 yards downstream. I took several photographs of this plume. (ATTACHMENT2 Photo album)

On 9/2/05 I met with the Lead CALTRANS Engineer for the project Geoffrey WRIGHT and his supervisor Ron Den HEYER at their office in Hydsville. WRIGHT stated that he was in charge of paper work issues such as dealing with the MCM Contractor. WRIGHT stated that CALTRANS Field Inspector David MORGAN was in charge of the site on 8/26/05. WRIGHT stated that he was not on site during the event on Friday the 26th, but did show up later in the afternoon around 5:30pm. I asked who is the CALTRANS employee who would have been in charge of the operation on 8/26/05.

WRIGHT stated that MORGAN was in charge. WRIGHT stated that contract biologist FROLAND had authority to shut the project down if he thought there was a problem. CALTRANS Lead Supervisor Ron Den HEYER interrupted and stated that it was David MORGAN's job to shut the project down not FROLAND.

Ron Den HEYER stated that it's the contract biologist job to make sure the project is in compliance with the permits, and to notify CALTRANS inspectors if there is a problem. Den HEYER stated that the lead CALTRANS biologist is Melinda MOLNAR, and she is the environmental construction liaison. Den HEYER stated that CALTRANS has the authority to stop a project if there is a problem. Den HEYER stated that the MCM Contractor Superintendent for the project is a James HAMM.

On 9/6/05 I met with CALTRANS David MORGAN. MORGAN stated that he over sees the project and listens to advice, but is not in charge. Morgan stated that FROLAND spoke to him on 8/26/05 at 10:30am about the sediment discharge, and after this meeting he stopped the contractor from continuing. MORGAN stated that he told the contractor to wait two hours, and they started back up

at 12:30pm. MORGAN stated that the permits are so generalized that their hard to interpret. MORGAN stated it was his understanding that the contractor can dig on the edge of the wetted channel then progress in the wetted channel. MORGAN stated that if a biologist comes to him, he will shut things down if there is a problem. MORGAN stated that he had talked to an Even PAIN of MCM about the wording of what excavating was, and whether the digging in the active channel was considered excavating. According to MORGAN MCM PAIN yelled at him saying "no this isn't excavating, Ill show you what F_cking excavating is"

On 9/6/05 I spoke by phone to CALTRANS Biologist Steve HANSEN. HANSEN stated that the permits are part of the bid package, and that the CALTRANS engineer is in charge of making sure the permits are complied with. MCM has copies of the permits on site. The CALTRANS Environmental Branch sees the permits before bidding goes forth. HANSEN stated that the CALTRANS Resident Engineer is fully responsible for what goes on at the site. HANSEN stated that on Thursday the 25th, he said to Jeff (WRIGHT) "Jeff you cannot dig in the active flowing water and be in

compliance with the permit. HANSEN then had Jeff (WRIGHT) read over the permit. HANSEN stated that the contractor was directed to do what they did, and that CALTRANS David MORGAN was in charge of the site at the time. HANSEN stated that there is a fear within CALTRANS to slow down a project or stop a project. The fear is that the contractor will file a claim against CALTRANS.

On 9/28/05 I received the notes from CALTRANS biologist James FROLAND and Steve HANSEN from lead CALTRANS biologist Melinda MOLNER. (ATTACHMENT 3)

In the notes of CALTRANS Biologist Steve HANSEN for day 8/24/05 it reads:

Date 8/24/05

07:30

Meet with Jeff Wright,RE, Discuss job requirements for monitoring in-water work. **Discussed permit requirements pertaining to work in waterway with Jeff. Specifically DFG 1601 Item 7.** Recommended enclosing RSP excavation area at Pier 3

cofferdam location to limit incidental silt plume likely from in stream excavation.

09:45 A school of about 15 trout (75mm-150,, long) actively feeding in mid-water and downstream from old pilings in the river.

Notes from day 8/25/05:

10:40 isolation berm collapsed into excavation, excavation hole now joined to the river.

11:00 plume from digging 75m downstream from temp constr br.

2:00 called Jeff Wright(RE), left message and paged. Recommended suspending in-water work until plume clears.

2:25 contractor finished filling in excavated hole and started in-water excavation.

2:50 contractor dug out K-rail section that collapsed into river from his previous hole.

3:05 contractor stopped in-water excavation.

3:40 Jeff Wright met on site to discuss plume problem- I recommended isolating the work area.

In the notes of CALTRANS Biologist James FROLAND for day 8/26/06 it reads:

7:00am- stream at worksite is clear, and there are depressions in the channel at Pier 4 from recent excavation. No silt containment structure are present

7:30am- Excavator begins working in flowing channel, excavating gravel and buried rock riprap from around Pier 4. Heavy turbidity present and moving downstream.

10:00am- Excavator has worked continuously in water on Pier 4 since early morning. Turbidity plume has moved downstream to within 100 yards of the Eel River and continues to flow downstream. Contact CT regarding problem.

10:30am- Excavator shut down by CT until after lunch period.

11:30-12:30 Lunch Break

1:00pm- Excavator resumes removing rock from flowing channel around Pier 4. Sediment plume is entering Eel River, and the entire lower Van Duzen R. below jobsite is substantially turbid. VDR temp 72 deg.F Eel River 68 deg.F

1:30pm- observed dozer cross the river without escort, as required in NOAA Fisheries permit. CT notified operator of requirement. At 2:00pm- I assist the operator to cross back in dozer. Excavator appears to be finished digging at Pier 4.

2:30pm- Dozer pushed excavated material back into the channel at Pier 4 to function as a work pad, then excavator began digging again at Pier 4 footing and buried riprap. Turbidity has traveled downstream since excavating recommenced at 1:00pm.

On 1/31/06 I spoke to Melaine FAUST of the California Coastal commission about violations of their permits. FUAST stated that CALTRANS did not follow the permit as required. FAUST sent me the California Coastal Commission permit for this project TH17c application number 1-04-014 (ATTACHMENT 4) FAUST went on to send me an email on what violations she documented(ATTACHMENT 5) the email reads :

When you called today, I explained that Caltrans and the contractor did not undertake the project in accordance with the approved project description. This means that Caltrans, as applicant, submitted a proposed project description, which the Commission reviewed and approved with the additional imposition of the permit conditions. If an applicant opts to change a project, that change triggers the need for an amendment to the permit, unless the Executive Director determines that no amendment is required. It appears that in a number of examples, Caltrans/contractor undertook development in a manner that was

not in accordance with the approved project, without seeking the necessary amendments. We discussed a few examples, such as the way they dropped the bridge deck (they did the same thing in violation of CDFG requirements when they replaced the northbound Van Duzen bridge some years back - though Caltrans now claims to have destroyed the project logs maintained by the Caltrans supervisor on that job), improper installation and use of temporary bridge, installing coffer dam within live waters of the Van Duzen instead of properly diverting the flow away from the installation site (sediment plume arose because of this improper sequence/installation), etc. We also note that Caltrans authorized placement of riprap on the northern bank of the Van Duzen last season, which is not authorized in the permit.

On 1/31/06 I spoke by phone with a Dennis HALLIGAN a Fisheries Biologist with the Natural Resource Management Corporation. HALLIGAN stated that on 9/1/05 he and his group conducted a fish survey at the mouth of the Van Duzen River. (ATTACHMENT 6) According to HALLIGANS email of his fish survey three Federally Listed Steelhead were observed inn this general area.

"I conducted in stream habitat mapping and an underwater survey in the Van Duzen River on September 1, 2005. The survey reach extended upstream from the river's mouth for approximately 2,530 feet.

Instream habitat within the reach consisted entirely of three long, wide and shallow flatwaters and three short, narrow riffles. Water depth through this reach ranged from three inches to one-foot. Water temperature at 12:45 pm was 21.5 degrees Celsius. Juvenile salmonid rearing habitat within this reach was nearly nonexistent. The only exception was a single small rootwad scour hole that was located approximately 830 feet upstream of the river mouth at the base of a riffle. Three Age 1+ and one Age 2+ steelhead were observed at this location along with about 20 juvenile Sacramento pikeminnow.

The substrate along the bottom of the channel was covered in algae. I did not see any evidence of recent fine sediment deposition in this reach."

When reading the CDFG Streambed Alteration Agreement 04-0097 (ATTACHMENT 7) under number seven it reads "

During construction in flowing water which can transport sediment downstream, the flow shall be diverted around the work area by pipe, pumping, or temporary diversion channel. When any dam or artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain fish life below the dam. Equipment may be operated in the stream channel of flowing live streams only as necessary to construct the described construction. The operator may channel the low flow into a pipe of adequate size to hold low flows and place native gravels over it to create an equipment work area."

Currently the (NWRWQCB) California Regional Water quality control Board has taken a civil enforcement action on this matter. (ATTACHMENT 8) On 2/3/06 I received an email from Mark NEELY of the NWRWQCB concerning the violations and what was being done (ATTACHMENT 9). The email is a press release and it states

" REGIONAL WATER BOARD COLLECTS FINE TO PAY FOR CLEANUPS

SANTA ROSA - On Monday, January 30, 2006, the North Coast Regional Water Quality Control Board received a $101,000 payment of an Administrative Civil Liability Complaint from the California Department of Transportation (Caltrans) for failing to comply with the requirements of a Section 401 Water Quality Certification for a Highway 101 bridge replacement project on the Van Duzen River near Fortuna (Humboldt County).

The money will be put in an account dedicated to cleaning up water pollution problems.

Staff issued the complaint after an investigation revealed that Caltrans failed to adhere to the requirements and best management practices included in the water quality certification for the project, and the discharge or threatened discharge of sediment, oil, petroleum products, and other construction materials into the river. Caltrans waived its right to a hearing on the matter.

Based on the information and evidence collected I believe the large sediment discharge on 8/26/05 was caused by CALTRANS

violating their 1600 Stream Bed Alteration Agreement as well as violating the California Coastal Commissions permit, and conditions. The operation on 8/26/05 of heavy equipment (excavator) digging in the live wetted channel, without diverting the flow around the construction site, caused a large sediment discharge to occur. The Van Duzen River is according to the US Environmental Protection Agency a Sediment impaired river (ATTACHMENT 10). Three federally listed fish spawn and rear in the Van Duzen River including Coho Salmon, Chinook Salmon and Steelhead. (ATTACHMENT 11)

ATTACHMENTS:

1. Margaret TAUZERS Email
2. Photo Album
3. CALTRANS Biologist Notes
4. California coastal Commission Permit
5. California Coastal Commission email
6. Dennis HALLIGAN Fish Survey
7. California Department of Fish and Game 1602 permit
8. Regional Water Quality control Board Enforcement Action
9. Regional Water Quality control Boards Press Release
10. EPA Report on Van Duzen River
11. NOAA Fisheries Listed Fish List for Northern California

I declare, under penalty of perjury under the laws of the United States of America, that the foregoing OIR, is true and correct to the best of my knowledge.

Signature

3-14-06
Executed on

ARCATA CA
Duty Station

Special Agent
Title

Subject: [Fwd: [Fwd: Van Duzen River - Highway 101 Bridge Work]]
From: David Reilly <David.Reilly@noaa.gov>
Date: Mon, 29 Aug 2005 10:05:56 -0700
To: Ed Ramos <ERAMOS@dfg.ca.gov>, Jonathan Willcox <JWillcox@dfg.ca.gov>

I will be looking into this, wanted to make sure you where aware of this, ill keep you informed on what I find out..

Dave

-------- Original Message --------
Subject: [Fwd: Van Duzen River - Highway 101 Bridge Work]
Date: Mon, 29 Aug 2005 10:00:37 -0700
From: Margaret Tauzer <Margaret.Tauzer@noaa.gov>
Organization: NOAA Fisheries
To: David Reilly <David.Reilly@noaa.gov>, Chuck Glasgow <Chuck.Glasgow@noaa.gov>

A complaint about the Van Duzen Bridge replacement project underway...The project was consulted on by Mike Kelly about four years ago. Dan said he would contact Melinda, the Caltrans person responsible for compliance.

-------- Original Message --------
Subject: Van Duzen River - Highway 101 Bridge Work
Date: Sat, 27 Aug 2005 10:05:49 -0700
From: Paul Kraus <pkerm@cox.net>
To: KELLEY REID <Kelley.E.Reid@spd02.usace.army.mil>, Margaret Tauzer <margaret.tauzer@noaa.gov>
CC: Keith Hess <drwkhess@cox.net>, Rob McLaughlin <erm@humboldt1.com>, Dennis Halligan <fish@nrmcorp.com>, Dinsmore, Doug <Doug.Dinsmore@gcinc.com>, Main, Jordan <Jordan.Main@gcinc.com>, Doug Jager <camelot3@cox.net>

Margaret: FYI

While surveying the Van Duzen Delta, August 25-26, the Van Duzen River was running turbid for nearly the entire two-days of our work. Depth of visibility into the Van Duzen at the confluence was approx. 4-6 inches for most of the two days. The contractor replacing the Highway 101 Bridge over the Van Duzen is aparently producing the turbidity that is reaching the Eel River and compromizing water quality. This project will likely last until the late fall. There must be turbidity management conditions or BMPs that can reduce or eliminate this condition if it is expected to be a lasting effect.

It may be considered to have someone check on the project.

Paul Kraus

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

Photograph taken on 8/29/05 of construction site on Van Duzen River HWY101 Bridge

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

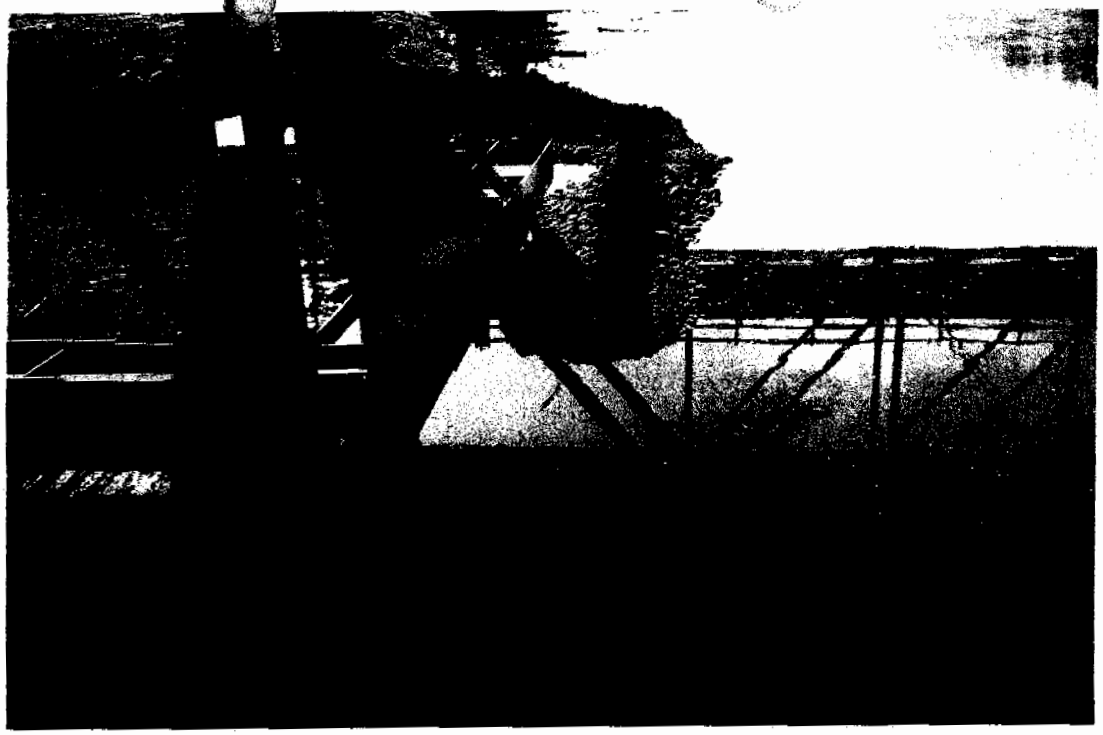
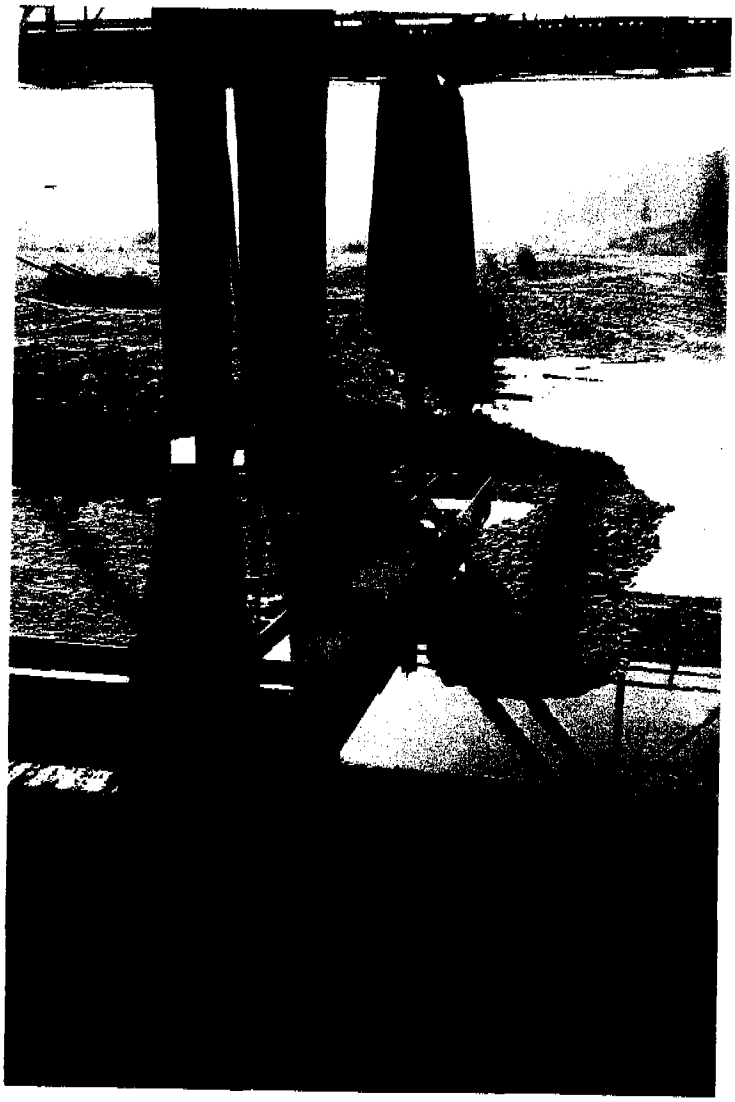
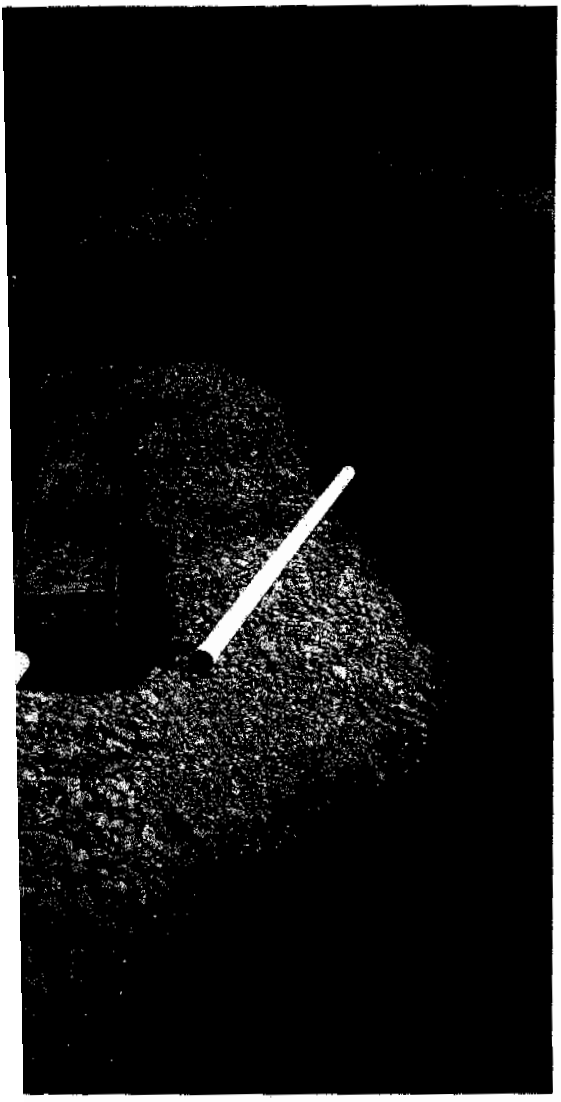


Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

These photographs were taken on 8/29/05 at a new pier site, you can see CALTRANS had not completed a coffer dam around the site as required, this was one of the main points where sediment was entering the river. On 8/25/05 heavy equipment had operated in the main channel and had caused much sediment to enter the river. On 8/29/05 while putting in the new pier, the pounding of the ground caused the sediment from 8/25/05 to get stirred up. Had CALTRANS put in the coffer dam the right way, there might not have been as much sediment getting stirred up again.



These photographs were taken on 8/30/05 of the pier site with the coffer dam in place.



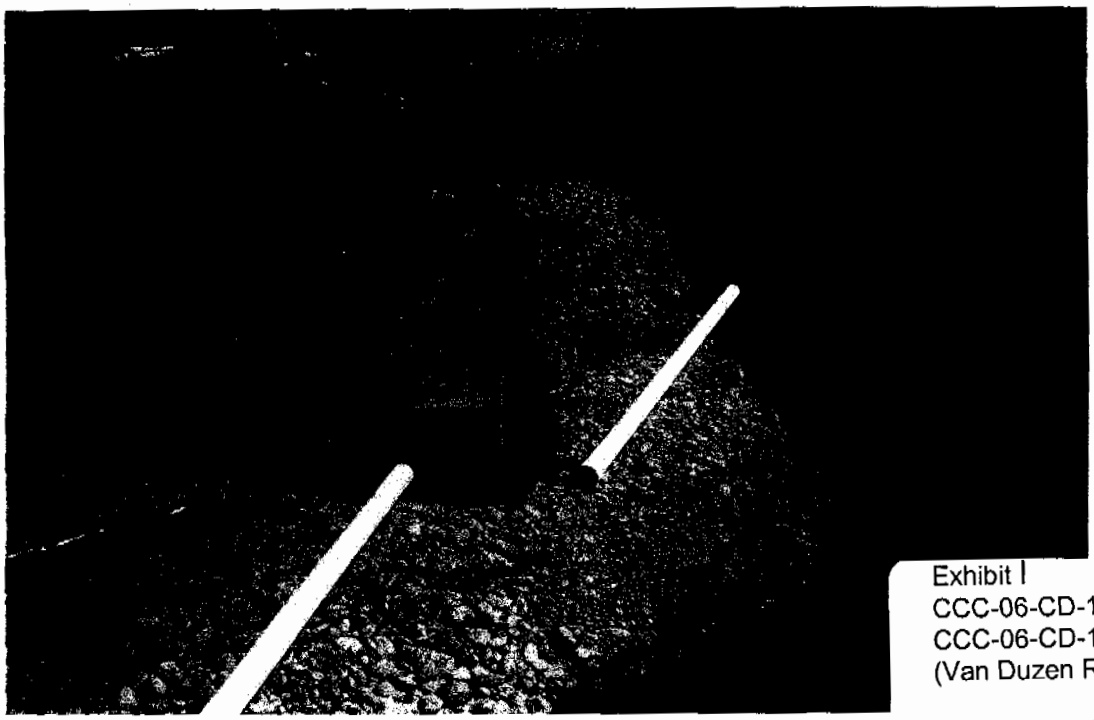
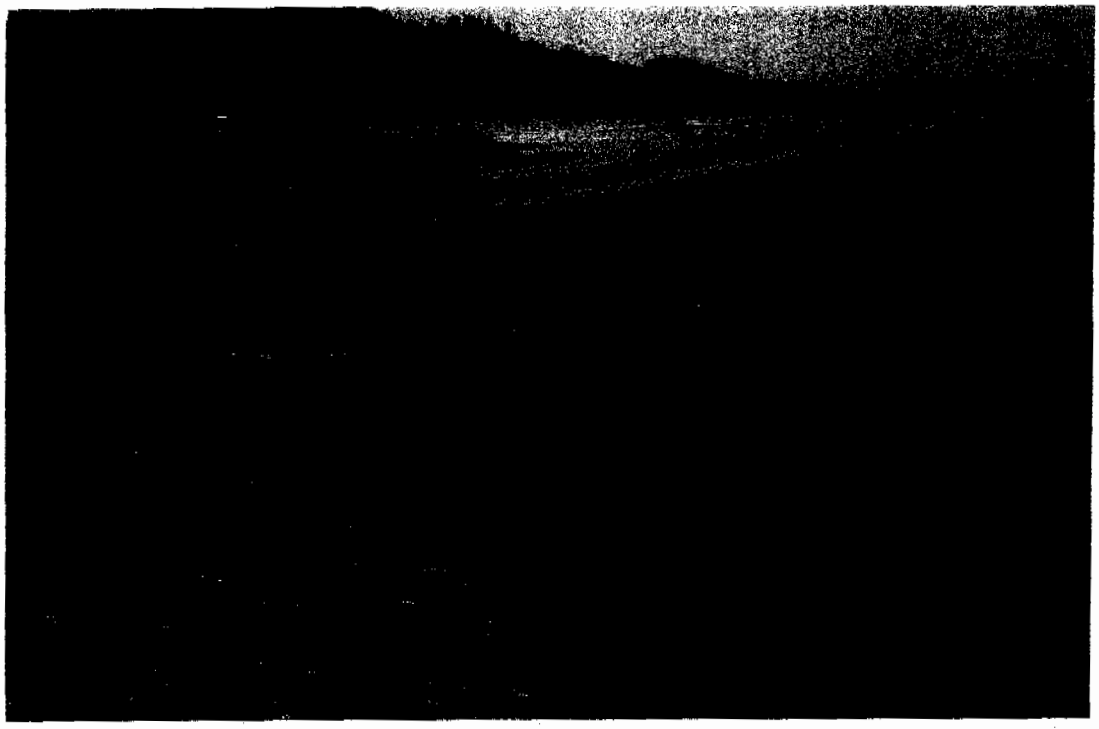
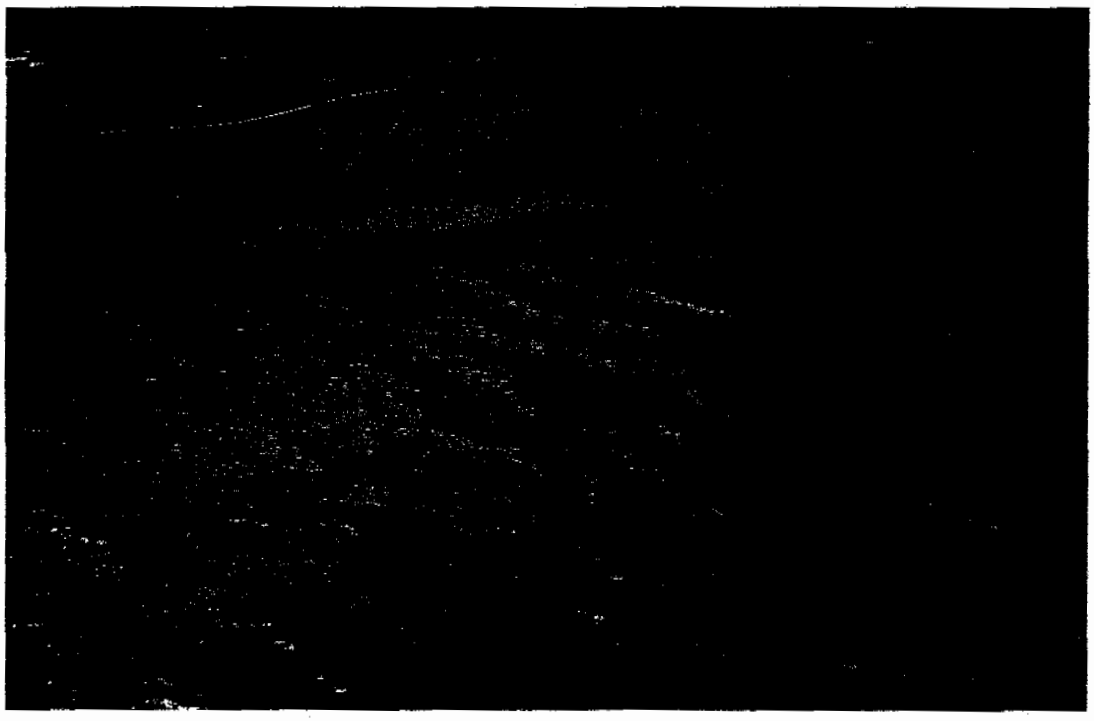


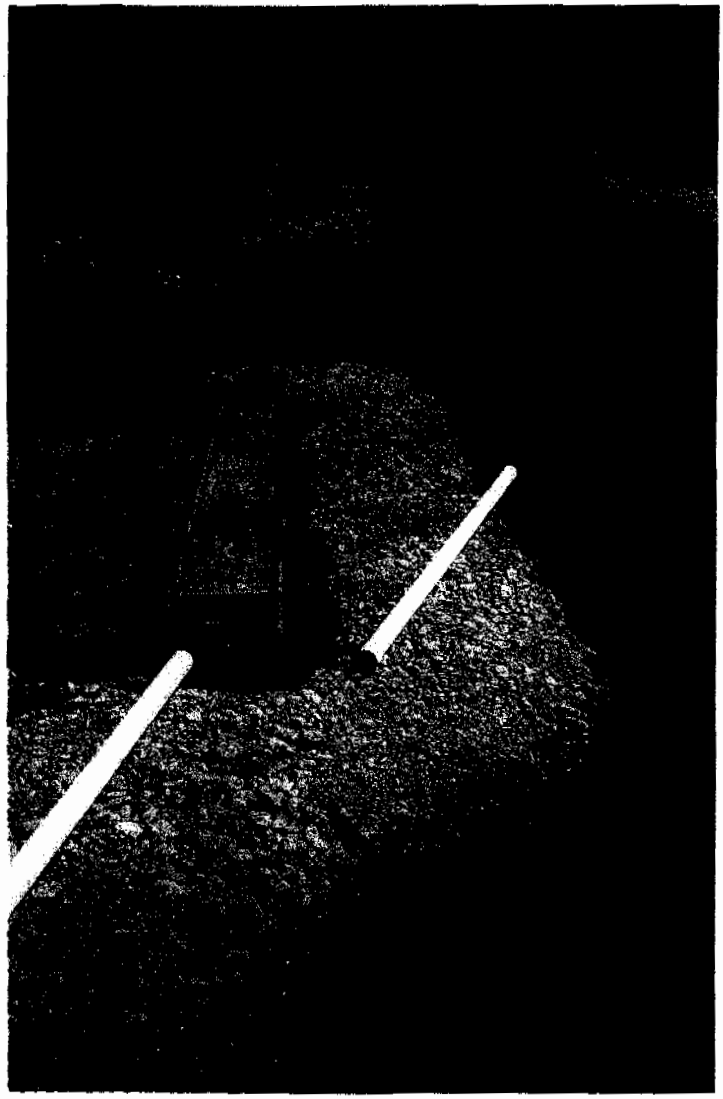
Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

This photograph was taken on 8/30/05; this was caused by workers putting in the water bladder. You can see the sediment plume heading towards the Eel River. This location is about 50 yards down stream of construction site.





These photographs were taken on 8/30/05 of the pier site with the coffer dam in place.



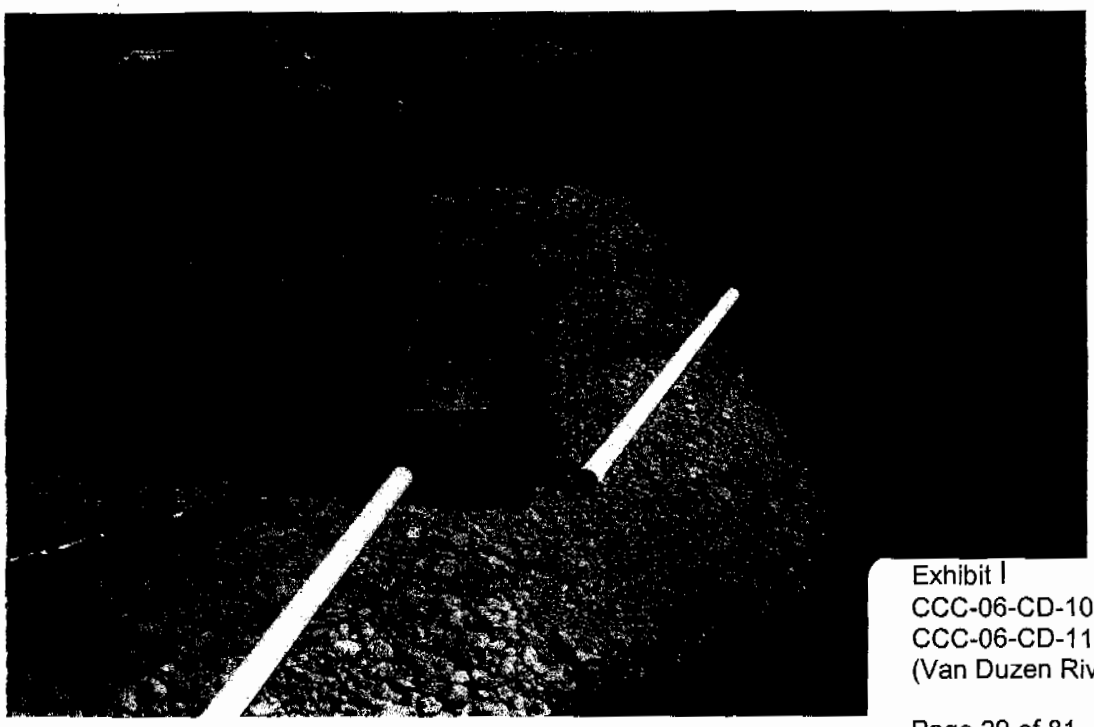


Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

These photographs were taken on 8/30/05 of CALTRANS putting in the water bladder. You can see how much sediment is being stirred up, just by people walking in the water. This sediment is from the original discharge from 8/25/05.

James Froland
Aquatic Biologist Consultant
1759 Hyland St.
Bayside, Cal. 95524
(707) 826-9591
e-mail: jlfroland@yahoo.com

Experience

Calif. Fish and Game Warden, Stream Alteration Specialist Position, Southern Humboldt and Western Trinity Counties, February 1979- December 2003 (Retired)

Scientific Aide, US Fish and Wildlife Service, Klamath River Salmon Project, Jun.-Sept. 1978

Scientific Aide, Cal. Dept of Fish and Game, Klamath River Steelhead Project, Mar.-Oct. 1977

Education

Associate Degree in Psychology, Napa Junior College 1975

Bachelors Degree in Fisheries Biology, Humboldt State University 1979

//-

CONSTRUCTION, INC.
GENERAL ENGINEERING CONTRACTORS
SACRAMENTO, CA

P.O. Box 620 / North Highlands / CA 95660-0620 / (916) 334-721

FAX COVER

Date: August 18, 2005

Page 1 of 9 (Including Cover)

TO: #273

Attention: James Ham

From: *Lisa Flores-Misajon*
Insurance/HR Administrator

Fax Number: (916) 334-8355

Comments: MSDS on the Vegetable Oil ?

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

ExxonMobil

Material Safety Data Sheets

New Search Get This Document In

601831-00 MOBIL EAL 224H
MATERIAL SAFETY DATA BULLETIN

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOBIL EAL 224H
SUPPLIER: EXXONMOBIL OIL CORPORATION
3225 GALLOWS RD.
FAIRFAX, VA 22037

24 - Hour Emergency (call collect): 609-737-4411
Product and MSDS Information:
Lubricants and Specialties: 800-662-4525 800-443-9966
Fuels Products: 800-947-9147
MSDS Fax on Demand: 613-228-1467
MSDS Internet Website: http://emmsds.ihssolutions.com/
CHEMTREC: 800-424-9300 202-483-7616

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAMES AND SYNONYMS: VEGETABLE OIL AND ADDITIVES

INGREDIENTS CONSIDERED HAZARDOUS TO HEALTH:

This product is not formulated to contain ingredients which have exposure limits established by U.S. agencies. It is not hazardous to health as defined by the European Union Dangerous Substances/Preparations Directives. See Section 15 for a regulatory analysis of the ingredients.

See Section 15 for European Label Information.

See Section 8 for exposure limits (if applicable).

3. HAZARDS IDENTIFICATION

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

US OSHA HAZARD COMMUNICATION STANDARD: Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined not to be hazardous.
EFFECTS OF OVEREXPOSURE: Not irritating according to U.S. and EC guidelines.
EMERGENCY RESPONSE DATA: Light Yellow Liquid. Note: Pressurized mists may form a flammable mixture. DOT ERG No. : NA

---

4. FIRST AID MEASURES

EYE CONTACT: Flush thoroughly with water. If irritation occurs, call a physician.
SKIN CONTACT: Wash contact areas with soap and water. High pressure accidental injection through the skin requires immediate medical attention for possible incision, irrigation and/or debridement.
INHALATION: Not expected to be a problem.
INGESTION: Not expected to be a problem when ingested. If uncomfortable seek medical assistance.

---

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog
SPECIAL FIRE FIGHTING PROCEDURES: Water or foam may cause frothing. Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.
SPECIAL PROTECTIVE EQUIPMENT: For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Note: Pressurized mists may form a flammable mixture. Flash Point C(F): > 220(428) (ASTM D-92).
Flammable limits - LEL: NA, UEL: NA.
NFPA HAZARD ID: Health: 0, Flammability: 1, Reactivity: 0
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide.

---

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES: Report spills as required to appropriate authorities. U.S. Regulations require immediate reporting of all oil spills that could reach any waterway, including wetlands and intermittent dry creeks. Report all oil spills to the National Response Center (U.S. Coast Guard) at (800)424-8802. In case of accident or road spill, notify CHEMTREC at (800)424-9300. Note:

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

This product does NOT contain any hazardous substances reportable under CERCLA.
PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Small spills can be absorbed with fire retardant treated sawdust, diatomaceous earth, etc. Contain and remove larger spills for salvage or disposal.
ENVIRONMENTAL PRECAUTIONS: Prevent spills from entering storm sewers or drains and contact with soil.
PERSONAL PRECAUTIONS: See Section 8

---

7. HANDLING AND STORAGE

HANDLING: No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.
STORAGE: Store above 32F.

---

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: No special requirements under ordinary conditions of use and with adequate ventilation.
RESPIRATORY PROTECTION: No special requirements under ordinary conditions of use and with adequate ventilation.
EYE PROTECTION: Normal industrial eye protection practices should be employed.
SKIN PROTECTION: No special equipment required. However, good personal hygiene practices should always be followed.
EXPOSURE LIMITS: This product does not contain any components which have recognized exposure limits. However, a exposure limit of 5.00 mg/m3 is suggested for oil mist.

---

9. PHYSICAL AND CHEMICAL PROPERTIES

Typical physical properties are given below. Consult Product Data She for specific details.

APPEARANCE: Liquid
COLOR: Light Yellow
ODOR: Mild
ODOR THRESHOLD-ppm: NE
pH: NA
BOILING POINT C(F): NE
MELTING POINT C(F): NA
FLASH POINT C(F): > 220(428) (ASTM D-92)
FLAMMABILITY: NE

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

AUTO FLAMMABILITY C(F): NE
EXPLOSIVE PROPERTIES: NA
OXIDIZING PROPERTIES: NA
VAPOR PRESSURE-mmHg 20 C: NE
VAPOR DENSITY: NE
EVAPORATION RATE: NE
RELATIVE DENSITY, 15/4 C: 0.92
SOLUBILITY IN WATER: Negligible
PARTITION COEFFICIENT: NE
VISCOSITY AT 40 C, cSt: 36.0
VISCOSITY AT 100 C, cSt: 8.4
POUR POINT C(F): -18(0)
FREEZING POINT C(F): NE
VOC: < 2.00 (Wt. %); 0.153 lbs/gal
NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTAT

---

10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): Stable.
CONDITIONS TO AVOID: Extreme heat.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide.
HAZARDOUS POLYMERIZATION: Will not occur.

---

11. TOXICOLOGICAL DATA

---ACUTE TOXICOLOGY---
ORAL TOXICITY (RATS): Practically non-toxic (LD50: greater than 2000 mg/kg). ---Based on testing of similar products and/or the components.
DERMAL TOXICITY (RABBITS): Practically non-toxic (LD50: greater than 2000 mg/kg). ---Based on testing of similar products and/or the components.
INHALATION TOXICITY (RATS): Practically non-toxic (LC50: greater than 5 mg/l). ---Based on testing of similar products and/or the components.
EYE IRRITATION (RABBITS): Practically non-irritating. (Draize score: 0 or greater but 6 or less). ---Based on testing of similar products and/or the components.
SKIN IRRITATION (RABBITS): Practically non-irritating. (Primary Irritation Index: greater than 0.5 but less than 3). ---Based on testing of similar products and/or the components.
OTHER ACUTE TOXICITY DATA: ***DOT skin corrosivity (4 hours): Negative ***

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

---SENSITIZATION (SUMMARY)---
The vegetable oil used in this product is not a contact sensitizer vi the Buehler guinea pig sensitization test.

---OTHER TOXICOLOGY DATA---
This product contains vegetable oil. Under normal conditions of use, no significant health hazards are expected. Although this product is formulated with vegetable oil, it is not approved for either direct or indirect food contact.

---

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS:

ECOTOXICITY:

Acute LC/EC50: Juvenile Rainbow Trout: Virtually non-toxic
---Based on testing of similar products (EC50: >5000 ppm).

MOBILITY: Not established.

PERSISTENCE AND DEGRADABILITY: This product meets OECD ready biodegradability criteria. Small spills of unused product on the ground will be readily biodegraded by naturally occurring soil organisms when exposed to air.

BIOACCUMULATIVE POTENTIAL: Not established.

---

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: EVEN THOUGH THIS PRODUCT IS READILY BIODEGRADABLE, IT MUST NOT BE INDISCRIMINATELY DISCARDED INTO THE ENVIRONMENT. This product is suitable for burning in an enclosed, controlled burner for fuel value and for recycling at an approved facility. In addition, it can be disposed of at an approved waste disposal facility. Land farming and processing through sewage treatment facilities may be available disposal options but necessary approvals must first be obtained from appropriate regulatory authorities. Specific characteristics of the waste at the time of disposal may affect the availability of the above options.

RCRA INFORMATION: This non-petroleum-based product is not subject to RCRA used oil requirements. Further, it should not be a RCRA hazardous waste unless it has been excessively contaminated with RCRA hazardous materials.

---

14. TRANSPORT INFORMATION

USA DOT: NOT REGULATED BY USA DOT.

RID/ADR: NOT REGULATED BY RID/ADR.

IMO: NOT REGULATED BY IMO.

IATA: NOT REGULATED BY IATA.

15. REGULATORY INFORMATION

Governmental Inventory Status: All components comply with TSCA, EINECS/ELINCS, AICS, and DSL.

EU Labeling: EU labeling not required.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III: This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

This product contains no chemicals subject to the supplier notificati requirements of SARA (313) toxic release program.

THIS PRODUCT HAS BEEN AUTHORIZED BY USDA FOR USE UNDER THE FOLLOWING CATEGORY: This product is acceptable as a lubricant where there is no possibility of food contact (complies with earlier USDA guidelines for H-2 lubricant use).

The following product ingredients are cited on the lists below:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS *
*** NO REPORTABLE INGREDIENTS ***		

--- REGULATORY LISTS SEARCHED ---
1=ACGIH ALL 6=IARC 1 11=TSCA 4 16=CA P65 CARC 21=LA RTK
2=ACGIH A1 7=IARC 2A 12=TSCA 5a2 17=CA P65 REPRO 22=MI 293
3=ACGIH A2 8=IARC 2B 13=TSCA 5e 18=CA RTK 23=MN RTK
4=NTP CARC 9=OSHA CARC 14=TSCA 6 19=FL RTK 24=NJ RTK
5=NTP SUS 10=OSHA Z 15=TSCA 12b 20=IL RTK 25=PA RTK
26=RI RTK

* EPA recently added new chemical substances to its TSCA Section 4 te rules. Please contact the supplier to confirm whether the ingredients this product currently appear on a TSCA 4 or TSCA 12b list.
Code key:CARC=Carcinogen; SUS=Suspected Carcinogen; REPRO=Reproductiv

16. OTHER INFORMATION

Precautionary Label Text:

CONTAINS BIODEGRADABLE NON-TOXIC HYDRAULIC OIL

THIS PRODUCT WILL BE NON-TOXIC AND IS READILY BIODEGRADABLE UNDER NOR CONDITIONS WHEN EXPOSED TO AIR.

For use in applications where incidental leakage to the environment m occur. Although this product contains vegetable oil, it is not suitab for contact with food.

For industrial use only.

Empty container may contain product residue, including flammable or explosive vapors. Do not cut, puncture, or weld on or near container. All label warnings and precautions must be observed until container h been thoroughly cleaned or destroyed.

Refer to product Material Safety Data Bulletin for further safety and health information.

USE: HYDRAULIC OIL

NOTE: PRODUCTS OF EXXON MOBIL CORPORATION AND ITS AFFILIATED COMPANIE ARE NOT FORMULATED TO CONTAIN PCBS.

Please call the Customer Response Center on 800-662-4525 for formulat disclosure.

****
For Internal Use Only: MHC: 0* 0* 0* 0* 1*, MPPEC: A, TRN: 601831-00, ELIS: 400106, CMCS97: 973407, REQ: US - MARKETING, SAFE USE: L
EHS Approval Date: 09APR1999
****

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DEPARTMENT OF TRANSPORTATION
District 1 Construction
PO Box 160
Hydesville, California
95547

(707) 768-9206
(707) 768-3340

SM06038 ATTACHMENT 3. ESA

September 28, 2005

01-314404
01-HUM-101-KP 90.4/92.5
ACNH-Q101(097)E
REPLACE VAN DUZEN RIVER BRIDGE

National Oceanic and Atmospheric Administration Fisheries
1125 16th Street, Suite 101
Arcata, CA 95521
Attn: David Reilly

RE: Letter of Transmittal: Biological Observer Reports

Dear Mr. Reilly:

Please find attached the Biological Observer Reports generated by Jim Froland and Steve Hansen through September 19, 2005, that you requested from Melinda Molnar on September 19, 2005. Melinda requested that I compile the reports and forward them to you.

Sincerely,

Geoffrey T. Wright, P.E.
Resident Engineer

Attachments

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

James Froland
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Tuesday August 16, 2005

Arrive onsite 1:00 pm

Current conditions at job site-
Mixed fog and sun, air temp.- 78 deg. F, surface water temp.(Van Duzen River)- 70 deg. F.

Daily Activity Report:

2:00 pm- Observed single, tractor wet crossing of Van Duzen River above temporary bridge. Substantial sediment disturbance plume, traveling downstream approx. 200 yards by 2:20 pm. Turbidity levels were fairly minor at that point.

2:30 pm- Checked flow from Van Duzen River entering Eel River at confluence. Estimate 20-25 cfs. Surface water temp. 71 deg. F. A large log stump in midstream approx. 150 yards above confluence has a good scour pool and several 6-8 inch fish, probably Steelhead, were seen.

3:00 pm- Sediment plume from wet ford by tractor now about 100 yards long and about 500 yards downstream of temporary bridge. Only a slight hazy, milky color at this point, and unlikely to move much farther downstream or reach Eel River. Suspended turbidity is too fine to be filtered with fabric.

4:00 pm- Observed instream excavation of filled gravel pad on south side of river channel, above temporary bridge. Gravel transported and stockpiled along bank on north side for later use. Unable to prevent significant turbidity increases, so observed extent of transport downstream. Sediment plume traveled approx. 200 yards downstream by 4:30 pm, and about 500 yards d/s by 5:30 pm. Majority of suspended sediment stayed within 100 yards of work site, and minor turbidity increases were scarcely noticeable at first riffle, about 600 yards downstream. No adverse impacts on aquatics anticipated below this point.

Leave worksite 5:40 pm

Recommendations and observations: High turbidity-causing activities during excavation in flowing stream were generally contained close to the work site. Downstream turbidity increases appeared minor, and are unlikely to impact Eel River. Wet crossing by equipment above work site created substantial turbidity due to soft, clay stream bottom material- it might be appropriate to look for alternate crossing site, perhaps downstream of work site.

total work hours- 5

James Froland
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Wednesday, August 17, 2005

Arrive onsite 7:00 am

Current conditions at job site-
Low fog, air temp.- 60 deg. F, surface water temp.(Van Duzen River)- 62 deg. F.

Daily Activity Report: Arrive worksite: 7:00am

7:30 am- Stream channel at worksite is very clear. Observed several salmonids next to Pier 4, probably Steelhead, 3-7 inches. Appeared to be in good condition. Also numerous pike minnow and stickleback.

8:30 am- Dozer and excavator pushed gravel pad out around south side of Pier 4 to function as catchment area for debris. Substantial turbidity generated but stayed fairly local. Areas of clear water were available for fish refuge from turbidity.

9:15 am- Excavator entered stream from north side and positioned midstream adjacent to Pier 4. Hydraulic hammers used by 2 excavators began breaking up abuttment. Excavator in stream left after about 15 minutes, deciding not to try pushing on pier.

10:10 am- Dozer wet fords stream downstream of worksite. The channel is more stable here (than upstream site previously used), and though there was some turbidity it settled quickly.

10:40 am- Two excavators continued breaking up Pier 4 with hydraulic hammers, one excavator sitting in mid channel, the other from the north side. Very little debris fell into the stream water, and pier was finally pushed over away from channel. Substantial turbidity but settled out well. Hose was used to wet down old concrete of pier to reduce dust. Excavator was out of stream channel by 11:30 am. Slight sheen observed on water surface, but not enough to indicate leak or spill.

5:00 pm- Hydraulic line breaks on equipment used to remove old steel piling. About 3-5 gallons sprayed on gravel bar, but operator states that it is vegetable oil that is used in this equipment.

Leave worksite 5:40 pm

Recommendations and observations: 1)Use new wet ford crossing site downstream in future.
2) Check on "non-petroluem" hydraulic product used for equipment to determine "cleanup"?.

Hours today- 11 Total hours for week- **16** Full time inspection.

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

James Froland
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Thursday, August 18, 2005

Arrive onsite 7:00 am

Current conditions at job site-
Low fog, air temp.- 62 deg. F, surface water temp.(Van Duzen River)- 68 deg. F.

Daily Activity Report: Arrive Caltrans office: 7:00 am. Worksite: 8:00am

8:00 am- Two excavators were breaking down Pier 4. Pile puller working on south side of river at excavation pit. No equipment operating in stream water. Checked flowing stream from worksite to confluence with Eel River. No signs of any injured or stressed fish or other species. Van Duzen River temp. at confluence was 64 deg. F. Eel River was 68 deg. F. Water clear and maintaining approx. 20-25 cfs.

9:30 am- Field sampled and photographed area around hydraulic unit that broke a fluid line yesterday afternoon. Placard on unit states that the fluid is biodegradeable vegetable oil. A sample placed in water developed sheen and floating yellow oil substance. Still waiting to review Material Data Sheet from operator.

10:30- Caltrans office. Review SWPPP for spill events and procedures.

Leave office, 11:00 am

Recommendations and observations: Recommend removal of oil saturated gravel material in area of hydraulic spill immediately after the hydraulic unit is moved from the area. Final disposition of this material should be contingent on information contained in the Material Data Sheet, which should be reviewed as soon as received. Appropriate agency notification should also be considered after reviewing the "vegetable oil" spill protocols and any potential toxicity issues described in the MDS.

Done

MSDS obtained. Oil saturated gravel exported to roadway area, Sta 111 + 00

Hours today- 4 Total hours for week- 20 Full time inspection.

FRIDAY

HOURS TODAY 4 TOTAL FOR WEEK 24

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

CC# 511-11-1209

STEVEN HANSEN, Fish and Wildlife Biologist
Biological Evaluations **Mitigation Planning** **Biological Monitoring**
(707) 496-8662

DAILY LOG **JOB: Van Duzen River Bridge - Construction Monitoring**

8/24/05

Date: ~~8/24/05~~ Time: 07:30 Air Temp: 13 Water Temp 16 High overcast Calm

~~8/25/05~~

Meet with Jeff Wright, RE, Discuss job requirements for monitoring in-water work. Discussed permit requirements pertaining to work in waterway with Jeff. Specifically DFG 1601 Item 7. Recommended enclosing RSP excavation area at Pier 3 cofferdam location to limit incidental silt plume likely from in-stream excavation.

08:20 - lots of pike minnows present 5-75 mm long, 2 dead Cottidae (freshwater bullheads) near temp constr br., one had fishline attached. Stream conditions at job site: 1 long shallow pool, approx 20m wide by 300m long, 300-500-mm deep, sand/gravel substrate w/ algal film on rocks, small cobbles present, water velocity slow. 8 old wood pilings and metal debris present in-water just downstream from the temp constr br. Large Woody Debris present in mid channel directly under NB bridge. Upstream the active channel narrows to ~10m, cobbles larger (150-200-mm), current faster, approx 300-mm deep. Lots of yellow-legged frogs along bank and tadpoles present. Lots of very small (10-25-mm) pike minnows present. 2 stickleback (~25-mm) seen.

09:45 - A school of about 15 trout (75-150-mm long) actively feeding in mid-water near and downstream from the old pilings in the river

10:20 - Western pond turtle seen basking on east bank of Eel R., 200m upstream of Van Duzen confluence.

11:00 - Wind West @ 10mph

12:00 - Wind West @ 15mph - Reviewed and signed "Code of Safe Practices"

1:00 - Wind West @ 15mph, Contractor filling in pier 3 excavation to build platform for equipment to excavate RSP from river channel. River has small silt cloud due to seep through from gravel dike isolating pier 3 excavation.

1:20 - spill over from Cat filling pier 3 excavation hole causing small plume.

1:30 - plume dissipated within 50m downstream from temp constr br.

1:40 - Contractor starting to remove RSP from river channel at upstream end of pier 3 cofferdam location.

1:50 - plume 150m downstream

3:00 - plume to lower end of hole - approx 300m downstream - contractor stopped excavation within water.

3:30 - Wind West @ 20mph - water in pool clearing

5:05 - Water in pool cleared up, contractor starting more RSP removal at Pier 3

5:50 - Contractor stopped excavation due to broken pin on excavator thumb. Pool cloudy past first riffle downstream (approx 400m).

Contractor to start at 06:00 tomorrow.

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

STEVEN HANSEN, Fish and Wildlife Biologist
Biological Evaluations **Mitigation Planning** **Biological Monitoring**
(707) 496-8662

DAILY LOG **JOB: Van Duzen River Bridge - Construction Monitoring**

Date: 8/~~24~~25/05 Time: 07:00 Air Temp: 13 Water Temp 16 Low overcast Calm

06:00 - no one here except equipment service truck 06:15 - MCM workers start showing up

07:00 - residual silt from yesterday that settled onto substrate and algal mat very localized and not visible 20m downstream from temp constr br.

9:40 - still repairing excavator - no in-water work started yet.

10:30 - digging on downstream edge of cofferdam location at pier 3, on land. Some slop-over from groundwater pool into river.

10:40 - isolation berm collapsed into excavation, excavation hole now joined to river.

11:00 - plume from digging 75m downstream from temp constr br.

12:00 - stopped digging for lunch break. Plume to 300m downstream.

12:30 - resume digging along downstream margin of pier 3 cofferdam location

12:40 - next pool below construction pool (approx 400m) is slightly cloudy in upper reach.

1:40 - stopped in-water digging

1:55 - plume check - stained water just reaching the Eel River, dissipating at the confluence.

2:00 - called Jeff Wright (RE), left message and paged. Recommended suspending in-water work until plume clears.

2:05 - contractor filling in excavated hole with spoils, less the RSP removed.

2:14 - talked to Jeff Wright on phone, He will come down and look at the situation.

2:25 - contractor finished filling in excavated hole and started in-water excavation

2:35 - some guy from the Carpenter's Union looking for the job boss - I had him wait for Jeff by the CT inspector's truck

2:50 - contractor dug out K-rail section that had collapsed into the river from his previous hole

3:05 - contractor stopped in-water excavation

3:40 - Jeff Wright met on-site to discuss plume problem - I recommended isolating the work area.

3:50 - checked plume in Eel R. Slight cloudy in first hole at confluence, clear next hold downstream

4:03 - contractor started in-stream excavation at upstream edge of cofferdam location @ pier 3

5:20 - contractor stopped in-water excavation - unable to move large RSP in channel.

6:00 - left work site, completed Daily Log Sheets and Invoice.

James Froland
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Friday, August 26, 2005

Arrive onsite- 7:00 am

Current conditions at job site-
Low fog, air temp.- 52 deg. F, surface water temp.(Van Duzen River)- 63 deg. F.
Flow in Van Duzen appears to have dropped slightly from a week ago- to approx. 15-20 cfs

Daily Activity Report:

7:00 am- stream at worksite is clear, and there are depressions in channel at Pier 4 from recent excavation. No silt containment structures are present.

7:30 am- Excavator begins working in flowing channel, excavating gravel and buried rock riprap from around Pier 4. Heavy turbidity present and moving downstream.

10:00 am- Excavator has worked continuously in water on Pier 4 since early morning. Turbidity plume has moved downstream to within 100 yards of Eel River and continues to flow downstream. Contacted CT regarding problem.

10:30 am- Excavator shut down by CT until after lunch period.

11:30-12:30 lunch break

1:00 pm- Excavator resumes removing rock from flowing channel around Pier 4. Sediment plume is entering Eel River, and the entire lower Van Duzen R. below jobsite is substantially turbid. VDR surface temp. 72 deg. F. Eel River- 68 deg. F.

1:30 pm- Observed dozer cross river without escort, as required in NOAA Fisheries permit. CT notified operator of requirement. At 2:00 pm I assist the operator to cross back in dozer. Excavator appears to be finished digging at Pier 4.

2:30 pm- Dozer pushed excavated material back into the channel at Pier 4 to function as a work pad, then excavator began digging again at Pier 4 footing and buried riprap. Turbidity has traveled downstream since excavating recommenced at 1:00pm.

3:30 pm- Flow at mouth of Van Duzen is now clear, but new turbidity plume from after-lunch work is approx. 100 yards upstream from confluence with Eel River.

4:00 pm- Excavator still digging in flowing channel at Pier 4. Turbidity entering Eel River.

4:30 pm- Cal. DFG arrives onsite.

6:00 pm. Leave jobsite.

Observations and Recommendations:

Throughout the day, turbidity generated at the worksite by excavating equipment flowed downstream in the Van Duzen River and eventually to Eel River. I believe levels of turbidity exceeded acceptable standards envisioned by state and federal agencies reviewing the proposed work plan. Coastal Development Permit No. 1-04-014 requires containment of turbidity generated by "excavating" in the flowing channel and this has not been done. State Fish and Game Warden Ramos also clearly stated that the work violated the terms of DFG Streambed Alteration Agreement #04-0097. Early installation of a turbidity containment structure (silt fence, water bladder, rock/fabric dike) around Pier 4 at the beginning of work would have prevented a large majority of the turbidity transport problems.

Warden Ramos was clear that there have been violations of permits at this project. I think it would be prudent to review the environmental protections included in the various permits, and ensure that each is followed "to the letter". Any questions of terminology or degree should be directed to the appropriate agency for clarification, not the contractor.

As for suggestions to deal with the turbidity problem, I suggest that silt fences or other techniques be installed during any excavation in the flowing stream, as required in item 5, page 7 of the Coastal Development Permit. "Excavation" is defined in Webster's Dictionary as "make hole by digging; hollow out". If the excavation part of the project is finished, and only the installation of sheet pile containment structures is anticipated, I would suggest the following turbidity monitoring/control scenario: Sheet pile or other non-excavation construction may occur in the flowing stream until turbidity reaches the existing temporary bridge. Work is then suspended until the work area has settled and relatively clear, at which time work could resume until turbidity levels are again moving downstream. After a discussion with Warden Ramos, I think enforcement action would be foreseeable if the turbidity level raises substantially within about 50 yards downstream of the temporary bridge. Any further instream work should proceed with caution. It is also possible, and still appropriate, to install a turbidity control structure around the area of Pier 4 to prevent any new chance of sediment transport downstream.

Hours today- 10 Total hours for week (8/22-8/26)- 10 Full time inspection.

James Froland
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Monday, August 29, 2005

Arrive onsite- 7:00 am

Current conditions at job site-
Low fog, air temp.- 62 deg. F, surface water temp.(Van Duzen River)- 64 deg. F.

Daily Activity Report:

7:00 am- Arrive jobsite. No work occurring in stream.

9:15 am- Crane drives I-beam into riverside corner of sheetpile template at Pier 4. Turbidity was generated but fairly localized. Plume fairly light at 50 yards below temporary bridge. It appears installation of sheet pile along stream edge of template may generate substantial and unacceptable levels of turbidity during installation. Requested CT implement some type of sediment containment structure.

10:00 am- Other I-beam driven at river edge of template. Substantial turbidity but staying fairly close and short term.

11:00 am- First sheetpile driven along stream side of template. Unacceptable turbidity levels generated and work stopped by CT. Pile is removed. CT discusses sediment containment with contractor and they agree to install a washed rock dike around sheetpile template area. MCM will drive sheetpile at back of structure while clean rock dam is installed with an excavator.

1:00 pm- washed gravel arriving onsite and excavator is placing around front edge of template. This activity is also generating some turbidity but appears in compliance with permits..

3:00 pm- Washed rock dike work is progressing. Some turbidity onsite and some light turbidity moving downstream.

4:00 pm- Work stoppped on dike with short portion left to complete. Operator says they will finish it tomorrow. DFG Warden Ramos and NOAA agent Riley arrive and meet with Wright (CT), Morgan (CT) and myself to discuss work so far and possible solutions to sediment problem. Ramos is still concerned about turbidity generated today, but I think installation of the sediment control dike is in accordance with permits and turbidity associated with it is unavoidable at this location. We agree to communicate with other agencies familiar with these type of issues, and that the gravel dike can be completed.

6:15 pm- offsite

Observations and Recommendations:

Wright, Morgan and I agreed to contact NOAA and local DFG biologists tomorrow for additional guidance in dealing with the turbidity problems. It is possible, even with the installation of the clean gravel berm, that turbidity leakage during sheetpile placement may still generate excessive turbidity. If so, other alternatives must be found to eliminate this problem.

Hours today- 11.5 Total hours for week- 11.5 Full time inspection.

James Froland
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Tuesday, August 30, 2005

Arrive onsite- 7:00 am

Current conditions at job site-
Low fog, air temp.- 64 deg. F, surface water temp.(Van Duzen River)- 63 deg. F.

Daily Activity Report:

7:00 am- Arrive jobsite. No work occurring in stream. Stream flow at Pier 4 is clear, but bottom sediments are thick and will be easily disturbed by any nearby activity.

10:00 am- Contractor completes gravel containment dike around Pier 4. Some moderate turbidity generated but localized and slow moving. Monitored continuing sheet pile installation to evaluate effectiveness of rock silt-retention dike.

11:30 am- Turbidity being generated during sheet pile installation and excavation at Pier 4. Both operations shut down by CT. Rock sediment basin is not functioning adequately to prevent turbidity. CT meets with AquaDam contractor Dave Doolaege to discuss installation of water-filled bladder dam around work area at Pier 4.

1:00 pm- Doolaege begins installing water bladder dam. This work in the stream also stirs up some sediment.

1:30 pm- Several Federal resource agency persons arrive to view project. (Ammerman, Reid-ACOE, Reilly, Fehr, Tauzer- NOAA). Some concerns expressed but general agreement that the bladder dam is a good idea.

4:30 pm- Work on water bladder dike is progressing, though some turbidity is generated by that activity. DFG Warden Ramos arrives- discusses onsite activity, requests proper screening on water pumps being used to fill water bladders.

5:30 pm- Water pumps properly screened and resume filling bladder. Operation progressing smoothly.

7:00 pm- Water bladder appears complete. Will seine the impoundment tomorrow morning to remove any trapped fish.

7:30 pm- leave site.

Recommendations and observations-

The impoundment area will be beach seined first thing tomorrow morning when the water is clear, to remove any trapped fish. Assuming sheet pile installation will begin soon after, this activity will be monitored closely to ensure that the combination of rock dike and water bladder dam serve to stop turbidity transport into the Van Duzen River channel. NOAA Fisheries D. Fehr requested CT look into the possibility of "vacuuming" the sediment from inside the bladder containment structure. If possible, this should be done after completion of any work that could generate suspended sediment in the retention basin at Pier 4. - TBD

Hours today- 12.5 Total hours for week- 24 Full time inspection.

James Froland
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Wednesday, August 31, 2005

Arrive onsite- 6:30 am

9:00 am weather conditions at job site-
Clear, air temp.- 70 deg. F, surface water temp.(Van Duzen River)- 64 deg. F.

Daily Activity Report:

6:30 am- Arrive jobsite. Used beach seine inside water structure at Pier 3. Transfer all species across to adjacent channel. No salmonids were observed. Turbidity is too high inside of impoundment to make accurate assessment, and will monitor as clearing allows.

9:00 am- Driving sheet pile at Pier 3 adjacent to rock sediment basin. Noted small sediment leak midway on water bladder.

10:00 am- Checked lower Van Duzen River to mouth with Wright and den Heyer of CT. Stream beds downstream of work site appear fairly clean and free of fine surface sediment.

11:00 am- Morgan requested visit from Doolaege to discuss possible leak in water structure. Doolaege arrived about 11:30 am and noted that the water surface is higher inside the bag than the adjacent water surface and, as a result, turbidity is flowing out under the bag. He will supply water pumps to try to lower level inside bags.

12:30 pm- Contacted Eureka Sand and Gravel regarding their recent delivery of "washed rock" used for fills in the flowing stream at the bridge construction site. During the site visit yesterday from federal agencies, they indicated that the washed rock being used was too dirty. Eureka S&G stated that the #4 washed rock they provided was the only such product they have available, and they knew of no other gravel operator in the county that had anything different.

1:00 pm- Sheet pile approximately ½ way across stream side face of template. At 2:30 pm, an excavator is working at removing boulder debris from under one of the sheet pile at the se corner of template. Doolaege brings 2 water pumps and we begin pumping water from the sediment control basin to a basin that contains a large unscreened pump which then pumps it to the silt settling basin. Soon after pumping begins, the water level inside the impoundment drops, and the turbidity leak stops.

3:30 pm- Large pump sending impoundment water to the settling basin plugs with debris. The turbidity level and surface water inside the impoundment quickly rises, and a short-term high

turbidity release event occurs. Pump is quickly cleared and restarted at about 3:45 and turbidity release stops. Turbidity plume travels about 100 yards downstream before finally dissipating.

5:30 pm- Contractor stops work. Pumps continue running to clear containment basin. Morgan and I remain on site until 6:45 pm, at which time the basin has substantially cleared and we shut off the pumps.

7:00 pm. Leave job site.

Recommendations and observations-

The pumping process is functioning to prevent turbidity releases. However, the system needs to be improved to eliminate any possible failure. Will work with CT and the contractor tomorrow to try to set up a better system. It is likely that turbidity concerns will be a high priority problem for only a couple more days, until the sheet pile are in place and turbidity is then contained within the cofferdam.

Hours today- 12.5 Total hours for week- 36.5 Full time inspection.

James Froland
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Thursday, September 1, 2005

Arrive onsite- 7:00 am

Weather conditions at job site-
Partly fog, clearing, air temp.- 54 deg. F, surface water temp.(Van Duzen River)- 61 deg. F.

Daily Activity Report:

7:00 am- Arrive jobsite. Fuel water pumps, dig out large pump, set hoses.

7:30 am- Sheet pile driving at Pier 3, moving away from stream side. No turbidity problems.

8:30 am- At CT request, MCM moves unscreened water pump from Van Duzen River channel to off-channel sump hole.

9:30 am- Driving sheet pile. Pumps not operating and no turbidity problems yet.

10:00 am- Slight turbidity leak from under bladders. Started pumps which quickly stopped the release.

12:00 pm- Shutoff all pumps in order to move lines so that excavator can add washed rock to berm around sheet pile.

1:00 pm- Restored pumping. Lunch break.

1:30 pm- Contacted DFG (Fortuna) and private fishery consultants regarding possible dewatering and cleaning of siltation basin inside water bladder. No one interested at this time but I left a few messages on local consulting businesses.

3:00 pm- Air temp. 64 deg. F/Stream surface water temp. 72 deg. F/Water temp. in impoundment 69 deg. F

4:30 pm. Leave job site.

Recommendations and observations-

The pumping process is functioning well and turbidity is becoming less of a problem. The

turbidity basin inside the water bladder is clearing, and is only cloudy at the lower end. Sheet pile driving is moving farther away from the water, though they will still need to come back and align all the piles at some point. Discussing a silt retrieval scenario with Doolaege, and either CT hires a qualified fisheries biologist to remove all fish if dewatering is intended, or some of the silt can be sucked out while maintaining some level of water in the impoundment. I have a message on my home phone from a biologist familiar with and permitted for capture of ESA listed fish species, but he won't be available to discuss it until next Tuesday.

Hours today- 8 Total hours for week- 44.5 Full time inspection.

James Froland, Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Friday, September 2, 2005

Arrive onsite- 6:30 am

Weather conditions at job site-
Low fog, air temp.- 54 deg. F, surface water temp.63 deg. F, Impoundment 63 deg. F..

Daily Activity Report:

6:30 am- Arrive jobsite. Turbidity basin fairly clear. Sheet pile driving on north side of Pier 3 template does not appear to be stirring up sediment.

8:30 am- Sheet pile driving stops due to possible obstruction. Contractor begins excavating inside of Pier 3 template.

10:15 am- Wet crossing by dozer with my escort.

11:30 am- Second wet crossing by dozer. I noted petroleum sheen on river, and oil spots on gravel bar. Contacted operator and he immediately drove the dozer away from the river channel and began to check for leaks. He also placed a drip pan under the dozer while working on it.

12:00-1:00 pm- lunch

2:00 pm- Phone contact with fish biologist Carl Page. Page is permitted to handle T&E species and could remove/relocate fish inside the impoundment if dewatering was needed. He estimates the 8 hour job could cost approx. $1200. I will continue to monitor the impoundment for presence of listed species, but have found none so far.

3:30 pm- Air temp. 74 deg. F, stream temp. 72 deg. F, impoundment temp. 69 deg. F.
Water pumps removed and they were picked up by Doolaege for security during the coming long holiday weekend.

5:00 pm- Leave job site.

Recommendations and observations- The water structure cofferdam functioned well today without pumping. It is apparent to me that a washed rock dike, acting alone, would not have functioned properly to contain sufficient turbidity while digging in the river, and would generally need the addition of filter fabric or some other impenetrable barrier in it's structure. I think the water structure is superior for both diverting flow in place, and for creating a turbidity shield.

Hours today- 8.5 Total hours for week- 53 Full time inspection.

Exhibit I
CCC-06-CD-10
CCC-06-CD-11
(Van Duzen River Bridge)

James Froland,
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Tuesday, September 6, 2005

Arrive onsite- 7;00 am

Weather conditions at job site (8:00 am)-
Low fog, air temp.- 58 deg. F, surface water temp.63 deg. F, Impoundment 58 deg. F..

Daily Activity Report:

7:00 am- Arrive jobsite. Turbidity basin clear and water structure dam is intact and functioning.

8:00 am- Equipment removing old piling from Pier 3. No work in stream water. Hose from pump in Pier 3 has substantial leak as it crossed the bridge over the river. I expressed concern to MCM about turbid water flowing into the river during pumping of the Pier 3 hole and they replaced that section of hose.

11:00 am- Met with NOAA agent Dave Riley to discuss turbidity release that occurred on August 26. Riley is apparently investigating this incident as a possible violation of the NOAA Fisheries permit.

12:00-1:00 Lunch

1:00 pm- Checked Van Duzen R. to confluence with Eel River. Flow has substantially dropped in the past 2 weeks, and appears to be approx. 4-5 cfs. River bed gravels from about 100 yards below work site to the Eel R. appear relatively free of fine sediment.

2:30 pm- Contacted Doolaege by phone. He will do his daily inspection later this afternoon to patch one small hole in water dam structure, and will be bring a water pump to the site tomorrow in case resumption of sheet pile installation generates turbidity in basin and needs pumping.

4:00 pm- Off site

Hours today- 7 Total hours for week- 7 Full time inspection.

James Froland,
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Wednesday, September 7, 2005

Arrive onsite- 6:30 am

Weather conditions at job site (8:00 am)-
Low fog, air temp.- 60 deg. F, surface water temp.63 deg. F, Impoundment 64 deg. F..

Daily Activity Report:

6:30 am- Arrive jobsite. Turbidity basin clear and water structure dam is intact and functioning.

8:00 am- Excavating inside Pier 3

10:30 am- Observed that work on Pier 3 was increasing turbidity in bladder structure basin, and starting a small sediment plume into river. Request to MCM to start pumping from Pier 3 cofferdam, and MCM started working on setting up water lines.

11:00 am- Pumping began, water level dropped in cofferdam and turbidity basin. Basin clearing.

11:30 am- NOAA Fisheries (D. Free) on site. Suggests a vacuum-style cleaning of bladder impoundment may be appropriate. Wright (CT) will look into possible courses of action. Free also recommends a fish survey/relocation survey in basin to remove all fish. I will request help from Cal. Fish and Game personnel in Fortuna, who have offered to do this.

12:00 pm- State Water Quality Biologist onsite. He checks turbidity issues and expresses concern over some possible small fluid spills around equipment and the lack of containment structures. I inform Morgan (CT) and he contacts MCM, who then begin to clean up the small spill areas.

12:30 -1:30 pm- lunch

2:30 pm- no work around Pier 3 or in water. MCM pumping sporadically from sheet pile cofferdam but no turbidity leakage into bladder impoundment or stream.

5:30 pm- off site

Recommendations- I will try to schedule fish survey/relocation in the impoundment as soon as possible, and provide NOAA Fisheries a copy of the survey report.

Hours today- 9 Total hours for week- 16 Full time inspection.

James Froland,
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Thursday, September 8, 2005

Arrive onsite- 7:00 am

Weather conditions at job site (7:00 am)-
Low fog, air temp.- 56 deg. F, surface water temp.63 deg. F, Impoundment 65 deg. F..

Daily Activity Report:

7:00 am- Arrive jobsite. Turbidity basin clear and water structure dam is intact and functioning. MCM preparing to continue sheet pile installation.

8:00 am- Phone contact with DFG Fisheries- will electrofish this morning.

10:00 am- MCM attempting sheet pile installation, but appear to have obstruction problems. Electrofished bladder impoundment with Allan Ringer (DFG Fisheries, Fortuna). No salmonids found. DFG will provide CT a written summary, and CT should forward that to NOAA Fisheries.

11:00-12:00 pm- lunch

1200 pm- Onsite, Doolaege delivers water pump. Hammer pile driver starts on Pier 2.

2:00 pm- Pile driver on Pier 2 shuts down. Crew moves to continue work on Pier 3 sheet pile cofferdam.

3:00 pm- Bladder turbidity basin clearing since this mornings fish survey. No pumping but functioning well. Sheet pile work continuing on Pier 3.

4:30 pm- Pickup water pump for safekeeping.

5:00 pm- Off site.

Recommendations- Formal confirmation of no salmonids in turbidity basin allow for more options in dealing with sediment issues. It can now be pumped without screening, so some form of pumping out the sediment from the basin, or other methods, could be attempted. I think it would be appropriate to wait until all sediment generating activities in the Pier 3 area have been completed before attempting sediment removal.

Hours today- 8 Total hours for week- 24 Full time inspection.

James Froland,
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Friday, September 9, 2005

Arrive onsite- 7:00 am

Weather conditions at job site (7:00 am)-
Low fog, air temp.- 59 deg. F, surface water temp.62 deg. F, Impoundment 63 deg. F..

Daily Activity Report:

7:00 am- Arrive jobsite. Turbidity basin clear and water structure dam is intact and functioning. MCM begins pumping and excavation on Pier 3. Apparent obstruction, and they begin pulling sheet pile on north side.

9:00 am- excavating for obstruction on Pier 3.

11:00 am- Dozer filling old channel/wetland along north bank of river. I advised Morgan that this activity was not in the permits, and there were fish in these pools. Morgan asked the operator to keep fill out of this area and he stopped filling.

11:30-12:30 pm- lunch

12:30 pm- onsite. Moore fuel truck fueling equipment on the river bar worksite (dozer, generator, excavator, and crane).

1:00 pm- Equipment work around Pier 3 increases turbidity in bladder basin. Pump was not working and the crew was rerigging the water lines. At 1:30 pm, pump finally started running and no turbidity escaped into the river. I did note one leak in hose that was dripping into the flowing stream and MCM quickly fixed it.

2:00pm- Dan Free (NOAA Fisheries) on site making habitat damage assessment from turbidity release of August 26.

3:00 pm- continuing excavation on Pier 3 and pump running. No sediment leaks.

5:30 pm- Off site.

Hours today- 8.5 Total hours for week- 32.5 Full time inspection.

James Froland,
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Monday, September 12, 2005

Weather conditions at job site (7:00 am)-
Low fog, air temp.- 60 deg. F, surface water temp.63 deg. F, Impoundment 64 deg. F..
Confluence of Van Duzen and Eel River- air temp 58 deg.F, Van Duzen 63 deg, F, Eel R. 64 deg

Daily Activity Report:

7:00 am- Arrive jobsite. Turbidity basin clear and water structure dam is intact and functioning. Walked Van Duzen River down to confluence with Eel River. Flow appears to be maintaining about 4-5 cfs, and will probably not dry up this year as in the past.

8:30 am- MCM begins pumping and driving sheet pile on Pier 3. Apparent obstruction.

10:00 am- pile driving begins on Pier 2.

11:30-12:30 pm- lunch

12:30 pm- Continuing pile work on both piers 2 and 3. Pump functioning well at Pier 3, and no turbidity problems.

4:00 pm- Off site.

Observations- Sheet pile installation problems on Pier 3 is delaying final pile driving, with possible turbidity problems when driving the pile along the water's edge. The pump system appears to be functioning well to keep turbidity from leaking into river. The few trout in the main channel below the bridge appear healthy, and did not appear to be visibly affected when pile driving began on Pier 2 today. Pike minnow in same area, at probably 100 to 1 ratio with trout, also appear healthy.

Hours today- 8 Total hours for week- 8 Full time inspection.

James Froland,
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Tuesday, September 13, 2005

Weather conditions at job site (7:00 am)-
Low fog, air temp.- 58 deg. F, surface water temp.61 deg. F, Impoundment 63 deg. F..

Daily Activity Report:

6:30 am- Arrive jobsite. Turbidity basin slightly cloudy from previous day activity excavating for sheet pile on Pier 3. Water structure dam is intact and functioning.

7:00 am- Both large pumps running in Pier 3 cofferdam, then dozer starts filling previous excavation. During filling, muddy water enters turbidity basin. I install a water pump and begin pumping basin into cofferdam. Works fine to eliminate any leakage into river.

Pile driving ongoing on Pier 2. Continuing problems with driving sheet pile on north side of cofferdam.

9:30 am- Discontinue small pump from turbidity basin- fairly clear.

11:30 - 12:00 pm- lunch

12:00 pm- onsite. Photograph adjacent wetlands (river channels), fords, bladder turbidity basin, worksite, Van Duzen River to confluence with Eel River. Estimate distances, check bottom substrate for sediment.

2:00 pm- Continuing struggle with sheet pile driving on Pier 3. Filling in of excavated hole to locate obstructions created waves of muddy water which entered turbidity basin. Both large pumps running in cofferdam and MCM periodically raised a sheet pile to allow elevated water in excavation to flood back into cofferdam for pumping. I started the small pump to lower the elevation within the turbidity basin, and it worked well to prevent any leakage into flowing channel. Shut off pump at 4:30 pm when basin cleared.

6:00 pm- Offsite

Observations- MCM crew were very helpful with pumping and eliminating turbidity problems today at Pier 3. It appears they understand the need to keep muddy water out of the river.

Hours today- 11 Total hours for week- 19 Full time inspection.

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James Froland,
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Wednesday, September 14, 2005

Weather conditions at job site (7:00 am)-
Low fog, air temp.- 62 deg. F, surface water temp.61 deg. F, Impoundment 62 deg. F..

Daily Activity Report:

7:00 am- Arrive jobsite. Continuing sheet pile work on Pier 3. Pumps running. Turbidity basin clear and no sediment leaks into stream. Morgan and I made cursory checks for fluid leakage under equipment. Some minor "spotting" noted, but no chronic problems seen. We will continue to check possible problem equipment for fluid leaks.

12:00-1:00 pm- lunch

1:00 pm- Continue sheet pile problems on Pier 3. Concrete pumping into Pier 2.

4:00 pm- Very little headway with sheet pile on Pier 3. No turbidity problems today.
Weather conditions- fog/sun, Air temp. 70 deg. F, Surface V.D. 68 deg. F, Impound 66 deg.F

5:00 pm- Offsite

Hours today- 9 Total hours for week- 28 Full time inspection.

James Froland,
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Thursday, September 15, 2005

Weather conditions at job site (7:00 am)-
Low fog, air temp.- 58 deg. F, surface water temp.62 deg. F, Impoundment 62 deg. F..

Daily Activity Report:

7:00 am- Arrive jobsite. Continuing sheet pile work on Pier 3. Turbidity basin clear and no sediment leaks into stream. Cursory checks for fluid leakage under equipment- no problems. I observed several trout in the channel below the temporary bridge. They appear healthy (probably 2+ year olds), and stayed fairly close to some debris cover in the streambed that is totally dominated by hundreds of pike minnow.

12:00-1:00 pm- lunch

1:00 pm- Continue pounding sheet pile on Pier 3. Water Structure rep onsite to top off and check water bladders. Slight turbidity in basin but no leakage into stream.

2:00 pm- Sheet pile cofferdam appears nearly complete. Excavator begins removing material from inside cofferdam. Filling hole on outside of cofferdam and some spreading of material around had created some turbidity in the basin, and I monitored it for leakage.

4:00 pm- Turbidity basin fairly cloudy, so Morgan and I started the small water pump to draw the basin down and prevent release. At about 4:30 pm, MCM started their 4" pump inside the turbidity basin, which should work even better to prevent any discharge.

5:30 pm- Offsite

Hours today- 9.5 Total hours for week- 37.5 Full time inspection.

James Froland,
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Friday, September 16, 2005

Weather conditions at job site (7:00 am)-
Clear, air temp.- 52 deg. F, surface water temp.60 deg. F, Impoundment 62 deg. F..

Daily Activity Report:

7:00 am- Arrive jobsite. Excavating inside Pier 3 cofferdam. I located a fluid spill around the portable hydraulic unit (it uses the vegetable oil based fluid) and reported it to Wright (CT). He contacted MCM and they quickly cleaned it up and removed it from the river bar.

11:00 am- 4" pump running from bladder turbidity basin into cofferdam. Wearing waders, I tried to stir up the bottom sediment inside the basin so that it would be pumped out to the sediment basin. It appeared to be ineffective- much of the sediment next to the work area is fairly heavy and just settled out, and the suspended sediment inside the basin was a concern the rest of the day.

11:30-12:00 pm- lunch

12:00 pm- Onsite. Cloudy, light rain. Small turbidity leak out of bladder basin because the 4" pump had been turned off during lunch. Restarted at 12:30 but leak continued to around 1:30 pm. Slight turbidity transport downstream but barely noticeable at 100 yards, and not bad in any area.

3:00 pm- Offsite

Observations and Recommendations- The concept of removing sediment from inside the bladder turbidity basin by stirring it up and pumping it out is probably not viable. The heavy material settles out quickly, and the suspended fines create a potential turbidity problem for hours. Perhaps a pump that is placed directly on the bottom, and moved through the area, could be somewhat more effective but is not without potential adverse impacts. When the basin clears up we can better determine if my activity today had any noticeable positive effect.

Hours today- 7.5 Total hours for week- 45 Full time inspection.

James Froland,
Aquatic Biological Services

Project- Van Duzen River Bridge/Highway 101

Monday, September 19, 2005

Weather conditions at job site (7:00 am)-
Low Fog, air temp.- 58 deg. F, surface water temp.62 deg. F, Impoundment 62 deg. F..

Daily Activity Report:

7:00 am- Arrive jobsite. Crane excavating inside Pier 3 cofferdam. No turbidity problems.

8:00 am- At Pier 2, drilling is beginning on driven piles to bore them out. I discussed the issue of spoil disposal with Morgan (CT) and reviewed applicable sections in project permits. It appears that the NOAA Fisheries Biological Opinion, March 11, 2002, pg. 34, item 2c, requires that the drilling spoil material be removed from the river channel. Morgan agreed and will discuss the issue with R.E. Geoff Wright (CT).

9:00 am- Closely monitoring excavation and subsequent fill of gravel from Pier 3. There is a very limited space in this area, and we are trying to protect the isolated pools along the north bank, which contain fish and other aquatics.

12:00-1:00 pm- Lunch

1:00 pm- Continue monitoring excavation on Pier 3. No turbidity issues.

3:30 pm- Water Structures Inc. onsite for maintenance of water bladder.

4:00 pm- Observed fluid leak on Manlift equipment. Contacted MCM mechanic and he said he would get it fixed.

5:30 pm- Excavation suspended on Pier 3 cofferdam while attempting to install whaler.

6:00 pm- Observed dozer pushing excavated material around from Pier 3 and saw breach in protective levee for wetland/channel on north bank. One MCM employee assisted by shoveling a gravel blockage in the berm while I discussed the problem with the dozer operator.

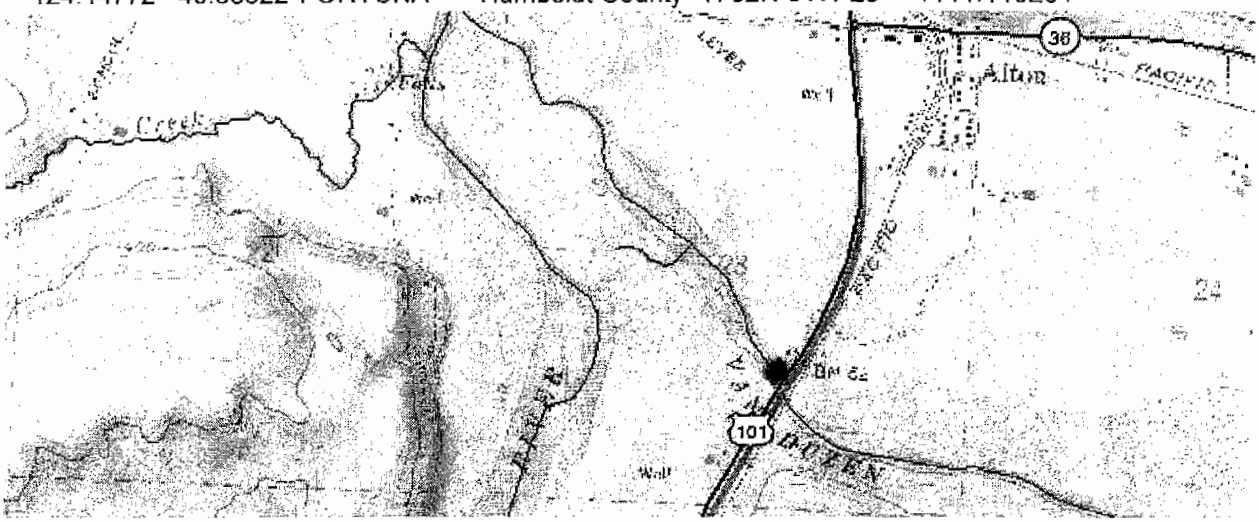
Observations and recommendations: Protecting the wetland channels on the north side of the river will require careful monitoring. New equipment operators are unaware of the need, and there is a very limited work area around Pier 3. I also recommend that the drilling spoil disposal issue for Pier 2 (and eventually Pier 3) be addressed and resolved with MCM.

Hours today- 11 Total hours for week- 11 Full time inspection.

Van Duzen River
Field Note

Tributary to: Eel River
Location:

Long DD	Lat DD	QUAD NAME	COUNTY	PLSS	CALWAT2.21
-124.14772	40.53822	FORTUNA	Humboldt County	H 02N 01W 23	1111.110201



Surveyors: Allan Renger
Date of Survey: 09/08/05
Begin survey time: 0900 End survey time: 1000
Purpose of survey: 1. Electrofishing to remove fish from a water bladder/coffer dammed impoundment at the Highway 101 Van Duzen River Bridge Construction Site. 2. Provide verification that no Salmonids remained in the impoundment.
Ownership: State highway right of way
Written by: Allan Renger, Fisheries Biologist, California Department of Fish and Game, (707) 725-1074

OBSERVATIONS

During an initial ten minute visual survey of the impoundment I identified one fish as a Sacramento Pike Minnow and no fish that appeared to be salmonids. The electrofishing effort resulted in the capture of one Sacramento Pike Minnow. Two fish that were affected by the electrofisher current but not captured were visually identified as Sacramento Pike Minnow. All areas within the impoundment that provide fish cover were electrofished. In my professional judgment there are no salmonids present within the water bladder/coffer dammed impoundment.

CALIFORNIA COASTAL COMMISSION
NORTH COAST DISTRICT OFFICE
710 E STREET • SUITE 200
EUREKA, CA 95501-1865
VOICE (707) 445-7833
FACSIMILE (707) 445-7877

MAILING ADDRESS:
P. O. BOX 4908
EUREKA, CA 95502-4908

TH17c

Date Filed:	March 8, 2004
Hearing Date:	October 14 2004
49th Day:	April 26, 2004
180th Day:	September 4, 2004
Staff Report:	September 30, 2004
Staff:	MKF
Commission Action:	

SW060038 ATTACHMENT 4. ESA

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.:	**1-04-014**
APPLICANT:	**California Dept. of Transportation (CALTRANS), District 1**
PROJECT LOCATION:	Highway 101 bridge over the Van Duzen River, 5 miles south of Fortuna, Humboldt Co.
PROJECT DESCRIPTION:	Replace the southbound Highway 101 bridge.
RECOMMENDATION:	Approval with Conditions.
MOTION & RESOLUTION:	Page 3
LOCAL APPROVALS RECEIVED:	None required.
OTHER APPROVALS RECEIVED:	Regional Water Quality Control Board Certification; California Department of Fish and Game Stream Alteration Agreement; U.S. Fish & Wildlife Service & National Marine Fisheries Service Section 7

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SW06w38 ATTACHMENT 5. ESA

Subject: Van Duzen River Bridge CDP violations
From: "Melanie Faust" <mfaust@coastal.ca.gov>
Date: Tue, 31 Jan 2006 12:50:43 -0800
To: <david.reilly@noaa.gov>

Hello David – you asked me in our telephone conversation today about the history of violations of our permit conditions by the Caltrans contractor on the Van Duzen River Bridge project (Highway 101, Humboldt County), and requested a copy of the staff report for CDP No. 1-04-014 (Caltrans). The conditions imposed by the Coastal Commission are the same as those recommended in the staff report.

When you called today, I explained that Caltrans and the contractor did not undertake the project in accordance with the *approved project description.* This means that Caltrans, as applicant, submitted a proposed project description, which the Commission reviewed and approved with the additional imposition of the permit conditions. If an applicant opts to change a project, that change triggers the need for an amendment to the permit, unless the Executive Director determines that no amendment is required. It appears that in a number of examples, Caltrans/contractor undertook development in a manner that was not in accordance with the approved project, without seeking the necessary amendments. We discussed a few examples, such as the way they dropped the bridge deck (they did the same thing in violation of CDFG requirements when they replaced the northbound Van Duzen bridge some years back – though Caltrans now claims to have destroyed the project logs maintained by the Caltrans supervisor on that job), improper installation and use of temporary bridge, installing coffer dam within live waters of the Van Duzen instead of properly diverting the flow away from the installation site (sediment plume arose because of this improper sequence/installation), etc. We also note that Caltrans authorized placement of riprap on the northern bank of the Van Duzen last season, which is not authorized in the permit.

I will also forward the AG's press release that we discussed and the RWQCB complaint reference, if I still have that...

My direct number (voice mail at my desk) is 707-445-5345

Melanie Faust
North Coast District
California Coastal Commission
710 E Street, Suite 200
Eureka, CA 95501

P: (707) 445-7833
F: (707) 445-7877
mfaust@coastal.ca.gov
www.coastal.ca.gov

1-04-014 Caltrans Van Duzen Replacement Bridge.doc	**Content-Description:**	1-04-014 Caltrans Van Duzen Replacement Bridge.doc
	Content-Type:	application/msword
	Content-Encoding:	base64

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(Van Duzen River Bridge)

SW060038 ATTACHMENT 6. ESA

Subject: Lower Van Duzen Steelhead
From: Dennis Halligan <fish@nrmcorp.com>
Date: Tue, 31 Jan 2006 11:07:17 -0800
To: David Reilly <david.reilly@noaa.gov>

Hello David,
Below is a summary of the fish work I did this past summer in the lower Van Duzen.

I conducted instream habitat mapping and an underwater survey in the Van Duzen River on September 1, 2005. The survey reach extended upstream from the river's mouth for approximately 2,530 feet.

Instream habitat within the reach consisted entirely of three long, wide and shallow flatwaters and three short, narrow riffles. Water depth through this reach ranged from three inches to one-foot. Water temperature at 12:45 pm was 21.5 degrees Celsius. Juvenile salmonid rearing habitat within this reach was nearly nonexistent. The only exception was a single small rootwad scour hole that was located approximately 830 feet upstream of the river mouth at the base of a riffle. Three Age 1+ and one Age 2+ steelhead were observed at this location along with about 20 juvenile Sacramento pikeminnow.

The substrate along the bottom of the channel was covered in algae. I did not see any evidence of recent fine sediment deposition in this reach.

It is my understanding that Scott Downie of the CDFG and his crew electrofished the reach in the fall. He may have some additional information for you.

I hope this helps with your investigation. Feel free to call me if you have any questions.

Dennis Halligan
Fisheries Biologist
707-269-1370

Fisheries Biologist
Natural Resources Management Corporation

Exhibit I
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(Van Duzen River Bridge)

FACSIMILE TRANSMISSION

CALIFORNIA DEPARTMENT OF FISH AND GAME
NORTHERN CALIFORNIA-NORTH COAST REGION

RIVER, STREAM AND LAKE CONSERVATION
STREAMBED ALTERATION AGREEMENTS

601 LOCUST STREET
REDDING, CALIFORNIA 96001

INFORMATION (530) 225-2367 FAX (530) 225-0324

To: Mr. Riley
Date: 1/30/06
Fax #: 707-826-9561
Pages: 8, including this cover sheet.
From: L. Burns
Telephone:
Subject: 04-0097
No.

ADDITIONAL INSTRUCTIONS:

As requested

Thank you,

If you have any problems with receiving this fax, please call (530)225-2367.

Exhibit I
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CCC-06-CD-11
(Van Duzen River Bridge)

NOTICE OF DETERMINATION

TO: Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

FROM: California Department of Fish and Game
1416 Ninth Street
Sacramento, CA 95814

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code

PROJECT TITLE: Lake or Streambed Alteration Agreement for Notification **#04-0097.** Project proposes to replace the southbound two-lane bridge crossing the **Van Duzen River at the mouth of the Eel River, Humboldt County**.

STATE CLEARINGHOUSE NUMBER: 2003042067

LEAD AGENCY: California Department of Transportation
Environmental Management Office
Post Office Box 3700
Eureka, CA 95502-3700

CONTACT: Deborah Harmon
Chief, Environmental Management

RESPONSIBLE AGENCY: Department of Fish and Game
601 Locust Street
Redding, CA 96001

CONTACT: Bruce Webb
Environmental Scientist
(530) 225-2675

PROJECT LOCATION/DESCRIPTION: The California Department of Fish and Game is issuing a final Lake or Streambed Alteration Agreement pursuant to Section 1602 of the Fish and Game Code to the project applicant, **[Ms. Gail Popham representing the California Department of Transportation].** The applicant proposes to replace the southbound two-lane bridge crossing the **Van Duzen River near the mouth of the Eel River, Humboldt County**.

This is to advise that the California Department of Fish and Game as a Responsible Agency approved the project described above on **September 9, 2004**, and has made the following determinations regarding the above described project.

1. The project will not have a significant effect on the environment.
2. A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures were not made a condition of the approval of the project.
4. A Statement of Overriding Considerations was not adopted for this project.
5. Findings were made pursuant to the provisions of CEQA.

This is to certify that a copy of the ND prepared for this project is available to the general public and may be reviewed at:

California Department of Transportation
Environmental Management Office
Post Office Box 3700
Eureka, CA 95502-3700, or

California Department of Fish and Game
601 Locust Street
Redding, CA 9600, or
Contact the person listed above.

Signed: Date: September 9, 2004

DONALD B. KOCH
Regional Manager, Northern California-North Coast Region
California Department Fish and Game

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CCC-06-CD-11
(Van Duzen River Bridge)

State of California - The Resources Agency
GRAY DAVIS, *Governor*
DEPARTMENT OF FISH AND GAME
Northern California-North Coast Region
619 Second Street
Eureka, CA 95501
(707) 445-6493

RECEIVED
2004 AUG 6 PM 1 33
DFG - REDDING

NOTIFICATION NO.: **04-0097**

AGREEMENT REGARDING PROPOSED STREAM ALTERATION

THIS AGREEMENT, entered in between the State of California, Department of Fish and Game, hereafter called the Department, and Ms. Gail Popham/Caltrans hereafter called the operator, is as follows:

WHEREAS, pursuant to Division 2, Chapter 6 of California Fish and Game Code, the operator, on 4-26-04 notified the Department that he intends to substantially divert or obstruct the natural flow of, or substantially change the bed, channel, or bank of, or use material from the streambed of, the following water: Van Duzen River in the County of HUMBOLDT, State of California.

WHEREAS, the Department, represented by **DFG WARDEN *Jon Dunn*** has conducted an onsite inspection on5-7-04 and has determined that such operations may substantially adversely affect existing fish and wildlife resources including: SALMON, STEELHEAD TROUT, and OTHER AQUATIC AND RIPARIAN SPECIES.

THEREFORE, the Department hereby proposes the following measures to protect fish and wildlife during the operator's work and the operator hereby agrees to accept these recommendations as part of his work. The operator, as designated by the signature on this agreement, shall be responsible for the execution of all elements of this agreement. A copy of this agreement must be provided to any contractor and/or subcontractor and must be in their possession at the worksite.

If the operator's work changes from that stated in the notification specified above, this agreement is no longer valid and a new notification shall be submitted to the Department of Fish and Game. **Failure to comply with the provisions of this agreement and with other pertinent DFG Code sections may result in prosecution and/or cancellation of this agreement.**

Nothing in this agreement authorizes the operator to trespass on any land or property, nor does it relieve the operator of responsibility for compliance with applicable federal, state, or local laws.

THIS AGREEMENT IS NOT INTENDED AS AN APPROVAL OR ENDORSEMENT OF A PROJECT OR OF SPECIFIC PROJECT FEATURES BY THE DEPARTMENT OF FISH AND GAME. INDEPENDENT REVIEW AND RECOMMENDATIONS WILL BE PROVIDED BY THE DEPARTMENT AS APPROPRIATE ON THOSE PROJECTS WHERE LOCAL, STATE, OR FEDERAL PERMITS OR OTHER ENVIRONMENTAL REPORTS ARE REQUIRED.

CAL ORNIA DEPARTMENT OF FISH AND ME
CEQA FINDINGS FOR THE AGREEMENT REGARDING PROPOSED LAKE OR STREAMBED ALTERATION, NO. 04-0097

Introduction

The California Environmental Quality Act (**CEQA**) (Public Resources Code section 21000, *et seq.*) and the State CEQA Guidelines (**Guidelines**) (Section 15000, et seq., Title 14, California Code of Regulations) require that no public agency shall approve or carry out a project for which a Negative Declaration (ND) has been completed unless a finding can be made that no significant effects will result from the project, or that changes in the project agreed to by the applicant will fully avoid any significant impacts that might otherwise result from the project.

As the lead agency for the Project, the California Department of Transportation (Caltrans) adopted the ND for the Project on **December 24, 2003.** Caltrans found that the Project will not result in significant environmental effects and that no mitigation measures were required.

The California Department of Fish and Game (Department) is issuing a Lake or Streambed Alteration Agreement (Agreement) to the project applicant **[Ms. Gail Popham representing the California Department of Transportation].** The project is located on the **Van Duzen River near the mouth of the Eel River, Humboldt County**, in Section 23, Township 2 North, Range 1 East, HB&M.

Because the Department is issuing the Agreement, it is a "responsible agency" under CEQA for the Project. As a CEQA Responsible Agency, the Department is required by Guidelines §15096 to review the environmental document certified by the lead agency approving the projects or activities addressed in the Agreement and to make certain findings concerning a project's potential to cause significant, adverse environmental effects. However, when considering alternatives and mitigation measures approved by the lead agency, a responsible agency is more limited than the lead agency. In issuing the Agreement, the Department is responsible only for ensuring that the direct or indirect environmental effects addressed in the Agreement are adequately mitigated or avoided. Consequently, the findings adopted or independently made by the Department with respect to the approval of Agreements Regarding Proposed Lake or Streambed Alterations are more limited than the findings of the lead agency funding, approving, or carrying out the project activities addressed in such Agreements.

Findings

The Department has considered the ND adopted by Caltrans. The Department has independently concluded that the Agreement should be issued under the terms and conditions specified therein. In this regard, the Department hereby adopts the findings of Caltrans, as set forth in the ND and record of project approval, insofar as those findings pertain to the Project's impacts on biological resources.

Signed: Date: September 8, 2004

DONALD B. KOCH
Regional Manager, Northern California-North Coast Region
California Department Fish and Game

Exhibit I
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CCC-06-CD-11
(Van Duzen River Bridge)

1. The following work conditions apply to the proposed replacement of the Hwy. 101 southbound bridge over the Van Duzen River near its confluence with the Eel River.

2. All work in or near the stream shall be confined to the period June 15 through October 15.

3. Except where noted in this Agreement, all construction shall be in accordance with work plan submitted with Notification #04-0097

4. Rock, riprap, or other erosion protection shall be placed in areas where vegetation cannot reasonably be expected to become re-established. All other areas of disturbed soil which drains toward the stream channel shall be seeded with native plant seed and mulched.

5. This agreement shall be in effect for five (5) years from date of signature of both parties or for the life of the Caltrans project to which it pertains, whichever term may end first and the conditions outlined herein shall remain the same throughout the term of the agreement. If conditions change substantially either to the river bed, bank or channel or the operator wishes to substantially change the construction plans as outlined in the Project Description the operator shall notify the Dept. and amend this agreement or prepare a new Notification describing the new work plan.

6. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. The disturbed portions of any stream channel shall be restored to as near their original condition as possible. Restoration shall include the mulching of stripped or exposed dirt areas at crossing sites prior to the end of the work period

7. During construction in flowing water which can transport sediment downstream, the flow shall be diverted around the work area by pipe, pumping, or temporary diversion channel. When any dam or artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain fish life below the dam. Equipment may be operated in the stream channel of flowing live streams only as necessary to construct the described construction. The operator may channel the low flow into a pipe of adequate size to hold low flows and place native gravels over it to create an equipment work area.

8. Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the high water mark before such flows occur.

9. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from any logging, construction, or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the State. When operations are completed, any excess materials or debris shall be remove from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream.

10. No servicing of equipment shall take place within the stream bed and all equipment shall be staged and stored when not in use out of the stream bed. No petroleum products shall be allowed to enter the stream channel. If a spill occurs, the Dept. shall be notified immediately and cleanup and containment shall commence. All work to the project shall cease until the spill has been cleaned to the Dept.'s satisfaction. Operator shall have onsite the necessary materials to begin removal of any spilled material. No concrete or washing of concrete trucks shall be allowed to take place within the stream channel

11. Operator/Caltrans shall provide access to the work area through any gates by assigning keys or lock

AGREEMENT TO AMEND
LAKE OR STREAMBED ALTERATION AGREEMENT NUMBER **04-0097**

WHEREAS, **Ms. Gail Popham,** representing the **California Department of Transportation, ("Operator") and the Department of Fish and Game ("Department")** entered into Lake or Streambed Alteration Agreement **#04-0097** ("Agreement"), on or about **September 13, 2004;** and

WHEREAS, the Department has been requested to **amend and extend the work period pursuant to Condition No. 2 of the agreement;** and

WHEREAS, pursuant to Section 1616 of the Fish and Game Code, former Section 1603(g) of the Code provides that the terms of a Lake or Streambed Alteration Agreement signed by the Department prior to January 1, 2004 may be amended by mutual consent of the parties to the agreement; and

WHEREAS, the Department has established a fee for amending a Lake or Streambed Alteration Agreement and that fee, as set forth in Section 699.5 of Title 14 of the California Code of Regulations, is $696.25.

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions set forth below, the Operator and the Department agree as follows:

1. The terms and conditions contained in the original Agreement and all amendments thereto shall remain in full force and effect.

2. All work in or near the stream shall be confined to the period June 15 through November 15, **OR** until a forecasted storm event threatens to raise the level of the river enough to allow for passibility of migrating fish. The quantified size of the storm event will be determined by a qualified NOAA Fisheries hydrologist, and then will become a condition of the work window extension approval. All proposed work, per the work window extension request, shall be performed accordingly as approved by the Department, U.S. Army Corps of Engineers and NOAA Fisheries.

3. All work shall be done in accordance with the plans and specifications provided to the Department with the original notification package and/or described in the original Agreement, except as herein provided.

4. A copy of this Amendment and a copy of the original Agreement shall be provided to any contractors and/or subcontractors of the Operator and copies of these documents shall be available at the project site.

5. Suspension and Cancellation. The Department may suspend or cancel the Agreement if the Department determines that circumstances warrant suspension or cancellation. The circumstances that might warrant suspension or cancellation include, but are not limited to, the following:

a. Failure by Operator, or his employees, agents, representatives, contractors,

and/or subcontractors, to comply with any of the terms and conditions of the Agreement.

b. The Department determines that the information Operator provided to the Department to develop the Agreement or this Amendment, or the information contained in a notification, is incomplete or inaccurate.

c. The Department obtains new information that shows the work authorized by the Agreement could substantially adversely affect fish and wildlife resources, notwithstanding Operator's compliance with the Agreement

d. The Department determines that measures to protect fish and wildlife resources different from those included in the Agreement are necessary to protect those resources.

e. There is a substantial change in conditions. For purposes of the Agreement, "substantial change in conditions" shall mean one or more of the following: 1) the work described in this Agreement is substantially changed; 2) conditions affecting fish and wildlife resources substantially change; and/or 3) the work conducted under this Agreement have adversely affected, or will adversely affect, fish and wildlife resources, notwithstanding that Operator has complied, or will comply with, the terms and conditions of the Agreement.

6. Scope of Suspension. At the discretion of the Department, any action to suspend the Agreement may be limited in scope to address the specific problem or problems resulting in the suspension. Hence, the Department may limit the suspension to specified work or specified areas. The Department shall notify Operator of any suspension of the Agreement, or any part thereof, in writing. Any suspension shall take effect immediately upon receipt of such notice by Operator, or in accordance with the instructions contained in the notice. Such notice will identify the reason or reasons for the suspension, the actions necessary to correct the problem, and the scope of the suspension.

7. The Operator understands that the Department may not execute this Amendment until it complies with all applicable State laws, including the California Environmental Quality Act (CEQA) (Pub. Resources Code, §§ 2100-21177), if CEQA applies.

IN WITNESS WHEREOF, the parties below have executed this amendment to Lake or Streambed Alteration Agreement **#04-0097** as indicated below.

10/14/05
Date

For Gail Popham
California Department of Transportation

10/17/05
Date

For **DONALD B. KOCH**, Regional Manager
Department of Fish and Game

Exhibit I
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(Van Duzen River Bridge)

Let me know if you need anything more on this. Have a good weekend.

Mark

//\\//\\ //\\//
Mark K. Neely, CEG #1582
Senior Engineering Geologist
Special Projects Unit
NCRWQCB
Phone: 707.576.2689
Fax: 707.523.0135
MNeely@waterboards.ca.gov
//\\//\\ //\\//

>>> "David Reilly" <David.Reilly@noaa.gov> 2/3/2006 12:40 PM >>>
Mark,

Can you tell me what the latest outcome of the Violations at the CALTRANS site on the HWY101 Bridge over the Van Duzen River are?

This is concerning *Compliant R1-2005-0125*

I am currently investigating this for possible federal and state violations

Thanks

Dave

Subject: Re: Van Duzen Case
From: "Mark Neely" <MNeely@waterboards.ca.gov>
Date: Fri, 03 Feb 2006 14:04:22 -0800
To: <David.Reilly@noaa.gov>
CC: "Fred Blatt" <FBlatt@waterboards.ca.gov>

David,

Here is a press release from yesterday on the Van Duzen bridge case:

~~~~~~~~~~~~~~~~~~~~~~~~~

FOR IMMEDIATE RELEASE
February 2, 2006

REGIONAL WATER BOARD COLLECTS FINE TO PAY FOR CLEANUPS

SANTA ROSA - On Monday, January 30, 2006, the North Coast Regional Water Quality Control Board received a $101,000 payment of an Administrative Civil Liability Complaint from the California Department of Transportation (Caltrans) for failing to comply with the requirements of a Section 401 Water Quality Certification for a Highway 101 bridge replacement project on the Van Duzen River near Fortuna (Humboldt County).

The money will be put in an account dedicated to cleaning up water pollution problems.

Staff issued the complaint after an investigation revealed that Caltrans failed to adhere to the requirements and best management practices included in the water quality certification for the project, and the discharge or threatened discharge of sediment, oil, petroleum products, and other construction materials into the river. Caltrans waived its right to a hearing on the matter.

For more information contact Catherine Kuhlman, Executive Officer, North Coast Regional Water Board, at (707) 576-2220, or 5550 Skylane Blvd, Santa Rosa CA, 95403.

###

State Water Resources Control Board
Office of Public Affairs
Phone: 916.341.5254
Fax: 916.341.5252
Email: info@waterboards.ca.gov

~~~~~~~~~~~~~~~~

Exhibit I
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(Van Duzen River Bridge)

U.S. Environmental Protection Agency

Total Maximum Daily Loads

Listed Water Information

CYCLE : 1998

Click here to see metadata for this report.

Cycle: 1998 **State:** CA **List ID:** CAR111.200VAN DUZEN RIVER

Waterbody Name: VAN DUZEN RIVER

State Basin Name: 111.200

Listed Water Map Link: No Spatial Data

State Impairments:

State Impairment	Parent Impairment	Priority	Rank	Targeted Flag	Anticipated Ti
SEDIMENTATION/SILTATION	SEDIMENT/SILTATION	LOW		Y	DEC-3

Potential Sources of Impairment:

Potential Impairment Sources
EROSION/SILTATION
NONPOINT SOURCES
RANGE LAND

Total Maximum Daily Load (TMDL) Information:

Note: Click on the underlinded TMDL Document Name for a detailed TMDL Document Rep

TMDL Document Name	Status	Actual TMDL Establishment Date	TMDL Pollutant Description	TMDL Pollutant Type	State Impain
VAN DUZEN RIVER	APPROVED/ESTABLISHED	SEP-30-1999	SEDIMENT	POINT/NONPOINT SOURCE	SEDIMENTATION/S
VAN DUZEN RIVER	APPROVED/ESTABLISHED	SEP-30-1999	SEDIMENT	POINT/NONPOINT SOURCE	SILTATIO

Watershed Information:

Watershed Name	Watershed States
LOWER EEL	CALIFORNIA

Exhibit I
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CCC-06-CD-11
(Van Duzen River Bridge)

Table 1. Summary of recommended proposed listing determinations for 27 Evolutionarily Significant Units of Salmon and *Oncorhynchus mykiss*.

Salmonid Species	ESU Reviewed	Current ESA Status	Recommended Proposed Listing Determination	Number of Hatchery Stocks Included in ESU
Sockeye Salmon *(O. nerka)*	Snake River	*Endangered*	*Endangered*	1
	Ozette Lake	*Threatened*	*Threatened*	2
Chinook Salmon *(O. tshawytscha)*	Sacramento River Winter-run	*Endangered*	*Threatened*	2
	Central Valley Spring-run	*Threatened*	*Threatened*	0
	California Coastal	*Threatened*	*Threatened*	7
	Lower Columbia River	*Threatened*	*Threatened*	17
	Upper Willamette River	*Threatened*	*Threatened*	7
	Upper Columbia River Spring-run	*Endangered*	*Threatened*	6
	Puget Sound	*Threatened*	*Threatened*	22
	Snake River Fall-run	*Threatened*	*Threatened*	4
	Snake River Spring/Summer-run	*Threatened*	*Threatened*	15
Coho Salmon *(O. kisutch)*	Central California Coast	*Threatened*	*Endangered*	4
	S. Oregon/N. California Coasts	*Threatened*	*Threatened*	3
	Oregon Coast	*Threatened*	*Threatened*	5
	Lower Columbia River	*Candidate*	*Threatened*	21
Chum Salmon *(O. keta)*	Hood Canal Summer-run	*Threatened*	*Threatened*	8
	Columbia River	*Threatened*	*Threatened*	3
O. mykiss	Southern California	*Endangered*	*Endangered*	0
	South-Central California Coast	*Threatened*	*Threatened*	0
	Central California Coast	*Threatened*	*Threatened*	2
	California Central Valley	*Threatened*	*Threatened*	2
	Northern California	Threatened	Threatened	2
	Upper Willamette River	*Threatened*	*Threatened*	0
	Lower Columbia River	*Threatened*	*Threatened*	10
	Middle Columbia River	*Threatened*	*Threatened*	7
	Upper Columbia River	*Endangered*	*Threatened*	6
	Snake River Basin	*Threatened*	*Threatened*	6

Exhibit I
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CCC-06-CD-11
(Van Duzen River Bridge)

California Regional Water Quality Control Board
North Coast Region
Beverly Wasson, Chairperson

Alan C. Lloyd, Ph.D.
Agency Secretary

http://www.waterboards.ca.gov/northcoast
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone: 1 (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135

Arnold Schwarzenegger
Governor

September 28, 2005

Post-it® Fax Note 7671	Date	# of pages ▶ 6
To Melanie Faust	From Dean Prat	
Co./Dept. CA Coastal Comm.	Co. RWQCB	
Phone #	Phone # 707-576-2801	
Fax # 707-445-7877	Fax #	

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CALIFORNIA
COASTAL COMMISSION

Mr. Charles Fielder
District Director
CDOT - Eureka
1656 Union Street
Eureka, CA. 95403

Dear Mr. Fielder:

Subject: Notice of Violation Regarding Activities Associated with the Highway 101 Bridge Project on the Van Duzen River, Humboldt County.

File: CDOT – Hwy 101, Van Duzen River, Southbound Bridge Replacement
WDID No. 1B04029WNHU

This Notice of Violation serves as a notice that the California Department of Transportation (CDOT) was in non-compliance with prior Regional Water Board authorization. On May 5, 2005, the Regional Water Board issued a Clean Water Act Section 401 Water Quality Certification (Water Quality Certification) for the Highway 101 Bridge Project on the Van Duzen River, Humboldt County, which was prepared in response to an application proposal submitted by CDOT on March 17, 2005.

The Water Quality Certification includes the following Additional Conditions.

- No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, other than that authorized by this permit, shall be allowed to enter into or be placed where it may be washed by rainfall into waters of the State. When operations are completed, any excess material or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream.

- Best Management Practices for sediment and turbidity control shall be implemented and in place prior to, during, and after construction in order to ensure that no silt or sediment enters surface waters.

On September 1, 2005, Regional Water Board staff received a call from Mr. David Ammerman of the United States Army Corps of Engineers (USACOE) reporting that he had recently received a complaint regarding excessive turbidity downstream of the bridge project. Mr. Ammerman informed Regional Water Board staff that he looked at the project and found that sheet pile had been installed around the excavation area that was causing turbidity and a rubber dam had been installed along the edge of the river to isolate the excavation area and prevent turbid water from entering the main channel.

In response to this report, Dean Prat of the Regional Water Board staff visited the site on September 7, 2005. Mr. Prat looked at the rubber dam and the excavation area on the north side of the river. Mr. Prat noted that the river was flowing clear and there did not appear to be any sediment entering the river as a result of the excavation work. The resident engineer, Mr. Jeffery Wright, told Mr. Prat that NOAA Fisheries staff is requiring CDOT to remove the fine sediment captured behind the rubber dam prior to removal of the dam. Mr. Prat also told the resident engineer that the fine sediment captured behind the dam had to be removed prior to removing the dam. After this site visit, CDOT staff informed our staff that CDOT would remove the fine sediment by sucking it off the bottom with a suction hose, and would pump the material to the settling basin. Staff concur with this approach. Failure to remove the fine sediment prior to removal of the rubber dam could result in non-compliance with the Water Quality Certification and our Basin Plan.

Although Mr. Prat noted that the rubber dam was working, and he did not observe turbidity entering the river, he did observe several other areas of non-compliance that CDOT will need to correct in order to comply with the Additional Conditions listed above. Mr. Prat observed dark stains on the gravel bar that appeared to be from petroleum spills or leaks. Mr. Prat also observed leaks from hoses and fittings connected to a generator that was located on the gravel bar. There was a drum of biodegradable hydraulic oil next to the generator. The drum and generator did not have any type of secondary containment, and obvious leaks were not being contained or cleaned up. To clarify the conditions in the Water Quality Certification, any discharge or threatened discharge of fuel and oil products is not authorized. CDOT shall not allow any material that leaks from equipment to be placed where the material could leach to groundwater or be washed by rainfall into waters of the State. CDOT shall implement adequate Best Management Practices (BMPs), including secondary containment of any generators, drums, and fueling areas. Any spills or leaks shall be cleaned up immediately and adequately. Contaminated material shall be containerized and disposed of appropriately.

On the south side of the river, Mr. Prat observed a significant amount of earthen material that originated from an excavation. The earthen material contained a much higher percentage of fine-grain material than the native material on the surface of the gravel bar. CDOT personnel onsite advised Mr. Prat that this material had come from the excavation area, and was being stockpiled, but would be removed from the river channel. Mr. Prat noted that the material appeared to have been spread out and leveled to create a working surface. Staff are concerned that there were no

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BMPs for storm water runoff in place to prevent this material from being washed into the river. The Water Quality Certification states that BMPs for sediment and turbidity control shall be implemented and in place prior to, during, and after construction in order to ensure that no silt or sediment enters surface waters. Therefore, the project was not in compliance with this Water Quality Certification condition. Spreading fine-grain material over the gravel bar and then installing a BMP to filter the storm water runoff does not constitute implementation of adequate BMPs. Spreading the excavated material onsite increased the threat to water quality and will make implementation of BMPs more difficult and less affective.

Staff's onsite observations indicate that the Highway 101-Van Duzen River Bridge Project was being conducted in a manner that was not authorized by the Regional Water Board. The unauthorized activities described above threaten to impact water quality and beneficial uses and could result in violation of provisions of the California Water Code. Regional Water Board staff are considering potential follow-up actions and at this time request that CDOT make sure that adequate BMPs are installed at this site immediately. Regional Water Board staff request submittal of a report to this office by October 15, 2005 that documents the actions taken by CDOT to address all areas of non-compliance described in this letter. The report shall specify the date any actions were taken and shall include photos of the affected areas.

If you have any further questions please contact Dean Prat of my staff at (707) 576-2801.

Sincerely,

Catherine Kuhlman

Catherine E. Kuhlman
Executive Officer

092805_DLP_tmk_VanDuzeninspect_090705

Certified-Return Receipt Requested

Enclosure: Water Quality Certification for the Highway 101 – Van Duzen River, Southbound Bridge Replacement Project

cc: Mr. Oscar Balaguer, SWRCB, Water Quality Certification Unit, Div. of Water Quality
Ms. Sheryl Freeman, SWRCB, Office of the Chief Council
Ms. Deborah Harmon, CDOT-Eureka, P.O. Box 3700, Eureka, CA 95502-3700
Ms. Jane Hicks, US Army Corps of Engineers, Regulatory Branch, 333 Market Street, San Francisco, CA 94105
U.S. Army Corps of Engineers, District Engineer, P.O. Box 4863, Eureka, CA 95502
Ms. Jane Vorpagel, California Department of Fish and Game, 601 Locust Street, Redding, CA 96002

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COASTAL COMMISSION

California Regional Water Quality Control Board
North Coast Region

COMPLAINT NO R1-2005-0125

FOR

ADMINISTRATIVE CIVIL LIABILITY

IN THE MATTER OF

CALIFORNIA DEPARTMENT OF TRANSPORTATION

FOR

FAILURE TO COMPLY WITH CLEAN WATER ACT SECTION 401
WATER QUALITY CERTIFICATION

FOR

SOUTHBOUND HIGHWAY 101
VAN DUZEN RIVER BRIDGE REPLACEMENT PROJECT
(WDID No. 1B04029WNHU)

Humboldt County

This civil liability complaint (Complaint) is issued to the California Department of Transportation, to assess administrative civil liability pursuant to California Water Code (CWC) Section 13385(a)(2) for violations of a Clean Water Action Section 401 Water Quality Certification, which was issued to the California Department of Transportation on May 5, 2004.

The Executive Officer of the California Regional Water Quality Control Board, North Coast Region (Regional Water Board), hereby finds that:

1. The California Department of Transportation is replacing the southbound bridge on Highway 101 over the Van Duzen River near Fortuna, California. The California Department of Transportation submitted an application and requested Clean Water Action Section 401 Water Quality Certification (Certification) for the bridge replacement project on March 17, 2004. The Regional Water Board issued Certification on May 5, 2004, contingent upon: a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicant's project description, and b) compliance with all applicable requirements of the Regional Water Board's Water Quality Control Plan for the North Coast Region (Basin Plan). For the purpose of this Complaint, the California Department of Transportation is hereinafter referred to as the "Discharger."

2. The Certification specifies that, pursuant to Title 23, California Code of Regulations, Section 3859(a), the Discharger shall comply with the conditions listed in the Certification. The Certification includes the following conditions:

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(Van Duzen River Bridge)

a. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, other than that authorized by this permit, shall be allowed to enter into or be placed where it may be washed by rainfall into waters of the State. When operations are completed, any excess material or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream.

b. Best Management Practices for sediment and turbidity control shall be implemented and in place prior to, during, and after construction in order to ensure that no silt or sediment enters surface waters.

c. If, at any time, an unauthorized discharge to surface waters occurs, or any water quality problem arises, the project shall cease immediately and the Regional Water Board shall be notified promptly.

3. On August 26, 2005, U.S. Army Corps of Engineers (USACOE) staff notified Regional Water Board staff that construction activities were causing elevated turbidity levels in the Van Duzen River downstream of the project. USACOE staff reported that steel sheet pile for a cofferdam was being installed near the edge of the river and the activity was creating turbidity in the river downstream of the project. Elevated turbidity was reported to be visible from the project area all the way down to the Eel River, approximately one-half mile downstream of the project.

4. On September 7, 2005, Regional Water Board staff inspected the project. Staff observed that a water-bladder barrier wall had been installed between the river and the construction activity to prevent additional silt and sediment from reaching the river. Staff were informed by the Discharger that its contactor continued to install the sheet pile cofferdam after the Discharger discovered that its construction activity was causing excessive turbidity in the river. The Discharger did not notify Regional Water Board staff that the project had caused a water quality problem. The Discharger told Regional Water Board staff that the sediment discharge continued until the water-bladder was installed and installation was completed on the same day the sediment discharge began.

5. The Certification includes conditions requiring the Discharger to implement Best Management Practices (BMPs) prior to, during, and after construction, in order to ensure that no silt or sediment enters surface waters. The water-bladder barrier wall was an effective BMP after it was installed; however, the Discharger did not install any BMPs prior to initiating the construction activity that caused the turbidity problem. Failure to install BMPs prior to construction is a violation of the Certification.

6. Regional Water Board staff observed additional violations of the Certification during the September 7, 2005 inspection. Staff observed several areas of stains on the gravel bar from spills or leaks of petroleum products, active leaks of petroleum products from hoses and

fittings connected to an air compressor generator, and a 50-gallon drum of biodegradable hydraulic oil was sitting on the gravel bar without any spill containment. The Discharger allowed oil or petroleum products to leak and be placed where they may be washed by rainfall into waters of the State in violation of the Certification. Staff also observed that earthen material originating from a pier footing excavation had been spread over the gravel bar and the earthen material contained a high percentage of fine-grained material. It appeared that the Discharger spread the excavated material over the gravel bar to create a work area for cranes and other heavy equipment. Spreading these fine-grained materials over the gravel bar is not consistent with implementation of BMPs for sediment and turbidity control. The excavated material was supposed to be hauled offsite or stockpiled for removal from the gravel bar. Instead, the Discharge placed this fine-grained earthen material in an area where it may be washed by rainfall into waters of the State, violating the Certification. In addition, no BMPs had been installed to ensure that no silt or sediment would enter surface waters, another violation of the Certification.

7. On September 28, 2005, Regional Water Board staff sent the Discharger a Notice of Violation (NOV) letter. The NOV describes the violations that Regional Water Board staff observed and required that the Discharger make sure that adequate BMPs were installed at the site immediately. The NOV requested that the Discharger submit a report by October 15, 2005 documenting any actions taken by the Discharger to address the issues of non-compliance described in the NOV. The NOV states that the report shall specify the dates any corrective actions were taken. On October 13, 2005, the Discharger submitted a report (dated October 12, 2005) describing several actions taken by the Discharger to address the issues of non-compliance; however, the report did not specify the date that each action was taken.

8. The Discharger's report indicates that the stains and petroleum leaks were cleaned up, the contaminated materials were appropriately disposed of offsite, and secondary containment measures had been installed/implemented for all generator and drum storage areas as well as areas where fueling activities were occurring. The report does not specify the dates when the Discharger cleaned up the stains and leaks, disposed of contaminated materials, or installed secondary containment.

9. The Discharger has violated the conditions of a Certification issued by the Executive Officer pursuant to Section 401 of the Clean Water Act, for which the Regional Water Board may impose civil liability under California Water Code (CWC) Section 13385(a)(2).

10. The Executive Officer, therefore, seeks to assess civil liabilities as provided in this Complaint. Unless waived, a hearing on this matter will be held before the Regional Water Board within 90 days following the issuance of this Complaint. Unless you decide to waive this right to a hearing, you or your representative will have an opportunity to address and contest the allegations in this Complaint and the imposition of civil liability before the Regional Water Board, in Santa Rosa, California. An agenda showing the time set for the hearing will be mailed to you not less than 10 days before the hearing.

At the hearing, unless waived, the Regional Water Board will consider whether to affirm, reject, or modify the proposed civil liability, whether to refer the matter to the Attorney General for recovery of judicial liability, or take other enforcement actions.

11. The following facts are the basis for the alleged violations in this matter:

a. Construction of the sheet pile cofferdam resulted in a discharge of soil, silt and earthen material to waters of the State. The Discharger violated an applicable Certification condition (listed above in finding 2a) for one (1) day.

b. BMPs were not implemented prior to construction of the sheet pile cofferdam and the construction activity resulted in a discharge of soil, silt and earthen material to waters of the State. The Discharger violated an applicable Certification condition (listed above in finding 2b) for one (1) day.

c. On August 26, 2005, the Discharger discovered that construction of a steel sheet pile cofferdam was causing silt and sediment to surface waters and the Discharger did not stop the activity that was causing the water quality problem. The Discharger did not notify Regional Water Board staff that a water quality problem had occurred. Regional Water Board staff were notified of the water quality problem by USACOE staff. The Discharger violated an applicable Certification condition (listed above in finding 2c) for one (1) day.

d. The Discharger allowed oil or petroleum products to enter into or be placed where they may be washed by rainfall into waters of the State. The Discharger was observed to be in violation of the Certification on September 7, 2005. The Discharger's report states that areas of leaks have been cleaned up and appropriately disposed of offsite. The report also states that all fueling and storage of generators and drums is now occurring with the use of secondary containment. Although the NOV states that the Discharger's report shall specify the date any actions were taken and shall include photos of the affected area, the Discharger's report does not contain any photos documenting installation of secondary containment or soil cleanup actions. The report also does not specify when secondary containment was installed and areas of leaks were cleaned up. Based on the nature of this violation and the Discharger's lack of attention to this issue while Regional Water Board staff were onsite inspecting the project, the Discharger was likely to be in violation of the Certification prior to Regional Water Board staff's inspection. If this violation was not addressed until the Discharger received the NOV the Discharger violated an applicable Certification condition (listed in finding 2a above) for at least twenty-two (22) days from September 7, 2005 to September 28, 2005.

e. The Discharger excavated fine-grained earthen material from within a steel sheet pile cofferdam and spread the material over the gravel bar. The Discharger allowed debris,

soil, silt, or earthen material from construction activity to be placed where it may be washed by rainfall into waters of the State. The Discharger's report states that as of October 7, 2005 over seventy (70) percent of the excavated material that was spread over the gravel bar had been removed offsite or stockpiled and winterized onsite for later use and ninety-five (95) percent of the material would be removed and disposed of by October 15, 2005. Regional Water Board staff inspected the site on October 19, 2005 and confirmed that the Discharger had removed most of the earthen material from the gravel bar. The Discharger violated an applicable Certification condition (listed in finding 2a above) for at least thirty-nine (39) days from sometime prior to September 7, 2005 to October 15, 2005.

f. The Discharger excavated fine-grained earthen material from within a steel sheet pile cofferdam and spread the earthen material over the gravel bar surface. The Discharger did not install any BMPs for sediment and turbidity control prior to or during this construction activity to ensure that no silt or sediment would enter surface waters. The Discharger's report states that as of October 6, 2005, silt fencing had been placed around the entire work area and between access roads and the river. The Discharger violated an applicable Certification condition (listed in finding 2b above) for at least thirty (30) days from prior to September 7, 2005 to October 6, 2005.

g. The Certification requires all in-stream work activities to be conducted between June 1 and October 15 to minimize impacts to juvenile salmonids and to avoid impacts to adult salmonids. This work period is also described in the Biological Opinion issued by the National Oceanic and Atmospheric Administration (NOAA Fisheries). Regional Water Board staff inspected the site on October 19, 2005 and observed the Discharger conducting in-stream work activities including removal of the temporary stream crossing. The Discharger violated the Certification for four (4) days from October 16, 2005 to October 19, 2005.

h. The Discharger did not remove two sheet pile cofferdams that were installed in the gravel bar. The Discharger requested permission and permit modifications from the various regulatory agencies to allow the Discharger to continue working past October 15th and also to allow the two cofferdams to remain in the gravel bar until the following construction season. The Discharger did not provide Regional Water Board staff with enough time to evaluate their proposed construction activities and revise the Certification. The Discharger covered the cofferdams with riprap and left them installed through the winter. The Discharger violated the work period authorized in the Certification beginning on October 15, 2005 and continues to violate the Certification daily while the cofferdams remain in the gravel bar. As of November 21, 2005, the Discharger has been in violation of the Certification for thirty-six (36) days.

12. CWC Section 13385(c) specifies that civil liability may be imposed administratively by the Regional Water Board pursuant to Article 2.5 (commencing with Section 13323) of Chapter 5 in an amount not to exceed the sum of ten thousand dollars ($10,000) for each

day in which a violation occurs and where there is a discharge, any portion of which is not susceptible to cleanup or is not cleaned up, and the volume discharged but not cleaned up exceeds 1,000 gallons, an additional liability not to exceed ten dollars ($10) multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.

13. As of October 19, 2005, the date of Regional Water Board staff's last inspection, the total civil liability that could be imposed against the Discharger in this Complaint is calculated as follows:

From Finding 11a:	1 day x $10,000/day	= $10,000
From Finding 11b:	1 day x $10,000/day	= $10,000
From Finding 11c:	1 day x $10,000/day	= $10,000
From Finding 11d:	22 days x $10,000/day	= $220,000
From Finding 11e:	39 days x $10,000/day	= $390,000
From Finding 11f:	30 days x $10,000/day	= $300,000
From Finding 11g:	4 days x $10,000/day	= $40,000
From Finding 11h:	36 days x $10,000/day	= $360,000
Total	134 days x $10,000/day	= $1,340,000

In summary, the Discharger is subject to maximum potential civil liabilities in the amount of $1,340,000.

14. In determining the amount of civil liability actually assessed, pursuant to California Water Code Section 13327, the Regional Water Board considered the following factors:

a) The Nature, Circumstances, Extent, and Gravity of the Violations:

i. Cofferdam (Alleged violations listed in Findings 11a, 11b and 11c)

The Discharger failed to install BMPs prior to construction of a cofferdam and allowed soil, silt and earthen material from the construction activity to enter waters of the State. The Discharger failed to cease the activity causing the discharge and failed to notify the Regional Water Board upon their discovery that the activity caused a water quality problem. This violation was not caused by an accidental action or equipment failure and the Discharger could have easily prevented the discharge by installing the water bladder barrier wall or other BMPs prior to initiating construction of the cofferdam. The Discharger also could have stopped the activity rather than continuing to violate the Certification and could have reported the water quality problem to Regional Water Board staff immediately. Therefore, Regional Water Board staff believe that the maximum amount of civil liability is appropriate for these violations, and have calculated a liability of $30,000, based on three separate violations for one day each.

ii. Petroleum Product Storage and Handling (Alleged violations listed in Finding 11d)

The Discharger allowed oil or petroleum products to enter into or to be placed where they may enter groundwater or be washed by runoff into waters of the State. The stains on the gravel bar and the leaking hoses were very obvious and not hidden to inspectors or to the Discharger. The Discharger did not adequately control heavy equipment and vehicle access onto the gravel bar and allowed oil and petroleum products to be spilled and leaked directly onto the gravel bar. The Discharger evidently did not inspect the gravel bar or the heavy equipment in order to identify and clean up any accidental spills or leaks. The Discharger could have used secondary containment methods/measures and prevented some of these oil and petroleum discharges. The Discharger should have cleaned up any incidental leaks as they occurred and could have fixed the equipment that was obviously leaking on the gravel bar. The Discharger's report did not include the date when this violation was addressed. After the report was submitted, the Discharger reported verbally that cleanup of the spills began on September 7, 2005 and that cleanup efforts were ongoing from that date forward.

Regional Water Board staff calculated civil liability in this matter using the maximum daily amount but did not use the maximum number of days of violation; instead, staff based the number of days of violation on an assumption that this violation likely existed at least one day prior to Regional Water Board staff's inspection and that complete cleanup of all the stains and leaks, and installation of secondary containment was not likely to be accomplished in one afternoon. Therefore, the proposed civil liability for the petroleum product-related violations is $30,000, based on $10,000 a day for three days of violation including the day before and the day after Regional Water Board staff's inspection.

iii. Placement of Fine-Grained Material on Gravel Bar (Alleged violations listed in Findings 11e and 11f)

The Discharger excavated fine-grained earthen material from within a steel sheet pile cofferdam, then spread the earthen material over the gravel bar surface without implementing any BMPs for sediment and turbidity control. The Discharger allowed soil, silt, or earthen material from a construction activity to be placed where it may be washed by rainfall into waters of the State in violation of the Certification. The Discharger was able and capable of hauling the material offsite or stockpiling the material out of the stream channel for future use. This construction activity violated two Certification conditions.

When calculating the civil liability for the violations associated with the matter, Regional Water Board staff noted that the violations did not result in a direct discharge and adverse impact to surface waters and the Discharger was able to eliminate or significantly reduce threatened sediment discharges by installing BMPs

(silt fencing) and by removing and hauling most of the fine-grained material out of the stream channel prior to any significant storm events. Therefore, rather than recommending the maximum penalty amount of $690,000 for sixty-nine days of violation, staff propose a penalty of $30,000. Staff based this calculation on $1,000 a day for thirty days of violation from September 7th, the day of Regional Water Board staff's inspection, through October 6th, the date reported by the Discharger as the date when silt fencing had been installed and over 70-percent of the soil had been removed from the stream channel.

iv. In-Stream Work Activities During Winter Period (Alleged violations listed in Findings 11g and 11h)

The Discharger continued conducting in-stream work activities after October 15th in violation of the Certification, apparently assuming that an extension would be granted even though Regional Water Board staff had issued an NOV for the project and had told the Discharger that an extension would not be considered until all violations were appropriately addressed. The Discharger eventually began winterizing the project and removed temporary structures such as the stream crossing and sediment basin that was used for disposal of water generated by dewatering activities.

The Discharger also allowed two cofferdams to remain in the gravel bar. The adequacy of the Discharger's cofferdam winterization efforts and the potential impact of leaving those cofferdams in the gravel bar through the winter remain to be seen, and the Regional Water Board retains the option of assessing additional penalties for this violation if the cofferdams cause any adverse water quality impacts. Thus, at this time, proposed penalties for in-stream work conducted after October 15 does not include penalties for cofferdams in place beyond October 15. Further, staff note that the Discharger continued in-stream activities after October 15 with knowledge of a favorable weather forecast, and these extended operations did not result in any known additional adverse impacts to water quality. Thus, rather than recommending the maximum possible penalty of $400,000, for at least forty days of violation at $10,000 per day of violation, staff propose a penalty of $4,000, based on four days of violation at $1,000 per day.

b) Degree of Culpability:

Regional Water Board staff notified the Discharger of this Board's water quality concerns verbally while onsite and in a NOV. The Discharger was notified of the Certification requirements and was given an opportunity to come into compliance. The Discharger, a State agency, is likely more aware than many dischargers of State laws and regulations, particularly in light of its ongoing interaction with the State and Regional Water Boards statewide in water quality-related matters associated with its

road construction and maintenance efforts. The Discharger's actions prior to the NOV demonstrated a willful disregard of the law and a high level of culpability.

c) Prior History of Violations:

The Discharger has a history of CWA and CWC violations and has been subject to other Regional Water Board enforcement actions. The Discharger has a prior history of continuing work on construction projects to near the end of the authorized work period and appears to operate under the assumption that extensions of the authorized work period will always be granted.

d) Susceptibility to Cleanup and Voluntary Cleanup Efforts Undertaken:

Regional Water Board staff have no knowledge of any voluntary cleanup efforts undertaken by the Discharger. Under pressure from Regional Water Board staff and other regulatory agency personnel, and in response to the NOV, the Discharger cleaned up the petroleum product spills and leaks on the gravel bar. The Discharger also installed silt fencing and removed the fine-grained earthen material that was excavated then spread over the gravel bar prior to a storm event that could have washed that material into the river.

e) Economic Savings:

The Discharger avoided costs associated with implementation of adequate BMPs. The Discharger attempted to avoid costs for BMPs to control turbidity from cofferdam installation but eventually installed the water-bladder after regulatory agencies were aware that the project was causing a sediment discharge and excessive turbidity in the Van Duzen River. The Discharger implemented additional BMPs and corrected other violations after Regional Water Board staff issued the NOV. Economic savings for omitting necessary BMPs and delaying implementation of BMPs would have primarily been any money that was saved by delaying the financing of the BMPs.

The Discharger installed steel sheet pile cofferdams in the gravel bar on each side of the river for bridge pier installation. The Discharger did not have adequate time to complete either pier during the 2005 construction season and decided to winterize the cofferdams, protect the cofferdams with a riprap cover, and allowed the cofferdams to remain in the gravel bar through the winter. Leaving the cofferdams in the stream channel through the winter season was not proposed in the Discharger's application and the Certification does not authorize the Discharger to leave temporary structures in the stream channel through the winter.

Regional Water Board staff were told the cost to remove one of the cofferdams at the end of this construction season and to reinstall the cofferdam at the beginning of next season was approximately one million dollars. The Discharger saved significant costs

by installing two sheet pile cofferdams, although the Discharger did not have enough time to complete either pier. By leaving these cofferdams in the gravel bar over the winter the Discharger has avoided spending approximately one million dollars, the reported cost to remove and reinstall the cofferdams.

f) Ability to Pay and Ability to Continue in Business:

The Regional Water Board has no reason to believe the Discharger does not have the ability to pay. The Discharger is a state agency that is not at risk of going out of business. Regional Water Board staff were told the total cost for the bridge project is approximately seventeen million dollars and that the contract for the project included significant funding for environmental compliance and BMPs.

g) Other matters as justice may require: The cost for staffs' time to investigate the matter and prepare this Complaint is estimated to be $7,000.

h) Total Civil Liability

Based on the factors discussed above, staff propose a civil liability of $30,000 for violations associated with the cofferdams, $30,000 for violations associated with petroleum product storage and handling, $30,000 for violations associated with placement of fine-grained material on the gravel bar, $4,000 for violations associated with in-stream work after October 15, and $7,000 for Regional Water Board staff costs associated with this matter. Thus, the total proposed civil liability is $101,000.

15. The issuance of a Complaint for Administrative Civil Liability is an enforcement action and is not subject to the California Environmental Quality Act, pursuant to Title 14, California Code of Regulations, Section 15321(a)(2).

16. Payment of the Civil Liability does not satisfy the Discharger's obligation to comply with the Certification. That Order remains in full force and effect.

17. Notwithstanding the issuance of this Complaint, the Regional Water Board shall retain the authority to assess additional penalties for violations of the requirements of the Certification, not otherwise addressed by this Complaint.

18. Regulations of the U.S. Environmental Protection Agency require public notification of any proposed settlement of the civil liability occasioned by violation of the Clean Water Act. Accordingly, interested persons will be given 30 days to comment on any proposed settlement of this Complaint.

Proposed Civil Liability

Based on the above factors, I hereby propose that the Discharger pay an Administrative Civil Liability in the amount of $101,000.

You may waive the right to a hearing. If you wish to waive the right to a hearing, please sign the enclosed waiver and return it together with a cashier's check or money order, made payable to the "State Water Resources Control Board" for $101,000 within 30 days of receipt of this Complaint to the California Regional Water Quality Control Board, North Coast Region, 5550 Skylane Boulevard, Suite A, Santa Rosa, CA 95403. Payment of the proposed civil liability will be treated as a settlement, and as with any other settlement, will not become effective until after a 30-day public comment period.

Ordered by _____
Catherine E. Kuhlman
Executive Officer

December 28, 2005

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Section 500
Body of SWPPP

500.1 Objectives

This Storm Water Pollution Prevention Plan (SWPPP) has four main objectives:

- Identify all pollutant sources, including sources of sediment that may affect the quality of storm water discharges associated with construction activity (storm water discharges) from the construction site, and
- Identify non-storm water discharges, and
- Identify, construct, implement in accordance with a time schedule, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction, and
- Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs).

This SWPPP conforms with the required elements of the Permit and with the required elements of the General Permit issued by the State of California, State Water Resources Control Board (SWRCB). This SWPPP will be modified and amended to reflect any amendments to the Permits, or any changes in construction or operations that may affect the discharge of pollutants from the construction site to surface waters, groundwaters, or the municipal separate storm sewer system (MS4). The SWPPP will also be amended if it is in violation of any condition of the Permit or has not achieved the general objective of reducing pollutants in storm water discharges. The SWPPP shall be readily available on-site for the duration of the project.

500.2 Vicinity Map

The construction project vicinity map showing the project location, surface water boundaries, geographic features, construction site perimeter, and general topography, is located in Attachment A. The project's Title Sheet provides more detail regarding the project location and is also included in Attachment A.

500.3 Pollutant Source Identification and BMP Selection

500.3.1 Inventory of Materials and Activities that May Pollute Storm Water

The following is a list of construction materials that will be used and activities that will be performed that will have the potential to contribute pollutants, other than sediment, to storm water

runoff (control practices for each activity are identified in the Water Pollution Control Drawings (WPCDs) and/or in Sections 500.3.4 through 500.3.9:

- (LIST)
- Asphaltic emulsions associated with asphalt-concrete paving operations
- Cement materials associated with PCC concrete paving operations, drainage structures, and median barriers.
- Joint and curing compounds
- Solvents, thinners
- Vehicle fluids,including oil, grease, and coolants
- General litter
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-
-

Construction activities that have the potential to contribute sediment to storm water discharges include:

- (LIST)
- Clear and grub operations
- Grading operations
- Landscaping operations
- RSP Operations
- Drainage facility removal/construction
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-
-
-

-
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Attachment C lists all Best Management Practices (BMPs) that are either minimum requirements or special contract requirements, and all BMPs selected for this project. Implementation and location of BMPs are shown on the WPCDs in Attachment B. Narrative descriptions of BMPs to be used during the project are listed by category in each of the following SWPPP sections. Attachment Q includes a copy or a list of all the BMPs selected for this project.

500.3.2 Existing (pre-construction) Control Measures

The following are existing (pre-construction) control measures encountered within the project site:

- Natural swales
- Low depression grassy areas- located adjacent to and along right of way.
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-
-
-
-
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500.3.3 Nature of Fill Material and Existing Data Describing the Soil

The nature of fill materials is sandy/clayey with some gravel. Fill will be constructed from materials onsite and/or imported.

Existing site features that, as a result of past usage, may contribute pollutants to storm water (e.g., toxic materials that are known to have been treated, stored, disposed, spilled, or leaked onto the construction site) include:

- (LIST)
- On the North West side of the project there is an existing gravel sorting operation with mobile and stationary equipment.

- As listed in the Contract Special Provisions and as shown in the Contract Plans there is potentially contaminated soil at the existing Abutment #1 and the existing Pier #2. The potential contaminate is lead from the existing paint system. There is material excavation required at these locations for the erection of the new structure.

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500.3.4 Soil Stabilization (Erosion Control)

Soil stabilization, also referred to as erosion control, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Soil stabilization BMPs protect the soil surface by covering and/or binding soil particles. This project will incorporate minimum temporary soil stabilization requirements, temporary soil stabilization measures required by the contract documents, and other measures selected by the contractor. This project will implement the following practices for effective temporary and final soil stabilization during construction:

1) Preserve existing vegetation where required and when feasible.

2) Apply temporary soil stabilization (erosion control) to remaining active and non-active areas as required by the Construction Site BMPs Manual and the Special Provisions. Reapply as necessary to maintain effectiveness.

3) Implement temporary soil stabilization measures at regular intervals throughout the defined rainy season to achieve and maintain the contract's disturbed soil area requirements. When the project's Special Provisions require it, temporary soil stabilization will be implemented 20 days prior to the defined rainy season.

4) Stabilize non-active areas within 14 days of cessation of construction activities.

5) Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding, and lining swales as required in the special provisions.

6) Apply seed to areas deemed substantially complete by the RE during the defined rainy season.

7) At completion of construction, apply permanent erosion control to all remaining disturbed soil areas as required in the special provisions.

Sufficient soil stabilization materials will be maintained on-site to allow implementation in conformance with Caltrans requirements and described in this SWPPP. This includes implementation requirements for active and non-active areas that require deployment before the onset of rain.

Implementation and locations of temporary soil stabilization BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B and/or described in this section. The BMP Consideration Checklist in Attachment C indicates the BMPs that will be implemented to control erosion on the construction site; these are:

- SS-1, Scheduling
- SS-2, Preservation of Existing Vegetation
- SS-4, Hydroseeding
- SS-5, Soil Binders
- SS-6, Straw Mulch
- SS-7, Erosion Control (Blanket)
- SS-9, Drainge Swales

A CPM schedule has been inserted in Section 300.4. Existing Vegetation will be perserved and critical areas will be outlined with ESA fence as shown on the contract plans (See Attachment B). The hydroseeding, straw mulch and erosion control blanket are item work and will be installed per the plans and direction of the engineer. Soil Binders will only be depolyed in the event that final seeding on all exposed slopes can not be used (this is not anticipated). There are existing drainage ditches, swales running parrallel to the existing roadways (See Attachment B).

500.3.5 Sediment Control

Sediment controls are structural measures that are intended to complement and enhance the selected soil stabilization (erosion control) measures and reduce sediment discharges from construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. This project will incorporate minimum temporary sediment control requirements, temporary sediment control measures required by the contract documents, and other measures selected by the contractor.

Temporary sediment control materials, equivalent to 10% of the installed quantities in the site, will be maintained on-site throughout the duration of the project, to allow implementation of temporary sediment controls in the event of predicted rain, and for rapid response to failures or emergencies, in conformance with other Caltrans requirements and as described in this SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

Implementation and locations of temporary sediment control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. The BMP Consideration Checklist in Attachment C indicates all the BMPs that will be implemented to control sediment on the construction site; these are:

- SC-1, Silt Fence and/or SC-5, Fiber Rolls
- SC-7, Street Sweeping and Vacuuming
- SC-10, Storm Drain Inlet Protection
- SC-2, Sediment/Desilting Basin
- SC-4, Check Dams
- SC-6, Gravel Bag Berm
- SC-8, Sandbag Barrier
- SC-9, Straw Bale Barrier

Temporary sediment control BMPs will be deployed prior to any soil disturbing activity according to the schedule shown in SWPPP section 300.4.

During the rainy season, temporary sediment controls will be implemented at the draining perimeter of disturbed soil areas, at the toe of slopes, at storm drain inlets and at outfall areas at all times.

During the non-rainy season, temporary sediment controls will be implemented at the draining perimeter of disturbed soil areas and at storm drain downstream from disturbed areas before rain events.

Silt Fences will be deployed to filter storm water runoff. Erodible surface drainage will be diverted into stable areas with little erosion potential.

Storm drain inlet protection will be used at all operational internal inlets to the storm drain system during the rainy season as shown on the WPCDs.

During the non-rainy season, in the event of a predicted storm, the following temporary sediment control materials will be maintained on-site: silt fence materials.

Street Sweeping will be performed when sediment is either tracked or deposited on any paved roadway within the project limits and or egress/ingress locations.

Check Dams will be utilized in the existing drainage swales only if there is no existing vegetation (See Attachment B). The Gravel Bag Berms, the Sandbag barrier and the Straw Bale Barrier are not

drawn on the plan, however they may be used to surround temporary stockpiles that will be at various locations within the temporary construction easement.

500.3.6 Tracking Control

The following BMPs have been selected to reduce sediment tracking from the construction site onto private or public roads:

- SC-7, Street Sweeping and Vacuuming
- TC-1, Stabilized Construction Entrance/Exit
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Stabilized Construction Entrance/Exit: will be constructed and stabilized with clean rock and maintained. The entrance will be designated and graded to prevent runoff from leaving the site and reduce tracking of sediment as a result of construction traffic. The entrance will be flared where it meets the existing road to provide adequate turning radius.

500.3.7 Wind Erosion Control

The following BMPs have been selected to control dust from the construction site:

- WE-1, Wind Erosion Control
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-

Dust Control: Water applications will be concentrated during the late summer and early fall months and especially during the embankment construction operations.

BMP WE-1, Wind Erosion Control, and BMP NS-1, Water Conservation Practices, will be implemented to provide dust control and prevent discharges from dust control activities and water supply equipment. Water application rates will be minimized as necessary to prevent runoff and ponding and water equipment leaks will be repaired immediately.

500.3.8 Non-Storm Water Control

An inventory of construction activities and potential non-storm water discharges is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to control non-storm water pollution on the construction site. Implementation and locations of some non-storm water control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. A narrative description of each BMP follows.

- NS-6, Illicit Connection/Illegal Discharge Detection and Reporting
- NS-8, Vehicle and Equipment Cleaning
- NS-9, Vehicle and Equipment Fueling
- NS-10, Vehicle and Equipment Maintenance
- NS-3, Paving and Grinding Operations
- NS-2, Dewatering Operations, Pier Cofferdams
- NS-1, Water Conservation Practices
- NS-4, Temporary Stream Crossing
- NS-5, Clear Water Diversion
- NS-11, Pile Driving Operations
- NS-12, Concrete Curing
- NS-13, Material and Equipment Use Over Water
- NS-14, Concrete Finishing

Vehicle and Equipment Operations: Several types of vehicles and equipment will be used on-site throughout the project, including graders, scrapers, excavators, loaders, paving equipment, rollers, trucks and trailers, backhoes, forklifts, generators, compressors, and traffic control equipment. BMPs NS-9, Vehicle and Equipment Fueling, and NS-10, Vehicle and Equipment Maintenance will be utilized to prevent discharges of fuel and other vehicle fluids. No vehicle or equipment maintenance, fueling, or cleaning shall take place within the active channel limits. Spill protection will be continually used under any equipment that drips or leaks. Equipment within or adjacent to the active channel will be checked and maintained daily, to prevent leaks of materials. Stationary equipment such as compressors, pumps generators and welders will be equiped with drip pans.

Fuel trucks, each equipped with absorbent spill clean-up materials, will be used for all on-site fueling, whether at the temporary fueling area or for mobile fueling elsewhere on the site (i.e. crawler crane). Drip pans will be used for all mobile fueling.

Drip pans or plastic sheeting will be used for all vehicle and equipment maintenance activities that involve refueling, grease, oil, solvents, or other vehicle fluids including paving equipment.

All vehicle cleaning, maintenance and mobile fueling operations will be conducted at least 15 m away from operational inlets and drainage facilities and on a level graded area.

Concrete Saw-cutting: BMP WM-08, Concrete Waste Management, will be implemented to contain and dispose of saw-cutting slurries. The slurry will be vacuumed and discharged to the concrete washout facility. Dried and cured concrete wastes will be disposed off-site during concrete washout maintenance activities as described in Section 500.3.9.

Paving Operations: BMP NS-3, Paving and Grinding Operations, will be implemented to prevent paving materials from being discharged off-site. Covers will be placed over each inlet adjacent to paving operations. Following paving operations, the area will be swept, inlet covers will be removed, and the inlets will be inspected for paving materials. Paving equipment will be placed on plastic lining before cleaning and while being stored within the Project's right of way.

Illicit Connection/Illegal Discharge Detection and Reporting will be implemented at all times when it is discovered that an illicit discharge or illegal dumping has occurred. Refer to Attachment K "Report of Non-Compliance." Any spills within the stream zone must be reported immediately to the appropriate regulatory agencies, and they should be consulted as to the required clean up procedures.

Accidental discharges will be handled immediately, automatically, and routinely. Appropriate methods will be used to handle minor, semi-significant, and significant/hazardous spills. Other illicit discharges will not be allowed. Action will be taken in reporting illicit discharges, removing the material, and having enforcement action taken against suspected culprits. Illegal dumping within the site will be immediately reported to the California Highway Patrol (or other appropriate authority) and the NPDES coordinator.

There will be a sediment pond built at the location as shown on the Contract Plans (See attachemt B). This sediment pond will be used to dewater the cofferdams for the foundation construction. The type of soil that is expected is a gravel with sand and some silt. The sediment pond will not be used for storm water accumulation or management. The discharge of the sediment pond will be to the sand/rock beach after the sediment has setteled out of the water. In Attachment Q, with NS-2, Dewatering Operations BMP, there is additional guidelines from the Caltrans October 2001 "Field Guide to Construction Site Dewatering". In the same section there is also a "Water Quality and Discharge Parameters Assessment Form" to aid in the evaluation of the effectiveness of the system.

There will be temporary stream crossing and clear water diversion as per the special provisions for access to the South Beach. See Attachment B for the apporximate location. The material and equipment use over water is included, however this work will be very limited and will be mostly from the stem and soffit construction after the falsework is erected.

The pile driving, concrete curing and concrete finishing are contract items and will be performed on the new bridge as per the contract plans.

500.3.9 Waste Management and Materials Pollution Control

An inventory of construction activities, materials, and wastes is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have

been selected to handle materials and control construction site wastes. A narrative description of each BMP follows.

- WM-1, Material Delivery and Storage
- WM- 2, Material Use
- WM-4, Spill Prevention and Control
- WM-5, Solid Waste Management
- WM-9, Sanitary/Septic Waste Management
- WM-3, Stockpile Management
- WM-6, Hazardous Waste Management
- WM-7, Contaminated Soil Management
- WM-8, Concrete Waste Management
- WM-10, Liquid Waste Management
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-

Material Delivery, Storage, and Use: In general, BMPs WM-1 and WM-2 will be implemented to help prevent discharges of construction materials during delivery, storage, and use. The general material storage area will be located in the contractor's yard as shown on the WPCDs. Two types of storage/containment facilities will be provided within the storage area to minimize storm water contact with construction materials:

Shipping containers will be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents and grease.
A separate covered storage/containment facility for 55gal drums will provide storage and will provide secondary containment equaling 1.5 times the volume of all containers therein. Storage for any secondary containment must be off-ground, over impervious material, with top cover, and protected from rain and wind on three sides.

Very large items, such as light standards, framing materials, and stockpiled lumber, will be stored in the open in the general storage area. Such materials will be elevated with wood blocks to minimize contact with run-on.

Aggregate and base materials will also be stockpiled in the general storage area and will be surrounded with additional sediment controls. Spill clean-up materials, material safety data sheets, a

material inventory, and emergency contact numbers will be maintained and stored in the shipping container.

Spill Prevention and Control: Regulatory agencies must be notified immediately of any spills within the stream zone and consulted for the appropriate clean up procedures. BMP WM-4, Spill Prevention and Control, will be implemented to contain and clean-up spills and prevent material discharges to the storm drain system. Spill prevention is also discussed above in Material Delivery, Storage, and below in the following waste management and equipment maintenance sections.

Waste Management: BMP WM-5, Solid Waste Management, and BMP WM-6, Hazardous Waste Management will be implemented to minimize storm water contact with waste materials and prevent waste discharges. Solid wastes will be loaded directly into trucks for off-site disposal. Debris and waste will be picked up daily and properly disposed of at an apprpriate site. When on-site storage is necessary, solid wastes will be stored in watertight dumpsters in the general storage area of the contractors yard. AC and PCC rubble will be stockpiled in the general storage area and will be surrounded with sediment controls. Solid waste, including rubble stockpiles, will be removed and disposed off-site at least weekly. Hazardous wastes will be stored in the shipping containers or covered containment area discussed above for materials storage. Hazardous wastes will be appropriate and clearly marked containers and segregated from other non-waste materials.

No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement, or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction, or associated activity of whatever nature will be allowed to enter into or placed where it may be washed by rainfall or runoff into river or slough or Waters of the State. When operations are completed any excess materials or debris will be completely removed from the work area. No rubbish shall be deposited within 50 feet of the high water mark.

Contaminated Soil Management: Contaminated soil management BMPs address the possibility of construction activity near contaminated soils. The construction site has potentially lead contaminated soil at the existing Abutment #1 and existing Pier #2. Only trained employees will be used to stockpile the material until soil tests are performed to categorize the hazardous level. Employees will also be instructed to recognize evidence of contaminated soil, such as buried debris, discolored soil, and unusual odors.

Concrete Residuals and Washout Wastes: Large pours will not be conducted during or immediately prior to rainfall events.

BMP WM-8, Concrete Waste Management, will be implemented and a below grade concrete washout facility will be constructed and maintained as shown on WPCD. All wash out pits will be constructed and labled such as prior to a pour event. Such pits shall not exist within stream zone. Inspection of washout pits will be performed before and after all pours. All excess concrete and concrete washout slurries will be discharged to the washout facility for drying. The minimum-sized washout, at 3m x 3m x 1m deep, will provide more than sufficient volume to contain concrete washout wastes and waste collected from concrete saw-cutting operations. BMP maintenance, waste

disposal, and BMP removal will be conducted as described in WM-08. Dried-off concrete will be used as fill material if permitted by the RE.

Sanitary and Septic Wastes: The contractor will implement BMP WM-9, Sanitary and Septic Waste Management, and portable toilets will be located and maintained at the contractors yard for the duration of the project. Specific locations are shown on WPCD. Weekly maintenance will be provided and wastes will be disposed off-site. The toilets will be located away from concentrated flow paths and traffic flow.

500.3.10 Cost Breakdown for Water Pollution Control

A cost breakdown itemizing the contract lump sum for water pollution control has been developed for this project and is included in Attachment O. The cost breakdown reflects the items of work, quantities and costs for BMPs shown in the SWPPP, except for those construction site BMPs and permanent BMPs that are shown on the project plans and for which there is a contract item of work.

500.4 Water Pollution Control Drawings (WPCDs)

The Water Pollution Control Drawings can be found in Attachment B of the SWPPP.

500.5 Construction BMP Maintenance, Inspection and Repair

Inspections will be conducted as follows:

- Prior to a forecast storm
- After a rain event that causes runoff from the construction site
- At 24-hour intervals during extended rain events
- Weekly during the rainy season
- Every 2 weeks during the non-rainy season
- At any other time(s) or intervals of time specified in the project Special Provisions.

Completed inspection checklists will be submitted to the RE within 24 hours of inspection. Copies of the completed checklists will be kept with the SWPPP. A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs. A program for Maintenance, Inspection and Repair of BMPs is shown in Attachment G.

500.6 Post-Construction Storm Water Management

500.6.1 Post-Construction Control Practices

The following are the post-construction BMPs that are to be used at this construction site after all construction is complete:

- (LIST)
- Outlet protection
- Rock slope protection
- Grade contouring per plans
- Final Plantings / Erosion Control
-
-
-
-

500.6.2 Operation/Maintenance after Project Completion

The post-construction BMPs that are described above will be funded and maintained as follows:

Short Term Funding: Caltrans District 1 Maintenance

Long Term Funding: Caltrans District 1 Maintenance

The responsible party for the long-term maintenance of post-construction BMPs is Caltrans District 1 Maintenance

500.7 Training

Section 300.5 shows the name of the contractor's Water Pollution Control Manager (WPCM). This person has received the following training:

- (LIST)

- CALTRANS - Certified Water Pollution Control for Construction Sites
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-

The training log showing formal and informal training of various personnel is shown in Attachment I.

This SWPPP was prepared by MCM Construction, Inc., Evan Paine, P.E.

500.8 List of Subcontractors

All contractors and subcontractors will be notified of the requirement for storm water management measures during the project. A list of contractors will be maintained and included in the SWPPP. If subcontractors change during the project, the list will be updated accordingly. The subcontractor notification letter and log is included in the SWPPP as Attachment J.

500.9 Other Plans/Permits

Attachment N includes copies of other local, state, and federal plans and permits. Following is a list of the plans and permits included in Attachment N:

- Current version of the State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity, August 1999. Including Resolution No. 2001-046, "Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit)", adopted by the SWRCB on April 26, 2001.

- California Department of Fish and Game Stream Alteration Agreement
- Army Corp of Engineers Nationwide Permit
- California Regional Water Quality Control North Coast Region
- Coastal Development Permit
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