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CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
 9 SOUTH CALIFORNIA ST., SUITE 200
 VENTURA, CA 93001
 (805) 641-0142



RECORD PACKET COPY

Item: 14f
 Date filed: 1/8/99
 49th Day: 2/26/99
 180th Day: 7/7/99
 Staff: MH-V
 Staff Report: 1/14/99
 Hearing Date: 2/4/99
 Commission Action:

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO. 4-98-280

APPLICANT: Union Pacific Railroad Co. **AGENT:** Paul Minault, Esq.

PROJECT LOCATION: Railroad bridge crossing over the mouth of the Ventura River, City of Ventura, County of Ventura.

PROJECT DESCRIPTION: Grade 40 cubic yards of dry sand from river bank to construct temporary berm upstream of bridge crossing, install downstream silt fence, remove from the riverbed and dispose of fallen span of old bridge crossing and other associated debris, and redistribute sand upon completion of work. Project also includes placement and removal of temporary silt fences within the river and estuary.

LOCAL APPROVALS: N/A

SUBSTANTIVE FILE DOCUMENTS: Biological opinion and Programmatic Consultation and Conference for Listed Coastal Species, Ventura, Santa Barbara, San Luis Obispo, Monterey, and Santa Cruz Counties, California (1-8-96-F-11), dated August 29, 1997, prepared by U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office; Formal consultation, U.S. Fish and Wildlife Service, for Removal of Fallen Bridge Span and Debris in the Ventura River Estuary, Ventura County (File No. 99-50007-LM), dated October 30, 1998; Biological Opinion, National Marine Fisheries Service, dated December 23, 1998, Streambed Alteration Agreement, California Department of Fish and Game, dated November 13, 1998.

SUMMARY of STAFF RECOMMENDATION: Staff recommends approval of the proposed project with special conditions addressing construction monitoring by qualified biologist, receipt of final approvals and authorizations, construction monitoring and debris removal, implementation of impact avoidance and mitigation measures required

and/or recommended by consulting agencies (Exhibits 8, 9, and 10), advance notice, and submittal of an acceptable access route plan. The proposed project poses minimal potential for adverse affects upon sensitive habitats and species. Moreover, the proposed project offers substantial benefits: the removal of the debris presently in the estuary and riverbed will reduce the potential for flooding during winter storm conditions.

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution:

I. Approval with Conditions

The Commission hereby **grants**, subject to the conditions below, a permit for the proposed development on the grounds that the development, as conditioned, 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 prepare a Local Coastal Program conforming to the provisions 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.

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. **Compliance.** All development must occur in strict compliance with the proposal as 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 or 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 applicant to bind all future owners and possessors of the subject property to the terms and conditions.

III. Special Conditions

1. Biological Monitoring and Mitigation Obligations

(a) Retention and Approval of Monitor: Prior to construction, the applicant shall retain one or more monitors, subject to approval by the Executive Director, to remain onsite during all project activities, through project completion.

(b) Qualifications of Monitor: The monitor(s) shall be a qualified fisheries biologist with expertise in the areas of resident or tidewater goby and anadromous salmonid biology and ecology, fish/habitat relationships, biological monitoring, and handling, collecting, and relocating salmonid species or gobies. In addition, the monitor shall be qualified to identify western snowy plovers and their nesting sites.

(c) Duties of Monitor; Interruption of Project Activities: The monitor(s) shall be onsite during all project activities and shall conduct a briefing of all project employees onsite at the onset of operations to alert them to the presence of any sensitive species and of the methods employed to avoid impacts to these species. The monitor shall verify that no nesting or resting sensitive species are present in the sandy beach areas or in the portion of the estuary that would be disturbed by the proposed activities, immediately prior to construction.

If the monitor(s) determines that any adverse impact to sensitive habitats or species beyond the limited scope of such disturbance authorized by this permit approval has occurred, the monitor(s) shall immediately halt project operations and inform the Executive Director, or the Executive Director's authorized representative, of the observed impact. Work shall not re-commence until the Executive Director determines that adequate corrective measures have been implemented and approves the continuance of project activities.

(d) Authority of Monitor: The monitor(s) shall have the authority to immediately stop project operations if adverse impacts to sensitive species or habitat beyond the incidental, minor potential effects considered in this permit approval should occur. The authority to determine whether any impact or activity warrants halting operations shall rest exclusively with the monitor(s). It is the responsibility of the applicant to ensure that all personnel, whether employees, agents, contractors, involved in project activities of any kind are informed of the monitor's authority.

(e) Report Preparation: Within ten (10) days of project completion, the monitor(s) shall prepare and submit a final report for the review and approval of the Executive Director documenting all impacts of the project activities, and indicating whether the impacts are temporary or warrant mitigation. The report shall include photographs of the project site and all access/staging areas before the project commences and photographs of the same views after construction is completed and all equipment removed. The report shall identify all short-term, temporary impacts to sensitive habitats and species observed during project activities and shall identify all continuing impacts to such habitats and species. The report shall verify that the riverbed, estuary, and riverbanks have been restored to pre-project condition. If such restoration has not been successfully completed, the report shall document the extent of the continued alteration of these areas and set forth recommendations for restoration of the affected areas.

In addition, the applicant shall provide copies of the report and photographic documentation to all applicable agencies and landowners identified pursuant to Special Condition 3.

(f) Mitigation Obligations

If the monitoring report prepared pursuant to (e) above indicates that any significant, adverse impacts to sensitive habitats or species have occurred during any activities undertaken pursuant to this permit, the applicant shall mitigate these impacts. The applicant shall prepare a mitigation plan, including performance standards to determine the success of the proposed mitigation, for the review and approval of the Executive Director. The Executive Director will determine whether a new permit is necessary for the implementation of the mitigation plan.

The applicant shall implement the supplemental mitigation plan within 30 days of the Executive Director's approval, or within such additional time as the Executive Director may determine is warranted. The applicant shall be responsible for the successful mitigation of all project impacts to the satisfaction of the Executive Director.

2. Implementation of Required Impact Avoidance and Mitigation Measures. The applicant shall implement all measures to avoid impacts to sensitive habitats or species as required or recommended by the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the U. S. Army Corps of Engineers, the California Department of Fish and Game, and the California State Parks Department, as set forth in the final permit approval or formal comments of each agency hereby incorporated by reference and attached hereto as Exhibits 8, 9, and 10.

3. Evidence of Final Authorization and Permit Approvals. Prior to issuance of the coastal development permit, the applicant shall provide evidence to the satisfaction of the Executive Director that all agencies with regulatory authority over the proposed project

have given final authorization or approval of the project, and that all applicable adjacent landowners, or owners of lands affected by the access route for placement of construction equipment in the riverbed, have given the applicant written permission to access or affect their property, or written evidence that such approval or authorization is not required. Applicable agencies and landowners include, but are not necessarily limited to, the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, the California Department of Fish and Game, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the California State Department of Parks and Recreation, and the City of Ventura.

4. Construction Responsibilities and Debris Removal. By acceptance of this permit, the applicant agrees that during project construction: (1) access to the site will only be undertaken during low tide, and no construction equipment, materials, or debris will be placed or stored in the intertidal zone, on the sandy beach, or in any location subject to wave action, with the exception of authorized activities required to remove the fallen bridge spans and associated debris from the riverbed; (2) the applicant shall remove from the beach, riverbanks, and riverbed any and all debris that may result from project-related activities and shall ensure that such debris is properly disposed of at a licensed facility authorized to accept such wastes; (3) construction equipment and materials shall not be placed where they pose a hazard to the public; (4) all construction equipment and materials shall be stored and staged from within the railroad right-of-way on or adjacent to the railroad bridge overcrossing the Ventura River, with the exception of the excavator authorized to dislodge the debris within the riverbed; (5) it is the responsibility of the applicant and the applicant's agents to ensure that all project-related activities are at all times undertaken in a manner that protects public health and safety; and (6) the applicant shall return the project area and all areas used for staging or access to the construction site to pre-project conditions upon completion of project activities.

5. Notice

The applicant shall notify the Executive Director, and all applicable agencies and landowners identified pursuant to Special Condition 3 above, at least two (2) working days in advance of the commencement of the proposed project.

6. Access to Riverbed

Prior to the issuance of the coastal development permit, the applicant shall submit evidence, including a map showing the proposed access route in detail, to verify that the access to the river bed of the one piece of heavy equipment proposed for use (an excavator), from the proposed staging area at the fairgrounds, will not traverse any sensitive habitat areas or areas of natural vegetation.

IV. Findings and Declarations.

The Commission hereby finds and declares:

A. Project Description and Background

Storms during the winter of 1997-1998 undermined a pier for the railroad bridge over the Ventura River, causing a bridge span and associated debris to fall into the river. High flows during these storms also deposited debris against the bridge abutments and piers. The existing debris and fallen span impede flows beneath the bridge, trap additional debris, and increase the threat of further damage to the bridge, or of flooding. (See Exhibits 1-7).

The applicant proposes to remove the fallen bridge span from the bed of the Ventura River by hoisting the span and associated debris to the top of the railroad bridge by a track-mounted crane. The applicant proposes to remove and dispose of the debris at an authorized facility off site. Debris around the bridge piers will be cut away and dug out of the riverbed and also hoisted to the top of the bridge for removal off site. To accomplish this, the applicant proposes that one piece of heavy construction equipment (an excavator) enter the river bed and be used to excavate the bridge span and debris where necessary. The exact amount of temporary riverbed disturbance is unknown but will be confined to the area directly associated with the bridge piers and fallen span. The excavator will access the riverbed from the nearby fairgrounds. At the time of staff report preparation, the applicant's agent stated verbally that the access route would not traverse any sensitive habitat areas or disturb any areas of natural vegetation. As noted below, Special Condition 6 ensures that the applicant must submit an access plan and map verifying this assertion prior to the issuance of the coastal development permit. The Commission staff will ensure that a draft of the plan, and/or a map showing the access route, will be submitted to the Commission as an Addendum Exhibit 5. No sensitive habitats or species occur along the route proposed for ingress and egress to the portion of the riverbed that will be accessed by the excavator.

The construction will take place at night during the lowest tide following the Commission's approval of this permit, and only when flow from the river is slight. Construction will be completed within an approximately eight-hour period. The applicant proposes to construct a temporary berm upstream of the fallen span by grading approximately 40 cubic yards of river sand, which will be taken from and returned to the dry area of the river bank to the west. In addition, the applicant will place a siltation screen downstream of the construction site.

Although the applicant originally proposed to access the site through Emma Woods State Beach, the applicant has since revised the proposal to take access from the County fairgrounds route, thereby avoiding public recreational areas and sensitive habitats. In addition, construction activities will occur at night and mostly from the railroad's right-of-way on and adjacent to the affected bridge. Therefore, no adverse impacts to coastal access or recreation will occur as the result of the proposed project.

The Ventura River and Estuary are Environmentally Sensitive Habitat Areas (ESHAs) and several endangered or sensitive species are associated with the site of the proposed project. These may include the western snowy plover, California least tern, brown pelican, tidewater goby, and steelhead trout.

B. Biological Resources

Coastal Act Section Section 30230 of the Coastal Act provides that:

Section 30230.

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 of the Coastal Act provides that:

Section 30231.

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

Section 30240

Coastal Act Section 30240 states:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

The applicant proposes to remove debris that fell from the railroad bridge crossing into the Ventura River during the severe El Nino storm conditions of the winter of 1997-1998. The existing debris and fallen bridge span impede flows beneath the bridge, trap additional debris, and increase the threat of further damage to the bridge, or of flooding. Removal of the debris will benefit the river ecosystem by reducing the amount of disturbance that the debris traps cause, and the potential impacts to riparian habitat should the river overflow due to excessive debris blockages this winter.

As noted previously, the fallen bridge span will be removed from the bed of the Ventura River and hoisted to the top of the railroad bridge by a track-mounted crane for removal and disposal off site. Debris around the bridge piers will be cut away and dug out of the riverbed and also hoisted to the top of the bridge for removal off site. To accomplish this, the applicant proposes that one piece of heavy construction equipment (an excavator) enter the river bed and be used to excavate the bridge span and debris where necessary. The exact amount of temporary riverbed disturbance is unknown but will be confined to the area directly associated with the bridge piers and fallen span. The excavator will access the riverbed via the County fairgrounds. As noted above, the applicant's agent has stated verbally that the access route from the fairgrounds to the riverbed will not traverse any sensitive habitat areas or stands of natural vegetation. Nevertheless, and to ensure that an acceptable access route is used that does not cause significant, adverse impacts on coastal resources, Special Condition 6 requires the applicant to submit an access plan and map showing the access route prior to the issuance of the coastal development permit. The Commission staff anticipates receiving the access plan and/or map prior to the hearing on this application and will submit these materials, for insertion as Exhibit 5 to this staff report, via an addendum prior to the hearing date.

The construction will take place at night during the lowest tide following the Commission's approval of this permit, and only when flow from the river is slight. Construction will be completed within an approximately eight-hour period. The applicant proposes to construct a temporary berm upstream of the fallen span by grading approximately 40 cubic yards of river sand, which will be taken from and returned to the dry area of the river bank to the west. In addition, the applicant will place a siltation screen downstream of the construction site. Construction in accordance with this schedule, and with the use of the berm and silt screens to reduce disturbance within the riverbed and to the river waters, will ensure that adverse impacts to stream habitat, and to fisheries in particular, are avoided to the maximum extent feasible. Some increased turbidity of the downstream waters is unavoidable, but will be short-term.

Special Condition 1 requires oversight of project activities by a qualified monitor. Among other requirements, the condition requires the monitor to ensure that project activities will not affect the nesting or resting areas of the California least tern or Western snowy plover, and that all impact avoidance and mitigation measures to protect steelhead trout and the tidewater goby are fully implemented.

The proposed project has been reviewed and approved, subject to extensive requirements for the implementation of measures to avoid impacts to sensitive species and habitats, by the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish and

Game. In addition, Special Condition 3 requires the applicant to submit evidence of final project authorization from the Army Corps of Engineers before construction commences. The findings, conditions, and authorizations of the consulting agencies are attached as Exhibits 8, 9, and 10. Special Condition 2 further requires the applicant to implement these recommendations and requirements through the authority of the coastal development permit, thereby ensuring that the conditions are adequately implemented.

Special Condition 1 requires oversight by a qualified biologist serving as project monitor, and further requires that the monitor prepare and submit to the Executive Director and to all agencies and individuals identified pursuant to Special Condition 3, a final report documenting the complete restoration of the riverbed and evaluating any residual, adverse environmental effects that may remain. Should residual impacts be identified, Special Condition 1 further requires the applicant to prepare and submit a mitigation plan for the Executive Director's approval.

Special Condition 5 requires the applicant to provide at least two working days' notice in advance of the commencement of construction to all interested parties identified pursuant to Special Condition 3. Thus, resources agencies and affected landowners may also monitor project activities. Special Condition 6 requires the applicant to submit written materials confirming that the access route from the fairgrounds to the riverbed for heavy equipment does not traverse sensitive habitat areas or areas of natural vegetation.

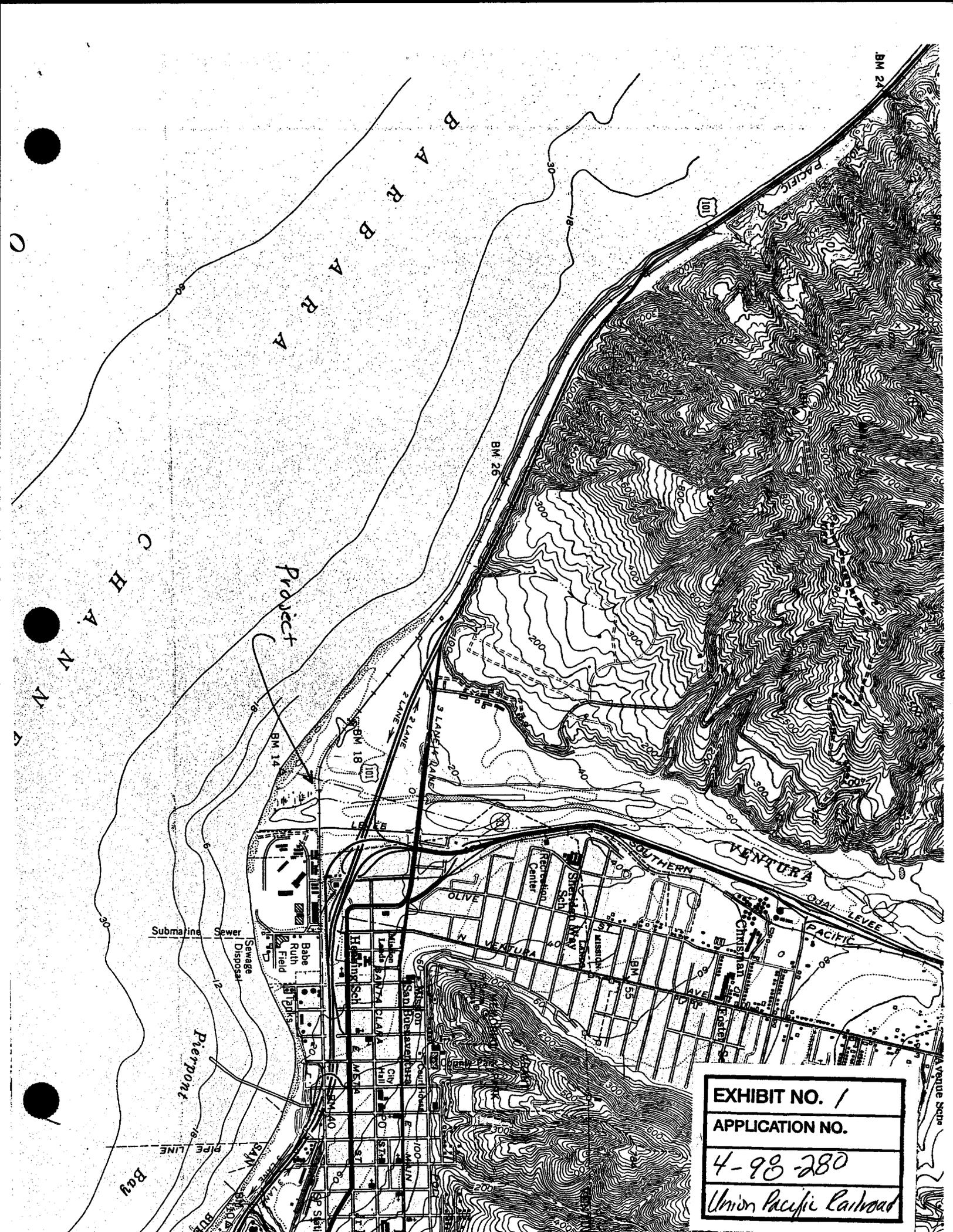
The Commission finds that the implementation of Special Conditions 1 through 6 will ensure that potential impacts of the proposed project to sensitive resources and species will be minimal and temporary, that the river and estuary habitat is returned to its pre-project condition, that the authorized activities overseen continuously by a qualified biologist, and that any unanticipated adverse environmental impacts that may nevertheless result must be fully mitigated by the applicant. For all of these reasons, the Commission finds that the proposed project will provide an overall benefit to the environment, and to public safety, by removing debris, reducing chronic site disturbance, and reducing the risk of flooding, and that as conditioned by Special Conditions 1 through 4, will ensure that all potential impacts are avoided or mitigated. Therefore, the Commission finds that the proposed project, as conditioned, is consistent with the requirements of Coastal Act Sections 30230, 30231, and 30240.

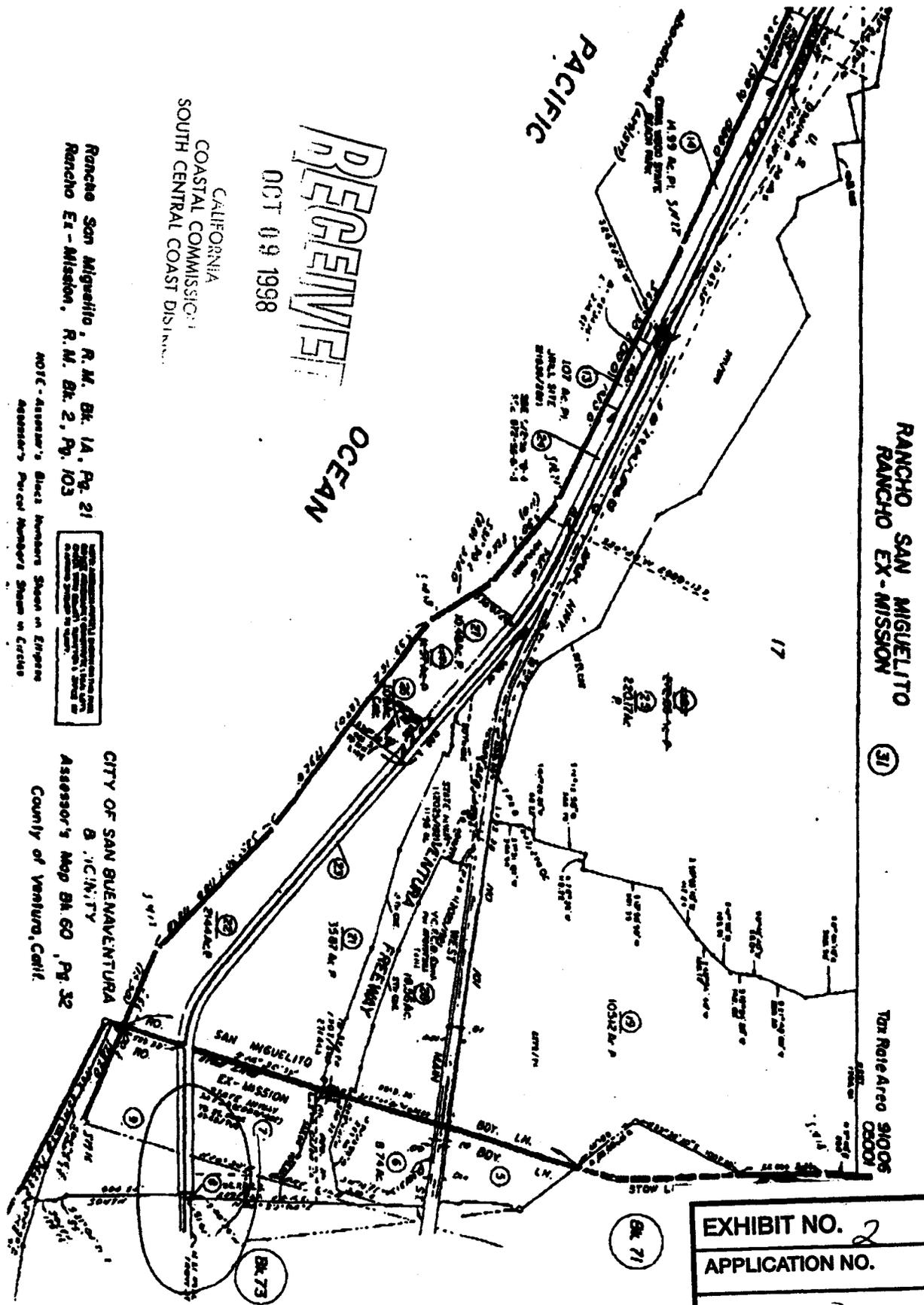
C. CEQA.

Section 13096(a) of the Commission's administrative regulations requires Commission approval of a Coastal Development Permit application to be supported by a finding showing the application, as conditioned, to be 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 feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity would have on the environment.

The Commission finds that the proposed project, as conditioned, will not have significant adverse effects on the environment, within the meaning of the California Environmental Quality Act of

1970. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified effects, is consistent with the requirements of CEQA and the policies of the Coastal Act.





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CALIFORNIA
 COASTAL COMMISSION
 SOUTH CENTRAL COAST DISTRICT

Rancho San Miguelito, R.M. Bk. 1A, Pg. 21
 Rancho Ex - Mission, R.M. Bk. 2, Pg. 103

NOTE - Assessor's Block Numbers Shown in Ellipse
 Assessor's Parcel Numbers Shown in Circles

THE INFORMATION CONTAINED HEREIN IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TO BE USED FOR ANY OTHER PURPOSE.

CITY OF SAN BUENAVENTURA
 B. J. C. IN. TV
 Assessor's Map Bk. 60, Pg. 32
 County of Ventura, Calif.

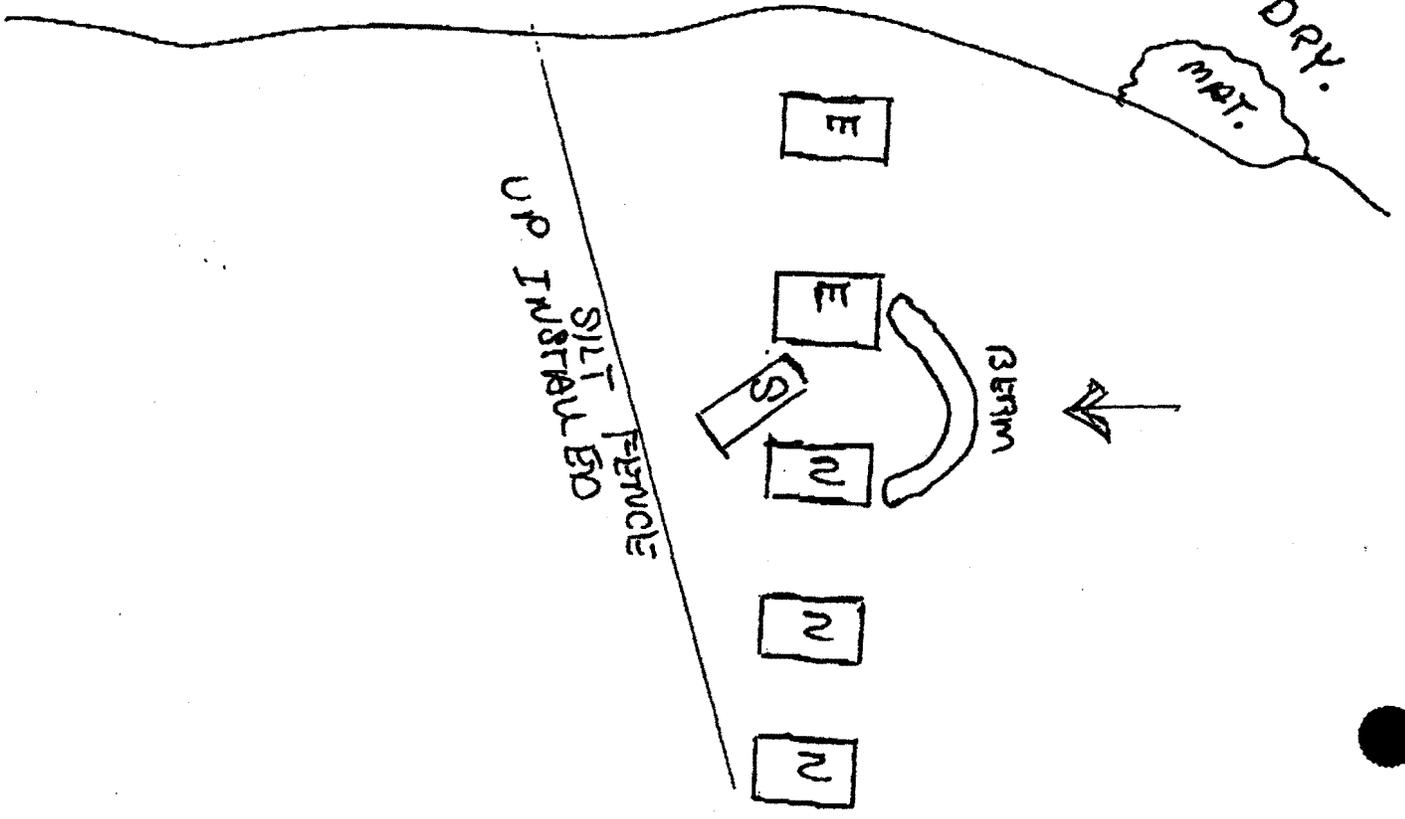
EXHIBIT NO. 2
APPLICATION NO.
4-98-280
Union Pacific Railroad

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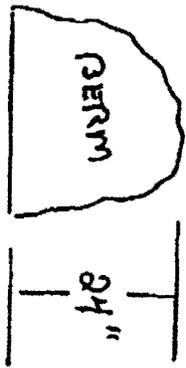


VENTURA

COASTAL COMMISSION
SOUTH CENTRAL COAST DISTRICT

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EXHIBIT NO. 4
APPLICATION NO.
4-98-280
Union Pacific Railroad



VENTURA

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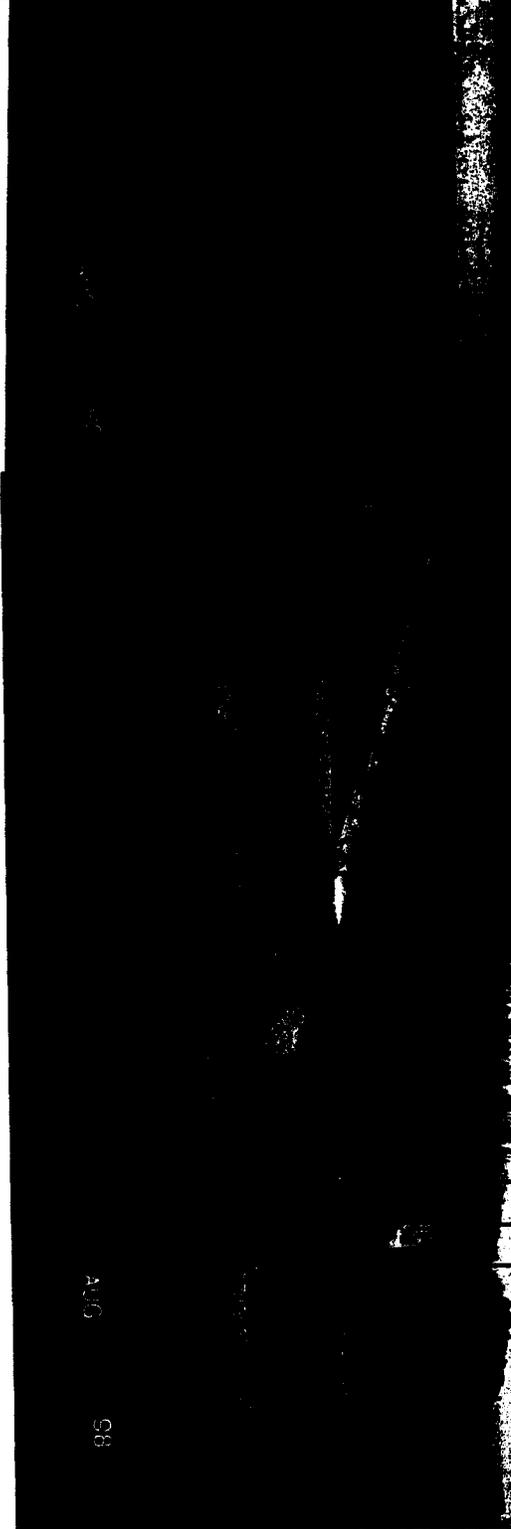
Exhibit 5, an access route map,
is unavailable at the time of report preparation
and will be submitted by addendum.

EXHIBIT NO. 5

APPLICATION NO.

4-98-280

Union Pacific Railroad



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EXHIBIT NO. 6
APPLICATION NO.
4-98-280
Union Pacific Railroad

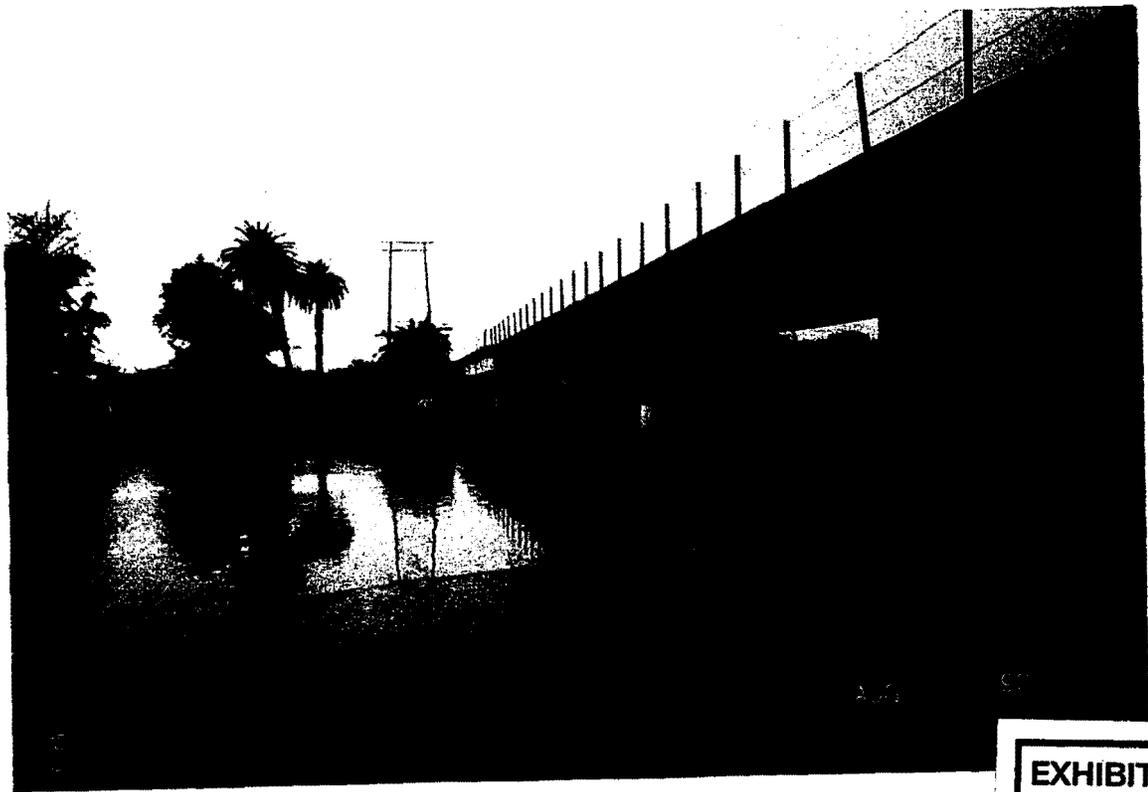
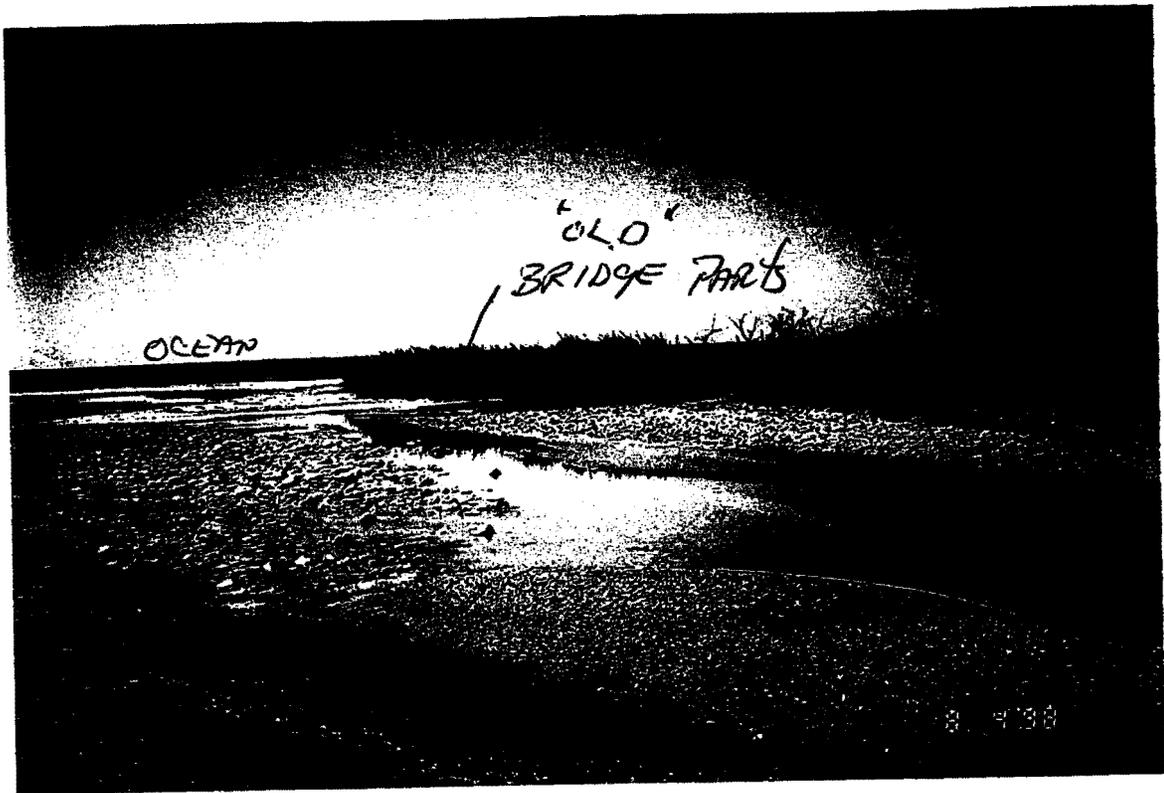


EXHIBIT NO. 7
APPLICATION NO.
4-98-280
Union Pacific Railroad

P.M.M.
DEC 29 1998



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

DEC 23 1998

F/SWO31:EJS

David Castanon
U.S. Army Corps of Engineers
Los Angeles District - Ventura Field Office
2151 Alessandro drive, Suite 255
Ventura, California 93001

Dear Mr. Castanon:

Enclosed is the National Marine Fisheries Service's (NMFS) biological opinion for the U.S. Army Corps of Engineers' (ACOE) proposed Nationwide 404 permitting action authorizing implementation of Union Pacific's (UP) removal of a fallen bridge span and removal of debris from bridge piers at the UP railroad bridge near the mouth of the Ventura River in Ventura County, California. The biological opinion addresses the effects of the proposed action on steelhead (*Oncorhynchus mykiss*) in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

The biological opinion concludes the ACOE's action and the resulting implementation of UP's bridge span and debris removal project are not likely to jeopardize the continued existence of the endangered Southern California Evolutionarily Significant Unit of steelhead known to be present in the Ventura River. The NMFS believes the action is likely to result in the take of steelhead, and therefore, an incidental take statement is attached to the biological opinion. The incidental take statement includes reasonable and prudent measures that NMFS believes are necessary and appropriate to minimize and monitor incidental take of steelhead. Eric Shott is the principle contact for this specific consultation. Please call him at (562) 980-4026 if you would like additional information.

Sincerely,

William T. Hogarth, Ph.D.
Regional Administrator

Enclosure

cc: Lisa Mangione, U.S. Army Corps of Engineers
Paul Minault, Consultant for Union Pacific Railroad

EXHIBIT NO. 8
APPLICATION NO. (16 PAGES)
498-280
Union Pacific Railroad

BIOLOGICAL OPINION

Agency: National Marine Fisheries Service, Southwest Region

Activity: Issuance of Permit for Conducting Bridge Debris Removal

Consultation Conducted By: Southwest Region, National Marine Fisheries Service.

Date Issued: DEC 23 1998

BACKGROUND

On October 19, 1998, the National Marine Fisheries Service (NMFS) received a written request for formal consultation from the Army Corps of Engineers (ACOE) Los Angeles District regarding this project. The ACOE consulted informally with the NMFS in September and October 1998. During informal consultation it was determined that steelhead (*Oncorhynchus mykiss*) could be present at the project site, but presence was unlikely. However, Union Pacific (UP) did not want to risk stopping project activities if steelhead were found during the pre-activity survey. Therefore the NMFS determined that UP's project is likely to adversely affect the federally endangered Southern California Evolutionarily Significant Unit (ESU) of steelhead should they need to be relocated during project activities and recommended the ACOE initiate formal consultation. The NMFS has therefore prepared this biological opinion for the bridge span removal and debris clean out project. This biological opinion is based on descriptions of the project (U. S. Army Corps of Engineers 1998 and Minault 1998), a site visit earlier this year by a NMFS fishery biologist, the expected effects of the project on steelhead and their habitat, and the ecological literature.

DESCRIPTION OF THE PROPOSED ACTION

The federal action involves granting a section 10 permit under the Rivers and Harbors Act to UP. UP would be authorized to conduct bridge span removal and debris clean out activities (hereafter referred to as project action) at their railroad bridge which crosses the Ventura River near its confluence with the Pacific Ocean. Specific construction activities that will occur at the project sites can be found in U. S. Army Corps of Engineers 1998 and Minault 1998. Generally, a fallen bridge span will be removed from the bed of the Ventura river and hoisted to the top of the rail road bridge by a track mounted crane for removal and disposal off site. Debris around the bridge piers will be cut away and dug out of the riverbed and also hoisted to the top of the bridge for removal off site. To accomplish this, it is proposed that one piece of heavy construction equipment (an excavator) enter the river bed and be used to excavate the bridge span and debris where necessary. The exact amount of temporary riverbed disturbance is unknown but is expected to be confined to the area directly associated with the bridge piers and fallen span. The excavator will access the riverbed from an already existing access site at Emma Wood State

Park, and be driven in the riverbed or on the bank during low tide avoiding water as much as possible. The project action will be implemented and completed during winter 1998. Thus, the action area of the project is that area (one acre or less) of river/estuary (including river/estuarine bed) directly under and adjacent to UP's rail road bridge.

STATUS OF THE SPECIES/CRITICAL HABITAT

Species/Critical Habitat Description

The steelhead population in the Ventura river is part of the Southern California Evolutionarily Significant Unit (ESU) for the federally endangered steelhead (*Oncorhynchus mykiss*). Steelhead in this ESU were listed as endangered by NMFS on August 18, 1997 (NMFS 1997). It is estimated that steelhead may migrate in the Ventura River as early as September (dependant on climate conditions), with the heaviest spawning taking place in February and March (Busby 1996). Some steelhead juveniles may also use the Ventura River Estuary as rearing habitat during much of the year. The project will occur during the winter of 1998 and steelhead juveniles may be present and adults may be attempting to migrate in the Ventura River and its estuary during the project. Critical habitat has not yet been designated for steelhead and is therefore not included in this Biological Opinion.

Life History and Habitat Requirements

Little is known about the life history and habitat requirements of steelhead populations south of San Francisco. The following description is based mostly on data from northern populations of steelhead that are considered applicable in NMFS's judgement.

The major life history stages of steelhead (as defined here) involve freshwater rearing and emigration of juveniles, upstream migration of adults, spawning, and incubation of embryos (Shapovalov and Taft 1954; Moyle 1976; Cederholm and Martin 1983; Barnhart 1991; Meehan and Bjornn 1991; Busby et al. 1996; National Marine Fisheries Service 1997). Steelhead young rear in freshwater for one to three years before migrating to the ocean, usually in the spring, where they may remain for up to four years. Steelhead grow and reach maturity at age two to four while in the ocean. Adults immigrate to natal streams for spawning during October to March, but some adults do not enter coastal streams until spring. Adults may migrate several miles, hundreds of miles in some watersheds, to reach their spawning grounds. Although spawning may occur during December to June, the specific timing of spawning may vary a month or more among streams within a region. Spawning and smolt migration may continue through June (Busby et al., 1996). Steelhead do not necessarily die after spawning and may return to the ocean, sometimes repeating their spawning migration one or more years. Female steelhead dig a nest in the stream and then deposit their eggs. After fertilization by the male, the female covers the nest with a layer of gravel; the embryos incubate within the gravel pocket. Hatching time varies from about three weeks to two months depending on water temperature. The young fish emerge from the nest about two to six weeks after hatching.

Habitat requirements of steelhead in streams generally depend on the life history stage (Cederholm and Martin 1983; Bjornn and Reiser 1991). Generally, stream flow volume, water temperature, and water chemistry must be appropriate for adult immigration and juvenile emigration (specific habitat requirement data can be found in Bjornn and Reiser 1991). Low stream flow, high water temperature, physical barriers, low dissolved oxygen, and high turbidity can delay or halt upstream migration of adults and timing of spawning, and downstream migration of juveniles and subsequent entry into estuary, lagoon, or ocean. Suitable water depth and velocity, and substrate composition are the primary requirements for spawning, but water temperature and turbidity are also important. Dissolved oxygen concentration, pH, and water temperature are factors affecting survival of incubating embryos. Fine sediment, sand and smaller particles, can fill interstitial spaces between substrate particles, thereby reducing water-flow through and dissolved oxygen levels within a nest. Juvenile steelhead require living space (different combinations of water depth and velocity), shelter from predators and harsh environmental conditions, food resources, and suitable water quality and quantity, for ontogeny and survival during summer and winter. Young-of-the-year and yearling steelhead generally use riffles and runs (e.g., Roper et al. 1994) during much of a given year where these habitats exist. Young-of-the-year and older juveniles may seek cover and cool water in pools during the summer (Nielsen et al. 1994), however.

Population Dynamics

Steelhead, an ocean-going form of rainbow trout, are native to Pacific Coast streams from Alaska south to northwestern Mexico (Moyle 1976; National Marine Fisheries Service 1997). Wild steelhead populations in California have decreased significantly from their historic levels (Swift et al. 1993; National Marine Fisheries Service 1997). This decline prompted listing of the Southern California ESU of steelhead as threatened on August 18, 1997 (National Marine Fisheries Service 1997).

Status and Distribution

Current estimates of run sizes for the major rivers in the Southern California ESU are as follows:

Santa Ynez River.....	< 100
Ventura River.....	< 200
Santa Clara River.....	< 100
Malibu Creek.....	< 100

(Busby et. al., 1996)

No escapement or trend data are available. Run estimates are not based on survey data and can not be used to quantitatively assess project effects. Extensive habitat loss due to water development, land use practices, and urbanization are largely responsible for the current population status. In addition, hatchery practices and rainbow trout planting may have led to genetic introgression, but documentation is lacking to fully assess the situation (Busby et. al., 1996). Historical estimates of steelhead abundance for the Ventura river indicate that the run size was approximately 4,000- 6,000 adults in the 1940s (NMFS 1997, Moore 1980).

Analysis of the Species/Critical Habitat Likely to Be Affected

The project action is likely to affect adult steelhead that may be migrating through the project area. In addition, sedimentation from the project may affect steelhead adults and juveniles if they occur in the Ventura River Estuary. These effects will be localized to the action area directly under and adjacent to UP's rail road bridge. Sedimentation and turbidity downstream of the bridge may occur, but it is not possible to predict the exact extent (quantity, distance and duration) of these disturbances. Critical habitat has not yet been designated for steelhead and is therefore not included in this Biological Opinion.

ENVIRONMENTAL BASELINE

Status of the Listed Species within the Action Area

As noted above, little population data exist for steelhead in the Ventura River. Presence is possible however. There are recent records of steelhead presence in the Ventura River (Cappelli, 1997). Given the lack of data, it is not possible to predict the number of steelhead that may be present in the action area during the project action.

Factors Affecting Species Environment within the Action Area

The action area identified above is or may be affected by water use in the Ventura River, sedimentation from land use activities (including roads), and direct alteration of the bed and banks of the river for flood control. For example, flood control and other activities associated with land use have reduced the size and changed the location of the Ventura River Estuary and may continue to affect estuarine habitat, including the action area.

EFFECTS OF THE ACTION

Generally, effects of the project action on steelhead and their habitat are those associated with removal of the fallen bridge span and clearing of debris around the bridge piers which includes excavation in the river/estuary bed. Project timing occurs when both adult and juvenile steelhead may be present in the action area. Direct effects are likely to involve temporary and permanent loss and alteration of instream habitat, temporary loss of aquatic macro invertebrates, and temporary turbidity and sedimentation. Direct effects may involve direct harm to steelhead due to contact with the excavator, fallen bridge span as it is being removed, debris as they are being removed from the pilings and riverbed, and high turbidity. The disturbance may also cause steelhead to move to adjacent habitats. There are no indirect or inter-related and inter-dependent effects of this project action.

Methodology for Effects Analysis

Useful quantitative data for the action area and project action are limited; the assessment of project action effects therefore focused mostly on qualitative identification. This approach was based on a review of ecological literature concerning the effects of loss and alteration of instream and estuarine habitat, loss of aquatic macro invertebrates, turbidity, and sedimentation on steelhead in particular and fish populations in general. This information was then compared to

the estimated amount of estuarine and instream habitat losses, and aquatic macro invertebrate losses, expected background turbidity levels in the river and associated with the project action, and expected rates of sedimentation. The effects analysis was performed without consideration of measures for avoiding, minimizing, or mitigating take of steelhead.

Loss of Instream and Estuarine Habitat

Direct loss or alteration of instream and estuarine habitat would result when the excavator is used to remove the fallen bridge span and debris accumulations around the bridge pilings. Loss of pool habitat may occur if pools occur at the fallen span or bridge pilings. Habitat loss would be confined to the action area: the bed of the river/estuary directly next to the bridge pilings and fallen span. Pool habitats are used extensively by juvenile steelhead for rearing (e.g., Everest et al. 1984).

Although the specific losses or modifications of instream and estuarine habitat in the action area have been estimated or qualitatively described, the potential effects to steelhead are uncertain. The extent that steelhead are harmed by habitat alterations depends, in part, on the extent of permanent changes to substrate type, cover complexity, habitat complexity, and water column depth and velocity patterns. Fish populations reportedly respond to instream and estuarine habitat modifications (Hunt 1969; Riley and Fausch 1995; Emmett et. al. 1988). Modifications that degrade the quality of instream habitat may cause reductions in fish abundance (Elser 1968; Dolloff 1986). Removal of the bridge span and debris around bridge piers may leave the habitat complexity (pools and hiding cover in the river at the railroad bridge) in a temporarily degraded condition. The persistence of this condition will depend upon river flow conditions following disturbance. The NMFS believes the type and magnitude of habitat changes that are expected to result from the project action will not result in permanent negative effects to steelhead. Pools, if they currently exist near bridge pilings, are expected to return as the result of winter flow scour.

Loss of Aquatic Macro Invertebrates

Direct loss of aquatic macro invertebrates in the action area would result when organisms are removed along with the river/estuary habitat during removal of the fallen span and debris. Localized losses in benthic macro invertebrate abundance are expected when substrates are modified (Thomas 1985; Harvey 1986; Sigler 1988). These organisms are part of the diet of salmonids in estuaries and rivers (Murphy et. al. 1988; Sigler 1988), and may represent a substantial portion of their diet at various times of a year. The effect of macro invertebrate loss on steelhead is likely to be temporary because rapid recolonization of the disturbed area is expected. In addition, the effect of macro invertebrate loss is likely to be negligible because food from nearby sources (via macro invertebrate drift) would be available to steelhead that may occur immediately near or in the action area, and the area of habitat expected to be affected by the project action is likely to be relatively small.

Turbidity

Turbidity refers to the amount of light that is scattered or absorbed by a fluid. Turbidity is likely low in the river throughout most of a given year, but would be high during and for a short period after storm events. Background turbidity is expected to be low, if not negligible, at the time the project action is implemented.

Elevated levels of turbidity (suspended particulate matter) are expected to result when fine sediment is contributed to the river or mobilized from the river bed during removal of the fallen span and debris around the bridge piers. The duration and concentration of the turbidity would likely depend in part on the length of time required to complete removal of the span and debris, and the volume and rate that sediment is contributed to the river/estuary during the overall repair activity. Turbidity may cause harm, injury, or mortality to juvenile and adult steelhead in the vicinity (onsite) and downstream (offsite) of the worksite. High turbidity concentrations can cause fish mortality, reduce fish feeding efficiency, and decrease food availability in both rivers and estuaries (Berg and Northcote 1985; McLeay et al. 1987; Gregory and Northcote 1993; Velagic 1995; Emmett et. al. 1988). High sediment and silt loads have been found to delay salmonid migration (Bjornn and Reiser, 1991). The effect of any elevated turbidity level on steelhead in the action area is difficult to evaluate quantitatively, in part because the amount of sediment contributed and the resulting turbidity level can not be quantitatively estimated. We believe turbidity levels may increase substantially over background levels in the action area and potentially for some distance downstream as a result of the project action. The increase is likely to be temporary. Migrating adults may be delayed during the increase in turbidity, but this is expected to be a very short term occurrence if it occurs at all. If juveniles are in the action area they could be adversely effected.

Sedimentation

Increased sedimentation (rapid settling of suspended sediment) rates would result mostly from fine sediment contributed to the river/estuary or mobilized during removal of debris and the fallen span. The specific sedimentation rate would depend in part on the duration, volume, and frequency that sediment is contributed to the river/estuary. Substantial sedimentation rates could bury less mobile organisms (Ellis 1936) that serve as a food source for many fish species, degrade instream habitat conditions (Cordone and Kelley 1961; Eaglin and Hubert 1993), cause reductions in fish abundance (Alexander and Hansen 1986; Berkman and Rabeni 1987), and reduce growth in salmonids (Crouse et al. 1981; Sigler, 1988). The extent that steelhead are harmed by sedimentation depends partially on the extent that post-project action substrate condition differs from pre-project action condition. In the action area, sand predominates and this is not expected to change as a result of the project action. Although specific sedimentation rates have not been estimated, they are expected to be localized and temporary.

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. NMFS maintains general familiarity with actions affecting steelhead in the Ventura River, and is unaware of any such actions that are reasonable certain to occur within the proposed action area that would not require section 7 consultation.

CONCLUSION

After reviewing the current status of the Southern California Steelhead ESU, the environmental baseline, the effects of the bridge span and debris removal project and the cumulative effects, it is NMFS's biological opinion that the proposed project is not likely to jeopardize the continued existence of the Southern California steelhead ESU. No critical habitat has been designated for this species, therefore, none will be affected.

The basis for this determination is as follows: (1) effects of the project action on steelhead and their habitat will be a series of short term events accomplished during one or more low tides whose effects are relaxed almost immediately and are likely to be temporary; (2) the amount of instream/estuarine habitat potentially affected by the project is extremely small compared to the total habitat area used by this ESU; and, (3) the number of steelhead individuals potentially affected by the project action is relatively small compared to the total number of individuals believed to compose the Southern California ESU and the Ventura River drainage.

INCIDENTAL TAKE STATEMENT

Section 7 (b)(4) of the ESA provides for the issuance of an incidental take statement for the agency action if the biological opinion concludes that the proposed action is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat. 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. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including 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 7(o)(2), taking that is incidental to and not intended as part of the proposed action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this Incidental Take Statement.

The measures described below are nondiscretionary, and must be undertaken by the ACOB so that they become binding conditions of any grant or permit issued to Union Pacific, as appropriate, for the exemption in section 7(o)(2) to apply. The ACOB has a continuing duty to regulate the activity covered by this incidental take statement. If the ACOB (1) fails to assume and implement the terms and conditions or (2) fails to require Union Pacific 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, Union Pacific 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(D)(3))

AMOUNT OR EXTENT OF TAKE

Take is possible in the form of capture, trap, harm, harassment, injury, and mortality of juvenile steelhead. This includes steelhead relocation activities. NMFS anticipates incidental take of steelhead will be difficult to detect because steelhead occur in river and estuarine water habitats which makes finding a dead or impaired specimens unlikely. Due to the lack of data on steelhead numbers in the ESU and action area, and the lack of methodologies to accurately estimate take from loss of surrogate species, food, cover, water quality and quantity, etc.; NMFS is unable to estimate the specific number of steelhead that could be taken. Therefore, the amount of anticipated incidental take is designated as "unquantifiable" and is expected to be very small.

EFFECT OF THE TAKE

In the accompanying biological opinion, the NMFS concluded the anticipated level of take associated with the project action is not likely to jeopardize the continued existence of the federally endangered Southern California steelhead ESU.

REASONABLE AND PRUDENT MEASURES

The NMFS believes the following reasonable and prudent measures are necessary and appropriate to minimize and monitor incidental take of steelhead:

1. Avoid working in flowing water to the maximum extent practicable.
2. Minimize the extent of permanent changes to instream and estuarine habitat.
3. Employ a fisheries biologist for the purposes of monitoring the affected area, and for removing and relocating steelhead from the affected area.
4. Implement sediment control measures.
5. Prepare Monitoring Reports.

TERMS AND CONDITIONS

In order to be exempt from the take prohibitions of the ESA, the ACOE must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

The following term and condition implements reasonable and prudent measure No. 1.

- 1) The ACOE shall require that Union Pacific only conduct work during low tide.

The following terms and conditions implement reasonable and prudent measure No. 2.

- 1) The ACOE shall require that Union Pacific photograph each project site during and immediately before and after the project action is completed for the purpose of tracking project effects to habitat in and near the action area.
- 2) The ACOE shall require that Union Pacific return the stream bed to pre-project conditions. This shall be accomplished by removing the silt screens upon work completion and re-contouring any channel bed disturbed to approximate pre-project conditions.

The following terms and conditions implement reasonable and prudent measure No. 3.

- 1) The ACOE shall require that Union Pacific retain a fisheries biologist with expertise in the areas of resident or anadromous salmonid biology and ecology, fish/habitat relationships, biological monitoring, and handling, collecting, and relocating salmonid species. The biologist will monitor the work space, span and debris

removal activities, and recontouring of the river bed to pre-project conditions.

- 2) The ACOE shall require that Union Pacific's biologist survey the work site area for steelhead presence just prior to the beginning of span and debris removal operations for the purpose of removing any steelhead that would be adversely affected. If removal operations are not completed during one low tide the biologist shall repeat this survey before the project re-starts. The biologist shall capture such steelhead located near the fallen bridge span or in and among the debris on the bridge pilings and relocate the individuals to a suitable location immediately upstream or downstream of the work area. The biologist shall note the number of individuals observed in the affected area, the number of individuals relocated, and the date and time of the collection and relocation. One or more of the following NMFS approved methods shall be used to capture steelhead: dip net, seine, throw net, minnow trap, hand. Electrofishing is prohibited from use.
- 3) The ACOE shall require that Union Pacific's biologist monitor debris removal activities, instream habitat, performance of sediment control/detention devices (see implementing reasonable and prudent measure No. 4), and return of the stream bed to pre-project conditions for the purpose of identifying and reconciling any condition that could adversely affect steelhead or their habitat. The biologist shall be empowered to halt work activity and to recommend measures for avoiding adverse effects to steelhead and their habitat.
- 4) The ACOE shall require that Union Pacific's biologist contact NMFS (Eric Shott, 562-980-4026) immediately if one or more steelhead are found dead or injured. The purpose of the contact shall be to review the activities resulting in take and to determine if additional protective measures are required.

The following term and condition implements reasonable and prudent measure No. 4.

- 1) The ACOE shall require that erosion control and sediment detention devices (sediment curtains, etc.) shall be incorporated into Union Pacific's project and implemented at the time of the project action. These devices shall be in place during the project action, and after if necessary, for the purpose of minimizing fine sediment and sediment/water slurry input to flowing water. The devices shall be placed at all locations where the likelihood of sediment input exists. Silt screens and curtains shall not extend across more than one half of the channel.

The following term and condition implements reasonable and prudent measure No. 5.

The ACOE shall require that Union Pacific provide sediment detention devices at the

action and biological monitoring; the number and size of steelhead removed; any effect of the project action on steelhead that was not previously considered (reinitiation of consultation would be required, see the reinitiation notice below); an assessment of the success of reasonable and prudent measures 1-5; photographs documenting compliance with Reasonable and Prudent Measures No. 4; and, photographs taken before and after work activity.

The NMFS believes that very few steelhead, if any, will be incidentally taken as a result of the proposed action. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. However, if the level of incidental take is greater than expected, reinitiation of consultation will be required to reassess the reasonable and prudent measures. For example, the discovery of one or more dead juvenile or adult steelhead in the action area would constitute exceeding the level of incidental take anticipated to occur. The ACOE must immediately provide an explanation of the causes of the taking and review with NMFS the need for possible modification of the reasonable and prudent measures.

REINITIATION NOTICE

This concludes formal consultation on the actions outlined in the project proposal (ACOE 1998). As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal 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 action that may affect listed species or critical habitat in a manner or to an extent not previously considered in this opinion; (3) the 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, any operations causing such take must cease pending reinitiation.

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

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August 29, 1997

Richard J. Schubel, Chief
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 P.O. Box 532711
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OPTIONAL FORM NO 10 (7-89)

FAX TRANSMITTAL

1 of pages 18

To: <i>Paul Minault</i> Dept/Agency:	From: <i>Colby H. Stalder</i> Phone:
Fax: <i>415-788-5768</i>	Fax #:
U.S. GOVERNMENT PRINTING OFFICE: 1988 O-501-101 GENERAL SERVICES ADMINISTRATION	

Subject: Programmatic Consultation and Conference for Listed Coastal Species, Ventura, Santa Barbara, San Luis Obispo, Monterey, and Santa Cruz Counties, California (1-8-96-P-11)

Dear Mr. Schubel:

This biological opinion responds to your request for formal consultation and conference with the U.S. Fish and Wildlife Service (Service) pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act). Your request was dated December 11, 1995 and was received by the Service on December 14, 1995. This programmatic consultation and conference was developed to provide an expedient method for considering the effects of particular actions that the U.S. Army Corps of Engineers (Corps) may permit on the federally endangered California least tern (*Sterna antillarum brownii*), brown pelican (*Pelecanus occidentalis*), and tidewater goby (*Fucyclogobius newberryi*) and the federally threatened southern sea otter (*Enhydra lutris nereis*) and western snowy plover (*Charadrius alexandrinus nivosus*), and the proposed critical habitat of the western snowy plover.

This biological opinion was prepared using information from the request initiating formal consultation, informal discussions between our staffs, and our files.

This document also serves as a formal conference opinion for the proposed critical habitat of the western snowy plover. However, throughout this document, the terms "formal consultation" and "biological opinion" are used in place of "formal consultation and conference" and "biological and conference opinion" for the sake of brevity.

Biological and Conference Opinion

It is the opinion of the Service that the proposed action is not likely to jeopardize the continued existence of the southern sea otter, brown pelican, California least tern, western snowy plover, or

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tidewater goby, or adversely modify the proposed critical habitat of the western snowy plover. Critical habitat has not been designated for any of the other species.

Consultation History

In an initial request for consultation, the North Coast Section of the Regulatory Branch of the Corps' Los Angeles District, asked the Service to consider the effects of actions on the southern sea otter, western snowy plover, California least tern, and brown pelican that would qualify under Nationwide Permits 3, 7, and 12 in tidally influenced areas along the coastline extending from the Ventura/Los Angeles County line to Gorda, Monterey County, California. After informal discussions among staff, the Service and Corps agreed that the tidewater goby should be included in this consultation and that the covered actions would be expanded to include additional categories of projects that the Corps may undertake, authorize, or permit under its regulatory authorities (i.e., section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act of 1899) or under its Civil Works program. The Corps formally requested this expansion of the consultation's scope in a letter to the Service dated April 14, 1997.

In a letter to David Castanon of the Corps' Los Angeles District, dated August 4, 1997, the Regulatory Branch of the Corps' San Francisco District requested that actions it permits in Monterey and Santa Cruz County be included in the consultation. Finally, by letter dated August 19, 1997, the Los Angeles District requested that the scope of the biological opinion be expanded to include Santa Cruz County and the remainder of Monterey County. Additionally, actions under the Civil Works program were eliminated from consideration in this consultation because incorporation of these actions was delaying the issuance of this biological opinion. These actions may be considered in a subsequent consultation.

Since listing of the species being considered in this biological opinion, the Service and Corps have consulted, both formally and informally, on numerous occasions on a variety of projects. Most of the actions which have been considered during these consultations resulted in temporary impacts to the listed species. In some cases, particularly with the tidewater goby, some incidental take of individuals in the form of mortality occurred; however, in many cases, the incidental take associated with the actions caused only harassment of individual animals. Additionally, staff determined that many of the same protective measures, including the Corps' proposed special conditions and the Service's terms and conditions, were very similar for a given species from project to project. Consequently, this consultation was developed to reduce the workload and time required to ensure compliance with the Act while continuing to provide protection to the listed species and their habitats.

Description of the Proposed Action

The primary objective of this formal consultation is to ensure that the Corps and Service comply with the provisions of section 7(a)(2) of the Act in an expedient and efficient manner for those actions which the Corps permits that may adversely affect the southern sea otter, western snowy

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plover, California least tern, brown pelican, and tidewater goby. Providing adequate protection to the listed species during these actions is implicit in that section 7(a)(2) of the Act requires all Federal agencies to review their actions to ensure that the continued existence of threatened and endangered species are not jeopardized by those actions.

The Corps is responsible for authorizing or permitting actions under section 404 of the Clean Water Act, section 10 of the Rivers and Harbors Act, and section 103 of the Marine Protection, Research and Sanctuaries Act of 1972. A Corps permit is required for:

- a) structures or work in or affecting "navigable waters of the United States" pursuant to section 10 of the Rivers and Harbors Act. Examples include, but are not limited to:
 1. constructing a pier, revetment, bulkhead, jetty, aid to navigation, artificial reef or island, and any structures to be placed under or over a navigable water;
 2. dredging, dredge disposal, filling and excavation;
- b) the discharge of dredged or fill material into, including any redeposit of dredged material within, "waters of the United States" and adjacent wetlands pursuant to section 404 of the Clean Water Act. Examples include, but are not limited to:
 1. creating fills for residential or commercial development, placing bank protection, temporary or permanent stockpiling of excavated material, building road crossing, backfilling for utility line crossings and constructing outfall structures, dams, levees, groins, weirs, or other structures;
 2. mechanized landclearing, grading which involves filling low areas or land leveling, ditching, channelizing and other excavation activities that would have the effect of destroying or degrading waters of the United States;
 3. allowing runoff or overflow from a contained land or water disposal area to re-enter a water of the United States;
 4. placing pilings when such placement has or would have the effect of a discharge of fill material;
- c) the transportation of dredged or fill material by vessel or other vehicle for the purpose of dumping the material into ocean waters pursuant to section 103 of the Marine Protection, Research and Sanctuaries Act of 1972; and
- d) any combination of the above.

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Actions which the Corps has permitted (and which have undergone formal consultation with the Service) that have affected the species under consideration in this biological opinion include: repair of outfall structures and tide gates; earthquake retrofitting, repair, and widening of bridges; repair of bank protection; replacement of low flow stream crossings with bridges; and stabilization of stream slopes.

This programmatic consultation would be implemented in the following manner. The Corps would begin the consultation process by making a determination of whether the action under consideration "may affect" a listed species, as required by the implementing regulations for section 7 (50 CFR 402.14). If the Corps determined that a "may affect" situation did not exist, no further consultation with the Service is required, although the Corps can request the Service's concurrence with this determination. If the Corps determined that the proposed action "may affect" one or more of the listed species included in this biological opinion, the Corps would then determine whether the action was likely to adversely affect the species.

Up to this point, the programmatic consultation has followed the steps contained in the implementing regulations for section 7 for a standard consultation. If the Corps determined that the proposed action "may affect" but was "not likely to adversely affect" the listed species included in this biological opinion, it would seek the Service's concurrence in writing, pursuant to 50 CFR 402.14(b)(1). If the Corps determined that the proposed action was likely to adversely affect the listed species, it would next consider whether the potential impacts of the proposed action would be covered, in terms of section 7 compliance, by this biological opinion. This determination would be made by evaluating whether the potential impacts of the proposed action on the listed species and its habitat were minor, temporary in nature, or not substantial. Because of the differing ecological needs and reproductive biology of these species, the criteria would vary from species to species. The area where the proposed action would occur and the action itself may also affect this determination. The criteria for each species under which this consultation could be used is described later in this section of the biological opinion.

If the Corps determines that the potential impacts of the proposed action do not meet the criteria established for this programmatic consultation, the standard provisions for section 7 consultation would apply throughout the remainder of the permitting or internal environmental review processes. If the Corps believes the proposed action meets the criteria, the Corps would note, in its public notice, pre-construction notification, or National Environmental Policy Act (NEPA) documents for actions it is implementing, that the provisions of the programmatic biological opinion would be used. The Service would then have the opportunity to review the proposed action and determine whether it concurred that use of the programmatic biological opinion was appropriate for the proposed action. The Service would be available during the earlier phases of the evaluation of a proposed action if the Corps wanted to discuss the potential effects for assistance with its section 7 determination.

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Suitability Criteria

This programmatic consultation is appropriate for use when a proposed action is likely to adversely affect a listed species, but is unlikely to result in long-term or substantial effects to the species. The criteria for determining when this programmatic consultation would apply are as follows:

For the southern sea otter and brown pelican, the potential for incidental take in the form of injury or mortality must be very low. Disturbance to loafing, roosting, and foraging areas must be temporary in nature. A limit to the duration of the disturbance is not specified; any evaluation of whether the duration of the action would result in adverse effects must also consider the area that would be disturbed at any one time and the nature of the disturbance. For example, an action that would temporarily disturb the bottom of a bay in which southern sea otters forage may be appropriate for coverage by this biological opinion if a substantial portion of the bottom of the bay is not disturbed at one time and for a long period of time. However, if southern sea otters are precluded from foraging in a substantial portion of the bay during the proposed action, a separate request for formal consultation may be appropriate.

For western snowy plovers and California least terns, the potential for incidental take in the form of injury or mortality must be very low. The incidental take of nests and chicks and disturbance of adults attempting to mate and nest must be avoided. Disturbance to wintering habitat at any time of the year and breeding habitat in the winter must not result in any condition which would preclude the use of those areas by western snowy plovers or California least terns at the appropriate time of the year. As in the case of southern sea otters and brown pelicans, the scope of the action must be considered in making this determination; an action which would preclude the use of a substantial portion of a beach that is used by wintering western snowy plovers would not be appropriate for coverage by this consultation, even if the action would result only in temporary impacts.

The incidental take of tidewater gobies, in the form of injury or mortality, may occur under the provisions of this consultation. We make this distinction because, when present, tidewater gobies may occur in very large numbers. Avoiding mortality or injury to every tidewater goby at all times is not possible; in fact, even determining whether any tidewater gobies have been taken may not be possible at times because of their small size, difficulty in detecting all individuals, and the nature of some actions. To be covered by this biological opinion, the proposed action must not be likely to cause complete disruption of breeding activities at any given location and must not result in long-term changes in substrate or water quality that would prevent tidewater gobies from using the area after the cessation of the disturbance. Because the tolerance of tidewater gobies for varying degrees of water quality is not well-known at this time, this biological opinion does not identify specific quantitative limits for water quality parameters. The effects on water quality must be considered on a case-by-case basis as part of the Corps' internal review and through informal consultation with the Service, if necessary.

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The Corps and the Service have developed the following measures that are intended to reduce or avoid the potential adverse effects on the listed species of the actions to be covered by this consultation. These measures, as appropriate for a specific action, would be included as special conditions of any permit or pre-construction notification issued by the Corps.

1. If any contractor or permittee fails to comply with any measures that are included as special conditions of any Corps action to reduce the adverse effects on the listed species covered by this biological opinion, their work activities shall be suspended by the Corps until such time that the contractor or permittee is in compliance with all measures. The Corps also shall notify the Service if a contractor or permittee fails to comply with any special conditions intended to reduce the adverse effects of an action on listed species.
2. Prior to the onset of activities that result in disturbance of habitat or individuals of any listed species, all project workers shall be given information on the status of the listed species in the project area, a brief overview of the species' natural history, the protection afforded the species by the Act, and the specific protective measures to be followed during implementation of the proposed action. Videos, brochures, books and briefings may be used in the educational program, provided that a qualified person is on hand to answer any questions.
3. Each contractor or permittee shall designate a person to monitor on-site compliance with these measures. The professional experience needed by this monitor shall be determined on a case-by-case basis. For projects where the effects of the action are more difficult to assess, a biologist qualified to work with the species in question may be required. In less complicated cases, a worker may be able to conduct monitoring activities after training. If a worker on the site is tasked as the monitor, the special conditions of the permit or pre-construction notification shall clearly stipulate the level of attention that the worker is required to expend on monitoring duties. The Corps, in consultation with the Service and applicant, as appropriate, shall determine the expertise needed by the monitor.
4. The monitor shall have authority to halt any action that might result in injury or mortality to southern sea otters, brown pelicans, California least terns, or western snowy plovers. In the case of tidewater gobies, the monitor shall have authority to halt any action that might result in impacts that exceed levels anticipated by the Corps and Service during review of the proposed action.
5. During project activities, all trash that may attract predators shall be properly contained, removed from the work site regularly, and disposed of at an approved location. Following construction, all trash and construction debris shall be removed from work areas.
6. Fueling and maintenance of vehicles and other equipment shall occur at least 20 meters from any aquatic habitat or roosting, foraging, or nesting sites. The Corps or permittee

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shall ensure that contamination of habitat does not occur during such routine operations. Prior to the onset of work, the Corps or permittee shall ensure that a plan has been prepared to allow a prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

7. The following additional measures apply to actions where southern sea otters and brown pelicans may be affected:
 - a. The monitors shall use their presence, herding boards, hand clapping, or water hoses to encourage southern sea otters and brown pelicans to leave any area where they may be at risk from project activities. Methods that are less disruptive, such as the mere presence of the monitors and hand-clapping, shall be used initially. If these methods are not successful, more intrusive methods, such as herding or water hoses, may be used.
 - b. The monitor shall carefully examine the immediate area of the action prior to use of seal bombs on California sea lions or other pinnipeds to ensure that southern sea otters and brown pelicans are not within 50 meters of the intended detonation site. Seal bombs shall not be used when southern sea otters or brown pelicans are within 50 meters of the detonation site.
 - c. The monitor shall maintain a record of all interactions with southern sea otters and brown pelicans encountered during project activities. This information shall include for each interaction:
 - i. response of the listed species to project activities;
 - ii. response of the listed species to intentional harassment;
 - iii. the approximate number of animals involved; and
 - iv. any unusual circumstances or behavior.
 - d. Disturbance or destruction of kelp beds shall be avoided to the maximum extent practicable. The Corps shall be notified by the permittee or contractors of any kelp bed impacts which exceed the limits established in the Corps permit or NEPA document.
8. The following measures apply to actions where western snowy plovers or their proposed critical habitat may be affected:
 - a. No activities that may disturb breeding western snowy plovers shall be conducted in areas where this species nests or where nesting individuals might be disturbed from March 1 through September 30.

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- b. If sand is moved on beaches during the winter to build storm berms, kelp or other marine vegetation that may harbor invertebrates that are a source of food for western snowy plovers shall be left in place. The kelp or other marine vegetation may be moved to facilitate placement of berms but shall be returned to a portion of the beach that is at a similar elevation in relation to the tide.
 - c. The spread or introduction of exotic plant species shall be avoided to the maximum extent possible during project activities by avoiding beach areas with established native vegetation, restoring disturbed areas with native species, and post-project monitoring and control of exotic species. The methods by which exotic vegetation is controlled shall be reviewed and approved by the Corps and Service prior to the onset of the proposed action. The project applicants also shall visually inspect any construction equipment that will be used in habitat of the western snowy plover to ensure that it is free of soil that may contain propagules of exotic plant species. If necessary, the equipment shall be thoroughly washed with pressure sprayers to remove potential propagules of exotic plant species. The washing shall occur prior to moving the equipment to any work site that contains habitat of the western snowy plover.
 - d. If beach contours are altered during the implementation of any project within proposed critical habitat of the western snowy plover, the landforms shall be returned to their original condition at the end of project activities. If the disturbance occurs within breeding habitat, this work shall be completed before March 1 or after September 30.
9. The following measures apply to actions where California least terns may be affected:
- a. No activities that may disturb breeding California least terns shall be conducted in areas where this species nests or where nesting individuals might be disturbed from April 1 through September 15. Between April 1 and April 15, the monitor shall evaluate the behavior of any California least terns that may be present and the distance from the work activities to the location of the California least terns. Work activities may proceed until April 15 if the monitor determines, with the concurrence of the Corps and the Service, that it will not disturb reproductive behavior.
 - b. The spread or introduction of exotic plant species shall be avoided to the maximum extent possible by avoiding beach areas with established native vegetation during project activities, restoring disturbed areas with native species, and post-project monitoring and control of exotic species. The methods by which exotic vegetation is controlled shall be reviewed and approved by the Corps and Service prior to the onset of the proposed action. The project applicants also shall visually inspect any construction equipment that will be used in habitat of the

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California least tern to ensure that it is free of soil that may contain propagules of exotic plant species. If necessary, the equipment shall be thoroughly washed with pressure sprayers to remove potential propagules of exotic plant species. The washing shall occur prior to moving the equipment to any work site that contains habitat of the California least tern.

- c. If beach contours are altered during the implementation of any project in known breeding habitat of the California least tern, the landforms shall be returned to their original condition at the end of project activities. If the disturbance occurs within breeding habitat, this work shall be completed before April 1 or after September 15. Between April 1 and April 15, the monitor shall evaluate the behavior of any California least terns that may be present and the distance from the work activities to the location of the California least terns. Work activities may proceed until April 15 if the monitor determines, with the concurrence of the Corps and the Service, that it will not disturb reproductive behavior.

10. The following measures apply to actions where tidewater gobies may be affected:

- a. When possible, all work activities shall be completed outside of the primary breeding season to reduce the harassment and mortality of tidewater gobies. April and May are generally considered to be the period of the year when most breeding occurs. If area specific information is available that indicates peak breeding may occur at other times, the Corps shall consider this information in its permitting process.
- b. Only qualified personnel authorized under this biological opinion shall participate in activities associated with the capture, handling, and monitoring of tidewater gobies. The names and credentials of personnel who desire to conduct these activities shall be supplied to the Service and Corps for their review and approval at least 15 days prior to the onset of the activities. This information may be provided to the Corps in application materials for section 10 and 404 permits.
- c. If project activities could degrade water quality, the existing water quality parameters shall be determined (e.g., salinity, temperature, dissolved oxygen, turbidity) prior to the onset of work. Samples shall be taken in a manner that minimizes harassment or mortality of tidewater gobies. Results shall be used to monitor water quality parameters during and after construction.
- d. If water is to be pumped around work sites, intakes shall be completely screened with wire mesh not larger than five millimeters (mm) to prevent tidewater gobies from entering the pump system.

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- e. If work areas are to be de-watered, as many tidewater gobies as possible shall be removed prior to draining the site. After barriers are constructed, tidewater gobies shall be captured, transported in buckets, and released in the most appropriate habitat immediately adjacent to the de-watered area. If a beach seine is used, it shall be pulled to shore in a deliberate manner with care being taken to avoid rolling the lead line inward. The number of tidewater gobies shall be estimated prior to release. All debris and aquatic and emergent vegetation in the pumped area shall be carefully inspected for tidewater gobies and other vertebrates. As the work site is de-watered, remaining pools shall be inspected for tidewater gobies. As many individuals as possible shall be captured using dipnets and other appropriate tools and moved as described above. Handling time for tidewater gobies shall be minimized to the maximum extent practicable.
- f. If, in the judgment of the Service and Corps, the most practical means of conserving tidewater gobies at a particular work site is to hold them in captivity until the completion of the project, individuals shall be collected as described in measure 10e and held in aquaria that provide the proper conditions for the species. Tidewater gobies that are held in this manner shall be maintained by a person or institution with experience in their husbandry. During the time they are in captivity, they shall be kept apart from tidewater gobies from other locations and shall not be used for any other purpose. The tidewater gobies shall be released at the earliest possible time, with the concurrence of the Service, after post-project conditions have become suitable for the species.
- g. If work areas have been de-watered, water above the barrier shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, the barriers to flow shall be removed in a manner that will allow flow to resume with the least disturbance to the substrate.
- h. If the substrate of the stream or lagoon is altered during work activities, it shall be graded or otherwise treated to approximate pre-construction conditions after the work is completed, unless the Corps and Service determine that other measures should be implemented.
11. Additional or modified measures to reduce the adverse effects of actions covered by this biological opinion may be identified during the review of specific actions. The Corps and Service may agree that these measures would be included in the special conditions of any Corps permit.

As stated previously in this biological opinion, this programmatic consultation is intended to assure that the Service and Corps comply with the provisions of section 7 of the Act for certain actions that the Corps permits. This consultation does not, in any way, constitute the Service's

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report under the authorities of the Fish and Wildlife Coordination Act. The Service reserves the right to provide the Corps with recommendations regarding the potential effects on wetlands and other trust resources of Corps activities or notices issued pursuant to section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act. Similarly, the Service reserves the right to elevate Corps permit decisions under the interagency 404(q) Memorandum of Agreement.

Activities associated with actions permitted by the Corps that are intended to create or restore habitat may adversely affect the species included in this consultation. Provided that these effects meet the criteria established for all other actions, they may proceed under the auspices of this consultation.

Some actions that may otherwise meet the parameters of this consultation may indirectly affect listed, proposed, or candidate species outside the Corps' jurisdiction. In any such case, a separate formal consultation would be initiated, if those effects were found to be under sufficient Federal control and responsibility (33 CFR Part 325 Appendix B), unless the Service concurs in writing that the action may occur under the auspices of this biological opinion. Alternatively, the Service may recommend to the project proponent that it should apply to the Service for a permit, pursuant to section 10(a)(1)(B) of the Act, for the incidental take of listed species that occur in areas outside the Corps' jurisdiction.

This programmatic consultation may be terminated by either the Corps or the Service. In the event that one agency determines that termination of the programmatic consultation is in its best interest, it will provide sufficient notice to the partner agency to ensure that the implementation of necessary actions is not imperiled.

Effects of the Proposed Action on the Listed Species

Species Account

Southern Sea Otter

The southern sea otter was federally listed as threatened in January of 1977. The recovery plan for the southern sea otter was originally issued in 1982 and was revised in 1991. A relocation program was established to manage southern sea otters, allowing for their removal from the region south of Point Conception (34°26.9' north latitude). The biology of and threats to the southern sea otter are presented in the recovery plan and are summarized below.

Southern sea otters formerly ranged from Washington State south to Baja California, Mexico. Southern sea otters within the jurisdiction of the United States south of Point Conception are not federally listed as either threatened or endangered as governed by Public Law 99-625, 100 Statute 3500. The occurrence of southern sea otters south of the Santa Ynez River is believed to be limited primarily to roaming, non-breeding males. Purisima Point, on north Vandenberg Air Force Base (Vandenberg), is the southernmost breeding colony of the listed southern sea otter.

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The northern end of the southern sea otter's range is also generally occupied by non-breeding adult and sub-adult males, although the age and sex distribution of the population shifts seasonally (Jameson 1983).

Southern sea otters occupy hard and soft sediment habitats from the littoral zone to depths of about 164 to 328 feet in protected bays to exposed outer coasts and are usually found in kelp beds associated with nearshore rocky reefs. Most individuals occur between shore and the 65-foot depth contour. Southern sea otters prefer unpolluted waters free from human disturbances containing sufficiently abundant prey to fulfill their energy and nutritional requirements. They feed on a wide variety of invertebrates and anchor themselves during periods of rest and sleep by wrapping kelp around their bodies (Kenyon 1969).

Declines in the southern sea otter population were attributed to entanglement in fishing gear, which resulted in mortality, and overharvest for the fur trade. In this century, the California population of southern sea otters has never increased at the species' maximum potential of about 20 percent per year, although the California rate of increase is typical of recovering populations in Washington State, British Columbia, Alaska, and the former Soviet Union. The depressed growth of the California southern sea otter population is largely due to mortality as opposed to reproductive depression or emigration. The cause or causes of the mortality are unclear, although resource limitation and disease have been suggested.

Threats to the California population of the southern sea otter include habitat degradation from oil spills and other environmental contaminants, prey depletion by human exploitation, shooting, and entanglement in fishing gear. Oil spills that could strike at any time threaten catastrophic decimation or localized extinction.

Brown Pelican

The brown pelican was federally listed as endangered in 1970. The recovery plan describes the biology, reasons for decline, and the actions needed for recovery of the California brown pelican (Service 1983).

The brown pelican is a large bird recognized by the long, pouched bill that is used to catch surface schooling fishes. Brown pelicans nest in colonies on small coastal islands that are free of mammalian predators and human disturbance, and are associated with an adequate and consistent food supply. Nesting colonies of the California brown pelican range from the Channel Islands in the Southern California Bight to the islands off Nayarit, Mexico. Prior to 1959, intermittent nesting was observed as far north as Point Lobos in Monterey County, California. Dispersal between breeding seasons ranges from British Columbia, Canada, to southern Mexico and possibly to Central America. During the non-breeding season brown pelicans roost communally, generally in areas that are near adequate food supplies, have some type of physical barrier to predation and disturbance, and that provide some protection from environmental stresses such as

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wind and high surf. Breakwaters and jetties are often used for roosting. Their numbers in a given area may vary greatly with the season.

Brown pelicans experienced widespread reproductive failures in the 1960s and early 1970s. Much of the failure was attributed to eggshell thinning caused by high concentrations of DDE, a metabolite of DDT. Other factors implicated in the decline of this subspecies include human disturbance at nesting colonies and food shortages.

Western Snowy Plover

The Pacific coast population of the western snowy plover was federally listed as threatened on March 5, 1993; a recovery plan has not been prepared. The final rule listing the western snowy plover as threatened describes the biology and reasons for the decline of the western snowy plover (58 Federal Register 12864). On March 2, 1995, the Service proposed designation of critical habitat for the western snowy plover (60 Federal Register 11768). This proposal describes physical and biological attributes that are essential to the conservation of the species, activities that could adversely affect proposed critical habitat areas, and the specific areas proposed to be designated as critical habitat. Within the area covered by this consultation, proposed critical habitat occurs at: Waddell, Scott, Laguna, and Wilder Creek Beaches, Santa Cruz County; Sunset, Zmudowski, Salinas River, and Point Sur Beaches and the Elkhorn Slough mudflat/saltpond, Monterey County; Arroyo Hondo Creek, Arroyo Laguna Creek, Atascadero, Toro Creek, and Morro Bay Beaches, and the Pismo Beach - Nippono Dune area, San Luis Obispo County; Vandenberg, Santa Ynez River Mouth - Ocean, Jalama, Deversaux, Point Castillo - Santa Barbara Harbor, and Carpinteria Beaches, Santa Barbara County; and San Buenaventura, Mandalay - Santa Clara River Mouth, Ormond, Mugu Lagoon, and San Nicolas Island Beaches, Ventura County.

For all areas of critical habitat proposed for the western snowy plover, these physical and biological features and primary constituent elements are provided or will be provided by intertidal beaches (between mean low water and mean high tide), associated dune systems, and river estuaries. Important components of the beach/dune/estuarine ecosystem include surf-cast kelp, sparsely vegetated foredunes, intertidal flats, spits, washover areas, blowouts, intertidal flats, salt flats, and flat rocky outcrops. Several of these components (sparse vegetation, salt flats) are mimicked in artificial habitat types used less commonly by western snowy plovers (i.e., dredge spoil sites and salt ponds and adjoining levees). Functional suitability of areas containing the features listed above is also contingent upon isolation from human disturbance and predation. These attributes are considered essential to the conservation of the coastal population of the western snowy plover (60 Federal Register 11768).

The western snowy plover is a small shorebird that forages on invertebrates in areas such as intertidal zones, the wrack line, dry sandy areas above the high tide line, salt pans, and the edges of salt marshes. The Pacific coast population nests near tidal waters along the mainland coast and on offshore islands from southern Washington to southern Baja California, Mexico. Most

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nesting occurs on unvegetated, or moderately vegetated, dune backed beaches and sand spits. Other less common nesting habitats include salt pans, dredge spoils, and salt pond levees. Nest site fidelity is common. Nesting and chick rearing activity generally occur between March 1 and September 30. During the non-breeding season western snowy plovers may remain at breeding sites or may migrate to other locations. Most winter south of Bodega Bay, California. Many birds from the interior population winter on the central and southern coast of California.

The Pacific coast population of the western snowy plover has experienced widespread loss of nesting habitat and reduced reproductive success at many nesting locations. Factors resulting in loss of nesting habitat include urban development and the encroachment of European beachgrass (*Ammophila arenaria*). Reduced reproductive success is frequently tied to disturbance from human activities and to predation. Activities such as walking, jogging, running pets, horseback riding, and off-road vehicle use frequently crush and destroy the western snowy plover's cryptic nests and chicks. These activities also flush adults off nests and away from chicks, and thus interfere with essential incubation and chick rearing behaviors.

A coalition of researchers in 1995 counted 974 adult western snowy plovers mid-breeding season in California coastal areas. The highest regional total was at Vandenberg Air Force Base, which has consistently supported one of the largest concentrations of breeding western snowy plovers along the west coast of the United States (Page and Persons 1995).

California Least Tern

The California least tern was federally listed as endangered in 1970. Details of the life history, biology, and reasons for decline of the California least tern are contained in the 1980 Recovery Plan and are mentioned briefly here. The California least tern is one of 12 recognized subspecies of the least tern, three of which inhabit the United States. The breeding range of this subspecies is described as extending along the Pacific Coast from San Francisco Bay, California, to Bahía de San Quintín, Baja California, Mexico. The California least tern is a migratory species which arrives in California by late April to breed and begins to depart to unknown southerly locations by August. It nests on coastal, sandy, open areas, usually around bays, estuaries, and creek and river mouths. Nests are simply scrapes or depressions in the sand that the birds often adorn with small fragments of shell or pebbles. During the average 21-day incubation period, the nest is tended continually. Both adults of a mated pair take turns tending the nest. The adults tend the flightless but quite mobile chicks for approximately three weeks after hatching. After fledging, the young terns do not become fully proficient at capturing fish until after they migrate from the breeding grounds. Adults and fledglings usually leave the breeding colony within about ten days of fledging.

California least terns were once common along the central and southern California coast. The precipitous decline of the California least tern is attributed to prolonged and widespread destruction and degradation of nesting and foraging habitats, and increasing human disturbance to breeding colonies. Conflicting uses of southern and central California beaches during the

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California least tern nesting season have led to isolated colony sites that are extremely vulnerable to predation from native, feral and exotic species, overwash by high tides, and vandalism and harassment by beach users. Since its classification as a Federal and State endangered species, considerable effort has been expended on annual population surveys, protection and enhancement of existing nesting colonies, and the establishment of new nesting locations. Control of predators constitutes one of the most crucial management responsibilities at California least tern nesting sites.

The nesting colonies in Santa Barbara and San Luis Obispo counties support a relatively small portion of the total state-wide population. However, they represent the only currently active breeding areas between Ventura County and San Francisco Bay. Monitoring efforts on Vandenberg have identified a main California least tern nesting colony being consistently located at Purisima Point, with satellite colonies appearing at Beach 2, San Antonio Creek, or the Santa Ynez River. The latter three colonies tend to vary from year to year in their number of nest attempts and often are not used at all. Predation from coyotes (*Canis latrans*) is believed to be one of the limiting factors affecting reproductive success (Animal Damage Control 1996). In Ventura County, California least terns nest at the Pacific Missile Test Center at Point Mugu, Ormond Beach, and just north of the mouth of the Santa Clara River. In 1996, approximately 80 pairs of California least terns nested at Ormond Beach, making this the largest colony in Ventura County. After fledging, young California least terns often use the estuary at the Ventura River for foraging and loafing before beginning their journey south. At this time, California least terns are not known to nest in Santa Cruz and Monterey Counties.

Tidewater Goby

The tidewater goby was listed by the Service as endangered on March 7, 1994. A recovery plan has not been published and critical habitat has not been proposed. Detailed information regarding the biology of the tidewater goby can be found in Irwin and Soltz (1984), Moyle et al. (1989), and Swift et al. (1989).

The tidewater goby, a member of the Gobiidae family, is the only species in the genus *Eucyclogobius*. It is a small fish, rarely exceeding 50 millimeters standard length (mm SL), and is characterized by large pectoral fins and a ventral sucker-like disk formed by the complete fusion of the pelvic fins.

The tidewater goby historically occurred in at least 109 California coastal lagoons (Service in prep.). It is currently known to occur in 84 locations. Its decline can be attributed to upstream water diversions, pollution, siltation, and urban development on surrounding lands. These threats continue to affect the remaining populations of tidewater gobies. In addition, given the lack of a marine life history stage and the high level of fragmentation between existing populations, the probability for exchange between the populations and natural colonization of suitable habitat is low.

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Habitat for the tidewater goby is characterized by brackish shallow lagoons and lower stream reaches where the water is fairly still but not stagnant (Miller and Lea 1972, Moyle 1976, Swift 1980, Wang 1982, Irwin and Soltz 1984). Tidewater gobies have been documented in waters with salinity levels from 0 to 40 parts per thousand, temperature levels from 8 to 23° Celsius, and water depths from 25 to 100 centimeters (Irwin and Soltz 1984, Swift et al. 1989).

The tidewater goby seems to spend all life stages in lagoons. It may enter the marine environment only when forced out of the lagoon by strong storm events. Small crustaceans, aquatic insects, and mollusks are the primary components of the tidewater goby's diet (Swift 1980, Wang 1982, Irwin and Soltz 1984). The tidewater goby seems to be an annual species although some variation has been observed (Swift 1980, Wang 1982, Irwin and Soltz 1984). Reproduction occurs year-round although distinct peaks in spawning, often in April and May, do occur (Moyle et al. 1989). When breeding, males dig vertical burrows for females to deposit eggs (Swift et al. 1989). Within nine to ten days larvae emerge and are approximately five to seven mm SL (Moyle et al. 1989). The larvae live in vegetated areas within the lagoon until they are 15 to 18 mm SL (Moyle et al. 1989).

Analysis of Effects

For southern sea otters, western snowy plovers, California least terns, and brown pelicans, this biological opinion includes only actions that are unlikely to result in mortality or injury. These species are likely to leave work areas as a result of human activities without deliberate harassment. In the event that project activities are not sufficient to cause southern sea otters and brown pelicans to leave an area, the Corps will include special conditions in its permits to harass these species from harm's way.

Turbidity associated with certain activities could indirectly affect the ability of southern sea otters, California least terns, brown pelicans, and tidewater gobies to forage because these species seek prey underwater. However, because of the standards under which this consultation would be used, turbidity should generally be minor and temporary. Natural flushing of the waters in harbors would reduce the amount of turbidity within a few days. The greatest turbidity would be expected in the immediate vicinity of the work activity where it is unlikely that individuals of these species would be present.

Southern sea otters probably use existing breakwater and jetty slopes and adjacent ocean bottoms for foraging to at least some degree. Stones placed during repair work on breakwaters and jetties could permanently cover portions of these potential foraging areas. Prey species occupying this area would be lost to southern sea otters. However, such an impact should not substantially reduce the amount of potential foraging area that is available to the southern sea otter. Newly placed stones on the breakwater and jetty slopes would, in time, be colonized by invertebrates and would again provide foraging areas for southern sea otters.

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Anchoring of barges and dredging could damage kelp beds, if any are present. Since this habitat type is important in the daily resting, sleeping, and foraging activities of southern sea otters, short-term loss of the kelp bed canopy would likely have temporary adverse effects on the southern sea otters; permanent loss of the kelp beds would likely have long-term adverse effects. Avoidance of kelp beds when anchoring or use of shore lines to secure the barges could reduce impacts to both the kelp beds and southern sea otters.

The Corps (1993) has previously proposed procedures to harass Californian sea lions (*Zalophus californicus*) into leaving work areas to prevent physical harm to either the animals or workers. This stepdown process involves qualified wildlife professionals using increasingly active means of encouraging Californian sea lions to leave, with the use of seal bombs as a last resort. If a seal bomb inadvertently hit a southern sea otter or brown pelican directly, the potential exists that the animal could be injured. The potential for take of listed species to occur by this means can be eliminated through careful observation of the vicinity prior to use of the seal bombs and prohibiting their use if a southern sea otter or brown pelican is within 50 meters of detonation.

Brown pelicans use breakwaters, jetties, and inactive barges as roosting areas. They would likely flush upon approach by humans or when work activities begin. This effect would not be likely to substantially harm brown pelicans, because additional roosting areas would likely be available for their use. The loss of all roosting habitat from an area could result in a substantial adverse effect on this species. Consequently, the potential for this effect to occur must be evaluated to determine whether use of this programmatic consultation is appropriate.

Project activities that would affect nesting habitat of the western snowy plover during the nesting season would not be covered by this biological opinion. Potential impacts would therefore be limited to wintering habitat. Disturbance of wintering western snowy plovers may cause individuals to move more frequently than they would under natural conditions and result in energy expenditures that could affect the ability of the individual to survive harsh conditions. Specific instances of such harassment leading to injury or death have not been documented for the western snowy plover. Activities that would be covered by this biological opinion would not result in the complete removal or continual, long-term disturbance to extensive areas of wintering habitat. Consequently, western snowy plovers should be able to move away from the disturbance with a moderate amount of energy expenditure.

In some cases, western snowy plovers have been observed making nest scrapes and courting as early as January (J. Watkins, biologist, U.S. Fish and Wildlife Service, Vandenberg Air Force Base, pers. comm. 1997). The potential effects of project activities on courting individuals in the earliest portions of the nesting season are not known. However, at some level of disturbance, courting individuals may delay nesting until later in the year. This delay may cause breeding birds that are resident year-round to nest at the same time as summer breeders. Data are not available to demonstrate if nesting space, food, or other resources required by nesting birds would be limited by this delayed nesting.

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Dredge lines that are laid across beaches would fragment wintering habitat by blocking the field of view of western snowy plovers and requiring them to fly over lines to have access to the entire beach. The effects of such dredge lines and this degree of habitat fragmentation are not well-known, but they could cause additional expenditures of energy as birds fly over the lines and serve as hiding places for predators.

Bulldozing wintering habitat to form berms that protect shoreline residences from high tides causes alteration of the beach form and potential loss of foraging habitat. The effects, if any, of the altered beach form are unknown. Intertidal foraging habitat would eventually be restored as marine organisms colonize disturbed areas. The burial of stranded masses of kelp and the invertebrates they support would constitute loss of another foraging opportunity. This effect can be mitigated by avoiding the burial of kelp masses; masses can be dragged out of the line of berm construction and replaced on the beach, just above the high tide line, after the berms are in place.

Some potential also exists for disturbance of habitat to cause the spread or establishment of European beach grass. Measures to prevent the spread or introduction of this species, such as avoiding beach areas with established native vegetation, restoring disturbed areas with native species, and post-project monitoring and control of exotic species, could reduce or eliminate this effect.

Many of the activities that are likely to occur under the auspices of this consultation may adversely affect critical habitat. The "destruction or adverse modification" is defined as "a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species" (50 CFR 402.02). This consultation will not evaluate actions that may have the potential to substantially adversely affect critical habitat, in terms of the amount of area disturbed, the nature of the disturbance, or the timing of the action. Therefore, the adverse modification or destruction of proposed critical habitat of the western snowy plover will be avoided during implementation of the provisions of this consultation. The Service and Corps will consider this issue specifically during the review of the individual actions that are covered under this consultation.

Impacts that could occur to tidewater gobies resulting from the activities covered by this biological opinion include temporary disturbance of habitat; permanent loss of habitat when only a small amount of the available area would be so affected; alteration of water quality; the capturing, handling, and transporting of tidewater gobies to remove them from project areas; and potential loss of a breeding season, if work activities temporarily render habitat unsuitable for breeding. Actions that are expected to cause the loss of an entire population of tidewater gobies should generally be evaluated in a separate consultation. However, cases may occur, particularly in smaller lagoons that support a small number of individuals, where either the substrate or water quality is temporarily altered to a condition that is not capable of sustaining tidewater gobies.

The type and level of the impacts would depend on the specific activity and are discussed below.

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The capture and handling of tidewater gobies to move them from a work area involves harassment of individual fish; however, the capture of tidewater gobies prior to the primary breeding season will reduce adverse impacts to juveniles, which would be less likely to survive this activity. Additionally, some individuals are likely to be killed by the capture efforts. Individuals could be crushed in seines by the weighted lead line if it should roll inward while being pulled in to shore. Stress from harassment may occur while tidewater gobies are held in buckets of water. Individuals could suffocate if water should become depleted of oxygen as a result in a rise in temperature or from excessive crowding. To avoid the physiological stress that could occur if tidewater gobies were released into an area that drastically differs in water quality from the capture site, individuals may be excluded from a work area but would not be transported to other locations within a lagoon. However, depending on the nature of the proposed action, fewer tidewater gobies may be killed during activities to exclude them from a work area than by proceeding without a such an effort. Also, the disturbance associated with the blocking of a stream or the capture effort may cause at least a portion of the tidewater gobies to leave the work area. Finally, because tidewater gobies may be concealed from capture by vegetation or debris, some individuals may remain within work areas and be killed by project activities.

Noise and vibration from work activities would likely disturb tidewater gobies to some degree. These effects are likely to last only during the construction activities. If tidewater gobies were driven from the vicinity of the work activities, they would likely return upon the completion of construction.

Tidewater gobies may be entrained by pump intakes, if such devices are used to dry out work areas. Screening pump intakes with wire with no greater than five millimeter (mm) mesh diameter should reduce the potential that tidewater gobies would be caught in the inflow.

Some potential exists for tidewater gobies that are excluded from a work area to be moved into habitat that does not contain the necessary elements necessary to sustain the species (e.g., adequate food and suitable substrate type for breeding). For example, if exclusion from a work area results in overcrowding, tidewater gobies may compete to a greater degree for food, breeding substrate, and space, although the effects of such competition are unknown. Because the tidewater goby has an annual life history, lack or scarcity of necessary elements could lead to extinction of a population. Consequently, the potential for such an effect to occur must be carefully considered during the evaluation of any action that is covered by this biological opinion. Upon completion of work activities, tidewater gobies may be able to regain use of the disturbed habitat after restoration actions or natural processes restore appropriate water depths and substrate.

In some cases, proposed actions may affect tidewater gobies in an isolated portion of a lagoon or a small number of individuals in an area of limited habitat. If the proposed action could result in temporary alteration of water quality or substrate condition to a degree that may preclude the ability of the tidewater goby to persist through the disturbance, tidewater gobies could be collected and held in captivity until the condition of the habitat is again suitable. Tidewater

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gobies have been maintained successfully in captivity for extended periods of time. Use of this measure to reduce the effects of an action could assist in conserving the specific stock of tidewater gobies from a given lagoon.

Tidewater gobies may sustain harassment and mortality from predators. If water that is impounded during work activities creates favorable habitat for non-native predators, such as bullfrogs (*Rana catesbeiana*) and centrarchid fishes, tidewater gobies may suffer abnormally high rates of predation. Additionally, any time that tidewater gobies are concentrated in a small area at unusually high densities, native predators such as herons, egrets, and kingfishers may feed on them opportunistically.

Under natural conditions, the areas occupied by tidewater gobies are subject to extreme variations in environmental conditions. Salinities and temperatures rise and fall as the mouths of estuaries open and close. Flow rates change dramatically from low flows during the summer to thousands of cubic feet per second during winter storms. At this time, researchers suspect that tidewater gobies survive these fluctuations by taking refuge in appropriate portions of the estuary system. During large storm events, they may even be washed to sea, survive in the almost fresh water found off the coast after large storms, and eventually make their way back into estuaries. Under most circumstances, tidewater gobies likely undergo large fluctuations in their numbers over a given year because of their short life span and capacity for reproducing in a prolific manner. Therefore, if adequate parameters of water quality and quantity are maintained within areas that it occupies, the tidewater goby should be able to persist in the face of the minor disturbances that would be covered by this consultation.

In the case of the tidewater goby, the quantification of take by harassment and mortality is difficult because of the species' small size, aquatic habitat, and annual life history. All of these factors make it difficult to detect where tidewater gobies are and if any have been affected by an action. For actions covered by this consultation, some harassment and mortality could be directly observed from those captured during translocation efforts. However, mortality from other sources would be difficult to observe.

Trash left during or after project activities could attract predators to work sites, which could, in turn, harass or prey on the listed species. For example, gulls, corvids, and coyotes are known to be attracted to trash and are also known to opportunistically prey on the eggs and young of nesting shorebirds, such as the western snowy plover. This potential impact can be reduced or avoided by careful control of waste products at all work sites.

Accidental spills of hazardous materials or careless fueling or oiling of vehicles or equipment could degrade water quality or important habitat features, such as nesting, roosting, or foraging areas, to a degree where listed species are adversely affected or killed. The potential for this impact to occur can be reduced by thoroughly informing workers of the importance of preventing hazardous materials from entering the environment and by having an effective spill response plan in place. The adverse effects of an accidental spill would vary with the type and amount of

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material that is released, weather conditions, the location of the release, and numerous other factors. Therefore, the adverse effects of a release of hazardous materials into the environment cannot be accurately quantified at this time. Additionally, the emergency provisions of the implementing regulations for section 7 of the Act establish procedures for expedited consultation in the event of an accidental release.

Under the provisions of this consultation, a small amount of habitat could be permanently lost as a result of project activities. For example, a bridge that is retrofitted for earthquake safety may have slightly larger footings after work is complete. Other actions may result in other minor losses of habitat. During the review of individual actions, the Service and Corps would determine whether the effects of any such loss of habitat was consistent with the spirit and intent of this consultation. If the agencies agree that the loss of habitat was not consistent with the spirit and intent of the consultation, an individual consultation would be initiated for that action. If the agencies concur, through informal consultation and review under the authorities of the Fish and Wildlife Coordination Act, that some form of compensatory action, such as restoration of disturbed habitat or creation of additional suitable habitat, would offset the effect of the loss of habitat as a result of the proposed action to an appropriate level, the action may proceed under the auspices of this biological opinion.

Some habitat disturbance and incidental take of southern sea otter, brown pelicans, California least tern, western snowy plover, and tidewater gobies may occur as a result of restoration or creation of habitat associated with permitted actions. Provided that the potential effects of such activities meet the criteria established for actions to be included in this consultation and that appropriate measures, as described previously in this biological opinion, are implemented to reduce or avoid those effects, those habitat restoration and creation activities may proceed under the auspices of this consultation.

The potential exists for unintentional workers to intentionally or unintentionally injure, harm, or kill southern sea otter, brown pelicans, western snowy plover, California least tern, or tidewater gobies. The potential for this impact could be greatly reduced by informing workers of the presence and protected status of these species and the measures that are being implemented to protect them during project activities.

The process established in this consultation by the Service and Corps may benefit the southern sea otter, brown pelican, western snowy plover, California least tern, and tidewater goby. By offering an expedited time frame if the conditions of this consultation are followed, project proponents may decide to alter the proposed action to meet the required parameters, which could result in less adverse effect to the listed species, rather than proceed with an action as originally planned and negotiate separate protective measures.

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Cumulative Effects

Cumulative effects are those impacts of future State and private actions that are reasonably certain to occur in the project area. Future Federal actions will be subject to the consultation requirements established in section 7 of the Act and, therefore, are not considered cumulative to the proposed project.

The Service is unaware of any future State or private action that is reasonably certain to occur in the area covered by this consultation that, when considered with the effects of this consultation on the listed species, would likely jeopardize the continued existence of the southern sea otter, brown pelican, western snowy plover, California least tern, or tidewater goby. By the nature of this programmatic consultation, actions that may adversely affect these species which are covered by this biological opinion are not expected to contribute to the fragmentation or loss of habitat or to a substantial decline in the number of individuals of these species.

Incidental Take

Section 9 of the Act prohibits any taking (i.e., to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of listed species without special exemption. Harm is defined to include significant habitat modification or degradation that results in the death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Under the terms of sections 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not the purpose of the agency action is not considered taking within the bounds of the Act, provided that such taking is in compliance with an incidental take statement. The stipulations in this biological opinion for southern sea otters, western snowy plovers, brown pelicans, California least terns, and tidewater gobies described as reasonable and prudent measures and terms and conditions are non-discretionary, and must be made a binding condition of any grant or permit, as appropriate.

This biological opinion anticipates the following forms of take as a result of actions that are covered by this biological opinion:

1. Southern sea otters and brown pelicans through harassment resulting from intentional (as described in the Description of the Proposed Action portion of this biological opinion) or unintentional disturbance at project sites.
2. Western snowy plovers through harassment resulting from project-related activities during winter months. Harassment of breeding individuals is specifically excluded.
3. California least terns through harassment resulting from disturbance from project-related activities where loafing or foraging individuals occur. Harassment of breeding individuals is specifically excluded.

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4. Tidewater gobies through mortality or injury resulting directly from project-related activities or indirectly during capture and release of individuals that may be in harm's way.
5. Tidewater gobies through harassment resulting directly from project-related activities or indirectly during capture and release of individuals that may be in harm's way.

The number of southern sea otters, brown pelicans, western snowy plovers, California least terns, and tidewater gobies that would be harassed cannot be accurately estimated because the timing, location, duration, and number of actions covered by this biological opinion are unknown at this time. The numbers of southern sea otters, brown pelicans, western snowy plovers, California least terns, and tidewater gobies that may be present when these actions occur are also unknown. The Service does not anticipate that any southern sea otters, brown pelicans, western snowy plovers, or California least terns would be directly killed or injured or suffer harm through permanent loss or degradation of habitat as a result of actions occurring under the auspices of this biological opinion.

The number of tidewater gobies that may be killed or injured cannot be estimated because the timing, location, duration, and number of actions covered by this biological opinion are unknown at this time; the number of tidewater gobies that may be present when these actions occur are also unknown.

If any southern sea otters, brown pelicans, western snowy plovers, or California least terns are killed or injured as a result of actions covered by this biological opinion, the Corps shall immediately notify its permittee to cease the activity that resulted in take and notify the Service.

Reasonable and Prudent Measure

The Service believes that the following reasonable and prudent measure is necessary and appropriate to minimize incidental take of southern sea otters, brown pelicans, western snowy plovers, California least terns, and tidewater gobies:

The incidental take of southern sea otters, brown pelicans, western snowy plovers, California least terns, and tidewater gobies resulting from actions covered by this programmatic consultation shall be avoided or reduced by fully implementing the mitigation measures contained in the "Description of the Proposed Action" portion of this biological opinion.

Terms and Condition

To be exempt from the prohibitions of section 9 of the Act, the Corps and its permittees must comply with the following term and condition, which implements the reasonable and prudent measure described above.

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The mitigation measures contained in the "Description of the Proposed Action" portion of this biological opinion are hereby incorporated as terms and conditions of this biological opinion and shall be fully implemented by the Corps and its permittees.

Reporting Requirements

The Corps shall require each permittee that makes use of the provisions of this programmatic consultation to prepare a compliance certification to be filed with the Corps to certify after completion of construction that the required mitigation was completed in accordance with the permit conditions. The information contained in the compliance certification shall include the types of actions that occurred, the area they affected, which species were present in the project area at the time of implementation, which mitigation measures were employed to protect the species, and a description of the area after the completion of the action. The compliance certification shall also document the effectiveness of the mitigation measures and the number of southern sea otters, western snowy plovers, brown pelicans, California least terns, and tidewater gobies that were taken during each project's activities.

This information shall be presented to the Service in an annual report, potentially in a table format with attached descriptions, as appropriate. The Corps' Regulatory Analysis and Management System (RAMS) may be used to present this information.

The report shall also include a map (or maps, as appropriate) that depicts the location of all actions that is keyed to the table and written descriptions. UTM coordinates may be used in place of maps. (The Corps may desire to develop a reporting format in coordination with the Service soon after issuance of this biological opinion.) The report shall be submitted to the Service by January 31 of each year.

The Service recognizes that accurately quantifying the number of individuals that were taken through harassment may not be possible; in these cases, the reporting of observations and relative numbers would provide useful information. If appropriate, the report shall also recommend modifications to future measures to enhance the protection of listed species.

Disposition of Injured or Dead Specimens

Upon locating dead or injured southern sea otters, brown pelicans, western snowy plovers, California least terns, or tidewater gobies, initial notification must be made by telephone and writing to the Ventura Fish and Wildlife Office (2493 Portola Road, Suite B, Ventura, California 93003, (805) 644-1766) within three working days of its finding. The report shall include the date, time, location of the carcass, a photograph, cause of death, if known, and any other pertinent information. For incidental take occurring in Ventura, Santa Barbara, and San Luis Obispo Counties, and Monterey County south of Gorda (i.e., the area of responsibility of the Los Angeles District's North Coast Section), this notification shall also be made, in writing, to the

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Service's Division of Law Enforcement (370 Arroyo Avenue, Suite 114, Torrance, California 90501)

Care shall be taken in handling injured animals to prevent additional injury. Injured animals may be released to the wild after receipt of concurrence from the Service. Care shall be taken in handling dead specimens to preserve biological material in the best possible state for later analysis. Dead tidewater gobies shall be preserved in 90 or 95 percent ethanol.

The remains of intact brown pelicans, California least terns, and western snowy plovers shall be placed with the University of California at Santa Barbara (Contact: Mark Holmgren, University of California at Santa Barbara, ERMIB Department, Santa Barbara, California, 93106, (805) 893-4098). The remains of southern sea otters shall be placed with the Biological Resources Division, U.S. Geological Survey (Contact: Lynn Creekmore, National Wildlife Health Center, Madison, Wisconsin 53711-6223, (608) 264-5412). Injured southern sea otters shall be taken to the Monterey Bay Aquarium (886 Cannery Row, Monterey, California 93940, (408) 644-4977). The remains of tidewater gobies shall be placed with the Los Angeles County Museum of Natural History, Section of Fishes, 900 Exposition Boulevard, Los Angeles, California 90007 (Attn: Jeffrey Seigel, (213) 763-3374); Marine Vertebrate Collection, Scripps Institute of Oceanography - 0208, La Jolla, California 92093-0208 (Attn: H.J. Walker, Jr., (619) 534-2199); or Department of Ichthyology, California Academy of Sciences, Golden Gate Park, San Francisco, California 94118 (Attn: Tomio Iwamoto, (415) 750-7054). The permittee shall make arrangements with the appropriate repository prior to the onset of the project. The arrangements shall include receiving instructions from the repository on the correct means of preserving the specimens, the proper collection data to be provided with the specimens, and a copy of the project authorization and citation of this biological opinion to provide the repository with proof that the individuals were taken legally.

Conservation Recommendations

Section 7(a)(1) of the Act directs Federal agencies to use 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. The Service offers the following conservation recommendations:

1. The Corps should include a special condition in its permits and pre-construction notices that requires restoration of any help bed that is disturbed during project activities. Restoration of disturbed help beds could reduce the time that this important component of the southern sea otter's ecosystem remains in less than optimal condition as a result of project activities.

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2. The Corps should provide resources to assist in monitoring the status of the listed species in the area covered by this consultation.

The Service requests notification of the implementation of any conservation recommendations to keep us informed of actions that either minimize or avoid adverse effects or that benefit listed species or their habitats.

Conclusion

This concludes formal consultation under section 7 of the Act for the issuance of section 10 and 404 permits which have minor and temporary impacts on the southern sea otters, western snowy plover, brown pelican, California least tern, and tidewater goby. Re-initiation of formal consultation is required if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may adversely affect listed species or critical habitat in a manner or to an extent not considered in this biological opinion; (3) the agency action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this biological opinion; and (4) a new species is listed or critical habitat is designated that may be affected by this action (50 CFR 402.16).

Upon designation of proposed critical habitat for the western snowy plover, the Corps may request that this conference opinion be confirmed as a final biological opinion. The request must be in writing. The Service will confirm the conference opinion as its final biological opinion if the circumstances described by conditions 2 and 3 of the previous paragraph have not occurred.

If you have any questions, please contact Ray Bransfield of my staff at (805) 644-1766.

Sincerely,

/s/ Diane K. Noda

Diane K. Noda
Field Supervisor

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AGREEMENT REGARDING PROPOSED STREAM OR LAKE ALTERATION

THIS AGREEMENT, entered into between the State of California, Department of Fish and Game, hereinafter called the Department, and UNION PACIFIC RAILROAD RENOVATED BY TONY MONTAGNA of BANNERMAN, State of CALIFORNIA, hereinafter called the operator, is as follows:

WHEREAS, pursuant to Section 1602 of California Fish and Game Code, the operator, on the 10th day of OCTOBER, 1998, 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: VENTURA RIVER, in the County of VENTURA, State of California, S T R

WHEREAS, The Department (represented by S. LAFANE) has made an inspection of subject area on the 30th day of OCTOBER, 1998, and) has determined that such operations may substantially adversely affect existing fish and wildlife resources including: STEELHEAD TROUT, AMPHIBIANS, VARIOUS GAME AND NON-GAME BIRD, VARIOUS GAME AND NON-GAME BEARS, SMALL MAMMALS, AND OTHER ANIMAL LIFE/PLANTS

THEREFORE, the Department hereby proposes measures to protect fish and wildlife during the operator's work. The operator hereby agrees to accept the following recommendations as part of his work: Numbers 1, 2, 3, 4, 5, 6, 7, 19, 21, 22 from the list of recommendations on the back of this page and the following special recommendations:

I. All work in or near the stream or lake shall be confined to the period 11-10-98 THROUGH 03-17-99.

- IN ADDITION TO THE NUMBERED RECOMMENDATIONS LISTED ABOVE, THE OPERATOR SHALL:
1. CONDUCT ALL WORK AT LOW TIDES TO MINIMIZE TURBIDITY.
2. TEMPORARY BEAMS, IF USED, SHALL ONLY BE BUILT FROM MATERIAL SUCH AS CLEAR CHANNEL.
3. ANY TEMPORARY BEAMS MADE SHALL BE CONSTRUCTED SO AS NOT TO IMPAIR ANY FISH AND SHALL BE REMOVED AND MARKERS REMOVED.
4. DESTROYED OR REMOVED VEGETATION SHALL BE REPAIRED / REPLANTED TO AS NEAR THEIR ORIGINAL CONDITION AS POSSIBLE.
5. ANY SPILLS OF HAZARDOUS MATERIALS WILL BE REPORTED IMMEDIATELY TO THE DEPARTMENT.
6. A COPY OF THIS DOCUMENT / AGREEMENT SHALL BE KEPT AT THE JOB SITE DURING OPERATIONS.

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 Code Sections, including but not limited to Fish and Game Code Sections 5850, 5852 and 5948, may result in prosecution.

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 or ordinances. A consummated agreement does not necessarily constitute Department of Fish and Game endorsement of the proposed operation, or assure the Department's concurrence with permits required from other agencies.

This agreement becomes effective on 11-10-98 and terminates 03-17-99

Operator: [Signature] M B M and [Signature] STONEY LAFANE Department Representative

Title: Manager of Bridge Maintenance Title: WARDEN

Organization: Union Pacific Railroad Department of Fish and Game, State of California

Date: NOV 13 1998 Date: 10-30-98

* If inspection was not made, cross out words within parentheses.

EXHIBIT NO. 10
APPLICATION NO. 2 pages
4-98-280
Union Pacific Railroad

RECOMMENDATIONS

1. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. The disturbed portions of any stream channel or lake margin within the high water mark of the stream or lake shall be restored to as near their original condition as possible.
2. Restoration shall include the revegetation of stripped or exposed areas.
3. Rock, riprap, or other erosion protection shall be placed in areas where vegetation cannot reasonably be expected to become reestablished.
4. Installation of bridges, culverts, or other structures shall be such that water flow is not impaired and upstream or downstream passage of fish is assured at all times. Bottoms of temporary culverts shall be placed at or below stream channel grade. Bottoms of permanent culverts shall be placed below stream channel grade.
5. Plans for design of concrete sills and other features that could potentially impede fish migrations must be approved by Department engineers.
6. When any dam (any artificial obstruction) is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain fishlife below the dam.
7. An adequate fish passage facility must be incorporated into any barrier that obstructs fish passage.
8. Any temporary dam (any artificial obstruction) constructed shall only be built from material such as clean gravel which will cause little or no siltation.
9. No equipment will be operated in live stream channels.
10. Equipment shall not be operated in the stream channels of flowing live streams except as may be necessary to construct crossings, or barriers and fills at channel changes.
11. When work in a flowing stream is unavoidable, the entire streamflow shall be diverted around the work area by a barrier, temporary culvert, and/or a new channel capable of permitting upstream and downstream fish movement. Construction of the barrier and/or the new channel shall normally begin in the downstream area and continue in an upstream direction, and the flow shall be diverted only when construction of the diversion is completed. Channel bank or barrier construction shall be adequate to prevent seepage into or from the work area. Channel banks or barriers shall not be made of earth or other substances subject to erosion unless first enclosed by sheet piling, rock riprap, or other protective material. The enclosure and the supportive material shall be removed when the work is completed and the removal shall normally proceed from downstream in an upstream direction.
12. Temporary fills shall be constructed of nonerodible materials and shall be removed immediately upon work completion.
13. Equipment shall not be operated in the lake or its margin except during excavation and as may be necessary to construct barriers or fills. If work in the lake is unavoidable, a curtain enclosure to prevent siltation of the lake beyond the immediate working area shall be installed. The enclosure and any supportive material shall be removed when the work is completed.
14. Silt settling basins shall be located away from the stream or lake to prevent discolored, silt-bearing water from reaching the stream or lake.
15. Preparation shall be made so that runoff from steep, erodible surfaces will be diverted into stable areas with little erosion potential. Frequent water checks shall be placed on dirt roads, cat tracks, or other work trails to control erosion.
16. Wash water containing mud or silt from aggregate washing or other operations shall not be allowed to enter a lake or flowing streams.
17. a) A silt catchment basin shall be constructed across the stream immediately below the project site. This catchment basin shall be constructed of gravel which is free from mud or silt.
b) Upon completion of the project and after all flowing water in the area is clear of turbidity, the gravel along with the trapped sediment shall be removed from the stream.
18. If operations require moving of equipment across a flowing stream, such operations shall be conducted without substantially increasing stream turbidity. For repeated crossings, the operator shall install a bridge, culvert, or rock-fill crossing as specified in comments below.
19. If a stream channel has been altered during the operations, its low flow channel shall be returned as nearly as possible to its natural state without creating a possible future bank erosion problem, or a flat wide channel or sluice-like area. If a lake margin has been altered, it shall be returned as nearly as possible to its natural state without creating a future bank erosion problem. The gradient of the streambed or lake margin shall be as nearly as possible the same gradient as existed prior to disturbance.
20. 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.
21. 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 logging, construction, or associated activity of whatever nature shall be allowed to enter into or 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 or lake.
22. The operator will notify the Department of Fish and Game of the date of commencement of operations and the date of completion of operations at least five days prior to such completion.

