

INFORMATION HANDOUT

For Contract No. 07-305204

At 07-Ven-33-15.7

Identified by

Project ID 0714000092

PERMITS

California Department of Fish and Wildlife Streambed Alteration Agreement

United States Department of the Interior Fish and Wildlife Service, Biological Opinion

United States Department of the Army Nationwide Permit Verification

United States National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Services (NMFS), Biological Opinion

WATER QUALITY

Los Angeles Regional Water Quality Control Board Water Quality Certification

MATERIALS INFORMATION

Foundation Report for Soil Nail Wall

**California Department of Fish and
Wildlife Streambed Alteration
Agreement**



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director



June 6, 2016

Mr. Peter Champion
California Department of Transportation
100 South Main Street, MS-16A
Los Angeles, California, 90012

Subject: Amendment of Streambed Alteration Agreement
Notification No. 1600-2012-0071-R5
Soil-Nail Wall State-Route 33
North Fork Matilija Creek Tributary to Ventura River

Dear Mr. Champion:

The Department of Fish and Wildlife (Department) has received your request to amend Lake or Streambed Alteration Agreement 1600-2012-0071-R5 (Agreement) and the required fee in the amount of \$245.50 for a minor amendment. Your request to amend the Agreement includes a change to the Project Description to extend the construction period and allow winterization of the Project (Table 1, p. 2), Avoidance Measures to Prevent Additional Impacts, and Modified Resource Protection Measures.

Please note that this Agreement has been previously extended with a new expiration date of **November 11, 2022**. All measures of the Agreement, and this executed Amendment, will remain in effect for construction-related activities until November 11, 2022.

However, please note that the Agreement and Amendment have no expiration date with regard to Mitigation activities. After the expiration date of November 11, 2022, Permittee remains responsible for fulfillment of all required mitigation. This includes installation, monitoring and reporting until the Department conducts a mitigation site visit. After the Department notifies Permittee in writing that the Department has determined the mitigation to be successfully completed, the Agreement and all Amendments will be closed.

UPDATED PROJECT DESCRIPTION

The area affected by Project changes outlined in this Amendment is anticipated to be the original action area analyzed in the NOAA Biological Opinion and original Agreement. The area to be dewatered and where steelhead capture and relocation activities are anticipated during season two will be the same as in the original Agreement. Winterization activities will take place within the original action area.

Table 1 outlines the aspects of the Project Description that have changed.

Project Component	Original Agreement	Revision
Water Diversion	Long-term pump-fed water diversion originally proposed to last six months.	Temporary water diversion and block nets will be removed in October at the end of the first construction season. The water diversion through the Project site will be reinstalled the following May and will be in place for an additional six months. Fish Exclusion and Removal activities will be conducted prior to the start of the second construction season.
Extended Project Schedule	The original Project schedule proposed construction to be completed in one season.	Due to the addition of the Stream Simulation and Fish Habitat Design, Caltrans Engineers determined that one season would be inadequate. The new schedule will consist of an additional construction season to complete the Project.
Winterization of Project Site	The original Project was proposed to last one season, with winterization activities not anticipated as necessary.	The Project site will need to be winterized. Winterization activities include placement of temporary 4T Rock Slope Protection (RSP) to protect the site between construction seasons. This RSP will then be utilized in the construction of the Rock Weir Step pools during the 2nd construction season.

POTENTIAL ADDITIONAL IMPACTS

Dewatering will occur twice, increased from once, as a result of the updated Project Description. Dewatering will temporarily preclude the Project area from serving as a freshwater rearing site and a freshwater migration corridor for steelhead trout. The ability of juveniles to migrate upstream and downstream through the action area will be hindered for several months each season. While the fish passage analysis conducted by CWE for Caltrans has concluded that upstream passage for juveniles through the Project reach is highly unlikely, due to the large natural drop structures downstream, passage of juveniles may be affected. The downstream migration of juveniles will be mitigated for by the monitoring of the juvenile population within the creek immediately upstream of the Project diversion and the capture and relocation downstream of individuals as the population increases.

Adult steelhead are not expected to be found in the creek, based on previous surveys, during Project-related activities. It is not expected the steelhead will be impacted by construction related-activities. The loss of aquatic habitat associated with the dewatering, and the impedance of migration through the Project area, will be temporary. The proposed-Project will restore connectivity, and allow steelhead to use the entire aquatic habitat, upstream and downstream.

AVOIDANCE and MINIMIZATION MEASURES

The following avoidance and minimization measures and BMPs for winterization activities will be implemented:

BMPs to control erosion and sedimentation will be deployed in appropriate areas of the construction site. These include covering any construction impacted area with BMPs such as jute netting and laying multiple straw-fiber-rolls along disturbed areas to minimize erosion and sedimentation.

The Temporary Water Diversion and all associated materials will be removed from within the creek. Removal of any remaining construction materials from areas that could be affected by storm flows, such as block nets, will be removed from the upstream terminus of the Project site.

All fish exclusion and relocation activities that will be conducted at the start of the second construction season will be done in an identical fashion as during the first construction season. This relocation plan has been reviewed and approved by NOAA Fisheries and was included in the original Agreement.

Please sign and return one copy of this letter to acknowledge the Amendment. Copies of the Agreement and this Amendment must be readily available at the Project worksite(s) and must be presented when requested by a Department representative or agency with inspection authority.

If you have any questions regarding this matter, please contact Mr. Dan Blankenship at 661-259-3750 or dan.blankenship@wildlife.ca.gov.

Sincerely,



Christine Found-Jackson
Senior Environmental Scientist, Supervisory

cc: Jamie Jackson, Senior Environmental Scientist (Specialist)
cc: Dan Blankenship, Senior Environmental Scientist (Specialist)

ACKNOWLEDGEMENT

I hereby agree to the above-referenced amendment.

Print Name: Mr. Peter Champion Date: 6/13/16

Signature: Peter Champion

**United States Department of the
Interior Fish and Wildlife Services
Biological Opinion**



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003



IN REPLY REFER TO:
08EVEN00-2015-TA-0396

August 31, 2015

Peter Champion
Associate Environmental Planner
Caltrans District 7, Los Angeles/Ventura
100 South Main Street MS:16A
Los Angeles, California 90012

Subject: Amendment to the Project Description of the Biological Opinion for the State
Route 33 Soil Nail Wall, Ventura County, California (8-8-12-F-14)

Dear Mr. Champion:

We have reviewed your request, dated June 10, 2015, and received in our office on August 14, 2015, to amend the project description of the biological opinion for Caltrans' Soil Nail Wall Bank Stabilization Project along North Fork Matilija Creek near Ojai in Ventura County, California (8-8-12-F-14). Your request describes changes to the project description that require an amendment to the biological opinion. You requested our concurrence that the revised project description would not result in additional effects to the federally threatened California red-legged frog (*Rana draytonii*) and its critical habitat beyond those considered in the biological opinion.

You are requesting the following changes be made to the project description:

1. The construction duration would be extended from one construction season (May to November) to two construction seasons to account for the amount of time necessary to construct both the soil nail wall and the stream simulation design;
2. The water diversion design would be changed to an AquaDam® and screened pump system that will run up onto the shoulder of the roadway and then drop back in to the creek downstream of the work area. This revision is required due the large boulders and drops within the creek bed making it (impossible) for a pipe to be run in the creek itself; and
3. Temporary rock slope protection would be installed at the work site between construction seasons (end of October to May), and removed when work resumes the following year.

Your proposed changes to the Soil Nail Wall Bank Stabilization Project will not result in effects to federally listed species beyond those considered in the biological opinion (8-8-12-F-14), and are therefore consistent with our analysis; further consultation pursuant to section 7(a)(2) of the

Endangered Species Act of 1972, as amended, is not necessary. Your letter and this response will serve as the amendment to the project description of the biological opinion.

As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency actions that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in the 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.

If you have any questions regarding this matter, please contact Rachel Henry of our staff at (805) 644-1766, extension 333, or by electronic mail at rachel_henry@fws.gov.

Sincerely,



Jeff Phillips

Deputy Assistant Field Supervisor



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003



IN REPLY REFER TO:
08EVEN00-2012-F-0227

October 17, 2012

Eduardo Aguilar, Branch Chief
Division of Environmental Planning
California Department of Transportation
100 Main Street, Suite 100
Los Angeles, California 90012-3606

Subject: Biological Opinion for the State Route 33 Soil Nail Wall (P.M.15.7-15.8),
Ventura County, California (8-8-12-F-14)

Dear Mr. Caron:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the proposed soil nail wall bank stabilization project (project) and the associated effects on the federally threatened California red-legged frog (*Rana draytonii*) and its designated critical habitat. The California Department of Transportation (Caltrans) is acting as the lead Federal agency, authorized under a Memorandum of Understanding with the Federal Highway Administration (FHWA), pursuant to section 6004 of the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. Your March 1, 2012, request for consultation noted that you determined the proposed action meets the suitability criteria contained in the programmatic biological opinion for the California red-legged frog (1-8-02-F-68), dated April 24, 2003 (Service 2003). We concur with this determination.

You also determined the proposed action is not likely to adversely affect the federally endangered southwestern willow flycatcher (*Empidonax traillii extimus*) and least Bell's vireo (*Vireo bellii pusillus*) because the quality of habitat for these species is marginal and construction would occur outside the breeding season for these species. Therefore, we concur the proposed action is not likely to adversely affect the southwestern willow flycatcher and least Bell's vireo. This biological opinion is issued in accordance with section 7 of the Endangered Species Act of 1973 as amended (Act) (16 U.S.C. 1531 et seq.).

This biological opinion was prepared using information contained in your request for consultation, dated March 1, 2012, and received in our office on March 7, 2012; the programmatic biological opinion; the biological assessment (Caltrans 2012); site visits conducted by our staff; and information in our files. A complete record of this consultation can be made available at the Ventura Fish and Wildlife Office.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The proposed action is a bank stabilization project adjacent to State Route (SR) 33 and the North Fork of Matilija Creek, north of the city of Ojai, California. Caltrans proposes to remove, in stages, existing, undermined grouted rock slope protection (RSP) and build a 500-foot-long soil-nail wall in its place. Large cavities have occurred under the RSP undermining its structural integrity.

An excavator with a breaker attachment would be used, from the roadway, to break up existing RSP, creating a bench that equipment can be lowered onto for construction on the soil-nail wall. The completed wall would be tied into grouted 2 to 4-ton RSP that would prevent creek flows from flanking and undermining the new wall.

The widened creek bed would be restored to a natural condition that blends with the existing creek. This would include placement of boulders, cobble, and gravel as well as in-kind replanting of any native vegetation that would be removed.

A water diversion system would be put in place prior to construction, including a coffer dam upstream of the undermined RSP, near SR 33 Bridge 52-44. A 36-inch corrugated pipe would be placed at the toe of the existing undermined RSP to move water from above the dam and through the construction area. The measures to minimize adverse effects to the California red-legged frog included in the programmatic biological opinion would followed.

ANALYTICAL FRAMEWORK FOR JEOPARDY AND ADVERSE MODIFICATION DETERMINATIONS

Jeopardy Determination

The jeopardy analysis in this biological relies on four components: (1) the *Status of the Species*, which evaluates the range-wide conditions of the California red-legged frog, the factors responsible for those conditions, and its survival and recovery needs; (2) the *Environmental Baseline*, which evaluates the conditions of the California red-legged frog in the action area, the factors responsible for those conditions, and the relationship of the action area to the survival and recovery of this species; (3) the *Effects of the Action*, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the California red-legged frog; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-Federal activities in the action area on the California red-legged frog.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the current status of the California red-legged frog, taking into account any cumulative effects, to determine if implementation of the

proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the California red-legged frog in the wild.

The jeopardy analysis in this biological opinion places an emphasis on consideration of the range-wide survival and recovery needs of the California red-legged frog and the role of the action area in the survival and recovery of this species as the context for evaluation the significance of the effects of the proposed Federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

Adverse Modification Determination

The Biological Opinion does not rely on the regulatory definition of “destruction or adverse modification” of critical habitat at 50 CFR 402.02. Instead, we have relied on the statutory provisions of the Act to complete the following analysis with respect to critical habitat.

In accordance with policy and regulation, the adverse modification analysis in this Biological Opinion relies on four components: (1) the *Status of Critical Habitat*, which evaluates the range-wide condition of designated critical habitat for the California red-legged frog in terms of primary constituent elements (PCEs), the factors responsible for that condition, and the intended recovery function of the critical habitat overall; (2) the *Environmental Baseline*, which evaluates the condition of the critical habitat in the action area, the factors responsible for that condition, and the recovery role of the critical habitat in the action area; (3) the *Effects of the Action*, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated and interdependent activities on the PCEs and how that will influence the recovery role of the affected critical habitat units; and (4) *Cumulative Effects*, which evaluates the effects of future non-Federal activities in the action area on the PCEs and how that will influence the recovery role of affected critical habitat units.

For purposes of the adverse modification determination, the effects of the proposed Federal action on the critical habitat of the California red-legged frog are evaluated in the context of the range-wide condition of the critical habitat, taking into account any cumulative effects, to determine if the critical habitat range-wide would remain functional (or would retain the current ability for the PCEs to be functionally established in areas of currently unsuitable but capable habitat) to serve its intended recovery role for the California red-legged frog.

The analysis in the biological opinion places an emphasis on using the intended range-wide recovery function of critical habitat for the California red-legged frog and the role of the action area relative to that intended function as the context for evaluating the significance of the effects of the proposed Federal action, taken together with cumulative effects, for purposes of making the adverse modification determination.

STATUS OF THE SPECIES

The California red-legged frog was federally listed as threatened on May 23, 1996 (61 Federal Register (FR) 25813). The programmatic biological opinion for the California red-legged frog (Service 2003) describes the basic ecology of the species and the reasons for its listing. For this reason, we will not repeat the information conveyed in the programmatic biological opinion. The Service issued a recovery plan for the California red-legged frog on May 28, 2002 (Service 2002).

Currently California red-legged frogs are only known from 3 disjunct regions in 26 California counties, and one disjunct region in Baja California, Mexico (Grismer 2002; Fidenci 2004; Smith and Krofta 2005). Current threats to the California red-legged frog include direct habitat loss due to stream alteration and disturbance to wetland areas, indirect effects of expanding urbanization, and competition or predation from non-native species, and Chytrid fungus (*Batrachochytrium dendrobatidis*), a waterborne fungus that can decimate amphibian populations.

California Red-legged Frog Critical Habitat

On March 17, 2010, the Service published a revised critical habitat designation for the California red-legged frog (75 FR 12816). The 2010 rule designated 50 critical habitat units in 27 California counties. The revised critical habitat encompasses 1,636,609 acres.

In accordance with section 3(5)(A)(i) of the Act and Federal regulations at 50 CFR 424.12, in determining which areas to designate as critical habitat, we consider those physical and biological features (primary constituent elements (PCEs)) that are essential to the conservation of the species, and within areas occupied by the species at the time of listing, that may require special management considerations and protection. These include, but are not limited to: space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing (or development) of offspring; and, habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

For critical habitat of the California red-legged frog, we identified the following features essential to the conservation of the species: aquatic breeding habitat (PCE 1), aquatic non-breeding habitat (PCE 2), upland habitat (PCE 3), and dispersal habitat (PCE 4). Aquatic breeding habitat consists of standing bodies of fresh water (with salinities less than 4.5 parts per thousand), including natural and manmade (e.g., stock) ponds, slow-moving streams or pools within streams, and other ephemeral or permanent water bodies that typically become inundated during winter rains and hold water for a minimum of 20 weeks in all but the driest of years. The aquatic non-breeding habitat consists of freshwater pond and stream habitats, as described above, that may not hold water long enough for the species to complete its aquatic life cycle but which provide for shelter, foraging, predator avoidance, and aquatic dispersal of juvenile and adult California red-legged frogs. Other wetland habitats considered to meet these criteria include, but

are not limited to: plunge pools within intermittent creeks, seeps, quiet water refugia within streams during high water flows, and springs of sufficient flow to withstand short-term dry periods.

For the purposes of the critical habitat designation, upland habitat was defined as upland areas adjacent to or surrounding breeding and non-breeding aquatic and riparian habitat up to a distance of 1 mile in most cases (i.e., depending on surrounding landscape and dispersal barriers) including various vegetational types such as grassland, woodland, forest, wetland, or riparian areas that provide shelter, forage, and predator avoidance for the California red-legged frog. Upland features are also essential in that they are needed to maintain the hydrologic, geographic, topographic, ecological, and edaphic features that support and surround the aquatic, wetland, or riparian habitat. These upland features contribute to: (1) filling of aquatic, wetland, or riparian habitats; (2) maintaining suitable periods of pool inundation for larval frogs and their food sources; and (3) providing non-breeding, feeding, and sheltering habitat for juvenile and adult frogs (e.g., shelter, shade, moisture, cooler temperatures, a prey base, foraging opportunities, and areas for predator avoidance). Upland habitat should include structural features such as boulders, rocks and organic debris (e.g., downed trees, logs), small mammal burrows, or moist leaf litter. Dispersal habitat was defined as accessible upland or riparian habitat within and between occupied or previously occupied sites that are located within 1 mi (1.6 km) of each other, and that support movement between such sites. Dispersal habitat includes various natural habitats, and altered habitats such as agricultural fields, that do not contain barriers (e.g., heavily traveled roads without bridges or culverts) to dispersal. Dispersal habitat does not include moderate- to high-density urban or industrial developments with large expanses of asphalt or concrete, nor does it include large lakes or reservoirs over 50 acres in size, or other areas that do not contain those features identified in aquatic breeding habitat, aquatic non-breeding habitat, or upland habitat as essential to the conservation of the species.

ENVIRONMENTAL BASELINE

The implementing regulations for section 7(a)(2) of the Act define the “action area” as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 Code of Federal Regulations (CFR) 402.02). For the purposes of this biological opinion, we consider the action area to include: the reach of the North Fork of Matilija Creek and stream bank immediately adjacent to the Mosler Rock Ojai Quarry on the east side of the creek and State Route 33 on the west side, approximately 0.33 mile upstream of the confluence of Matilija Creek and the North Fork of Matilija Creek (Post Mile 15.7-15.8), and extending approximately 500 feet above and below the 500-foot-long construction area. This area likely encompasses the direct and indirect effects of the proposed action on the California red-legged frog and its critical habitat.

Within the action area the North Fork of Matilija Creek flows through a steep-sided canyon. Aquatic habitat within the creek is cold and fast-moving. Creek flows during years with heavy rain events are fast with high water levels. Emergent vegetation is absent from the immediate construction area, likely due to high flows and scour. A scour pool is located at the southern end

of the construction area with little to no emergent vegetation. Above the construction area a pool forms under the SR 33 bridge with a wider adjacent floodplain, and slower moving water than in the construction area immediately to the south of the bridge. Riparian vegetation along the edges of the creek bank in the construction area is relatively thin. Plant species include western sycamore (*Plantus racemosa*), white-alder (*Alnus rhombifolia*), coast live oak (*Quercus agrifolia*), and arroyo willow (*Salix lasiopepis*). Other vegetation in the action area includes mulefat (*Baccharis salicifolia*), sugar bush (*Rhus ovata*), black sage (*Salvia mellifera*) and California bay laurel (*Umbellularia californica*). The steep uplands outside the riparian area are vegetated with chaparral species. Immediately adjacent to the construction area, uplands are heavily degraded by the rock quarry and SR 33.

In 2006, a rock slide from the adjacent quarry redirected the creek toward SR 33 and created a barrier to fish migration. The rock fill was removed in 2011.

Pre-construction day and night surveys (two day and two night surveys) of the action area were completed by Service-approved biologists in August and September 2010 (Padre 2010). No California red-legged frogs were found during these surveys. California red-legged frogs have been documented in Matilija Creek, above the Matilija Dam in the adjacent drainage to the west, and downstream of the project site in the Ventura River, below the Robles Diversion.

Critical Habitat for the California Red-legged Frog

The proposed action occurs within critical habitat unit STB-7, Upper Santa Ynez River and Matilija Creek. This unit is comprised of 145,121 acres of land in southeastern Santa Barbara County and extends into western Ventura County at Matilija Creek. The unit contains aquatic habitat for breeding and non-breeding activities and upland habitat for foraging and dispersal. Unit STB-7 is occupied by the species and provides habitat connectivity between locations along the coast, in the Sierra Madre Mountains, and in the Ventura River watershed.

Aquatic habitat within the action area, particularly in the construction area consists primarily of aquatic non-breeding habitat. Pools to the north and south of the construction area provide potential breeding habitat during low flow years, when vegetation has not been scoured away.

EFFECTS OF THE ACTION

The programmatic biological opinion for the California red-legged frog (Service 2003) generally describes how the species could be affected by actions such as the proposed bank stabilization. For this reason, use of the programmatic biological opinion is appropriate and we will not repeat that analysis herein.

The potential exists for California red-legged frogs to occur in the construction area or move through the area during construction. Juvenile and adult California red-legged frogs or tadpoles may be killed or injured when the RSP is removed and when vegetation is cleared to provide

access to the creek for construction equipment and foot traffic, especially if individuals are not found during preconstruction surveys and relocation attempts.

An approximately 500-foot reach of the creek and riparian habitat would be removed during construction. Adverse effects to aquatic and riparian habitat will be temporary and the construction area restored following completion of the soil nail wall. The wider creek channel and proposed energy dissipation should result in slower average flows and an improvement in the quality of habitat for the California red-legged frog in the action area.

We are unable to determine how many California red-legged frogs would be encountered during the proposed project, but that number is likely to be low because the project site is relatively small in size and no adults were found during pre-construction surveys of the action area in 2010. Additionally, Caltrans has proposed to implement the protective measures contained in the programmatic biological opinion (Service 2003).

Chytrid fungus is a water-borne fungus that can be spread through direct contact between aquatic animals and by a spore that can move short distances through the water. The fungus only attacks the parts of a frog's skin that have keratin (thickened skin), such as the mouthparts of tadpoles and the tougher parts of adults' skin, such as the toes. The fungus can decimate amphibian populations, causing fungal dermatitis which usually results in death in 1 to 2 weeks, but not before infected animals may have spread the fungal spores to other ponds and streams. Once a pond or waterway has become infected with Chytrid fungus, the fungus stays in the water for an undetermined amount of time. Chytrid fungus could be spread if infected California red-legged frogs are relocated and introduced into areas with healthy California red-legged frogs or vice versa. It is also possible that infected equipment or clothing could introduce Chytrid fungus into areas where it did not previously occur. Caltrans proposes to follow the enclosed fieldwork code of practice developed by the Declining Amphibian Populations Task Force, to minimize the potential for Chytrid fungus to be conveyed between work sites.

Critical Habitat for the California Red-legged Frog

A 500-foot reach of the North Fork of Matilija Creek within Critical Habitat Unit STB-7 would be directly affected by the proposed project during construction. Indirect effects to an additional 500 feet of creek and riparian corridor are likely to occur both upstream and downstream of the construction area. All adverse effects to aquatic and riparian habitat will be temporary. The project should eventually result in an overall improvement in the quality of aquatic habitat for the California red-legged frog because the creek channel and adjacent floodplain will be widened and restored, thereby reducing creek flows.

Only a small portion of the entire critical habitat designation for the California red-legged frog would be affected by the action and therefore the function and conservation role of habitat within Critical Habitat Unit STB-7 for the California red-legged frog will not be substantially affected by the proposed project activities. The quality of California red-legged frog habitat in the North

Fork of Matilija Creek portion of Unit STB-7 should be improved as a result of the proposed action.

While we anticipate the potential for injury or mortality during project activities, the number of California red-legged frogs so affected would be minimized to the extent possible by the protective measures proposed by Caltrans. We do not expect the effects of the project to reduce the reproduction, numbers, or distribution of the species, and once the project is complete, we expect the habitat conditions for the California red-legged frog in the action area to be improved over the current situation. Improving the habitat in the action area will contribute to the California red-legged frog's recovery despite any temporary adverse effects.

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. We are not aware of any non-Federal actions that are reasonably certain to occur in the action area.

CONCLUSION

After reviewing the current status of the California red-legged frog, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects; it is the Service's biological opinion that the VEN-33 Soil Nail Wall Project, as proposed, is not likely to jeopardize the continued existence of the California red-legged frog or destroy or adversely modify its designated critical habitat. We have reached these conclusions for the following reasons:

California Red-legged Frog

1. California red-legged frogs are expected to occur in low numbers in the action area; the proposed action is likely to adversely affect only a small number of California red-legged frogs.
2. A relatively small amount of habitat would be temporarily disturbed or lost in comparison with the amount of habitat available to the California red-legged frog throughout its range.
3. Caltrans has proposed numerous measures to reduce the adverse effects of the proposed work on the California red-legged frog.

Critical Habitat

1. The project will not result in the permanent loss of habitat containing the PCEs of critical habitat for the California red-legged frog, in the North Fork of Matilija Creek, in Critical Habitat Unit STB-7; and as a result of conservation measures included as part of the

proposed action, the stated function of the unit will be maintained and should be improved.

2. The project area represents a small portion of Critical Habitat Unit STB-7. The project should not appreciably reduce the ability of habitat within STB-7 to support the recovery of the California red-legged frog. Following construction the unit should continue to function as critical habitat.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. 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 by the Service 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. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary and Caltrans must adhere to them for the exemption in section 7(o)(2) to apply. Caltrans has a continuing duty to regulate the activity covered by this incidental take statement. If Caltrans fails to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to its authorization, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, Caltrans must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

All California red-legged frogs found within the project area may be subject to take in the form of capture during relocation efforts. A subset of captured California red-legged frogs may experience a significant disruption of normal behavioral patterns to the point that reaches the level of harassment. California red-legged frogs that remain in the project area may be subject to increased predation, be crushed or entombed during construction activities, or be otherwise injured or killed.

We cannot determine the precise number of California red-legged frogs that may be captured, killed, injured, harassed, or harmed as a result of the proposed action. Numbers and locations of California red-legged frogs within a population vary from year to year. Incidental take of California red-legged frogs will be difficult to detect because of their small body size and finding

a dead or injured specimen is unlikely. Finding carcasses and assigning a cause of death are problematic, especially in the presence of numerous scavengers that are likely to find dead animals soon after they die. California red-legged frogs may be taken only within the defined boundaries of the action area. Given the protective measures proposed by Caltrans, we anticipate that take of the California red-legged frog will be minimal and will be limited to: harm or harassment due to work activities including noise, vibration, traffic, and temporary disturbance of habitat; injury or death of individuals by construction equipment if undetected in the project area, stranding of tadpoles during the dewatering of the creek, or spread of pathogens (e.g., chytrid fungus).

Although we cannot anticipate precisely the number of California red-legged frogs that may be captured, killed, or injured, we must provide a threshold at which consultation must be reinitiated. Based upon the avoidance and minimization measures proposed by Caltrans and the occurrences of the species in the action area, we anticipate the following levels of take:

If more than two California red-legged frogs (adult or juvenile) are found dead or injured, any operations causing such take should cease pending reinitiation.

This biological opinion and incidental take statement provide an exemption from the prohibition against the taking of listed species, contained in section 9 of the Act, only for the activities described in the Description of the Proposed Action section of this biological opinion.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of California red-legged frogs:

1. Caltrans must ensure that the level of incidental take during project implementation is minimized through use of a Service-approved biologist.
2. Caltrans must avoid transferring disease or pathogens between aquatic habitats during surveys and relocation activities.
3. Specific activity restrictions must be implemented to avoid or minimize adverse effects on the California red-legged frog.

The Service's evaluation of the effects of the proposed action includes consideration of the measures to minimize the adverse effects of the proposed action on the California red-legged frog that were developed by the Federal Highway Administration (FHWA), Caltrans, and the Service and included in the programmatic biological opinion for the California red-legged frog (Service 2003). Any subsequent changes in these measures may constitute a modification of the proposed action and may warrant re-initiation of formal consultation, as specified at 50 CFR 402.16. The above reasonable and prudent measures are intended to supplement the protective measures that were proposed by Caltrans as part of the proposed action.

TERMS AND CONDITIONS

To be exempted from the prohibitions of section 9 of the Act, Caltrans must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. The following terms and conditions implement reasonable and prudent measure 1:
 - a. Caltrans must request our approval of any biologists they wish to conduct activities pursuant to this biological opinion. Such requests must be in writing, and be received by the Ventura Fish and Wildlife Office at least 15 days prior to any such activities being conducted.
 - b. If one California red-legged frog (adult, sub-adult, juvenile, or egg mass) is found dead or injured, FHWA or Caltrans must contact our office immediately so we can review the project activities to determine if additional protective measures are needed. Project activities may continue during this review period, provided that all protective measures proposed by the FHWA and Caltrans and the terms and conditions of this biological opinion have been and continue to be implemented.
 - c. If a California red-legged frog is observed within a designated work area and cannot be avoided, all work must stop until the animal leaves the work area or until it is captured and relocated by a Service-approved biologist to outside of the work area to avoid injury or mortality.
2. The following terms and conditions implement reasonable and prudent measure 2:
 - a. To avoid transferring disease or pathogens between aquatic habitats during the course of California red-legged frog surveys, the Service-approved biologist(s) must follow the Declining Amphibian Population Task Force's Code of Practice. A copy of this Code of Practice is enclosed. You may substitute a bleach solution (0.5 to 1.0 cup of bleach to 1.0 gallon of water) for the ethanol solution. Care must be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat.
 - b. When capturing and removing California red-legged frogs from work sites, the Service-approved biologist(s) must minimize the amount of time that animals are held in captivity. During this time, they must be maintained in a manner that does not expose them to temperatures or any other environmental conditions that could cause injury or undue stress. California red-legged frogs must be captured only by hand or dipnet and transported in buckets separate from other species.

- c. Caltrans must only relocate California red-legged frogs to adjacent suitable aquatic habitat within the North Fork of Matilija Creek.
3. The following term and condition implements reasonable and prudent measure 3:

Construction activities must be limited to times when no more than 0.5 inch of rain is forecasted within 24 hours.

REPORTING REQUIREMENTS

Caltrans must provide a written report to the Service within 90 days following completion of the proposed project. The report must document the number and size of California red-legged frogs relocated from the action area, the date and time of relocation, and a description of the relocation site. The report must also state the number of California red-legged frogs killed or injured and describe the circumstances of the mortalities or injuries if possible. The report must contain a brief discussion of any problems encountered in implementing minimization measures, results of biological surveys and sighting records, and any other pertinent information. We encourage you to submit recommendations regarding modification of or additional measures that would improve or maintain protection of the California red-legged frogs while simplifying compliance with the Act.

DISPOSITION OF DEAD OR INJURED SPECIMENS

Upon locating a dead or injured California red-legged frog, initial notification must be made by telephone and writing to the Ventura Fish and Wildlife Office in Ventura, California, (2493 Portola Road, Suite B, Ventura, California 93003, (805) 644-1766) within 3 working days of the finding. The report must include the date, time, location of the carcass, a photograph, cause of death if known, and any other pertinent information.

Care must be taken in handling dead specimens to preserve biological material in the best possible state for later analysis. Should any injured California red-legged frogs survive, the Service must be contacted regarding their final disposition. The remains of California red-legged frogs must be placed with the Santa Barbara Natural History Museum (Contact: Paul Collins, Santa Barbara Natural History Museum, Vertebrate Zoology Department, 2559 Puesta Del Sol, Santa Barbara, California 93460, (805) 682-4711, extension 321. Arrangements regarding proper disposition of potential museum specimens must be made with the Santa Barbara Natural History Museum by Caltrans prior to implementation of project-related actions.

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.

Caltrans should work with local agencies and governments to implement recovery actions identified in the California red-legged frog recovery plan.

The Service requests notification of the implementation of any conservation recommendations so we may be kept informed of actions that minimize or avoid adverse effects or that benefit listed species and their habitats.

REINITIATION NOTICE

This concludes formal consultation on the State Route 33 Soil Nail Wall (P.M.15.7-15.8) project in Ventura County, California. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this biological opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this biological opinion; or (4) a new species is listed or critical habitat is designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions regarding this consultation, please contact Chris Dellith of my staff at (805) 644-1766, extension 227.

Sincerely,


for Diane K. Noda
Field Supervisor

Enclosure

REFERENCES CITED

- Bulger, J.B., N.J. Scott, Jr., and R.B. Seymour. 2003. Terrestrial activity and conservation of adult red-legged frogs *Rana aurora draytonii* in coastal forests and grasslands. *Biological Conservation* 110:85-95.
- Fidenci, P. 2004. The California red-legged frog, *Rana aurora draytonii*, along the Arroyo Santo Domingo, Northern Baja California, Mexico. *The Herpetological Journal*. V. 88. London, England.
- Grismer, L. 2002. Reptiles and Amphibians of Baja California, Including its Pacific Island and the Islands in the Sea of Cortez. University of California Press, Berkeley and Los Angeles, California.
- Padre, Inc. 2010. California red-legged survey report for the Ojai Quarry. Ventura, California.
- Smith, R. and D. Krofta. 2005. Field notes documenting the occurrence of California red-legged frogs in Baja California, Mexico. In litt.
- [Service] U.S. Fish and Wildlife Service. 2002. Recovery plan for the California red-legged frog (*Rana aurora draytonii*). Portland, Oregon.
- [Service] U.S. Fish and Wildlife Service. 2003. Programmatic biological opinion for projects funded or approved under the Federal Aid Program (HDA-CA, File #: Section 7 with Ventura USFWS, Document #: S38192) (1-8-02-F-68). Ventura, California.

The Declining Amphibian Populations Task Force Fieldwork Code of Practice

1. Remove mud, snails, algae, and other debris from nets, traps, boots, vehicle tires, and all other surfaces. Rinse cleaned items with sterilized (*e.g.*, boiled or treated) water before leaving each study site.
2. Scrub boots, nets, traps, and other types of equipment used in the aquatic environment with 70 percent ethanol solution or a bleach solution of one-half to one cup of bleach in one gallon of water and rinse clean with sterilized water between study sites. Avoid cleaning equipment in the immediate vicinity of a pond, wetland, or riparian area.
3. In remote locations, clean all equipment with 70 percent ethanol or a bleach solution, and rinse with sterile water upon return to the lab or a “base camp.” Elsewhere, when laundry facilities are available, remove nets from poles and wash (in a protective mesh laundry bag) with bleach on a “delicate” cycle.
4. When working at sites with known or suspected disease problems, or when sampling populations of rare or isolated species, wear disposable gloves and change them between handling each animal. Dedicate separate sets of nets, boots, traps, and other equipment to each site being visited. Clean and store them separately at the end of each field day.
5. Safely dispose of used cleaning materials and fluids. Do not dispose of cleaning materials and fluids in or near ponds, wetland, and riparian areas; if necessary, return them to the lab for proper disposal. Safely dispose of used disposable gloves in sealed bags.
6. When amphibians are collected, ensure the separation of animals from different sites and take great care to avoid indirect contact (*e.g.*, via handling or reuse of containers) between them or with other captive animals. Do not expose animals to unsterilized vegetation or soils which have been taken from other sites. Always use disinfected and disposable husbandry equipment.
7. If a dead amphibian is found, place it in a sealable plastic bag and refrigerate (do not freeze). If any captured live amphibians appear unhealthy, retain each animal in a separate plastic container that allows air circulation and provides a moist environment from a damp sponge or sphagnum moss. For each collection of live or dead animals, record the date and time collected, location of collection, name of collector, condition of animal upon collection, and any other relevant environmental conditions observed at the time of collection. Immediately contact the Ventura Fish and Wildlife Office at (805) 644-1766 for further instructions.

The Fieldwork Code of Practice has been produced by the Declining Amphibian Populations Task Force with valuable assistance from Begona Arano, Andrew Cunningham, Tom Langton, Jamie Reaser, and Stan Sessions.

For further information on this Code, or on the Declining Amphibian Populations Task Force, contact John Wilkinson, Biology Department, the Open University, Walton Hall, Milton Keynes, MK7 6AA, UK.
Email: DAPTF@open.ac.uk
Fax: +44 (0) 1908-654167

**United States Department of
the Army
Nationwide Permit Verification**



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY

Los Angeles District Corps of Engineers

May 14, 2013

Regulatory Division

Eduardo Aguilar, Branch Chief
California Department of Transportation, District 7
Attention: Peter Champion
100 S. Main Street, MS- 16A
Los Angeles, California 90012

DEPARTMENT OF THE ARMY NATIONWIDE PERMIT VERIFICATION

Dear Mr. Aguilar:

This is in reply to your application (File No. SPL-2012-00348-TS) dated May 17, 2012, for a Department of the Army Permit to discharge fill in waters of the U.S., in association with the Caltrans VEN 33 Soil Nail Wall project, in the North Fork of Matilija Creek, near the Mosler rock quarry and the city of Ojai, Ventura County, California.

Your proposed project would result in a discharge of dredged and/or fill material into waters of the United States. Therefore, pursuant to section 404 of the Clean Water Act (33 U.S.C. 1344; 33 C.F.R. parts 323 and 330), your proposed project requires a Department of the Army permit.

I have determined construction of Caltrans-D7 VEN-33 Soil Nail Wall Project PM 15.7-15.8 complies with Nationwide Permit (NWP) No. 3 Maintenance, if conducted as described in your application.

Specifically, you are authorized to conduct the following regulated activities:

1. Temporarily divert water for the duration of construction over a linear distance of approximately 900 feet due to the perennial nature of the stream in this location;
2. Remove approximately 3,900 cubic yards (cy) of existing grouted rock slope bank protection (RSP) over a linear distance of approximately 500 feet;
3. Replace the existing grouted RSP with approximately 350 cy of concrete and steel mesh in the form of an approximately 500-foot-long, vertical soil nail wall. The wall

would transition into the existing RSP at each end, with a 1:1 slope of grouted 2-4 ton RSP which would prevent stream flow from flanking the wall; and

4. Re-vegetate the project area with native riparian species common to the North Fork of Matilija Creek as described in Appendix A of the Natural Environment Study (March 2012).

For this NWP verification letter to be valid, you must comply with all of the terms and conditions in Enclosure 1. Furthermore, you must comply with the following non-discretionary Special Conditions listed below:

1. Prior to initiating construction in waters of the U.S., the Permittee shall provide a stream revegetation plan to the Corps for review and approval for the re-establishment of non-wetland waters of the U.S. and riparian vegetation in the North Fork Matilija Creek. The Permittee shall not initiate work in waters of the U.S. prior to receiving written confirmation (by letter or e-mail) from the Corps Regulatory Division as to compliance with this special condition.
2. The Permittee shall notify the Corps of the construction start date at least five (5) business days in advance of initiation of construction, and at least five (5) days prior to project completion. Notification may be made by electronic mail, regular mail, facsimile, or telephone.
3. The Permittee shall clearly mark the limits of the workspace with flagging or similar means to ensure mechanized equipment does not enter preserved waters of the U.S. Adverse impacts to waters of the U.S. beyond the Corps-approved construction footprint are not authorized. Such impacts could result in permit suspension and revocation, administrative, civil or criminal penalties, and/or substantial, additional, compensatory mitigation requirements.
4. Equipment and materials storage areas shall be located at least 100 feet from waters of the U.S.
5. Within 45 calendar days of completion of authorized work in waters of the U.S., the Permittee shall submit to the Corps Regulatory Division a post-project implementation memo indicating the date authorized impacts to waters of the U.S. ceased.
6. Appropriate measures must be taken to maintain near normal downstream flows and to minimize flooding during project activities in waters of the U.S. Fill materials must be of a type, and be placed in a manner, that will not result in erosion by high flows.

7. No debris, soil, sand, bark, slash, sawdust, rubbish, cement or washings thereof, asphalt, oil or petroleum products, or any other material that may be harmful to fish or wildlife, that results from maintenance and associated activities shall be allowed to enter or be placed where it may be washed by rainfall or runoff into waters of the U.S. When maintenance activities are completed, all excess materials, and/or debris shall be removed from the work area to an approved off-site disposal area, outside of waters of the U.S.
8. When work in flowing or standing water is unavoidable, measures to minimize downstream turbidity shall be implemented and maintained for the duration of the work in waters of the U.S. Equipment working in wetlands shall be placed on mats (or equivalent) to minimize soil disturbance and compaction.
9. Exotic and invasive plant species removed during maintenance activities shall be disposed at an approved off-site location, outside waters of the U.S. Target species include but are not limited to: giant reed (*Arundo donax*), castor bean (*Ricinus communis*), salt cedar (*Tamarisk* sp.), tree tobacco (*Nicotiana glauca*), yellow star thistle (*Centaurea solstitialis*), artichoke thistle (*Cynara cardunculus*), pampas grass (*Cortaderia selloana*), fountain grass (*Pennisetum setaceum*), and cocklebur (*Xanthium strumarium*).
10. Immediately following completion of construction activities, temporary fills and water diversion(s) must be entirely removed to an upland location, outside waters of the U.S., and the affected area must be restored to pre-project conditions.
11. Where temporary water diversion, grading, filling or excavation occurs as part of the repair or replacement, the Permittee shall ensure standard Best Management Practices are in place to minimize turbidity within the affected waterbody. Standard BMPs are provided in the *Construction Site Best Management Practices Manual* (March 2003; http://www.dot.ca.gov/hq/construc/stormwater/CSBMP_303_Final.pdf) and at http://onramp.dot.ca.gov/hq/maint/roadside/storm_water/WATER.PDF.
12. Work should be performed during periods when the channel is dry or flows are absent or minimal, generally May through October. Standard Best Management Practices shall be implemented to minimize turbidity within the affected waterbody, and appropriate measures must be taken to minimize flooding and erosion on adjacent properties.
13. The Corps Regulatory Division project manager shall be notified of any accidental spill of hazardous materials within 12 hours of detection. Notification may be in the form of an electronic mail message, telephone, or facsimile. Notification shall include

the reason for the spill, the exact location of the spill, the type and approximately quantity of the materials spilled, and the measures taken to control and clean-up the spilled materials.

Endangered Species Act:

1. This Corps permit does not authorize you to take any threatened or endangered species, in particular the federally endangered southern California steelhead (*Oncorhynchus mykiss*), and California red legged frog (*Rana draytonii*), or adversely modify designated critical habitat for these species. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g. ESA Section 10 permit, or a Biological Opinion (BO) under ESA Section 7, with "incidental take" provisions with which you must comply). The National Marine Fisheries Service Biological Opinion (NMFS, File No. 2012/0084, dated February 26, 2013), and U.S. Fish and Wildlife Service Biological Opinion (FWS, File No. 8-8-12-F-14, dated October 17, 2012), of which you provided a copy to the Corps, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the B.O. Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take described in the B.O.s, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the B.O.s, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The NMFS and FWS, respectively, are the appropriate authorities to determine compliance with the terms and conditions of its Biological Opinion, and with the Endangered Species Act. The Permittee must comply with all conditions of each Biological Opinion. If you are unable to comply with the terms and conditions, you must immediately notify Caltrans, the appropriate NMFS and/or FWS office, and the U.S. Army Corps of Engineers Regulatory Division project manager, so that Caltrans, acting as the lead Federal agency for this project, may consult as appropriate, prior to initiating the work, in accordance with Federal law.
2. This permit does not authorize you to take any migratory birds pursuant to the Migratory Bird Treaty Act. Vegetation shall not be removed from 15 February to 31 August, to avoid impacts to nesting birds, unless the results of a pre-project bird survey, by a qualified biologist, indicates no nesting birds are present in the project area. Pre-project surveys shall be conducted within two weeks of vegetation removal. Survey results shall be submitted to the Corps Regulatory Division prior to construction activities in waters of the U.S. (electronic mail, facsimile, or standard mail is acceptable). If nesting birds are present, no work shall occur until the young have fledged and would no longer be impacted by the project. Survey results shall be submitted to the Corps Regulatory Division prior to construction activities in waters of the U.S.

Cultural Resources:

1. Pursuant to 36 C.F.R. section 800.13, in the event of any discoveries during construction of either human remains, archeological deposits, or any other type of historic property, the Permittee shall immediately suspend all work in any area(s) where potential cultural resources are discovered, and notify the Corps' Regulatory Division Staff (Theresa Stevens, Ph.D. at 805-585-2146) and Corps' Archaeology Staff within 24 hours (Steve Dibble at 213-452-3849 or John Killeen at 213-452-3861). The Permittee shall not resume construction in the area surrounding the potential cultural resources until the Corps Regulatory Division re-authorizes project construction, per 36 C.F.R. section 800.13.

Your verification is valid through March 18, 2017. All NWP's will expire on March 18, 2017. It is incumbent upon you to remain informed of changes to the NWP's. A public notice of the change(s) will be issued when any of the NWP's are modified, reissued, or revoked. Furthermore, if you commence or are under contract to commence this activity before the date on which the relevant NWP is reissued, modified, or revoked, you will have twelve (12) months from the date of the reissuance, modification, or revocation of the NWP to complete the activity under the present terms and conditions of the relevant NWP.

A preliminary jurisdictional determination (JD) has been conducted to determine the extent of U.S. Army Corps of Engineers (Corps) geographic jurisdiction, upon which this NWP verification is based. A preliminary JD is advisory in nature and is a written indication Corps geographic jurisdiction may be present on a particular site, but is not appealable. An approved JD is an official Corps determination of the precisely identified limits of Corps geographic jurisdiction on a particular site, and is appealable. Should you wish to appeal an approved JD, you may request an administrative appeal under Corps regulations at 33 C.F.R. part 331. Please refer to the previously mailed Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form for more information.

A NWP does not grant any property rights or exclusive privileges. Additionally, it does not authorize any injury to the property, rights of others, nor does it authorize interference with any existing or proposed Federal project. Furthermore, it does not obviate the need to obtain other Federal, state, or local authorizations required by law.

Thank you for participating in our regulatory program. If you have any questions, please contact Theresa Stevens at 805-585-2146 or via e-mail at theresa.stevens@usace.army.mil.

Please be advised you can now comment on your experience with Regulatory Division by accessing the Corps web-based customer survey form at:
<http://per2.nwp.usace.army.mil/survey.html>.

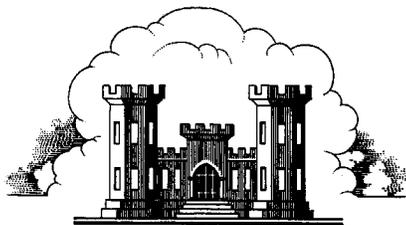
"Building Strong and Taking Care of People!"

Sincerely,

A handwritten signature in black ink, appearing to read "Mark D. Cohen". The signature is fluid and cursive, with the first name "Mark" being the most prominent.

Mark D. Cohen, Deputy Chief
Regulatory Division

Enclosure(s)



**LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS**

**CERTIFICATE OF COMPLIANCE WITH
DEPARTMENT OF THE ARMY NATIONWIDE PERMIT**

Permit Number: *SPL-2012-00348-TS*

Name of Permittee: *Eduardo Aguilar, California Department of Transportation-District 7*

Date of Issuance: *May 14, 2013*

Upon completion of the activity authorized by this permit and the mitigation required by this permit, sign this certificate, and return it to the following address:

U.S. Army Corps of Engineers, Los Angeles District
Regulatory Division
ATTN: CESPL-RG-SPL-2012-00348-TS

Please note your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this Nationwide Permit, you may be subjected to permit suspension, modification, or revocation procedures as contained in 33 C.F.R. § 330.5 or enforcement procedures such as those contained in 33 C.F.R. §§ 326.4 and 326.5.

I hereby certify the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit condition(s).

Signature of Permittee

Date

Enclosure 1: NATIONWIDE PERMIT NUMBER(S) NWP 3 Maintenance. TERMS AND CONDITIONS

1. Nationwide Permit(s) NWP 3 Maintenance. Terms:

Your activity is authorized under Nationwide Permit Number(s) NWP 3 Maintenance, subject to the following terms:

3. Maintenance. (a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable, structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This NWP authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays. (b) This NWP also authorizes the removal of accumulated sediments and debris in the vicinity of and within existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) and the placement of new or additional riprap to protect the structure. The removal of sediment is limited to the minimum necessary to restore the waterway in the immediate vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend further than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an upland area unless otherwise specifically approved by the district engineer under separate authorization. The placement of riprap must be the minimum necessary to protect the structure or to ensure the safety of the structure. Any bank stabilization measures not directly associated with the structure will require a separate authorization from the district engineer. (c) This NWP also authorizes temporary structures, fills, and work necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate. (d) This NWP does not authorize maintenance dredging for the primary purpose of navigation or beach restoration. This NWP does not authorize new stream channelization or stream relocation projects. Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 27). Where maintenance dredging is proposed, the pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Sections 10 and 404) Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance.

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general

conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

2. Nationwide Permit General Conditions: The following general conditions must be followed in order for any authorization by an NWP to be valid:

1. 1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.
(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.
3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.
6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).
10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.
12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.
13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.
14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.
15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.
16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.
18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.
- (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.
- (c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have “no effect” on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
- (d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.
- (e) Authorization of an activity by a NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.
- (f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.noaa.gov/fisheries.html> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any “take” permits required under the U.S. Fish and Wildlife Service’s regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such “take” permits are required for a particular activity.
20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.
- (b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.
- (c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.
- (d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
- (e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on

Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.
 - (a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.
 - (b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.
23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:
 - (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).
 - (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.
 - (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that

the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.

(2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.
25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.
26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.
27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.
28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.
29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of

the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. **Compliance Certification.** Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:
- (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
 - (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
 - (c) The signature of the permittee certifying the completion of the work and mitigation.
31. **Pre-Construction Notification.** (a) **Timing.** Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:
- (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
 - (2) 45 calendar days have passed from the district engineer’s receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer.

However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is “no effect” on listed species or “no potential to cause effects” on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWP 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee’s right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed project;
- (3) A description of the proposed project; the project’s purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);
- (4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;
- (5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.
- (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work.

Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

3. Regional Conditions for the Los Angeles District:

In accordance with General Condition Number 27, "Regional and Case-by-Case Conditions," the following Regional Conditions, as added by the Division Engineer, must be met in order for an authorization by any Nationwide to be valid:

1. For all activities in waters of the U.S. that are suitable habitat for federally listed fish species, the permittee shall design all road crossings to ensure that the passage and/or spawning of fish is not hindered. In these areas, the permittee shall employ bridge designs that span the stream or river, including pier- or pile-supported spans, or designs that use a bottomless arch culvert with a natural stream bed, unless determined to be impracticable by the Corps.
2. Nationwide Permits (NWP) 3, 7, 12-15, 17-19, 21, 23, 25, 29, 35, 36, or 39-46, 48-52 cannot be used to authorize structures, work, and/or the discharge of dredged or fill material that would result in the "loss" of wetlands, mudflats, vegetated shallows or riffle and pool complexes as defined at 40 CFR Part 230.40-45. The definition of "loss" for this regional condition is the same as the definition of "loss of waters of the United States" used for the Nationwide Permit Program. Furthermore, this regional condition applies only within the State of Arizona and within the Mojave and Sonoran (Colorado) desert regions of California. The desert regions in California are limited to four USGS Hydrologic Unit Code (HUC) accounting units (Lower Colorado -150301, Northern Mojave-180902, Southern Mojave-181001, and Salton Sea-181002).
3. When a pre-construction notification (PCN) is required, the appropriate U.S. Army Corps of Engineers (Corps) District shall be notified in accordance with General Condition 31 using either the South Pacific Division PCN Checklist or a signed application form (ENG Form 4345) with an attachment providing information on compliance with all of the General and Regional Conditions. The PCN Checklist and application form are available at: <http://www.spl.usace.army.mil/regulatory>. In addition, the PCN shall include:
 - a. A written statement describing how the activity has been designed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States;
 - b. Drawings, including plan and cross-section views, clearly depicting the location, size and dimensions of the proposed activity as well as the location of delineated waters of the U.S. on the site. The drawings shall contain a title block, legend and scale, amount (in cubic yards) and area (in acres) of fill in Corps jurisdiction, including both permanent and temporary fills/structures. The ordinary high water mark or, if tidal waters, the mean high water mark and high tide line, should be shown (in feet), based on National Geodetic Vertical Datum (NGVD) or other appropriate referenced elevation. All drawings for projects located within the boundaries of the Los Angeles District shall comply with the most current version of the *Map and Drawing Standards for the Los Angeles District Regulatory Division* (available on the Los Angeles District Regulatory Division website at: www.spl.usace.army.mil/regulatory/); and
 - c. Numbered and dated pre-project color photographs showing a representative sample of waters proposed to be impacted on the project site, and all waters proposed to be avoided on and immediately adjacent to the project site. The compass angle and position of each photograph shall be documented on the plan-view drawing required in subpart b of this regional condition.

4. Submission of a PCN pursuant to General Condition 31 and Regional Condition 3 shall be required for all regulated activities in the following locations:
 - a. All perennial waterbodies and special aquatic sites within the State of Arizona and within the Mojave and Sonoran (Colorado) desert regions of California, excluding the Colorado River in Arizona from Davis Dam to River Mile 261 (northern boundary of the Fort Mojave Indian Tribe Reservation). The desert region in California is limited to four USGS HUC accounting units (Lower Colorado -150301, Northern Mojave-180902, Southern Mojave-181001, and Salton Sea-181002).
 - b. All areas designated as Essential Fish Habitat (EFH) by the Pacific Fishery Management Council (i.e., all tidally influenced areas - Federal Register dated March 12, 2007 (72 FR 11092)), in which case the PCN shall include an EFH assessment and extent of proposed impacts to EFH. Examples of EFH habitat assessments can be found at: <http://www.swr.noaa.gov/efh.htm>.
 - c. All watersheds in the Santa Monica Mountains in Los Angeles and Ventura counties bounded by Calleguas Creek on the west, by Highway 101 on the north and east, and by Sunset Boulevard and Pacific Ocean on the south.
 - d. The Santa Clara River watershed in Los Angeles and Ventura counties, including but not limited to Aliso Canyon, Agua Dulce Canyon, Sand Canyon, Bouquet Canyon, Mint Canyon, South Fork of the Santa Clara River, San Francisquito Canyon, Castaic Creek, Piru Creek, Sespe Creek and the main-stem of the Santa Clara River.
5. Individual Permits shall be required for all discharges of fill material in jurisdictional vernal pools, with the exception that discharges for the purpose of restoration, enhancement, management or scientific study of vernal pools may be authorized under NWP 5, 6, and 27 with the submission of a PCN in accordance with General Condition 31 and Regional Condition 3.
6. Individual Permits shall be required in Murrieta Creek and Temecula Creek watersheds in Riverside County for new permanent fills in perennial and intermittent watercourses otherwise authorized under NWP 29, 39, 42 and 43, and in ephemeral watercourses for these NWP 29, 39, 42 and 43 for projects that impact greater than 0.1 acre of waters of the United States. In addition, when NWP 14 is used in conjunction with residential, commercial, or industrial developments the 0.1 acre limit would also apply.
7. Individual Permits (Standard Individual Permit or 404 Letter of Permission) shall be required in San Luis Obispo Creek and Santa Rosa Creek in San Luis Obispo County for bank stabilization projects, and in Gaviota Creek, Mission Creek and Carpinteria Creek in Santa Barbara County for bank stabilization projects and grade control structures.
8. In conjunction with the Los Angeles District's Special Area Management Plans (SAMPs) for the San Diego Creek Watershed and San Juan Creek/Western San Mateo Creek Watersheds in Orange County, California, the Corps' Division Engineer, through his discretionary authority has revoked the use of the following 26 selected NWP 29, 39, 40, 41, 42, 43, 44, 46, 49, and 50. Consequently, these NWP 29, 39, 40, 41, 42, 43, 44, 46, 49, and 50 are no longer available in those watersheds to authorize impacts to waters of the United States from discharges of dredged or fill material under the Corps' Clean Water Act section 404 authority.
9. Any requests to waive the 300 linear foot limitation for intermittent and ephemeral streams for NWP 29, 39, 40 and 42, 43, 44, 51 and 52 or to waive the 500 linear foot limitation along the bank for NWP 13, must include the following:

- a. A narrative description of the stream. This should include known information on: volume and duration of flow; the approximate length, width, and depth of the waterbody and characters observed associated with an Ordinary High Water Mark (e.g. bed and bank, wrack line, or scour marks); a description of the adjacent vegetation community and a statement regarding the wetland status of the associated vegetation community (i.e. wetland, non-wetland); surrounding land use; water quality; issues related to cumulative impacts in the watershed, and; any other relevant information.
- b. An analysis of the proposed impacts to the waterbody in accordance with General Condition 31 and Regional Condition 3;
- c. Measures taken to avoid and minimize losses, including other methods of constructing the proposed project; and
- d. A compensatory mitigation plan describing how the unavoidable losses are proposed to be compensated, in accordance with 33 CFR Part 332.

10. The permittee shall complete the construction of any compensatory mitigation required by special condition(s) of the NWP verification before or concurrent with commencement of construction of the authorized activity, except when specifically determined to be impracticable by the Corps. When mitigation involves use of a mitigation bank or in-lieu fee program, the permittee shall submit proof of payment to the Corps prior to commencement of construction of the authorized activity.

4. Further information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
 - () Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
 - (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
 - () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
 - (a) This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
 - (b) This permit does not grant any property rights or exclusive privileges.
 - (c) This permit does not authorize any injury to the property or rights of others.
 - (d) This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
 - (a) Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
 - (b) Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
 - (c) Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - (d) Design or construction deficiencies associated with the permitted work.
 - (e) Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. **Reevaluation of Permit Decision.** This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
 - (a) You fail to comply with the terms and conditions of this permit.
 - (b) The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
 - (c) Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 330.5 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. This letter of verification is valid for a period not to exceed two years unless the nationwide permit is modified, reissued, revoked, or expires before that time.
7. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition H below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
8. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.

**United States National Oceanic and
Atmospheric Administration (NOAA)
National Marine Fisheries Services
(NMFS) Biological Opinion**



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

West Coast Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404

FEB 11 2016

Refer to NMFS No: WCR-2016-04111

Eduardo Aguilar
Branch Manager, Division of Environmental Planning
California Department of Transportation, District 7
100 Main Street, Suite 100
Los Angeles, California 90012-3606

Dear Mr. Aguilar:

NOAA's National Marine Fisheries Service (NMFS) hereby transmits the enclosed biological opinion pursuant to Section 7 of the Endangered Species Act of 1973 (ESA) (16 U.S.C. 1531 *et seq.*) for the California Department of Transportation's (Caltrans) State Route 33 Soil Nail Wall Project (proposed action) at North Fork Matilija Creek, Ventura County. This biological opinion is the result of reinitiated formal consultation and supersedes the biological opinion dated February 26, 2013. This biological opinion addresses the effects of the proposed action on the federally endangered Southern California Coast (SCC) Distinct Population Segment (DPS) of steelhead (*Oncorhynchus mykiss*) and its designated critical habitat in accordance with Section (7)(a)(2) of the ESA.

The biological opinion concludes that the proposed action is not likely to jeopardize the continued existence of the endangered SCC DPS of steelhead, or destroy or adversely modify designated critical habitat for this species. NMFS believes the proposed action is likely to result in incidental take of endangered steelhead, and, therefore, the attached incidental take statement includes the amount and extent of anticipated incidental take with reasonable and prudent measures and non-discretionary terms and conditions that are necessary and appropriate to minimize and monitor incidental take of endangered steelhead.

Please contact Jay Ogawa at NMFS' Southern California Branch of the California Coastal Office in Long Beach, 562-980-4061 or at Jay.Ogawa@noaa.gov, if you have a question concerning this Section 7 consultation, or if you require additional information.

Sincerely,

William W. Stelle, Jr.
Regional Administrator

Enclosure

cc: Administrative No. 151422-SWR-2010-PR00355
Chris Dellith, USFWS, Ventura
Mary Larson, CDFW, Los Alamitos
Eric Shott, NMFS, Santa Rosa



Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion

State Route 33 Soil Nail Wall Project

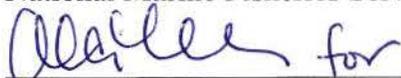
NMFS Consultation Number: 151422-SWR-2010-PR00355/PCTS WCR-2016-04111

Action Agency: California Department of Transportation

Affected Species and NMFS' Determinations:

ESA-Listed Species	Status	Is Action Likely to Adversely Affect Species or Critical Habitat?	Is Action Likely To Jeopardize the Species?	Is Action Likely To Destroy or Adversely Modify Critical Habitat?
Southern California Coast steelhead (<i>Oncorhynchus mykiss</i>)	Endangered	Yes	No	No

Consultation Conducted By: National Marine Fisheries Service, West Coast Region

Issued By: 
William W. Stelle, Jr.
Regional Administrator

Date: FEB 11 2016

1. INTRODUCTION

This introduction provides information relevant to the other sections of this document and is incorporated by reference into Sections 2 and 3 below.

1.1 Background

NOAA's National Marine Fisheries Service (NMFS) prepared the biological opinion (opinion) and incidental take statement portions of this document in accordance with Section 7(b) of the Endangered Species Act (ESA) of 1973 (16 USC 1531 *et seq.*), and implementing regulations at 50 CFR 402.

A pre-dissemination review of this document was completed using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The document will be available through NMFS' Public Consultation Tracking System [<https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts>]. A complete record of this consultation is on file at NMFS' California Coastal Area Office, Southern California Branch in Long Beach, California.

1.2 Consultation History

On May 21, 2015, NMFS received from the California Department of Transportation's (Caltrans) office in Los Angeles, a written request for reinitiation of formal consultation under Section 7 of the ESA. Caltrans' request concerns the State Route 33 (SR-33) Soil Nail Wall Project (proposed action) at North Fork Matilija Creek in Ventura County, and potential effects of the proposed action on endangered steelhead (*Oncorhynchus mykiss*) and designated critical habitat. NMFS issued a biological opinion dated February 26, 2013, that concluded Caltrans' proposed action is not likely to jeopardize the continued existence of endangered steelhead or destroy or adversely modify critical habitat for the species. NMFS concluded that the proposed action may result in the incidental take of steelhead, therefore an Incidental Take Statement (ITS) is included in the biological opinion.

At the time of the original consultation, construction was to be completed in one season (May 15 to October 31). However, subsequent to the issuance of the February 23, 2013, biological opinion, Caltrans determined that construction may not be completed within this timeframe. Caltrans is now proposing a revised work schedule that would extend instream activities over two construction seasons, not merely one season as previously believed. After reviewing Caltrans' request including biological assessment (BA) and project construction plans, NMFS determined the change in project plans invalidated the effects analysis and ITS that are the bases of the February 26, 2013, biological opinion, and therefore agreed with Caltrans that reinitiating formal consultation was required. By letter dated June 23, 2015, NMFS requested additional information concerning the temporary rock-slope protection (RSP) and potential impacts on steelhead-passage conditions. Upon review of the requested supplemental information received from Caltrans on October 19, 2015, NMFS moved forward with the reinitiated formal consultation on the same day.

1.3 Proposed Action

“Action” means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies (50 CFR §402.02).

Overview of the Proposed Action: The existing grouted RSP along SR-33 will be removed to install a 500-foot long vertical soil-nail wall and ten boulder-step structures. The proposed action is necessary to alleviate further undermining of the roadway and possible failure of the RSP and the roadway itself. All instream construction will occur above the 2-year water surface elevation. Construction of the proposed action is expected to be completed in two seasons, with all instream work to occur between May 15 and October 31 beginning in the 2017. Best-management practices (BMP) are incorporated into the proposed action and will be implemented when bridge-construction activities are undertaken.

Proposed Activities to Prepare the Work Area for Construction: To prepare for construction in dry conditions, the work area will be isolated from surface water and any steelhead within the affected area will be relocated. A coffer dam will be constructed across the channel immediately downstream of SR-33 Bridge 52-44 and remain in place for the duration of each construction season. Surface water will be pumped through the work area in a polyethylene pipe and return to the creek approximately 900-feet downstream. All primary diversion pump intakes will be doubled screened with one-quarter-inch mesh and framed one-eighth mesh. The diversion pipe will be placed in a ditch and covered with excavated material for thermal insulation. After the immediate project area is dewatered and all steelhead have been removed and relocated, surface flow will be diverted around the work area for the duration of construction.

Prior to the actual diversion of surface water, the entire work area will be surveyed for steelhead, which will be captured with seines and dip nets, then relocated to a pre-determined location with suitable habitat. Additional measures will be undertaken to minimize take of steelhead and adverse effects to aquatic habitat during the dewatering process and subsequent construction activities. Block nets of three-eighth-inch and one-eighth-inch mesh will be placed about 150-feet upstream of the SR-33 Bridge 52-44 to prevent juvenile steelhead from entering the work area from the upstream direction. The upstream block nets will remain in place for the duration of construction activities each season because the water diversion will not allow for steelhead migration. The presence of steelhead at the upstream block net will be monitored and fish will be relocated if fish begin to accumulate. Block nets will be placed at the downstream end of the work area prior to dewatering to prevent juvenile steelhead from entering the work area from the downstream direction. All proposed water diversion plans will require an onsite qualified fisheries biologist to monitor installation and removal efforts. Upon completion of the proposed action and construction activities each season, barriers to surface flow shall be removed.

Proposed Construction Activities: After the work area is dewatered, Caltrans will remove the existing grouted RSP and begin construction of the soil-nail wall until bedrock is reached. To anchor the toe of the wall to bedrock, a 10-foot wide work area will be excavated along the edge of the wall face. Boulders encountered within the 10-foot wide section will be removed by excavator, crane, or be broken and reduced to moveable pieces. The wall will transition into the existing RSP on each end with a 1:1 slope of grouted two to four-ton RSP. Upon completion of the soil-nail wall a 30 percent clay material will be filled and compacted within the excavated area. Geotextile fabric

and temporary four-ton RSP will be placed on the bank and along the soil nail wall. The stream channel is expected to have a widened configuration throughout much of the action area, relative to existing conditions, following completion. Concrete debris will be removed from the dewatered work area as necessary, and BMPs will be maintained throughout the demolition and construction periods to minimize erosion and sedimentation of the disturbed sections of the work area. These BMPs include, jute-netting, straw-wattles, silt-fencing, and hay bales. All vehicle and equipment maintenance and material storage will be located outside the riparian corridor to the west of the creek.

During the second season of construction, the widened streambed will be restored to generally match the characteristics and condition of the habitat upstream and downstream of the action area. Natural material will be placed in the stream channel to create 10 boulder-step structures and streambank sections between the structures. The step structures, composed of four to six-ton boulders will be installed along the length of the soil-nail wall and tie into the existing natural-step structures within the stream reach. Boulders of four tons or greater will not be removed, but incorporated into the design with oversight by the on-site engineer. Boulder-step structures will be installed at specific elevations to ensure stability, and individual boulders will be cabled allowing for natural settling. To prevent water seepage through the structures, void filler that consists of about 30 percent clay will be used to serve as a permeable layer until fine-sediment deposits seal the boulder-step structures. Streambank sections between the boulder-step structures will be planted with native vegetation. All material used to fill voids and backfill excavated portions of the stream channel will be compacted and sealed. Creek flows will be restored after project construction is completed each season.

Proposed Post-Construction Activities: Following construction of the proposed action, Caltrans proposes to implement a revegetation plan that includes native trees, shrubs, and grasses. The revegetation plan provides Caltrans' approach for the restoration, enhancement, and replacement of riparian habitat temporarily or permanently lost as a result of the proposed action. Revegetation will include planting white alder (*Alnus rhombifolia*), western sycamore (*Platanus racemosa*), and arroyo willow (*Salix lasiolepis*) at ratios of 4:1, 5:1, and 14:1, respectively. Rows of mulefat will be planted at the top and toe of the rock-weir structures. Larger trees to be planted include 27, 24-inch box western sycamore and 6, 48-inch box western sycamore trees will be planted to provide immediate shade and cover. Currently, a monitoring plan has not been proposed by Caltrans to ensure biological resources are restored and enhanced.

Additionally, Caltrans proposes to implement a monitoring and maintenance plan to evaluate the effects of the boulder-step structures and determine the need for adaptive changes to ensure the overall project objectives are met. Implementation monitoring will provide baseline information before and immediately after project completion in order to determine if the project was constructed correctly. Effectiveness monitoring will provide an evaluation of whether the completed project is providing an increase of attraction flows during steelhead migration periods and accessibility for steelhead. Photo-documentation and measurement of six parameters (*i.e.*, sediment accumulation, water depth in pool, pool width and length, structural damage, number of steelhead) will be used to ascertain the impacts to steelhead habitat and functionality of the step-pool system within the action area. The frequency of monitoring may vary over time and may be scheduled relative to specific flow events. Although Caltrans proposes a list of actions with regard to monitoring potential effects of the project, maintenance as a result of the monitoring effort would only be implemented if there is

catastrophic failure of one of the boulder-step structures that results in a change in the step-pool geomorphology or if more than 30 percent of pools are filled with sediment reducing juvenile rearing habitat. The monitoring and maintenance plan does not identify project related effects that could be addressed prior to catastrophic failure of the boulder step-structures.

“Interrelated actions” are those that are part of a larger action and depend on the larger action for their justification. “Interdependent actions” are those that have no independent utility apart from the action under consideration (50 CFR 402.02). There is no interrelated or interdependent action associated with the proposed action based on NMFS’ review of the October 19, 2015, re-initiated consultation package.

1.4 Action Area

“Action area” means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02).

The action area encompasses about one-acre of land along the western bank of North Fork Matilija Creek and includes natural communities and land-use types such as riverine, riparian scrub, riparian forest, rock mining, and existing roads. The length of North Fork Matilija Creek within the action extends about 150-feet upstream of the SR-33 Bridge 52-44 centerline, where the first steelhead-exclusion net will be placed, and 350-feet downstream from the end of the diversion, where temporary construction effects such as elevated turbidity are anticipated to cease. The length of North Fork Matilija Creek within the action area is about 1400-feet.

2. ENDANGERED SPECIES ACT: BIOLOGICAL OPINION AND INCIDENTAL TAKE STATEMENT

The ESA establishes a national program for conserving threatened and endangered species of fish, wildlife, plants, and the habitat upon which they depend. As required by section 7(a)(2) of the ESA, Federal agencies must ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species, or adversely modify or destroy their designated critical habitat. Per the requirements of the ESA, Federal action agencies consult with NMFS and section 7(b)(3) requires that, at the conclusion of consultation, NMFS provides an opinion stating how the agency’s actions would affect listed species and their critical habitat. If incidental take is expected, Section 7(b)(4) requires NMFS to provide an incidental take statement (ITS) that specifies the impact of any incidental taking and includes non-discretionary reasonable and prudent measures and terms and conditions to minimize such impacts.

2.1 Analytical Approach

This biological opinion includes both a jeopardy analysis and an adverse modification analysis. The jeopardy analysis relies upon the regulatory definition of “to jeopardize the continued existence of a listed species,” which is “to engage in an action that would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species” (50 CFR §402.02). The jeopardy analysis considers both survival and recovery of the species.

The adverse modification analysis considers the impacts of the Federal action on the conservation value of designated critical habitat. This biological opinion does not rely on the regulatory definition of "destruction or adverse modification" of critical habitat at 50 CFR §402.02. Instead, this biological opinion relies upon the statutory provisions of the ESA to complete the following analysis with respect to critical habitat.¹

The following approach is used to determine whether a proposed action is likely to jeopardize listed species or destroy or adversely modify critical habitat:

- Identify the rangewide status of the species and critical habitat likely to be adversely affected by the proposed action.
- Describe the environmental baseline in the action area.
- Analyze the effects of the proposed action on both species and their habitat using an "exposure-response-risk" approach.
- Describe any cumulative effects in the action area.
- Integrate and synthesize the above factors to assess the risk that the proposed action poses to species and critical habitat.
- Reach conclusions regarding the jeopardy and adverse modification standards.
- If necessary, define a reasonable and prudent alternative to the proposed action.

Information submitted by Caltrans and reviewed by NMFS included the following documents: (1) the biological assessment (BA) for the proposed action; (2) project plans; (3) conceptual maintenance and monitoring plan mitigation plan; (4) fish passage design and hydraulic assessment report; and (5) 95% fish-passage improvement plans. NMFS relied on relevant ecological literature, documented in the official record for the proposed action, to inform the assessment of potential effects on endangered steelhead and designated critical habitat.

2.2 Rangewide Status of the Species and Critical Habitat

This opinion examines the status of endangered steelhead, as determined by the level of extinction risk that the listed species faces, based on parameters considered in documents such as recovery plans, status reviews, and listing decisions. This informs the description of the species' likelihood of both survival and recovery. The species status section informs the description of the species' current "reproduction, numbers, or distribution" as described in 50 CFR §402.02.

2.2.1 Status of the Species. – *Oncorhynchus mykiss* is one of six Pacific salmon in the genus *Oncorhynchus* that are native to the North American coast. The natural history of this species dictates the terminology fisheries biologists and resource managers use when discussing *O. mykiss*, its habitat, and distribution. If the species remains in freshwater throughout their entire life cycle (and reside upstream of longstanding migration barriers), they are referred to as resident trout (non-anadromous), or rainbow trout. The anadromous or ocean-going form of *O. mykiss*, and its progeny, are listed under the ESA (NMFS 2006) and is typically referred to as "steelhead."

¹ Memorandum from William T. Hogarth to Regional Administrators, Office of Protected Resources, NMFS (Application of the "Destruction or Adverse Modification" Standard Under Section 7(a)(2) of the Endangered Species Act) (November 7, 2005).

Globally, steelhead are found in the western Pacific through the Kamchatka Peninsula in Asia, east to Alaska, south to southern California, and even reported in Baja California del Norte (Ruiz-Campos and Pister 1995).

The listed unit of anadromous *O. mykiss* is termed a “distinct population segment” or DPS (NMFS 2006), and the listed unit contains several individual or fish-bearing watersheds. The DPS recognizes only the anadromous *O. mykiss*. In accordance with the listing decision, this biological opinion solely uses the DPS terminology and provides NMFS’ conclusion as to the likelihood of jeopardy to the species based only on effects to the listed DPS. This biological opinion analyzes the effects of the proposed action on the following listed DPS and designated critical habitat, which occur in the action area:

Salmonid Species	ESU/DPS Name	Original Listing	Revised Listing(s)	Critical Habitat Designations
Steelhead (<i>O. mykiss</i>)	Southern California Coast DPS	FR Notice: 62 FR 43937 Date: 08/18/1997	FR Notice: 71 FR 5248 Date: 01/05/2006	FR Notice: 70 FR 52488 Date: 09/02/2005

The geographic range of this DPS extends from the Santa Maria River, near Santa Maria, to the California–Mexico border (NMFS 1997, NMFS 2002, NMFS 2006), which represents the known southern geographic extent of the anadromous form of *O. mykiss*. NMFS described historical and recent steelhead abundance and distribution for the southern California coast through a population characterization (Boughton *et al.* 2006). Surveys in Boughton *et al.* (2006) indicate between 58 percent and 65 percent of the historical steelhead basins currently harbor *O. mykiss* populations at sites with connectivity to the ocean. Most of the apparent losses of steelhead were noted in the south, including Orange and San Diego counties (Boughton *et al.* 2005). The majority of losses (68 percent) of steelhead were associated with anthropogenic barriers to steelhead migration (*e.g.*, dams, flood-control structures, culverts, *etc.*). Additionally, the investigators found the barrier exclusions were statistically associated with highly-developed watersheds.

Steelhead in southern California are categorized as “winter run” because they can migrate into natal streams between December and April (Fukushima and Lesh 1998), arriving in reproductive condition and spawning shortly thereafter. Adults may migrate several miles, hundreds of miles in some watersheds, to reach their spawning grounds. Steelhead have evolved to migrate deep into the extreme fringes of a watershed to exploit the environmental conditions that favor production of young (Montgomery *et al.* 1999). Steelhead in southern California streams can be tolerant of warm water, remaining active and feeding at temperatures that are higher than the temperature preferences and heat tolerances reported for the species based on individuals from northern latitudes (Spina 2007). While 46 drainages support this DPS (Boughton *et al.* 2005), only 10 population units possess a high and biologically plausible likelihood of being viable and independent² (Boughton *et al.* 2006).

Although the geographic area of the DPS is broad, the individual population units are sparsely distributed throughout the DPS with extensive spatial breadth often existing between nearest-

² Independent population: a collection of one or more local breeding units whose population dynamics or extinction risk over a 100-year time period is not substantially altered by exchanges of individuals with other populations (Boughton *et al.* 2006).

neighbor populations (Boughton *et al.* 2005; NMFS 2005; Boughton *et al.* 2006). Extinction of some population units has been observed as well as contraction of the southern extent of the species' geographic range (Boughton *et al.* 2005; Gustafson *et al.* 2007). One reason for the extensive spatial gaps between neighboring population units and the range contraction involves man-made barriers to steelhead migration (Boughton *et al.* 2005).

The small number of extant populations that make up this DPS are vulnerable to extirpation due to loss of accessibility to freshwater spawning and rearing habitat, low abundance, degraded estuarine habitats and watershed processes essential to maintain freshwater habitats (NMFS 2011). There is little new evidence to suggest that the status of the SCC DPS has changed appreciably in either direction since publication of the most recent collections of status reviews (Good *et al.* 2005; NMFS 2011; Williams *et al.* 2011). New information since the last review concerning the status of anadromous runs in the DPS is limited and does not suggest a change in extinction risk.

Population abundance trends can vary based on yearly rainfall within the range of the SCC DPS. A relatively large number of adult steelhead were observed in 2008, two years after an extended wet spring that presumably gave smolts ample opportunity to migrate to the ocean. Low rainfall appears to have caused many spawners to get trapped in freshwater, where they were observed during the summer. In addition, low rainfall probably improved conditions for viewing fish during snorkel surveys and trapping fish in weirs (Williams *et al.* 2011).

2.2.2 General Life History of Steelhead. – *O. mykiss* possesses an exceedingly complex life history (Behnke 1992). Distinctly different than other Pacific salmon, steelhead adults can survive their first spawning and return to the ocean to reside until the next year to reproduce again. For returning adults, the specific timing of spawning can vary by a month or more among rivers or streams within a region, occurring in winter and early spring. The spawning time frames depend on physical factors such as the magnitude and duration of instream flows and sand-bar breaching. Once they reach their spawning grounds, females will use their caudal fin to excavate a nest (redd) in streambed gravels where they deposit their eggs. Males will then fertilize the eggs and, afterwards, the females cover the redd with a layer of gravel, where the embryos (alevins) incubate within the gravel. Hatching time can vary from approximately three weeks to two months depending on surrounding water temperature. The young fish (fry) emerge from the redd two to six weeks after hatching. As steelhead begin to mature, juveniles or “parr” will rear in freshwater streams anywhere from 1-3 years. Juvenile steelhead can also rear in seasonal coastal lagoons or estuaries of their natal creek, providing over-summering habitat.

Juvenile steelhead emigrate to the ocean (as smolts) usually in late winter and spring and grow to reach maturity at age 2-4, but steelhead can reside in the ocean for an additional 2-3 years before returning to spawn. The timing of emigration is influenced by a variety of parameters such as photoperiod, temperature, breaching of sandbars at the river's mouth and streamflow. Extended droughts can cause juveniles to become landlocked, unable to reach the ocean (Boughton *et al.* 2006).

Through studying the otolith (small ear stone) microchemistry of *O. mykiss*, researchers further understand the complex and intricate life history of steelhead. Specifically, resident rainbow trout can produce steelhead progeny; likewise, steelhead can yield resident rainbow trout progeny (Zimmerman and Reeves 2000). Additionally, evidence indicates that sequestered populations of

steelhead (*e.g.*, above introduced migration barriers) can exhibit traits that are the same or similar to anadromous specimens with access to the ocean. Examples include inland resident fish exhibiting smolting characteristics and river systems producing smolts with no regular access for adult steelhead. This evidence suggests the ecological importance of the resident form to the viability of steelhead and the need to reconnect populations upstream and downstream of introduced migration barriers. The loss or reduction in anadromy and migration of juvenile steelhead to the estuary or ocean is expected to reduce gene flow, which strongly influences population diversity (McElhany *et al.* 2000). Evidence indicates genetic diversity in populations of southern California steelhead is low (Girman and Garza 2006).

2.2.3 Steelhead Habitat Requirements. – Habitat requirements of steelhead generally depend on the life history stage. Steelhead encounter several distinct habitats during their life cycle. Water discharge, water temperature, and water chemistry must be appropriate for adult and juvenile migration. Suitable water depth and velocity, and substrate composition are the primary requirements for spawning. Furthermore, dissolved oxygen concentration, pH, and water temperature are factors affecting survival of incubating embryos. The presence of interspatial spaces between large substrate particle types is important for maintaining water-flow through the nest as well as dissolved oxygen levels within the nest. These spaces can become filled with fine sediment, sand, and other small particles. Additionally, juveniles need abundant food sources, including insects, crustaceans, and other small fish. Habitat must also provide places to hide from predators, such as under logs, root wads and boulders in the stream, and beneath overhanging vegetation. Steelhead also need places to seek refuge from periodic high-flow events (side channels and off channel areas), and may occasionally benefit from the availability of cold-water springs or seeps and deep pools during summer. Estuarine habitats can be utilized during the seaward migration of steelhead, as these habitats have been shown to be nurseries for steelhead. Estuarine or lagoon habitats can vary significantly in their physical characteristics from one another, but remain an important habitat requirement as physiology begins to change while juvenile steelhead become acclimated to a saltwater environment.

2.2.4 Status of Designated Critical Habitat. – Within the process of designating critical habitat, NMFS developed a list of Primary Constituent Elements (PCEs) (NMFS 2005) for habitat sites essential to support one or more life stages of the DPS, such as sites for spawning, rearing, and migration (Table 1). These sites in turn contain physical or biological features³ essential to the conservation of the endangered SCC DPS of steelhead.

Habitat for steelhead has suffered destruction and modification, and anthropogenic activities have reduced the amount of habitat available to steelhead (Nehlsen *et al.* 1991; NMFS 1997; Boughton *et al.* 2005; NMFS 2006). In many watersheds throughout the range of the SCC DPS, the damming of streams has precluded steelhead from hundreds of miles of historical spawning and rearing habitats (*e.g.*, Twitchell Reservoir within the Santa Maria River watershed, Bradbury Dam within the Santa Ynez River watershed, Matilija Dam within the Ventura River watershed, Rindge Dam within the Malibu Creek watershed, Pyramid Dam and Santa Felicia Dam on Piru Creek). These dams create

³ The essential features include water characteristics, soil type, geological features, sites, prey, vegetation, symbiotic species, single or complex combination of habitat characteristics, and ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity (per proposed rule: Docket No. FWS-HQ-ES-2012-0096; Docket No. 120106025-3256-01; 4500030114 on May 12, 2014; 50 CFR 424 Vol. 79, No. 91. Page 27066-27077).

physical barriers and hydrological impediments for adult and juvenile steelhead migrating to and from spawning and rearing habitats. Likewise, construction and ongoing impassable presence of highway projects have rendered habitats inaccessible to adult steelhead (Boughton *et al.* 2005). Within stream reaches that are accessible to this species (but that may currently contain no fish), urbanization (including effects due to water exploitation) has in many watersheds eliminated or dramatically reduced the quality and amount of living space for juvenile steelhead. The number of streams that historically supported steelhead has been dramatically reduced (Good *et al.* 2005). Groundwater pumping and diversion of surface water contribute to the loss of habitat for steelhead, particularly during the dry season (*e.g.*, Spina *et al.* 2006). The extensive loss and degradation of habitat is one of the leading causes for the decline of steelhead abundance in southern California and listing of the species as endangered (NMFS 1997; NMFS 2006).

A significant amount of estuarine habitat has been lost across the range of the DPS with an average of only 22 percent of the original estuarine habitat remaining (NMFS 2011). The condition of these remaining wetland habitats is largely degraded, with many wetland areas at continued risk of loss or further degradation. Although many historically harmful practices have been halted, much of the historical damage remains to be addressed and the necessary restoration activities will likely require decades. Many of these threats are associated with the larger river systems such as the Santa Maria, Santa Ynez, Ventura, Santa Clara, Los Angeles, San Gabriel, Santa Ana, San Luis Rey, Santa Margarita, San Dieguito, and San Diego rivers, but they also apply to smaller coastal systems such as Malibu, San Juan, and San Mateo creeks. Overall, these threats have remained essentially unchanged for the DPS as determined by the last status review (Williams *et al.* 2011) though some individual, site specific threats have been reduced or eliminated as a result of conservation actions such as the removal of small fish passage barriers.

Table 1. Physical or biological features critical to the conservation of sites determined essential to support one or more life stages of steelhead (NMFS 2005).

Primary Constituent Elements	Physical Characteristics	Essential to Conservation
Freshwater spawning sites	With water quantity and quality conditions and substrate supporting spawning, incubation and larval development.	Without these features the species cannot successfully spawn and produce offspring.
Freshwater rearing sites	With water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility; water quality and forage supporting juvenile development; and natural cover such as shade, submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels.	Without these features juveniles cannot access and use the areas needed to forage, grow, and develop behaviors (<i>e.g.</i> , predator avoidance, competition) that help ensure their survival.
Freshwater migration corridors	Free of obstruction with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival.	Without these features juveniles cannot use the variety of habitats that allow them to avoid high flows, avoid predators, successfully compete, begin the behavioral and physiological changes needed for life in the ocean, and reach the ocean in a timely manner; allow steelhead adults in a non-feeding condition to successfully swim upstream, avoid predators, and reach spawning areas on limited energy stores.
Estuarine areas	Free of obstruction with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels; and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.	Without these features juveniles cannot reach the ocean in a timely manner and use the variety of habitats that allow them to avoid predators, compete successfully, and complete the behavioral and physiological changes needed for life in the ocean; they provide a final source of abundant forage for adult steelhead that will provide the energy stores needed to make the physiological transition to fresh water, migrate upstream, avoid predators, and develop to maturity upon reaching spawning areas.
Near-shore marine areas	Free of obstruction with water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels.	Without these features juveniles cannot successfully transition from natal streams to offshore marine areas.
Offshore marine areas	With water quality conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation.	Without them juveniles cannot forage and grow to adulthood.

2.2.5 Influence of a Changing Climate on the Species. – One factor affecting the rangewide status of endangered steelhead, and aquatic habitat at large, is climate change. For the Southwest region (southern Rocky Mountains to the Pacific Coast), the average temperature has already increased roughly 1.5°F compared to a 1960-1979 baseline period. High temperatures will become more common, indicating that southern California steelhead may experience increased thermal stress even though this species has shown to endure higher than preferable body temperatures (Spina 2007).

Precipitation trends are also important to consider. The Southwest region, including California, showed a 16 percent increase in the number of days with heavy precipitation from 1958 to 2007. Potential impacts to southern California steelhead in freshwater streams include damage to spawning redds and washing away of incubating eggs due to higher winter stream flow (USGCRP 2009), and poor freshwater survival due to longer and warmer periods of drought (Hanak *et al.* 2011; Mastrandrea and Luers 2012), which may lead to lower host resistance of steelhead to more virulent parasitic and bacterial diseases (McCullough 1999; Marcogliese 2001). Snyder and Sloan (2005) projected mean annual precipitation in southwestern California to decrease by 2.0 cm (four percent) by the end of the 21st century.

Wildfires periodically burn large areas of chaparral and adjacent woodlands in autumn and winter in southern California (Westerling *et al.* 2004). Increased wildfire activity over recent decades reflects sub-regional responses to changes in climate, specifically observations of warmer and earlier onset of spring along with longer summer-dry seasons (Westerling *et al.* 2006; Westerling and Bryant 2008).

Estuarine productivity is likely to change based on changes in freshwater flows, nutrient cycling, and sediment amounts (Scavia *et al.* 2002). Additionally, upper ocean temperature is the primary physical factor influencing the distribution of steelhead in the open ocean, and a warming climate may result in a north-ward shift in steelhead distribution, for example (Myers and Mantua 2013).

In summary, observed and predicted climate-change effects are generally detrimental to the species, given the unprecedented rate of change and uncertainty about the ability to adapt, so unless offset by improvements in other factors, status of the species and critical habitat is likely to decline over time. The climate change projections referenced above cover the time period between the present and approximately 2100. In general, climate change projections cannot be distinguished from annual and decadal climate variability for approximately the first 10 years of the projection period (see Cox and Stephenson 2007). While there is uncertainty associated with projections beyond 10 years, which increases over time, the direction of change is relatively certain (McClure *et al.* 2003).

2.3 Environmental Baseline

The “environmental baseline” includes the past and present impacts of all Federal, state, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early Section 7 consultation, and the impact of state or private actions which are contemporaneous with the consultation in process (50 CFR §402.02).

2.3.1 Status of Aquatic Habitat in the Action Area. – Aquatic habitat within the action area of North Fork Matilija Creek consists of a complex array of pools and pocket water, with short riffles and runs between pools. The active channel of the creek is about 20 to 30-feet wide and is comprised of gravel, cobble, and boulders. North Fork Matilija Creek drains part of the Western Transverse ranges of southern California, a tectonically active area (Florsheim *et al.* 1991). As a result, debris slides are common and several large boulders are present through the action area, creating step pools and hydraulic breaks for rearing, migrating, and spawning steelhead. The right bank of the creek below the roadway is covered in grouted RSP. Riparian trees within the action area include several white alders, western sycamores, and arroyo willows that create a dense canopy cover, and provide shade over the creek. Overall, the habitat in the action area provides most, if not all, of the PCEs necessary for the growth and survival of steelhead (*i.e.*, cover, shelter, pools, riparian, and migratory habitat).

2.3.2 Status of Steelhead in the Action Area. – Juvenile steelhead abundance was surveyed within and upstream of the action area from 2008 to 2009 (TRPA 2009, 2010). Total numbers of juvenile steelhead observed via snorkeling ranged from 139 to 295 steelhead within two half-mile stream reaches of pool habitat. In April 2008, while Caltrans implemented emergency SR-33 repairs at Wheeler Springs, about two-miles upstream of the action area, 782 steelhead fry and 32 yearling steelhead were found within a 350-foot section of the creek and relocated (Swift Mulder 2008). There were 16 mortalities associated with this capture and relocation effort (2% mortality). Based on a known distribution provided by TRPA (2009 and 2010) and Swift and Mulder (2008), and habitat within the action area (*i.e.*, pools), NMFS estimates that up to 500 juvenile steelhead may be present in the work area to be dewatered each season (or 1000 juvenile steelhead over 2 construction seasons). Since downstream migration through the project area is not possible during construction activities and juvenile steelhead may accumulate above the upstream block net, NMFS estimates that 50 or fewer juveniles (or 100 juvenile steelhead over two construction seasons) will need to be relocated. Thus, NMFS estimates that up to 550 juvenile steelhead or fewer (500 dewatered area/50 upstream block net) will need to be relocated each construction season (total 1000 dewatered area/100 upstream block net over two seasons). Adult steelhead are not expected to be present within the action area during the time of construction activities (May 1 to October 31).

2.3.3 Factors Affecting Species Environment in the Action Area and Vicinity

Migration Barrier

An impediment to steelhead migration exists downstream of the action area within the Ventura River at the Robles Diversion fishway. The fishway was completed in 2004, but the effectiveness of the fishway for passing steelhead without delay has not been reliably assessed. Videotaped sightings of adult steelhead passing upstream through the fishway were recorded during winter 2007 and 2008, so it is believed that the fishway provides some level of passage for steelhead past the diversion. Currently, it is unknown if, and to what extent, steelhead may be delayed at the fishway during their upstream migration. As a result, overall steelhead productivity and rearing capacity has the potential to be reduced in North Fork Matilija Creek including the action area.

Road Encroachment

SR-33 is directly adjacent to North Fork Matilija Creek within the action area, and the location of

the road likely results in runoff from the road surface entering the creek during rainstorms, which reduces the water quality within the action area to an unknown degree. The effects on water quality from road surface runoff are most likely to occur during the winter when there is runoff during rainstorms. Runoff from road surfaces contains dirt, oils, automotive fluids, and petrochemicals that are harmful to aquatic life, including steelhead (Spence *et al.* 1996). Additionally, the placement of the road directly adjacent to the creek required installation of grouted RSP on the bank which has reduced the ability of the stream to meander and diminished the riparian zone on the western streambank. The effects on steelhead passage and rearing habitat within the action area cannot be absolutely determined at this time. The location of the road and grouted RSP appear to be at least part of the reason for the present RSP failure as well, as streamflows slowly undermined and scoured the base of the RSP.

Rock Quarry

The Mosler Quarry is on the eastern streambank in the action area. The quarry is a source of both coarse and fine sediment to the stream channel. In 2006, a complex of large boulders that originated from the quarry on upslope areas of the left streambank fell into the creek, causing a severe impediment to upstream steelhead migration under most flow conditions. Only during very high flow events were steelhead believed to be able to migrate upstream past the impediment. In August 2010, the boulders that created the impediment were relocated within the channel, eliminating the impediment adjacent to the quarry. Although known barriers have been recently removed, the effects of encroachment by quarry activities on critical habitat within the action area are not fully understood. Activities at the quarry can lead to elevated turbidity in the stream during high flow events. Santa Barbara Channelkeeper (2008) documented extremely high turbidity in the creek just downstream of the quarry during rain events, contrasting with low to moderate turbidity upstream of the quarry.

2.4 Effects of the Action

Under the ESA, “effects of the action” means the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline (50 CFR §402.02). Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur. The expected effects of the action on endangered steelhead and designated critical habitat for this species are described as follows.

2.4.1 Alteration of Aquatic Habitat. – Dewatering the immediate work area is expected to temporarily disrupt steelhead behavior patterns (*i.e.*, rearing, migrating), cause temporary loss of aquatic habitat, as well as loss of invertebrate forage for steelhead within the dewatered work area. About 900-linear feet of North Fork Matilija Creek will be dewatered two times for up to six months (for each dewatering event) during the dry season (May 15 through October 31) to allow construction work to proceed in dry conditions.

Dewatering will temporarily preclude the action area from serving as a freshwater rearing site and a freshwater migration corridor for endangered steelhead. The ability of juvenile steelhead to migrate upstream and downstream through the action area will be hindered for several months each season while the diversion is in place. Downstream migration of juvenile steelhead from reaches upstream

of the action area is not expected to be significantly affected by the diversion because downstream migrants would be captured and relocated to suitable habitat upstream. Adult steelhead are not expected in the river and, therefore, are not likely to be affected by construction activities.

Aquatic macroinvertebrate forage will be temporarily reduced or eliminated within the action area as a result of isolating the workspace from flowing water. Aquatic insects provide a source of food for instream fish populations, and may represent a substantial portion of food items consumed by juvenile steelhead. Effects to aquatic macroinvertebrates resulting from stream flow diversions and dewatering will be temporary because construction activities will be temporary, and rapid recolonization (about one to two months) of the restored channel area by macroinvertebrates is expected following re-watering (Cushman 1985; Thomas 1985; Harvey 1986). In addition, the effect of macroinvertebrate loss on juvenile steelhead is expected to be negligible because food from upstream sources would be available downstream of the dewatered area via drift. Based on the foregoing, the temporary loss of aquatic macroinvertebrates as a result of dewatering activities is not expected to adversely affect steelhead.

Ultimately, the loss of aquatic habitat associated with dewatering, and the impedance of migration through the action area will be temporary and is not expected to result in lethal effects, as relocated steelhead will be able to use all aquatic habitat upstream of the dewatered portion of the creek, which appears to be of similar quality as the reach subject to dewatering (J.Ogawa, NMFS, 2012, personal observation). Connectivity between the upstream and downstream stream reaches will be restored after the water diversion is removed and river flows are returned to the dewatered area, and no long-term diminishment will result from the proposed action in the physical capacity of the habitat to serve the intended functional role for steelhead. Overall, effects to steelhead and designated critical habitat for this species from water diversion are expected to be non-lethal and temporary. In order to compensate the species for the loss of service owed to dewatering the creek, Caltrans has proposed to install added instream cover in two locations within the action area (*i.e.*, rootwads, logs) that will be accessible to the species year around following the completion of the proposed action.

2.4.2 Capture and Relocation of Steelhead. – Protocols are proposed to reduce the likelihood of harm and mortality to juvenile steelhead within the area to be dewatered each season. Prior to the actual diversion of surface water, the entire work area will be surveyed for steelhead; observed steelhead will be captured, then relocated to a pre-determined location with suitable habitat. All proposed water diversion plans will require a qualified fisheries biologist be onsite to monitor installation and removal efforts, and accumulation of juvenile steelhead at the upstream end of the diversion. Upon completion of the proposed action and construction activities, barriers to surface flow shall be removed and living space for juvenile will return to the dewatered action area. Ultimately, steelhead relocation efforts are expected to significantly minimize impacts to juvenile steelhead from areas where they would have probably experienced a high rate of injury or mortality.

Capture activities necessitates finding suitable relocation habitat. However, the description of the proposed action does not include Caltrans' criteria for judging suitable habitat. To ensure the safe capture and timely relocation of steelhead, a minimum of two fisheries biologist should be onsite during relocation activities. Ideally, sites selected for relocating juvenile steelhead should have ample habitat. In addition, Caltrans' proposed action does not identify the number of biologists to be used during dewatering, specific qualifications and expertise of the biologists, and whether the

biologists would be empowered to halt construction activities for the benefit of reducing harm or mortality of steelhead. Lastly, the proposed action does not include a provision to notify NMFS of the number of steelhead that may be harmed or injured as a result of the construction activities including the dewatering. This effects assessment assumes that Caltrans will implement the necessary precautionary measures to ensure potential effects to juvenile steelhead are minimized during relocation efforts.

Based on a known fish distribution provided by TRPA (2009 and 2010) and Swift and Mulder (2008) and habitat conditions in the action area, NMFS expects no more than 500 juvenile steelhead will need to be relocated from the dewatered area each construction season (no more than 1000 juveniles over 2 seasons). Because downstream migration through the project area is not possible for the duration of project construction, and juvenile steelhead may accumulate above the upstream block net, NMFS anticipates that 50 or fewer juveniles at the upstream side of the block net will need to be captured and then relocated upstream (no more than 100 juveniles over 2 seasons). Thus, NMFS anticipates that approximately 550 juvenile steelhead (500 dewatered area/50 upstream block net) will need to be relocated throughout the duration of project activities (no more than 1000 dewatered area/100 upstream block net). NMFS expects that 11 juvenile steelhead may be injured or killed as a result of the proposed action each construction season (no more than 22 juveniles over two construction seasons). This estimated mortality is based on reported rates of mortality experienced during a recent emergency action at Wheeler Springs.

2.4.3 Disturbance to the Streambed. – Although manipulation and disturbance of the streambed can create long-term impediments to steelhead migration or alter juvenile rearing conditions, aspects of the proposed action reduce the likelihood of these conditions. The widened stream channel and proposed boulder-step structures are expected to improve steelhead rearing and migratory characteristics at flows greater than the two-year storm event by reducing velocities and providing resting areas for steelhead. The existing steelhead-passage and juvenile rearing conditions that occur at the two-year event are expected to remain the same. Notwithstanding these aspects of the proposed action, there is potential risk that the pool habitat within the action area partially fills with sediment or the new structures could experience shifts in elevation; some level of aggradation or scour could impact steelhead passage and rearing conditions. Additionally, subsurface flows may result if the structures are not properly installed, as was observed at the Caltrans' Santa Paula Creek Rock Weir Fish Passage Project (J. Ogawa, NMFS, 2012, personal observation). In the event of subsurface flows, impacts to steelhead could result in stranding or hinder passage opportunities. Potential impacts associated with construction of the structures could be avoided if a qualified engineer oversees installation of the boulder-step structures. Ideally, the final design plans should be verified by NMFS prior to construction. Caltrans proposes to implement a monitoring and maintenance plan which includes the following: (1) implementation monitoring following construction to verify the structures were built as designed; and (2) effectiveness monitoring to identify and remedy potential sediment related effects, and remedy any catastrophic failure of the boulder-step structures. However, monitoring protocol and methodology have not been finalized and a maintenance plan has not been established which addresses effects to designated critical habitat that may occur prior to catastrophic failure. Overall, NMFS does not expect the proposed action to cause a reduction in the conservation value of designated critical habitat for endangered steelhead. This is expected to be verified through Caltrans' monitoring and maintenance plan.

2.4.4 Alteration of Water Quality. – NMFS does not expect acute or chronic effects on aquatic habitat or steelhead in North Fork Matilija Creek because increases in sedimentation and turbidity levels resulting from construction activities are expected to be minimal and temporary (*i.e.*, a few hours during dewatering, and a few hours after rewatering to about one day during the first storm). A majority of the research regarding turbidity and sedimentation effects on fish was carried out in a laboratory setting with turbidity levels significantly higher than those expected to result from project activities. In addition, use of BMPs and sediment control devices (*e.g.*, jute-netting, straw-fiber rolls, silt-fencing, hay bales, and settling basins) would be expected to minimize the effects of sedimentation and turbidity on water quality. After the first season of construction, the widened stream channel will be covered with geotextile fabric and layered with light and four-ton RSP to minimize erosion and runoff during rain events. The success of these measures has been documented during other similar projects (M. Larson, CDFG, 2012, personal communication), though the efficacy of the proposed measures should be verified in the field at the time of the proposed action. NMFS expects that the disturbance within the stream channel will not result in any long-term, incremental increases in sedimentation within the creek.

Caltrans proposes precautionary measures to reduce the likelihood that onsite effects would extend downstream; dewatering the work area is expected to greatly advance this objective. However, the operation of heavy equipment is of concern because the proposed action does not appear to include procedures to guard against the minor accidental release of petroleum products into the dewatered channel bed or flowing water, increasing the risk of harm and death for steelhead. Overall, the precautionary measures included in the proposed action are expected to be reasonably effective for ensuring that the value of aquatic habitat for steelhead will not be appreciably reduced in the action area beyond the temporary effects noted here.

2.4.5 Disturbance to Streamside Vegetation. – Riparian vegetation provides numerous functional values to fish that may benefit migrating, rearing, or spawning steelhead. Riparian vegetation enhances stream habitat by providing shade, cover, and shelter for stream fish in the form of overhanging branches, large-woody debris such as rootwads, undercut banks, and scour pools (Wesche *et al.* 1987; Platts 1991; Wang *et al.* 1997; Bilby and Bisson 1998; Naiman *et al.* 2000). Riparian zones enhance water quality by reducing the input of fine sediments and pollutants into streams (Karr and Schlosser 1978; Lowrance *et al.* 1985). Riparian vegetation also provides a source of drift forage for juvenile steelhead (Wesche *et al.* 1987).

The proposed action has the potential to temporarily affect these elements of aquatic habitat within the action area of North Fork Matilija Creek due to a discrete loss of shade and cover currently present along the active channel. Indirect effects associated with the removal of riparian vegetation can result in increased water temperatures (Mitchell 1999; Opperman and Merenlender 2004) and decreased water quality (Lowrance *et al.* 1985; Welsch 1991) attributable to a loss of shade and cover over the active channel. However, the loss of vegetation as a result of the proposed action is expected to be temporary, because native riparian vegetation will be replanted throughout the disturbed areas to minimize impacts from project construction, including the section of stream bank previously covered by RSP. Immediate shade and cover will be provided for six of eight pools within the action area by 48-inch box western sycamore. The streambank sections between boulder-step structures will be planted with cuttings and seeded with native vegetation. Based on NMFS' experience observing the response of riparian vegetation to human-made disturbances (J. Ogawa, NMFS 2015, personal observation), the riparian zone is expected to recover from the

project one to two years following the completion of construction. Overall, the amount of riparian vegetation affected by the proposed action is not expected to diminish the overall functional value of the migratory corridor and freshwater rearing sites within the action area. However, Caltrans has not proposed a vegetation monitoring plan to verify the success of the proposed plantings over time.

2.5 Cumulative Effects

“Cumulative effects” are those effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 CFR 402.02). 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 ESA.

NMFS is generally familiar with activities occurring in the action area, and at this time is unaware of such actions that would be reasonably certain to occur. Consequently, NMFS believes no cumulative effects are likely, beyond the continuing effects of present land uses as described in the Environmental Baseline (Section 2.3).

2.6 Integration and Synthesis

The Integration and Synthesis section is the final step in our assessment of the risk posed to species and critical habitat as a result of implementing the proposed action. In this section, we add the effects of the action (Section 2.4) to the environmental baseline (Section 2.3) and the cumulative effects (Section 2.5), taking into account the status of the species and critical habitat (Section 2.2), to formulate the agency’s biological opinion as to whether the proposed action is likely to: (1) appreciably reduce the likelihood of both the survival and recovery of a listed species in the wild by reducing its numbers, reproduction, or distribution; or (2) reduce the value of designated or proposed critical habitat for the conservation of the species.

Juvenile steelhead are expected to be present in the action area during the time the proposed action will be implemented and, therefore, subject to direct and indirect effects associated with aspects of the proposed action. The main risk to individual steelhead involves effects due to capture and relocation. The adverse effects include potential injury or mortality during the process of capture and relocation during dewatering activities, but precautions are in place to minimize, if not eliminate, the risk of injury and mortality, and adjacent instream habitats are expected to suitably harbor the relocated steelhead. Because the habitat alteration due to the dewatering is short lived and localized, the proposed action is not expected to result in adverse modification to designated critical habitat.

Based on the steelhead surveys described in the environmental baseline section (2.3.2), NMFS concludes non-lethal take of no more than 550 juvenile steelhead that may be captured and relocated as a result of dewatering within the action area during each construction season (no more than 1100 individuals over two construction seasons), with a potential lethal take of no more than 11 out of the 550 (total 22 of the 1100 individuals), thus the risk of mortality is low. Any juvenile steelhead present in the action area likely make up a small proportion of the SCC DPS of steelhead.

Overall, the impacts to critical habitat are expected to be temporary and not translate into a reduction in the functional value of the habitat in the long term. The replanted areas are expected to create a functional riparian zone that provides cover and shelter for steelhead within the action area of North Fork Matilija Creek. The impacts from disturbing the streambed are not expected to adversely affect the quality or quantity of aquatic habitat; rather, the proposed action is expected to provide overwintering habitat for juvenile steelhead and resting areas for migrating adult steelhead within the localized area. Improved rearing habitat and passage conditions are expected to favor the viability of the endangered SCC DPS of steelhead and avoids reducing the value of critical habitat for the species within the action area of North Fork Matilija Creek.

2.7 Conclusion

After reviewing and analyzing the current status of the listed species and critical habitat, the environmental baseline within the action area, the effects of the proposed action, any effects of interrelated and interdependent activities, and cumulative effects, it is NMFS' biological opinion that the proposed action is not likely to jeopardize the continued existence of the endangered SCC DPS of steelhead or destroy or adversely modify its designated critical habitat.

2.8 Incidental Take Statement

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. "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 by regulation to include significant habitat modification or degradation that actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 222.102). "Incidental take" is defined by regulation as takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant (50 CFR 402.02). Section 7(b)(4) and Section 7(o)(2) provide that a taking that is incidental to an otherwise lawful agency action is not considered to be prohibited taking under the ESA if that action is performed in compliance with the terms and conditions of this incidental take statement.

2.8.1 Amount or Extent of Take

Based on steelhead surveys within and in the vicinity of the action area, and the depth, size, and amount of instream cover within the action area, the biological opinion anticipates the following amount of incidental take: All steelhead in the action area, expected to be no more than 550 juveniles that are captured or harassed during project activities each construction season (no more than 1100 juveniles over two seasons). No more than 11 juvenile steelhead are expected to be injured or killed as a result of dewatering the action area and relocating the species each construction season (total 22 juvenile steelhead). Based on NMFS' general familiarity of steelhead abundance in southern California, and Ventura County streams in particular, the anticipated number of juvenile steelhead that may be injured or killed as a result of the proposed action is likely to represent a small fraction of the overall watershed-specific populations and the entire SCC DPS of endangered steelhead. Therefore, the effects of the relocation on steelhead over the entirety of the two seasons are not expected to give rise to population-level effects. No other incidental take is

anticipated as a result of the proposed action. The accompanying biological opinion does not anticipate any form of take that is not incidental to the proposed action.

2.8.2 Effect of the Take

In the biological opinion, NMFS determined that the amount or extent of anticipated take, coupled with other effects of the proposed action, is not likely to result in jeopardy to the species.

2.8.3 Reasonable and Prudent Measures

“Reasonable and prudent measures” are nondiscretionary measures that are necessary or appropriate to minimize the impact of the amount or extent of incidental take (50 CFR 402.02). NMFS believes following reasonable and prudent measures are necessary and appropriate to minimize and monitor incidental take of steelhead. The results of the effect analysis provide the basis for the following reasonable and prudent measures:

1. Avoid and minimize harm and mortality of steelhead during the relocation activities.
2. Avoid and minimize impacts to steelhead and designated critical habitat from construction activities.
3. Minimize the amount and extent of temporary and permanent changes in the quality and quantity of riparian and instream habitat for steelhead.

2.8.4 Terms and Conditions

The terms and conditions described below are non-discretionary, and Caltrans or any applicant must comply with the terms and conditions, which implement the reasonable and prudent measures (50 CFR §402.14). Caltrans or any applicant has a continuing duty to monitor the impacts of incidental take and must report the progress of the action and its impact on the species as specified in this incidental take statement (50 CFR §402.14). If the entity to whom a term and condition is directed does not comply with the following terms and conditions, protective coverage for the proposed action may lapse.

1. The following terms and conditions implement reasonable and prudent measure 1:
 - A. Caltrans shall retain at least two biologists with expertise in the areas of resident or anadromous salmonid biology and ecology, fish/habitat relationships, biological monitoring, and handling, collecting, and retaining salmonid species. The names and credentials of the biologists should be sent to NMFS (Jay Ogawa, NMFS, 501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802-4213) for review and potential approval 15 days prior to the start of dewatering activities.
 - B. Caltrans’ biologists shall identify and evaluate the suitability of upstream steelhead relocation habitat(s) prior to undertaking the dewatering activities that are required to isolate the work area from flowing water. The biologists shall evaluate potential relocation sites based on attributes such as adequate water quality (a minimum dissolved oxygen level of 5

mg/L and suitable water temperature), cover (instream and over-hanging vegetation or woody debris), and living space. Multiple relocation habitats may be necessary to prevent overcrowding of a single habitat depending on the number of steelhead captured, current number of steelhead already occupying the relocation habitat(s), and the size of the receiving habitat(s).

- C. Caltrans' biologists shall provide a written steelhead-relocation report to NMFS within 30 working days following completion of construction each season. The report shall include 1) the number and size of all steelhead relocated during the proposed action; 2) the date and time of the collection and relocation; 3) a description of any problem encountered during the project or when implementing terms and conditions; and 4) any effect of the proposed action on steelhead that was not previously considered. The report shall be sent to Jay Ogawa, NMFS, 501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802-4213.
- D. Caltrans' biologists shall contact NMFS (Jay Ogawa, 562-980-4061) 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. All steelhead mortalities shall be retained, frozen as soon as practical, and placed in an appropriate-sized sealable bag that is labeled with the date and location of the collection and fork length and weight of the specimen(s). Frozen samples shall be retained by the biologist until additional instructions are provided by NMFS. Subsequent notification must also be made in writing to Jay Ogawa, NMFS, 501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802-4213 within five days of noting dead or injured steelhead. The written notification shall include 1) the date, time, and location of the carcass or injured specimen; 2) a color photograph of the steelhead; 3) cause of injury or death; and 4) name and affiliation of the person whom found the specimen.

2. The following terms and conditions implements reasonable and prudent measure 2:

- A. Caltrans' biologists shall monitor all construction activities, instream habitat, and performance of sediment-control devices for the purpose of identifying and reconciling any condition that could adversely affect steelhead or their habitat. The biologists shall be empowered to halt work activity and to recommend measures for avoiding adverse effects to steelhead and their habitat. The biologists shall immediately contact NMFS (Jay Ogawa, 562-980-4061) upon making a determination that unforeseen effects have occurred, which could have an adverse effect on steelhead or aquatic habitat not previously considered. Caltrans shall provide the results of the implementation monitoring within 30 working days following completion of the proposed action to ensure the structures were built as designed. Results shall be sent to Jay Ogawa, NMFS, 501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802-4213
- B. Erosion control or sediment-detention devices (*e.g.*, settling tank) shall be installed prior to the time of construction activities and incorporated into Caltrans' maintenance activities. These devices shall be in place throughout the entirety of the proposed action as necessary, including the wet season, for the purpose of minimizing sediment and sediment-water slurry input to flowing water. Sediment collected in the devices shall be disposed off-site and not allowed to enter the creek channel.

- C. Heavy equipment shall be positioned away from the creek channel at the end of each workday. When feasible the use of heavy equipment shall be performed from upland areas or the roadway. Each day prior to being deployed into the creek channel, all heavy equipment shall be checked for leaks of oil, gas, hydraulic fluid and any other pollutant which could impact water quality and instream habitat. Such leaks shall be controlled for the purpose of avoiding introducing contaminants to surface water or the creek channel.
 - D. Caltrans shall provide the final design plans and notify NMFS when the proposed action will take place 14 days prior to the beginning of construction so NMFS, at its discretion may periodically observe project construction and other activities. These observations may help in devising ways to reduce adverse impacts to steelhead and their habitat for this project and for future projects of similar nature. Plans shall be sent to Jay Ogawa, NMFS, 501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802-4213.
3. The following terms and conditions implements reasonable and prudent measure 3:
- A. Caltrans shall provide a revegetation report that is to include a description of the locations seeded or planted, the area revegetated, proposed methods to monitor and maintain the revegetated area, criteria used to determine the success of the plantings, and pre- and post-planting color photographs of the revegetated area. The revegetation report shall be sent to Jay Ogawa, NMFS, 501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802-4213, within 30 calendar days following completion of the proposed action.
 - B. Caltrans shall provide the results of the vegetation monitoring within 30 calendar days following completion of each annual site inspection for the five years following completion of the project as described in the BA. The five reports shall include color photographs taken of the project area during each inspection and before implementation of the proposed action. The vegetation monitoring results shall be sent to Jay Ogawa, NMFS, 501 W. Ocean Blvd., Suite 4200, Long Beach, California 90802-4213.
 - C. Caltrans shall implement a monitoring plan to identify sediment/deposition related effects within instream habitats in the action area and remedy the identified effects on endangered steelhead and designated critical habitat for this species through maintenance. The plan shall include: (1) a description of project objectives; (2) the locations within the action area to monitor for changes in stream-bed morphology; (3) the methods and protocols utilized to quantify sediment-related effects; (4) a schedule that specifies time of implementation and sampling events; (5) the action taken to resolve sediment related effects; (6) the type and magnitude of material requiring removal and methods of removal; (7) the schedule for addressing the identified effects within 30 days of detection; and (8) schedule for providing reports. Caltrans shall submit a summary report describing the results of any maintenance task performed. The plan shall be prepared by a qualified geomorphologist with prior experience performing similar sediment transport/deposition studies. Prior to implementing the plan, Caltrans shall submit the plan to Jay Ogawa, NMFS, 501 W. Ocean Blvd., Suite 4200, Long Beach California 90802 for review and must receive NMFS written agreement before the proposed action is implemented.

D. Caltrans shall implement a monitoring and maintenance plan within the action area to validate the post-construction performance of the soil-nail wall and boulder-step structures and remedy project effects on endangered steelhead and designated critical habitat for this species through maintenance. The plan shall ensure long-term maintenance of the project and include a clearly identified schedule that requires timely monitoring and inspection of the soil nail wall, boulder-step structures, and steelhead habitat conditions within the action area. The plan shall include: (1) the protocol used to monitor and measure effectiveness of the project; (2) a description of the methodology used to quantify instream habitat characteristics of the stream reach, including channel cross sections within the action area as related to structural performance of the project; (3) the methodology used to assess the effects of the project on steelhead and designated critical habitat for this species; (4) identification of structural and instream habitat conditions that require maintenance prior to catastrophic failure of the boulder-step structures; and (5) the schedule for field studies and inspection of the structures during wet and dry season, with frequency in effort increasing during the rainy season (e.g., adult and juvenile migration periods). The plan shall clearly define the type of maintenance required and methods of repair needed to address preventable issues that may lead to structural catastrophic failure of the project or hinder adult and juvenile steelhead passage. Prior to implementing the plan, Caltrans shall submit the plan to Jay Ogawa, NMFS, 501 W. Ocean Blvd., Suite 4200, Long Beach California 90802 for review and must receive NMFS written agreement before the proposed action is implemented.

2.9 Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Specifically, conservation recommendations are suggestions regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information (50 CFR §402.02).

NMFS has no conservation recommendation related to the proposed action considered in this biological opinion.

2.10 Reinitiation of Consultation

This concludes formal consultation for Caltrans. As 50 CFR §402.16 states, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and if: (1) the amount or extent of incidental taking specified in the incidental take statement is exceeded, (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion, (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion, or (4) a new species is listed or critical habitat designated that may be affected by the action.

5. DATA QUALITY ACT DOCUMENTATION AND PRE-DISSEMINATION REVIEW

The Data Quality Act (DQA) specifies three components contributing to the quality of a document. They are utility, integrity, and objectivity. This section of the opinion addresses these DQA components, documents compliance with the DQA, and certifies that this opinion has undergone pre-dissemination review.

5.1 Utility

Utility principally refers to ensuring that the information contained in this consultation is helpful, serviceable, and beneficial to the intended users. The intended user of this opinion is Caltrans. Other interested users could include the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service. Individual copies of this opinion were provided to Caltrans. This opinion will be posted on the Public Consultation Tracking System web site (<https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts>). The format and naming adheres to conventional standards for style.

5.2 Integrity

This consultation was completed on a computer system managed by NMFS in accordance with relevant information technology security policies and standards set out in Appendix III, 'Security of Automated Information Resources,' Office of Management and Budget Circular A-130; the Computer Security Act; and the Government Information Security Reform Act.

5.3 Objectivity

Information Product Category: Natural Resource Plan

Standards: This consultation and supporting documents are clear, concise, complete, and unbiased; and were developed using commonly accepted scientific research methods. They adhere to published standards including the NMFS ESA Consultation Handbook, ESA regulations, 50 CFR 402.01 *et seq.*, and the MSA implementing regulations regarding EFH, 50 CFR 600.

Best Available Information: This consultation and supporting documents use the best available information, as referenced in the References section. The analyses in this opinion contain more background on information sources and quality.

Referencing: All supporting materials, information, data and analyses are properly referenced, consistent with standard scientific referencing style.

Review Process: This consultation was drafted by NMFS staff with training in ESA, and reviewed in accordance with West Coast Region ESA quality control and assurance processes

6. REFERENCES

- Behnke, R. J. 1992. Native trout of western North America. *American Fisheries Society Monograph* 6, Bethesda, Maryland.
- Bilby, R. E., and P. A. Bisson. 1998. Function and distribution of large woody debris. 324–346. in Naiman RJ, Bilby RE, eds. *River Ecology and Management: Lessons From the Pacific Coastal Ecoregion* New York: Springer-Verlag.
- Boughton, D. A., H. Fish, K. Pipal, J. Goin, F. Watson, J. Casagrande, and M. Stoecker. 2005. Contraction of the southern range limit for anadromous *Oncorhynchus mykiss*. *NOAA Tech. Memo.* NMFS-SWFSC-380.
- Boughton, D. A., P. B. Adams, E. Anderson, C. Fusaro, E. Keller, E. Kelley, L. Lentsch, J. Nielsen, K. Perry, H. Regan, J. Smith, C. Swift, L. Thompson, and F. Watson. 2006. Steelhead of the south-central/southern California coast: population characterization for recovery planning. *NOAA Tech. Memo.* NMFS-SWFSC-394.
- Cox, P., and D. Stephenson. 2007. Climate change: A changing climate for prediction. *Science*, 317, 207 – 208.
- Cushman, R. M. 1985. Review of ecological effects of rapidly varying flows downstream from hydroelectric facilities. *North American Journal of Fisheries Management* 5:330–339.
- Florsheim, J. L., E. A. Keller, and D. W. Best. 1991. Fluvial sediment transport in response to moderate storm flows following chaparral wildfire, Ventura County, southern California. *Geological Society of America Bulletin* 103: 504-511.
- Fukushima, L., and E.W. Lesh. 1998. Adult and juvenile anadromous salmonid migration timing in California streams. *California Fish and Game* 84: 133-145.
- Girman, D., and J. C. Garza. 2006. Population structure and ancestry of *O. mykiss* populations in South-Central California based on genetic analysis of microsatellite data. Final report of the National Marine Fisheries Service, Southwest Fisheries Science Center, Santa Cruz, California, for the California Department of Fish and Game Project No. P0350021 and Pacific States Marine Fisheries, Contract No. AWIP-S-1.
- Good, T. P., R. S. Waples, P. Adams. 2005. Updated status of federally listed ESUs of West Coast salmon and steelhead. U. S. Department of Commerce, NOAA Technical Memorandum, NMFS-NWFSC-66.
- Gustafson, R. G., R. S. Waples, J. M. Myers, L. A. Weitkamp, G. J. Bryant, O. W. Johnson, and J. J. Hard. 2007. Pacific salmon extinctions: quantifying lost and remaining diversity. *Conservation Biology* 21: 1009-1020.

- Hanak, E., J. Lund, A. Dinar, B. Gray, R. Howitt, J. Mount, P. Moyle, B. Thompson. 2011. Managing California's Water: From Conflict to Reconciliation. *Public Policy Institute of California*. San Francisco, CA.
- Harvey, B. C. 1986. Effects of suction gold dredging on fish and invertebrates in two California streams. *North American Journal of Fisheries Management* 6:401–409.
- Karr, J. R., and I. J. Schlosser. 1978. Water resources and the land-water interface. *Science* 201:229–234.
- Lowrance, R., R. Leonard, and J. Sheridan. 1985. Managing riparian ecosystems to control nonpoint pollution. *Journal of Soil and Water Conservation* 40:87–91.
- Marcogliese, D.J. 2001. Implications of climate change for parasitism of animals in the aquatic environment. *Canadian Journal of Zoology* 79:1331–1352.
- Mastrandrea, M. D., and A. L. Luers. 2012. Climate change in California: scenarios and approaches for adaptation. *Climatic Change*. 111: 5-16.
- McClure, M. M., E. E. Holmes, B. L. Sanderson, and C. E. Jordan. 2003. A Large-Scale, Multispecies Status Assessment: Anadromous Salmonids in the Columbia River Basin. *Ecological Applications*.13:964–989. [http://dx.doi.org/10.1890/1051-0761\(2003\)13\[964:ALMSAA\]2.0.CO;2](http://dx.doi.org/10.1890/1051-0761(2003)13[964:ALMSAA]2.0.CO;2).
- McCullough, D. A. 1999. A review and synthesis of effects of alterations to the water temperature regime on freshwater life stages of salmonids, with special reference to Chinook salmon. EPA, Seattle. EPA 910-R-99-010. 279 pp. Available at <http://yosemite.epa.gov/> (1999).
- McElhany, P., M. H. Ruckelshaus, M. J. Ford, T. C. Wainwright, and E. P. Bjorkstedt. 2000. Viable salmonid populations and the recovery of evolutionary significant units. *NOAA Tech. Memo.* NMFS-NWFSC-42.
- Mitchell, S. 1999. A simple model for estimating mean monthly stream temperatures after riparian canopy removal. *Environmental Management* 24: 77-83.
- Montgomery, D. R., E. M. Beamer, G. R. Pess, and T. P. Quinn. 1999. Channel type and salmonid spawning distribution and abundance. *Canadian Journal of Fisheries and Aquatic Sciences*. 56: 377–387.
- Myers, K. and N. Mantua. 2013. Climate Change and Ocean Ecology of Northwest Steelhead. The Osprey. The Steelhead Committee of the International Federation of Fly Fishers. Issue No. 75: May.
- Naiman, R. J., R. E. Bilby, and P. Bisson. 2000. Riparian ecology and management in the Pacific coastal rain forest. *BioScience* 50:996–1011.

- National Marine Fisheries Service. 1997. Endangered and threatened species: listing of several evolutionary significant units (ESUs) of West Coast steelhead. Federal Register 62 (159): 43937-43953.
- National Marine Fisheries Service. 2005. Endangered and threatened species: designated critical habitat for seven evolutionary significant units of Pacific salmon and steelhead in California. Federal Register 70 (170): 52488-52586.
- National Marine Fisheries Service. 2006. Endangered and threatened species: final listing determinations for 10 distinct population segments of west coast steelhead. Federal Register 71 (3): 834-862.
- National Marine Fisheries Service. 2011. South-Central/Southern California Coast Steelhead Recovery Planning Domain. Five-Year Review: Summary and Evaluation of South-Central California Coast Steelhead Distinct Population Segment. November 11. Southwest Region, Long Beach, California.
- Nehlsen, W., J. E., J. A. Lichatowich, and J. E. Williams. 1991. Pacific salmon at the crossroads: stocks at risk from California, Oregon, Idaho, and Washington. *Fisheries*. 16: 4-21.
- Opperman, J., and A. M. Merenlender. 2004. The effectiveness of riparian restoration for improving instream fish habitat in four hardwood-dominated California streams. *North American Journal of Fisheries Management* 24(3):822-834.
- Platts, W. S. 1991. Livestock grazing. Pages 389–423 in W. R. Meehan (ed.) *Influences of Forest and Rangeland Management on Salmonid Fishes and their Habitats*. American Fisheries Society Special Publication 19.
- Ruiz-Campos, G., and E. P. Pister. 1995. Distribution, habitat, and current status of the San Pedro Mártir rainbow trout, *Oncorhynchus mykiss nelson* (Evermann). *Bulletin of the Southern California Academy of Sciences*. Vol. 94: 131-148.
- Santa Barbara Channelkeeper. 2008. Letter to Ventura County, Los Angeles Regional Water Quality Control Board, California Department of Fish and Game, U.S. Army Corps of Engineers, and National Marine Fisheries Service, March 24, 2008.
- Scavia, D., J. C. Field, D. F. Boesch, R. W. Buddemeier, V. Burkett, D. R. Cayan, M. Fogarty, M. A. Harwell, R. W. Howarth, C. Mason, D. J. Reed, T. C. Royer, A. H. Sallenger and J. G. Titus. 2002. Climate Change Impacts on U. S. Coastal and Marine Ecosystems. *Estuaries*. 25 (2):149-164.
- Swift, C., and J. Mulder. 2008. *Emergency road repair project on state highway 33, North Fork Matilija Creek at Wheeler Springs, Ventura County, California*. Fish Rescue and Construction Monitoring Report. Entrix Inc., Ventura, CA.

- Thomas R. Payne and Associates (TRPA). 2009. Steelhead population and habitat assessment in the Ventura River/Matilija Creek Basin. 2008 Final Report by Mark Allen to the Ventura County Flood Control District, Ventura, CA. 30 p.
- Thomas R. Payne and Associates (TRPA). 2010. Steelhead population assessment in the Ventura River/Matilija Creek Basin. 2009 Data Summary Report by Mark Allen to the Matilija Coalition and Patagonia, Inc. 15 p.
- Snyder, M. A., and L. C. Sloan. 2005. Transient future climate over the western United States using a regional climate model. *Earth Interactions* 9: Article No. 11.
- Spence, B.C., G.A. Lomnický, R.M. Hughes and R. P. Novitzki. 1996. An Ecosystem Approach to Salmonid Conservation. Funded jointly by the U.S. EPA, U.S. Fish and Wildlife Service and National Marine Fisheries Service. TR-4501-96-6057. Man Tech Environmental Research Services Corp., Corvallis, OR.
- Spina, A. P., M. R. McGoogan, and T. S. Gaffney. 2006. Influence of surface-water withdrawal on juvenile steelhead and their habitat in a south-central California nursery stream. *California Fish and Game* 92: 81-90.
- Spina, A. 2007. Thermal ecology of juvenile steelhead in a warm-water environment. *Environ. Biol. Fish.* 80: 23-34.
- Stoeker, M. W. 2002. Steelhead Assessment and Recovery Opportunities in southern Santa Barbara County, California. Conception Coast Project, Santa Barbara, California.
- Thomas, V. G. 1985. Experimentally determined impacts of a small, suction gold dredge on a Montana stream. *North American Journal of Fisheries Management* 5:480-488.
- Titus, R. G., D. C. Erman, and W. M. Snider. 2003. History and status of steelhead in California coastal drainages south of San Francisco Bay. Draft manuscript. October 14, 2003.
- USGCRP (U.S. Global Change Research Program). 2009. Global Climate Change Impacts in the United States: A State of Knowledge Report from the U.S. Global Change Research Program. Cambridge University Press, New York.
- Wang, L., J. Lyons, P. Kanehl, and R. Gratti. 1997. Influences of watershed land use on habitat quality and biotic integrity in Wisconsin streams. *Fisheries* 6:6-12.
- Welsch, D. J. 1991. Riparian forest buffers: functions and design for protection and enhancement of water resources. USDA Forest Service, NA-PR-07-91, Radnor, Pennsylvania.
- Wesche, T. A., C. M. Goertler, and C. B. Frye. 1987. Contributions of riparian vegetation to trout cover in small streams. *North American Journal of Fisheries Management* 7:151-153.
- Westerling, A. L., D. R. Cayan, T. J. Brown, B. L. Hall, and L. G. Riddle. 2004. Climate, Santa Ana winds and autumn wildfires in southern California. *EOS, Transactions American Geophysical Union*. Vol. 85:289-296.

- Westerling, A.L., H.G. Hidalgo, D.R. Cayan, T.W. Swetnam. 2006. Increases in Western U.S. forest wildfire associated with warming and advances in the timing of spring. *Science* 313:940–943.
- Westerling, A. L., and B. P. Bryant. 2008. Climate change and wildfire in California. *Climatic Change*. Vol. 87:S231-S249.
- Williams, T. H., S. T. Lindley, B. C. Spence, and D. A. Boughton. 2011. Status Review Update for Pacific Salmon under the Endangered Species Act: Southwest. National Marine Fisheries Service, Southwest Fisheries Science Center, Fisheries Ecology Division 110 Shaffer Road, Santa Cruz, California 95060.
- Zimmerman, C. E., and G. H. Reeves. 2000. Population structure of sympatric anadromous and non-anadromous *Oncorhynchus mykiss*: evidence from spawning surveys and otolith microchemistry. *Canadian Journal of Fisheries and Aquatic Sciences*. 57: 2152-2162.

**Los Angeles
Regional Water Quality Board
Water Quality Certification**

Los Angeles Regional Water Quality Control Board

Mr. Peter Champion
California Department of Transportation
100 S. Main Street
Los Angeles, CA 90012

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED
No. 7007 2560 0001 7889 6743

WATER QUALITY CERTIFICATION FOR PROPOSED VEN-33 SOIL NAIL WALL PROJECT (Corps' Project No. 2012-000348-TS), NORTH FORK MATILIJIA CREEK, OJAI, VENTURA COUNTY (File No. 12-032)

Dear Mr. Champion:

Board staff has reviewed your request on behalf of California Department of Transportation (Applicant) for a Clean Water Act Section 401 Water Quality Certification for the above-referenced project. Your application was deemed complete on April 19, 2013.

I hereby issue an order certifying that any discharge from the referenced project will comply with the applicable provisions of sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, and with other applicable requirements of State law. This discharge is also regulated under State Water Resources Control Board Order No. 2003 - 0017 - DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges that have received State Water Quality Certification" which requires compliance with all conditions of this Water Quality Certification.

Please read this entire document carefully. The Applicant shall be liable civilly for any violations of this Certification in accordance with the California Water Code. This Certification does not eliminate the Applicant's responsibility to comply with any other applicable laws, requirements and/or permits.

Should you have questions concerning this Certification action, please contact Valerie Carrillo, P.G., Lead, Section 401 Program, at (213) 576-6759.



Samuel Unger, P.E.
Executive Officer



Date

DISTRIBUTION LIST

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ATTACHMENT A

Project Information

File No. 12-032

1. Applicant: California Department of Transportation
100 S. Main Street
Los Angeles, CA 90012

Phone: (213) 897-8492

2. Applicant's Agent: Mr. Peter Champion
California Department of Transportation
100 S. Main Street
Los Angeles, CA 90012

Phone: (213) 897-0702

3. Project Name: VEN-33 Soil Nail Wall Project

4. Project Location: Ojai, Ventura County

<u>Latitude</u>	<u>Longitude</u>
34.4870	119.3047
34.4879	119.3046
34.4875	119.3053
34.4876	119.3052
34.4885	119.3055
34.4888	119.3055
34.4888	119.3054
34.4882	119.3052

5. Type of Project: Soil Nail Wall Construction

6. Project Purpose: The purpose of the project is to alleviate undermining and possible failure of the existing grouted rock slope protection along State Route 33 (SR-33) at Post Mile 15.7-15.8. Currently, segments of the slope below the road have been scoured and pose a safety hazard along SR-33.

7. Project Description: The proposed project is located in Ventura County on State Route 33 at Post mile 15.7 to 15.8. Caltrans proposes to remove, in stages, existing grouted rock slope protection and build an approximately 500 foot long soil-nail wall in its place. An excavator with a breaker attachment will be used to break up the existing grouted rock slope protection (RSP) from the roadway, creating a bench that equipment

ATTACHMENT A

Project Information File No. 12-032

can be lowered into, in order to begin construction of the wall.

The wall will then be constructed from the top down until reaching bed rock, and will consist of soil nails (steel bars) drilled horizontally into the ground approximately five feet apart and then grouted into place. A wall face will then be constructed with steel mesh and concrete. The wall will be tied into the existing RSP on each end by 1:1 sloped grouted 2-4 ton RSP that will prevent stream flows from flanking the wall. The proposed wall will range in height from 20 to 30 feet tall dependent upon the depth of bedrock and height of existing roadway.

Because the proposed action will replace the existing RSP with a vertical wall, the stream channel is expected to have a widened configuration throughout much of the action area, relative to existing conditions, following completion. The widened streambed will be restored to a more natural condition that matches upstream and downstream habitat in North Fork Matilija Creek.

Natural material will be placed in the stream channel to create the 10 boulder-step structures and streambank sections between the structures. The step structures, composed of 4-ton to 6-ton boulders will be installed along the length of the soil-nail wall and tie into the existing natural step structures within the reach. Boulders of 4-tons or greater will not be removed, but incorporated into the design with oversight by the on-site engineer. Boulder-step structures will be installed at specific elevations to ensure stability, and individual boulders will be cabled allowing for natural settling. To prevent water seepage through the structures, void filler that consists of approximately 30 percent clay will be used to serve as a semipermeable layer until fine-sediment deposits seal the boulder-step structures.

Streambank sections between the boulder step structures will be compacted to 85 percent and planted with native vegetation. All material used to fill voids and backfill excavated portions of the stream channel will be compacted and sealed. Work within the stream channel will occur above the 2-year flood level and boulders of 4 tons or greater will not be removed to minimize disturbance of the stream channel.

ATTACHMENT A

Project Information

File No. 12-032

Creek flows will be restored through the main channel after construction is complete. Short-term increases in turbidity are anticipated approximately 350-feet downstream of the end of the soil nail wall during the re-watering of the stream channel and the initial rainstorms affecting areas of exposed soil within the work area.

Two types of monitoring are proposed to evaluate the effects of the constructed project and determine the need for adaptive changes to ensure the overall project objectives are met.

1. Sediment accumulation, water depth in pool, pool width and length, structural damage, number of steelhead, and photo-documentation are the monitoring parameters that will be measured to ascertain the impacts to steelhead habitat and the functionality of the step-pool system within the action area.

2. Implementation monitoring will provide baseline information before and immediately after project completion in order to determine if the project was constructed correctly and if mitigation measures were implemented. Photo-documentation of structure removal, structure installation, stream diversion, and erosion control measures will be used as a tool for evaluating implementation. Effectiveness monitoring will provide an evaluation of whether the completed project is providing an increase of attraction flows during migration periods and accessibility for fish. Field evaluation of the channel stability and the quality of riparian habitat will occur through photo-documentation and channel measurements.

Photodocumentation of stream-flow during periods of migration, area of accessible habitat, unforeseen adverse effects, and structural integrity will also be used to evaluate effectiveness of the project. The frequency of monitoring may vary over time and may be scheduled relative to specific flow events.

If there is catastrophic failure of one of the boulder step structures that results in a change in the step-pool geomorphology or if more than 30 percent of pools are filled with sediment reducing juvenile steelhead rearing habitat, appropriate actions will be taken in the project area.

Currently, there is a limited amount of riparian vegetation on the

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western bank due to the existing undermined RSP. With the installation of the proposed project, the streambank is expected to have an improved stream profile and native riparian vegetation, and provide an overall improvement for fish.

A water diversion system will be put into place prior to the initiation of construction activities; this will include a gravel bag coffer dam constructed across the channel directly downstream of the SR-33 Bridge No. 52-44. Then, a 36 inch diameter corrugated HDPE pipe will be placed along the toe of the existing undermined RSP for over 500 feet. In areas with steep drops, the pipe will be placed on gravel bag berms for support.

The project will cover 0.5 acres, or 600 linear feet. Permanent impacts to vegetated streambed will total 0.23 acres, or 500 linear feet. Temporary impacts to vegetated streambed will total 0.12 acres, or 600 linear feet. The project is anticipated to begin in June 2013, last for approximately 100 working days, and end in November 2013.

- | | |
|--|--|
| 8. Federal Agency/Permit: | U.S. Army Corps of Engineers
NWP Nos. 14, 33 (Permit No. 2012-000348-TS) |
| 9. Other Required
Regulatory Approvals: | California Department of Fish and Game
Streambed Alteration Agreement |
| 10. California
Environmental Quality
Act Compliance: | The proposed project is Categorical Exempt from CEQA pursuant to the CEQA Guidelines, Section 15301 (Existing Facilities). |
| 11. Receiving Water: | North Fork Matilija Creek (Hydrologic Unit No. 403.20) |
| 12. Designated Beneficial
Uses: | MUN, IND, PROC, AGR, GWR, REC-1, REC-2, WARM, COLD,
WILD, RARE, MIGR, SPWN, WET |
| 13. Impacted Waters of the
United States: | Non-wetland waters (streambed): 0.12 temporary and 0.23
permanent acres (600 linear feet) |
| 14. Dredge Volume: | None |
| 15. Related Projects
Implemented/to be | In 2008, the VEN-33 Wheeler Springs Emergency Wall Repair
project by Caltrans involved rebuilding an approximately 150 foot |

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Implemented by the Applicant:

long concrete retaining wall and repairing approximately 250 feet of undermined concrete retaining wall with shotcrete at North Fork Matilija Creek. The project involved a 500 foot long water diversion.

Caltrans has participated in the planning process for the removal of Matilija Dam.

16. Avoidance/
Minimization
Activities:

The Applicant has proposed to implement several Best Management Practices, including, but not limited to, the following:

- All applicable Best Management Practices for water quality shall be implemented to minimize affects to downstream areas.
- Caltrans will conduct pre-construction surveys done by a qualified botanist with experience in locating and identifying rare plants, prior to initiation of work. If any rare plants are located within the project footprint they will be re-located to a safe location as deemed by the botanist and in coordination with California Department of Fish and Game.
- Caltrans will conduct pre-construction surveys following the appropriate protocols for locating and identifying southwestern willow flycatcher and least Bell's vireo done by a qualified ornithologist, approved by USFWS prior to initiation of work. If any southwestern willow flycatchers or least Bell's vireo are found within 500 feet of the construction, no work shall begin until the nesting has been completed and the birds have left the area or Caltrans has completed formal consultation.
- Caltrans will conduct weekly surveys of the adjacent riparian zone surrounding the project site for the duration of construction activities within the creek. These surveys will be done by a qualified ornithologist with experience in locating and identifying least Bell's vireo and southwestern willow flycatcher. Should either of these species be located, work shall be halted and USFWS will be notified. Work will not resume until such time as it is determined that the birds have left the area or Caltrans has completed formal consultation.
- Exclusionary nets will be setup to exclude fish from the project site prior to installation of the water diversion. Any fish found

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within the project site will be moved upstream of the project site and released. All exclusionary and removal activities will be conducted by NOAA and USFWS approved ichthyologist with experience in identifying and handling tidewater goby and southern steelhead trout.

- A Final Project Report will be submitted to USFWS, NOAA, CDFG, ACOE, and RWQCB once the project and all monitoring have been completed.
- A Stream Restoration Plan will be developed by Caltrans in-conjunction with a qualified hydraulics engineer to ensure that the morphology of the stream will not be affected in such a way as to prevent fish migration and passage through the project area.
- Ground water seepage within the project area will be containerized and taken offsite to prevent sediments from entering the lagoon downstream
- Caltrans will conduct pre-construction surveys done by a qualified herpetologist with experience in locating and identifying CRLF and approved by USFWS, prior to initiation of work. If any CRLF are located within the project footprint, they will be re-located to a safe location as deemed by the herpetologist in coordination with USFWS.
- Caltrans will have a biological monitor with experience in locating and identifying CRLF on-site at all times throughout the duration of construction activities in the riparian zone. If any CRLF are observed during construction work, all work will halt until a permitted herpetologist can be present to help relocate any individuals found to a safe location.
- Caltrans will incorporate all applicable Avoidance and Minimization Measures as identified in the Programmatic Biological Opinion issued by U.S. Fish and Wildlife Service to the Federal Highways Administration (1-8-02-F-68).
- Pre-construction surveys done by an NOAA approved, qualified ichthyologist with experience in locating and identifying Southern steelhead trout will be done prior to initiation of work. If any Southern steelhead trout are located, work will not

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commence until coordination with NOAA has occurred.

- Caltrans will restore the creek to pre-construction conditions by replacing any boulders moved back to their original locations and blending the widened portion of the creek into the existing creek bed. This includes placing fines, gravel, rock, and boulders within the widened portion of the creek to simulate a natural stream environment as well as planting removed riparian vegetation to provide shade for the creek.
- A Water Diversion Plan shall be developed and implemented in consultation with NOAA, CDFG, USFWS, ACOE, and RWQCB to divert water through the project site to reduce turbidity and prevent sediments from entering the lagoon downstream of the project site.
- All work shall be conducted outside of the upstream migration season for winter-run southern steelhead trout. Southern steelhead trout generally begin migrating upstream during November and continue migrating through winter generally till the end of March. Work shall be conducted from June 1st, through November 1st.

17. Proposed Compensatory Mitigation:

In addition to the restoration of the creek as described in the project description, a revegetation plan, that includes native trees, shrubs and grasses, will be implemented following construction of the soil-nail wall and boulder-step structures. Revegetation will include planting white alders, Western sycamores, and arroyo willows at ratios of 4:1, 5:1, and 14:1, respectively. Rows of mulefat will be planted at the top and toe of the rock-weir structures. Larger trees to be planted include 27 24-inch box Western sycamore and 6 48-inch box Western sycamore trees will also be planted to provide immediate shade and cover.

18. Required Compensatory Mitigation:

The Regional Board will require compensatory mitigation for all permanent impacts associated with the proposed project (0.23 acres) at a ratio of 2:1 for a total of 0.46 acres. Mitigation shall consist of restoration within the streambed and streambanks in the project vicinity.

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See *Attachment B, Conditions of Certifications, Additional Conditions* for modifications and additions to the above proposed compensatory mitigation.

ATTACHMENT B

Conditions of Certification File No. 12-032

STANDARD CONDITIONS

Pursuant to §3860 of Title 23 of the California Code of Regulations (23 CCR), the following three standard conditions shall apply to this project:

1. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to §13330 of the California Water Code and Article 6 (commencing with 23 CCR §3867).
2. This Certification action is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to 23 CCR Subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. Certification is conditioned upon total payment of any fee required pursuant to 23 CCR Chapter 28 and owed by the Applicant.

ADDITIONAL CONDITIONS

Pursuant to 23 CCR §3859(a), the Applicant shall comply with the following additional conditions:

1. The Applicant shall submit to this Regional Board copies of any other final permits and agreements required for this project, including, but not limited to, the U.S. Army Corps of Engineers' (ACOE) Section 404 Permit and the California Department of Fish and Game's (CDFG) Streambed Alteration Agreement. **These documents shall be submitted prior to any discharge to waters of the State.**
2. The Applicant shall adhere to the most stringent conditions indicated with either this Certification, the CDFG's Streambed Alteration Agreement, or the ACOE Section 404 Permit.
3. The Applicant shall comply with all water quality objectives, prohibitions, and policies set forth in the *Water Quality Control Plan, Los Angeles Region (1994)*, as amended.
4. The Avoidance/Minimization activities proposed by the Applicant as described in Attachment A, No. 16, are incorporated as additional conditions herein.
5. The Applicant and all contractors employed by the Applicant shall have copies of this Certification and all other regulatory approvals for this project on site at all times and shall be familiar with all conditions set forth.

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6. Fueling, lubrication, maintenance, operation, and storage of vehicles and equipment shall not result in a discharge or a threatened discharge to waters of the State. At no time shall the Applicant use any vehicle or equipment which leaks any substance that may impact water quality. Staging and storage areas for vehicles and equipment shall be located outside of waters of the State.
7. All excavation, construction, or maintenance activities shall follow best management practices to minimize impacts to water quality and beneficial uses. Dust control activities shall be conducted in such a manner that will not produce downstream runoff.
8. No construction material, spoils, debris, or any other substances associated with this project that may adversely impact water quality standards, shall be located in a manner which may result in a discharge or a threatened discharge to waters of the State. Designated spoil and waste areas shall be visually marked prior to any excavation and/or construction activity, and storage of the materials shall be confined to these areas.
9. All waste or dredged material removed shall be relocated to a legal point of disposal if applicable. A legal point of disposal is defined as one for which Waste Discharge Requirements have been established by a California Regional Water Quality Control Board, and is in full compliance therewith. Please contact the Land Disposal Unit at the Regional Board for further information regarding the disposal of solid wastes.
10. The Applicant shall implement all necessary control measures to prevent the degradation of water quality from the proposed project in order to maintain compliance with the Basin Plan. The discharge shall meet all effluent limitations and toxic and effluent standards established to comply with the applicable water quality standards and other appropriate requirements, including the provisions of Sections 301, 302, 303, 306, and 307 of the Clean Water Act. This Certification does not authorize the discharge by the applicant for any other activity than specifically described in the 404 Permit.
11. The discharge shall not: a) degrade surface water communities and populations including vertebrate, invertebrate, and plant species; b) promote the breeding of mosquitoes, gnats, black flies, midges, or other pests; c) alter the color, create visual contrast with the natural appearance, nor cause aesthetically undesirable discoloration of the receiving waters; d) cause formation of sludge deposits; or e) adversely affect any designated beneficial uses.
12. The Applicant shall allow the Regional Board and its authorized representative entry to the premises, including all mitigation sites, to inspect and undertake any activity to determine compliance with this Certification, or as otherwise authorized by the California Water Code.
13. Application of pesticides must be supervised by a certified applicator and be in conformance with manufacturer's specifications for use. Compounds used must be appropriate to the

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target species and habitat. All pesticides directed toward aquatic species must be approved by the Regional Board. Pesticide utilization shall be in accordance with State Water Resources Control Board Water Quality Order Nos. 2011-0002-DWQ and 2004-0009-DWQ.

14. The Applicant shall not conduct any construction activities within waters of the State during a rainfall event. The Applicant shall maintain a **five-day (5-day) clear weather forecast** before conducting any operations within waters of the State.
15. A Storm Response Plan will be developed by Caltrans in coordination with the contractor at initiation of project activities. This Plan shall be submitted to the Regional Board for approval within 30 days of project initiation. The plan shall include measures which will be in place to protect the project area from any water quality impacts during the days before a storm, which may compromise any diversion activities or impact project areas with flows.
16. The Regional Board will require a long-term monitoring plan to assess any geomorphological changes either upstream or downstream or through the project areas, following each storm season while the project is being completed and for a period of 5 years after project completion. The Plan shall be submitted for Regional Board approval within 6 months of project initiation.
17. The Applicant shall utilize the services of a qualified biologist with expertise in riparian assessments during any vegetation clearing activities. The biologist shall be available on site during construction activities to ensure that all protected areas are marked properly and ensure that no vegetation outside the specified areas is removed. The biologist shall have the authority to stop the work, as necessary, if instructions are not followed. The biologist shall be available upon request from this Regional Board for consultation within 24 hours of request of consultation.
18. No activities shall involve wet excavations (i.e., no excavations shall occur below the seasonal high water table). A minimum **5-foot** buffer zone shall be maintained above the existing groundwater level. If construction or groundwater dewatering is proposed or anticipated, the Applicant shall file a **Report of Waste Discharge (ROWD)** to this Regional Board and obtain any necessary NPDES permits/Waste Discharge Requirements prior to discharging waste.
19. All project/construction activities not included in this Certification, and which may require a permit, must be reported to the Regional Board for appropriate permitting. Bank stabilization and grading, as well as any other ground disturbances, are subject to restoration and revegetation requirements, and may require additional Certification action.
20. All surface waters, including ponded waters, shall be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may

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result in a discharge to the receiving water. If surface water diversions are anticipated, the Applicant shall develop and submit a **Surface Water Diversion Plan** (plan) to this Regional Board. The plan shall include the proposed method and duration of diversion activities, structure configuration, construction materials, equipment, erosion and sediment controls, and a map or drawing indicating the locations of diversion and discharge points. Contingency measures shall be a part of this plan to address various flow discharge rates. The plan shall be submitted prior to any surface water diversions. If surface flows are present, then upstream and downstream monitoring for the following shall be implemented:

- pH
- temperature
- dissolved oxygen
- turbidity
- total suspended solids(TSS)

Analyses must be performed using approved US Environmental Protection Agency methods, where applicable. These constituents shall be measured at least once prior to diversion and then monitored for on a daily basis during the first week of diversion and/or dewatering activities, and then on a weekly basis, thereafter, until the in-stream work is complete.

Results of the analyses shall be submitted to this Regional Board by the 15th day of each subsequent sampling month. A map or drawing indicating the locations of sampling points shall be included with each submittal. Diversion activities shall not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Downstream TSS shall be maintained at ambient levels. Where natural turbidity is between 0 and 50 Nephelometric Turbidity Units (NTU), increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%. Any such violations may result in corrective and/or enforcement actions, including increased monitoring and sample collection.

21. The Applicant shall restore the proposed **0.12 acres** of TEMPORARY IMPACTS to waters of the United States and all other areas of temporary disturbance which could result in a discharge or a threatened discharge to waters of the State. Restoration shall include grading of disturbed areas to pre-project contours and revegetation with native species. Restored areas shall be monitored and maintained with native species as necessary for five years. The Applicant shall implement all necessary Best Management Practices to control erosion and runoff from areas associated with this project.
22. The Applicant shall provide COMPENSATORY MITIGATION to offset the proposed permanent impacts to **0.23 acres** of vegetation within waters of the United States/Federal jurisdictional wetlands by creating or restoring riparian habitat/Federal jurisdictional wetland habitat at a minimum **2:1** area replacement ratio (**0.46 acres**). The mitigation site shall be located within the project vicinity otherwise approved by this Regional Board. The Applicant shall submit a **Proposed Mitigation Report** which shall include:

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Conditions of Certification File No. 12-032

- (a) The boundary of the mitigation site shall be clearly identified on a map of suitable resolution and quality and shall also be defined by latitude and longitude.
- (b) The type(s) of mitigation shall be described (e.g., removal of exotics and/or replanting with native species, etc.)
- (c) Success criteria shall be established.

This information shall be submitted to this Regional Board for approval prior to *any* project activities which take place within waters of the United States and shall include copies of all agreements made between the Applicant and a third party organization regarding compensatory mitigation efforts.

23. The Applicant shall submit to this Regional Board **Annual Mitigation Monitoring Reports** (Annual Reports) by **January 1st** of each year for a minimum period of **five (5) years** following this issuance of 401 Certification or until mitigation success has been achieved and documented. The Annual Reports shall describe in detail all of the project/construction activities performed during the previous year and all restoration and mitigation efforts; including percent survival by plant species and percent cover. At a minimum the Annual Reports shall include the following documentation:
- (a) Color photo documentation of the pre- and post-project and mitigation site conditions;
 - (b) Geographical Positioning System (GPS) coordinates in decimal-degrees format outlining the boundary of the project and mitigation areas;
 - (c) The overall status of project including a detailed schedule of whether or not work has begun on the Project;
 - (d) Copies of all permits revised as required in Additional Condition 1;
 - (e) Water quality monitoring results for each reach (as required) compiled in an easy to interpret format;
 - (f) A certified Statement of “no net loss” of wetlands associated with this project;
 - (g) Discussion of any monitoring activities and exotic plant control efforts; and
 - (h) A certified Statement from the permittee or his/her representative that all conditions of this Certification have been met.
24. All applications, reports, or information submitted to the Regional Board shall be signed:

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- (a) For corporations, by a principal executive officer at least of the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which discharge originates.
 - (b) For a partnership, by a general partner.
 - (c) For a sole proprietorship, by the proprietor.
 - (d) For a municipal, State, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
25. Each and any report submitted in accordance with this Certification shall contain the following completed declaration:

“I declare under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who managed the system or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on the _____ day of _____ at _____.

(Signature)
(Title)”

- 26. All communications regarding this project and submitted to this Regional Board shall identify the Project File Number **12-032**. Submittals shall be sent to the attention of the 401 Certification Unit.
- 27. Any modifications of the proposed project may require submittal of a new Clean Water Act Section 401 Water Quality Certification application and appropriate filing fee.
- 28. The project shall comply with the local regulations associated with the Regional Board’s **Municipal Stormwater Permit** issued to Ventura County and co-permittees under NPDES No. CAS004002 and Waste Discharge Requirements Order No. R4-2010-0108. This includes all related implementing local ordinances and regulations for the control of stormwater pollution from new development and redevelopment. The project shall also comply with all requirements of the National Pollutant Discharge Elimination System (NPDES) **General Permit** for Storm Water Discharges Associated with Construction Activity, Order No. 2009-009-DWQ. All stormwater treatment systems shall be located

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outside of any water of the State and shall not be used as a wetland or riparian mitigation credit.

29. Coverage under this Certification may be transferred to the extent the underlying federal permit may legally be transferred and further provided that the Applicant notifies the Executive Officer at least 30 days before the proposed transfer date, and the notice includes a written agreement between the existing and new Applicants containing a specific date of coverage, responsibility for compliance with this Certification, and liability between them.
30. The Applicant or their agents shall report any noncompliance. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Applicant becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
31. *Enforcement:*
 - (a) In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under State law. For purposes of section 401(d) of the Clean Water Act, the applicability of any State law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification.
 - (b) In response to a suspected violation of any condition of this Certification, the State Water Resources Control Board (SWRCB) or Regional Water Quality Control Board (RWQCB) may require the holder of any permit or license subject to this Certification to furnish, under penalty of perjury, any technical or monitoring reports the SWRCB deems appropriate, provided that the burden, including costs, of the reports shall be a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.
 - (c) In response to any violation of the conditions of this Certification, the SWRCB or RWQCB may add to or modify the conditions of this Certification as appropriate to ensure compliance.
32. This Certification shall expire **five (5) years** from date of this Certification.

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33. If the Applicant intends to continue work in waters of the state or U.S. after expiration of the Certification, the Certification does not renew; therefore:
- (a) A new Clean Water Act 401 Water Quality Certification must be reviewed, signed, and authorized **before** work can continue; which requires:
 - (b) That a complete application as well as current application fees must be submitted **at least 90 days prior to the expiration** of the Certification.

Foundation Report for Soil Nail Wall

Memorandum

To : MR. DOUGLAS DUNRUD – BRANCH CHIEF
Structures Design – Branch 14

Date: May 21, 2015

File: 07-VEN-33
PM 15.7/15.8
Project ID 0714000092
EA 07-305201
Soil Nail Wall

Attn. : Mr. John J Lane – Project Engineer

From : DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
METS-Geotechnical Services
Office of Geotechnical Design South-1

Subject : Foundation Report For Soil Nail Wall

Scope of Work

In response to the request from the Office of Structure Design – Branch 14, dated October 13, 2011, the Office of Geotechnical Design South-1 has prepared the following geotechnical recommendations for the proposed retaining wall:

This Foundation Report supersedes the Preliminary Foundation Report dated June 30, 2010.

This report is based on the review of following information:

1. 1952 Topographic map (7.5 minute series) – Matilija Quadrangle, California – Ventura County.
2. 1967 Topographic map (7.5 minute series) – Matilija Quadrangle, California – Ventura County.
3. “As Built Plan” – Contract No. 07-231624, dated April 19, 1971.
4. 1988 Topographic map (7.5 minute series) – Matilija Quadrangle, California – Ventura County.
5. Geologic map of the Matilija 7.5’ Quadrangle, Ventura County, California.
6. Slope review on VEN 33 – PM 15.70, dated April 15, 2010.
7. Slope Review and Recommendations for Ventura 33 – PM 15.7, dated February 15, 2011.
8. Two boreholes – R-11-001 and R-11-002 drilled on September 13 and 14, 2011.
9. Survey data of job site including the plan and cross sections.
10. Site and maintenance historical information provided by District Maintenance-Support.

Project Description

In the winter storm of 2010/2011, large cavities under the toe of grouted rock slope protection (RSP) were discovered at three locations in between Post Miles 15.6 and 15.7, State Route 33. The dimensions and locations of three cavities are listed in Table 1 and with photos shown in Figures 1 to 3. At location No. 2, a 1.5 inch wide crack was observed on the grouted RSP (Figure 2a).

Table 1: Location and Extents of the Cavities

Location	Stations (begin/end)	Scour Distance into embankment slope (ft)	
1	829+85/830+75	16	Refer to Figure 1
2	832+15/832+77	11	Refer to Figure 2a
3	833+55/834+55	5	Refer to Figure 3



Figure 1 Scour at Stations 829+85/830+75



Figure 2a Scour at Stations 832+15/832+77



Figure 2b Crack on Grouted RSP



Figure 3 Scour at Stations 834+55/833+55

Approximate location of job site is shown in the Figure 4



Figure 4 Map of Job Site

A geotechnical report, dated February 15, 2011, recommended repair of the grouted rock slope protection (RSP). But this recommendation was rejected by PDT because of required stringent and time consuming environmental permits from at least 6 different agencies, and the need of a permanent repair. According to District 7 Project Development, Environmental, and Maintenance, repairing the grouted RSP could significantly impact the species, Steelhead fish, migrating into the habitat upstream of the creek.

In addition, we have been informed that there are several on-going lawsuits between the adjacent rock quarry property owner and several county agencies due to the rocks fallen from the rock quarry into the creek; and these rocks are not expected to be removed before completion of upcoming Caltrans project. Due to the complex legal issues, we have been informed by Maintenance-Support that Caltrans Legal required a repair strategy that protects Caltrans from being drawn into the current and any potential future lawsuits.

Historical Information Review Summary

In 1971 a construction to re-align the highway was performed. For this re-alignment, current highway was built by cutting southwestwardly into rock formation, Matilija Sandstone, and placing embankment fill to match the grade.

According to As-built Plan, the top of bedrock elevation varies across the highway and trends lower toward the toe of the embankment. The embankment slope was built at a 1 1/2:1 (horizontal:vertical) grade. The slope is covered with a 3-foot thick

grouted RSP. Two-tons RSP was placed by method A, and one-ton RSP was placed by method B. Based on the Plan, the RSP extended about 5 feet below the toe of the slope. But whether the RSP extended 5 feet below the toe of the slope cannot be verified because the water and creek bed elevation could have changed over the decades. Based on the plan, there may have been scouring issues in this highway section after relocation of the highway to the current side of creek, and additional re-alignment seems to be required in 1971.

In 2007, a rockslide was reported to occur at the rock quarry across the creek and the fallen rocks blocked the creek, directed stream toward the highway embankment, and could have caused severe scouring of the embankment slope. The rocks fallen into the creek have not been removed to date.

After the discovery of the large cavities, FHWA approved funding for the repair, and required a permanent solution that is maintenance free.

On March 30, 2010, Matt Stoecker, Ecologist reported that large sea-run Steelheads were observed immediately downstream of the quarry barriers where they were prevented from migrating into several miles of excellent habitat upstream. Also the Steelheads had damaged and dysfunctional eye and highly scared head due to unsuccessful jumps over the boulder quarry barrier. Steelhead has been a very sensitive environmental issue in this area, and to protect this specie, grouted RSP re-construction was prohibited.

Subsurface Exploration and Testing Program

Due to limited delivery schedule and maintenance support, only two boreholes were drilled on September 13 and 14, 2011 using rotary wash method. The drillings were performed at middle of the northbound of the highway. Continuous sampling was performed to collect samples and Standard Penetration Test (SPT) was performed at 5-foot interval until rock formation was encountered. Rock samples were continuously cored using rotary wire-line.

Site Observation

During site visits in March through September of 2011, at location Nos.1 and 2 (Figures 1 and 2) we noticed no presence of rocks inside the cavities. Given nominal size of rocks observed in the surrounding and above the cavities, the rocks of these sizes are unlikely to be washed away. Most likely the scoured materials were soil and small size rocks that formed original creek bed. In addition, the rocks lining the cavity walls appear to be rounded without angular and sharp edges. The roundness of

rocks observed is similar to that of rocks scattered on the creek bed. The rock lining the cavity walls may have been exposed to years of erosion and wearing.

In addition, no pavement distress has been indicated on the highway near these three locations.

Laboratory Testing Program

Due to lack of soil samples retrieved from the sampler, only corrosivity test was performed. The result of corrosivity test is present in Corrosion Evaluation section.

Site Geology and Subsurface Conditions

The site is located within the Transverse Ranges Geomorphic Province. The Transverse Ranges Provinces is characterized by east-west trending mountain ranges and faults, which formed due to compressional forces related to a bend in the San Andeas Fault.

The site is located southwest of the Matilija Creek, and consists of embankment fill – mixtures of silty and clayey sand, and sandy clay with gravel, cobbles and boulders, underlain by Matilija sandstone – middle to late Eocene. The sandstone composes of hard arkosic sandstone with micaceous shale interbeds.

Corrosion Evaluation

Corrosivity of subsurface materials was tested in accordance with CTM 532, 643, 417, and 422. The test results indicated that the subsurface materials in the project area are non-corrosive. The test results are presented as follows:

Table 3: Corrosion Test Result Summary

Borehole Number	Depth Interval (ft)	Lab Sample Number	pH	Minimum Resistivity (ohm-cm)	Sulfate Content (ppm)	Chloride Content (ppm)
R-11-001	0 – 15	NA	6.67	1488.5	N/A	N/A

Note: Caltrans currently considers a site to be corrosive to foundation elements if one or more of the following conditions exist: Chloride concentration is greater than or equal to 500 ppm, sulfate concentration is greater than or equal to 2000 ppm, or the pH is 5.5 or less.

Seismic Recommendations

Based on subsurface condition encountered during subsurface exploration, the average shear wave velocity at the project site is estimated to be 560 m/sec. Following

Geotechnical Services Design Manual, Version 1.0, dated August 2009, both deterministic and probabilistic analyses were performed, using ARS online and 2008 USGS Interactive deaggregation tool (Beta). Based on the analysis, the seismic design at the project site is governed by a deterministic ARS curve of Santa Ynez Fault. Fault parameters used for the analysis were summarized in the two Tables below.

Table 4: Summary of Nearby Faults

Fault Name	Type	M _{max}	R _X	R _{JB}	R _{RUP}
Santa Ynez (Pacífico section)	LLSS	7.1	1.67 km	0.0 km	1.57 km
Santa Ana	R	7.2	6.28 km	6.28 km	6.28 km

Notes:

R_X = Horizontal distance to the fault trace

R_{JB} = Shortest horizontal distance to the surface projection of the rupture area

R_{RUP} = Closest distance to the fault rupture plane

R = Reverse fault

LLSS = Left lateral strike slip

Table 5: Site Seismic Characteristics of On-Site Soil/Rock

Shear Wave Velocity, V _{s30} (m/s)	Z _{1.0} (m)	Z _{2.5} (km)
560	74	2

It should be noted that according to Errata Report dated December 3, 2009, Santa Ana fault data has been revised to:

- Dip angle: 70 degree instead of 60 degree
- Dip direction: South instead of North
- Bottom of rupture plane: 8 km instead of 13 km

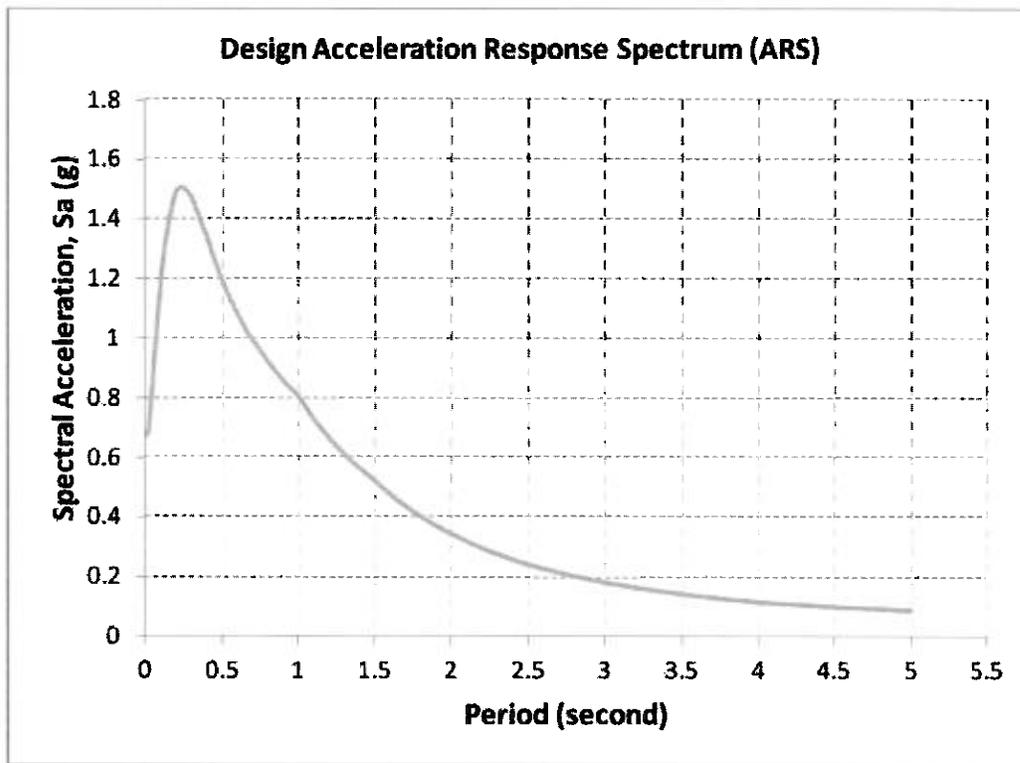


Figure 5 Design ARS Curve

Period (second)	Spectral Acceleration, Sa (g)
0.01	0.674506
0.05	0.873739
0.1	1.187479
0.25	1.504683
0.5	1.194439
0.75	0.959078
1	0.806175
2	0.344628
3	0.182156
4	0.116547
5	0.088838

Estimated design PGA value is 0.67g based on the design ARS curve above.

Liquefaction

Although relatively high intensity of ground shaking is probable at the job site, liquefaction potential is very low due to low groundwater table elevation and subsurface materials, which mostly consist of gravel, cobbles and boulders.

As-Built Plan

According to As-built Plan, the top of bedrock elevation varies across the highway and trends lower toward the toe of the embankment. The embankment slope was built at a 1 1/2:1 (horizontal:vertical) grade. The slope is covered with about 3-foot thick grouted RSP. Two tons of RSP were placed by method A, and one ton of RSP was placed by method B. Based on the Plan, the RSP extended about 5 feet below the toe of the slope. But whether the RSP extended 5 feet below the toe of the slope cannot be verified because the water and creek bed elevation could have changed over the decades. Based on the plan, there may have been scouring issues in this highway section before re-alignment of the highway, and the re-alignment seems to be required in 1971.

Geotechnical Recommendations

As discussed in the Project Description section, there are stringent environmental constraints imposed by various agencies. In order to accommodate these constraints, several PDT meetings and field visits were held, and a soil nail wall was selected by the PDT to address the observed cavity issue. For the design of the soil nail wall, following geotechnical engineering properties are presented below.

Engineering Properties for Engineering Analysis

The engineering properties are interpreted based on observed outcrop condition and findings from subsurface exploration. The groundwater table is assumed to be at creek water elevation, and is expected to fluctuate accordingly.

Table 6: Geotechnical Engineering Properties for Stations 829+85 to 830+75

Approximated Elevation (ft)	Soil Type	Unit Weight (lb/ft ³)	Apparent Friction Angle	Apparent Cohesion (lb/ft ²)	Undrained Shear Strength (lb/ft ²)
1073 to 1050	Silty Sand/clay/gravel/cobbles/boulders	120	34	150	
1050 to 1031	Sandstone	130			25,000

Table 7: Geotechnical Engineering Properties for Stations 832+15 to 832+77

Approximated Elevation (ft)	Soil Type	Unit Weight (lb/ft ³)	Apparent Friction Angle	Apparent Cohesion (lb/ft ²)	Undrained Shear Strength (lb/ft ²)
1090 to 1065	Silty Sand/clay/gravel/cobbles/boulders	120	34	150	
1065 to 1055	Sandstone	130			25,000

Table 8: Geotechnical Engineering Properties for Stations 834+55 to 833+55

Approximated Elevation (ft)	Soil Type	Unit Weight (lb/ft ³)	Apparent Friction Angle	Apparent Cohesion (lb/ft ²)	Undrained Shear Strength (lb/ft ²)
1095 to 1070	Silty Sand/clay/gravel/cobbles/boulders	120	34	150	
1070 to 1050	Sandstone	130			25,000

Please note that boreholes were drilled in the middle of northbound travel way, and the top of bedrock elevations vary along the retaining wall layout line.

Soil Nail Wall Design

For the design of the recommended soil nail wall, the computer program SNAILZWIN was used. Following are the geotechnical design criteria for the soil nail wall:

- **Static Case**
 Minimum Factor of Safety: 1.5
- **Seismic Case**
 Minimum Factor of Safety: 1.0
 Non-dimensional horizontal seismic coefficient $k_h = 0.2$
 Expected deformation: less than 4 inches

The soil nail wall design is summarized in the following tables.

Table 9: Soil Nail Wall Design

Begin Station	End Station	Wall Height (ft)	Number of Nail Rows	Nail Spacing Vertical (ft)	Nail Spacing Horizontal (ft)
829+70	834+70	20	4	5	5
		25	5	5	5
		30	6	5	5

Note:

1. Nail length should be 70% of the wall height.
2. Square nail layout pattern should be used.
3. The wall height is the vertical distance from the original ground at the top of the wall to the finished grade at the toe of the wall.
4. Inclination angle of nails is 15 degree measured from horizontal.
5. First row of the nails should be placed 3 feet below the original ground, and vertical nail spacing needs to be adjusted in areas with geometric constraints.

It should be noted that the bottom of the wall should be extended 2 feet below the top of bedrock elevation, and the wall height need to be adjusted during construction due to varying rock elevation. For the purpose of cost estimate, design height may be assumed to be about 30 feet.

The soil nail wall is designed to support fill materials and bedrock, and the design pullout resistance is presented in the Table below:

Table 10: Soil Nail Resistance Information

Station	Zone 1	Tensile Force of Nail ² (kips)	Facing Tensile Force ² (kips)
	Design Pullout Resistance ¹ (pound per foot)		
829+70 to 834+70	2800	32	28

Note:

¹Design pullout resistance of the soil nail should be placed on the plans.

²For structural design, appropriate structural factor of safety should be applied to the nail tensile force: both bending and punch shear resistance should be checked against facing tensile force shown in above Table.

For seismic stability analysis, pseudo-static method was used. In the pseudo-static method, the earthquake-induced forces of inertial varying in time are simplified as equivalent pseudo-static force acting on the center of gravity of the analyzed block.

Scour

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Whether additional Scour protection is needed should be addressed by Structure Hydraulics.

Construction Consideration

The top of bedrock elevations vary along the retaining wall layout line and should be verified during construction. The bottom of wall height should be adjusted to extend 2 feet below the top of bedrock elevation. Due to the required 2-foot excavation into hard bedrock, and expected excavation through cobbles and boulders, special equipment such as rock coring bits and casing is necessary for the soil nail wall construction. Also there are high cave-in potential materials consisting of granular materials. In addition, cave-in of drilled open hole or excavated face is very likely due to presence of granular soil and gravels.

Should you have any questions or comments, please contact me at (916) 227-4533.



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