



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

February 19, 2016

Refer to NMFS No: SWR-2011-3722

Aaron Allen
Acting Chief, Regulatory Division
San Francisco District, Corps of Engineers
1455 Market Street
San Francisco, California 94103-1398

Re: Revised Incidental Take Statement for the Endangered Species Act Section 7(a)(2) April 8, 2014, Biological Opinion for Santa Clara Valley Water District Stream Maintenance Program 2014-2023 (Corps File Number 1996-225250)

Dear Mr. Allen:

This letter regards the biological opinion and incidental take statement issued by NOAA's National Marine Fisheries Service (NMFS) to the U.S. Army Corps of Engineers (Corps) on April 8, 2014 for the Corps' issuance of a Regional General Permit to the Santa Clara Valley Water District (SCVWD) to conduct Stream Maintenance Program Phase 2 activities in streams and channels in Santa Clara County, California (Corps File No. 1996-225250). In that opinion, NMFS determined that the proposed project was not likely to jeopardize the continued existence of threatened Central California Coast (CCC) steelhead (*Oncorhynchus mykiss*), threatened South-Central California Coast (S-CCC) steelhead (*O. mykiss*), threatened southern distinct population segment (DPS) of North American green sturgeon (*Acipenser medirostris*), and designated critical habitat in accordance with section 7 of the Endangered Species Act (16 U.S.C. 1531 *et seq.*).

In May 2014, the SCVWD notified the Corps and NMFS of a proposal to modify two Stream Maintenance Program requirements pertaining to application of herbicides, because these measures appreciably limit the SCVWD's ability to utilize aquatic herbicides for removal of vegetation. Herbicides are used by the Stream Maintenance Program in conjunction with mechanical and hand vegetation suppression to support hydraulic, fire safety, and ecosystem functions. Existing requirements in the 2014-2023 Stream Maintenance Program Manual state the use of surfactants on streams supporting anadromous salmonids is permitted when "(t)he stream is dry in the immediate work locations and no rain is forecast for the next 48 hours" and "(s)urfactants are permitted adjacent to streams identified as supporting anadromous salmonid, or green sturgeon/longfin smelt (the latter in SF Bay tidal areas only) when a 20' buffer is established between the treatment area and the wetted flow channel" (page 4-11, 2014-2023 Stream Maintenance Program Manual dated November 13, 2013). The intent of these measures were also incorporated into reasonable and prudent measure (RPM) 5 of the incidental take statement (ITS) attached to the April 8, 2014 biological opinion. RPM 5 requires the SCVWD to



“Undertake measure to ensure in-channel application of herbicides in streams with anadromous fish minimize the risk of steelhead exposure.” Term and condition 5(a) states that “herbicides must be only applied to dry work sites, when no rain is forecasted to occur within 48 hours,” and term and condition 5(c) states that “no surfactants may be added to herbicides used within 20 feet of the wetted channel.” The SCVWD, with agreement from the Corps, has proposed to eliminate these measures from the Program Manual and requested that terms and conditions 5(a) and 5(c) be removed from the ITS so that the SCVWD may more effectively manage nuisance vegetation.

NMFS has assessed the potential effects of these changes including the potential for an increased risk of toxicity effects on listed fish. The analysis and findings presented in the April 8, 2014 biological opinion are based on the SMP’s methods of application and selection of herbicide mixtures/products. Although the requirement for a 20’ buffer and dry work sites would be eliminated, application of herbicides must still be limited to small, low volume equipment such as a hose, hand gun, or backpack unit, and no direct application of herbicides into waters is permitted. Best management practices limit application until the solution has a “wet” appearance on the target plants in order to avoid run off. Additionally, the analysis in the biological opinion is based on the Stream Maintenance Program measures that require herbicides to only be applied when wind conditions will not result in drift and surfactant use is limited to non-ionic products, such as Agridex, Competitor, or other brands using the same ingredients. With these application techniques and products, the SMP’s use of herbicides is unlikely to result in toxicity effects on listed fish or critical habitat. Based on the above, potential effects to steelhead, green sturgeon, and designated critical habitat remain unchanged from that previously analyzed in the April 8, 2014 biological opinion and, thus, reinitiation of consultation is not warranted.

NMFS has incorporated the changes noted above and revised ITS for the SCVWD’s Stream Maintenance Program Phase 2 (Corps File Number 1996-225250). The new ITS is enclosed and it replaces the original ITS attached to the April 8, 2014 biological opinion. Only Section X, the ITS, of the biological opinion has been revised. The Corps and the SCVWD must substitute the revised ITS for the original ITS, as the original ITS is no longer in effect. No changes have been made to the body of the biological opinion and the opinion remains in effect. However, further consultation may be required if: (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the action that may affect listed species in a manner or to an extent not previously considered in this opinion, (3) the action is subsequently modified in a manner that causes an effect to the listed species that is 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, formal consultation shall be reinitiated immediately.

Please contact Gary Stern at (707) 575-6060 or via e-mail at gary.stern@noaa.gov if you have any questions concerning this section 7 consultation, or if you require additional information.

Sincerely,



William W. Stelle, Jr.
Regional Administrator

Enclosure

cc: Dan Breen, Corps of Engineers, San Francisco
Kristine O'Kane, SCVWD, San Jose
Tami Shane, California Department of Fish and Wildlife, Yountville
Susan Glendening, San Francisco Bay Regional Water Quality Control Board, Oakland
Jon Rohrbough, Central Coast Regional Water Quality Control Board, San Luis Obispo
Copy to ARN File #151422SWR2011SR00415
Copy to Chron File

X. INCIDENTAL TAKE STATEMENT (Revised February 19, 2016; replaces ITS attached to biological opinion issued April 8, 2014))

Section 9 of the ESA and Federal regulation pursuant to section 4(d) of the ESA 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 NMFS as an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are nondiscretionary, and must be undertaken by the Corps and its permittee for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps: (1) fails to assume and implement the terms and conditions, or (2) fails to require any permittee to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to any permit, grant document, or contract, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Corps must report the progress of the action and its impact on the species to NMFS as specified in the incidental take statement (50 CFR §402.14(i)(3)).

A. Amount or Extent of Take

The SCVWD's 2014-2023 stream maintenance program in Santa Clara County is expected to result in the incidental take of threatened CCC and S-CCC steelhead. No incidental take is anticipated for threatened southern DPS green sturgeon. As described above in the biological opinion, juvenile steelhead are expected to be captured for relocation efforts at dewatered construction sites. A small number of fish are likely to be harmed or killed during relocation efforts. A few fish may avoid relocation efforts and be killed when the work area is dewatered. Given the habitat conditions of streams within the action area, up to 310 juvenile CCC steelhead and 80 juvenile S-CCC steelhead are likely to be collected and relocated annually from SMP work sites between 2014 and 2023. As described in the biological opinion, NMFS anticipates no more than three percent of the juvenile CCC and S-CCC steelhead present in the areas to be dewatered will be harmed or killed during relocation and dewatering efforts (approximately 10 CCC steelhead and 3 S-CCC steelhead).

Additional CCC and S-CCC juvenile steelhead may be collected annually by electrofishing for evaluation of SMP mitigation projects. Although the location and number of SMP mitigation projects for salmonid enhancement and restoration are unknown, sampling will be limited to the non-migration season when only juvenile rearing steelhead are present. Based on the habitat conditions within the action area, and providing for the evaluation of up to 20 mitigation projects

in northern Santa Clara County and five (5) mitigation projects in southern Santa Clara County, NMFS anticipates up to 500 juvenile CCC steelhead and 100 juvenile S-CCC steelhead may be collected annually by electrofishing during evaluation of SMP mitigation projects between 2014 and 2023. As described in the biological opinion, NMFS anticipates no more than three percent of the juvenile CCC and S-CCC steelhead present in the areas to be evaluated will be harmed or killed during electrofishing activities (approximately 15 CCC steelhead and three (3) S-CCC steelhead).

Based on the combined total of steelhead that may be collected during implementation of SMP maintenance activities and evaluation of SMP salmonid habitat enhancement/restoration projects, incidental take will have been exceeded if more than 810 juvenile CCC steelhead or more than 180 S-CCC steelhead are collected, or if more than 25 individual CCC steelhead or more than 6 individual S-CCC steelhead are harmed or killed annually by SMP activities.

B. Effect of the Take

In the accompanying opinion, NMFS determined that this level of anticipated take is not likely to result in jeopardy to CCC steelhead, S-CCC steelhead, or southern DPS green sturgeon.

C. Reasonable and Prudent Measures

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

1. Undertake measures to ensure harm and mortality to steelhead resulting from fish relocation and dewatering activities are low.
2. Conduct annual inspections and perform required maintenance at SCVWD fish ladders and fish screens to ensure these facilities are properly functioning for steelhead passage.
3. Ensure SMP impacts to steelhead are adequately determined and impacts fully mitigated per the 2014-2023 SMP Manual.
4. Ensure SMP mitigation actions for LWD (Tier 3 and 4), coarse sediment, and habitat complexity are adequately evaluated and monitored for their benefits to steelhead.
5. Undertake measure to ensure in-channel application of herbicides in streams with anadromous fish minimize the risk of steelhead exposure.
6. Prepare and submit annual reports regarding SMP activities conducted during the previous work season and completed mitigation actions.

D. Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the Corps, its permittee, and their contractors or designees must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are nondiscretionary.

1. The following term and condition implements reasonable and prudent measure #1:
 - a. The SCVWD must retain qualified biologists¹ with expertise in the area of anadromous salmonid biology, including handling, collecting, and relocating salmonids, for the collection of fish during project site dewaterings. The SCVWD must ensure that all biologists collecting and handling steelhead are qualified to conduct fish collections in a manner which minimizes potential risks.
 - b. A qualified biologist must monitor SMP work sites during placement and removal of stream flow diversions and cofferdams to ensure any adverse effects to salmonids are avoid or minimized. The biologist must be on site during all dewatering events to ensure all ESA-listed salmonids are captured, handled, and relocated safely.
 - c. Before fish relocation begins, a qualified biologist must identify the most appropriate release location(s). Release locations must have water temperatures within 1° C of the capture location. Release locations must offer ample habitat for released fish, avoid possibility of re-entry to the work area, and avoid areas where individual fish could become impinged on the exclusion net or screen.
 - d. Steelhead must be handled with extreme care and kept in water to the maximum extent possible during relocation activities. All captured fish must be kept in cool, shaded, aerated water protected from excessive noise, jostling, or overcrowding any time they are not in the stream and fish must not be removed from this water except when released. To avoid predation, the biologist must have at least two containers and segregate young-of-year fish from larger age-classes and other potential aquatic predators. Captured salmonids will be relocated, as soon as possible, to a suitable instream location in which habitat conditions allow for adequate survival of transported fish and fish already present at the release site.
 - e. If any steelhead are found dead or injured, the biologist must contact NMFS by phone immediately at the NMFS North Central Coast Office at (707) 575-6050. The purpose of the contact is to review the activities resulting in take and to determine if additional protective measures are required. All steelhead mortalities

¹ A qualified biologist (including those specializing in botany, wildlife, and fisheries) is determined by a combination of academic training and professional experience in biological sciences and related resource management activities. SCVWD may also utilize appropriately experienced and/or trained environmental staff. Resumes of qualified biologists shall be made available to NMFS upon request.

must be retained, placed in an appropriately-sized sealable plastic bag, labeled with the date and location of collection, fork length measured, and be frozen as soon as possible. Frozen samples must be retained by the biologist until specific instructions are provided by NMFS. The biologist may not transfer biological samples to anyone other than the NMFS North Central Coast Office without obtaining prior written approval from the North Central Coast Office, Supervisor. Any such transfer will be subject to such conditions as NMFS deems appropriate.

- f. The SCVWD must allow any NMFS employee(s) or any other person(s) designated by NMFS, to accompany field personnel to visit SMP work sites during activities described in this Opinion.

2. The following term and condition implements reasonable and prudent measure #2:

- a. The SCVWD must annually inspect fish ladders and fish screens during the period between March 1 and April 30 to determine the condition and required maintenance at the following facilities:

Fish Ladders: Coyote Percolation Ponds/Steel Dam (Coyote Creek); Mabury Diversion (Upper Penitencia Creek); Noble Avenue Diversion (Upper Penitencia Creek); Masson Diversion (Guadalupe Creek); Alamitos Diversion (Guadalupe River); Moffett Boulevard (Stevens Creek); Evelyn Avenue (Stevens Creek); Central Avenue (Stevens Creek); Fremont Avenue (Stevens Creek); and 14 drop structures (Llagas Creek).

Fish Screens: Coyote Canal Diversion (Coyote Creek); Mabury Diversion (Upper Penitencia Creek); Noble Avenue Diversion (Upper Penitencia Creek); Masson Diversion (Guadalupe Creek); Alamitos Diversion (Guadalupe River); and Church Avenue Diversion (Llagas Creek).

- b. The following components, where applicable, of each facility must be inspected: (1) upstream access and channels; (2) downstream access and channels; (3) culverts; (4) baffles/pools; (5) pool/chute structures; (6) entry and terminal pools; (7) weirs; (8) bypass channels; (9) gates; (10) debris racks; (11) control systems; (12) screen faces; and (13) screen cleaning systems. Inspections must determine if sediment, debris, or algal growth are impairing the functionality of the facility. Inspections must also determine if any components of the facility are loose, broken, missing, or present sharp edges. For fish screens, inspections must determine if screens are firmly attached and no gaps, tears, rips, or holes are present.
- c. The results of inspections at each facility must be presented annually in the SMP Notice of Proposed Work (NPW). Inspection results must include a narrative description of the condition of the facility, photographs, water depth and velocity measurements (where applicable), and maintenance needs. Maintenance proposed for the upcoming SMP work season must be specified. The inspection

reports must also present any other condition that is or could be in the future compromising the functionality of the fish ladder or screen. Maintenance must be performed during the subsequent SMP work window (June 15 to October 31). NMFS shall review the results of the inspections to determine the adequacy of the proposed maintenance and NMFS will respond to the SCVWD through the NPW review procedure.

- d. A follow-up inspection of each of the above facilities must be performed between September 1 and October 31 to confirm the completion of maintenance and repairs, if any were performed. If no repairs or maintenance were performed, the follow-up inspection must confirm whether or not the condition of the facility remains as reported in the previous NPW. The follow-up inspection must identify any condition that is or could be in the future compromising the functionality of the fish ladder or screen. The results of the follow-up inspection must be presented in the Annual Summary Report.
 - e. The SCVWD must develop and maintain an inspection and maintenance log books for each of the above fish ladder and screen facilities.
3. The following term and condition implements reasonable and prudent measure #3:
- a. The SCVWD must prepare and submit all pre-project site assessments for sediment removal and bank stabilization projects in anadromous salmonid streams with the annual NPW.
 - b. Through the annual NPW review procedure, SCVWD must identify all proposed on-site and off-site mitigation actions for potential impacts to LWD (Tier 3 and 4), coarse sediment, and instream habitat complexity to NMFS for review and approval. Each off-site mitigation action must identify: (1) project-specific objectives; (2) project design plans and specifications; (3) monitoring/evaluation program; and (4) project success criteria. NMFS approval of proposed mitigation actions will be based upon the anticipated probability of the project to successfully achieve project-specific objectives, ability of the monitoring program to assess the project's success criteria, and whether the mitigation project adequately compensate for anticipated impacts.
4. The following term and condition implements reasonable and prudent measure #4:
- a. Off-site SMP mitigation projects for LWD (Tier 3 and 4), coarse sediment, and habitat complexity must be monitored for a period of at least five (5) years post-construction with assessments performed, at minimum, in Years 1, 3, and 5.
 - b. Monitoring and evaluation of mitigation sites must be performed by a qualified biologist to evaluate the condition of the project, utilization by target species, and achievement of the project-specific success criteria.

- c. Monitoring and evaluation of mitigation sites must conform with the principals and procedures for project evaluation and monitoring contained in the *California Salmonid Stream Habitat Restoration Manual* (Part VIII Project Evaluation and Monitoring). Methods must include “as-built” design drawings, photographs, and narrative descriptions. Post-construction assessments should include a variety of methods to determine if project-specific objectives have been achieved (e.g., fish observations, electrofishing, water depths and velocities, channel cross-section surveys).
5. The following term and condition implements reasonable and prudent measure #5:
- a. Herbicides must only be applied when wind conditions will not result in drift.
 - b. No direct application of herbicides into water.
 - c. Instream herbicide application methods must be limited to small, low-volume equipment such as a hose, hand gun, or backpack unit.
6. The following term and condition implements reasonable and prudent measure #6:
- a. Maintenance and repair work at SCVWD fish ladders and screens completed by the SMP during the previous work season must be presented in the Annual Summary Report (ASR).
 - b. Evaluation and monitoring performed at SMP mitigation sites for LWD (Tier 3 and 4), coarse sediment, and habitat complexity in anadromous salmonid streams must be presented in the ASR.
 - c. The Final Water Quality Monitoring Reports prepared by the SMP for water diversions at SMP work sites (as described in *Attachment H* of the *2014-2023 SMP Manual*) must be provided to NMFS no later than January 31 of each year.
 - d. The SCVWD must provide the ASR to NMFS no later than January 31 of each year. The report must be submitted to the NMFS North Central Coast Office Attention: Supervisor of NMFS North Central Coast Office, 777 Sonoma Avenue, Room 325, Santa Rosa, California, 95404.