

RECLAMATION

Managing Water in the West

Categorical Exclusion Checklist

Contra Costa Water District's Proposed 2015 Rock Slough Mechanical Harvesting

CEC-15-041

Prepared by:

Kelly Baker
Kelly Baker
Natural Resources Specialist
South-Central California Area Office

Date: 11/10/15

Concurred by:

See Attachment A
BranDee Bruce
Architectural Historian
Mid-Pacific Regional Office
Regional Archeologist concurred with Item 8. Their determination has been placed within the project file.

Date: See Attachment A

Concurred by:

Shauna McDonald
Shauna McDonald
Wildlife Biologist
South-Central California Area Office

Date: 11/10/15

Concurred by:

Rain L. Emerson
Rain L. Emerson
Supervisory Natural Resources Specialist
South-Central California Area Office
ITA Designee concurred with Item 11. Their determination has been placed within the project file.

Date: 11/10/15

Approved by:

for Michael Jackson
Michael Jackson
Area Manager
South-Central California Area Office

Date: 11/10/15



Background

The Rock Slough Fish Screen (RSFS) facility is located at the junction Bureau of Reclamation's (Reclamation) unlined Contra Costa Canal (Canal) and Rock Slough, approximately four miles southeast of the town of Oakley, California (see Figure 1). Construction on the RSFS by Reclamation began in 2009 in order to comply with requirements of the Central Valley Project Improvement Act and the Los Vaqueros Biological Opinion issued by the U.S. Fish and Wildlife Service in 1993. The purpose of the RSFS facility is to provide protection to the federally threatened Delta smelt (*Hypomesus transpacificus*), threatened spring-run Chinook salmon (*Oncorhynchus tshawytscha*), threatened Central Valley steelhead (*O. mykiss*), and the endangered winter-run Chinook salmon (*O. tshawytscha*) while allowing diversions to serve Contra Costa Water District's (CCWD's) water users. Major construction work at the RSFS is now substantially complete; however, mechanical, safety and operational issues with the facility remain unresolved and are currently being evaluated by Reclamation and CCWD. Consequently, the RSFS is not considered fully operational.

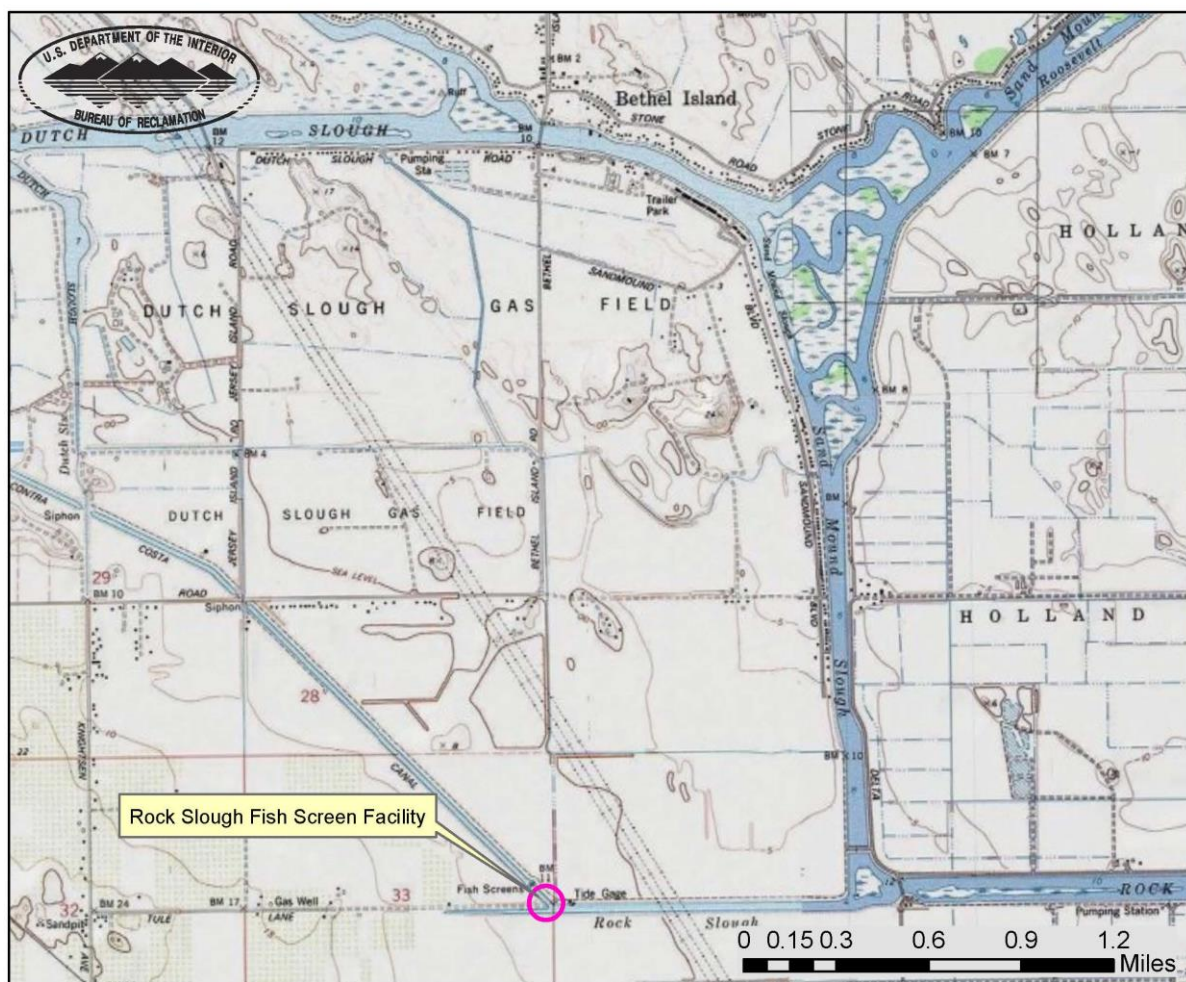


Figure 1 Proposed Action Area

Since the RSFS was installed in the fall of 2011, water hyacinth and primrose have become increasingly established in the area upstream of the outer log boom in front of the screen as well

as within the Rock Slough extension. In 2014, the California Department of Boating and Waterways sprayed glyphosate on a small area near the outer log boom on the northeast side of RSFS. The sprayed area appears to exhibit less water hyacinth and primrose than before the spraying was done; however, the entire forebay of the fish screen and the Rock Slough extension is largely engulfed in aquatic weeds that are extremely dense.

In April 2014, Reclamation completed Categorical Exclusion Checklist (CEC)-13-049 for proposed testing operations of a prototype rake (rake No. 2) at the RSFS. Based on several factors, including the presence of migratory birds at the facility, CCWD was not able to test the prototype rake fully. In February 2015 Reclamation authorized CCWD to extend the prototype testing plan into 2015 under certain conditions (CEC 15-004). CCWD has been running the rakes once per day but has yet to test the rakes fully due to several issues, including the presence of extremely dense aquatic weeds. In late June 2015, due to heavy debris loading the rakes at the RSFS were strained lifting aquatic weeds, primarily *Egeria densa* and coontail (*Ceratophyllum demersum*) as shown in Figure 2.

In order to be able to test the prototype rake, CCWD has requested authorization to use a mechanical harvester to remove the large mass of aquatic invasive weeds in front of the RSFS and within the Rock Slough extension. CCWD also proposed to remove aquatic weeds that are becoming established downstream of the RSFS and upstream of the headworks. At this time, there are no other proposed ways to clean or remove materials from the area behind the screen.



Figure 2 Photograph of Aquatic Vegetation in front of the Rock Slough Fish Screen

Nature of the Action

CCWD, pursuant to their operating agreement (Contract No. 14-06-200-6072A), proposes to mechanically harvest aquatic weeds from the area in front of the RSFS, the Rock Slough Extension, and from the area downstream of the fish screen and upstream of the Rock Slough Headworks (see Figure 3). No ground disturbance would occur in order to complete the Proposed Action.

CCWD will contract out for mechanical harvesting of the aquatic weeds. Since there are no boat ramps at the RSFS, the harvester will be deployed in the river by a crane placed in front of and behind the RSFS. The harvester (see Figure 4 for an example of a mechanical harvester) will cut the weeds at a depth of approximately 5 feet below the water surface. In shallower areas (six feet deep or less), the harvester will cut the weeds as close to the bottom of the slough or Canal as practicable. No disturbance of the river's bottom would occur. Cut weeds will then be pulled up onto the harvester via conveyor belt until the harvester is full. Once full, the weeds will be pulled off the harvester by the crane at the RSFS. The aquatic weeds will be dried on site within the drying area that is currently used to dry aquatic weeds removed by the RSFS rakes (see Figure 3). Once the weeds have dried sufficiently, they will either be removed or composted on site.

The proposed harvesting area in front of the RSFS and Rock Slough extension is estimated at approximately 4 acres and the area within the Contra Costa Canal downstream of the fish screen but upstream of the headworks is estimated at 2 acres. Total time to harvest is expected to take approximately one week to complete (1 acre/day at approximately 2 miles per hour).

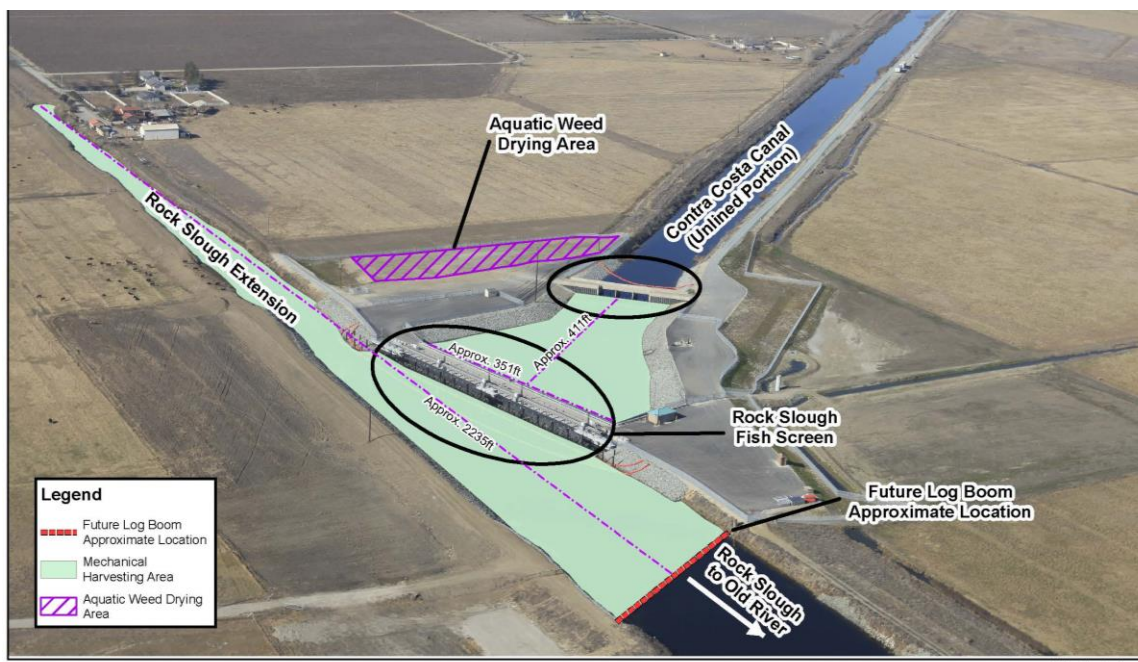


Figure 3 Proposed Mechanical Harvesting Project Details



Figure 4 Example of Mechanical Harvester (Source: <http://www.aquatic-weed-harvesting.com/>)

Environmental Commitments

Concurrence memorandums were received by Reclamation from the U.S. Fish and Wildlife Service on October 1, 2015 and from the National Marine Fisheries Service on October 9, 2015, and are included in Appendix B and Appendix C, respectively. CCWD will implement environmental commitments which are described in the concurrence memorandums to avoid any environmental consequences associated with the Proposed Action, as well as the following commitments listed by Reclamation:

- CCWD will coordinate the plan to mechanically harvest aquatic weeds in this area with the California Department of Boating and Waterways.
- Vegetation would be harvested so as to minimize risk of encountering giant garter snake. Snakes are more likely to be where cover/open water interface. Consequently, harvesting will be initiated near the center of vegetation that projects above the water's surface, allowing snakes to move outward toward the vegetation edge/open water interface and away from the disturbance).
- A preconstruction survey for migratory birds shall be conducted prior to mechanical harvesting if harvesting occurs between February 1 and August 30.

Environmental consequences for biological resources assume the measures specified will be fully implemented.

Exclusion Category

516 DM 14.5 C (3). *Minor construction activities associated with authorized projects which correct unsatisfactory environmental conditions or which merely augment or supplement, or are enclosed within existing facilities.*

Evaluation of Criteria for Categorical Exclusion

- | | | | |
|---|---|---------------------------------------|---------------------------------|
| 1. This action would have a significant effect on the quality of the human environment (40 CFR 1502.3). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 2. This action would have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA Section 102(2)(E) and 43 CFR 46.215(c)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 3. This action would have significant impacts on public health or safety (43 CFR 46.215(a)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 4. This action would have significant impacts on such natural resources and unique geographical characteristics as historic or cultural resources; parks, recreation, and refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); flood plains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas (43 CFR 46.215 (b)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 5. This action would have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks (43 CFR 46.215(d)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 6. This action would establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects (43 CFR 46.215 (e)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 7. This action would have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects (43 CFR 46.215 (f)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |

- | | | | |
|--|---|---------------------------------------|---------------------------------|
| 8. This action would have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by Reclamation (LND 02-01) (43 CFR 46.215 (g)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 9. This action would have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated critical habitat for these species (43 CFR 46.215 (h)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 10. This action would violate a Federal, tribal, State, or local law or requirement imposed for protection of the environment (43 CFR 46.215 (i)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 11. This action would affect ITAs (512 DM 2, Policy Memorandum dated December 15, 1993). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 12. This action would have a disproportionately high and adverse effect on low income or minority populations (EO 12898) (43 CFR 46.215 (j)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 13. This action would limit access to, and ceremonial use of, Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007, 43 CFR 46.215 (k), and 512 DM 3)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 14. This action would contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act, EO 13112, and 43 CFR 46.215 (l)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |

NEPA Action: Categorical Exclusion

The Proposed Action is covered by the exclusion category and no extraordinary circumstances exist. The Action is excluded from further documentation in an EA or EIS.

Appendix A

Cultural Resources Determination

CULTURAL RESOURCES COMPLIANCE
Division of Environmental Affairs
Cultural Resources Branch (MP-153)

MP-153 Tracking Number: 15-SCAO-235

Project Name: Contra Costa Water District's Proposed 2015 Rock Slough Mechanical Harvesting

NEPA Document: CEC-15-041

NEPA Contact(s): Rain Emerson, Natural Resources Specialist

MP-153 Cultural Resources Reviewer: BranDee Bruce, Architectural Historian

Date: August 10, 2015

Reclamation proposes to authorize the Contra Costa Water District (CCWD), pursuant to their operating agreement (Contract No. 14-06-200-6072A), to mechanically harvest aquatic weeds from the area in front of the Rock Slough Fish Screen (RSFS). The RSFS was constructed in 2011, but has suffered mechanical, safety, and operational issues that are currently being evaluated. The removal of aquatic weeds is one of those unresolved issues, as the existing rakes currently do not function properly. In order to continue testing a prototype rake at the RSFS, the mechanical harvester will remove the large mass of aquatic invasive weeds in four places: in front of the RSFS, near the Rock Slough Extension, downstream of the RSFS, and upstream of the headworks area. There are currently no boat ramps near the RSFS, so the harvester will be inserted by a crane near the RSFS. The weeds will be cut approximately 5 feet below water level. In areas with shallower water, the weeds will be cut close to the bottom of the canal/river, but will not result in any ground disturbance. Cut weeds will be dried on site and will either be removed or composted once dry.

Reclamation has determined that the proposed action involves the type of activity that does not have the potential to cause effects to historic properties, should such properties be present. In accordance with 36 CFR § 800.3(a)(1), Reclamation has no further obligations under 54 U.S.C. § 306108, commonly known as Section 106 of the National Historic Preservation Act (NHPA).

This document conveys the completion of the NHPA Section 106 process for this undertaking. Please retain a copy in the administrative record for this action. Should the proposed project change, additional NHPA Section 106 review, possibly including consultation with the State Historic Preservation Officer, may be required.

Appendix B

U.S. Fish and Wildlife Service Determination



United States Department of the Interior

FISH AND WILDLIFE SERVICE
San Francisco Bay-Delta Fish and Wildlife Office
650 Capitol Mall, Suite 8-300
Sacramento, California 95814

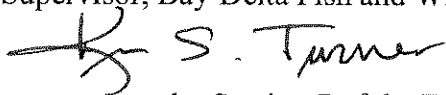


In reply refer to:
08FBDT00-2015-I-0046

NOV 09 2015

MEMORANDUM

To: David E. Hyatt, Supervisory Biologist, Bureau of Reclamation, Mid-Pacific Region, South-Central California Area Office, Fresno, California

From: Assistant Field Supervisor, Bay-Delta Fish and Wildlife Office, Sacramento, California


Subject: Request for Concurrence under Section 7 of the Endangered Species Act for Contra Costa Water District's Proposed 2015 Rock Slough Mechanical Harvesting (15-041)

This memorandum is in response to the Bureau of Reclamations' (Reclamation) September 16, 2015, request to initiate informal consultation with the U.S. Fish and Wildlife Service (Service) for the Contra Costa Water District's (CCWD) Proposed 2015 Rock Slough Mechanical Harvesting Project (project) located in Rock Slough near Oakley, Contra Costa County, California. CCWD has proposed to mechanically harvest aquatic vegetation that is located near the Rock Slough Fish Screen facility (RSFS) located at the entrance of the Contra Costa Canal. Reclamation has determined that this project may affect but is not likely to adversely affect the giant garter snake (*Thamnophis gigas*) and delta smelt (*Hypomesus transpacificus*) and its designated critical habitat and has requested the Service's concurrence with this determination. Your request was received in our office on September 21, 2015. This document is issued under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C 1531 *et seq.*) (Act).

In reviewing this project, the Service has relied upon: (1) the September 16, 2015, Reclamation memorandum requesting initiation of informal consultation for the proposed project; (2) documents from previous consultations related to the Rock Slough Fish Screen (Service File Numbers: 1-1-93-F-35, 81420-2009-I-1015-1 and 08FBDT00-2014-I-0012); (3) the October 13, 2015, Addendum to Project Description (4) electronic mails between Reclamation and the Service from May 2015 to November 2015 to refine the project description; and (5) other information available to the Service.

Construction on the RSFS by Reclamation began in 2009 in order to comply with requirements of the Central Valley Project Improvement Act and the Los Vaqueros Biological Opinion issued by the Service in 1993 (Service File No. 1-1-93-F-35). The purpose of the RSFS facility is to provide protection to the federally-listed species, while allowing water diversion to serve CCWD's water users. Reclamation consulted on the installation of the fish screen in 2009 with the Service (Service File No. 81420-2009-I-1015-1) concluding that the proposed construction of the fish screen is not going to result in any affects beyond those previously considered in the

Service's earlier documents. RSFS has been constructed and operating; however, the RSFS is still not protecting delta smelt as intended by the Central Valley Project Improvement Act and the Los Vaqueros Biological Opinion, since the fish screen experiences periods where it is blocked by aquatic vegetation and the rake cleaning system is unable to clean screen.

Since the RSFS was constructed in the fall of 2011, water hyacinth and primrose have become increasingly established in the area upstream of the outer log boom in front of the screen as well as within the Rock Slough extension. Since June 2015, CCWD has been attempting to operate the rakes in such a way to minimize the amount of materials lifted from the water since the debris loading in front of the screen exceeds the rated capability of the RSFS rakes. CCWD engineers believe that the only way to allow the rakes to operate without risk of failure is to mechanically harvest the large mass of growing weeds in and around the RSFS. It is important to harvest the weeds so that rake operations have as much flexibility as possible after November 1 when sensitive salmonids are more likely to stray into this area.

Proposed Action

CCWD has proposed to mechanically harvest aquatic vegetation that has accumulated in Rock Slough and Contra Costa Canal near RSFS. CCWD will contract out for mechanical harvesting of the aquatic vegetation. Since there are no boat ramps at the RSFS, the harvester will be deployed in the river by a crane placed in front of and behind the RSFS. The crane will be located on asphalt at the facility and no ground disturbance will occur. The harvester will then cut the weeds to a depth of approximately five feet below the water surface. In shallower areas (six feet deep or less), the harvester will cut the weeds as close to the bottom of the Rock Slough or Contra Costa Canal as practicable. No disturbance of the river's bottom is expected to occur. Cut aquatic vegetation will then be pulled up onto the harvester via conveyor belt until the harvester is full. Once full, the aquatic vegetation will be pulled off the harvester by the crane at the RSFS. The aquatic vegetation will be dried on site within the drying area that is currently used to dry aquatic weeds removed by the RSFS rakes. Once the aquatic vegetation has dried out sufficiently, it will either be removed or composted on site.

The area expected to be harvested is approximately 4 acres in front of the RSFS and approximately 2 acres behind the screen in Contra Costa Canal. Total duration is expected to take approximately one week to complete (one acre/day at approximately two miles per hour) during November 2015.

The following conservation measures for the giant garter snake and delta smelt are incorporated into the project description:

- All mechanical harvesting will be conducted during the Service's recommended in-water work window for the delta smelt, from August 1 through November 30.
- CCWD will coordinate the plan to mechanically harvest aquatic weeds in this area with the California State Parks Division of Boating and Waterways.

- Within 24-hours prior to the initiation of work activities, the action area shall be surveyed by a qualified biologist approved by the Service. If any giant garter snakes are found to be present during surveys all work will cease, the Service will be notified within 24 hours, and formal consultation with the Service will be initiated.
- CCWD will have a Service-approved biological monitor observe for GGS in the water during mechanical harvesting. Should any snake be observed, the biological monitor will have the authority to halt mechanical harvesting until the snake has left the area on its own. Any sightings of a snake will attempted to be photographed and then reported to the Service within 24-hours.
- Prior to conducting mechanical harvesting, a worker environmental training awareness program will be conducted by a qualified biologist approved by the Service. The training will include instruction regarding giant garter snake identification, natural history, habitat protection needs, and conservation measures to be implemented on site. Color photographs of the snake will be distributed during the training session and will be posted on site. New workers will be provided with all information from the training program. Environmental awareness training would be provided in a language other than English if necessary.
- Deposition of harvested vegetation would be limited to the designated area, and the Service-approved biologist would ensure that no potential upland borrows would be buried.
- The most recent survey results from ongoing fish monitoring would be checked to ensure that no federally-listed fishes have been seen in the action area, prior to conducting mechanical harvesting, and the harvesting delayed until the species is no longer found. Special-status fish species are not expected to use these dense areas of invasive plants.

Aquatic vegetation removes pelagic habitat for delta smelt while increasing favorable habitat for predators of the species and decreasing available oxygen, therefore it is unlikely for the delta smelt to be present during aquatic vegetation removal. This is further supported by drought conditions being experienced in the State of California and current distribution of delta smelt. The Service concurs with Reclamation's determination that the proposed action is not likely to adversely affect the delta smelt or its critical habitat due to the implementation of the proposed conservation measures, unlikely presence of delta smelt. Additionally, the proposed project is expected to result in improved screen operation which would be beneficial to the species, when the species is potentially in Rock Slough, by reducing potential for fish entrainment and impingement at the RSFS.

Usually proposed projects in or near suitable GGS habitat occur during the GGS active season, from May 1st to October 1st, to minimize effects to the species. Since, the proposed project does not include any upland ground disturbance and is entirely aquatic, the Service is providing an exception to the recommended work window because GGS should be in brumation and not foraging in aquatic habitats. The Service concurs with Reclamation's determination that the

proposed action is not likely to adversely affect the giant garter snake. This concurrence is based on the unlikely presence of GSS in the aquatic habitat, the implementation of the proposed conservation measures and avoidance of ground disturbance.

Unless new information reveals effects of the proposed action may affect listed species to an extent not considered or a new species or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the Act is necessary. Any actions or proposed actions that are modified in a manner that causes an effect to listed species or critical habitat that was not considered in this consultation will require reinitiation.

This concludes informal consultation for the Contra Costa Water District's Proposed 2015 Rock Slough Mechanical Harvesting Project. Please address any questions or concerns regarding this response to Armin Halston, Endangered Species Biologist, at Armin_Halston@fws.gov or (916) 930-5642 or Kim Squires, Section 7 Coordinator at kim_squires@fws.gov. Please refer to Service File No. 08FBDT00-2015-I-0046 in any future correspondence regarding the project.

cc: Mr. Mark Seedall, Contra Costa Water District, Concord, California

Appendix C

National Marine Fisheries Service Determination



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
650 Capitol Mall, Suite 5-100
Sacramento, California 95814-4700

SEP 30 2015

Refer to NMFS No: WCR-2015--3492

Mr. David E Hyatt
Chief, Resources Management Division
U.S. Bureau of Reclamation, Mid-Pacific Region
South-Central California Area Office
1243 N Street
Fresno, California 93721-1813

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens
Fishery Conservation and Management Act Essential Fish Habitat Response for the 2015
Rock Slough Mechanical Harvesting Project

Dear Mr. Hyatt:

On September 18, 2015, NOAA's National Marine Fisheries Service (NMFS) received your request for written concurrence (SCC-424, Env-7.00) that Contra Costa Water District's (CCWD) proposed 2015 Rock Slough Mechanical Harvesting Project is not likely to adversely affect (NLAA) species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

NMFS also reviewed the proposed action for potential effects on essential fish habitat (EFH) for Pacific Coast Salmon, designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation. In addition to winter-run and spring-run Chinook salmon, fall-run and late-fall-run Chinook salmon have the potential to be present in the action area and are managed under the Pacific Coast Salmon Fisheries Management Plan (FMP). As of January 20, 2015, habitat areas of particular concern (HAPCs) have been designated in the Central Valley of California within the FMP (PFMC 2014). However, within the action area, there are no HAPCs present, nor are there additional concerns to EFH for fall-run and late-fall-run Chinook salmon. In this case, NMFS concluded the action would not adversely affect Pacific Coast Salmon EFH. Thus, consultation under the MSA is not required for this action.



This letter underwent pre-dissemination review 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 concurrence letter 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 the NMFS California Central Valley Area Office.

Proposed Action

The U.S. Bureau of Reclamation (Reclamation) constructed the Rock Slough Fish Screen (RSFS) in 2009. The operation of CCWD's Rock Slough Intake was consulted on in the biological and conference opinion on the long-term operations of the Central Valley Project and State Water Project (NMFS 2009). Therefore, the continued maintenance of the RSFS is interrelated to NMFS (2009). There are no interdependent activities. CCWD is responsible for the daily operation and maintenance of the RSFS. The current rake cleaning system is unable to handle the large amounts of aquatic vegetation that end up on the fish screen. Therefore, the fish screen has been only partially operational since 2009.

Reclamation is in the process of testing a new prototype rake cleaning system. In order to test the new rake design and run the rake system, Reclamation has requested authorization for CCWD to use a mechanical harvester to remove the large mass of weeds in front of the RSFS and within Rock Slough. CCWD will contract out for a boat-mounted mechanical harvester to cut the weeds at a depth of approximately 5 feet below the water surface. The harvester will be deployed by a crane since there are no nearby boat ramps. No disturbance of the bottom substrate will occur. Cut weeds will be pulled up onto the harvester via a conveyor belt and then off loaded by the crane at the RSFS. The aquatic weeds will be dried on site within the drying area used by the RSFS rakes and then either removed or composted on site. The proposed timing of the harvester is anytime between October 1 and April 30 (Seedall 2015). Total time to harvest aquatic weeds is expected to take approximately one week to complete. CCWD will coordinate the mechanical harvest plan with the California Department of Boating and Waterways.

In addition, CCWD will relocate the existing log boom approximately 600 feet upstream (east) of its current location across Rock Slough. The log boom will be anchored on both sides with a 24-inch diameter concrete anchor, 8.5 feet (ft) deep, on a 6 ft x 6 ft x 1 ft concrete pad. Construction of the anchor will require access on the levee for a well drilling rig, concrete truck, backhoe, and pickup trucks. Construction of the anchors is expected to take up to 4 weeks to excavate soil and pour concrete. The new anchors will be constructed above the mean high tide level on the streamside banks of Rock Slough. CCWD will maintain the log boom with boats from the RSFS. Observations of fish at RSFS indicate that adult salmon and steelhead are not likely to be present from May 1 through September 30.

Action Area

The RSFS is located at the junction of the Contra Costa Canal and Rock Slough, which is part of the San Joaquin-Sacramento Delta (Delta), approximately four miles southeast of the City of Oakley in Contra Costa County, California (Latitude 37.97611°, Longitude -121.64125°).

The action area includes the waters in Rock Slough from 600 feet east of the RSFS to approximately 2,235 feet west to the terminus of Rock Slough. The areas to be harvested are approximately four acres in front of the RSFS and 2 acres behind the RSFS in the Contra Costa Canal. The upland areas include the RSFS paved yard where aquatic weeds will be dried, and two 6-ft by 6-ft concrete pads on either side of Rock Slough to support the log boom and block net.

The waterside areas, including those sections of the levee immediately adjacent to the RSFS, are sparsely vegetated, with dense riprap revetment, supporting very little riparian or aquatic vegetation. A cattle ranch directly across from RSFS contributes organic waste to the water. Cattle are allowed free access to the water and breakdown the banks. Rock Slough is a dead-end slough located off of the main migratory routes through the Delta for listed fish species. However, due to tidal action, salmon and steelhead occasionally stray into Rock Slough during the winter and spring, attracted by the fresh water draining out of Contra Costa Canal. Aquatic weeds prevent the efficient operation of the RSFS and harbor high densities of non-native fish which can prey on juvenile salmonids. Removing the aquatic weeds reduces the habitat available for predators and reduces the probability that adult salmon and steelhead will be trapped on the RSFS during cleaning operations.

The action area encompasses waterways where the following listed species are present: endangered Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*), threatened Central Valley (CV) spring-run Chinook salmon (*O. tshawytscha*), threatened California CV steelhead (*O. mykiss*), and the threatened Southern distinct population segment (sDPS) of North American green sturgeon (*Acipenser medirostris*). Critical habitat is designated for the sDPS of green sturgeon within Rock Slough. The primary constituent elements (PCEs) of the designated critical habitat for green sturgeon sDPS relevant to the action area are food resources, water flow, water quality, migratory corridor, water depth, and sediment quality. Listed salmonids have the greatest potential to occur in the action area primarily from November to June, based on the timing of adult and juvenile migrations in and through the waterways of the Delta. Green sturgeon presence is presumed to be year-round within the action area.

Reclamation's Effects Determinations

Reclamation determined that the proposed action may affect, but is NLAA Sacramento River winter-run Chinook salmon, CV spring-run Chinook salmon, California CV steelhead, and the sDPS of North American green sturgeon. In addition, Reclamation has determined that the proposed action is NLAA for sDPS of green sturgeon critical habitat and Pacific Coast Salmon EFH. This determination is based on the harvester having an insignificant potential to harm listed fish species since listed fish are not present in the weeds. Monitoring of the area in front of the RSFS has only found non-native fish (*i.e.*, bass, bluegill, catfish) that typically prey on juvenile salmonids (Tenera 2013-2015).

Consultation History

- May 29, 2015, site visit to RSFS and meeting with CCWD, Reclamation, and the U.S. Fish and Wildlife Service to recommend actions to improve operations.

- On September 18, 2015, Reclamation sent to NMFS a letter requesting concurrence for its proposed Mechanical Weed Harvesting project.
- NMFS has reviewed the request and determined that the information provided is sufficient to initiate informal consultation.

ENDANGERED SPECIES ACT

Under the ESA, “effects of the action” means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is NLAA listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

The effects of the proposed action are likely to include minor changes to the immediate habitat in Rock Slough that are insignificant compared to the larger habitat available in the Delta. A small area (36 square feet) on each bank above the high-water line would be covered by a concrete pad/anchor. Currently, this area consists of rock rip-rap. No riparian vegetation would be removed. Removal of aquatic weeds within Rock Slough would improve the condition of the area available for juvenile salmonids and green sturgeon to rear in. The habitat in Rock Slough is of poor quality and highly modified. Due to the accumulation of aquatic weeds the RSFS can only be operated at ebb tides. Mechanical removal of the aquatic weeds is expected to be beneficial, and include: 1) reduced juvenile predation; 2) improved fish protection (*i.e.*, screen efficiency); and 3) eliminating adult mortality during fish screen maintenance.

The effects of the proposed action are considered beneficial to listed fish species since it will reduce adult entrainment at the RSFS and improve habitat conditions in Rock Slough. The effects to green sturgeon critical habitat are considered positive because they improve the PCEs (*e.g.*, water flow, water quality) within the action area. Water quality in the action area is reduced by the large mats of weeds that negatively impact dissolved oxygen (DO) when they die and sink to the bottom. NMFS assumes that by improving the efficiency of the RSFS, listed fish species will have a higher likelihood of not being entrained on the fish screen (for both juveniles and adults). Since the weed removal is being done by mechanical harvester, there will not be any water quality impacts (*e.g.*, decreased DO) that would be carried out to the larger Delta where there is designated critical habitat for California CV steelhead.

Conclusion

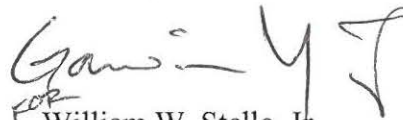
Based on this analysis, NMFS concurs with Reclamation that the proposed action is not likely to adversely affect the subject listed species and designated critical habitat.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by Reclamation or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

Please direct questions regarding this letter to Bruce Oppenheim, Fishery Biologist, California Central Valley Area Office at 916-930-3603 or bruce.oppenheim@noaa.gov.

Sincerely,



William W. Stelle, Jr.
Regional Administrator

cc: File copy -ARN #151422WCR2015SA00163

Mark Seedall, Contra Costa Water District, P.O. Box H20, Concord, CA 94524-2099
Carl Dealy, U.S. Bureau of Reclamation, 16650 Kelso Road, Byron, CA 94514-1909
Armin Halston, U.S. Fish and Wildlife Service, 650 Capitol Mall, Suite 8-300,
Sacramento, CA 95814-4700

References cited:

NMFS 2009. Biological and conference opinion on the long-term operation of the Central Valley Project and State Water Project. NMFS-Southwest Region, Long Beach, California. 844 pages plus appendices. June 4.

PFMC (Pacific Fisheries Management Council). 2014. Appendix A to the Pacific Coast Salmon Fishery Management Plan. As modified by Amendment 18 to the Pacific Coast Salmon Plan. 227 pp.

Seedall, M. 2015. E-mail from Mark Seedall, CCWD, to Shauna McDonald, Reclamation, regarding the proposed timing of the mechanical harvesting of aquatic weeds in Rock Slough. September 18.

Tenera Environmental (Tenera). 2013-2015. Unpublished data collected from the aquatic weeds removed from the Rock Slough Fish Screen. October through June. Lafayette, CA.