Appendix H: Biological Opinion from the U.S. Fish and Wildlife Service

McDonald, SHAUNA <smcdonald@usbr.gov>

Re: Cypress Preserve Residential inclusion letter

1 message

Jentsch, Stephanie <stephanie_jentsch@fws.gov> Mon, Jul 30, 2018 at 4:51 PM
To: "McDonald, SHAUNA" <smcdonald@usbr.gov>
Cc: Abby Fateman <abigail.fateman@dcd.cccounty.us>, "Farinha, Melissa@Wildlife" <Melissa.Farinha@wildlife.ca.gov>, Mark Seedall <mseedall@ccwater.com>, Owen Poole <owen@realestatesvs.com>, jeff <jeff@olberdingenv.com>, Rain Emerson <remerson@usbr.gov>, "Ha, Peck SPK" <peck.ha@usace.army.mil>

Hi Shauna,

The Section 7 letter as written covers all the impacts of the project and references documents that provide a full description of all the actions. Also, we don't typically specifically describe federal actions other than those of the lead agency for the consultation.

I'm hoping that providing this email that clarifies that the document as written covers all of Reclamation's actions and covers all the impacts associated with the propose project will suffice to address those concerns.

Thanks,

Stephanie Jentsch
Senior Wildlife Biologist
U.S. Fish and Wildlife Service
Conservation Planning Division
2800 Cottage Way, Room W-2605
Sacramento, CA 95825
(916) 414-6496

On Thu, Jul 19, 2018 at 2:09 PM, McDonald, SHAUNA <smcdonald@usbr.gov> wrote:

> Hi Stephanie. Thank you again for the fast work on this. We did look it over and we had one small concern. We are sure all the actual impacts are covered, but we noticed that our main action is named, but not the lands-related actions, and also the Corps project number is stated, but their actions aren't named. We are hoping the Service can do a revision to add those in, and again we think the impacts are completely covered but just some actions weren't named. We just want it to be clear to anyone down the road that might need to pull this up that nothing was left out.
>
> Here is what we are asking to be added (in underlined text), right after your text in italics. Let me know if we need to send this request via letterhead, and I will do that, no problem. I just figured I'd try emailing you first and then can go the other route if necessary.
>
> *The federal action<u>s</u> on which we are consulting <u>include</u> Reclamation's approval of the inclusion of the Cypress Preserve Development Project into Contra Costa Water District's (CCWD) service area for Central Valley Project (CVP) water <u>as well as Reclamation's land actions to authorize the widening of East Cypress Rd over the Contra Costa Canal, and construction of levees within the Reclamation right of way adjacent to the Contra Costa Canal. Additionally, the U.S. Army Corps of Engineers designated Reclamation as the lead Federal agency on December 7, 2015, and therefore we are also consulting on the proposed issuance of a standard individual permit pursuant to section 404 of the Clean Water Act, as well as a permit under section 10 of the Rivers and Harbors Act of 1899.</u>*
>
> Thanks.
>
> On Fri, Jun 29, 2018 at 3:40 PM, Jentsch, Stephanie <stephanie_jentsch@fws.gov> wrote:
>
> > Hi Shauna,
> >
> > The signed section 7 letter for the Cypress Preserve Development is attached. Hard copies are in the mail.
> >
> > Thanks,

> Stephanie
>
> Stephanie Jentsch
> Senior Wildlife Biologist
> U.S. Fish and Wildlife Service
> Conservation Planning Division
> 2800 Cottage Way, Room W-2605
> Sacramento, CA 95825
> (916) 414-6496

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
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In Reply Refer to:
08ESMF00-
2016-I-2376

JUN 29 2018

Memorandum

To: Chief, Resource Management Division, U.S. Bureau of Reclamation, South-Central California Area Office, Fresno, California (Attn: Shauna McDonald)

From: Field Supervisor, Sacramento Fish and Wildlife Office, Sacramento, California

Subject: Section 7 Consultation on the Proposed Cypress Preserve Development Project Inclusion (Reclamation file No.15-049; SPK-2014-01048)

This memorandum is in response to the U.S. Bureau of Reclamation's (Reclamation) January 21, 2016, request for initiation of consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Cypress Preserve Development Project (proposed project) in the City of Oakley, Contra Costa County, California. Your request for formal consultation on the threatened delta smelt (*Hypomesus transpacificus*) and it's designated critical habitat and the threatened giant garter snake (*Thamnophis gigas*) was received by the Service on January 25, 2016. This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

The federal action on which we are consulting is Reclamation's approval of the inclusion of the Cypress Preserve Development Project into Contra Costa Water District's (CCWD) service area for Central Valley Project (CVP) water. Reclamation has a long-term contract with CCWD (Contract No. 175r-3401A-LTR1), renewed in 2005 for a period of 40 years, to deliver CVP water for municipal and industrial use. Reclamation's CVP water can only be used within the service area for CVP water as specified in the long-term contract. Reclamation must include the area for the East Cypress development into the service area in CCWD's contract in order for CVP water to be delivered there. Reclamation consulted on the long-term contract for CVP water with the Service. The Service issued a biological opinion on CCWD's Future Water Supply Implementation Program on March 11, 2005 (Service File Number 1-1 -04-F-0082) and a biological opinion regarding effects to delta smelt on the operation of the CVP and State Water Project on December 15, 2008 (Service File Number 81420-2008-F-1481-5). The proposed inclusion would not increase any water diversions. The water that would be delivered to the proposed project has already been consulted on. Therefore, only the effects from the water delivery and construction and implementation of proposed project are at issue.

This memorandum was prepared based on: (1) information provided in Reclamation's January 21, 2016, letter; (2) the *Planning Survey Report and HCP/NCCP Application (PSR) for the Cypress Preserve Project* dated May 25, 2018; (3) the *ACD-TI Oakley, LLC, Cypress Preserve Project Biological Assessment* dated January 2016, (4) the *East Contra Costa County Habitat Conservation Plan/Natural Communities Conservation Plan* dated October 2006; and (5) other information available to the Service.

The proposed project is located within the East Contra Costa County (ECCC) Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP) inventory area and is eligible for coverage under the HCP/NCCP. Provided the applicant fulfills their obligations under the HCP/NCCP and complies with all applicable Incidental Take and Minimization Measures and Conditions required by the HCP/NCCP, take of listed species covered by the HCP/NCCP resulting from the proposed project will be authorized through the HCP/NCCP's incidental take permit (Fish and Wildlife Permit No.: TE-160958-0). The effects to listed species that would result from the issuance of this incidental take permit were analyzed in the Service's July 20, 2007, *Intra-Service Biological Opinion on Issuance of a Section 10(a)(1)(B) Incidental Take Permit for the Contra Costa County, the Contra Costa Flood Control and Water Conservation District, the East Bay Regional Park District, and the Cities of Brentwood, Clayton, Oakley, and Pittsburg for Implementation of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan.* The giant garter snake is a covered species in the ECCC HCP/NCCP and will not be addressed further in this document.

The delta smelt and its designated critical habitat is not a covered species in the ECCC HCP/NCCP. Therefore, the remainder of this document addresses effects of the proposed project on the delta smelt and its critical habitat. In a December 6, 2017, email, Reclamation amended their determination for the delta smelt and its critical habitat to a not likely to adversely affect determination due to the fact that bridge construction would be conducted during a time of year when the delta smelt is not expected to be present, as well as the small area of impact to low-quality habitat, and absence of any recent delta smelt captures despite regular monitoring.

The proposed project includes construction of a residential development and associated infrastructure including a bridge over Rock Slough in the same location as CCWD's existing Rock Slough fish screen log boom. On November 2, 2017, the Service issued an Amendment of the 2005 Biological Opinion on the Operations and Maintenance Program Occurring on Bureau of Reclamation Lands within South-Central California Area Office (Service File Number: 1-1-04-F-0368) to include the Rock Slough Fish Screen Facility Improvement Project (Service File Number 08FBDT00-2017-F-0072) which included the relocation of the CCWD log boom. Although the log boom relocation is interdependent with the construction of the new bridge over Rock Slough, the log boom relocation was analyzed in Reclamation's biological assessment for the Rock Slough Fish Screen Facility Improvement Project and subsequently included in the Service's November 2, 2017 amendment. Therefore, the log boom relocation will not be addressed in this document.

Two components of the proposed project have the potential to affect delta smelt and its critical habitat: construction of the Rock Slough Bridge and the periodic release of treated stormwater.

Rock Slough Bridge

The Rock Slough Bridge will span Rock Slough and connect with Byron Highway to the south. The structure will be comprised of three spans of precast-prestressed concrete voided slab girders sitting on reinforced concrete two-column piers and seat-type abutments. The total length of the span will be approximately 220 feet and the width will be approximately 56 feet. The length of the bridge over the slough will be approximately 210 feet; a total of 12,320 square feet (0.028 acre) of structure over Rock Slough will result from construction of the bridge. The bridge will initially provide one lane in each direction, shoulders on both sides, and a sidewalk on both sides. The height of the bridge will be a minimum of 10 feet above Mean Higher High Water to allow for aquatic vegetation mechanical harvesting equipment that may be used in Rock Slough as part of CCWD's aquatic vegetation management program. The bridge will not require painting.

Construction of the Rock Slough Bridge involves both in-water and land-based activities. In-water construction activities in Rock Slough will include installing pin piles for pile driving templates and

falsework trestle piles to support two temporary work trestles (work platforms), installing permanent cast-in-steel-shell (CISS) piles, removing the pin piles, falsework trestle piles, and temporary work trestles, removing existing rock rip-rap prior to construction of the abutments, and replacing the rock rip-rap after construction of the abutments.

Two temporary work trestles will be constructed on both ends of the bridge to provide working platforms during bridge construction. Prior to construction of the work trestles, twenty-four (24) 14-inch steel pin piles for pile driving templates will be installed using a vibratory hammer; use of an impact hammer is not anticipated. Each work trestle will be supported by six (6) 24-inch steel trestle piles installed in the water and two (2) 24-inch steel trestle piles installed on land, for a total of twelve (12) 24-inch piles installed in the water and four (4) installed on land. The 24-inch steel shell pipes for the construction of the temporary trestles will be imbedded approximately 40 feet and will be installed by vibratory hammer. The work trestles will be 30 feet wide and will extend approximately 50 feet over the water in Rock Slough from each side. The steel trestle piles will initially be driven into the bottom of the slough with a vibratory hammer; it may be necessary to use an impact hammer to drive the final length. Sound generated from driving the temporary piles will be attenuated by installing and operating either a bubble curtain/bubble tree or some other form of agency-approved attenuation device.

The permanent bridge piles will require driving four sets (8 total) of 48-inch diameter CISS piles in Rock Slough. The CISS piles consist of a steel shell containing a reinforced concrete core. The CISS piles will initially be driven into the bottom of the slough with a vibratory hammer; it is likely that an impact hammer be used to drive the final length. Based on similar projects, it is assumed that the CISS permanent piles will be imbedded 60–80 feet with the final length dependent on geotechnical subsoil strength characteristics. The contractor will install the permanent shell for the CISS piles within oversized steel casings. Sound generated from driving the permanent piles will be attenuated by either maintaining a dewatered void within the oversize steel casings or allowing water to fill the space within the oversized steel casings and installing and operating a bubble curtain or bubble trees between the casings and the permanent piles throughout the pile driving operation. During pile installation, noise will be monitored and limited to a predetermined threshold.

Abutments will be placed on land at the north and south ends of the bridge. The abutments will be constructed above the 300-year flood elevation, and will not require any in-water work. The slopes of both sides of Rock Slough have existing rock rip-rap extending from the waters of Rock Slough to the tops of the levee roads. A portion of this existing rip-rap would be temporarily removed to allow construction of the abutments and work trestles. No new rock rip-rap will be required to armor the abutments in order to prevent scour and erosion.

Generalized construction activities and sequences will likely include the following steps:

1. Conduct fill and grade activities at each end of the new bridge associated with the construction of two temporary construction trestles from which the in-water work will be conducted (in-water work).
2. Use a vibratory hammer to install approximately sixteen (16) 24-inch steel trestle piles (in-water work) (2 of which will be installed on land) to support two temporary work trestles and (24) 14-inch steel pin piles for pile driving templates. Each work trestle would be 30 feet wide and extend approximately 55 feet into Rock Slough from each side.
3. Drive two (2) sets of four (4) (8 total) 48-inch diameter CISS piles at approximately 55 feet from each abutment using a vibratory hammer and an impact hammer if necessary (in-water work).
4. Form and pour concrete pile bent caps at each set of pile locations (land-based work).

5. Remove concrete forms and place precast concrete bridge support girders (land-based work).
6. Form and pour concrete bridge deck (land-based work).
7. Remove bridge deck form work (land-based work).
8. Remove the temporary trestle piles, temporary pin piles, and temporary work trestles (in-water work).
9. Drive sheet piles to enable abutment construction within slough limits yet outside and above water limits (land-based).
10. Excavate and form/reinforce/pour abutments (land-based work).
11. Complete placement of scour/erosion measures and final grading at abutments (land-based work).

It is anticipated the in-water work associated with construction and removal of the temporary work trestles and installing the permanent bridge piles can be completed within one season's work window (August 1–October 15) but replacement of the existing rip-rap rock slope protection (RSP) may need to occur in the following year's work window after completion of the concrete bridge. The first year's in-water work will include pile driving (vibratory) for temporary work trestles, CISS pile driving (vibratory first and impact only if necessary) and placement, and removal of the temporary work trestles and templates. It will take approximately three weeks to construct the trestles, including driving the in-water 14-inch steel pin piles and the 24-inch steel trestle piles. The length of time to vibrate in each CISS pile is estimated at four (4) hours per pile. If an impact hammer must be used to drive or proof the piles, it is estimated to take two (2) hours per pile. Driving of the eight (8) CISS 48-inch piles will be scheduled to occur over four days.

The bridge will result in permanent loss of 100.5 square feet (0.002 acre) of benthic substrate and 55.9 cubic yards of water column volume from the permanent bridge piles, and the degradation of 9,565 square foot (0.22 acre) of low quality delta smelt habitat by shading from the bridge.

Stormwater

The current discharge of all surface water runoff within the proposed project area is to Dutch Slough and Sandmound Slough through existing pump stations that are owned and operated by Reclamation District (RD) 799. The existing pump stations were constructed to handle the agricultural runoff that occurs during irrigation of the agricultural land within the proposed project boundary. While the existing pump stations can accommodate the calculated surface water runoff from the Project, RD799 has plans to upgrade Pump Stations 2 and 4 to provide service redundancy and modernize their facilities. These upgrades will not involve impacts to aquatic habitat.

The proposed project's storm drain system will replace the existing network of open drainage ditches that currently collect and drain existing untreated surface water to RD799 Pump Stations 2 and 4. All proposed project-generated runoff is designed to drain to a system of central lakes that are proposed as part of the proposed project storm drain system. The proposed lakes will provide water quality enhancement features in addition to providing stormwater detention. Surface water runoff from the existing residences along East Cypress Road and Bethel Island Road (referred to as non-project areas), will be collected in the proposed project's comprehensive drainage system, including within the lakes, and pumped over the proposed project interior levee and discharged into existing RD799 drainage canals.

The proposed project includes stormwater pump stations to move surface water runoff from within the interior of the urban levee to the inter-levee area. The northerly lift station will move runoff from both the non-Project (Bethel Island Road, East Cypress Road, and existing residential areas south of East Cypress Road) and proposed project areas within the interior levee over the levee to

the RD799 drainage canal that flows to Pump Station 2. There will be no levee penetration associated with moving the water over the new levee. The southerly lift station located on the southeastern portion of Project Area will discharge surface water runoff from the Dal Porto South and Bethel Island LLC properties and runoff from the southern phase of the Summer Lake project over the interior levee to Pump Station 4.

Creation of the on-site lakes will be incorporated as part of the stormwater control plan. The surface area of the lakes is estimated to be approximately 32 acres. The on-site lakes will be of sufficient volume/capacity to retard peak stormwater flows by retaining stormwater. Balance Hydrologics (2015 as cited in the biological assessment) determined that the resultant peak discharge from the lake system will not be greater than the current peak discharge from the irrigated pasture land. Because the lakes will include clay liners to separate them from the shallow ground-water system, loss of water from the lakes through seepage will be extremely small, if it occurs at all (Balance Hydrologics 2015 as cited in the biological assessment). However, there will still be substantial losses of water from the lakes due to evaporation, particularly during the hot, dry summer period. Balance Hydrologics (2015 as cited in the biological assessment) provided preliminary calculations of evaporation rates for the lakes based on the pan evaporation record from Antioch. The calculations show that runoff into the lakes can be expected to equal or exceed evaporation rates over the long term for the months of October–April. Balance Hydrologics (2015 as cited in the biological assessment) determined that make-up water will be needed to maintain lake water surface elevations during the period from May–September, with the predicted maximum evaporation excess of 8.1 inches in July. This is equivalent to a make-up water demand of roughly 22 acre-feet in the month of July just to replace water lost to evaporation. Other water-quality management considerations in the lakes will likely call for additional make-up water, with the amounts varying by year and season. These make-up demands will be met through augmentation using groundwater from appropriately sited wells; no make-up water will be withdrawn from the Delta. Balance Hydrologics (2015 as cited in the biological assessment) calculated that the summer demands could be largely offset, if desired, through the implementation of rainwater harvesting using the lakes as a central storage component.

Mitigation of potential water-quality impacts shall be carried out on a property-by-property basis within the proposed project. Each developer shall be required to comply with applicable regulations and standards pertaining to water quality both during and after construction. The regulations and standards include those associated with the National Pollutant Discharge Elimination System permit as administered by the City of Oakley, the County of Contra Costa (through the Contra Costa Clean Water Program), and the Central Valley Regional Water Quality Control Board.

Compliance shall be documented in Stormwater Management Plans (SWMP) for each development as it is permitted. The SWMP document shall describe the strategy for maintaining and/or enhancing the quality of stormwater runoff including the specific measures that will be implemented. The measures shall include a framework of best management practices that have proven effective at numerous locations throughout the state.

Source control of pollutants limits the release of pollutants into the stormwater system and serves an important early role in reducing urban pollutants. The following source control measures are included in the stormwater Control Plan:

- Regular street sweeping by the City of Oakley;
- Development of chemical application management plans;
- Training for all landscaping staff;
- Cleaning of storm drain inlets;
- Stenciling of all storm drain inlets with the words “No Dumping”; and

- Outreach and education programs regarding source control would be carried out by the City and County through the ongoing programs of the Contra Costa Clean Water Program.

The lakes proposed for the site would serve as a central treatment control element for much of the Project. The lake designs would incorporate a number of features that would serve to improve the quality of water that is stored and pumped from the lakes that eventually reaches the adjacent sloughs. Each lake would be lined to eliminate contact with the shallow ground water that characterizes the area. The lakes would also include aeration, circulation, and filtration systems to improve control of nutrient loads and algal growth. In addition, the lake pump stations would be programmed so that the required stormwater treatment volume is detained in the lake system for a minimum of 48 hours to enhance the removal of sediment, biological uptake, photodegradation and other pollutant removal mechanisms.

The Applicant will ensure that the proposed bridge will be designed so that no stormwater from the bridge will drain into Rock Slough since this could impact the water quality at CCWD's Rock Slough Fish Screen Intake.

The Service concurs that effects resulting from Reclamation's inclusion of the Cypress Preserve Development project into CCWD service area for Central Valley Project water will not adversely affect delta smelt or its designated critical habitat. Rock Slough is a dead-end slough with poor habitat for delta smelt and very few delta smelt have been sampled over the years of monitoring at the Rock Slough Fish Screen. In water work for the Rock Slough Bridge will be conducted in summer and fall when delta smelt are not present. The Rock Slough Bridge will result in a small amount of permanent loss of low quality habitat that does not contain the primary constituent elements of its critical habitat. The treated stormwater discharges, as described, may be an improvement to the baseline agricultural discharges.

As provided in 50 CFR §402.16, reinitiation of formal consultation is required and shall be requested by the Federal agency or by the Service where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and:

(a) If the amount or extent of taking specified in the incidental take statement is exceeded;
(b) If 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;
(c) If 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 the biological opinion; or
(d) If a new species is listed or critical habitat designated that may be affected by the identified action.

If you have any questions regarding this response, please contact Stephanie Jentsch, Wildlife Biologist (Stephanie_jentsch@fws.gov) or Ryan Olah, Coast Bay Division Chief (ryan_olah@fws.gov), at the letterhead address or at (916) 414-6496.

cc:
Jim Starr, California Department of Fish and Wildlife, Napa, California
Abby Fateman, East Contra Costa County Habitat Conservancy, Martinez, California