CALIFORNIA ENVIRONMENTAL QUALITY ACT
ADDENDUM

to the

MITIGATED NEGATIVE DECLARATION
PREVIOUSLY ADOPTED BY THE
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE AS LEAD AGENCY

for the

SUTTER NATIONAL WILDLIFE REFUGE LIFT STATION PROJECT
(SCH No. 2018062073)

AMENDMENT TO
MITIGATION MONITORING AND REPORTING PLAN

SEPTMEBER 2022

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1. Introduction

The Bureau of Reclamation (Reclamation) with Ducks Unlimited, Inc. (DU) proposes to make minor changes to the Mitigation Monitoring and Reporting Plan (MMRP) for the Sutter National Wildlife Refuge Lift Station Project (Project). The Project was originally evaluated in the *Sutter National Wildlife Refuge Lift Station Project Final Environmental Assessment/Initial Study (EA 17-26-MP)*.

The purpose of this Addendum is to describe the proposed minor changes to the Project and provide substantial evidence explaining why the California Department of Fish and Wildlife (CDFW) has decided not to prepare a subsequent Environmental Impact Report (EIR) or negative declaration in compliance with §15162, Title 14, California Code of Regulations (CCR). Pursuant to §15164, this Addendum is required because only minor technical changes and additions are necessary to make the adopted Final Mitigated Negative Declaration (Final MND) adequate under CEQA. This Addendum identifies all new information of substantial importance since adoption of the Final MND and supports CDFW's conclusion that the proposed revised MMRP as described herein does not create any of the conditions in §15162 or Cal. Pub. Res. Code §21166 requiring the preparation of a subsequent EIR. The Final MND retains informational value to facilitate meaningful review of this action.

This Addendum will be maintained in the websites of CDFW and the State Clearinghouse. The document is available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=202370 and https://ceqanet.opr.ca.gov/Project/2018062073. The custodian of these documents is Jeffrey Shu who can be reached by email at Jeffrey.Shu@wildlife.ca.gov or at (916) 445-8572. The documents and other materials that constitute the record of proceedings on which CDFW will consider adoption of the Addendum to the Final MND include but are not limited to:

- August 2019*, Sutter National Wildlife Refuge Lift Station Project Final Environmental Assessment/Initial Study (EA 17-26-MP)* adopted by U.S. Bureau of Reclamation (Reclamation) and CDFW in 2019
- August 28, 2019, *Mitigated Negative Declaration for the Sutter National Wildlife Refuges Lift Station Project* adopted by CDFW in 2019
- February 12, 2021, *Letter from Ducks Unlimited to Reclamation, Interior Region 10 re: Sutter National Wildlife Refuge (NWR) Lift Station Project – Need for Revisions to Some Conservation Measures*
- February 17, 2022, *Memorandum from Reclamation, Bay-Delta Office to U.S. Fish and Wildlife Service (FWS), Sacramento Fish and Wildlife Office re: Revised Conservation Measures for the Proposed Sutter National Wildlife Refuge Lift Station Project (SLSP), Sutter County, California*
- April 11, 2022, *Memorandum from FWS, Sacramento Fish and Wildlife Office to Reclamation, Bay-Delta Office Bay re: Reinitiation of Formal Consultation on the Proposed Sutter National Wildlife Refuge Lift Station Project in Sutter County, California (Bureau File Number BDO-100 2.2.1.06)*

2. CEQA Requirements

In accordance with the CEQA Guidelines (§15164(b), Title 14, CCR), "An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary but none of the conditions described in §15162 calling for preparation of a subsequent EIR or negative

declaration have occurred." Specifically, §15162 states that, for a project such as this one with an adopted MND, "no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
    (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
    (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
    (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Under a scenario in which minor technical changes or additions to the previously adopted MND or certified EIR are necessary, but none of the changes or additions meet the standards for a Subsequent EIR, the lead agency is directed to prepare an addendum to the previous document (§15164). The addendum should include "a brief explanation of the decision not to prepare a subsequent EIR pursuant to §15162," and "the explanation must be supported by substantial evidence." (§15164(e)). Public review of an addendum is not required, "but can be included in or attached to the final EIR or adopted negative declaration." (§15164(c)).

3. Summary of Project

U.S. Bureau of Reclamation (Reclamation) and CDFW are lead federal and state agencies for National Environmental Policy Act and California Environmental Quality Act, respectively. Reclamation and its partners, the U.S. Fish and Wildlife Service (FWS) and Ducks Unlimited (DU), propose to construct the Sutter National Wildlife Refuge (SNWR) Lift Station. The Project would further the goals and objectives of the CVPIA Refuge Water Supply Program by improving refuge water availability and capacity for Level 2 and Incremental Level 4 water supplies at the SNWR.

The proposed project consists of the following elements:

(1) construction of a lift station with four vertical-turbine pumps located approximately 200 feet upstream of California Department of Water Resources' Weir No. 2 structure and on the west side of the East Borrow Ditch;
(2) installation of approximately 700 feet of 54-inch diameter buried pipeline from the proposed pump station to a new concrete distribution box;
(3) construction of a new concrete distribution box connected to the new buried pipeline and existing internal refuge water conveyance facilities;
(4) installation of two cylindrical fish screens fitted to the new pump station intakes;
(5) improving internal maintenance roads; and
(6) installing infrastructure to supply power to the pump station. The above elements are located on lands owned by the FWS and the state of California.

Figure 1 Proposed Action/Project Area Access

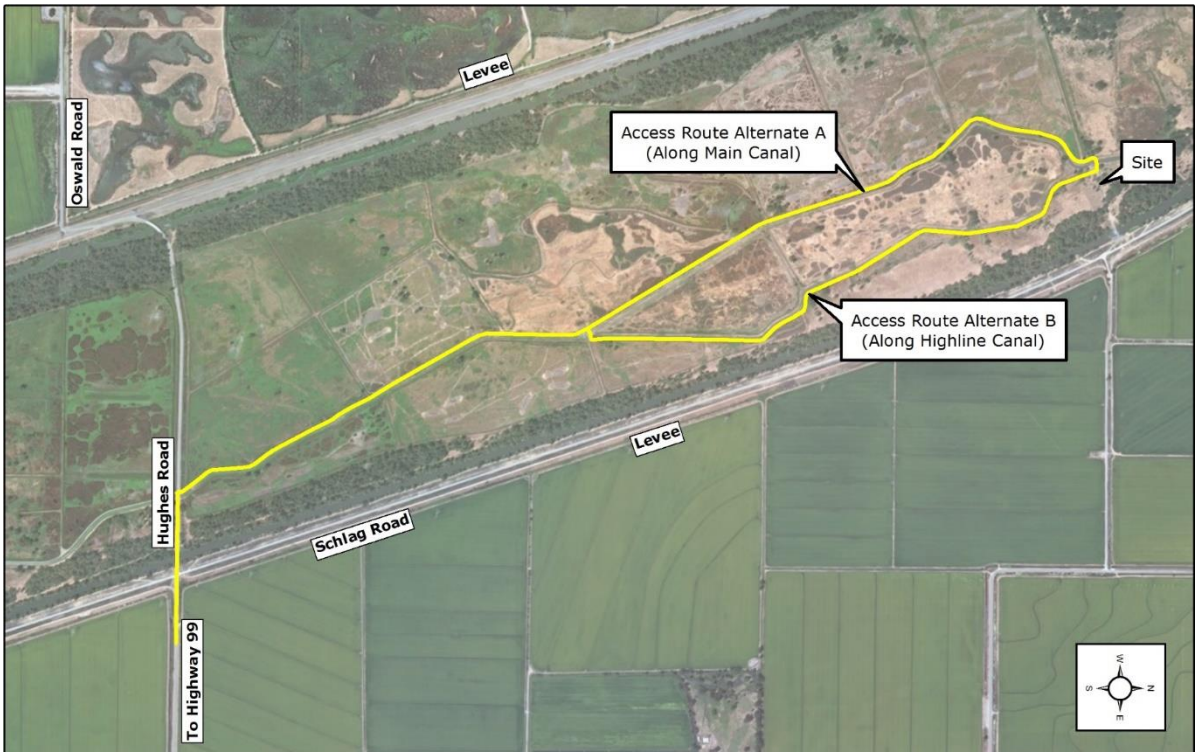
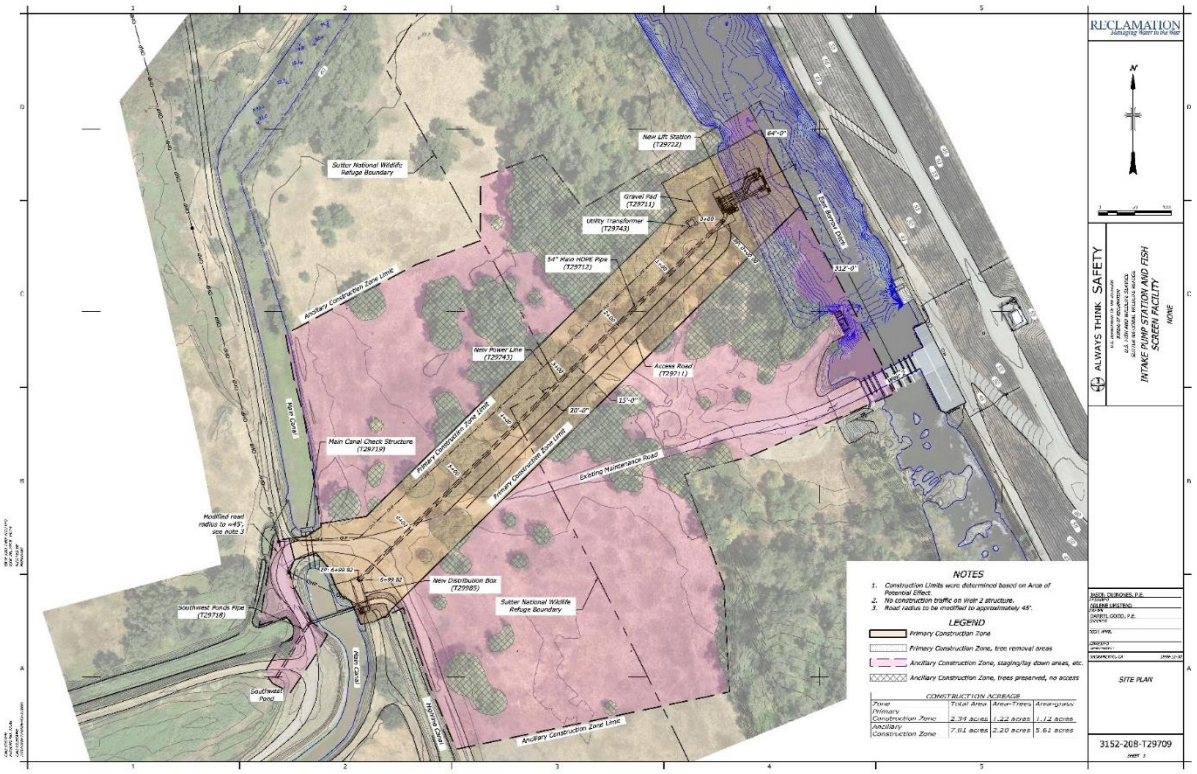


Figure 2 Proposed Action/Project Area



4. Proposed Changes to the Approved Project

The proposed changes to the MMRP will have text in *italics* to show additions and ~~strikeout~~ to show deletions. The clean and complete version of the MMRP in table format can be found in **Appendix A**.

The following special status fish (FISH) mitigation measures are proposed to be changed:

- FISH-1: Contractor shall perform any in-water construction activities *in the East Borrow Ditch and Main Canal* between July 1 and October 31 to avoid impacting fish during migratory periods. When in-water work is conducted *in these areas*, a qualified biologist shall be present during such work to monitor construction activities and ensure compliance with mitigation requirements and permit terms and conditions.

The following giant garter snake (GGS) mitigation measures are proposed to be changed:

- GGS-2: Twenty-four hours prior to the commencement of construction activities, *suitable habitat within* the construction area will be surveyed for GGS by a USFWS/CDFW-approved monitoring biologist to determine if GGS are likely to be present *and to determine any specific actions that need to be taken in those areas to avoid or reduce impacts on GGS (e.g., above-ground vegetation removal, micro or macro excavation to remove burrows, and rip rap removal as described in conservation measures 12, 13, and 14 below). The monitoring biologist will provide USFWS and CDFW with a written report that documents the results of the survey effort within 24 hours of commencement of construction activities*. ~~The monitoring biologist will advise~~

~~work crews on areas to be avoided to avoid effects to GGS. If the monitoring biologist determines GGS are likely in the area, construction will be delayed and USFWS and CDFW will both be notified.~~ *The monitoring biologist will be present during all initial vegetation clearing, site preparation, and ground-disturbing activities within suitable habitat and will have the authority to stop these activities, if necessary, to avoid or reduce impacts on GGS, until appropriate corrective measures have been implemented. The monitoring biologist will advise work crews of any specific actions that need to be taken in those areas where GGS are likely to be present that were identified during the preconstruction survey. If a snake is observed outside the active construction area or is likely to move into the active construction area, all work in the immediate area where the snake is encountered will cease and the animal will be allowed adequate opportunity to leave the area of its own volition. If the snake does not leave the active construction area or if it is determined to be likely to move into the active construction area:*

a) *the monitoring biologist will capture and relocate the snake according to the protocols in the relocation plan (see GGS 11 measure); and*
b) *the monitoring biologist will provide USFWS and CDFW written reports adequately documenting relocation efforts within 24 hours of the completion of relocation activities.*

The construction area will be re-inspected by the monitoring biologist whenever a lapse in construction activity of two weeks or greater has occurred. ~~The monitoring biologist will provide USFWS and CDFW with a written report that adequately documents the monitoring efforts within 24 hours of commencement of construction activities.~~ During construction, the monitoring biologist will ~~immediately~~ report to both USFWS and CDF*W*~~G~~ *within 24 hours* any direct encounters between the snake, project workers, and their equipment ~~whereby incidental take in the form of harassment, harm, injury, or mortality occurs. If a GGS in~~ **~~encountered but unharmed~~** ~~within the construction area, all work will cease, and the animal will be allowed to leave the area on its own.~~ **Injured** GGS must be cared for by a licensed veterinarian or other qualified person(s), such as the USFWS/CDFW-approved monitoring biologist. **Dead** GGS must be sealed in a re-sealable plastic bag containing a paper with the date and time when the animal was found, the location where it was found, the name of the person who found it~~,~~. ~~and~~ The bag containing the specimen ~~frozen~~ *should be placed* in a freezer located in a secure site until instructions are received from the Service and CDFW regarding the disposition of the dead specimen. Contacts will be the ~~Chief~~ Supervisor of the Sacramento Valley Division of the ~~Endangered Species Program~~ at the USFWS Sacramento Fish and Wildlife Office ~~(SFWO)~~ at (916) 414-66*00*~~31~~, as well as CDFW*'s Sutter County biologist at* (916) 358-~~284~~*2955.* ~~If the encounter occurs after normal working hours, the monitoring biologist shall contact the USFWS and CDFW at the earliest possible opportunity the next working day. USFWS and CDFW will immediately respond to the monitoring biologist to provide further guidance before work continues;~~

- GGS-8: Temporary impacts to approximately 1.74 acres of potential upland GGS habitat will occur as a result of placing spoil piles on the existing levee access road (Alternative Access road). *Prior to any earthmoving activities,* ~~T~~*t*emporary impacts to GGS *upland* habitat will be mitigated by purchasing credits at an approved GGS mitigation bank *with a service area that covers the proposed project* at a 0.5:1 replacement ratio *(*for a total of 0.87 ~~acres~~ *credit)*. Permanent impacts to approximately 0.09 acres of potential upland GGS habitat *will occur* as a result of placing rip rap along the west bank of the Main Canal, across from the new distribution box. *Prior to any earthmoving activities,* ~~P~~*p*ermanent impacts to GGS habitat ~~during the active season~~

will be mitigated by purchasing credits at an approved GGS mitigation bank *with a service area that covers the proposed project* at a 3:1 replacement ratio *(*for a total of 0.27 ~~acres~~ *credit)*. *A total of 1.14 GGS conservation credits will be purchased to mitigate temporary and permanent impacts.*

- GGS-9: Dewatered areas (within the Main Canal *and the existing distribution basin*) will remain dry and absent of aquatic prey for *48 hours* prior to the initiation of construction activities. If complete dewatering is not possible, ~~USFWS and CDFW will be contacted to determine what additional measures may be necessary to minimize effects to GGS~~ *the canal and distribution basin will be thoroughly inspected by the monitoring biologist prior to the commencement of construction. If a snake is present, the monitoring biologist will capture and relocate it according to the protocols in the relocation plan (see GGS 11 measure). The monitoring biologist will provide USFWS and CDFW a written report documenting capture and relocation efforts within 24 hours of completion of those activities. Aquatic prey, if any, that remains in the residual water will be captured and relocated to the nearest suitable habitat outside of the Main Canal and distribution basin work areas. Biologists will use hand-held nets or haul seines to capture and remove GGS prey items, including fish and amphibians, from the remaining water. Engineering controls will be instituted as needed to prevent snakes from being entrained by the pumps used in dewatering. Such controls may include installation of a wire cage around the pump's intake hose to create an area of separation between the water body and the intake.*
- GGS-10: ~~Prior to October 1 and after dewatering~~ *Before the initiation of construction activities,* high visibility *construction* fencing will be erected *to demarcate the designated work area* around the Main Canal *and proposed distribution box* to ~~identify and~~ protect ~~these~~ areas *outside the work area* from encroachment of personnel and equipment. ~~These a~~*A*reas *outside the designated work area* will be avoided by all construction personnel. ~~The fencing shall be inspected by the contractor before the start of each work day and maintained by the contractor until completion of the project.~~ *Snake exclusion* ~~F~~fencing will be established in the uplands immediately adjacent to aquatic snake habitat and *the designated work area along the Main Canal and proposed distribution box and will* extend~~ing~~ up to 200 feet from construction activities. GGS exclusionary fencing will be buried at least six inches below the ground to prevent snakes from attempting to *use* burrow*s* or move under the fence. *One-way exit funnels will be installed in the fence at no more than 150-foot intervals. Installation of the GGS exclusionary fencing will need to be approved by the monitoring biologist prior to the commencement of construction activities in that area. The high visibility construction and snake exclusion fencing will be inspected by the contractor before the start of each workday and maintained by the contractor until completion of the project.*
- *GGS-11: A GGS Handling and Relocation Plan will be submitted to USFWS and CDFW for review and approval prior to the commencement of construction activities.*
- *GGS-12: Above-ground vegetation in the designated work area along the Main Canal and area of the proposed distribution box will be removed during the snake's active season prior to construction. Most above-ground vegetation will be removed mechanically (e.g., mowing). However, if areas are too steep to access with larger equipment the above-ground vegetation will be removed using a combination of hand labor and power tools (e.g., gas-powered weedeater).*

a) *The monitoring biologist will survey vegetation removal areas immediately prior to clearing work and will be present during vegetation clearing activities.*
b) *Vegetation removal work will occur between 11:00 a.m. and 6:00 p.m., when snakes are most likely to be above ground and active.*
c) *Any GGS encountered during vegetation removal activities will be captured and relocated according to the protocols in the relocation plan (see GGS 11 measure).*
d) *A 15-day lag time will elapse between the completion of above-ground vegetation removal and commencement of rodent burrow removal and root-zone grubbing activities (see GGS 13 measure below) to allow snakes that may be present in the immediate area to move to other more suitable habitat.*

- *GGS-13: Excavation of rodent burrows will occur during the snake's active season and will proceed no less than 15 days after above-ground vegetation removal (see GGS 12 measure). Excavation of rodent burrows will involve an excavator with an equipment operator, a laborer or spotter, and a monitoring biologist. The monitoring biologist will determine the procedure for burrow removal based on site conditions and expected likelihood of encountering snakes and will monitor the burrow removal. The monitoring biologist may also require additional or different types of equipment to adapt to site conditions. The burrow excavation will primarily occur in the form of either micro-excavation or macro-excavation.*
    a) *Micro-excavation will be implemented in areas where the likelihood of encountering snakes is expected to be the highest (e.g., along the west bank of the Main Canal). The excavator used in micro-excavation will have a bucket that is 8-12 inches wide. Initially, the monitoring biologist will use a scope with a light to inspect the upper portion of the burrow to determine if a snake is present. If a snake is observed, the burrow will be carefully hand-excavated until the monitoring biologist is able to capture the snake and relocate it from the work area in accordance with the relocation plan (see GGS 11 measure). If a snake is not observed the monitoring biologist will insert a section of PVC pipe or hose into the burrow to mark the portion that was inspected. The burrow then will be mechanically excavated back to the end of the insert. This process will be repeated until the burrow has been excavated to the point where the monitoring biologist can determine that a snake is not present or has removed and relocated any snake that was present. The burrow will then be filled in with soil.*
    b) *Macro-excavation will be implemented in all other portions of the work area along the Main Canal and area of the proposed distribution box where burrows are present. The excavator used in macro-excavation will have a bucket that is 24 inches wide. The excavator will pick up a bucket of soil from the burrow area. The monitoring biologist will examine the soil for any snakes that may be present in the bucket before the soil is deposited on the ground. If a snake is observed in the bucket, the monitoring biologist will capture the snake and relocate it from the work area in accordance with the relocation plan. If no snakes are observed in the bucket, the excavator will deposit the soil on the ground and the soil will be further examined by the monitoring biologist to determine if any snakes are present. If a snake is observed in the deposited soil, the monitoring biologist will capture the snake and relocate it from the work area in accordance with the relocation plan. If the monitoring biologist determines that a snake is not present in the deposited soil, the excavator will pick up the next bucket of soil from*

the burrow area and the process will be repeated until the burrows have been excavated to the point that the monitoring biologist can determine that a snake is not present or has removed and relocated any snake that was present. The burrows will then be filled in with soil.

c) *Some portions of the designated work area along the Main Canal and area of the proposed distribution box may include very small holes or cracks in the soil that could provide potential burrows for snakes. Due to the smaller size, these burrows will be hand-excavated either by the monitoring biologist or by the monitoring biologist and a laborer provided by the contractor.*

d) *Burrow removal work will occur between 11:00 a.m. and 6:00 p.m., when snakes are most likely to be above-ground. After burrows are removed, removal of below-ground vegetation can proceed with no daily time constraints.*

The monitoring biologist will be present during removal of below-ground vegetation in the work area along the Main Canal and area of the proposed distribution box. If a snake is observed, the biologist will temporarily halt vegetation removal activities and capture and relocate the snake according to the protocols in the relocation plan (see GGS 11 measure).

- *GGS-14: Existing rip rap along the Main Canal and around the current water distribution basin will be removed during the snake's active season. A monitoring biologist will be present during rip rap removal. If a snake is observed during rip rap removal, the monitoring biologist will temporarily stop work and capture the snake and relocate it from the work area according to the protocols in the relocation plan (see GGS 11 measure). If feasible, water levels will be raised in the canal and water distribution basin work areas to inundate the rip rap and displace snakes that may be present. Rip rap removal will be initiated after these areas are inundated. If it is not feasible to raise water in the canal and distribution basin to inundate the rock, its removal will be completed in the following sequence:*
    a) *Remove exposed rock that is above the canal and distribution basin water lines, beginning no earlier than 9:00 a.m., to allow snakes to become active. After removal of rock that is above the canal and distribution basin water lines, where feasible, immediately lower water level in canal and distribution basin and concurrently remove remaining rock; or,*
    b) *Where canal and distribution basin water levels cannot be lowered, remove rock in the following sequence over two consecutive days:*
        i. *Day 1: Beginning no earlier than 9:00 a.m., remove rock that is above the water line and suspend work for the day.*
        ii. *Day 2: Continue with removal of rock below the water line until complete with no restrictions on construction start time.*

The following Swainson's hawks (SWHA) mitigation measures are proposed to be changed:

- SWHA-1: Surveys for *nesting* SWHA *and other raptors* will be conducted 15 days prior to *commencement of* construction *activities and monthly during the nesting season. Surveys will also be conducted* ~~and again~~ if there is a lapse in work for 15 days. Surveys will cover *suitable potential nesting habitat within* a minimum of a 0.5-mile radius around the construction area*, if access is available*. If nesting SWHA *or other raptors* are detected *prior to construction*, buffers will be established around nests that are sufficient to ensure that breeding is not likely to be

disrupted or adversely impacted by construction. Buffers around active *SWHA and other* raptor nests will be *0.25 mile* ~~500 feet for non-listed raptors~~ *if feasible*, unless a qualified biologist determines that smaller buffers would be sufficient to avoid impacts to nesting raptors. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until a qualified CDFW biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival. *If nesting SWHA or other raptors are detected and the nesting activity was initiated after construction had begun, construction buffers will be established around the nest site, the nest will be monitored for continued activity, and construction will be allowed to proceed. The nest survey and monitoring results will be documented in a report to be provided to CDFW by September 15th.*

- SWHA-2: If construction occurs between February 1 and August 31, surveys will be conducted for nesting raptors in accordance with established CDFW raptor survey protocols*, as described in SWHA-1 measure*. ~~See YBCU-1 regarding tree removal which also applies to SWHA.~~
- *SWHA-3: Removal of tree trunks and canopies shall be conducted from September 1 through February 1 outside the nesting season for SWHA and other raptors to deter these birds from nesting in the project area and being disturbed during other construction activities that will occur during the nesting season. Removal of tree stumps can be conducted concurrently with removal of tree trunks and canopies or as a separate follow-up action during either the nesting or non-nesting season.*

The following western red bat (WRB) mitigation measures are proposed to be changed:

- WRB-1: A pre-construction survey for roosting ~~sites for~~ WRB*s* shall be ~~performed~~ *conducted by a qualified biologist during the bat's active season (i.e., May 1st through September 30th) using bat detection equipment within 5 days* prior to tree removal or trimming activities. If the survey results are negative, no further action by the Permittee is needed *prior to tree removal during the bat's active season*. If the survey finds that ~~any~~ *roosting* WRB*s* ~~roosting sites~~ are present, ~~the Permittee will consult with CDFW on the appropriate action prior to continuing tree removal or trimming activities with the potential to impact the species~~ *a dusk survey shall be conducted on the night prior to tree removal to help confirm the use of specific trees by bats*.
- *WRB-2: If western red bat presence is detected during the pre-construction survey (see WRB 1 above), removal of tree trunks and canopies shall be conducted from September 1st through September 30th outside the WRB maternity season and torpor period following the methodology described in WRB 3 below to avoid direct impacts on maternity colonies and inactive bats and deter WRB from establishing maternity or torpor roosts in the project area and being disturbed during other construction activities that will occur during the maternity season or torpor period. Removal of tree stumps can be conducted concurrently with removal of tree trunks and canopies or as a separate follow-up action during either the maternity season or torpor period (i.e., during May 1st through August 31st or October 1st through April 30th) or outside the maternity season and torpor period (i.e., during September 1st through September 30th).*
- *WRB-3: A qualified biologist shall monitor removal/trimming of trees that provide suitable bat roosting habitat. Tree removal/trimming shall occur over two consecutive days during September 1st through September 30th as described in WRB 2 above. On the first day in the*

afternoon, limbs and branches shall be removed using chainsaws only. Limbs with cavities, crevices, or deep bark fissures shall be avoided, and only branches or limbs without those features shall be removed. On the second day, the entire tree trunk and canopy shall be removed. Prior to tree removal/trimming, each tree shall be shaken gently and several minutes shall pass before felling trees or limbs to allow bats time to arouse and leave the tree. The biologist shall search downed vegetation for dead or injured bat species and report any dead or injured special-status bat species to CDFW. A report documenting bat survey and tree clearing methods and results will be provided to CDFW within 30 days after completion of tree clearing.

The following yellow-billed cuckoo (YBCU) mitigation measures are proposed to be changed:

- YBCU-1: The Proposed Action/Project will result in the removal of approximately 2.20 acres of mature woody vegetation (primarily oaks) and Shaded Riverine Aquatic habitat (SRA). Removal of *tree trunks and canopies* ~~shall~~ will be conducted from September 1 through March 1 outside the cuckoo's ~~YUBC~~ nesting season to *deter the cuckoo from nesting in the project area and being disturbed* ~~avoid disturbance to YBCU~~ during other construction activities. *Removal of tree stumps can be conducted concurrently with removal of tree trunks and canopies or as a separate follow-up action during either the nesting or non-nesting season.*
- ~~YBCU-2: Within 24 hours prior to the commencement of construction activities, the Proposed Action/Project area will be surveyed for YBCU by a USFWS/CDFW-approved biologist. The Proposed Action/Project area will be re-inspected by the monitoring biologist whenever a lapse in construction activity of two weeks or greater has occurred.~~
- ~~YBCU-3: Within 24 hours prior to the commencement of construction activities, the Proposed Action/Project area will be surveyed for YBCU by a USFWS/CDFW-approved biologist. The Proposed Action/Project area will be re-inspected by the monitoring biologist whenever a lapse in construction activity of two weeks or greater has occurred.~~

5. Summary of Approval of Proposed Changes

Proposed changes in connection with federally listed species (GGS and YBCU) were evaluated by FWS as summarized in the April 11, 2022 FWS memorandum. These proposed changes are intended to allow more reasonable flexibility to avoid or minimize any work stoppages during construction by creating additional measures and revising existing measures with more specificity in order to reduce the likelihood of adverse impacts on biological resources and to rely less on re-consultation with lead NEPA and CEQA agencies should incidental take of listed species occur, in particular, for GGS. The proposed changes are also based on additional information on GGS and associated mitigation measures generated to-date from a nearby and ongoing project SCH# 1997052044: Conveyance of Refuge Water Supply-East Sacramento Valley (a.k.a. Gray Lodge Wildlife Area Water Supply Project; Gray Lodge Wildlife Area Water Supply Infrastructure Improvement Project). FWS concluded that the proposed changes are not likely to jeopardize the continued existence of GGS and would not preclude recovery or likelihood of species survival based on consideration of the environmental baseline, project-related effects, and consideration of all potential cumulative effects.

CDFW has conducted an independent review of the proposed changes which additionally include FISH and YBCU; and state-listed species SWHA and WRB. The CDFW review has concluded that these proposed changes:

- Are only minor technical changes or additions (§15164(b)); and
- None of the conditions described in §15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.

Justification for this determination for the proposed changes are as follows:

Proposed changes to FISH-1 include only clarifying language.

Proposed removal of YBCU-2 and YBCU-3. They will not be necessary as YBCU-1 will have removed possible YBCU nesting sites from the project area.

Proposed changes to SWHA-1 includes clarifying language and the requirement to submit survey and monitoring results of buffer areas if buffers need to be established.

Proposed changes to SWHA-2 adds reference to SWHA-1 which is more specific than the reference to YBCU-1 for the minimization of impact to SWHA.

Proposed changes to WRB-1 and subsequent additions of WRB-2 and WRB-3 are considered to provide the same amount of protection to WRB while providing more clarity to implementation to minimize work stoppage during construction.

Proposed changes to GGS-2, GGS-9, GGS-10, GGS-11, GGS-12, and GGS-13 are based on the implementation of GGS mitigations measures for the Conveyance of Refuge Water Supply-East Sacramento Valley. The proposed implementation measures are consistent with minimizing impacts to GGS while providing more flexibility for implementation and more certainty to project outcomes.

Proposed changes of GGS-8 classification of it being a pre-construction measure instead of a post-construction measure is a result of federal requirements for the timing of purchasing habitat mitigation credits.

APPENDIX A
PROPOSED MITIGATION MONITORING AND REPORTING PLAN

Pre-construction				
Impact	**Monitoring Responsibility**	**Mitigation Type**	**Implementation Measure**	
Biological Resources	USFWS/CDFW	Avoid	GGS-2:	Twenty-four hours prior to the commencement of construction activities, suitable habitat within the construction area will be surveyed for GGS by a USFWS/CDFW-approved monitoring biologist to determine if GGS are likely to be present and to determine any specific actions that need to be taken in those areas to avoid or reduce impacts on GGS (e.g., above-ground vegetation removal, micro or macro excavation to remove burrows, and rip rap removal as described in conservation measures 12, 13, and 14 below). The monitoring biologist will provide USFWS and CDFW with a written report that documents the results of the survey effort within 24 hours of commencement of construction activities. The monitoring biologist will be present during all initial vegetation clearing, site preparation, and ground-disturbing activities within suitable habitat and will have the authority to stop these activities, if necessary, to avoid or reduce impacts on GGS, until appropriate corrective measures have been implemented. The monitoring biologist will advise work crews of any specific actions that need to be taken in those areas where GGS are likely to be present that were identified during the preconstruction survey. If a snake is observed outside the active construction area or is likely to move into the active construction area, all work in the immediate area where the snake is encountered will cease and the animal will be allowed adequate opportunity to leave the area of its own volition. If the snake does not leave the active construction area or if it is determined to be likely to move into the active construction area: a) the monitoring biologist will capture and relocate the snake according to the protocols in the relocation plan (see GGS 11 measure); and b) the monitoring biologist will provide USFWS and CDFW written reports adequately documenting relocation efforts within 24 hours of the completion of relocation activities. The construction area will be re-inspected by the monitoring biologist whenever a lapse in construction activity of two weeks or greater has occurred. During construction, the monitoring biologist will report to both USFWS and CDFW

Impact	Monitoring Responsibility	Mitigation Type	Implementation Measure	
				within 24 hours any direct encounters between the snake, project workers, and their equipment. **Injured** GGS must be cared for by a licensed veterinarian or other qualified person(s), such as the USFWS/CDFW-approved monitoring biologist. **Dead** GGS must be sealed in a re-sealable plastic bag containing a paper with the date and time when the animal was found, the location where it was found, the name of the person who found it. The bag containing the specimen should be placed in a freezer located in a secure site until instructions are received from the Service and CDFW regarding the disposition of the dead specimen. Contacts will be the Supervisor of the Sacramento Valley Division at the USFWS Sacramento Fish and Wildlife Office at (916) 414-6600, as well as CDFW's Sutter County biologist at (916) 358-2955.
Biological Resources	USFWS/CDFW	Avoid	GGS-7:	Project staging activities will remain greater than 30 feet from the EBD and the Main and Hi-Line Canals.
Biological Resources	USFWS/CDFW	Compensate	GGS-8:	Temporary impacts to approximately 1.74 acres of potential upland GGS habitat will occur as a result of placing spoil piles on the existing levee access road (Alternative Access road). Prior to any earthmoving activities, temporary impacts to GGS upland habitat will be mitigated by purchasing credits at an approved GGS mitigation bank with a service area that covers the proposed project at a 0.5:1 replacement ratio (for a total of 0.87 credit). Permanent impacts to approximately 0.09 acres of potential upland GGS habitat will occur as a result of placing rip rap along the west bank of the Main Canal, across from the new distribution box. Prior to any earthmoving activities, permanent impacts to GGS habitat will be mitigated by purchasing credits at an approved GGS mitigation bank with a service area that covers the proposed project at a 3:1 replacement ratio (for a total of 0.27 credit). A total of 1.14 GGS conservation credits will be purchased to mitigate temporary and permanent impacts.
Biological Resources	USFWS/CDFW	Minimize	GGS-9:	Dewatered areas (within the Main Canal and the existing distribution basin) will remain dry and absent of aquatic prey for 48 hours prior to the initiation of construction activities. If complete dewatering is not possible, the canal and distribution basin will be thoroughly inspected by the monitoring biologist prior to the commencement of construction. If a snake is present, the monitoring biologist will capture and relocate it according to the protocols in the relocation plan (see

Impact	Monitoring Responsibility	Mitigation Type	Implementation Measure	
				GGS 11 measure). The monitoring biologist will provide USFWS and CDFW a written report documenting capture and relocation efforts within 24 hours of completion of those activities. Aquatic prey, if any, that remains in the residual water will be captured and relocated to the nearest suitable habitat outside of the Main Canal and distribution basin work areas. Biologists will use hand-held nets or haul seines to capture and remove GGS prey items, including fish and amphibians, from the remaining water. Engineering controls will be instituted as needed to prevent snakes from being entrained by the pumps used in dewatering. Such controls may include installation of a wire cage around the pump's intake hose to create an area of separation between the water body and the intake.
Biological Resources	USFWS/CDFW	Minimize	GGS-10:	Before the initiation of construction activities, high visibility construction fencing will be erected to demarcate the designated work area around the Main Canal and proposed distribution box to protect areas outside the work area from encroachment of personnel and equipment. Areas outside the designated work area will be avoided by all construction personnel. Snake exclusion fencing will be established in the uplands immediately adjacent to aquatic snake habitat and the designated work area along the Main Canal and proposed distribution box and will extend up to 200 feet from construction activities. GGS exclusionary fencing will be buried at least six inches below the ground to prevent snakes from attempting to use burrows or move under the fence. One-way exit funnels will be installed in the fence at no more than 150-foot intervals. Installation of the GGS exclusionary fencing will need to be approved by the monitoring biologist prior to the commencement of construction activities in that area. The high visibility construction and snake exclusion fencing will be inspected by the contractor before the start of each workday and maintained by the contractor until completion of the project.
Biological Resources	USFWS/CDFW	Minimize	GGS-11:	A GGS Handling and Relocation Plan will be submitted to USFWS and CDFW for review and approval prior to the commencement of construction activities.

Impact	Monitoring Responsibility	Mitigation Type	Implementation Measure	
Biological Resources	CDFW	Avoid	WPT-1:	In-water work will be avoided to the extent practicable. In cases where this is unavoidable, a biological monitor will survey the sites before work commences. If WPTs are found, efforts will be made to move them to suitable habitat outside the disturbance area.
Biological Resources	CDFW	Minimize	SWHA-1:	Surveys for nesting SWHA and other raptors will be conducted 15 days prior to commencement of construction activities and monthly during the nesting season. Surveys will also be conducted if there is a lapse in work for 15 days. Surveys will cover suitable potential nesting habitat within a minimum of a 0.5- mile radius around the construction area, if access is available. If nesting SWHA or other raptors are detected prior to construction, buffers will be established around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. Buffers around active SWHA and other raptor nests will be 0.25 mile if feasible, unless a qualified biologist determines that smaller buffers would be sufficient to avoid impacts to nesting raptors. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until a qualified CDFW biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival. If nesting SWHA or other raptors are detected and the nesting activity was initiated after construction had begun, construction buffers will be established around the nest site, the nest will be monitored for continued activity, and construction will be allowed to proceed. The nest survey and monitoring results will be documented in a report to be provided to CDFW by September 15th.
Biological Resources	CDFW	Minimize	SWHA-2:	If construction occurs between February 1 and August 31, surveys will be conducted for nesting raptors in accordance with established CDFW raptor survey protocols, as described in SWHA-1 measure.

Impact	Monitoring Responsibility	Mitigation Type	Implementation Measure	
Biological Resources	CDFW	Minimize	RPS-1:	Rare Plant Survey. A pre-construction plant survey shall be performed during the appropriate blooming period for all State listed and special-status plants with potential to occur within the project site. If the survey results are negative, no further action by the Permittee is needed. If the survey finds that any State listed, or special-status plants are present, the Permittee will consult with CDFW on the appropriate action prior to continuing project activities with the potential to impact the plants.
Biological Resources	CDFW	Avoid	WRB-1:	A pre-construction survey for roosting WRBs shall be conducted by a qualified biologist during the bat's active season (i.e., May 1st through September 30th) using bat detection equipment within 5 days prior to tree removal or trimming activities. If the survey results are negative, no further action by the Permittee is needed prior to tree removal during the bat's active season. If the survey finds that roosting WRBs are present, a dusk survey shall be conducted on the night prior to tree removal to help confirm the use of specific trees by bats.

Construction				
Impact	**Monitoring Responsibility**	**Mitigation Type**	**Implementation Measure**	
Biological Resources	USFWS/CDFW	Avoid	GGS-1:	Ground disturbing activities along the canals would occur during the GGS active season (May through October) to avoid take of GGS burrowing in canals or staged construction materials.
Biological Resources	USFWS/CDFW	Avoid	GGS-3:	A Worker Environmental Awareness Training Program for construction personnel will be conducted by a USFWS/CDFW-approved biologist for all construction workers, including contractors, prior to the commencement of construction activities. Interpretation will be provided for non-English speaking workers and the same instruction provided for any new workers prior to performing work on site. The training will include information regarding the appearance, biology, distribution and habitat needs of any special-status species that may be present, legal protections for those species, and penalties for violations and project-specific protective measures.
Biological Resources	USFWS/CDFW	Avoid	GGS-4:	During construction, stockpiling of construction materials, portable equipment, vehicles and supplies will be restricted to designated construction staging areas and all operations will be confined to the minimal area necessary, as designated on the engineering plans.
Biological Resources	USFWS/CDFW	Minimize	GGS-5:	Project-related vehicles will observe a 15-mph speed limit within construction areas and when accessing the construction area through Sutter NWR.
Biological Resources	USFWS/CDFW	Minimize	GGS-12:	Above-ground vegetation in the designated work area along the Main Canal and area of the proposed distribution box will be removed during the snake's active season prior to construction. Most above-ground vegetation will be removed mechanically (e.g., mowing). However, if areas are too steep to access with larger equipment the above-ground vegetation will be removed using a combination of hand labor and power tools (e.g., gas-powered weed eater). a) The monitoring biologist will survey vegetation removal areas immediately prior to clearing work and will be present during vegetation clearing activities. b) Vegetation removal work will occur between 11:00 a.m. and 6:00 p.m., when snakes are most likely to be above ground and active. c) Any GGS encountered during vegetation removal activities will be

Impact	Monitoring Responsibility	Mitigation Type	Implementation Measure
			captured and relocated according to the protocols in the relocation plan (see GGS 11 measure). d) A 15-day lag time will elapse between the completion of above-ground vegetation removal and commencement of rodent burrow removal and root-zone grubbing activities (see GGS 13 measure below) to allow snakes that may be present in the immediate area to move to other more suitable habitat.
Biological Resources	USFWS/CDFW	Minimize	GGS-13: Excavation of rodent burrows will occur during the snake's active season and will proceed no less than 15 days after above-ground vegetation removal (see GGS 12 measure). Excavation of rodent burrows will involve an excavator with an equipment operator, a laborer or spotter, and a monitoring biologist. The monitoring biologist will determine the procedure for burrow removal based on site conditions and expected likelihood of encountering snakes and will monitor the burrow removal. The monitoring biologist may also require additional or different types of equipment to adapt to site conditions. The burrow excavation will primarily occur in the form of either micro-excavation or macro-excavation. a) Micro-excavation will be implemented in areas where the likelihood of encountering snakes is expected to be the highest (e.g., along the west bank of the Main Canal). The excavator used in micro-excavation will have a bucket that is 8-12 inches wide. Initially, the monitoring biologist will use a scope with a light to inspect the upper portion of the burrow to determine if a snake is present. If a snake is observed, the burrow will be carefully hand-excavated until the monitoring biologist is able to capture the snake and relocate it from the work area in accordance with the relocation plan (see GGS 11 measure). If a snake is not observed the monitoring biologist will insert a section of PVC pipe or hose into the burrow to mark the portion that was inspected. The burrow then will be mechanically excavated back to the end of the insert. This process will be repeated until the burrow has been excavated to the point where the monitoring biologist can determine that a snake is not present or has removed and relocated any snake that was present. The burrow will then be filled in with soil.

Impact	Monitoring Responsibility	Mitigation Type	Implementation Measure
			b) Macro-excavation will be implemented in all other portions of the work area along the Main Canal and area of the proposed distribution box where burrows are present. The excavator used in macro-excavation will have a bucket that is 24 inches wide. The excavator will pick up a bucket of soil from the burrow area. The monitoring biologist will examine the soil for any snakes that may be present in the bucket before the soil is deposited on the ground. If a snake is observed in the bucket, the monitoring biologist will capture the snake and relocate it from the work area in accordance with the relocation plan. If no snakes are observed in the bucket, the excavator will deposit the soil on the ground and the soil will be further examined by the monitoring biologist to determine if any snakes are present. If a snake is observed in the deposited soil, the monitoring biologist will capture the snake and relocate it from the work area in accordance with the relocation plan. If the monitoring biologist determines that a snake is not present in the deposited soil, the excavator will pick up the next bucket of soil from the burrow area and the process will be repeated until the burrows have been excavated to the point that the monitoring biologist can determine that a snake is not present or has removed and relocated any snake that was present. The burrows will then be filled in with soil. c) Some portions of the designated work area along the Main Canal and area of the proposed distribution box may include very small holes or cracks in the soil that could provide potential burrows for snakes. Due to the smaller size, these burrows will be hand-excavated either by the monitoring biologist or by the monitoring biologist and a laborer provided by the contractor. d) Burrow removal work will occur between 11:00 a.m. and 6:00 p.m., when snakes are most likely to be above-ground. After burrows are removed, removal of below-ground vegetation can proceed with no daily time constraints. The monitoring biologist will be present during removal of below-ground

Impact	Monitoring Responsibility	Mitigation Type	Implementation Measure	
				vegetation in the work area along the Main Canal and area of the proposed distribution box. If a snake is observed, the biologist will temporarily halt vegetation removal activities and capture and relocate the snake according to the protocols in the relocation plan (see GGS 11 measure).
Biological Resources	USFWS/CDFW	Minimize	GGS-14:	Existing rip rap along the Main Canal and around the current water distribution basin will be removed during the snake's active season. A monitoring biologist will be present during rip rap removal. If a snake is observed during rip rap removal, the monitoring biologist will temporarily stop work and capture the snake and relocate it from the work area according to the protocols in the relocation plan (see GGS 11 measure). If feasible, water levels will be raised in the canal and water distribution basin work areas to inundate the rip rap and displace snakes that may be present. Rip rap removal will be initiated after these areas are inundated. If it is not feasible to raise water in the canal and distribution basin to inundate the rock, its removal will be completed in the following sequence: a) Remove exposed rock that is above the canal and distribution basin water lines, beginning no earlier than 9:00 a.m., to allow snakes to become active. After removal of rock that is above the canal and distribution basin water lines, where feasible, immediately lower water level in canal and distribution basin and concurrently remove remaining rock; or, b) Where canal and distribution basin water levels cannot be lowered, remove rock in the following sequence over two consecutive days: i) Day 1: Beginning no earlier than 9:00 a.m., remove rock that is above the water line and suspend work for the day. ii) Day 2: Continue with removal of rock below the water line until complete with no restrictions on construction start time.
Biological Resources	USFWS/CDFW	Avoid	YBCU-1:	The Proposed Action/Project will result in the removal of approximately 2.20 acres of mature woody vegetation (primarily oaks) and Shaded Riverine Aquatic habitat (SRA). Removal of tree trunks and canopies will be conducted from September 1 through March 1 outside the cuckoo's nesting season to deter the cuckoo from nesting in the project area and being disturbed during other

Impact	Monitoring Responsibility	Mitigation Type	Implementation Measure	
				construction activities. Removal of tree stumps can be conducted concurrently with removal of tree trunks and canopies or as a separate follow-up action during either the nesting or non-nesting season.
Biological Resources	CDFW	Avoid	SWHA-3:	Removal of tree trunks and canopies shall be conducted from September 1 through February 1 outside the nesting season for SWHA and other raptors to deter these birds from nesting in the project area and being disturbed during other construction activities that will occur during the nesting season. Removal of tree stumps can be conducted concurrently with removal of tree trunks and canopies or as a separate follow-up action during either the nesting or non-nesting season.
Biological Resources	CDFW	Avoid	WRB-2:	If western red bat presence is detected during the pre-construction survey (see WRB 1 above), removal of tree trunks and canopies shall be conducted from September 1st through September 30th outside the WRB maternity season and torpor period following the methodology described in WRB 3 below to avoid direct impacts on maternity colonies and inactive bats and deter WRB from establishing maternity or torpor roosts in the project area and being disturbed during other construction activities that will occur during the maternity season or torpor period. Removal of tree stumps can be conducted concurrently with removal of tree trunks and canopies or as a separate follow-up action during either the maternity season or torpor period (i.e., during May 1st through August 31st or October 1st through April 30th) or outside the maternity season and torpor period (i.e., during September 1st through September 30th).
Biological Resources	CDFW	Avoid	WRB-3:	A qualified biologist shall monitor removal/trimming of trees that provide suitable bat roosting habitat. Tree removal/trimming shall occur over two consecutive days during September 1st through September 30th as described in WRB 2 above. On the first day in the afternoon, limbs and branches shall be removed using chainsaws only. Limbs with cavities, crevices, or deep bark fissures shall be avoided, and only branches or limbs without those features shall be removed. On the second day, the entire tree trunk and canopy shall be removed. Prior to tree removal/trimming, each tree shall be shaken gently and several minutes shall pass before felling trees or limbs to allow bats time to arouse and leave the tree. The biologist shall search downed vegetation for dead

Impact	Monitoring Responsibility	Mitigation Type	Implementation Measure	
				or injured bat species and report any dead or injured special-status bat species to CDFW. A report documenting bat survey and tree clearing methods and results will be provided to CDFW within 30 days after completion of tree clearing.
Biological Resources	USFWS/CDFW	Avoid	FISH-1:	Contractor shall perform any in-water construction activities in the East Borrow Ditch and Main Canal between July 1 and October 31 to avoid impacting fish during migratory periods. When in-water work is conducted in these areas, a qualified biologist shall be present during such work to monitor construction activities and ensure compliance with mitigation requirements and permit terms and conditions.
Biological Resources	USFWS/CDFW	Minimize	FISH-2:	Pipe pile shall only be driven by vibratory or non-impact methods (hydraulic) that result in sound pressures below threshold levels (see Effects Analysis) to the extent practical, but may be finished with the diesel hammer as needed to reach required tip elevation. Pile driving equipment will start at low power levels and strike frequency to minimize sound pressure levels harmful to fish and allow fish in the area to move away. A minimum of a 15- minute break between each pile installation will allow fish within the action area to move. Affected fish should only be temporarily impacted.
Tribal Cultural Resources	CDFW	Avoid	TCR-1:	A paid tribal monitor shall be present during ground disturbing activities to identify tribal cultural resources if they are uncovered.
Tribal Cultural Resources	CDFW	Avoid	TCR-2:	If a tribal cultural resource is encountered during construction activity, all work within 100 feet of the discovery area will stop, and further work will avoid disturbing the tribal cultural resources. Tribal representatives shall be contacted immediately and consulted with to determine appropriate and respectful treatment of the find.

Post-construction				
Impact	**Monitoring Responsibility**	**Mitigation Type**	**Implementation Measure**	
Biological Resources	USFWS/CDFW	Rectify	GGS-6:	Once construction is completed, all construction debris will be removed and wherever feasible, disturbed areas will be restored. Restoration will be coordinated with refuge staff to ensure that refuge management goals are reflected. A photo documentation report showing pre- and post-project area conditions will be submitted to USFWS and CDFW one month after the implementation of the restoration.
Biological Resources	USFWS/CDFW	Compensate	FISH-3:	Permanent impacts to approximately 0.03 acres of SRA habitat as a result of putting piles to support the fish screen structure in the EBD will be mitigated by purchasing credits at an approved SRA habitat mitigation bank at a 3:1 replacement ratio.
Biological Resources	USACE	Compensate	WOUS-1:	Permanent and temporary impacts to WOUS as a result of the Proposed Action/Project will be mitigated through purchases of mitigation credits to offset impacts and reduce the level of impacts to less than significant in accordance with the U.S. Army Corps of Engineers Section 404 permit.

Mitigation Type - These describe how the mitigation measures are designed to address impacts

Avoid	Avoid the impact by not taking certain action or parts of an action.
Minimize	Minimize impacts by limiting the degree or magnitude of the action and its implementation. May also include avoidance measures.
Rectify	Rectify the impact by repairing, habilitating, or restoring the affected environment.
Reduce or Eliminate	Reduce or eliminate the impact over time through preservation and maintenance during the life of the action.
Compensate	Compensate for the impact by replacing or providing substitute resource or environments.

APPENDIX B
LETTERS AND MEMORANDA

February 12, 2021, Letter from Ducks Unlimited to Reclamation, Interior Region 10 re: Sutter National Wildlife Refuge (NWR) Lift Station Project – Need for Revisions to Some Conservation Measures

DUCKS UNLIMITED

Western Regional Office
3074 Gold Canal Drive
Rancho Cordova, CA 95670-6116
(916) 852-2000 fax (916) 852-2200
www.ducks.org

February 12, 2021

Ms. Pam Taber
U.S. Bureau of Reclamation
Interior Region 10 - California-Great Basin
2800 Cottage Way
Sacramento, CA 95825

SUBJECT: Sutter National Wildlife Refuge (NWR) Lift Station Project – Need for Revisions to Some Conservation Measures

Dear Ms. Taber:

The Mitigation Monitoring and Reporting Plan (MMRP) developed for the Sutter NWR Lift Station Project includes the compilation of the conservation measures required for the project. These measures come from various compliance documents and permits (e.g., Environmental Assessment/Initial Study and U.S. Fish and Wildlife Service [USFWS] and National Marine Fisheries Service Biological Opinions [BO's]). Some of these conservation measures will trigger delays in starting work; stoppages of work that is underway; and/or adoption of additional, as-of-yet undefined, conservation measures if certain conditions occur (e.g., roosting western red bats are detected in trees to be removed by the project). These measures do not provide predictable outcomes or timelines for resolving those conditions and initiating or resuming work. Furthermore, the additional project costs associated with such work delays or stoppages or new conservation measures cannot be accurately determined but could be substantial.

The BO issued by USFWS includes an incidental take limit of only one dead or injured giant garter snake (GGS). It states that if the take threshold is reached, the avoidance and minimization measures and project implementation need to be evaluated and possibly modified. However, it does not provide any clarity as to the time it might take for USFWS to complete such an evaluation nor the possible modifications that may result. Although the likelihood of encountering GGS in the construction area may be low, injuring or killing only one GGS could result in substantial construction delays and stand-by charges from the construction contractor while the path forward is determined by USFWS, as well as increased costs from new conservation measures. Note that the project is being required to mitigate for both temporary and permanent impacts on potential GGS habitat so USFWS is treating portions of the project area as if they provide habitat that could support GGS. Therefore, the chance of encountering a GGS in the project area does exist. A higher incidental take limit (i.e., three to five snakes) is needed to reasonably implement this construction project in potential GGS habitat.

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The project area is in a designated floodway and work stoppages could leave partially constructed sites vulnerable to flood damage. In addition, work stoppages in the Main Canal and distribution box area could cause water delivery to Sutter NWR to be disrupted during the critical fall flood-up period.

As the grantee for the California Natural Resources Agency's grant agreement that provides much of the funding for this project and the holder of the eventual construction contract, Ducks Unlimited, Inc. (DU) believes it is in the best interest of both the project and the biological resources that may occur in the project area to revise some of the existing conservation measures and add some new measures prior to project implementation. We are not seeking to reduce the conservation measures currently required for the project. We are recommending that some of these measures be revised and additional measures be adopted. Our requested revisions/additions to the conservation measures currently included in the MMRP are provided in Attachment A. These additions/revisions and an increase in the incidental take limit for GGS will provide more clarity to the environmental compliance process, reduce the risk of delays in the start of construction and work stoppages during construction, avoid increased and unforeseen construction and environmental compliance costs, reduce the risk of flood damage in the project area and disruptions in fall water delivery to Sutter NWR, and further reduce the likelihood of adverse impacts on biological resources. DU recommends that the U.S. Bureau of Reclamation (Reclamation) work with the appropriate regulatory agencies to adopt the provided additions/revisions and secure an increased incidental take limit for GGS.

Please contact me if you need additional information regarding the recommended additions/ revisions to the conservation measures currently included in the MMRP. DU is willing to assist Reclamation, if needed, to revise the project's existing environmental documents and work with the appropriate regulatory agencies to adopt the recommended changes.

Sincerely,

Virginia K. Getz
Manager of Conservation Programs

cc: Dan Cordova (Reclamation)
Dale Garrison and Craig Isola (USFWS)
Jeffrey Shu (California Department of Fish and Wildlife)
Vince Thompson, John Ranlett, and Meghan Fought (DU)

February 17, 2022, Memorandum from Reclamation, Bay-Delta Office to U.S. Fish and Wildlife Service (FWS), Sacramento Fish and Wildlife Office re: Revised Conservation Measures for the Proposed Sutter National Wildlife Refuge Lift Station Project (SLSP), Sutter County, California

United States Department of the Interior
BUREAU OF RECLAMATION
2800 Cottage Way
Sacramento, CA 95825-1898

IN REPLY REFER TO:
BDO-100
2.2.1.06

VIA ELECTRONIC MAIL ONLY

Memorandum

To: Field Supervisor, Sacramento Fish and Wildlife Office
Attn: Michael Fris

From: David M. Mooney
Area Manager, Bay-Delta Office

DAVID MOONEY
Digitally signed by DAVID MOONEY
Date: 2022.02.17 15:40:52 -08'00'

Subject: Revised Conservation Measures for the Proposed Sutter National Wildlife Refuge Lift Station Project (SLSP), Sutter County, California

On November 2, 2021, staff from the Bureau of Reclamation, Ducks Unlimited, Inc. (DU), the U.S. Fish and Wildlife Service (Service), Sacramento Fish and Wildlife Office, the Sacramento National Wildlife Refuge Complex, and the California Department of Fish and Wildlife (CDFW) met to discuss proposed revisions to the conservation measures and incidental take limit associated with the subject project (Proposed Action).

On May 8, 2018, Reclamation sent a letter and biological assessment (BA) to the Service requesting formal consultation for the Proposed Action for impacts to the giant garter snake (GGS) and the yellow-billed cuckoo (YBCU), including a list of conservation measures. On July 19, 2018, the Service issued a biological opinion (BO) on the Proposed Action. On September 11, 2018, Reclamation requested reinitiation of consultation due to a change in the project description that changed the effects of the Proposed Action on the GGS. On September 26, 2018, the Service issued a BO in response.

Reclamation is now proposing to revise the conservation measures and adopt additional measures to allow more reasonable flexibility to avoid or minimize any work stoppages after construction begins and to further reduce the likelihood of adverse impacts on biological resources. Some of the existing conservation measures will trigger delays in starting work; stoppages of work that is underway; and/or adoption of additional, as-of-yet undefined, conservation measures if certain conditions occur. The existing measures do not provide predictable outcomes or timelines for resolving those conditions and initiating or resuming work.

In addition, Reclamation is requesting the Service to re-evaluate the incidental take limit for GGS. The BO states that the Service "cannot estimate the number of individual snakes that will

be incidentally taken" and includes an incidental take limit of only one dead or injured GGS. Reclamation believes, based upon the available information, that an incidental take limit of five GGS is necessary and reasonable to implement this construction project in potential GGS habitat.

Since the Service issued the BO for the SLSP in September 2018, Reclamation, DU, Biggs-West Gridley Water District, CDFW, and California Natural Resources Agency have partnered on delivery of Phase 2 of the nearby Gray Lodge Wildlife Area Water Supply Infrastructure Improvement Project (GLWSP). The Service issued a BO for that project in July 2019. Implementation of Phase 1 of the GLWSP between 2013 and 2015 resulted in take of 232 GGS, including 44 mortalities. Four other snakes were injured with two released back to the wild, and the two others retained in captivity due to the extent of injuries sustained. Of the 232 total snakes taken, 186 snakes (including the two injured snakes released back to the wild) were captured and relocated between 1 to 2 miles from the site of capture. The regulatory agencies and other interested parties were concerned with the high number of GGS encounters and mortalities during Phase 1 and sought to reduce the level of GGS take during Phase 2 construction. Consequently, DU convened a GGS working group consisting of Federal and state resource agencies, species experts, and concerned environmental groups to help develop a package of avoidance and minimization measures (AMMs) to reduce impacts on GGS during Phase 2 construction. The resulting measures accounted for the species' activity patterns and micro-habitat selection.

For Phase 2 of the ongoing GLWSP, the adopted AMMs have substantially reduced the levels of take of GGS. In 29 months of construction (through December 31, 2021), 62 GGS have been encountered and 5 mortalities have occurred. Of the 57 snakes captured and relocated, 2 injured snakes were treated by veterinarians and released back into the wild.

For the SLSP, newly proposed AMMs 11 through14, and2 and 9 as modified, are based on the AMMs adopted for the GLWSP Phase 2 construction that were developed based on lessons learned during Phase 1 of that project. Many of the 232 GGS encounters during Phase 1 construction of the GLWSP were associated with removing riprap- or shotcrete-lining on canal slopes and around concrete water control structures. Similar work will occur around the existing water distribution basin for the nearby SLSP. These two project areas are in fairly close proximity and have some similar GGS habitat features. Therefore, it is possible that GGS may be encountered at the SLSP. In addition, the Service is requiring mitigation for both temporary and permanent impacts on potential GGS habitat further indicating the possibility of GGS presence. Given the potential for encountering GGS, the take limit of only one GGS provided in the current BO is not sufficient to reasonably implement this construction project in potential GGS habitat.

Therefore, we propose to increase the take limit to five snakes but also propose to implement the additional AMMs to reduce the likelihood of GGS injuries or mortalities. The raise in the take limit from one to five snakes would include capture and relocation of any GGS encountered and deemed to be imminently in harm's way; snakes encountered would preferentially be allowed to

move out of harm's way on their own volition and only captured should they be in imminent danger of harm from construction activities.

Attached are our proposed revisions to the conservation measures with additions in ***bold italics*** and deletions with strikethrough notation (Attachment 1) and the current timeline for construction of the Proposed Action (Attachment 2).

We appreciate the Service's review and support of this important project to support critical water delivery infrastructure for the Sutter National Wildlife Refuge. If you have any questions please contact Mr. Douglas Kleinsmith, Natural Resources Specialist, at (916) 978-5034 or *dkleinsmith@usbr.gov* with any questions.

2 Attachments

April 11, 2022, Memorandum from FWS, Sacramento Fish and Wildlife Office to Reclamation, Bay-Delta Office Bay re: Reinitiation of Formal Consultation on the Proposed Sutter National Wildlife Refuge Lift Station Project in Sutter County, California (Bureau File Number BDO-100 2.2.1.06)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846
SFWO_mail@fws.gov

In Reply Refer to:
2022-0013401-S7-001

April 11, 2022

Memorandum

To: David Mooney, Area Manager, Bay-Delta Office, U.S. Bureau of Reclamation, Sacramento California [dmmooney@usbr.gov]

From: Kim S. Turner, Acting Field Supervisor

Subject: Reinitiation of Formal Consultation on the Proposed Sutter National Wildlife Refuge Lift Station Project in Sutter County, California (Bureau File Number BDO-100 2.2.1.06)

This memorandum is in response to the U.S. Bureau of Reclamation's (Bureau) February 17, 2022, request for reinitiation of formal consultation with the U.S. Fish and Wildlife Service's Sacramento Fish and Wildlife Office (Service) on the proposed Sutter National Wildlife Refuge Lift Station Project (proposed project) in Sutter County, California. Your reinitiation request was received by the Service on February 18, 2022. At issue are the proposed project's effects on the federally threatened giant garter snake (*Thamnophis gigas*) (snake) and western distinct population segment of the yellow-billed cuckoo (*Coccyzus americanus*) (cuckoo). This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

The federal action on which we are consulting is the Bureau providing funding for the Sutter National Wildlife Refuge (Refuge) to construct a lift station and associated infrastructure. The proposed project will provide reliable Central Valley Project Improvement Act Level 2 and Incremental Level 4 refuge water supplies to the Refuge in accordance with requirements under Section 3406(d) of the Central Valley Project Improvement Act. In addition, the proposed project will further the goals and objectives of the Refuge by improving refuge water availability at the Refuge.

The U.S. Army Corps of Engineers has jurisdiction over a portion of the proposed project that involves Waters of the U.S. that occur within the action area of the proposed project. This biological opinion addresses the incidental take of federally listed species that will result from the proposed project, and therefore, satisfies the U.S. Army Corps of Engineers' requirements with the Service under section 7 of the Act.

Pursuant to 50 CFR 402.12(j), you submitted a biological assessment for our review and requested concurrence with the findings presented therein. These findings conclude that the proposed project may affect, but is not likely to adversely affect the cuckoo. In addition, the

biological assessment concluded that the proposed project may affect, and is likely to adversely affect the snake. The proposed project is not within designated or proposed critical habitat for any federally listed species.

The Bureau requested reinitiation due to a change in the project description that changed the effects analyzed in the original September 26, 2018, amended biological opinion (Service File Number 08ESMF00-2018-F-2433-R001). Specifically, the Bureau is proposing to revise the proposed conservation measures for the snake and cuckoo and adopt additional conservation measures for the snake to address changes in the proposed project description that provide flexibility to avoid or minimize any work stoppages after construction begins and to further reduce the likelihood of adverse impacts on the snake. The existing conservation measures analyzed in the original amended biological opinion do not provide predictable outcomes or timelines for resolving construction timing issues and initiating or resuming work. In addition, the Bureau is requesting the Service re-evaluate the amount of incidental take for the snake based on updated information in the environmental baseline and findings from similar projects in the area.

All changes to the September 26, 2018, biological opinion are shown below in **bold** to aid in their identification and all other text remains unchanged. This biological opinion was also updated to ensure compliance with Section 508 of the Rehabilitation Act of 1973; however, these changes are not shown in bold. This biological opinion supersedes the previously issued September 26, 2018, biological opinion.

In considering your request, we based our evaluation on the following:

1) your May 2018 biological assessment;

2) your May 8, 2018, letter initiating formal consultation;

3) your September 11, 2018, email requesting reinitiation of formal consultation;

4) **your February 17, 2022, email requesting reinitiation of formal consultation with attached revised and newly proposed conservation measures and updated information relating to the environmental baseline for the snake;**

5) email and telephone correspondence between the Service, the Bureau**, and Ducks Unlimited**; and

6) additional information available to the Service.

After reviewing all of the available information, we concur with your determination that the proposed project is not likely to adversely affect the cuckoo. The proposed project reached the 'may affect' level, and the subsequent requirement for a biological assessment, due to the fact that the proposed project occurs within the known range of the cuckoo and suitable habitat occurs within the action area.

The proposed project is located within the Refuge, which contains riparian woodland habitat that provides suitable foraging habitat for the cuckoo. Refuge staff conducted cuckoo surveys in both 2000 and 2015. The survey route was designed to sample potential cuckoo habitat within the Refuge (riparian strips along the East Borrow Ditch and West Borrow Ditch). Seven cuckoos were detected along the West Borrow Ditch and one was detected along the East Borrow Ditch.

Suitable nesting habitat occurs within the West Borrow Ditch, which is approximately 0.75 mile from the action area and contains an area of riparian cover of over 400 acres. No nesting habitat occurs within the action area. However, suitable foraging habitat within the action area consists of approximately 5 acres of canopy cover, which includes primarily oaks. The proposed project will result in the removal of approximately **2.20** acres of this mature woody riparian vegetation.

Disturbance associated with the proposed project during the breeding season will mostly occur within cleared areas and cuckoos will likely find other areas of suitable riparian habitat to use for foraging. Although construction of the proposed project will result in the loss of riparian habitat that the cuckoo could use for dispersal, there is more suitable foraging and nesting habitat available located along the West Borrow Ditch that the cuckoos can utilize. In addition, the Bureau has proposed minimization and avoidance measures that are described below and identified in the biological assessment that will further reduce the effects of the proposed project down to a level of insignificance.

1) **The proposed project will result in the removal of approximately 2.20 acres of mature woody vegetation (primarily oaks) and shaded riverine aquatic habitat.** Removal of tree **trunks and canopies** will be conducted from September 1 through March 1 outside the cuckoo's nesting season to **deter the cuckoo from nesting in the project area and being disturbed** during other construction activities. **Removal of tree stumps can be conducted concurrently with removal of tree trunks and canopies or as a separate follow-up action during either the nesting or non-nesting season.**

The remainder of this document provides our biological opinion on the effects of the proposed project on the snake.

Consultation History

April 3, 2018:	The Service participated in a meeting with the Bureau to discuss the proposed project.
May 8, 2018:	The Service received the May 8, 2018, letter from the Bureau initiating consultation on the proposed project.
July 19, 2018:	The Service issued a biological opinion for the proposed project (Service File Number 08ESMF00-2018-F-2433-1)
Sept. 11, 2018:	The Service received the September 11, 2018, email from the Bureau requesting reinitiation on the proposed project.
Sept. 26, 2018:	**The Service issued an amended biological opinion for the proposed project (Service File Number 08ESMF00-2018-F-2433-R001)**
Nov. 2, 2021:	**The U.S. Fish and Wildlife Service's National Wildlife Refuge System Program held a meeting with the Bureau, the Service, California Department of Fish and Wildlife (Department), and Ducks Unlimited to discuss changes for the proposed project.**
Feb. 18, 2022:	**The Service received the February 17, 2018, email from the Bureau requesting reinitiation of consultation on the proposed project with the attached information.**

BIOLOGICAL OPINION

Description of the Action

The proposed project includes the construction of a lift station and associated infrastructure located on the Refuge in Sutter County, California. The proposed project consists of the following six components:

1) Construction of a lift station (pump station) with four vertical-turbine pumps;

2) Installation of approximately 700 feet of 54-inch diameter buried pipeline from the proposed pump station to a new concrete distribution box;

3) Construction of a new concrete distribution box connected to the new buried pipeline and existing internal Refuge water conveyance facilities;

4) Installation of two cylindrical fish screens fitted to the new pump station intakes;

5) Maintenance road improvements; and

6) Installation of Infrastructure to supply power to the pump station.

Lift Station

The proposed project includes the construction of a lift station, consisting of four vertical-turbine intake pumps, which will be constructed upstream of California Department of Water Resources' Weir Number 2 on the East Borrow Ditch. Dewatering during construction will likely be required for trenching and placing of new buried main line pipe and construction of the new concrete diversion box (there will be no dewatering of any waterbodies, only from where groundwater seeps into the construction area). The construction contractor will be required to submit a dewatering plan for approval and will likely entail a series of shallow sumps and wells that are strategically placed and operated to bring down the groundwater table sufficiently to allow for construction activities to be performed.

Individual protected steel pipe intakes will be constructed for each pump and all intakes will be connected to one of two cylindrical fish screens. The pump size configuration is approximately one pump with a 40-cubic-foot-per-second capacity, one pump with a 20-cubic-foot-per-second capacity, and two pumps with a 10-cubic-foot-per-second capacity. This configuration provides the needed amount of flexibility for the Refuge to efficiently manage their water. The four intake pumps will be located on an elevated steel platform with the bottom of the platform structure set at an elevation of 59.8 feet (at the 200 year flood stage level). The platform will house all lift station electronics and controls. Individual pump intakes will discharge into a single pump discharge header that is connected to a 54-inch buried pipeline. Energy will be transformed at the lift station by a submersible transformer. The transformer will be placed in a vault above ground and will likely be made of aluminum, steel, or concreate and placed on a reinforced concrete pad at grade near the new elevated platform. The enclosure dimensions will be approximately 5 feet by 9 feet by 8 feet. The conduit from the transformer up to the electrical components on the platform will likely be 5-inch steel pipe and will be 30 to 50 feet long, depending on where it is connected. The enclosure will be further protected with posts (to protect from vehicles).

The electrical systems of the proposed lift station will include power distribution, motor control, lighting and convenience receptacles, auxiliary systems, and grounding. Power to run the lift station will be provided via an extension of the existing 12.47 kilovolt Pacific Gas and Electric Company distribution lines on the Refuge currently powering an existing lift pump near the proposed distribution box location. Approximately 800 feet of new electrical distribution line, an additional distribution line pole, and a new pole and transformer at the lift station will be required. The 12.47 kilovolt distribution line will be transformed at the lift station to 480 volts by a submersible transformer. The new lift station electric power loading is estimated to be in the range of 650 to 850 horsepower. In addition, the Pacific Gas and Electric Company will decommission the existing point of delivery that will include removal of the existing overhead, pole-mounted transformer and wood power pole.

The lift station will be fitted with a lighting system for safety and operation while Refuge staff are at the facility. The elevated platform (accessible by stairs and a locked gate) will be enclosed by an 8-foot tall fence. Lighting designs will minimize direct lighting onto the East Borrow Ditch water surface to protect against potential predation of listed fish species.

Buried Pipeline and Concrete Distribution Box

The proposed project includes the installation of approximately 700-foot long, 54-inch buried pipeline, which will involve clearing and grubbing and temporary excavation within the primary construction zone. The pipeline will be buried such that a minimum of 3 feet of cover above the top of pipe is provided from the finished ground surface elevation. Pipe material will be high-density polyethylene. A concrete distribution box will be constructed with three outfalls that allow flexible distribution of water to various Refuge canals via existing internal Refuge conveyance facilities. Rip rap will be placed along the west bank of the Main Canal across from the new distribution box. The area is approximately 45 feet long by 18 feet wide by 1.5 feet deep (810 square feet and 45 cubic yards) of 6- to 9-inch size 0 rip rap. It will be placed on the Main Canal slope across from the distribution box.

Portions of the backfilled alignment will be planted with appropriate ground cover according to the Refuge managers and biologists. The pipeline alignment will also include a new gravel operations and maintenance road to access the new lift station facilities. Buried pipeline and concrete distribution box work will take place while water is present in the East Borrow Ditch but not when the bypass is flooded. Dewatering will likely be required during construction and will be performed by a contractor per approved designs, best practices, and permits.

Fish Screen Intake Structure

The lift station intakes will be fitted with two 48-inch diameter cylindrical fish screens designed for a maximum approach velocity of 0.33 feet per second in accordance with the National Oceanic and Atmospheric Administration Fisheries' and the Department's fish screen design criteria. Maximum lift station diversions will not exceed 80 cubic feet per second and is in accordance with the Central Valley Project Implantation Act water supply allocations and terms of the Refuge's water rights licenses. Timing of diversion and terms of the existing water rights will not change under the proposed project. The footprint of the elevated platform structure and fish screen within the East Borrow Ditch (to top of bank) is approximately 0.04 acre (1,700 square feet). The majority of the structure in this footprint is above 54 feet in elevation (the 100-year flood event stage). The cross-sectional area of the elevated platform structure and fish screens within the East Borrow Ditch (to top of bank) is 0.011 acre (500 square feet).

Cylindrical screens attach directly to the intake bowls of the vertical turbine pumps, eliminating the need for a sump structure to house the pump column and support the fish screen system. One cylindrical screen will provide flow to the 40-cubic-foot-per-second pump and the second screen will provide flow to the 20-cubic-foot-per-second pump and the two 10-cubic-foot-per-second pumps. Each screen will be able to be operated independently. The cylindrical screens will be supported on individual pile-supported vertical steel frames. A rail system will be constructed above the pump column to allow the screen to be retracted using a cable and winch system (electronically powered and controlled) to facilitate maintenance and repair.

Maintenance Road

The proposed project will be accessed via either the existing access road within the Refuge that parallels the Main Canal (Alternative A) or via another existing access road within the Refuge that parallels the Hi-Line Canal (Alternative B). If used, Alternative B will need to be enhanced for construction equipment and as such, excess spoil material (approximately 280 cubic yards) excavated from the construction area and not used to backfill the new buried pipeline will be utilized by the Refuge for standard operation and maintenance of road and internal levee maintenance and repair needs. Road enhancement will be on top of the existing road (a width of approximately 12 feet) and for a distance of approximately 6,180 feet, depending on how much material is needed in areas. No spoils will be placed within wetlands or canals.

Construction Details

Construction activities **will take place** in the fall or winter **and is currently planned to begin in 2022**. Approximately **12** months are needed to complete the construction work activities. Activities will be staged in a manner to minimize effects to species. For example, tree clearing activities within the pipeline alignment will be performed outside the bird nesting window (September through March 1), in-water construction activities will be performed during a time when listed fish species will not be impacted (July 1 through October 31) and the snake is active (May through October). Ducks Unlimited and its construction contractor and potential subcontractors will employ standard best management practices during construction to avoid and minimize water quality impacts including turbidity, sedimentation, etc., and will work with Refuge biologists regarding construction windows. The temporary construction features include staging areas and road access. Construction site access is available from the south via an existing access road beginning at Hughes Road. Additionally, there is potential construction site access from the north via an existing access road over the East Borrow Ditch.

Operations and Maintenance

The Refuge will be responsible for all long-term operations and maintenance for the proposed project. Therefore, the operations and maintenance is not being covered under this consultation.

Conservation Measures

Ducks Unlimited convened a Giant Garter Snake Working Group consisting of federal and state resource agencies, species experts, and concerned environmental groups to help develop new conservation measures to reduce impacts to the snake during the then-upcoming Formal Consultation on the Gray Lodge Wildlife Area Water Supply Infrastructure Improvement Project, which the Service most recently issued a biological opinion for on October 1, 2021 (Service File Number 08ESMF00-2019-F-1312-R003-1). The

Gray Lodge Wildlife Area Water Supply Infrastructure Improvement Project is currently ongoing, but the developed conservation measures have reduced the numbers of snakes that have been killed or injured compared to an earlier phase of that project. Therefore, the Bureau revised the existing conservation measures in the biological assessment for the proposed project and added new conservation measures, both of which were adopted from the conservation measures developed by the Giant Garter Snake Working Group. These conservation measures are considered part of the proposed action evaluated by the Service in this biological opinion.

1) Ground disturbing activities along the canals will occur during the snake's active season (May through October) to avoid harming snakes using burrows in canals or in staged construction materials.

2) Twenty-four hours prior to the commencement of construction activities, **suitable habitat within** the construction area will be surveyed for the snake by a Service- and Department-approved biologist to determine if the snake is likely to be present **and to determine any specific actions that need to be taken in those areas to avoid or reduce impacts on snakes (e.g., above-ground vegetation removal, micro or macro excavation to remove burrows, and rip rap removal as described in conservation measures 12, 13, and 14 below) The monitoring biologist will provide the Service and the Department with a written report that documents the results of the survey effort within 24 hours of commencement of construction activities. The monitoring biologist will be present during all initial vegetation clearing, site preparation, and ground-disturbing activities within suitable habitat and will have the authority to stop these activities, if necessary, to avoid or reduce impacts on snakes, until appropriate corrective measures have been implemented. The monitoring biologist will advise work crews of any specific actions that need to be taken in those areas where snakes are likely to be present that were identified during the preconstruction survey. If a snake is observed outside the active construction area or is likely to move into the active construction area, all work in the immediate area where the snake is encountered will cease and the animal will be allowed adequate opportunity to leave the area of its own volition. If the snake does not leave the active construction area or if it is determined to be likely to move into the active construction area:**

    a) **the monitoring biologist will capture and relocate the snake according to the protocols in the relocation plan (see conservation measure 11); and**

    b) **the monitoring biologist will provide the Service and the Department written reports adequately documenting relocation efforts within 24 hours of the completion of relocation activities.**

The construction area will be re-inspected by the monitoring biologist whenever a lapse in construction activity of two weeks or greater has occurred. **During construction, the monitoring biologist will report to both the Service and the Department within 24 hours any direct encounters between the snake, project workers, and their equipment. Injured snakes must be cared for by a licensed veterinarian or other qualified person(s), such as the monitoring biologist. Dead snakes must be sealed in a re-sealable plastic bag that contains a paper with the date and time when the animal was found, the location where it was found, and the name of the person who**

found it. The bag containing the specimen should be placed in a freezer located in a secure site until instructions are received from the Service and the Department regarding the disposition of the dead specimen. Contacts will be the Supervisor of the Sacramento Valley Division at the Service's Sacramento Fish and Wildlife Office at (916) 414-6600, as well as the Department's Sutter County biologist at (916) 358-2955.

3) A Worker Environmental Awareness Training Program for construction personnel will be conducted by a Service- and Department-approved biologist for all construction workers, including contractors, prior to the commencement of construction activities. Interpretation will be provided for non-English speaking workers and the same instruction provided for any new workers prior to performing work on site. The training will include information regarding the appearance, biology, distribution, and habitat needs of any special-status species that may be present, legal protections for those species, and penalties for violations and project-specific protective measures.

4) During construction, stockpiling of construction materials, portable equipment, vehicles, and supplies will be restricted to designated constructed staging areas and all operations will be confined to the minimal area necessary.

5) Project-related vehicles will observe a 15-mile-per-hour speed limit within construction areas.

6) Once construction is completed, all construction debris will be removed and wherever feasible, disturbed areas will be restored. Restoration will be coordinated with Refuge staff to ensure that Refuge management goals are reflected. A photo documentation report showing pre- and post-project area conditions will be submitted to the Service and the Department one month after implementation of restoration.

7) Proposed project staging areas will remain greater than 30 feet from the East Borrow Ditch and the Main and Hi-Line Canals.

8) **Temporary impacts to approximately 1.74 acres of potential upland snake habitat will occur as a result of placing spoil piles on the existing levee access road.** Prior to any earthmoving activities, temporary **impacts** to snake upland habitat **will be mitigated** by purchas**ing snake** conservation credits at a Service-approved conservation bank with a service area that covers the proposed project **at a 0.5:1 ratio (for a total of 0.87)**. Permanent impacts to 0.09 acre of **potential upland snake habitat will occur as a result of placing rip rap along the west bank of the Main Canal across from the new distribution box. Prior to any earthmoving activities,** permanent **impacts to** snake upland habitat **will be mitigated** by purchas**ing snake** conservation credits at a Service-approved conservation bank with a service area that covers the proposed **project at a 3:1 ratio (for a total of 0.27 credit). A total of 1.14 snake conservation credits will be purchased to mitigate temporary and permanent impacts.**

9) Dewatered areas (within the Main Canal **and existing distribution basin**) will remain dry and absent of aquatic prey for **48 hours** prior to the initiation of construction activities. If complete dewatering is not possible, **the canal and distribution basin will be thoroughly inspected by the monitoring biologist prior to the commencement of construction. If a snake is present, the monitoring biologist will capture and relocate**

it according to the protocols in the relocation plan (see conservation measure 11). The monitoring biologist will provide the Service and the Department a written report documenting capture and relocation efforts within 24 hours of completion of those activities. Aquatic prey, if any, that remains in the residual water will be captured and relocated to the nearest suitable habitat outside of the Main Canal and distribution basin work areas. Biologists will use hand-held nets or haul seines to capture and remove prey items, including fish and amphibians, from the remaining water. Engineering controls will be instituted as needed to prevent snakes from being entrained by the pumps used in dewatering. Such controls may include installation of a wire cage around the pump's intake hose to create an area of separation between the water body and the intake.

10) **Before the initiation of construction activities**, high-visibility **construction** fencing will be erected **to demarcate the designated work area** around the Main Canal **and proposed distribution box** to protect areas **outside the work area** from encroachment of personnel and equipment. Areas **outside the designated work area** will be avoided by all construction personnel. **Snake exclusion** fencing will be established in the uplands immediately adjacent to aquatic snake habitat **and the designated work area along the Main Canal and proposed distribution box** and **will** extend up to 200 feet from construction activities. Snake exclusionary fencing will be buried at least 6 inches below the ground to prevent snakes from attempting to use burrows or move under the fence. **One-way exit funnels will be installed in the fence at no more than 150-foot intervals. Installation of the snake exclusionary fencing will need to be approved by the monitoring biologist prior to the commencement of construction activities in that area. The high visibility construction and snake exclusion fencing will be inspected by the contractor before the start of each workday and maintained by the contractor until completion of the project.**

11) **A Giant Garter Snake Handling and Relocation Plan will be submitted to the Service and the Department for review and approval prior to the commencement of construction activities.**

12) **Above-ground vegetation in the designated work area along the Main Canal and area of the proposed distribution box will be removed during the snake's active season prior to construction. Most above-ground vegetation will be removed mechanically (e.g., mowing). However, if areas are too steep to access with larger equipment the above-ground vegetation will be removed using a combination of hand labor and power tools (e.g., gas-powered weedeater).**

    a) **The monitoring biologist will survey vegetation removal areas immediately prior to clearing work and will be present during vegetation clearing activities.**

    b) **Vegetation removal work will occur between 11:00 a.m. and 6:00 p.m. when snakes are most likely to be above ground and active.**

    c) **Any snakes encountered during vegetation removal activities will be captured and relocated according to the protocols in the relocation plan (see conservation measure 11).**

d) **A 15-day lag time will elapse between the completion of above-ground vegetation removal and commencement of rodent burrow removal and root-zone grubbing activities (see conservation measure 13) to allow snakes that may be present in the immediate area to move to other more suitable habitat.**

13) **Excavation of rodent burrows will occur during the snake's active season and will proceed no less than 15 days after above-ground vegetation removal (see conservation measure 12). Excavation of rodent burrows will involve an excavator with an equipment operator, a laborer or spotter, and a monitoring biologist. The monitoring biologist will determine the procedure for burrow removal based on site conditions and expected likelihood of encountering snakes and will monitor the burrow removal. The monitoring biologist may also require additional or different types of equipment to adapt to site conditions. The burrow excavation will primarily occur in the form of either micro-excavations or macro-excavations.**

a) **Micro-excavation will be implemented in areas where the likelihood of encountering snakes is expected to be the highest (e.g., along the west bank of the Main Canal). The excavator used in micro-excavation will have a bucket that is 8 to 12 inches wide. Initially, the monitoring biologist will use a scope with a light to inspect the upper portion of the burrow to determine if a snake is present. If a snake is observed, the burrow will be carefully hand-excavated until the monitoring biologist is able to capture the snake and relocate it from the work area in accordance with the relocation plan (see conservation measure 11). If a snake is not observed, the monitoring biologist will insert a section of PVC pipe or hose into the burrow to mark the portion that was inspected. The burrow then will be mechanically excavated back to the end of the insert. This process will be repeated until the burrow has been excavated to the point where the monitoring biologist can determine that a snake is not present or has removed and relocated any snake that was present. The burrow will then be filled in with soil.**

b) **Macro-excavation will be implemented in all other portions of the work area along the Main Canal and area of the proposed distribution box where burrows are present. The excavator used in macro-excavation will have a bucket that is 24 inches wide. The excavator will pick up a bucket of soil from the burrow area. The monitoring biologist will examine the soil for any snakes that may be present in the bucket before the soil is deposited on the ground. If a snake is observed in the bucket, the monitoring biologist will capture the snake and relocate it from the work are in accordance with the relocation plan. If no snakes are observed in the bucket, the excavator will deposit the soil on the ground and the soil will be further examined by the monitoring biologist to determine if any snakes are present. If a snake is observed in the deposited soil, the monitoring biologist will capture the snake and relocate it from the work area in accordance with the relocation plan. If the monitoring biologist determines that a snake is not present in the deposited soil, the excavator will pick up the next bucket of soil from the burrow area and the process will be repeated until the burrows have been excavated to the point that the monitoring biologist can determine that a snake is not present or has removed and relocated any snake that was present. The burrows will then be filled in with soil.**

c) **Some portions of the designated work area along the Main Canal and area of the proposed distribution box may include very small holes or cracks in the soil that could provide potential burrows for snakes. Due to the smaller size, these burrows will be hand-excavated either by the monitoring biologist or by the monitoring biologist and a laborer provided by the contractor.**

d) **Burrow removal work will occur between 11:00 a.m. and 6:00 p.m. when snakes are most likely to be above-ground. After burrows are removed, removal of below-ground vegetation can proceed with no daily time constraints.**

The monitoring biologist will be present during removal of below-ground vegetation in the work area along the Main Canal and area of the proposed distribution box. If a snake is observed, the biologist will temporarily halt vegetation removal activities and capture and relocate the snake according to the protocols in the relocation plan (see conservation measure 11).

14) **Existing rip rap along the Main Canal and around the current water distribution basin will be removed during the snake's active season. A monitoring biologist will be present during rip rap removal. If a snake is observed during rip rap removal, the monitoring biologist will temporarily stop work and capture the snake and relocate it from the work area according to the protocols in the relocation plan (see conservation measure 11). If feasible, water levels will be raised in the canal and water distribution basin work areas to inundate the rip rap and displace snakes that may be present. Rip rap removal will be initiated after these areas are inundated. If it is not feasible to raise the water in the canal and distribution basin to inundate the rock, its removal will be completed in the following sequence:**

a) **Remove exposed rock that is above the canal and distribution basin water lines beginning no earlier than 9:00 a.m. to allow snakes to become active. After removal of rock that is above the canal and distribution basin water lines, where feasible, immediately lower water level in canal and distribution basin and concurrently remove remaining rock; or**

b) **Where canal and distribution basin water levels cannot be lowered, remove rock in the following sequence over two consecutive days:**

i) **Day 1: Beginning no earlier than 9:00 a.m., remove rock that is above the water line and suspend work for the day.**

ii) **Day 2: Continue with removal of rock below water line until complete with no restrictions on construction start time.**

Action Area

The action area is defined in 50 CFR 402.02, as "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action." For the proposed project, the action area encompasses the footprint of the lift station, the distribution box, the placement of rip rap, and the pipeline. The action area also includes all access roads, staging

areas, and all areas up to 330 feet from the maintenance activities in which noise from construction activities is expected to exceed ambient levels (derived from Service 2006).

Analytical Framework for the Jeopardy Determination

Section 7(a)(2) of the Act requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. "Jeopardize the continued existence of" means to engage in an action that reasonably 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 in this biological opinion considers the effects of the proposed federal action, and any cumulative effects, on the rangewide survival and recovery of the listed species. It relies on four components: (1) the *Status of the Species*, which describes the current rangewide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which analyzes the current condition of the species in the action area without the consequences to the listed species caused by the proposed action, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the *Effects of the Action*, which determines all consequences to listed species that are caused by the proposed federal action; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-federal activities in the action area on the species. The *Effects of the Action* and *Cumulative Effects* are added to the *Environmental Baseline* and in light of the status of the species, the Service formulates its opinion as to whether the proposed action is likely to jeopardize the continued existence of the listed species.

Status of the Species

For the most recent comprehensive assessment of the species' rangewide status, please refer to the *Giant Garter Snake (Thamnophis gigas) 5-year Review: Summary and Evaluation* (Service **2020**) (5-year Review). No change in the species' listing status was recommended in this 5-year Review. The abundance and distribution of the snake has not changed significantly since the previous review, although some populations remain in danger of extirpation due to small population size and low habitat quality. Threats **evaluated during that review and** discussed in the **final document** have continued to act on the snake since the **2020** 5-year Review was finalized, with loss and fragmentation of habitat being the most significant effect. While there continue to be losses of snake habitat throughout **the various recovery units, including the Sutter Basin Recovery Unit where the proposed project is located**, to date no project has proposed a level of effect for which the Service has issued a biological opinion of jeopardy for the snake.

Environmental Baseline

***Environmental baseline* refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. 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. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline.

The proposed project is located within the Sutter Basin, identified as a "snake population and Recovery Unit" in the *Recovery Plan for the Giant Garter Snake* (Service 2017) (Recovery Plan). The Sutter Basin Recovery Unit extends from the Sutter buttes to the confluence of the Feather and Sacramento Rivers. The Sutter Basin Recovery Unit consists of 239,810 acres, including portions of Butte and Sutter Counties. The proposed project occurs in the Refuge in the Sutter Bypass, which is bordered by both the Gilsizer Slough Management Unit and the Sutter Management Unit. The nearest known occurrence of the snake in the California Diversity Database (Database) **(2022)** is approximately 1 mile west of the action area along the west levee road. **One snake was found at this occurrence in 2005.** Two additional occurrences**, which are close to each other,** are just over 3 miles to the southeast along irrigation ditches within and adjacent to the Refuge. **Several snakes have been found at these occurrences over several survey events, with the most recent survey event in 2005 finding four snakes.**

Most of the action area is managed by the Refuge for waterfowl and is seasonally flooded (typically September through February) to provide migratory and nesting habitat. Due to annual flooding, most of the action area is not suitable for year round snake occupation. Ditches within the Refuge may have water in them at any time, but are used specifically for moving water to ponds within the Refuge and are not watered as habitat. The action area supports areas of open water (varying seasonally) with emergent vegetation.

The East Borrow Ditch can act as a travel corridor between wetland areas that provide suitable escape cover and foraging habitat. However, snakes are unlikely to be found within the action area along the East Borrow Ditch because the banks have little terrestrial vegetation for cover, dense riparian overstory is present and provides few available basking sites, and the area is frequently flooded during the inactive season (November through April). The Main Canal contains suitable aquatic habitat with the associated uplands that provide suitable basking sites for the snake. Outside of the Sutter Bypass, but within the action area, suitable snake habitat is composed of a permanently flooded irrigation ditch with abundant herbaceous emergent vegetation, adjacent uplands, and no riparian overstory, and is adjacent to cultivated rice fields.

The Service issued a series of biological opinions for two phases of a similar project (Programmatic Biological Opinion on the Conveyance of Refuge Water Supply Project, issued on December 7, 1998 [Service File Number 1-1-99-F-0015] and an appendage for the Gray Lodge Wildlife Area Water Supply Project, issued on September 27, 2013 [Service File Number 81420-2009-TA-1164-2]; and Formal Consultation on the Gray Lodge Wildlife Area Water Supply Infrastructure Improvement Project issued on October 1, 2021 [Service File Number 08ESMF00-2019-F-1312-R003-1]) approximately 17 miles to the north. Implementation of the first phase resulted in documented and reported take of 232 snakes, including 44 mortalities. While currently ongoing, implementation of the second phase has resulted in the documented and reported take of 63 snakes, including 5 mortalities. Relocation reports from the second phase has shown most of the snakes captured were found in upland areas in the general vicinity of water control structures. The biphasic project and the proposed project occur in proximity to each other, have similar habitat, and similar work will occur around existing infrastructure.

Due to the suitability of habitat within the Main Canal, the known occurrences near the action area, and the suitable habitat adjacent to the proposed project, **the Service is reasonably certain that the** snake occurs within the action area.

Effects of the Action

***Effects of the action* are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action.**

The proposed project will have both temporary and permanent effects to upland snake habitat. Temporary effects will result from the placement of spoil piles on the levee access road along approximately 1.74 acres of snake upland habitat. The proposed project will result in the permanent loss of approximately 0.09 acre of snake upland habitat as a result of the installation of the new distribution box including placing rip rap along the west bank of the Main Canal across from the new distribution box. The permanent loss of suitable habitat will prevent the snake from foraging within suitable aquatic habitats **as the loss of upland habitat will result in the removal of emergent vegetation on the banks from which the snake uses to hunt**. The loss of upland habitat will also prevent snakes from **using burrows in** these areas to thermoregulate below ground, seek shelter from predators, or find winter refugia during the snake's inactive season. We expect noise and vibration of construction equipment to displace snakes from the work area, making them vulnerable to the potential for predation, and will hinder their ability to find necessary resources such as food and shelter. In addition, construction equipment in the action area will disturb, collapse, or crush small animal burrows, which will result in injury or mortality to snakes if they are using these burrows for shelter.

Construction of the new distribution box and the placement of rip rap will result in injury or mortality to the snake if they are crushed by construction equipment or if they become entombed by the placement of the concrete or rip rap.

Snakes within the action area of the proposed project will now be subject to relocation. The effects of relocating snakes will minimize the risk of injury or mortality caused by construction equipment. Snakes can be injured by being handled improperly and their risk of predation can increase if snakes are released in areas that don't provide suitable habitat. However, these risks will be minimized through the use of a Service-approved relocation plan.

As noted previously in the *Description of the Action* section, the project proponent has also proposed a set of conservation measures, including the commitment to provide compensatory habitat as a condition of the action. This compensatory habitat is intended to minimize the effect on the species of the proposed project's anticipated incidental take, resulting from the temporary and permanent loss of habitat described above. The compensatory habitat proposed will be in the form of snake conservation credits at a Service-approved conservation bank **with a service area that includes the proposed project's location. This component of the action will have the effect of protecting and managing lands for the species' conservation in perpetuity.** The compensatory lands will provide suitable habitat for breeding, feeding, or sheltering commensurate with or better than habitat lost as a result of the proposed project. Providing this

compensatory habitat as part of a relatively large, contiguous block of conserved land may contribute to other recovery efforts for the species.

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. During this consultation, the Service did not identify any future non-federal actions that are reasonably certain to occur in the action area of the proposed project.

Conclusion

After reviewing the current status of snake, the environmental baseline for the action area, the effects of the proposed project, and the cumulative effects, it is the Service's biological opinion that the Sutter National Wildlife Refuge Lift Station Project, as proposed, is not likely to jeopardize the continued existence of the snake. The Service reached this conclusion because the project-related effects to the species, when added to the environmental baseline and analyzed in consideration of all potential cumulative effects, will not rise to the level of precluding recovery or reducing the likelihood of survival of the species based on the conservation measures proposed by the Bureau and the purchase of conservation credits to minimize the permanent loss of snake 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. Harass is defined by Service regulations at 50 CFR 17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and 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 must be implemented by the **Bureau** so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The **Bureau** has a continuing duty to regulate the activity covered by this incidental take statement. If the **Bureau** (1) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document or (2) fails to **assume and implement the** terms and conditions, the protective coverage of section 7(o)(2) may lapse. **In order to monitor the impact of incidental take, the Bureau 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)].

Amount or Extent of Take

The Service anticipates that incidental take of the giant garter snake will be difficult to detect or quantify because the number of individuals in the action area is unknown, and estimates of population density in the action area are unavailable. The snake is secretive and uses underground burrows for shelter while not in aquatic habitat during the active season and for brumation during the inactive season. **Since the exact number of snakes within the action area is unknown, the Service has determined that the quantification of incidental take of the snake for the proposed project will be based on the 2005 trapping surveys that occurred within and adjacent to the Refuge and knowledge gained from the implementation of a project in proximity to the proposed project. Therefore, the Service anticipates take incidental to the proposed action as the injury or mortality of five (5) snakes. In addition, the Service anticipates that all snakes inhabiting the combined 1.83 acres of suitable habitat that will either be temporarily or permanently affected will be subject to incidental take in the form of capture.**

Upon implementation of the following reasonable and prudent measures, incidental take of snake associated with the Sutter National Wildlife Refuge Lift Station Project will become exempt from the prohibitions described in section 9 of the Act. No other forms of take are exempted under this opinion.

Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species.

Reasonable and Prudent Measures

All necessary and appropriate measures to avoid or minimize effects on the snake resulting from implementation of this project have been incorporated into the project's proposed conservation measures. Therefore, the Service believes the following reasonable and prudent measure is necessary and appropriate to minimize incidental take of the snake:

1) All conservation measures, as described in the biological assessment and restated in the *Description of the Action* section of this biological opinion, shall be fully implemented and adhered to. Further, this reasonable and prudent measure shall be supplemented by the *Terms and Conditions* below.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the Bureau must ensure compliance with the following terms and conditions, which implement the reasonable and prudent measure described above. These terms and conditions are nondiscretionary.

1. The Bureau will include full implementation and adherence to the conservation measures as a condition of any permit or contract issued for the proposed project.

2. Prior to construction, the Bureau will provide a copy of the completed bill(s) of sale and payment receipt(s) to the Service upon the purchase of habitat conservation credits.

3. In order to monitor whether the amount or extent of incidental take anticipated from implementation of the proposed project is approached or exceeded, the Bureau will adhere to the following reporting requirements. Should this anticipated amount or extent of incidental take be exceeded, the Bureau must immediately reinitiate formal consultation, as per 50 CFR 402.16(a).

    a. The Bureau shall immediately contact the Sacramento Fish and Wildlife Office's **Sacramento Valley Division Supervisor** at (916) 414-**6600** to report direct encounters between the snake and project workers and their equipment whereby incidental take in the form of injury or mortality occurs. If the encounter occurs after normal working hours, the Bureau shall contact the Sacramento Fish and Wildlife Office at the earliest possible opportunity the next working day. When injured or killed individuals of the listed species are found, the Bureau shall follow the steps outlined in the *Salvage and Disposition of Individuals* section below.

    b. For those components of the action that will require the capture and relocation of any listed species, the Bureau shall immediately contact the Sacramento Fish and Wildlife Office's **Sacramento Valley Division Supervisor** at (916) 414-**6600** to report the action. If capture and relocation need to occur after normal working hours, the Bureau shall contact the Sacramento Fish and Wildlife Office at the earliest possible opportunity the next working day.

Salvage and Disposition of Individuals:

Injured listed species must be cared for by a licensed veterinarian or other qualified person(s), such as the Service-approved biologist. Dead individuals must be sealed in a resealable plastic bag that contains a paper with the date and time when the animal was found, the location where it was found, and the name of the person who found it. The bag containing the specimen should be placed in a freezer located in a secure site until instructions are received from the Service regarding the disposition of the dead specimen. The Service contact person is the Sacramento Valley Division **Supervisor** of the Endangered Species Program at the Sacramento Fish and Wildlife Office at (916) 414-**6600**.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The Service recommends the following actions:

1) The Bureau should work with the Service to assist us in meeting the goals of the Recovery Plan for the snake.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION—CLOSING STATEMENT

This concludes formal consultation on the Sutter National Wildlife Refuge Lift Station Project. As provided in 50 CFR 402.16(a), reinitiation of consultation is required and shall be requested by the federal agency or by the Service where discretionary federal involvement or control over the action has been retained or is authorized by law, and:

1) If the amount or extent of taking specified in the incidental take statement is exceeded;

2) 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;

3) 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 written concurrence, or

4) 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 biological opinion, please contact **Sam Sosa, Senior Fish and Wildlife Biologist (samuel_sosa@fws.gov), at (916) 414-6560 or the Sacramento Valley Division Supervisor at (916) 414-6600 or at the letterhead address.**

ec:
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