



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
81420-2008-F-0195-R002

OCT 2 2009
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Mr. Francis C. Piccola
Chief, Planning Division
U.S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814

Subject: Re-initiation of Formal Consultation for the Natomas Levee Improvement Program, Landside Improvements Project, Phase 2 Biological Opinion, Sacramento and Sutter Counties, California

Dear Mr. Piccola:

This is in response to your August 13, 2009, request to amend the project description of the biological opinion written by the U.S. Fish and Wildlife Service (Service) on the Natomas Levee Improvement Program, Landside Improvements Project Phase 2 (proposed project) in Sacramento and Sutter Counties, California, dated October 9, 2008 (File 81420-2008-F-0195-5) and amended on May 6, 2009. The Corps has requested changes to the project description including adding work at Pumping Plant 34, removal of a section of the Central Main Flume, Elkhorn Pump Plant Pipeline, and a change in the timing of construction of other activities. These changes have resulted in a change to the previous effects analysis. This document represents the Service's concurrence to amend the Phase 2 biological opinion on the effects of the action to two federally-listed threatened species: the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) and the giant garter snake (*Thamnophis gigas*), in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

This amendment is based on: (1) your August 13, 2009, e-mail requesting re-initiation under section 7 of the Service's May 6, 2009, amended biological opinion (biological opinion); (2) the memo prepared by EDAW dated August 12, 2009; (3) the August 12 and 13, 2009, e-mails from the U.S. Army Corps of Engineers (Corps) including information regarding the valley elderberry longhorn beetle; and (4) other information available to the Service.

The following changes are made to the May 6, 2009, amended biological opinion:

1. On page 29, change first sentence of last paragraph from:

Improvements to Reaches 1-4B are anticipated to occur over one construction season, beginning in May 2009 and ending in October 2009.



To:

Improvements to Reaches 1–4B are anticipated to occur over one construction season. Reach 1 will be completed by October 2009 and Reaches 2-4B will extend through November 15, 2009. After October 1, 2009, construction will consist of compacting of newly constructed levee embankment, hydroseeding, and demobilization.

2. On page 32, insert following paragraph after second paragraph under Major Irrigation and Drainage Infrastructure Modifications:

Construction of the sedimentation basin would occur between August 15 and November 15, 2009. Aquatic features in this area are heavily shaded by dense riparian woodlands. Areas which could support overwintering giant garter snakes would be disturbed prior to October 1 and fenced with exclusionary fencing.

3. Insert the following paragraphs on page 33 prior to Prichard Pumping Plant Connection:

Pumping Plant Number 4 Outfall Raising

The RD 1000's Pumping Plant Number 4 site is located along the NCC south levee and pumps water from the Natomas basin into the NCC. In order to modify Pump Plant Number 4's outfall to the 200-year flood elevation the area surrounding the outfall must be dewatered by constructing a rock cofferdam. The rock cofferdam would be composed of angular washed rock and placed so that it binds with the underlying rock already in the channel and creates a stable configuration. The cofferdam would prevent water from entering the work site while allowing water to flow around the work zone. After the rock has been placed with an excavator, the contractor would place a thin layer of 3/4- to 1-1/2-inch washed crushed rock over the streamside surface of the cofferdam. The contractor would then place a rubberized liner that would form the water barrier of the dam and minimize the potential for water leakage. After construction, the contractor would pump water out of the enclosed work area using a pump and intake and discharge hoses. The intake hose would be fitted with a screen with a 1/4-inch mesh opening.

After the area surrounding the outfall is dewatered, the outfall would be excavated in order to build the concrete outfall structure. During construction of the new outfall structure, additional pumping would likely be required to maintain the lowered water elevation within the cofferdam. After construction of the outfall structure, the contractor would use some of the rock from the cofferdam to fill in the area around the Pumping Plant Number 4 discharge outfall structure. After the initial placement of rock is complete, water would be pumped into the cofferdam area to equalize the water pressure on the rubberized liner. The liner would then be removed. The contractor would then carefully remove the remaining rock that is located above the elevation of the new plant outfall apron. The rock would be stacked on the bank for later removal to a different location on the project outside of the stream zone. About 0.07 acre of giant garter snake aquatic habitat would be changed permanently from natural bank to hardened bank from this construction. This work would occur after May 1, 2010.

4. Insert the following paragraph on page 34 under Central Main Flume Connection:

The Central Main Flume is constructed in an earthen berm slightly above the existing grade. The flume is narrow and concrete lined. A portion of the flume is located under the footprint of proposed improvements to the Sacramento River east levee. An additional 625-foot-long segment of Central Main Flume between the western edge of the new canal alignments and the eastern edge of the levee improvements footprint will need to be removed as part of the project. Removal of the flume would involve an excavator or other piece of heavy equipment working from one side of the flume to break up the concrete and remove the rubble. This section of the Central Main Flume has little open water and is shaded by oak woodland along its entire length. However, there are some small ditches that run parallel along the Central Main Flume that would be filled in as a result of the project. This would result in the loss of 0.12 acre of aquatic giant garter snake habitat and 0.06 acre of upland giant garter snake habitat. SAFCA proposes to create 0.18 acre of managed marsh near Fisherman's Lake during Phase 4A.

5. Insert the following paragraph on page 34 after the Central Main Flume Connection section:

Elkhorn Pumping Plant

As part of the construction of the sediment basin, SAFCA would have to relocate the outfall for the Elkhorn Pumping Plant to the new sediment basin. A temporary 36-inch pipe will be fit to the existing 42-inch metal pipe within the outfall structure and will extend across the Elkhorn Reservoir into the new sediment basin. Water from the Elkhorn Pumping Plant will outfall into the sediment basin rather than the existing Elkhorn Reservoir when the sediment basin construction is completed. Installation of the new pipes would require temporary dewatering of a portion of the existing Elkhorn Reservoir using sandbag cofferdams. The water in the pipeline alignment will be pumped onto upland and allowed to infiltrate. The discharge area for the pumped water will have silt fence around it. Once the pipeline alignment is dewatered, the ground will be excavated with spoils contained within the cofferdam limits. The pipes will be installed and the trench will be backfilled. However, in order to protect the pipes an extra 2-foot of cover will be placed over the pipes, above existing ground level, resulting in a change in the aquatic area of the Elkhorn Reservoir. These construction activities would result in a permanent loss of 0.10 acre and temporary loss of 0.18 acre of aquatic habitat for giant garter snake and temporary loss of 0.16 acre of upland habitat for giant garter snake. SAFCA proposes to create 0.10 acre of managed marsh near Fisherman's Lake during Phase 4 of the project.

6. On page 35, change the second paragraph from:

The segment of the Elkhorn Canal from the Prichard Pumping Plant to the Elkhorn sedimentation basin would be constructed between May and October 2009. The segment of the Elkhorn Canal from the Central Main Flume to the Elkhorn sedimentation basin would be constructed between May and October 2009.

To:

The segment of the Elkhorn Canal from the Prichard Pumping Plant to the Elkhorn sedimentation basin would be constructed between August 1 and November 15, 2009. The segment of the Elkhorn Canal from the Central Main Flume to the Elkhorn sedimentation basin would be constructed between September 15 and December 15, 2009. All areas would be disturbed prior to October 1 and giant garter snake exclusion fencing will be placed prior to October 1, 2009, in areas that are potential overwintering sites for giant garter snakes.

7. On page 50, change the Phase 2 Giant Garter Snake Effects section from:

Phase 2 construction includes work along the NCC and reaches 1-4B along the Sacramento River east levee. The Corps and SAFCA have proposed to complete the majority of the work during the active season of the giant garter snake (May 1 to October 1). Construction during this time would occur in 61.1 acres of developed land, 139.6 acres of annual grassland, 645.5 acres of row and field crop and fallow agriculture, 1.5 acres of orchard, 185 acres of rice (25 would be a permanent effect, 160 acres would be a temporary effect), 2 acres of canals and ditches, 22 acres of open water and other non-canal wetlands, and 10.3 acres of woodland. At the end of the construction season the proposed land cover types will be 53.5 acres of developed land, 30 acres of created woodland, 15.85 acres of preserved woodland, 168 acres of levee slope grassland, 123 acres of grassland on seepage berms and canal embankments, 19 acres of irrigation canal, 13.5 acres of GGS/Drainage Canal, and 175 acres of preserved rice. The newly created cover-types with the project would be protected from future development through either a flood control easement, conservation easement, or drainage easement.

Phase 2 construction would primarily occur between May 1 and October 1. The only components of Phase 2 work which would occur outside of the giant garter snake's active season would be relocation of power poles, relocation of private irrigation pipelines, canals, and wells, and the removal, transplantation, and/or planting of trees and elderberry shrubs that are located in the Phase 2 footprint. To reduce the likelihood of disturbing or killing a giant garter snake that may be overwintering in uplands that would be affected this winter, SAFCA has proposed to erect exclusionary fencing around the areas where they would be working prior to October 1. This fence would be monitored daily prior to and during construction to insure that there are no breaches that a snake could get through. This should remove the chance that project construction would kill giant garter snakes when they are working in the winter months.

The remainder of the project would be constructed during the active period (May 1 – October 1) for the snake, resulting in a decreased risk of direct mortality of snakes. However, given the number of acres of aquatic and upland giant garter snake habitat affected within Phase 2, it is highly likely effects to snakes would include removal of cover and basking sites, filling or crushing of burrows or crevices, obstructing snake movement, and decreasing the prey base, and may result in the direct disturbance, displacement, injury, and/or mortality of snakes. Snakes may disperse across or may bask on existing roads, and thus may be killed or injured by construction equipment or other vehicles accessing the project site.

To:

Phase 2 construction includes work along the NCC and reaches 1-4B along the Sacramento River east levee. Construction would occur in 61.1 acres of developed land, 139.8 acres of annual grassland, 645.5 acres of row and field crop and fallow agriculture, 1.5 acres of orchard, 185 acres of rice (25 would be permanently affected, 160 acres would be temporarily affected), 2.35 acres of canals and ditches, 22 acres of open water and other non-canal wetlands, and 10.3 acres of woodland. At the end of the construction season the proposed land cover types will be 53.5 acres of developed land, 30 acres of created woodland, 15.85 acres of preserved woodland, 168 acres of levee slope grassland, 123 acres of grassland on seepage berms and canal embankments, 19 acres of irrigation canal, 13.5 acres of GGS/Drainage Canal, and 175 acres of preserved rice. The newly created cover-types with the project would be protected from future development through either a flood control easement, conservation easement, or drainage easement.

SAFCA has proposed to conduct some of the Phase 2 construction outside of the giant garter snake active season (between May 1 and October 1). These include relocation of power poles, relocation of private irrigation pipelines, canals, and wells, the removal, transplantation, and/or planting of trees and elderberry shrubs that are located in the Phase 2 footprint, construction of pipes from the Elkhorn Pumping Plant to the Elkhorn Reservoir, Sacramento River east levee Reaches 2-4B, upper Elkhorn Canal and Upper GGS/Drainage Canal construction, and a new sedimentation basin. To reduce the likelihood of disturbing or killing a giant garter snake that may be overwintering in uplands that would be affected during the inactive season (October through April), SAFCA has proposed to erect exclusionary fencing prior to October 1 around areas where snakes would be likely to overwinter. This fence would be monitored daily prior to and during construction to insure that there are no breaches that a snake could get through. This should lessen the chance that project construction would kill overwintering giant garter snakes. Many of the canals have been without water this year, which would make the areas that SAFCA proposes to construct in the winter less attractive to the giant garter snake due to their use of aquatic features for feeding and movement. Additionally, for the construction of pipes from the Elkhorn Pumping Plant to the Elkhorn Reservoir, Sacramento River east levee Reaches 2-4B, upper Elkhorn Canal and Upper GGS/Drainage Canal construction, and new sedimentation basin construction at these sites would begin prior to October 1, 2009 which is when the snakes begin to search for sites suitable for overwintering. Disturbance of these areas prior to snakes finding them for overwintering would likely cause them to seek other areas.

The remainder of the project would be constructed during the active period (May 1 – October 1) for the snake, which can result in a decreased risk of direct mortality of snakes because snakes are more active during these months. However, given the number of acres of aquatic and upland giant garter snake habitat affected within Phase 2, it is highly likely effects to snakes would include removal of cover and basking sites, filling or crushing of burrows or crevices, obstructing snake movement, and temporary loss of aquatic habitat which decreases the prey base, and may result in the direct disturbance, displacement, injury, and/or mortality of snakes. Snakes may disperse across or may bask on existing roads, and thus may be killed or injured by construction equipment or other vehicles accessing the project site.

8. On page 56, change the Phase 2 Incidental Take Statement from:

Giant Garter Snake

The Service anticipates that incidental take of the snake will be difficult to detect or quantify for the following reasons: giant garter snakes are cryptically colored, secretive, and known to be sensitive to human activities. Snakes may avoid detection by retreating to burrows, soil crevices, vegetation, or other cover. Individual snakes are difficult to detect unless they are observed, undisturbed, at a distance. Most close-range observations represent chance encounters that are difficult to predict. It is not possible to make an accurate estimate of the number of snakes that will be harassed, harmed or killed during Phase 2 construction activities (staging areas, work on canal banks, soil borrow areas, and vehicle traffic to and from borrow areas). In instances when take is difficult to detect, the Service may estimate take in numbers of species per acre of habitat lost or affected as a result of the action. Therefore, the Service anticipates that all giant garter snakes inhabiting 187 acres of aquatic and 818.9 acres of upland habitat may be harassed, harmed, or 2 giant garter snakes killed by loss and destruction of habitat, as a result of the project.

To:

Giant Garter Snake

The Service anticipates that incidental take of the snake will be difficult to detect or quantify for the following reasons: giant garter snakes are cryptically colored, secretive, and known to be sensitive to human activities. Snakes may avoid detection by retreating to burrows, soil crevices, vegetation, or other cover. Individual snakes are difficult to detect unless they are observed, undisturbed, at a distance. Most close-range observations represent chance encounters that are difficult to predict. It is not possible to make an accurate estimate of the number of snakes that will be harassed, harmed or killed during Phase 2 construction activities (staging areas, work on canal banks, soil borrow areas, and vehicle traffic to and from borrow areas). In instances when take is difficult to detect, the Service may estimate take in numbers of species per acre of habitat lost or affected as a result of the action. Therefore, the Service anticipates that all giant garter snakes inhabiting 187.35 acres of aquatic and 818.9 acres of upland habitat may be harassed, harmed, or 3 giant garter snakes killed by loss and destruction of habitat, as a result of the project. The number of snakes killed has been increased because some of the construction schedule has been changed to occur in the winter months when snakes are less mobile and more likely to be killed due to construction activities.

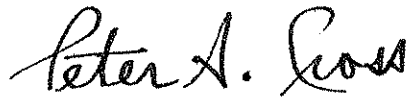
The Service has reviewed the changes in the project description and analyzed the effects to the giant garter snake due to these changes. The Service's biological opinion is that the proposed Natomas Landside Improvements Project changes are not likely to jeopardize the continued existence of the giant garter snake.

This concludes formal consultation with the Corps on the amended Natomas Levee Improvement Program, Landside Improvements Project Phase 2. As provided in 50 CFR §402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control

over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending re-initiation.

If you have any questions regarding this biological opinion on the Natomas Landside Improvements Project Phase 2, please contact Jennifer Hobbs at (916) 414-6541 or Jana Milliken, Chief, Sacramento Valley Branch at (916) 414-6645.

Sincerely,



Susan K. Moore
Field Supervisor

cc:

Elizabeth Holland, Corps, Sacramento, CA
Patrick Moeszinger, CDFG, Rancho Cordova, CA
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