



# 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:  
81420-2009-F-0890-R005

SEP 14 2011

Ms. Alicia E. Kirchner  
Chief, Planning Division  
U.S. Army Corps of Engineers, Sacramento District  
1325 J Street  
Sacramento, California 95814

Subject: Reinitiation of Section 7 Programmatic Formal Consultation on the Natomas Levee Improvement Program's Landside Improvements Phase 3 Project, Sacramento and Sutter Counties, California

Dear Ms. Kirchner:

This is in response to your May 10, 2011, request to reinitiate formal consultation with the U.S. Fish and Wildlife Service (Service) for a fifth time on the Natomas Levee Improvement Program (NLIP), Landside Improvements Project, Phase 3 (Phase 3) in Sacramento and Sutter Counties, California. Your request was received in our office on May 10, 2011. The Phase 3 biological opinion (81420-2009-F-0890-1) was completed on September 28, 2009 and tiered off a programmatic biological opinion (81420-2008-F-0195-5) for the entire NLIP project that was issued on October 9, 2008. The Corps is requesting reinitiation on the Phase 3 project, for a fifth time, due to an increase in the number of elderberry shrubs affected and a design change in the project description. These actions have not been previously analyzed. This biological opinion addresses effects to the federally-threatened giant garter snake (*Thamnophis gigas*) and the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) and is issued under the authority of section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

This biological opinion is based on: (1) your May 10, 2011, request for reinitiation; (2) the memorandum prepared by AECOM dated May 2, 2011; and (3) other information available to the Service.

To provide ease of reading, language changed within a paragraph from the original biological opinion will be underlined. Therefore, the Phase 3 biological opinion is now amended as follows:

Page 4: Change the following bullet under the **Sacramento River East Levee Reaches 5A-12** section of the **Project Description** from:

- removal of trees and 96 elderberry shrubs (*Sambucus sp.*) from Reaches 10 through 12A to prepare for construction of a 500-foot-wide berm and the Riverside Canal realignment that would be conducted in Phase 4;

To:

- removal of trees and 99 elderberry shrubs (*Sambucus sp.*) from Reaches 9B through 12A to prepare for construction of a 500-foot-wide berm and the Riverside Canal realignment that would be conducted in Phase 4;

Page 20: Change the following paragraph under **Landside Woodlands of the Project Description** from:

In Phase 3, woodlands consisting of native riparian species would be planted east of the maintenance corridor along the Sacramento River east levee improvements. Tree and shrub species, including elderberry shrubs, would be planted on approximately 18.5 acres of existing cropland, fallow, or currently unused sites in a woodland corridor along Reaches 7-9B of the Sacramento River east levee. An additional 2.5 acres of existing woodlands would be preserved along the proposed woodland corridor. At least another 15 acres of woodlands would be established on a site as yet to be determined. Groves would generally be at least 50-100 feet wide and several hundred feet long. At maturity, stand structure would vary from closed canopy woodland to grassland savanna vegetation type.

To:

In Phase 3, woodlands consisting of native riparian species will be planted east of the maintenance corridor along the Sacramento River east levee improvements. Tree and shrub species, including elderberry shrubs, would be planted on approximately 30.5 acres of existing cropland, fallow, or currently unused sites in a woodland corridor along Reaches 7-9B of the Sacramento River east levee. An additional 5.5 acres of existing woodlands will be preserved along the proposed woodland corridor. Groves would generally be at least 50-100 feet wide and several hundred feet long. At maturity, stand structure would vary from closed canopy woodland to grassland savanna vegetation.

Page 22: Change the following paragraph under **South Sutter, LLC/Thornton of the Project Description** from:

To deal with stormwater that will collect at the South Sutter Borrow Site, the site has to have proper drainage. To drain the site SAFCA proposes to construct a drainage culvert, made of reinforced concrete pipe that would convey drainage flow into the Walnut Road West Ditch. The reinforced concrete pipes will be trenched from the borrow sites to the outfall locations on a gentle slope for gravity draining. The Walnut Road West Ditch will be regraded from the new culvert installation to the intersection with Elkhorn Boulevard. Riprap will be installed around

the culvert leading into the Walnut Road West Ditch. The ditch south of the culvert will be re-graded because the borrow site will be at a lower elevation than the surrounding area once borrow activities are completed. In order to facilitate drainage from the borrow site, 850 feet of the Walnut Road West Ditch will also be re-graded to match the elevation of the borrow site so water can drain.

To:

To manage stormwater that will collect at the South Sutter Borrow Site, the site has to have proper drainage. To drain the site, SAFCA proposes to construct a drainage culvert, made of reinforced concrete pipe that would convey drainage flow into the Walnut Road West Ditch. The reinforced concrete pipes will be trenched from the borrow sites to the outfall locations on a gentle slope for gravity draining. The Walnut Road West Ditch will be regraded from the new culvert installation to the intersection of Elkhorn Boulevard. Riprap will be installed around the culvert discharging into the Walnut Road West Ditch. The ditch south of the culvert will be re-graded because the borrow site will be at a lower elevation than the surrounding area once borrow activities are completed. In order to facilitate drainage from the borrow site, 1,810 feet of the Walnut Road West Ditch will also be re-graded to match the elevation of the borrow site so water can drain. All ditches that are re-graded would be dewatered as described in the conservation measures prior to construction beginning. This would temporarily affect 0.37 acre of giant garter snake aquatic habitat for one active season (May 1 to October 1). At the end of the construction, the aquatic habitat would be restored to pre-project conditions.

Page 36: Change Table 1. of the Project Description from:

**Table 1. Elderberry Stem Sizes and Compensation**

Location	Stems (maximum diameter at ground level)	Exit Hole on Shrub (Yes or No)	Elderberry Seedling Ratio	Associated Native Plant Ratio	Out of Season Ratio (2X Feb. 15- March 15, 2.5X June 15 - Oct. 31)	Number of Stems Observed	Required Elderberry Plantings	Required Associated Native Plant Plantings
Riparian	stems ≥1" & ≤3"	No	2:1	1:1	na	15	30	30
		No	2:1	1:1	2X	15	60	60
Riparian	stems ≥1" & ≤3"	Yes	4:1	2:1	na	4	16	32
		Yes	4:1	2:1	2X	5	40	80
Riparian	stems > 3" & <5"	No	3:1	1:1	na	5	15	15
Riparian	stems > 3" & <5"	Yes	6:1	2:1	2X	1	12	24
Riparian	stems > 5"	No	4:1	1:1	na	4	16	16
Riparian	stems > 5"	Yes	8:1	2:1	na	3	24	48
Non-riparian	stems ≥1" & ≤3"	No	1:1	1:1	na	172	172	172
		No	1:1	1:1	2X	35	70	70
		No	1:1	1:1	2.5X	52	130	130

Location	Stems (maximum diameter at ground level)	Exit Hole on Shrub (Yes or No)	Elderberry Seedling Ratio	Associated Native Plant Ratio	Out of Season Ratio (2X Feb. 15-March 15, 2.5X June 15 - Oct. 31)	Number of Stems Observed	Required Elderberry Plantings	Required Associated Native Plant Plantings
Non-riparian	stems $\geq 1''$ & $\leq 3''$	Yes	2:1	2:1	na	8	16	32
		Yes	2:1	2:1	2X	3	12	24
		Yes	2:1	2:1	2.5X	12	60	120
Non-riparian	stems $> 3''$ & $< 5''$	No	2:1	1:1	na	34	68	68
		No	2:1	1:1	2X	12	48	48
		No	2:1	1:1	2.5X	13	65	65
Non-riparian	stems $> 3''$ & $< 5''$	Yes	4:1	2:1	na	2	8	16
		Yes	4:1	2:1	2X	1	8	16
		Yes	4:1	2:1	2.5X	3	30	60
Non-riparian	stems $> 5''$	No	3:1	1:1	na	23	69	69
		No	3:1	1:1	2X	6	36	36
		No	3:1	1:1	2.5X	2	15	15
Non-riparian	stems $> 5''$	Yes	6:1	2:1	na	4	24	48
		Yes	6:1	2:1	2X	2	24	48
		Yes	6:1	2:1	2.5X	2	30	60
Non-transplant riparian	stems $\geq 1''$ & $\leq 3''$	No	2:1	1:1	4X	11	88	88
		Yes	4:1	2:1	4X	11	176	352
Non-transplant riparian	stems $> 3''$ & $< 5''$	No	3:1	1:1	4X	4	48	48
		Yes	6:1	2:1	4X	2	48	96
Non-transplant riparian	stems $> 5''$	No	4:1	1:1	4X	1	16	16
Non-transplant non-riparian	stems $\geq 1''$ & $\leq 3''$	No	1:1	1:1	4X	6	24	24
Non-transplant non-riparian	stems $> 5''$	No	3:1	1:1	4X	1	12	12
Elderberry replacements for Cummings Preserve							13	13
Total replacement plantings							1,522	2,050
Total Elderberry shrubs to be transplanted							96	
3,572 / 10 = 357.2 valley elderberry longhorn beetle credits or 14.76 acres								

To:

**Table 1. Elderberry Stem Sizes and Compensation**

Location	Stems (maximum diameter at ground level)	Exit Hole on Shrub (Yes or No)	Elderberry Seedling Ratio	Associated Native Plant Ratio	Out of Season Ratio (2X Feb. 15-March 15, 2.5X June 15 - Oct. 31)	Number of Stems Observed	Required Elderberry Plantings	Required Associated Native Plant Plantings
Riparian	stems $\geq 1''$ & $\leq 3''$	No	2:1	1:1	na	15	30	30
		No	2:1	1:1	2X	15	60	60
Riparian	stems $\geq 1''$ & $\leq 3''$	Yes	4:1	2:1	na	4	16	32
		Yes	4:1	2:1	2X	5	40	80
Riparian	stems $> 3''$ & $< 5''$	No	3:1	1:1	na	5	15	15
Riparian	stems $> 3''$ & $< 5''$	Yes	6:1	2:1	2X	1	12	24
Riparian	stems $\geq 5''$	No	4:1	1:1	na	4	16	16
Riparian	stems $\geq 5''$	Yes	8:1	2:1	na	3	24	48
Non-riparian	stems $\geq 1''$ & $\leq 3''$	No	1:1	1:1	na	172	172	172
		No	1:1	1:1	2X	49	98	98
		No	1:1	1:1	2.5X	52	130	130
Non-riparian	stems $\geq 1''$ & $\leq 3''$	Yes	2:1	2:1	na	8	16	32
		Yes	2:1	2:1	2X	3	12	24
		Yes	2:1	2:1	2.5X	12	60	120
Non-riparian	stems $> 3''$ & $< 5''$	No	2:1	1:1	na	33	66	66
		No	2:1	1:1	2X	12	48	48
		No	2:1	1:1	2.5X	13	65	65
Non-riparian	stems $> 3''$ & $< 5''$	Yes	4:1	2:1	na	2	8	16
		Yes	4:1	2:1	2X	1	8	16
		Yes	4:1	2:1	2.5X	3	30	60
Non-riparian	stems $\geq 5''$	No	3:1	1:1	na	23	69	69
		No	3:1	1:1	2X	6	36	36
		No	3:1	1:1	2.5X	2	15	15
Non-riparian	stems $\geq 5''$	Yes	6:1	2:1	na	4	24	48
		Yes	6:1	2:1	2X	2	24	48
		Yes	6:1	2:1	2.5X	2	30	60
Non-transplant riparian	stems $\geq 1''$ & $\leq 3''$	No	2:1	1:1	4X	11	88	88
		Yes	4:1	2:1	4X	11	176	352
Non-transplant riparian	stems $> 3''$ & $< 5''$	No	3:1	1:1	4X	4	48	48
		Yes	6:1	2:1	4X	2	48	96

Location	Stems (maximum diameter at ground level)	Exit Hole on Shrub (Yes or No)	Elderberry Seedling Ratio	Associated Native Plant Ratio	Out of Season Ratio (2X Feb. 15- March 15, 2.5X June 15 - Oct. 31)	Number of Stems Observed	Required Elderberry Plantings	Required Associated Native Plant Plantings	
Non-transplant riparian	stems ≥ 5"	No	4:1	1:1	4X	1	16	16	
Non-transplant non-riparian	stems ≥ 1" & ≤ 3"	No	1:1	1:1	4X	8	32	32	
Non-transplant non-riparian	Stems > 3" & < 5"	No	2:1	1:1	4X	1	8	8	
Non-transplant non-riparian	Stems > 3" & < 5"	Yes	4:1	2:1	4X	1	16	32	
Non-transplant non-riparian	stems ≥ 5"	No	3:1	1:1	4X	1	12	12	
Elderberry replacements for Cummings Preserve								13	13
Total replacement plantings								1,581	2,125
Total Elderberry shrubs to be transplanted								99	
3,706 / 10 = 370.6 valley elderberry longhorn beetle credits or 15.31 acres									

Page 41: Change the following paragraph under Giant Garter Snake Effects from:

Re-grading of 850 linear feet of Walnut Road West Ditch will temporarily disturb 0.18 acre of giant garter snake aquatic habitat. The habitat will be returned to pre-existing conditions within the same season (May 1 - October 1).

To:

Re-grading of 1,810 linear feet of Walnut Road West Ditch will temporarily disturb 0.37 acre of giant garter snake aquatic habitat. The habitat will be returned to pre-existing conditions within the same season (May 1 - October 1). Effects to the giant garter snake as a result of this temporary disturbance of aquatic habitat include snakes moving to other areas for foraging and cover and obstruction of movement between aquatic habitats. By working during the active season, SAFCA will reduce the effects to giant garter snakes as the snakes are better able to move away from construction.

Page 45: Change Giant Garter Snake Incidental Take Statement from:

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 3 construction activities (staging areas, work on canal banks, soil borrow areas, and vehicle traffic to and from borrow areas) or long-term maintenance of the GGS/Drainage Canal and Brookfield rice. 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 59.99 acres of aquatic and 73.81 acres of upland habitat may be harassed, harmed, or 3 giant garter snakes killed by loss and destruction of habitat due to construction of Phase 3. The Service also anticipates that all giant garter snakes inhabiting the 2.2-mile-long upper GGS/Drainage Canal may be harmed, harassed, or one giant garter snake killed due to RD 1000 annual maintenance of the canal and adjacent uplands per year.

To:

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 3 construction activities (staging areas, work on canal banks, soil borrow areas, and vehicle traffic to and from borrow areas) or long-term maintenance of the GGS/Drainage Canal and Brookfield rice. 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 60.18 acres of aquatic and 73.81 acres of upland habitat may be harassed or harmed, by loss and destruction of habitat or that three giant garter snakes may be killed during construction of Phase 3. The Service also anticipates that all giant garter snakes inhabiting the 2.2-mile-long upper GGS/Drainage Canal may be harmed, harassed, or one giant garter snake killed due to RD 1000 annual maintenance of the canal and adjacent uplands per year.

Page 46: Change Valley Elderberry Longhorn Beetle Incidental Take Statement from:

The Service expects that incidental take of the valley elderberry longhorn beetle will be difficult to detect or quantify. The cryptic nature of these species and their relatively small body size make the finding of an injured or dead specimen unlikely. The species occurs in habitats that make them difficult to detect. Due to the difficulty in quantifying the number of beetles that will be taken as a result of the proposed action, the Service is quantifying take incidental to the project as the number of elderberry stems one inch or greater in diameter at ground level (beetle habitat) that will be affected and result in direct or indirect effects to the valley elderberry longhorn beetle as a result of Phase 3 construction. Therefore, the Service estimates that all beetles inhabiting 102 elderberry plants containing stems 1 inch or greater at ground level

(348 stems between 1-3 inches, 77 stems between 3 and 5 inches and 48 stems  $\geq$ 5 inches (see Table 1 in the text) will be affected as a result of the proposed action.


To:

The Service expects that incidental take of the valley elderberry longhorn beetle will be difficult to detect or quantify. The cryptic nature of these species and their relatively small body size make the finding of an injured or dead specimen unlikely. The species occurs in habitats that make them difficult to detect. Due to the difficulty in quantifying the number of beetles that will be taken as a result of the proposed action, the Service is quantifying take incidental to the project as the number of elderberry stems one inch or greater in diameter at ground level (beetle habitat) that will become unsuitable for beetles due to direct or indirect effects as a result of Phase 3 construction. Therefore, the Service estimates that all beetles inhabiting 107 elderberry plants containing stems 1 inch or greater at ground level (365 stems between 1-3 inches, 78 stems between 3 and 5 inches, and 48 stems  $>$ 5 inches (see Table 1 in the text) will be harmed or harassed as a result of the proposed action.

This concludes formal consultation with the Corps on the Natomas Levee Improvement Program, Landside Improvements Project Phase 4a. As provided in 50 CFR 402.16, reinitiation 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 proposed action 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 listed species or critical habitat that was not considered in this opinion; or (4) a new species or critical habitat is designated that may be affected by the proposed action.

If you have any questions regarding this biological opinion on the Natomas Landside Improvements Project, please contact Jennifer Hobbs, Senior Fish and Wildlife Biologist at (916) 414-6541 or Kellie Berry, Chief, Sacramento Valley Division at (916) 414-6645.

Sincerely,

  
Susan K. Moore  
Field Supervisor

cc:

Elizabeth Holland, Corps, Sacramento, CA  
Todd Gardner, CDFG, Sacramento, CA  
Peter Buck, SAFCA, Sacramento, CA  
Kelly Holland, AECOM, Sacramento, CA