

Appendix C

Fish and Wildlife Coordination Act Report



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:
81420-2010-CPA-0005

APR 30 2010

Memorandum

To: Michael R. Finnegan, United States Bureau of Reclamation
Folsom, California

From: *Daniel Willsey* (Acting)
Assistant Field Supervisor, Sacramento Fish and Wildlife Service
Sacramento, California

Subject: Supplemental Fish and Wildlife Coordination Act Report for the Mormon Island
Auxiliary Dam Modification Project in Sacramento County

The Bureau of Reclamation (Reclamation) has requested supplemental coordination under the Fish and Wildlife Coordination Act (FWCA) for the Mormon Island Auxiliary Dam Modification Project. The proposed dam modifications would occur on the Mormon Island Auxiliary Dam on the southeastern shore of Folsom Lake in Sacramento County, California. The enclosed report constitutes the Fish and Wildlife Service's (Service) supplemental FWCA report for the proposed modifications.

This report assesses potential effects on fish and wildlife resources and provides our recommendations to avoid, minimize, rectify or compensate for potential adverse effects. The report is primarily based on the Service's review of the December 2009 *Mormon Island Auxiliary Dam Modification Project Environmental Impact Statement/ Environmental Impact Report* and a site visit conducted on March 19, 2010, with Doug Weinrich, Stephanie Rickabaugh, and Tyler Willsey of the Service and Mathew See of Reclamation.

If you have any questions regarding this report on the proposed project, please contact Tyler Willsey at (916) 414-6577.

cc:
Matt See, USBR, Folsom, CA
Maria Rea, NOAA Fisheries, Sacramento, CA
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SUPPLEMENTAL FISH AND WILDLIFE COORDINATION ACT REPORT
Mormon Island Auxiliary Dam Modification Project
April 2010

INTRODUCTION

This is the Fish and Wildlife Service's (Service) Supplemental Fish and Wildlife Coordination Act (FWCA) report on the effects that the Bureau of Reclamation's (Reclamation) Mormon Island Auxiliary Dam (MIAD) Modification Project would have on fish and wildlife resources on and around the southeast shore of Folsom Lake in Sacramento County, California. Findings presented in this report are based on the *Mormon Island Auxiliary Dam Modification Project Draft Supplemental Environmental Impact Statement/Environmental Impact Report* and other reports provided by Reclamation, communication with Reclamation and its consultants, and a site visit conducted by Reclamation and Service staff on March 19, 2010. This report has been prepared under the authority of, and in accordance with, the provisions of section 2(b) of the FWCA (48 stat. 401, as amended; 16 U.S.C. 661 et seq.).

BACKGROUND INFORMATION

In the early 1980s Reclamation and the Corps determined that corrective action was necessary at MIAD using the criteria of the Safety of Dams Act. The maximum credible earthquake (magnitude 6.5 at the East Branch of the Bear Mountain Fault, located 8 miles east of MIAD), could cause liquefaction of dredged tailings beneath the dam and could lead to its failure. Geotechnical studies indicate MIAD would slump following liquefaction of foundation materials and could result in substantial flooding of Folsom, Rancho Cordova, and a large part of Sacramento (Reclamation 1991).

In the 1990s, Reclamation, in cooperation with the Corps, began a program to correct the seismic issues identified at MIAD including placement of a new berm on the upstream side of MIAD and dynamic compaction of the upstream foundation. After completion, it was determined by Reclamation that these measures did not fully treat the problem and the risk of potential liquefaction of the foundation during seismic activity remained great enough to justify further actions (Reclamation 2005).

In 2007, Reclamation completed the Final EIS/EIR for the Folsom Dam Safety and Flood Damage Reduction (DS/FDR) Project to address static, seismic, and hydrologic risks at the Folsom Facility selecting a technique known as jet grouting as their preferred alternative.

In 2009, Reclamation and the Sacramento Area Flood Control Agency proposed changes to the dam safety modifications originally selected for MIAD based on subsequent investigations indicating that jet grouting at MIAD was unlikely to meet Reclamation's risk standards.

In December 2009, the draft supplemental EIS/EIR for the MIAD modification project, part of the Folsom DS/FDR Project, was completed. This document contains four new construction alternatives designed to significantly reduce the risk of flooding along the main stem of the American River in the Sacramento area while meeting dam safety and public safety objectives.

The Proposed Alternatives evaluated in this report is supplemental to the Folsom DS/FDR project and deemed necessary by Reclamation for its full implementation. This report describes aspects of the Proposed Alternative that would have a ground disturbing effect and/or may impact fish and wildlife species and their habitats that were not previously analyzed.

DESCRIPTION OF ALTERNATIVES

There are five alternatives to this project: Large Open Cut Excavation, Open Cut Single Wall, Open Cut Dual Wall System, Cellular Construction (Multiple Walls), and No Action. All alternatives involve two steps: 1) foundation treatment on the downstream side of MIAD that would involve the removal of and replacement of the downstream foundation materials, 2) placement of the overlay with filter and drain elements.

PROJECT DESCRIPTION

The Cellular Open Excavation and Overlay technique was chosen by Reclamation in order to reduce the construction footprint, and greatly reduce the construction risks associated with the other alternatives. This technique involves the creation of "cells" to close off an area that could be excavated independently of other cells. It is expected that a maximum of five cells would be open at any given time. The cells allow excavation of one small area of the foundation at a time, rather than larger open cut excavation which requires temporary removal of a large portion of the dams support (Alternatives 1-3). This alternative greatly reduces the construction risks as it limits the size of the open cut into the foundation of MIAD; however, it would increase the duration of excavation from 9 months (Alternatives 1 and 2) to 18 months.

A dewatering system would be designed to handle a peak flow of 1,000 gpm and a sustained flow of 200 gpm. This water would be pumped out of the project area into a 13 acre area containing several constructed detention ponds located south of Green Valley Road. Groundwater in the trench would be pumped from the wells into the detention ponds to allow settling. The water would be held in these ponds for no more than 24 hours before it would be discharged into Humbug Creek, south of Green Valley Road, which drains to Willow Creek and the Lower American River.

When the trench is backfilled the dewatering system would be dismantled. The dewatering system and the detention ponds would be in use for about 18 months. Reclamation is currently evaluating the possibility of modifying the dewatering ponds after completion of modifications to MIAD, to provide long-term riparian and seasonal wetland habitat to mitigate for project impacts.

The second portion of the modifications proposed at MIAD is designed to increase the mass of the dam by placing an overlay over the downstream side. The downstream overlay would not prevent upstream sliding and deformation or provide any additional hydrologic control, but would give MIAD additional mass to withstand a seismic event.

Following the completion of the replacement of the downstream foundation, the crest and the downstream face would be widened using large quantities of soil material from the removal of the shell and also from MIAD stockpiles that were deposited during the excavation of the Joint

Federal Project Auxiliary Spillway. The material would be compacted as it is placed and would extend the landside slope of MIAD to near Green Valley Road.

The overlay would also incorporate the installation of processed materials for filter zones. The filters would extend upwards from the downstream toe of the facility to the crest of the dam. Water collected by the filters would be carried to the toe of the structure for discharge away from the dam through the toe drain. The filter would reduce the risk of static failure of MIAD by seepage and piping.

BIOLOGICAL RESOURCES

Vegetation

Vegetation at MIAD consists mainly of annual grasslands with a small portion of interior live oak woodland and occasional freshwater marsh wetlands at the base of MIAD along Green Valley Road. MIAD serves to dam water in a historic river channel, resulting in the creation of several perennial wetlands, including the Mormon Island Wetland Preserve (Preserve), operated by California State Parks, on the east side of Green Valley Road (Reclamation 2006). The major vegetation communities in this area were identified in 2008 to be cattail emergent wetland and cottonwood/ willow riparian woodland. In addition seasonal wetland habitats also exist within the project area.

Within the Preserve, emergent cattail wetland supports many common plant types, including baltic rush, broadleaf cattail, hairy vetch, water primrose, and narrow-leaved willow.

Common plant species found in the cottonwood/willow riparian woodland include poison oak, baltic rush, clustered field sedge, foothill needlegrass, Himalayan blackberry, California grape, and horkelia (Reclamation et. al. 2008). Three willow species: narrow-leaved, Goodding's, and arroyo also occur in the Preserve, along with Fremont cottonwood, interior live oak, blue oak, and scattered mature foothill pines (Reclamation 2009a).

Seasonal wetlands in the project area consist of depressions with species such as spikerush, water buttercup, coyote thistle, and goldfields (CDM 2009).

Environmental Science Associates conducted a vernal pool survey in July 2009 at MIAD just south of Green Valley Road (ESA 2010). A total of 13 potential vernal pool features (0.187 acre) were identified in area proposed for the detention pond. The majority of potential vernal pools identified had cobbles and clay substrates that supported hydrophytic vegetation. Plant species indicative of vernal pools that were observed include: Vasey's coyote-thistle, pale spike-rush, vernal pool goldfields, rose-veined meadowfoam, annual hairgrass, rabbit's foot, dwarf wooly marbles, and curly dock.

Dominant plant species in the California annual grassland include introduced annual grasses such as wild oat, ripgut brome, soft chess, and brachypodium (California State Parks et. al. 2007). Herbaceous forbs and wildflowers present in this vegetation include both native species such as fiddleneck, western ragweed, and popcornflower, and non-native species such as shortpod mustard, yellow star thistle, and dove weed (Reclamation 2006).

Developed/ruderal lands exist within the project area in areas of intensive human use, such as roadsides. Human use in these areas has compacted the soil and impacted vegetation (California State Parks et. al. 2007). Ruderal (weedy) species include non-native grasses, short-pod mustard, telegraph weed, yellow star thistle and tree tobacco.

Wildlife

The Mormon Island Wetland Preserve supports many species of wildlife dependant on freshwater marsh and/or riparian habitat for foraging and rearing young (Reclamation 2006). Common species include Pacific treefrog, western toad, common garter snake, beaver, raccoon, and muskrat.

The Mormon Island Wetland Preserve also supports a high level of bird species diversity (Reclamation 2009b). Resident bird species most commonly encountered during recent avian monitoring included house wren, oak titmouse, black phoebe, lesser goldfinch, Bewick's wren, and western scrub-jay. Ruby-crowned kinglet and yellow-rumped warbler were the most common local wintering species encountered, while commonly encountered migrant species included tree swallow, ash-throated flycatcher, Bullock's oriole, western kingbird, Wilson's warbler and yellow warbler. Raptor nests were observed at the Preserve, including one red-shouldered hawk, one red-tailed hawk, one great-horned owl, and one American kestrel - all successfully fledged juveniles. Black phoebe nests were commonly found below foot bridges and signs throughout the Preserve. An individual white-tailed kite was detected during an April point count and occasionally observed utilizing the habitat on the eastern edge of the preserve (Reclamation 2009).

Seasonal wetlands in the project area have the potential to contain listed vernal pool species such as branchiopods (CDM 2009). Dry season surveys have indicated the presence of potential vernal pools south of Green Valley Road. Wet season surveys will be completed to identify any listed vernal pool species that may be present.

While not considered sensitive habitat, California annual grassland within the project area provide foraging habitat for wide-ranging species such as red-tailed hawk, coyote, gray fox, and bobcat (Reclamation 2006). These species depend on grassland prey species that include California vole, California ground squirrel, gopher snake, and western fence lizard. In addition, many smaller bird species, including western bluebird and western kingbird, and some species of bats may forage in grasslands.

Developed areas commonly support fewer wildlife species since they are dominated by non-native plants and therefore, may offer sparse cover and reduced food value. In addition, developed areas are typically disturbed on a more or less ongoing basis by human activity, which further reduces their value for wildlife (Reclamation 2006).

Special Status Species

The American River and Folsom Lake, as well as the habitat around the lake, are home to a variety of plant and wildlife species, including some whose existence is threatened or

endangered. Based on a California Natural Diversity Data Base search and the types of habitats present, special-status wildlife species with the potential to occur in the MIAD project area include vernal pool fairy shrimp, valley elderberry longhorn beetle, California red-legged frog, western spadefoot toad, northwestern pond turtle, California horned lizard, tricolored blackbird, western burrowing owl, bald eagle, and pallid bat.

Reclamation and the Corps consulted under the Endangered Species Act with the Service on the original project description resulting in a biological opinion on April 5, 2007, which was amended on December 5, 2007, and again on January 31, 2008. Reclamation reinitiated consultation on March 31, 2010, and an amended Biological Opinion was signed on April 28, 2010, by the Service and is attached to this document (See Appendix A)

DISCUSSION

After reviewing the proposed project description, the Service finds that the proposed action would have an adverse affect on 0.187 acre of seasonal wetland habitat in the proposed 13 acre area south of Green Valley Road containing the proposed detention basin. To compensate for this impact, 0.748 acre of seasonal wetland habitat (4 to 1 ratio listed in the 2007 FWCA report) could be developed at this site.

In addition, after the completion of the project, Reclamation is researching restoration of the detention basin to riparian and seasonal wetland habitat. Its proximity to the Mormon Island Wetland Preserve makes it a potentially valuable resource for wildlife in the area. Riparian forests and seasonal wetlands were formerly widespread in the Central Valley, but have been severely reduced by agricultural development, flood control measures, and decreased stream flows due to damming. Both habitat types provide essential feeding, nesting, and shelter habitat for many species of migratory birds which use these and surrounding lands (County of Sacramento 1993). The Service encourages and supports the restoration of the detention basin area to enhance wildlife resources in the area of the Mormon Island Wetland Preserve.

RECOMMENDATIONS

The Service recommends that Reclamation:

1. Follow the avoidance and minimization measures proposed in Reclamation's Biological Assessment and detailed in the Service's April 28, 2010, amended biological opinion (81420-2010-F-0437-5) for the MIAD work.
2. Avoid or minimize adverse impacts to fish and wildlife resources and their habitat when selecting locations for staging material, equipment and establishing access routes. To assist in avoidance or minimization of adverse impacts, it is important to choose sites with infrastructure in place and with existing access points or roads (to be able to perform routine maintenance activities with little to no adverse impact to fish and wildlife resources).
3. Avoid impacts to migratory birds nesting in trees along the access routes and adjacent to the proposed repair sites (mainly Mormon Island Wetland Preserve) by conducting pre-construction surveys for active nests along proposed haul roads, staging areas, and construction sites. This would especially apply if construction begins in the spring. Work activity around active nests

should be avoided until the young have fledged. The following protocol from the California Department of Fish and Game (CDFG) for Swainson's hawk would suffice for the pre-construction survey for raptors.

A focused survey for Swainson's hawk nests will be conducted by a qualified biologist during the nesting season (February 1 to August 31) to identify active nests within 0.25 miles of the project area. The survey will be conducted no less than 14 days and no more than 30 days prior to the beginning of construction. If nesting Swainson's hawks are found within 0.25 miles of the project area, no construction will occur during the active nesting season of February 1 to August 31, or until the young have fledged (as determined by a qualified biologist), unless otherwise negotiated with the California Department of Fish and Game. If work is begun and completed between September 1 and February 28, a survey is not required.

4. Minimize impacts to all disturbed areas at the construction easement, staging and stockpiling areas, and along access routes by re-seeding grasslands with native annual grasses at the completion of construction or when disturbed areas are going to be fallow for the growing season.
5. Minimize effects to woody vegetation and shrub habitats by fencing off areas to prevent construction equipment from entering and implement Best Management Practices to prevent degraded material from eroding or slipping down the slopes.
6. Consult with the CDFG regarding potential impacts to State listed threatened and endangered species.
7. Monitor the Mormon Island Wetland Preserve during construction and continue for 4 years after construction has been completed. Post-construction surveys should monitor for potential changes in wetland hydrology, water quality, and vegetation. If changes in wetland hydrologic function are detected from the baseline condition, implement adaptive management mitigation to return affected systems to baseline conditions considering the long-term conservation of the Mormon Island Preserve.
8. Compensation for the loss of 0.187 acre of seasonal wetland habitat by developing 0.748 acre (4 to 1 ratio as established in the 2007 *Fish and Wildlife Coordination Act Report for the Folsom Dam Safety and Flood Damage Reduction Project*) of seasonal wetland habitat at the detention pond site or at a Service approved mitigation bank. The remainder of the 13 acre site should be restored to contain riparian woodland, emergent wetland, and seasonal swale vegetation. The restoration plan should be developed in coordination with the CDFG, the Service, and California State Parks.

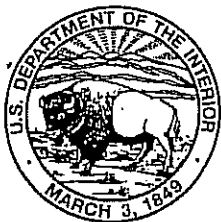
Literature Cited

- Bureau of Reclamation. 1991. *Final Environmental Assessment and Finding of No Significant Impact, Mormon Island Auxiliary Dam Modification Phase II Safety of Dams Program, October 1991.*
- Bureau of Reclamation. 2005. *Folsom Dam- Draft Safety of Dams Corrective Action Study Scoping Report. October 2005.*
- Bureau of Reclamation, U.S. Army Corps of Engineers, Central Valley Flood Protection Board, and Sacramento Area Flood Control Agency. 2006. *Folsom Dam Safety/ Flood Damage Reduction Draft Environmental Impact Study, December 2006.* Vol. I & II. Prepared by CDM.
- Bureau of Reclamation, U.S. Army Corps of Engineers, Central Valley Flood Protection Board, Sacramento Area Flood Control Agency. 2007. *Folsom Dam Safety and Flood Damage Reduction Project Final Environmental Impact Statement/ Environmental Impact Report, Vol III.* State Clearinghouse #2006022091.
- Bureau of Reclamation, U.S. Army Corps of Engineers, Central Valley Flood Protection Board, Sacramento Area Flood Control Agency. 2008. *Draft Supplemental Environmental Assessment/ Initial Study to the Folsom Dam Safety and Flood Damage Reduction Environmental Impact Statement/ Environmental Impact report, February 2008.*
- Bureau of Reclamation. 2009. *Baseline Monitoring Report for Mormon Island Wetland Preserve.*
- Bureau of Reclamation. 2009. *Avian Monitoring Study Results, Folsom Dam Safety/Flood Damage Reduction Project..*
- Bureau of Reclamation and Sacramento Area Flood Control Agency. 2009. *Mormon Island Auxiliary Dam Modification Project Draft supplemental Environmental Impact Statement/Environmental Impact Report.*
- California State Parks and the Bureau of Reclamation. 2007. *Draft Environmental Impact Statement/Environmental Impact Report, Folsom Lake State Recreation Area & Folsom Powerhouse State Historical Park General Plan/ Resource Management Plan.*
- CDM. 2009. *Wetland Findings Report, Mormon Island Auxiliary Dam Modification and Mississippi Bar Mitigation Project.*
- County of Sacramento. 1993. *Conservation Element of the County of Sacramento General Plan.* Planning and Community Development Department.

Environmental Science Associates (ESA). 2010. *Mormon Island Auxiliary Dam Modification Project- Vernal Pool Survey Report*.

U.S. Fish and Wildlife Service. 2007. *Fish and Wildlife Coordination Act Report for the Folsom Dam Safety and Flood Damage Reduction Project*.

Appendix A:
**Amendment to the Biological Opinion for the Folsom Dam Safety
and Flood Damage Reduction Project**



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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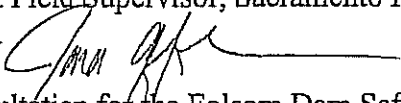


In Reply Refer To:
81420-2008-F-0437-5

APR 28 2010

Memorandum

To: Michael R. Finnegan, U.S. Bureau of Reclamation,
Folsom, California

From: *for* Kenneth D. Sanchez, Assistant Field Supervisor, Sacramento Fish and Wildlife
Office, Sacramento, California 

Subject: Reinitiation of Section 7 Consultation for the Folsom Dam Safety and Flood
Damage Reduction Project, Sacramento, Placer, and El Dorado Counties,
California

This is in response to your March 31, 2010, letter requesting reinitiation of formal consultation and an amendment to the biological opinion (Service Reference Number 81420-2008-F-0437) for the Folsom Dam Safety and Flood Damage Reduction (DS/FDR) project in Sacramento County, California. The U.S. Fish and Wildlife Service (Service) received your request on April 5, 2010. This response is in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act). At issue are effects to the federally-threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle).

Our analysis of potential effects from the proposed project is based on the following information: (1) the April 5, 2007, biological opinion for the Folsom Dam Safety and Flood Damage Reduction Project; (2) a site visit conducted on March 19, 2010, by the Service (Doug Weinrich, Tyler Willsey, and Stephanie Rickabaugh) and the Bureau of Reclamation (Reclamation) (Matt See) to the Mormon Island Auxiliary Dam; (3) a site visit conducted on March 25, 2010, by the Service (Doug Weinrich and Tyler Willsey) to Mississippi Bar; (4) your March 31, 2010, letter requesting an amendment to the biological opinion for the Folsom Dam Safety and Flood Damage Reduction Project to include the Mormon Island Modifications Project and Mississippi Bar Mitigation Site; and (5) other information available to the Service.

Background Information

Further investigations into the feasibility of the Mormon Island Auxiliary Dam Modification (MIAD) Project, as presented in the March 2007 Folsom DS/FDR Environmental Impact Statement/Environmental Impact Report, indicate that jet grouting at MIAD would not achieve



Reclamation's risk standards for dam safety. In December 2009, a draft supplemental EIS/EIR for the MIAD modification project, part of the Folsom DS/FDR Project, was completed. This document contained four new construction alternatives designed to significantly reduce the risk of flooding along the main stem of the American River in the Sacramento area while meeting dam safety and public safety objectives. Reclamation chose the Cellular Construction (Multiple Wall construction) method which entails foundation treatment on the downstream side of MIAD. The proposed construction would remove and replace the downstream foundation materials and place an overlay with filter and drain elements. These changes would result in an expansion of the MIAD footprint and development of a groundwater dewatering system on the south side of Green Valley Road, adjacent to the Mormon Island Wetland Preserve. Reclamation has surveyed the area where the MIAD footprint would be expanded and the proposed detention basin site and no elderberry shrubs (*Sambucus* sp.) were located within 100 feet of the construction area. Elderberry shrubs are the sole host plant of the beetle. Therefore, Reclamation has determined no additional effects to the beetle will occur with the new alternative that were not previously analyzed in the April 5, 2007, biological opinion.

A December 2007 Clean Water Act Section 404 permit issued to Reclamation for another project feature required that at least 10 acres of riparian (forested) wetland habitat be created on-site to mitigate for impacts to other waters of the United States. Reclamation originally proposed to construct the 10 acres within the fluctuation zone of Folsom Reservoir between Beals Point and Folsom Point. Upon further consideration and analysis, Reclamation concluded that on-site mitigation was impracticable due to: (1) lack of suitable conditions for plant establishment including water level fluctuation, soil conditions, and erosion and; (2) potential conflicts with on-going construction and recreational activities.

In May of 2009, Reclamation requested that the mitigation site for the 10 acres of riparian wetland habitat be moved from the original site between Beals Point and Folsom Point to Mississippi Bar along Lake Natoma. Conditions on Lake Natoma are more suitable for successful establishment of riparian habitat.

Description of the Proposed Project

Mississippi Bar is located on the west shore of Lake Natoma in Sacramento County, California and is considered part of the Lower American River Watershed and the American River Parkway. The area was heavily mined, resulting in dredge tailing piles, compaction of gravel and lack of soil to support vegetation in some areas (USFWS 2008). The project area consists of annual grasslands, oak woodland, and wetland/drainage habitats (DPR and Reclamations 2007). The land at Mississippi Bar is owned by both Reclamation and the California Department of Parks and Recreation.

Reclamation is proposing to create 10 acres of riparian habitat at Mississippi Bar to mitigate for impacts to other waters of the United States detailed in the May 8, 2009, modified Section 404 permit for the Folsom DS/FDR project. Reclamation will concentrate its riparian woodland habitat creation efforts on the areas that have not recovered from past mining activities. They propose to re-contour the land to establish more natural drainage patterns and restore native

riparian vegetation. Mitigation activities will avoid all identified mine tailings, wetlands, and direct impacts to elderberry shrubs. All areas will be planted with native vegetation similar to that found along Lake Natoma and the Lower American River. The detailed plans and specifications for the mitigation area are expected to be available in June 2010. The Service was provided with a map identifying the location and avoidance area for elderberry shrubs and written details describing avoidance measures.

Indirect effects on the beetle could occur from the access to and development of the mitigation site from dust pollution during site preparation (disking), noise disturbances caused by vehicular traffic, and pesticide drift. The result of the project will be 10 acres of riparian habitat suitable for the beetle to colonize.

Valley Elderberry Longhorn Beetle Conservation Measures

To minimize the potential effects of developing the mitigation site on the beetle, Reclamation proposes the following conservation measures. The project has the potential to indirectly affect seven elderberry shrubs with a total of 45 stems measuring 1 inch or greater at ground level. These shrubs are located within 100 feet of the paved and gravel access road to the planting area and within the proposed planting area.

Avoidance and Minimization Measures for Direct and Indirect Effects:

1. Complete avoidance (*i.e.*, no adverse effects) will be achieved by maintaining a 100-foot (or wider) buffer established and maintained around elderberry plants containing stems measuring 1.0 inch or greater in diameter at ground level. The Service will be consulted before any disturbances within the buffer area are undertaken.
2. For elderberry shrubs that cannot be avoided with a 100 foot buffer, a minimum 20 foot buffer from the drip-line of the shrub will be established. All elderberry shrubs will be flagged and/or fenced for easy identification and avoidance.
3. Work crews and contractors will be given environmental awareness training that will emphasize the identification of elderberry shrubs and the need to avoid damaging the elderberry shrubs and the possible penalties of non-compliance.
4. Water trucks and/or portable pumps with hoses will be used to control fugitive dust during construction. A speed limit of 15 mph will be employed on unpaved roads.
5. Signs will be erected every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs will be clearly readable from a distance of 20 feet and will be maintained throughout the construction period.

6. No insecticides, herbicides, fertilizers, or other chemicals that might harm the elderberry shrub or the beetle will be used within 100 feet of any elderberry shrub with one or more stems measuring 1.0 inch or greater in diameter at ground level.

After reviewing the current status of the beetle and the effects of the additional features of the proposed project, the Service's concurs with Reclamation's determination that the Mississippi Bar mitigation, may affect, but is not likely to affect the beetle. Critical habitat has been designated for the beetle but none exists in the project area; therefore, no beetle habitat will be adversely modified or destroyed, by the proposed mitigation project.

This concludes consultation on the proposed Folsom Dam Safety and Flood Damage Reduction Project. 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 that the agency 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 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 reinitiation.

If you have any questions regarding this amendment to the biological opinion please contact Tyler Willsey at (916) 414-6577.

cc:

Matt See, U.S. Bureau of Reclamation, Folsom, California

Literature Sited

California Department of Parks and Recreation (DPR) and Reclamation. 2007. *Draft Environmental Impact Statement/Environmental Impact Report, Folsom Lake State Recreation Area & Folsom Powerhouse State Historic Park General Plan/Resource Management Plan.*

USFWS. 2008. *Supplemental Habitat Evaluation Procedure (HEP) Report for the Kanaka Valley and Mississippi Bar Sites, Folsom Dam Safety and Flood Damage Reduction Project, December 2008.*