

RECLAMATION

Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT

Meridian Farms Water Company Phase 2 Fish Screen Project

FONSI 12-08-MP

Recommended by:

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BACKGROUND

In accordance with the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA), the Bureau of Reclamation (Reclamation) and California Department of Fish and Game (CDFG) have prepared a joint Environmental Assessment/Initial Study (EA/IS) for the *Meridian Farms Water Company Phase 2 Fish Screen Project*, dated August 2012.

The loss of juvenile fish at water diversions in the Central Valley has been identified as contributing to anadromous fish population declines. The Central Valley Project Improvement Act (CVPIA) provides that the Central Valley Project (CVP) shall be operated to meet all obligations under state and Federal law, including the Endangered Species Act (ESA). One measure to help fulfill CVPIA's goals of at least doubling the average population levels of anadromous fish in the Central Valley is to provide funds for the construction of fish screens on unscreened water diversions.

In March of 2002, MFWC completed a Surface Water Diversion and Fish Screening Feasibility Study that evaluated alternatives for improvements to their existing diversion facilities to provide a positive barrier fish screen for anadromous fish at each pump intake. The alternative selected for further study was a plan to consolidate the three existing diversions into two new pump station facilities with positive barrier fish screens. In 2008, the plan was divided into two phases for construction (Phase 1 and Phase 2) and an EA/IS and Mitigated Negative Declaration/Finding of No Significant Impact (MND/FONSI) were prepared that addressed both Phase 1 and Phase 2 elements (2008 EA/IS). Funds were available to construct Phase 1. The MND was certified (Phase 1 and Phase 2) and FONSI was adopted (Phase 1 only).

Phase 1's construction was completed in 2010 and included the following elements:

- New Grimes Diversion/Pumping Plant. Construction of a new 30 cubic feet per second (cfs) diversion with fish screen and pumping plant installed north of the existing Grimes Diversion/Pumping Plant.
- New Grimes Pipeline and Modifications to the existing Main Canal. Approximately 650 lineal feet of 36-inch diameter pipeline was installed and 3,800 lineal feet of the existing earthen canal was modified to deliver flows from the New Grimes Diversion/Pumping Plant to the Grimes Service Area. Approximately 1,200 linear feet of ditch was concrete lined and 3,250 feet of earthen ditch was left unlined.
- Drexler Pipeline. Approximately 6,500 lineal feet of a 36-inch diameter pipeline was installed beginning at the Drexler Pumping Plant and terminating at the intersection of Summy Road and the Main Canal.
- Existing Grimes Diversion/Pumping Plant. The existing pumping facility was removed.

Phase 2, which has not been constructed, included the following elements as described in the 2008 EA/IS:

- **New Meridian Diversion/Pumping Plant.** A new 135 cfs diversion with fish screen and pumping plant would be installed adjacent to and would replace the existing Meridian Diversion.
- **Main Canal Modifications.** The capacity of approximately 15,200 lineal feet of the Main Canal would be increased to convey flows over to the Drexler Service Area in order to accommodate the consolidation of the Meridian and Drexler diversions.
- **New Drexler Re-lift Pumping Plant.** A new 35 cfs pumping plant would be installed at the end of the Main Canal modifications to deliver flows to the Drexler Service Area via the new Drexler Pipeline.
- **Removal of Existing Meridian Diversion/Pumping Plant.** The existing diversion/pumping facility would be removed after the new Meridian Diversion/Pumping Plant was constructed and operational.
- **Removal of the Existing Drexler Pumping Plant.** The existing pumping facility would be removed after the new pumping plant was constructed.

PROPOSED ACTION

The 2008 EA/IS was updated and the current EA/IS (2012) reflects and analyzes the current Phase 2 Project (Proposed Action). The Proposed Action replaces and consolidates two of MFWC's existing unscreened diversion structures on the Sacramento River (Drexler and Meridian diversions) with a new 135 cfs screened intake and pumping facility that meets CDFG and National Marine Fisheries Service (NOAA Fisheries) anadromous fish screen design criteria.

The Proposed Action includes the following elements:

- **New Meridian Diversion/Pumping Plant.** A new 135 cfs diversion with fish screen and pumping plant would be installed adjacent to the existing Meridian Diversion.
- **New Drexler Re-lift Pumping Plant.** A new 35 cfs pumping plant would be installed at the end of the Main Canal modifications to deliver flows to the Drexler Service Area via the new Drexler Pipeline.
- **Main Canal Modifications.** Approximately 15,200 linear feet of the Main Canal would be widened up to three feet, depending on the location, to provide adequate capacity to convey flows to the Drexler Service Area in order to accommodate the consolidation of the Meridian and Drexler diversions.
- **Drexler Pipeline Extension.** The Drexler Pipeline would be extended by approximately 500 feet to improve service to a portion of the Drexler Service Area and reduce pumping costs. The outlet box at the end of the Drexler Pipeline could be modified to reduce pumping costs.

- **Removal of Existing Meridian Diversion/Pumping Plant.** The existing diversion/pumping facility would be removed after the new Meridian Diversion/Pumping Plant is constructed and operational.
- **Removal of the Existing Drexler Diversion/Pumping Plant.** The existing pumping facility would be removed after the new Drexler Re-Lift Pumping Plant is construction and operational.
- **Grimes Canal Modifications.** Concrete lining of approximately 2,500 linear feet of the Grimes canal.

Reclamation’s involvement is limited to contributing up to 50 percent of the cost of the fish screen intake and pumping facility. This funding will be provided by Reclamation, through the Anadromous Fish Screen Program, under Section 3406(b)(21) of the CVPIA. The CVPIA authorizes Reclamation to develop and implement measures to avoid losses of juvenile anadromous fish resulting from unscreened diversions on the Sacramento and San Joaquin Rivers and their tributaries.

FINDINGS

Based on the attached EA/IS, Reclamation finds that the Proposed Action is not a major federal action that will significantly affect the quality of the human environment. The attached EA/IS describes the existing environmental resources in the Proposed Action area, evaluates the effects of the No Action and Proposed Action alternatives on the resources, and proposes measures to avoid, minimize, or mitigate any adverse effects. This EA/IS was prepared in accordance with NEPA, Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508), and DOI Regulations (43 CFR Part 46). Effects on several environmental resources were examined and found to be absent or minor. This analysis is provided in the attached EA/IS, and is hereby incorporated by reference.

Agriculture and Land Use

The project area contains agriculturally zoned properties, lands designated as Prime Farmland, and parcels listed under Williamson Act contracts. However, construction of permanent facilities would be confined to existing disturbed facilities, including existing roadways, canal rights-of-way, and levees along the Sacramento River. For this reason, the Proposed Action would not conflict with any existing Williamson Act Contracts. Construction of the Meridian Pumping Plant and new fish screen may require removal of two to five walnut trees in the adjacent orchard. The Drexler re-lift Pumping Plant would be located at the edge of an agricultural parcel and the Drexler pipeline extension would cross a small portion of agricultural land. However, the pipeline would be buried deep enough, where appropriate, so it would not preclude future agricultural activities. Other temporary construction-related impacts to important farmland would be associated with materials’ staging areas. In these instances, where temporary and permanent disruption to agricultural operations would occur, MFWC would compensate affected land owners in accordance with State and local laws and ordinances related to compensation for impacts to agricultural lands. As a result, the Proposed Action would not have a significant impact on agricultural resources or land use.

Air Quality and Climate Change

The Proposed Action would not alter existing land use designations in the project area and would not facilitate any new growth not previously envisioned in the County's currently adopted General Plan. Following construction, operational vehicle trips would be similar to existing conditions. Consequently, construction and operation of the Proposed Action would not conflict with or obstruct implementation of any applicable air quality regulation, plan, or policy. As a result, there would be no significant impacts to air quality or climate change.

Biological Resources

The analysis in the EA/IS indicates that the impacts to wildlife would be less than significant with the implementation of avoidance and minimization measures. Impacts to special-status species, including giant garter snake (GGS), salmonids and North American green sturgeon, would be avoided or minimized by implementing the measures discussed in the EA/IS, the Action Specific Implementation Plan (ASIP), and the Biological Opinions (BO) from U.S. Fish and Wildlife Service and NOAA Fisheries (XXX and XXX, 2012, respectively). With the screened intake, there would be an overall net benefit to listed fish species as a result of the Proposed Action.

To reduce and minimize impacts to GGS as a result of the implementation of the Proposed Action, measures described in the EA/IS, ASIP and BOs would be implemented as appropriate. Compensation would be required for permanent loss of GGS habitat. With implementation of 2008 EA/IS Mitigation Measures BIO-1, BIO-4, BIO-6 through BIO-14, and BIO-17, and modified 2008 EA/IS Mitigation Measures BIO-2, BIO-3, BIO-16 and BIO-18 presented in the current EA/IS, there would be no significant impacts to GGS.

Given the overall benefit to fish as a result of the Proposed Action, as well as the use of a cofferdam, the fish salvage requirement for dewatered work sites, the localized and minimal in-river disturbances, and constructing within the work period when fish would least likely be in the area, the Proposed Action is expected to result in minimal impacts to fisheries resources of the Sacramento River. With the implementation of 2008 EA/IS Mitigation Measures BIO-19, BIO-20 and proposed Mitigation Measures BIO-A through BIO-H¹ presented in the current EA/IS, impacts to listed and special-concern fish species would not be significant.

The sensitive natural community that would be potentially impacted by the Proposed Action is the Sacramento River and associated Valley foothill riparian. However, with avoidance, minimization, and erosion control measures outlined in the EA/IS, impacts to the Sacramento River and riparian habitats are considered less-than significant. Implementation of 2008 EA/IS Mitigation Measure BIO-1, modified 2008 IS/EA Mitigation Measures BIO-2 and BIO-23 and Mitigation Measure BIO-G would ensure no disturbance and encroachment into these sensitive riparian habitat areas, thus resulting in no significant impact.

¹ Mitigation measures BIO-A through BIO-H are identified with alphabetical letters instead of numbers to avoid confusion with mitigation measures from the 2008 EA/IS.

The Proposed Action would temporarily and permanently fill perennial stream channel (Sacramento River) with the proposed placement of the Meridian diversion facilities within the ordinary high water mark of the Sacramento River. These features are navigable and therefore regulated under Section 10 of the Rivers and Harbors Act. In addition, existing irrigation channels would be modified to improve conveyance from the proposed diversion facilities. These channels would likely be considered jurisdictional by the U.S. Army Corps of Engineers (Corps) per Section 404 of the Clean Water Act (CWA) and Regional Water Quality Control Board per Section 401 of the CWA. The only feature that may qualify as a wetland and/or waters of the U.S. in the Proposed Action area is the Sacramento River. Implementation of BIO-I and modified 2008 EA/IS Mitigation Measure BIO-28 would reduce impacts to wetlands in the event that the potential fill of these features requires compensation.

Cultural Resources

The Proposed Action is the type of activity that has the potential to affect historic properties. A records search, a cultural resources survey, and Tribal consultation did not identify historic properties within the area of potential effect. All project activities would result in no historic properties affected pursuant to 36 CFR Part 800.4(d)(1). The State Historic Preservation Officer (SHPO) concurred with Reclamation's determinations and findings on February 12, 2008 and Reclamation concluded the Section 106 compliance process. Since no historic properties would be affected, no cultural resources would be impacted as a result of implementing the Proposed Action.

Geology and Soils

Implementation of erosion and sediment control measures as described in the EA/IS would reduce erosion rates during and after construction. Operation of the screened intake structure is not expected to result in changes to erosion compared to existing conditions. The screened intake would be designed to minimize erosion or disturbance to soils and the area disturbed during construction would be stabilized with vegetation or engineered structures as described in the EA/IS. There are no significant impacts to geology and soils associated with the Proposed Action.

Water Quality

Short-term increases in turbidity may occur during construction activities; however, the increases would be temporary. Minimization and avoidance measures, as presented in the EA/IS, would be implemented to reduce adverse impacts on water quality in accordance with the water quality certification standards and conditions of the CWA Sections 404 and 401 permits. The Proposed Action would have no significant impacts on water quality.

Noise

The project site is located in rural Sutter County. Sensitive receptors in the vicinity of the Proposed Action area are generally limited to scattered rural residences and small residential areas in the town of Meridian. The Meridian pump station would generate noise comparable to that of the existing pump station facility; no long-term changes to the ambient noise environment are anticipated. The Drexler re-lift pump station is located over 3,000 feet from the closest resident and therefore would have little or no effect on the existing ambient noise environment. In addition, the measures described in the EA/IS are incorporated into the Proposed Action, which would require noise attenuation during construction activities to minimize exposure of persons to noise levels in excess of applicable standards. In addition, implementation of 2008 IS/EA Mitigation Measure NOISE-1 would further minimize increases in noise levels. Therefore, this would not result in a significant impact.

Traffic

Construction of the Proposed Action would intermittently and temporarily generate increases in vehicle trips by construction workers and construction vehicles on area roadways. Construction activities would also result in a temporary reduction in the number of, or the available width of, travel lanes on roads where full or partial closures are required, resulting in short-term traffic delays for vehicles traveling past the construction zones, and in some cases, temporary closure of road segment, with resulting disruption to access for adjacent land uses and streets for both general traffic and emergency vehicles. Construction-generated traffic would be temporary and therefore would not result in any long-term degradation in operating conditions or level of service on any local roadways. Implementation of mitigation measures in the EA/IS would reduce potential conflicts during construction activities.

Environmental Justice

The Proposed Action would not disproportionately affect any minority or low income populations. Therefore, no impacts regarding Environmental Justice would occur as a result of the Proposed Action.

Indian Trust Assets and Indian Sacred Sites

There are no Indian reservations, Rancherias, allotments or Indian Sacred Sites in the project area. The Proposed Action does not have the potential to affect ITAs.

MITIGATED NEGATIVE DECLARATION (REVISED)

Phase 2 Meridian Farms Fish Screen Project

Based upon the findings in the Initial Study and Environmental Assessment for the Meridian Farms Fish Screen Project:

- I find that the Proposed Project WOULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT will be prepared.
- I find that the Proposed Project may have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the Proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the Proposed Project, nothing further is required.

Signature

Signature

Printed Name

California Department of Fish and Game

California Environmental Quality Act Mitigated Negative Declaration Findings

This Mitigated Negative Declaration reflects the decision-making body's independent judgment and analysis, and; that the decision-making body has reviewed and considered the information contained in this Mitigated Negative Declaration and the comments received during the public review period; and that revisions in the project plans or proposals made by or agreed to by the project applicant/sponsor would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and, on the basis of the whole record before the decision-making body (including this Mitigated Negative Declaration) that there is no substantial evidence that the project as revised will have a significant effect on the environment.

Name of Project:

Phase 2 Meridian Farms Fish Screen Project

Project Description:

Meridian Farms Water Company (MFWC) is proposing to remove the existing Meridian Diversion/Pumping Plant along the Sacramento River in the vicinity of the Town of Meridian, Sutter County California and replace it with a new diversion/pumping plant equipped with retractable cylindrical fish screens to preventing entrainment of migrating, at-risk, native fish species. The project would also include improvement of the Main Canal to increase flow capacity to the Drexler Service area, extension of the Drexler Pipeline, and construction of a new Drexler re-lift pump station on the Main Canal east of the Sacramento River. The existing Drexler Diversion/Pumping Plant located south of the Meridian Diversion on the Sacramento River would be removed. The Proposed Project/Action would not increase MFWC's overall diversion capacity from the Sacramento River. All work would be performed in compliance with Reclamation Board, California Department of Fish and Game (CDFG), National Marine Fisheries Service (NMFS), and the U.S. Fish and Wildlife Service (USFWS) requirements.

Project Location:

MFWC is located in Sutter County, California, between Interstate 5 and Highway 99 east of the Sacramento River and southwest of the Sutter Bypass. MFWC provides irrigation water to three separate service areas encompassing 9,150 total acres in an area between the Town of Meridian and Grimes. The existing and proposed Sacramento River diversions are located in two locations along the River and are referred to as the Meridian and Drexler diversions. These diversions currently use unscreened intakes, and may have entrained Chinook salmon, steelhead trout, and other anadromous fish species that pass by the intake.

Project Background:

In 2008 the plan was divided into two phases for construction (Phase 1 and Phase 2), and an Initial Study/Mitigated Negative Declaration (IS/MND) and Environmental Assessment (EA) and

Finding of No Significant Impact (FONSI) was prepared that addressed both Phase 1 and Phase 2 elements (2008 IS/EA). Funds were available to construct one of the planned diversions and fish screen, providing some benefit to fish species. The MND was certified (for Phase 1 and Phase 2) and FONSI was adopted for Phase 1 only. This Revised MND addresses work associated with Phase 2 only.

Findings:

Based upon the Environmental Assessment/Initial Study, it was determined that there would be no significant adverse environmental effects resulting from implementation of the proposed project with the inclusion of the following measures to address project-related impacts on environmental resources.

Required Mitigation Measures:

Mitigation Measures included in the project to reduce potentially significant impacts related to air quality; biological resources; noise; and transportation and traffic to less than significant level are described below.

Air Quality

Mitigation Measure AIR-1: Implement FRAQMD Best Available Mitigation Measures For Construction Activity.

- (A) Implement PM10 control measures outlined in the FRAQMD Fugitive Dust Control Plan.

- (B) MFWC shall require its construction contractor(s) to assemble a comprehensive inventory list (i.e., make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that will be used an aggregate of 40 or more hours for both Phases 1 and 2 construction activities and apply the following mitigation measure:

Reducing NO_x emissions from off-road diesel powered equipment

MFWC or its construction contractor(s) shall provide a plan for approval by FRAQMD demonstrating that the heavy-duty (equal to or greater than 50 horsepower) off-road equipment to be used in construction of Phases 1 and 2, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NO_x reduction and 45 percent particulate reduction 1 compared to the most recent CARB fleet average at time of construction. A Construction Mitigation Calculator (MS Excel) may be downloaded from the SMAQMD web site to perform the fleet average evaluation <http://www.airquality.org/ceqa/index.shtml>.

Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment

- products, perform offsite mitigation projects, provide funds for air district offsite mitigation projects, and/or other options as they become available. The District should be contacted to discuss alternative measures.
- (C) Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0, Visible Emissions limitations (40 percent opacity or Ringelmann 2.0). Operators of vehicles and equipment found to exceed opacity limits shall take action to repair the equipment within 72 hours or remove the equipment from service. Failure to comply may result in a Notice of Violation.
- (D) The primary contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained.
- (E) Minimize idling time to 10 minutes – saves fuel and reduces emissions.
- (F) No open burning of removed vegetation during infrastructure improvements. Vegetative material should be chipped or delivered as waste to energy facilities.
- (G) Portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, may require California Air Resources Board (CARB) Portable Equipment Registration with the State or a local district permit. The owner/operator shall be responsible for arranging appropriate consultations with the CARB or the District to determine registration and permitting requirements prior to equipment operation at the site.

Biological Resources

Giant Garter Snake – Mitigation Measures from the 2008 IS/EA adopted by CDFG that are Relevant to Phase 2

Mitigation Measure BIO-1: Traffic Routing, and Movement. During construction operations, the number of access routes, number and size of staging areas, and the total area of the proposed project activity will be limited to the minimum necessary. Routes and boundaries will be clearly demarcated. Movement of heavy equipment to and from the project site will be restricted to established roadways to minimize habitat disturbance. Project-related vehicles shall observe a 20-mile-per-hour speed limit within construction areas, except on County roads and on State and Federal highways. This is particularly important during periods when the snake may be sunning or moving on roadways. All heavy equipment, vehicles, and supplies will be stored at the designated staging area at the end of each work period.

Mitigation Measure BIO-4: Timing of Construction. Construction activity within giant garter snake habitat (*e.g.* aquatic, upland, and rice habitat) shall be conducted between May 1 and October 1. This is the active period for the snake and direct mortality is lessened, because snakes are expected to actively move and avoid danger. If it appears that construction activity may go beyond October 1, the project proponents shall contact the USFWS as soon as

possible, but not later than September 15 of the year in question, to determine if additional measures are necessary to minimize take. Construction activities within 200 feet from the banks of snake aquatic habitat will be avoided during the snake's inactive season. **If this is not feasible, the Project Proponent must consult with USFWS to determine measures to avoid impacts to giant garter snake.**

Mitigation Measure BIO-6: Worker Awareness Training. A Worker Environmental Awareness Training Program for construction personnel shall be conducted by the USFWS--approved biologist for all construction workers, including contractors, prior to the commencement of construction activities. The program shall provide workers with information on their responsibilities with regard to the snake, an overview of the life-history of this species, information on take prohibitions, protections afforded this animal under the Act, and an explanation of the relevant terms and conditions of this biological opinion. Written documentation of the training must be submitted to the Sacramento Fish and Wildlife Office within 30 days of the completion of training. As needed, training shall be conducted in Spanish for Spanish language speakers.

Mitigation Measure BIO-7: Install Snake Exclusion Fencing. Prior to the commencement of construction activities, high visibility fencing will be erected around the habitats of federally listed species to identify and protect these designated ESAs from encroachment of personnel and equipment. These areas 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. The fencing may be removed only when the construction of the project is completed. Fencing will be established in upland immediately adjacent to aquatic snake habitat and extending up to 200 feet from construction activities. Silt fencing, if properly installed, may serve as suitable snake exclusion fencing.

Mitigation Measure BIO-8: Provide Adequate Signage. Signs will be posted by the Contractor every 50 feet along the edge of the ESAs, with the following information: "This area is habitat of federally-threatened and/or endangered species, and must not be disturbed. These species are protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet, and must be maintained by the Contractor for the duration of construction.

Mitigation Measure BIO-9: Implement BMPs. Best Management Practices (BMPs), including a Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP), will be implemented to minimize effects to the snake during construction. Best management practices will be implemented to prevent sedimentation from entering ESAs and to reduce erosion, dust, noise, and other deleterious aspects of construction related activities. These BMPs may include, but are not limited to, silt fencing, temporary berms, restrictions on cleaning equipment in or near ESAs, installation of vegetative strips, and temporary sediment disposal. Runoff from dust control and hazardous materials will be retained on the construction site and prevented from flowing into the ESAs.

Mitigation Measure BIO-10: Erosion Control Materials. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material shall be used for erosion control and other purposes at the ESA to ensure that the giant garter snake is not trapped or becomes entangled. This limitation shall be communicated to the contractor using special provisions included in the bid solicitation package.

Mitigation Measure BIO-11: Properly Dispose of Garbage. To eliminate an attraction to predators of the snake, all food-related trash items, such as wrappers, cans, bottles, and food scraps, must be disposed of in closed containers and removed at the end of each workday from the entire project site.

Mitigation Measure BIO-12: Use Approved Aggregate, Fill, or Borrow Materials. The Contractor shall provide documentation that aggregate, fill, or borrow material provided for the proposed project was obtained in compliance with the State Mining and Reclamation Act (SMARA). Evidence of compliance with the Act shall be demonstrated by providing the resident engineer with one of the following: 1) a letter from the USFWS stating that the use of the borrow pit will not result in the incidental take of species; 2) an incidental take permit for contractor-related activities issued by the USFWS pursuant to section IO(a)(1)(B) of the Act; 3) a biological opinion or letter concurring with a "not likely to adversely affect" determination issued by the USFWS to the Federal agency having jurisdiction over contractor-related services' 4) a letter from the USFWS concurring with the "no effect" determination for contractor-related activities; or 5) contractor submittal of information to the resident engineer indicating compliance with the SMARA and provision of County land use permits and California Environmental Quality Act (CEQA) clearance.

Mitigation Measure BIO-13: Restore Temporarily Affected Habitat. After construction activities are complete, any temporary fill or construction debris shall be removed and disturbed areas restored to their pre-project conditions. An area subject to "temporary" disturbance includes any area that is disturbed during the project, but that, after project completion, will not be subject to further disturbance and has the potential to be re-vegetated. All ESA snake habitats subject to temporary ground disturbances, including storage and staging areas and temporary roads, will be restored to pre-project conditions. If appropriate, these areas shall also be re-contoured to pre-project conditions. A written report shall be submitted to the USFWS within ten (10) working days of the completion of construction at the project site and restoration of the site to pre-project conditions.

Mitigation Measure BIO-14: Post-construction Monitoring. An inspection of the site, with a photo documentation report showing pre-and post-project area photos, will be conducted and photos and a brief report will be submitted to USFWS one year from implementation of restoration to pre-project conditions.

Mitigation Measure BIO-17: Monitoring During Construction. A USFWS-approved biologist shall inspect construction-related activities at the proposed project site to ensure that no unauthorized take of federally listed species or destruction of their habitat occurs. The biologist shall be available for monitoring throughout all phases of construction that may

result in adverse effects to the giant garter snake. This includes clearing and grubbing and other construction activities in the areas of wetland vegetation/aquatic habitat, adjacent upland habitat, and during exclusion fence installation. Furthermore, the biologist shall have the authority through communication with the resident engineer to stop construction activities in the immediate area if a giant garter snake is encountered during construction until appropriate collective measures have been completed or until the snake is determined to be unharmed. Snakes encountered during construction activities shall be allowed to move away from the area on their own volition. The biologist shall notify the USFWS immediately if any listed species are found on-site, and will submit a report, including date(s), location(s), habitat description, and any collective measures taken to protect the species found. The biologist shall be required to report any take of listed species to the USFWS immediately by telephone at 916/414-6600 and by electronic mail or written letter addressed to the Chief, Endangered Species Division, within three (3) working days of the incident. The Service does not authorize any handling or moving of a giant garter snake by other than a USFWS-permitted biologist.

Giant Garter Snake – Additional Mitigation Measures Specific to Phases 2 (Modified from 2008 IS/EA)

Mitigation Measure BIO-2: Staging Areas. During construction operations, stockpiling of construction materials, portable equipment, vehicles, and supplies will be restricted to the designated construction staging areas and exclusive of the Environmentally Sensitive Areas (ESAs). A solid barrier fence, such as silt fencing, will be installed along the boundaries of the staging area to prevent contamination of ESAs during such operations.

Mitigation Measure BIO-3: Pre-construction Surveys. No more than 24-hours prior to the commencement of construction activities, a USFWS-approved biologist shall survey areas deemed suitable GGS habitat for the presence of GGS. The biologist will provide the USFWS with a written report that adequately documents the methodology and results of the pre-construction survey within three days of the survey. These areas shall be re-inspected by the biologist whenever a lapse in construction activity of two and removed at the end of each workday from the entire project site.

Mitigation Measure BIO-16: De-watering GGS Habitat. During the GGS active period (May 1-September 31), GGS aquatic habitat may be dewatered starting on April 15. Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling the dewatered habitat.

Mitigation Measure BIO-18: Compensation. Compensation for temporary and permanent impacts to GGS habitat is the responsibility of MFWC. Temporary impacts shall be restored to pre-project conditions. Areas subject to temporary impacts shall be limited to one season (the calendar year period between May 1 and October 1) and be restored within two seasons. . In addition, GGS habitats temporarily disturbed during the inactive season (3.4 acres of aquatic habitat and 6.4 acres of upland habitat) will be replaced at a level of 1:1 by purchasing credits in a USFWS-approved mitigation bank

prior to project construction.

Fish Species – Mitigation Measures from the 2008 IS/EA adopted by CDFG that are Relevant to Phase 2

Mitigation Measure BIO-19: Pile Driving Activities. For Phase 2 only, the contractor shall use vibrational pile driving to the greatest extent feasible. If percussive pile driving is necessary, its use shall be minimized to the maximum extent possible and comply with the following *Interim Criteria for Injury of Fish to Pile Driving Operations* (Popper et al., 2006):

- The Sound Exposure Level (SEL) shall not exceed 187 dB (re: 1 μ Pa² ·sec) in any single strike, measured at a distance of 32.8 ft from the source;
- The peak sound pressure level should not exceed 208 dB (re: 1 μ Pa_{peak}) in any single strike, measured at a distance of 32.8 ft from the source.

Mitigation Measure BIO-20: Dewatering. For Phase 2 only, pump(s) used for dewatering the construction site will be screened according to NMFS fish screening criteria for anadromous salmonids (NMFS, 1997b). A qualified biologist will be on-site during such pumping activities to ensure that any fish that may be present within the construction area are relocated to suitable habitat near the project area.

Fish Species – Additional Mitigation Measures Specific to Phases 2

Mitigation Measure BIO-A: Spoil Sites. Spoil sites shall be located so they do not drain directly into the waterways. If a spoil site drains into a water body, catch basins shall be constructed to intercept sediment before it reaches the channels. Spoil sites shall be graded to reduce the potential for erosion.

Mitigation Measure BIO-B: Hazardous Materials. A spill prevention plan for potentially hazardous materials shall be prepared and implemented. The plan shall include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If necessary, containment berms shall be constructed to prevent spilled materials from reaching the creek channels.

Mitigation Measure BIO-C: Storage. Equipment and materials shall be stored at least 50 feet from waterways. No debris such as trash and spoils shall be deposited within 100 feet of waterways. Staging and storage areas for equipment, materials, fuels, lubricants and solvents, shall be located outside of the stream channel and banks. Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream shall be positioned over drip pans. Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life. Vehicles shall be moved away from the stream prior to refueling and lubrication.

Mitigation Measure BIO-D: Vehicle Maintenance. Proper and timely maintenance for vehicles and equipment used during construction shall be provided to reduce the potential for mechanical breakdowns leading to a spill of materials into or around the creeks. Maintenance and fueling shall be conducted in an area that meets the criteria set forth in the spill prevention plan (i.e., away from sensitive drainages).

Mitigation Measure BIO-E: Dust Prevention. Water used for dust abatement, if necessary, shall be acquired from an authorized off-site source. Water shall be a clean water source in accordance with California RWQCB Construction Storm Water Program and/or as authorized under a separate National Pollutant Discharge Elimination System (NPDES) permit.

Mitigation Measure BIO-F: Daily Monitoring. A qualified biological monitor shall be on site during in-water construction activities. The biological monitor shall be authorized to halt construction if impacts to special-status salmonid species are evident.

Mitigation Measure BIO-G: Riparian Habitat. Current riparian vegetation shall be retained to extent feasible.

Mitigation Measure BIO-H: Fish Rescue Plan. A fish rescue plan shall be prepared by MFWC prior to the implementation of the project and provided for review and comment to NMFS, USFWS and CDFG as appropriate. A qualified fisheries biologist will design and conduct a fish rescue and relocation effort to collect fish from the area within the cofferdam involving the capture and return of those fish to suitable habitat within the Sacramento River. To ensure compliance, a fisheries biologist shall provide observation during initial dewatering activities within the cofferdam. Following the fish rescue effort, a report shall be prepared by the fisheries biologist and submitted to NMFS within 30 days.

Swainson's Hawk – Mitigation Measures from the 2008 IS/EA adopted by CDFG that are Relevant to Phase 2

Mitigation Measure BIO-22: Swainson's Hawk Nest Survey. If construction is proposed to take place during the nesting season, then a qualified biologist shall survey the project site and all habitats within 0.5 mile of the site for Swainson's hawk nests. Should an active nest site occur within 0.5 mile of the project site, the CDFG shall be consulted to develop measures that will protect the nest site from project-generated disturbance. Measures may include implementing a limited operating period surrounding the nest site until young have fledged.

Mitigation Measure BIO-23: Riparian Habitat Exclusion. There shall be no encroachment by construction equipment or personnel into existing riparian habitat areas located along the Sacramento River. Storage or parking of equipment shall be restricted within 100 feet of riparian habitat.

Western Burrowing Owl, Bank Swallow, and Cackling Goose Mitigation, and Osprey - Mitigation Measures from the 2008 IS/EA adopted by CDFG that are Relevant to Phase 2

Mitigation Measure BIO-21. Tree Removal Period. Some trees will be removed on the Chesney property for the Drexler pipeline, and some walnut trees removed on the Coffman property for the Meridian Pumping Plant. All of these trees are outside the Sacramento River riparian areas. If possible, trees required for removal shall be removed outside of the nesting period (nesting period = March 1st through August 31st).

Western Burrowing Owl, Bank Swallow, and Cackling Goose Mitigation, and Osprey - Additional Mitigation Measures Specific to Phases 2 (Modified from 2008 IS/EA)

Mitigation Measure BIO-22: Swainson's Hawk, Nesting Raptors and Other Nesting Bird Survey. For any construction activities that will occur between March 1 and August 31 of any given year, the applicant shall conduct preconstruction surveys in suitable nesting habitat within 0.5 mile of the construction area for nesting raptors. Surveys shall be conducted by a qualified biologist. In addition, all trees slated for removal during the nesting season shall be surveyed by a qualified biologist no more than 48-hours before removal to ensure that no nesting birds are occupying the tree.

If active nests are found during the survey, the applicant shall implement appropriate mitigation measures to ensure that the species will not be adversely affected, which will include establishing a no-work buffer zone as, approved by the CDFG, around the active nest. The no-work buffer may vary depending on species and site specific conditions as approved by CDFG. Appropriate mitigation measures include delaying construction activities until a qualified biologist determines that juveniles have fledged the nest(s), or establishing a "no construction" zone buffer around the nest.

The results of the survey shall be documented in a letter report that is distributed to the CDFG. These measures would ensure compliance with the Migratory Bird Treaty Act and California Department of Fish and Game Code 3503.5.

Mitigation Measure BIO-23: Riparian Habitat Exclusion. Where construction work occurs adjacent to riparian habitat (i.e., at the existing Drexler Diversion and Pumping Plant and the Grimes Canal modifications), there shall be no encroachment by construction equipment or personnel into existing riparian habitat areas located along the Sacramento River. Storage or parking of equipment shall be restricted within 100 feet of riparian habitat.

Western Burrowing Owl, Bank Swallow, and Cackling Goose Mitigation, and Osprey – Additional Mitigation Measure Specific to Phases 2

Mitigation Measure BIO-I: Pre-construction surveys for burrowing owls shall be conducted by a qualified biologist as approved by the California Department of Fish and Game (CDFG) within 30-days prior to the start of work activities where land construction is planned in

known or suitable habitat. If construction activities are delayed for more than 30 days after the initial preconstruction surveys, then a new preconstruction survey shall be required. All surveys shall be conducted in accordance with the CDFG/California Burrowing Owl Consortium survey protocols. This survey can be conducted concurrently with Mitigation Measure BIO-22.

If burrowing owls are discovered in the proposed project site vicinity during construction, the onsite biologist shall be notified immediately. Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the CDFG verifies through non-invasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

If this criteria is not met, occupied burrows during the nesting season will be avoided by establishment of a no-work buffer of 250-foot around the occupied/active burrow. Where maintenance of a 250-foot no-work buffer zone is not practical, the applicant shall consult with the CDFG to determine appropriate avoidance measures. Burrows occupied during the breeding season (February 1 to August 31) will be closely monitored by the biologist until the young fledge/leave the nest. The onsite biologist shall have the authority to stop work if it is determined that construction related activities are disturbing the owls.

If criterion 1 or 2 above are met and as approved by CDFG, the biologist shall undertake passive relocation techniques by installing one-way doors in active and suitable burrows allowing owls to escape but not re-enter. Owls should be excluded from the immediate impact zone and within a 160-foot buffer zone by having one-way doors placed over the entrance to prevent owls from inhabiting those burrows.

After nesting season ends (August 31) and the burrow is deemed unoccupied by the biologist, passive relocation techniques shall take place. Construction activities may occur once a qualified biologist has deemed the burrows are unoccupied.

Jurisdictional Waters Mitigation - Mitigation Measure Specific to Phases 2 (Modified from 2008 IS/EA)

Mitigation Measure BIO-28: Compensation for Loss of Jurisdictional Wetlands. If the Proposed Project/Action results in the permanent degradation of riverine and wetland habitat, those impacts shall be compensated for at a 1:1 ratio through the purchase of similar habitat value from a USFWS-approved conservation bank. Compensation shall take the form of wetland and/or riverine preservation or creation in accordance with the Corps and CDFG mitigation requirements, as required under project permits. Preservation and creation may occur onsite through a conservation agreement or offsite through purchasing credits at a Corps approved mitigation bank.

Jurisdictional Waters Mitigation - Additional Mitigation Measure Specific to Phases 2

Mitigation Measure BIO-J: Wetlands. If it is determined that the Proposed Project/Action impacts waters of the U.S., the MFWC shall obtain all required permit approvals from the Corps, RWQCB, CDFG and any other agencies with permitting responsibilities for construction activities within jurisdictional features. Permit approvals and certifications would likely include the following:

Clean Water Act Section 404. Permit approval from the Corps shall be obtained for the placement of dredge or fill material in waters of the U.S. pursuant to Section 404 of the federal Clean Water Act. The Section 404 permit application would require a delineation of wetlands and other waters of the U.S., a jurisdictional determination from the Corps, and preparation of a Pre-Construction Notification (PCN) and supporting documentation. A PCN outlines project activities, areas of impact, construction techniques, and methods for avoiding and reducing impacts to jurisdictional features. State and federal regulations require that the project applicant avoid or minimize impacts to wetlands and waters and develop appropriate protection for wetlands. Wetlands that cannot be avoided must be compensated to result in “no net loss” of wetlands to ensure that the project would maintain the current functions and values of onsite wetland habitats.

Clean Water Act Section 401 Water Quality Certification/Porter-Cologne Act. Approval of Water Quality Certification (WQC) under the CWA and/or Waste Discharge Requirements (WDRs) under the Porter-Cologne Act shall be obtained from the RWQCB for work within jurisdictional waters. Application for a WQC requires an application and supporting materials, including construction techniques, areas of impact, mitigation measures, project schedule, and proof of CEQA compliance. Application for a WDR requires an application and supporting materials, including a characterization of the discharge which includes but is not limited to: design and actual flows; a list of constituents and the discharge concentration of each constituent; a list of other appropriate waste discharge characteristics; a description and schematic drawing of all treatment process; a description of any BMPs used; and a description of disposal methods. Proof of CEQA compliance is also required.

California Fish and Game Code Section 1602. CDFG requires a Streambed Alteration Agreement for activities that result in alteration of the bed or bank of a stream (typically the top of bank or edge of riparian habitat, whichever is greater), or that adversely impact fish or wildlife resources. The notification package must include supporting materials, including construction techniques, areas of impact, mitigation measures, project schedule, and proof of CEQA compliance.

Noise

Mitigation Measure NOISE-I. Minimization of the Construction and Operational Noise.

Standard noise abatement measures will be implemented during construction of Phase 1 and 2 to reduce noise impacts from construction activities. Construction activities will be limited between 7:00 a.m. and 5:00 p.m. on weekdays to reduce potential noise impacts to area residents. In addition, staging areas and stationary noise generating construction equipment will be located as far as possible from sensitive receptors, and all construction equipment will be maintained with the manufacturer's specified noise-muffling devices. Final design of the Phase I and 2 facilities of the Proposed Project/Action will incorporate noise attenuating technologies and noise barriers to mitigate that noise emanating from the facilities at maximum operational load will not exceed applicable standards or lead to cumulative increases in ambient noise levels.

Transportation and Traffic

Mitigation Measure TRAFFIC-1: Following completion of construction activities, contractor(s) shall restore any damage to construction access routes to existing conditions or better.

Mitigation Measure TRAFFIC-2: Prior to and during construction activities, contractor(s) shall prepare and implement a Traffic Control Plan in accordance with professional engineering standards prior to construction. The Traffic Control Plan should include the following requirements, or equally effective measures:

- Emergency services access to local land uses shall be maintained at all times for the duration of construction activities. Local emergency service providers shall be informed of road closures and detours.
- For roadways requiring full closures, contractor(s), in coordination with Sutter County, shall develop circulation and detour plans to minimize impacts to local street circulation. This would include the use of signing to guide vehicles onto alternative roads around the construction zone.
- Advanced warning signs of construction activities shall be posted to allow motorists to select alternative routes in advance. This will include noticing of residents and businesses fronting the alignment at least two weeks prior to the commencement of construction activities.
- Access for local land uses including during construction activities shall be maintained.
- Roadside safety protocols shall be complied with, so as to reduce the risk of accident.
- A telephone resource shall be arranged to address public questions and complaints during project construction.