Attachment A

California Environmental Quality Act Findings and Mitigation Monitoring and Reporting Plan for the Battle Creek Hydroelectric Project

The State Water Board is the lead agency under the California Environmental Quality Act (CEQA), in connection with the proceeding to consider issuing water quality certifications for the Project. (Pub. Resources Code, §§ 21000-21177.) CEQA requires that the lead agency make one or more of a set of three findings whenever an Environmental Impact Report (EIR) identifies a significant effect on the environment. These findings are set forth in section 21081 of the Public Resources Code:

1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment.

2) Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.

3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. (See also Cal. Code Regs., tit. 14, § 15091.)

When significant effects are subject to a finding under paragraph (3) of subdivision (a), the public agency finds that specific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment. (Pub. Resources Code, § 21081, subd. (b).)

A public agency shall provide that measures to mitigate or avoid significant effects on the environment are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents which address required mitigation measures or, in the case of the adoption of a plan, policy, regulation, or other public project, by incorporating the mitigation measures into the plan, policy, regulation, or project design. (Pub. Resources Code, § 21081.6, subd. (b).)

The EIR for the proposed Project identified potential significant environmental effects of the Project absent project modifications or mitigation measures to reduce or eliminate those effects. Most potentially significant impacts identified are reduced to a level of less than significant with implementation of the identified mitigation measure(s) and the 14 environmental measures adopted for inclusion into the Project. These findings are made under Public Resources Code section 21081, subdivision (a)(1). Each mitigation measure shall be made enforceable by: 1) incorporation into State Water Board water quality certification issued to PG&E, Reclamation, or both; and 2) incorporation as part

of the Project. Some potentially significant impacts can be mitigated, however, the mitigation can and should be adopted by another public agency. These findings are made under Public Resources Code section 21081, subdivision (a)(2). Finally, the State Water board finds that three potentially significant impacts relating to the Oasis Springs Ranch cannot be feasibly mitigated to less than significant levels with certainty. These findings are made under Public Resources Code section 21081, subdivision (a)(3). A statement of overriding considerations supported by substantial evidence is contained at the end of this document. (Cal. Code Regs., tit. 14, § 15093.)

Public Resources Code section 21081.6(a) requires that if a public agency makes changes or alterations in a project to mitigate or avoid the significant adverse environmental effects of the project, it must adopt a monitoring or reporting program to ensure compliance with the changes or alterations. The mitigation, monitoring and reporting plan is contained in a separate document (MMRP). The MMRP consists of a table that identifies, for each mitigation measure, the entity responsible for implementation and timing of implementation, the entities responsible for oversight and monitoring, and what if any, plans or approvals are needed. More specific mitigation and monitoring requirements are incorporated into the mitigation measures identified below.

Accordingly, the State Water Board adopts the following findings for the Battle Creek Restoration Project.

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Impact 1: Impacts from the accidental spill of petroleum products and other construction-related materials

Construction during the Project could result in adverse impacts on fish and other aquatic species due to mortality, lowered growth rates, and reduced reproductive success from accidental spill of petroleum products and other construction-related materials (contaminants). This impact is considered significant.

Implementation of Mitigation Measures 1-9 would reduce this impact to a less-than-significant level.

Mitigation Measure 1: Develop and Implement a Worker Environmental Education Program

The U.S. Department of the Interior, Bureau of Reclamation (Reclamation) is responsible to ensure that contractors and sub-contractors implement all mitigation measures as required. Reclamation shall develop and implement a Worker Environmental Education Program. Reclamation shall require construction contractor and subcontractor personnel to participate in and comply with this program. The program shall include, but is not limited to education regarding:

1) Federal, state, and local environmental laws, regulations, and permits, as well as the penalties for noncompliance with environmental requirements and conditions;

2) Threatened and endangered species and special-status species, as well as their habitats;

3) Cultural resource sites; and

4) Environmental mitigation, compensation, and restoration.

Reclamation shall require a member of the contractor's management staff to participate in the training sessions to discuss the contractor's environmental commitment plans. Upon completion of each training session, Reclamation shall require each employee to sign a statement indicating that he/she has received the training.

The program must cover the relevant requirements detailed in the following Mitigation Measures: 2 (Exclusion Zones), 7, 9, 29, 35-36 (Spill Prevention and Countermeasure Plan (SPCP)), 16 (Wetlands and Riparian Mitigation and Monitoring Plan), 18 (noxious weed control), 22 (Valley Elderberry protections), 38 (Mosquito Protection), and 39 (Fire Prevention and Control Plan).

Mitigation Measure 2: Designate Work and Exclusion Zones

Reclamation shall ensure that construction equipment and associated activities shall be confined to the designated work zone in order to avoid areas that support sensitive resources and that cattle shall be excluded from the work zone. Construction equipment shall be confined to a designated work zone (including access roads) at each project site. Before construction, the work zone shall be fenced to clearly delineate the zone, and to keep cattle from entering the site during construction.

Exclusion zones shall be delineated in the field by a qualified biologist using global positioning system units to measure distances from sensitive resources. Exclusion zones shall include areas identified in the Wetland and Riparian Restoration Mitigation and Monitoring Plan (Mitigation Measure 16). In addition, exclusion zones should include areas identified for exclusion under Mitigation Measures 7 (SPCP), 10 (Vegetation Protection Plan and Erosion and Sediment Control Plan), 17 (MBTA Compliance Program), 18 (noxious weeds), 21 (Oak Plan), and 22-28 (species protection). These zones shall be demarcated by orange construction fencing or along access roads with stakes and ropes. All fences shall have signs attached that identify each area as an *Environmentally Sensitive Area*. The fencing shall be installed before construction activities begin and shall be maintained throughout the construction period.

As part of the Environmental Worker Education Program, Reclamation shall inform construction personnel about the importance of avoiding ground-disturbing activities outside the designated work zone. During construction, the construction monitors and

resource monitors shall ensure that construction equipment and associated activities avoid any disturbance of sensitive resources outside the designated work zones (e.g., riparian zones, including root zones under drip lines, wetlands, springs, and seeps). Reclamation shall ensure that construction personnel avoid all marked environmentally sensitive locations and cultural resources locations within and outside the contractor use area limits. Reclamation shall ensure that construction personnel avoid the root zone of individual oak woodland trees, which will be marked by flagging the dripline of each tree. Environmental monitors will conduct surveys as appropriate for threatened and endangered species and special-status species. Reclamation shall also employ the following measures:

1) Confine the use and storage of construction equipment to within the designated contractor use area limits.

2) Use existing roads and access points to the extent possible to minimize disturbance to wildlife and their habitats.

3) Conduct excavating, filling, and other earth moving activities gradually within the contractor use areas to allow wildlife to escape in advance of machinery and moving soils.

4) Locate staging areas, borrow material sites, parking locations, stockpile areas, and storage areas outside of environmentally sensitive locations. To the extent feasible, these facilities will be located in annual grassland habitat.

Mitigation Measure 3: Anadromous Fish Spawning Exclusion

A qualified fish biologist, designated by Reclamation in consultation with NOAA Fisheries and DFG, shall identify spawning gravels in the stream channel area that has the potential to be directly disturbed by construction and dam removal activities at Wildcat, Eagle Canyon, and Coleman Diversion Dams (i.e., downstream of the existing blocked fish ladders on Coleman and Eagle Canyon Diversion Dams). The qualified fish biologist shall determine the need for temporary armoring to exclude spawning at construction locations prior to any construction activity. The spawning gravel shall be armored with temporary mats or other armoring devices that will prevent spawning by Chinook salmon and steelhead. The gravels shall be armored at least 2 months before construction and demolition activities that could kill or injure eggs and larvae of steelhead and Chinook salmon in the gravel. The armoring materials shall be installed in areas where heavy equipment may be operated within the stream channel or in the vicinity of potential blasting. The temporary mats or other armoring devices shall be removed after instream construction and blasting have been completed.

Mitigation Measure 4: Debris Removal

Reclamation shall remove debris in the stream channel resulting from construction and dam removal activities and deposit it off site. To the extent practicable, Reclamation

shall remove debris in a way that will not affect conditions supporting upstream migration of adult steelhead and Chinook salmon at minimum flow releases from upstream dams and will not adversely modify spawning or rearing habitat. Reclamation shall ensure that any material left in the stream will not impair flows or fish passage. A qualified fish biologist shall inspect the stream channel and confirm the restoration of habitat conditions.

Reclamation shall include its plans for debris removal in the Erosion and Sediment Control Plan required by Mitigation Measures 10 and 19.

Mitigation Measure 5: Implement Environmental Timeframes

Reclamation shall complete all activities in a timely manner to minimize the duration and impacts resulting from construction. In addition, all activities shall occur during the times of the year that are least detrimental to the environment. Instream work shall be conducted during periods of low streamflow (May–October). In addition, construction activities that could adversely affect nesting birds and their habitat shall be limited to the nonbreeding period (see Mitigation Measures 17, 25, 26, and 27), and construction activities that could adversely affect bat colonies and their habitat will be limited to the nonhibernation, nonmaternity colony period (August–October) (see Mitigation Measure 28). Reclamation shall implement the timeframes as required under Mitigation Measures 20 Wetland and Riparian Mitigation and Monitoring Plan.

Mitigation Measure 6: Develop and Implement a Stormwater Pollution Prevention Plan

Reclamation shall prepare and implement a SWPPP as part of the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activities (General Permit). The SWPPP shall include measures to minimize erosion and sediment transport to Battle Creek. It will include: best management practices (BMPs) (e.g., sediment containment devices, protection of construction spoils, proper installation of cofferdams); site restoration; post construction monitoring of the effectiveness of BMPs; contingency measures; details about contractor responsibilities; a list of responsible parties; and a list of agency contacts. The SWPPP should also contain the requirements developed under Mitigation Measures 4 (debris removal), 7 (SPCP), and 18 (noxious weeds).

Measures in the plan shall include, at a minimum, the following measures:

1) Avoid work or equipment operation in flowing water during in-channel activities by constructing cofferdams and diverting all flows around construction sites;

2) Conduct all construction work according to site-specific construction plans that minimize the potential for sediment input to the aquatic system, including constructing silt barriers immediately downstream of the construction site and minimizing disruption of the streambed at and adjacent to the construction site;

3) Use sedimentation fences, hay bales certified as weed-free, sandbags, water bars, and baffles as additional sources of protection for waters, ditches, and wetlands;

4) Identify all areas requiring clearing, grading, revegetation, and recontouring, and minimize the areas to be cleared, graded, and recontoured;

5) Store construction spoils out of the stream (above the ordinary high-water mark) and protect receiving waters from these erosion source areas with sedimentation fences or other effective sediment control devices;

6) Grade spoil sites to minimize surface erosion; and

7) Cover bare areas with mulch and revegetate all cleared areas with appropriate native, noninvasive species.

In addition, Reclamation shall file an application for a waste discharge permit with the Central Valley Regional Water Quality Control Board (Regional Water Board), and comply with any monitoring and reporting requirements established by the Regional Water Board for project construction. No construction or ground disturbing activity shall take place prior to Reclamation receiving any required permits from the Regional Water Board.

Mitigation Measure 7: Spill Prevention and Countermeasure Plan

Before construction begins, Reclamation shall prepare a Spill Prevention and Countermeasure Plan (SPCP) that includes strict on-site handling rules to keep construction and maintenance materials out of drainages and the waterway. The SPCP must be approved by the Deputy Director for Water Rights prior to any construction. The SPCP shall include the additional requirements identified in Mitigation Measures 9 and 29. Measures in the SPCP include, but are not limited to the following:

1) Prevent contamination of streamside soil and the watercourse from cement; concrete or concrete washing; asphalt, paint, or other coating materials; oil or other petroleum products; and hazardous materials;

2) Clean up spills immediately and notify the State Water Board, Regional Water Board, and DFG immediately of any spill and cleanup procedures;

3) Restrict the volume of petroleum products allowed on site to the volume that can be reasonably addressed by the spill control and response measures developed for the SPCP;

4) Provide staging and storage areas outside the stream zone for equipment, construction materials, fuels, lubricants, solvents, and other possible contaminants;

5) Store hazardous substances in staging areas at least 100 feet from stream and other water surfaces;

6) Perform refueling and vehicle maintenance at least 100 feet from receiving waters;

7) Minimize equipment operations in flowing water and remove vehicles from the normal high-water area before refueling and lubricating;

8) Inspect equipment to ensure that seals prevent any fuel, engine oil, or other fluids from leaking.

9) Incorporate the provisions to protect worker and public safety as outlined in Mitigation Measures 35 and 36.

Mitigation Measure 8: Develop and implement an Environmental Compliance Construction Monitoring Program

Before construction begins, Reclamation shall develop an Environmental Compliance Construction Monitoring Program (ECCMP) to ensure that the mitigation measures are implemented in an appropriate and timely manner. As part of this construction monitoring program, Reclamation shall retain qualified biologists, environmental resource specialists, and archeologists to monitor construction activities near environmentally sensitive areas, including areas that support threatened, endangered, and special-status species; migratory bird nesting; woody riparian vegetation; wetlands and perennial drainage crossings; and cultural sites.

Construction monitors shall be hired and trained by Reclamation prior to construction and will conduct daily preconstruction surveys, stake resources, conduct on-site monitoring, clear equipment and vehicle staging areas, document violations and compliance, coordinate with construction inspectors, and post-construction documentation. Resource monitors shall be employed to patrol work zones and work with construction monitors to ensure that barrier fencing, stakes, and required setback buffers are maintained. The roles of the construction monitors, resource monitors, and other individuals on the project, compliance documentation, and any other necessary elements shall be clearly defined in the ECCMP. The ECCMP must be approved by the Deputy Director for Water Rights prior to any construction.

Mitigation Measure 9: Develop and Implement a Toxic Materials Control and Spill Response Plan

Before construction begins, Reclamation shall develop and implement a Toxic Materials Control and Spill Response Plan (TMCSRP) to reduce impacts attributable to accidental spill of petroleum products. The TMCSRP shall regulate the use of hazardous materials, such as petroleum-based products used as fuel and lubricants for equipment, and other potentially toxic materials associated with project construction. The TMCSRP

must be approved by the Deputy Director for Water Rights prior to any construction. The plan shall incorporate the goals and measures specified in Mitigation Measure 6 and shall be implemented in a coordinated manner with the SPCP. The plan shall incorporate the provisions to protect worker and public safety as outlined in Mitigation Measures 35 and 36. Reclamation shall develop and implement a Construction-Area Fish Management Program to emphasize the importance of protecting Chinook salmon and steelhead trout and their habitat.

Impact 2: Impacts from increased sedimentation due to construction activities

Construction during the Project could result in adverse impacts due to mortality of fish eggs and larvae and reduced reproductive success of fish and other aquatic species because of increased sedimentation to North Fork and South Fork Battle Creek. This impact is considered significant.

Implementation of Mitigation Measures 1-8 and 10 will reduce this impact to a less than significant level.

Mitigation Measure 10: Develop and implement a Vegetation Protection Plan and an Erosion and Sediment Control Plan

Reclamation shall develop and implement a Vegetation Protection Plan to protect vegetation during construction, and an Erosion and Sediment Control Plan to minimize the potential for sediment input to the aquatic system. The plans shall incorporate the provision required under Mitigation Measure 19 to control sediment discharge during construction of roads and excavation and other activities in the stream channel during installation of fish screens and fish ladders and during dam removal. The plans must be approved by the Deputy Director for Water Rights prior to commencement of ground disturbing activities.

Impact 3: Impacts from fine sedimentation due to dam removal

Dam removal during the Project could result in adverse impacts due to mortality of fish eggs and larvae and reduced reproductive success of fish and other aquatic species as a result of currently stored fine sediment being released to the stream channel. This impact is considered significant.

Implementation of Mitigation Measures 1-8, and 10-11 will reduce this impact to a less than significant level.

Mitigation Measure 11: Remove diversion dams during low-flow season and construct pilot channels

Reclamation shall remove diversion dams during low-flow conditions to minimize the downstream transport of fine sediment consistent with the Timeframes for Instream Work identified in the NOAA Fisheries biological opinion. Fine sediment would

subsequently be mobilized and transported by higher flows during winter storms, minimizing deposition in gravel substrates and potential adverse effects on egg and larvae of Chinook salmon and steelhead and other aquatic organisms dependent on clean gravel. Reclamation shall also mitigate some of the potential sediment impacts by constructing pilot channels to facilitate the downstream distribution of sediment behind the dams. This requirement shall be incorporated into a Dam Decommissioning Plan, developed by Reclamation and subject to approval by the Deputy Director for Water Rights, FERC, NOAA Fisheries and DFG.

Impact 4: Impacts from direct injury due to construction activities

Construction activities during the Project could result in adverse impacts due to vulnerability of all life stages of fish to injury or mortality from percussion related energy shock waves, operation of equipment, and becoming trapped in isolated pockets of water. Notwithstanding the small size of the construction area and the short construction period, this impact is considered significant.

Implementation of Mitigation Measures 1-3, 5, 8 and 12 will reduce this impact to a less than significant level.

Mitigation Measure 12: Implement a Fish Rescue Operation

Stream channel segments may be isolated from the streamflow during construction. Reclamation, in consultation with NOAA Fisheries and DFG, will ensure that a fish biologist is on site to implement a fish rescue operation in isolated pools that may harbor stranded fish. Fish will be removed from isolated pools by seining or electroshocking. Reclamation, in consultation with NOAA Fisheries and DFG, will also ensure that the electroshocking or seining team includes at least one person with a 4-year college degree in fisheries or biology, or a related degree. The person must also have at least 2 years of professional experience in fisheries field surveys and the use of electroshocking equipment.

Fish collection assumes a 2- to 4-person team per electroshocker or seine to facilitate safe and efficient collection and transport. Up to two electroshocking or seining teams may be used to facilitate efficient fish removal, particularly in reaches where the average width of the channel is more than 20 feet or where an abundance of instream cover makes fish capture difficult. The electroshocking team will complete a minimum of three passes through each isolated pool. The number of electroshocking passes may exceed three if necessary to remove most fish. Captured fish will be placed in 5-gallon buckets. At the end of each pass, captured fish will be transferred into buckets with aerated water or into in-river holding tanks (e.g., buckets with small holes or other similar containers). Water temperature in holding buckets will be monitored and river water will be added or replaced as needed to maintain fish in good condition.

Fish will be counted and recorded by species. All fish will be released in the live channel upstream of the construction area unless it is determined these fish are

downstream migrants that should be released downstream of the affected areas. The number of Chinook salmon and steelhead captured and the number of Chinook salmon and steelhead accidentally killed before release will be reported by email to NOAA Fisheries within 5 working days. All dead Chinook salmon and steelhead will be frozen and retained until NOAA Fisheries provides direction for disposition or until 6 months following fish capture.

Impact 5: Impacts from increased exposure to fish diseases due to increased anadromous fish populations

Implementation of the Project could result in impacts to fish after the project is implemented by increasing the exposure of rainbow trout (specifically trout raised by fish farms) to pathogens as the populations of Chinook salmon and steelhead in Battle Creek increase, specifically the risk of a serious or catastrophic fish disease from spreading from Battle Creek to fish communities throughout the state of California. This impact is considered significant.

Implementation of Mitigation Measure 13 will reduce this impact to a less than significant level.

Mitigation Measure 13: Implement mitigation at Mount Lassen Trout Farm's (MLTF's) Jeffcoat and Willow Springs aquaculture facilities and at the Darrah Springs State Fish Hatchery.

Mitigation measures for each facility are as follows:

<u>Jeffcoat Aquaculture Facilities</u>
Reclamation shall divert canal water from Eagle Canyon Canal into a new watertight pipeline (e.g., high-density polyethylene with heat-welded joints) at a point along the canal that is sufficiently far enough upstream of the spring area to prevent canal water from mixing with the spring water. The pipe shall be sealed and buried. The new pipeline shall be constructed and operational before the risk of transmitting disease has significantly increased as a result of completing the proposed fish passage facilities at Eagle Canyon Diversion Dam.

The pipeline alignment shall follow a new "cross-country" alignment downslope of the present canal as defined in Figure F-11 in Appendix F in Volume II of the Final EIS/EIR. During construction, Reclamation shall take every action to avoid or minimize the potential impacts on wildlife habitat, cultural resources, and waters of the United States, consistent with the construction mitigation measures identified in this document. Reclamation shall submit a final copy of the design specifications to, and receive approval from, the Deputy Director for Water Rights, prior to any ground-disturbing activities.

Willow Springs Aquaculture Facility

A structural solution is not feasible to prevent the spread of serious or catastrophic fish diseases at the Mount Lassen Trout Farm facility because it would interfere with the hydrologic connectivity between the canals and springs necessary to supply the facility with water. Mitigation to reduce the impact to a less than significant level requires changes or alterations within the responsibility and jurisdiction of DFG.

Asbury Diversion Dam

Structural changes are necessary to prevent anadromous fish from passing above the dam and conveying diseases to Darrah Springs State Fish Hatchery during the times when fish are present and at the flows that facilitate their passage over Asbury Diversion Dam (including high flows and normal floodflows). Reclamation shall construct an appropriate fish barrier at Asbury Diversion Dam by structural and operational modifications. Modifications to Asbury Diversion Dam may require the construction of a temporary upstream cofferdam and excavation of reservoir sediments at the upstream face of the dam. The existing walkway across the dam shall be replaced with a footbridge set at a higher elevation and with a longer free span to allow safe passage of moderately severe floodflows and to avoid debris accumulations. The footbridge will allow access to the flow-measurement weirs and outlet works slide gate for operation, maintenance, and adjustments. At least three existing bays will be fitted with flow-measurement weirs, which will replace the flashboard weirs mounted on the crest of the dam. The use of multiple weirs will disperse the flow over a wide area, which is expected to reduce the potential for attracting fish to areas of higher passage potential. The flow-measurement weirs shall be incorporated into the cap structure. The vertical steel support columns for the existing walkway shall be cut off, but the lower portions may remain and possibly be incorporated into the cap structure.

To eliminate potential jump pools below the dam crest, existing scour holes near the downstream toe of the dam shall be covered to establish a surface free of low spots to prevent formation of launching areas for migrating fish, but which is durable enough to handle expected debris loads with a minimum of maintenance. The apron area downstream of the dam shall be modified by placement of reinforced concrete, grouted riprap or other durable materials. The top surface of the apron shall be horizontal from the dam to the end of the walkway footings and shall be sloped downstream at a 5% grade for the remaining 8 to 10 feet. The apron shall extend across the face of the dam, including the area adjacent to the sediment-pass-through-gate control structure and the approximate 6-foot pass-through gate. If hydraulic analyses indicate a possibility of high tailwater levels during high flow periods, the surface of the apron may be raised up to 2 or 3 feet and be extended farther downstream.

PG&E shall discontinue sluicing of sediments through the existing flashboard spill gate. The periodic sluicing of sediments shall be accomplished by releasing water through the existing 36-inch-diameter outlet works pipe. The sluicing of sediments shall be addressed in the Erosion and Sediment Control Plan required by Mitigation Measures 10 and 19. In order to minimize the risk of fish passing through the 36-inch culvert pipe during sediment-pass-through operations, the existing outlet pipe shall be extended

between 75 and 100 feet downstream. The reason for extending the pipe is to afford some level of prevention of fish attempting to migrate up the pipe during sluicing operations. The pipe shall be constructed of a suitable material (e.g., reinforced concrete, steel, or high density polyethylene), shall be properly supported with concrete saddle supports, and shall not have any internal corrugations. The pipe shall be placed at the steepest angle that the channel geometry allows. In general, the pipe shall follow the relatively flat grade of the creek bed, but shall be anchored to rock to prevent movement. Because higher-velocity flow is expected in the extended pipe, the pipe should serve as a velocity barrier to upstream passage. The type of pipe (concrete, steel, etc.), alignment, method of anchoring, and other features for protecting the pipe from debris during floodflows shall be determined based on engineering and cost analyses. The 6-foot gate shall be discontinued in favor of the 36-inch culvert pipe and periodic dredging of material from behind the dam. Only the minimum amount of excavation shall be performed in the creek bed. PG&E's Asbury facility operation plans shall be revised to include timely notifications to the Darrah Springs Hatchery facility in the event of significant increases in creek flows in the watershed as indicated by elevated Asbury Diversion Pool.

During construction, Reclamation shall take every action to avoid or minimize the potential impacts on wildlife habitat, cultural resources, and waters of the United States, consistent with the construction mitigations measures identified in this document. Reclamation shall submit a final copy of the design specifications and receive approval from the Deputy Director for Water Rights, prior to any ground-disturbing activities.

BOTANICAL, WETLAND, AND WILDLIFE RESOURCES

Impact 6: Impacts to woody riparian vegetation due to Project activities

Implementation of the Project could result in adverse impacts due to disturbance or loss of 7.2 acres of woody riparian vegetation and associated wildlife habitat. This impact is considered significant.

Implementation of Mitigation Measures 1-3, 5, 8, and 14-17 will reduce this impact to a less than significant level. Mitigation Measure 17 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 14: Riparian Restoration Plan

Reclamation shall develop a Riparian Restoration Plan as a component of the Wetland and Riparian Mitigation and Monitoring Plan required by Mitigation Measure 16. Reclamation must receive approval of the Plan by the Deputy Director for Water Rights, and other appropriate resource agencies before conducting any ground-disturbing activities. Reclamation shall incorporate into the Plan, and implement, the following measures to avoid, minimize, and compensate for the potential loss of woody riparian vegetation and associated wildlife habitat:

Avoid and Minimize Removal and Disturbance of Riparian Habitat. Reclamation shall ensure that the unnecessary removal or disturbance of riparian habitat adjacent to the construction area shall be avoided by installing orange construction barrier fencing (and sedimentation fencing in some cases) between the construction site and the riparian/creek area. The removal of woody riparian vegetation shall be avoided by creating an exclusion zone (buffer) around woody riparian vegetation near the construction zone, educating construction crews about the importance of avoiding the sensitive habitat, and monitoring construction to ensure avoidance. The exclusion zone shall be demarcated by orange construction fencing placed 20 feet beyond the drip line of the woody riparian vegetation. Reclamation shall install fencing before construction activities begin and shall maintain the fencing throughout the construction period. Reclamation shall implement this measure in coordination and consistent with Mitigation Measure 2 (exclusion zones), and address the requirements of this measure in the Worker Environmental Education Plan required by Mitigation Measure 1.

Avoid Long-Term Impacts on Woody Riparian Vegetation and Associated Habitat. Reclamation shall avoid long-term impacts on woody riparian vegetation by trimming trees and shrubs rather than removing entire woody plants. Where possible, shrubs and trees shall be cut at least 1 foot above ground level to leave the root systems intact and allow for more rapid regeneration following construction. To avoid the take of eggs or nestlings of migratory birds, riparian vegetation shall be removed during the nonbreeding season (October–February) before construction begins. If such timing is not feasible, riparian vegetation shall not be removed until it can be demonstrated that it is not supporting nesting birds. Reclamation shall implement this measure in coordination and consistent with Mitigation Measures 5 (environmental timeframes), 16 and 17 (WRMMP and MBTA compliance), and address the requirements of this measure in the Worker Environmental Education Plan required by Mitigation Measure 1.

Compensate for the Loss of Woody Riparian Habitat. Reclamation shall compensate for the temporary loss of woody riparian habitat, which shall include full restoration of the affected habitat. In addition to restoring the affected area, on-site or off-site compensation or enhancement shall be completed at a ratio of 2:1 (2 acres enhanced for every 1 acre affected) for temporary loss of woody riparian habitat. This portion of the total compensation would be credited from the Burton Ranch conservation easement (U.S. Fish and Wildlife Service 2005a). The Plan shall contain a provision for agency determination about how much habitat loss is considered permanent. In addition, the Plan should designate the success criteria to measure the effectiveness of restoration efforts. The compensation for permanent loss of woody riparian habitat shall be provided at a minimum ratio of 3:1 (3 acres of compensation for every 1 acre affected) through the use of habitat credits from a California Bay-Delta Authority (CBDA)–funded conservation easement located within the project area.

- As part of the Riparian Restoration Plan, Reclamation shall retain a qualified ecologist to prepare a compensation proposal that will compensate for the

removal of riparian vegetation along Battle Creek, including trees and shrubs that are removed entirely (including root systems). Enhancement of riparian habitat will be accomplished along Battle Creek through the removal of invasive species and replacement with native riparian species. The compensation proposal shall evaluate the feasibility of removing nonnative species and replanting native species. The proposal shall include design specifications, an implementation plan, maintenance requirements, and a monitoring program for on-site restoration. The plan must be approved by the Deputy Director for Water Rights and other appropriate resource agencies prior to implementation.

- Reclamation shall monitor on-site riparian restoration efforts for a 10-year period, or until the performance standards have been met without human intervention for 3 years, to document the degree to which success criteria are achieved and to identify remedial actions that may be needed (U.S. Fish and Wildlife Service 2005a). Annual monitoring reports shall be submitted to the Deputy Director for Water Rights, and other appropriate resource agencies. The reports shall summarize the data collected during monitoring periods, describe how the habitats are progressing in terms of the success criteria (determined as part of the Restoration Plan), and recommend any additional actions needed.

- Off-site enhancement of riparian habitat shall be implemented by using habitat credits at the Burton Ranch property, a CBDA–funded conservation easement managed by The Nature Conservancy and located on the mainstem of Battle Creek. The Nature Conservancy will conduct monitoring and reporting as part of its commitment to stewardship of this easement.

Mitigation Measure 15: Implement Habitat Compensation Approach

Reclamation shall mitigate temporary habitat impacts associated with the Project on site through habitat restoration measures that Reclamation will identify in the Riparian Restoration Plan (Mitigation Measure 14). The Riparian Restoration Plan shall include a provision for determining what impacts to riparian habitat are permanent. The mitigation approach for permanent impacts shall include consideration of a CBDA–funded conservation easement in the Battle Creek watershed for offsetting long-term impacts to riparian and upland habitats.

Following implementation of avoidance, minimization, and restoration measures, the remaining environmental compensation needs of the Project may be offset by the environmental benefits of the CBDA–funded Burton Ranch easement along the mainstem of Battle Creek. Habitat credit comes from preservation, in perpetuity, of riparian and upland habitat that is under threat of future impacts attributable to human land use/development. This conservation easement would provide the in-kind benefits needed to offset habitat values lost during implementation of the Restoration Project.

Mitigation Measure 16: Complete and implement a Wetland and Riparian Mitigation and Monitoring Plan

Reclamation, in consultation with NOAA Fisheries and DFG, shall prepare a Wetland and Riparian Mitigation and Monitoring Plan (WRMMP) to mitigate impacts on wetlands subject to U.S. Army Corps of Engineers (Corps) jurisdiction in the Project area as described in more detail under Mitigation Measure 20. The WRMMP shall also include the Riparian Restoration Plan outlined under Mitigation Measure 14. Reclamation shall receive approval of the plan from the Deputy Director for Water Rights and other appropriate resources agencies prior to Project construction activities.

Reclamation shall avoid and minimize adverse effects on wetland and riparian habitat, as well as replace the acreage and function and values of wetlands and riparian habitat permanently affected by the Project. To support this goal, the WRMMP shall meet the following objectives:

- Provide compensatory mitigation for permanent impacts in the form of habitat creation, restoration, preservation, or enhancement of wetland habitats in the Project area (i.e., the Battle Creek watershed);
- Provide in-kind mitigation and design the habitats so that they will have equal or better function and value and quality than the wetlands that will be affected by the project;
- Immediately restore habitats that have been temporarily affected by Project construction to predisturbance conditions;
- Integrate concerns for special-status species (e.g., valley elderberry longhorn beetle) into the mitigation design;
- Design the mitigation wetlands so that once established, they will require no maintenance; and
- Develop and implement a monitoring and reporting program for any actions taken above or other actions taken to protect riparian and/or wetland resources.

Reclamation shall submit an annual performance monitoring report to ACOE and the State Water Board by January 30 for the previous calendar year. The report will summarize monitoring methods, results, progress toward meeting the final performance standards specified in the WRMMP, and any corrective actions taken.

Mitigation Measure 17: Implement Migratory Bird Treaty Act Compliance Program

Reclamation and/or the construction contractor will implement the following mitigation measures:

- Reclamation shall protect all known or potential nesting and roosting sites, such as live trees with cavities, and all snags and stumps year-round.
- Reclamation shall not remove nests of raptors or any other bird from their locations.

- To the extent possible, construction activities that could adversely affect nesting birds and rearing of young through take of nests, impacts on nesting habitat, or disturbance from noise or human activity, will be limited to the period between September 1 and February 1 to avoid the bird breeding season.
- Reclamation shall remove only as necessary for construction purposes any habitat that provides nesting cover for birds, such as grassland, mixed chaparral, live oak woodland, blue oak woodland, gray pine/oak woodland, and westside ponderosa pine between September 1 and February 1 prior to construction.
- Reclamation shall monitor construction sites for bird nesting activity during the breeding season.
- If raptors or any other birds appear at or near a construction site and attempt to nest, typical levels of construction noise and activity that will occur at the site during the breeding season will be sustained, such that the birds can accept or reject the site based on their assessment of the disturbance. Unless it is known that the nest site will be physically disturbed, the birds will be allowed to nest if they choose under the assumption that they will be able to tolerate construction noise and activity.
- If disturbance of a nest with eggs or young appears unavoidable, or nesting activity such as incubation or feeding of young may be affected, a project contact at USFWS and DFG will be consulted before disturbance occurs.
- If potential nesting habitat must be affected during the breeding season, Reclamation shall consult with the USFWS and DFG before the disturbance occurs.
- If a project site meets buffer zone criteria for an active nest during the breeding season, Reclamation shall contact the USFWS and DFG for known occurrences of these species in the project area.

Reclamation shall discuss these measures in the Worker Education Program (Mitigation Measure 1), and designate exclusion zones (Mitigation Measure 2) where necessary. Reclamation shall incorporate these provisions into its commitments under Mitigation Measure 5 (environmental time frames) and 8 (compliance monitoring).

Impact 7: Impacts from the introduction or spreading of noxious weeds

Project implementation could result in adverse impacts due to introduction of noxious weeds or spread of existing noxious weeds into potentially uninfested areas. This impact is considered significant.

Implementation of Mitigation Measures 1, 6-7, 10, and 18-19 will reduce this impact to a less than significant level. Mitigation Measure 18 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 18: Avoid or minimize the spread of noxious weeds into previously uninfested areas

To avoid the introduction or spread of noxious weeds into previously uninfested areas, Reclamation shall implement the following measures:

a) Coordinated and consistent with the Worker Environmental Education Program required under Mitigation Measure 1, Reclamation shall educate construction workers, supervisors and managers on weed identification and the measures required to control and prevent the spread of noxious weeds.

b) Reclamation shall treat small, isolated infestations with approved eradication methods at an appropriate time to prevent and/or destroy viable plant parts or seed.

c) Reclamation shall ensure that all earth moving equipment is washed before entering and leaving Project sites that contain noxious weeds. Because of the remoteness of the project area, equipment washing shall be done off site at a paved facility (located away from sensitive biological resource areas). The contract inspectors and resource monitors shall routinely inspect construction activities to verify that construction equipment is being washed.

d) Reclamation shall implement measures set forth in the SWPPP to revegetate and restore disturbed areas immediately after construction is complete (Mitigation Measure 6). The revegetation portion of the SWPPP shall contain specifications for using certified weed-free native and nonnative mixes. The SWPPP shall also specify that all disturbed areas shall be weeded (if necessary) and reseeded in the following years if the post-construction inventory (see following discussion) indicates that noxious weed species are colonizing the area.

e) Reclamation shall conduct a post-construction inventory at years 1 and 2 after construction at each site is complete. The inventory shall focus on areas disturbed during Project activities and shall verify that ongoing activities have not resulted in the introduction of new noxious weed infestations. The inventory shall be conducted by a plant ecologist designated by Reclamation.

f) The plant ecologist shall also prepare and submit a Noxious Weed Inventory letter to the resource agencies after each visit. Items addressed in the letter shall include any new infestations of noxious weeds and the actions that have been taken to control noxious weed infestations.

Mitigation Measure 19: Implement an Erosion and Sediment Control Plan to implement BMPs at all construction sites

Reclamation shall develop an Erosion and Sediment Control Plan (Mitigation Measure 10) that addresses each site where soils will be disturbed and/or exposed by construction activities, subject to the approval by the Deputy Director for Water Rights, prior to any ground disturbing activities. The plan shall include, but is not limited to, feasible Best Management Practices (BMP) to control accelerated erosion, slope instability, and sedimentation that could result from clearing, grading, and other ground-disturbing activities during construction. BMPs include, but are not limited to, the following:

- Minimize the amount of vegetation removal and soil disturbed;
- Spray water on exposed soils to minimize wind erosion and dust during construction;
- Avoid the disturbance of steep slopes;
- Construct fill slopes of a 2:1 (i.e., horizontal:vertical) ratio or flatter;
- Construct V-ditches above cut and fill slopes to divert water from newly exposed slope faces;
- Outslope new roads and construct rolling dips, water bars, and other drainage control measures;
- Use temporary and permanent stabilization practices, such as seeding, mulching, erosion control blankets, or aggregate surfacing;
- Install fiber rolls or silt fences downslope of disturbed areas to control sediment;
- Construct temporary or permanent sedimentation basins as needed;
- Select removing, stockpiling, and replacing topsoil as a medium for revegetation (this measure should be implemented where more than 6 inches of topsoil is removed);
- Stabilize drainage channels using rock lining or similar natural materials;
- Stabilize borrow areas with temporary and ultimately permanent vegetation; and
- Monitor the BMPs and make adjustments to the practices as required so that disturbed areas are adequately stabilized, as defined by the Erosion and Sediment Control Plan.

Reclamation shall use the Erosion and Sediment Control Plan to develop the SWPPP (Measure 6).

Impact 8: Impacts from the loss or disturbance of water of the United States

Project implementation could result in adverse impacts to botanical, wetland and wildlife resources due to loss or disturbance of 18.86 acres of waters of the United States (including wetlands). This impact is considered significant.

Implementation of Mitigation Measures 1-2, 4-6, 8, 15-16, and 19-20 will reduce this impact to a less than significant level.

Mitigation Measure 20: Avoid and minimize construction activities adjacent to jurisdictional waters, compensate for loss of waters of the United States, and revegetate lost habitat

Reclamation shall develop and implement a Wetland Restoration Plan (WRP) as a component of the WRMMP (Mitigation Measure 16), to avoid, minimize, and compensate for impacts on waters of the United States (including wetlands). Reclamation shall receive approval of the WRP by the Deputy Director for Water Rights and other appropriate resource agencies, prior to any ground-disturbing activities. The plan shall include, but is not limited to, the following measures:

- Avoid direct and indirect impacts on wetlands and streams, if feasible;
- Stake and flag wetland areas and identify exclusion zones (Mitigation Measure 2);
- Discuss these measures in the Worker Education Program (Mitigation Measure 1);
- Avoid construction activities in saturated or ponded wetlands and streams during the wet season (spring and winter) to the maximum extent possible (see Mitigation Measure 5). Where such activities are unavoidable, employ protective practices, such as use of padding or vehicles with balloon tires;
- Where necessary, use geotextile cushions and other materials (e.g., timber pads, prefabricated equipment pads, geotextile fabric) in saturated conditions to minimize damage to the substrate and vegetation;
- Stabilize exposed slopes and streambanks immediately upon completion of construction activities. Restore other waters of the United States in a manner that encourages native vegetation to reestablish preproject condition and reduces the effects of erosion on the drainage system;
- In highly erodible stream systems, stabilize banks using a nonvegetative material that will bind the soil initially and break down within a few years. If more aggressive erosion control treatments are needed, use geotextile mats, excelsior blankets, or other soil stabilization products that are compatible with Project objectives;
- During construction, remove trees, shrubs, debris, or soils that are inadvertently deposited below the ordinary high-water mark of streams in a manner that minimizes disturbance of the bed and bank;

- Restrict instream construction within the ordinary high-water mark to the low-flow period (see Timeframes for Instream Work identified in the NOAA Fisheries biological opinion);
- Complete all activities promptly to minimize their duration and the resulting impacts;
- Require contractors to obtain approval from Reclamation for all staging areas for the Project;
- Prohibit to the extent possible, equipment access or staging in and near wetlands and other waters of the United States located along existing access roads. To the extent possible, confine access to existing roads;
- Ensure that resource monitors and contract compliance inspectors routinely inspect protected areas to confirm that protective measures are in place and effective (see Mitigation Measure 8); and
- Keep all protective measures in place until all construction activities have been completed near the resource and remove them immediately following construction and reclamation activities.

The WRP shall evaluate potential wetland creation and enhancement sites on-site or within the Battle Creek watershed for restoration feasibility. If on-site or off-site restoration is possible, the plan shall describe where and when restoration shall occur and who shall be responsible for developing, implementing, and monitoring the restoration plan. If possible, restoration shall be conducted in the Battle Creek watershed.

The WRP shall contain a provision for identifying permanent impacts. Once identified, to compensate for permanent impacts on waters of the United States, and to ensure no net loss of habitat functions and values, Reclamation shall provide compensation at a minimum ratio of 2:1 (2 acres restored or created for every 1 acre filled). The Project could be partially or fully self-mitigating for project-related effects on waters of the United States; however, if vegetation does not develop naturally, the plan shall provide for additional mitigation. Potential measures may include a combination of on-site restoration/creation, off-site restoration, mitigation credits, and habitat credits from a CBDA–funded conservation easement. Compensation options are presented below.

1) Purchase mitigation bank credits at an agency-approved bank in the project region; or

2) Contribute funds, equal to the amount needed to purchase mitigation bank credits, to restore wetlands and other waters in the Battle Creek watershed or other nearby lands that are publicly managed and shall be protected in perpetuity.

Before this mitigation measure is considered complete, Reclamation must receive notification from the Deputy Director for Water Rights that wetland mitigation, restoration or compensation requirements have been met.

Impact 9: Impacts to woodland and forest wildlife habitat

Project implementation could result in adverse impacts on common upland woodland and forest communities and associated wildlife habitat. This impact is considered significant.

Implementation of Mitigation Measures 1-2, 5, 8, 15-16, 19 and 21 will reduce this impact to a less than significant level. Mitigation Measure 21 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 21: Avoid and minimize the removal and disturbance of oak woodland habitat and compensate for the loss of oak and woodland habitat

Reclamation shall implement the following measures to avoid, minimize, and compensate for the potential disturbance or loss of oak woodland habitat associated with Project activities:

Retain an arborist to identify the species and numbers of native trees that will be removed or indirectly affected within the construction zone. Protect oaks that will not be removed (more than 6 inches diameter at breast height) but that are within 61 meters (200 feet) of the grading activity by fencing them 1.5 meters (5 feet) beyond the dripline and root zone (as determined by a certified arborist). This fence, intended to prevent activities that result in soil compaction beneath the canopy or over the root zone, shall be maintained until all construction activities are complete. No grading, trenching, or movement of construction equipment shall be allowed within fenced areas. Protection for oak trees on slopes shall include installation of silt fences. A silt fence shall be installed at the upslope base of the protective fence to prevent any soil drifting down over the root zone.

Reclamation shall compensate for temporary and permanent impacts on oak woodland habitat to ensure no net loss of habitat functions and values. Where impacts on oak woodland habitat are temporary, compensation shall include full restoration of the affected habitat as well as on-site or off-site restoration at a range in ratios from 2:1 to 4:1 (2 to 4 acres restored for every 1 acre affected), depending on the severity of the impact. Determination of the appropriate ratio would take place during construction monitoring and postconstruction assessment. The compensation for permanent loss of oak woodland habitat shall be provided at a minimum ratio of 5:1. Reclamation shall develop and implement an Oak Planting Plan for on-site compensation for the temporary loss of oak woodland habitat. The Oak Planting Plan shall include the following measures:

- Specify collecting acorns from the local region and planting the acorns on site based on the diameter at breast height of the removed trees.

- Develop success criteria and monitor the restored habitat for 10–15 years or until the success criteria are met.

- Adaptive management measures to ensure that the desired goals are achieved.

Plantings shall be monitored annually by a qualified biologist for 10 to 15 years after construction is complete and until the success criteria are met. The monitoring methods shall be described in the Implementation Plan. Results of the monitoring shall be submitted to the appropriate agencies. Success will be achieved if there is a minimum survival and growth rate, specified by USFWS, by the end of the fifth year and a stable viable population for the duration of the monitoring period. If the performance standards are not met, remedial measures, such as replanting, shall be implemented. During monitoring, the following information shall be evaluated: average tree height, percent of tree cover, tree density, percent of woody shrub cover, seedling recruitment, and invasion by nonnative species. During the revegetation process, tree survival shall be maximized by using deer screens or other maintenance measures as recommended by a certified arborist.

Areas that have vegetative pruning and tree removal shall be inspected immediately before construction begins, following construction, and 1 year following construction to determine the amount of existing vegetative cover, cover that is removed, and cover that resprouts. If these areas have not resprouted sufficiently to return the cover to the level of cover existing prior to project construction, these areas shall be replanted with the same species to reestablish the cover to the preproject condition.

Off-site restoration of oak woodland habitat shall be implemented by using habitat credits at the Burton Ranch property, a CBDA–funded conservation easement managed by The Nature Conservancy and located on the mainstem of Battle Creek. The Nature Conservancy will conduct monitoring and reporting as part of its commitment to stewardship of this easement.

A final Oak Monitoring Report shall be submitted to the Deputy Director for Water Rights as well as to USFWS and DFG . The final Oak Monitoring Report shall outline those actions taken by Reclamation to fulfill any compensation requirements as a result of Restoration Project construction. The report shall include evidence of consultation with USFWS, DFG and The Nature Conservancy, and their concurrence that restoration/compensation goals have been or will be met.

Impact 10: Impacts due to disturbance of Elderberry shrubs

Project implementation could result in direct or indirect, potentially significant adverse impacts to Valley Elderberry Longhorn Beetle (VELB) due to disturbance of Elderberry shrubs. This impact is considered significant.

Implementation of Mitigation Measures 1-2, 5-6, 8, 15-16, and 22 will reduce this impact to a less than significant level. Mitigation Measure 22 is within the responsibility and

jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 22: Avoid and minimize the disturbance and removal of elderberry shrubs and compensate for the loss of habitat for the valley elderberry longhorn beetle

According to the USFWS Biological Opinion (U.S. Fish and Wildlife Service 2005b), Reclamation may remove up to 26 shrubs, or no more than 108 stems. Reclamation shall mitigate effects on valley elderberry longhorn beetles by implementing the conservation measures identified in the ASIP, ASIP addendum, and USFWS's biological opinion. These mitigation measures are as follows:

A qualified biologist designated by Reclamation and in consultation with USFWS and DFG, shall conduct preconstruction surveys at each Restoration Project construction site if previous surveys were completed more than 2 years from the date of actual construction activities. The surveys shall begin before, or during, the November–February transplant season, before construction begins at the site, so that any necessary elderberry shrub transplanting can be done before the end of the transplant season. If additional shrubs that may be affected by the project are located from these preconstruction surveys, Reclamation must contact USFWS and reinitiate formal consultation under this biological opinion prior to any groundbreaking activities.

For elderberry shrubs that will be avoided, a qualified biologist shall identify and mark all shrubs with stems 1.0 inch or more in diameter within 100 feet of the impact area. A 100-foot buffer shall be established around all elderberry shrubs, and no construction activities shall be permitted within the buffer zone unless approved by USFWS. In areas where encroachment on the 100-foot buffer has been approved by USFWS, no ground disturbing activities shall be permitted within 20 feet of the dripline of each elderberry shrub. No riparian vegetation within 100 feet of elderberry shrubs that are to be avoided shall be removed by construction activities. Orange fencing shall be placed around all elderberry shrubs using the appropriate buffer to avoid inadvertent effects. Throughout project construction, a qualified biologist shall routinely monitor construction near the 100-foot no-disturbance buffer between potential valley elderberry longhorn beetle habitat and construction activities to prevent removal and disturbance of elderberry shrubs not approved by USFWS.

Signs shall 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. The Endangered Species Act of 1973, as amended, protects this species. Violators are subject to prosecution, fines, and imprisonment." The signs shall be clearly readable from a distance of 20 feet and must be maintained for the duration of the construction.

Reclamation shall present an Environmental Worker Education Program to all construction personnel to brief them on the status of the valley elderberry longhorn

beetle, the need to avoid adverse effects on the beetle and its habitat, and the penalty for not complying with these requirements.

Reclamation shall implement the following dust control measures along all dirt access roads and construction sites to minimize the effects of dust on nearby elderberry shrubs:

- All disturbed areas, including storage piles that are not actively used for construction purposes shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, tarp or other suitable cover, or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions by applying water or by presoaking.
- When materials are transported off site, all material shall be covered or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained.
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, piles shall be effectively stabilized of fugitive dust emissions using sufficient water or chemical stabilizer/suppressant.
- Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.

Reclamation intends to use the Stillwater Plains Mitigation Bank near Redding, California, to compensate for project-related effects on valley elderberry longhorn beetle habitat that cannot be avoided. Prior to groundbreaking activities at sites where effects on valley elderberry longhorn beetle habitat is assumed, Reclamation shall:

- Complete mitigation bank arrangements with Stillwater Plains Mitigation Bank, and

- Transplant all elderberry shrubs with one or more stems measuring 1.0 inch or more in diameter that will be directly affected by construction activities (i.e., that would otherwise be destroyed) to Stillwater Plains Mitigation Bank in accordance with Service's Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999).

Reclamation shall provide USFWS and DFG with an annual Valley Elderberry Longhorn Beetle Habitat Report, prepared by a qualified biologist, to document project progress, compensation activities, and results of preconstruction surveys required. Each report shall also address project sites scheduled for the following construction season and state whether effects at the sites would be within the limits set forth in the biological

opinion. Reclamation shall reinitiate formal consultation if effects on the valley elderberry longhorn beetle are determined to be greater than the levels set forth in the USFWS's biological opinion.

Impact 11: Impacts due to disturbance of yellow-legged frog habitat

Project implementation could result in adverse impacts to foothill yellow-legged frogs from habitat disturbance. This impact is considered significant.

Implementation of Mitigation Measures 1-2, 5-6, 8, 15-16, and 23 will reduce this impact to a less than significant level. Mitigation Measure 23 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 23: Avoid and minimize the disturbance of foothill yellow-legged frogs

Within 2 weeks prior to construction activities at Lower Ripley Creek Feeder Diversion Dam, Inskip Diversion Dam/South Powerhouse, Soap Creek Feeder Diversion Dam, South Diversion Dam, North Battle Creek Feeder Diversion Dam, upstream of Eagle Canyon Diversion Dam, upstream of Wildcat Diversion Dam, Coleman Diversion Dam, Inskip Powerhouse, Asbury Diversion Dam, and the Jeffcoat mitigation site, a qualified biologist designated by Reclamation shall conduct focused surveys for foothill yellow-legged frogs that follow appropriate protocols approved by USFWS and DFG. If frogs, tadpoles, or egg masses are detected, barrier fencing shall be constructed in the work area in a manner that will exclude frogs from entering the work area. For 3 days prior to construction activities (one survey each day), qualified biologists shall survey each work site for foothill yellow-legged frogs and relocate any frogs, tadpoles, or egg masses found within the work site to the nearest suitable habitat outside the work area and away from the exclusion fencing. If frogs, tadpoles, or egg masses are found in previously unoccupied sites, frog exclusion areas shall be established at those sites. After construction has been completed, Reclamation shall remove the barrier fencing and restore the habitat.

Reclamation shall provide the USFWS and DFG with a report within six months from the end of construction of any particular work site where frogs, tadpoles or egg masses were located summarizing the results of the focused surveys and the actions taken to avoid, exclude or relocate frogs from construction sites. USFWS and DFG may require additional measures to protect foothill yellow-legged frogs from any future impacts as a result of project operation.

Impact 12: Impacts due to disturbance of northwestern pond turtles

Project implementation could result in adverse impacts on northwestern pond turtles. This impact is considered significant.

Implementation of Mitigation Measures 1-2, 5-6, 8, 15-16, and 24 will reduce this impact to a less than significant level. Mitigation Measure 24 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 24: Avoid and minimize the disturbance of northwestern pond turtles

Within 2 weeks prior to construction activities at Lower Ripley Creek Feeder Diversion Dam, Inskip Diversion Dam/South Powerhouse, Soap Creek Feeder Diversion Dam, South Diversion Dam, Coleman Diversion Dam, upstream of Eagle Canyon Diversion Dam, upstream of Wildcat Diversion Dam, Inskip Powerhouse, Asbury Diversion Dam, Jeffcoat mitigation site, and the Willow Springs site, a qualified biologist designated by Reclamation shall conduct focused surveys for northwestern pond turtle that follow appropriate protocols approved by USFWS and DFG. If turtles are detected, barrier fencing shall be constructed in the work area in a manner that will exclude turtles from entering the work area. For 3 days prior to construction activities (one survey each day), qualified biologists shall survey each of these work sites for turtles and shall relocate any turtle found within the work site to the nearest suitable habitat outside the work area and away from the exclusion fencing. If turtles are found in previously unoccupied sites, turtle exclusion areas shall be established at those sites. After construction has been completed, Reclamation shall remove the barrier fencing and restore the habitat.

Reclamation shall provide the USFWS and DFG, within six months of completing construction at any particular work site, a report summarizing the results of the focused surveys and the actions taken to avoid, exclude or relocate pond turtles from construction sites. USFWS and DFG may require additional measures to protect pond turtles from any future impacts as a result of project operation.

Impact 13: Impacts due to disturbance of breeding yellow-breasted chats and little willow flycatchers

Project implementation could result in adverse impacts to yellow-breasted chats and little willow flycatchers. This impact is considered significant.

Implementation of Mitigation Measures 1-2, 5-6, 8, 14-17, and 25 will reduce this impact to a less than significant level. Mitigation Measures 17 and 25 are within the responsibility and jurisdiction of DFG and other agencies and have been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 25: Avoid and minimize the disturbance of breeding yellow-breasted chats and little willow flycatchers

If construction begins during yellow-breasted chat breeding season (mid-April to August) of the construction year, a qualified biologist designated by Reclamation, using

appropriate protocols approved by USFWS and DFG, shall survey all affected project sites to determine chat occupancy. Surveys shall be conducted between April 25 and May 25. If no breeding chats are detected, no further mitigation is required.
If construction- and restoration-related activities are to occur during the little willow flycatcher breeding season, a qualified biologist shall survey the all affected project sites to determine flycatcher occupancy using appropriate protocols approved by USFWS and DFG. At least three surveys shall be conducted between May 15 and July 25, or at least one or two surveys shall be conducted prior to construction if construction begins during that time period. At least one survey must be conducted between June 20 and July 1 to determine presence of non-migratory willow flycatchers. If no breeding flycatchers are detected, no further mitigation is required.

If breeding chats or flycatchers are detected, a qualified biologist shall install orange barrier fencing around the riparian vegetation to protect it from incidental damage. To minimize the potential for mortality or nest abandonment, a qualified biologist shall establish a 500-foot no-disturbance buffer around all active nesting sites during the birds' breeding season. This buffer, identified as a work exclusion zone, shall be delineated and marked as explained under the requirements of Mitigation Measure 2 described above.

The buffer shall remain in place until the young have successfully fledged or the nest has failed, as determined by a qualified biologist. A qualified biologist shall monitor the effectiveness of the buffer, and the buffer shall be readjusted if the nesting birds appear agitated from construction and other operations. If monitoring shows no impacts, the buffer distance may be reduced if approved by DFG and USFWS.

A qualified biologist shall monitor construction sites for bird nesting activity during the breeding season. Unless it is known that the nest site will be physically disturbed, the birds should be allowed to nest if they choose, under the assumption that they will be able to tolerate the construction noise and activity.

Impact 14: Impacts due to disturbance of nesting raptors

Project implementation could result in adverse impacts to nesting raptors. This impact is considered significant.

Implementation of Mitigation Measures 1-2, 5-6, 8, 14-17, and 26 will reduce this impact to a less than significant level. Mitigation Measures 17 and 26 are within the responsibility and jurisdiction of DFG and other agencies and have been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 26: Avoid and minimize disturbance of active osprey, Cooper's hawk, peregrine falcon, golden eagle, and bald eagle nests

Reclamation shall implement the following measures to avoid and minimize project effects on nesting raptors:

Bald Eagle—Perform preconstruction surveys, limit construction activities near occupied nests to the nonbreeding season, and establish buffers for active bald eagle nests consistent with conservation measures identified in DFG's Action-Specific Implementation Plan (ASIP), the ASIP Addendum, and USFWS's biological opinion.

A qualified biologist designated by Reclamation in consultation with USFWS shall conduct a series of three surveys at the project sites during the breeding season before construction activities begin each construction year to locate active bald eagle nests. The three sets of surveys shall take place during late February–early March, late April–May, and early June–July. Performing additional surveys in the year before construction begins is required if construction is scheduled to begin at a time of year before the series of three surveys has been completed. Performing surveys the year before construction begins may help determine potential nesting sites within 0.5 mile of a construction site or access road for the year when construction activities start.

If active bald eagle nests are discovered in the project area, a qualified biologist shall establish a 0.5-mile radius, direct-line-of-sight buffer for active nests. The buffers, identified as work exclusion zones, shall be delineated and marked as explained under the environmental commitments described above. These buffers shall remain in place until the young have successfully fledged or the nest has failed as determined by a qualified biologist.

If an active bald eagle nest within that area is discovered in the June–July survey after construction has begun, construction must stop. If a nest is occupied, Reclamation shall limit construction activities near the nest to the nonbreeding season (August 1 to February 1). In addition, Reclamation shall maintain a 0.5-mile, direct-line-of-sight helicopter-exclusion zone around any active nests. A qualified biologist shall monitor the effectiveness of the buffer, and the buffer shall be adjusted if the nesting birds appear agitated from construction and other operations. If monitoring shows no impacts, the buffer distance may be reduced if approved by DFG and USFWS.

If disturbance of a nest with eggs or young appears unavoidable, or nesting activity such as incubation or feeding of young may be affected, project contacts at USFWS and DFG shall be consulted and approval granted before disturbance begins. If potential nesting habitat (i.e., traditional nest site and structure) must be affected, project contacts at USFWS and DFG shall be consulted and approval granted before disturbance begins. If a project site is farther than the 0.5-mile buffer zone, disturbance may be assumed insignificant, but project contacts at USFWS and DFG shall be consulted and approval granted for known occurrences of bald eagle in the study area.

Non-Listed Special Status Raptors—Perform preconstruction surveys, limit construction activities near occupied nests to the nonbreeding season, and establish buffers for active Cooper's hawk, osprey, peregrine falcon, and golden eagle nests.

A qualified biologist designated by Reclamation in consultation with USFWS shall survey the project sites during the breeding seasons for each nonlisted special-status raptor species before construction activities begin each construction year to locate active nests.

If active raptor nests are discovered in the project area, a qualified biologist shall establish a 500-foot radius, direct-line-of-sight buffer for active raptor nests. The buffers shall be work-exclusion zones delineated and marked as described under the environmental commitments described above). These buffers shall remain in place until the young have successfully fledged or the nest has failed as determined by a qualified biologist.

If a nest is occupied, Reclamation shall limit construction activities near the nest to the nonbreeding season. In addition, Reclamation shall maintain a 0.5-mile, direct-line-of-sight helicopter-exclusion zone around any active nests. A qualified biologist shall monitor the effectiveness of the buffer, and the buffer shall be adjusted if the nesting birds appear agitated from construction and other operations. If monitoring shows no impacts, the buffer distance may be reduced if approved by DFG and USFWS.

If construction at or near an old nonlisted special status raptor nest must occur between March 1 and August 31, it should be assumed that the site contains suitable breeding habitat, and construction should begin by the approximate start of the breeding season. If a nonlisted special status raptor pair appears at or near a construction site and attempts to nest, a work-exclusion zone buffer shall be established around the nest and typical levels of activity and noise disturbance that would occur at the site during the breeding season shall be sustained such that the pair will accept or reject that site based upon its assessment of disturbance. Unless it is known that the nest site will be physically disturbed, the birds should be allowed to nest if they choose under the assumption that they will be able to tolerate the construction noise and activity. If a breeding pair commences to nest, construction noise and activity should continue on a routine basis through the end of the breeding season or until construction is completed. If disturbance of a nest with eggs or young appears unavoidable, or nesting activity such as incubation or feeding of young may be affected, project contacts at USFWS and DFG shall be consulted and approval granted before disturbance begins. If potential nesting habitat (i.e., traditional nest site and structure) must be affected during the breeding season, project contacts at USFWS and DFG shall be consulted and approval granted before disturbance begins. If a project site is farther than the 0.5-mile buffer zone, disturbance may be assumed insignificant, but project contacts at USFWS and DFG shall be consulted for known occurrences of nonlisted special-status raptors in the study area.

Reclamation shall prepare an annual report regarding any actions taken as a result of this mitigation measure during the construction of the project and shall provide the report to the State Water Board, USFWS and DFG by January 30 each year for actions taken in the previous calendar year.

Impact 15: Impacts due to noise and dust to nesting habitats

Project implementation could result in adverse noise and dust impacts to California black rail nesting habitat in emergent marshes. This impact is considered significant.

Implementation of Mitigation Measures 1-2, 5-6, 8, 15-16, and 27 will reduce this impact to a less than significant level. Mitigation Measure 27 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 27: Avoid and minimize disturbance of nesting California black rails

Before beginning construction, a qualified biologist designated by Reclamation in consultation with DFG shall conduct a tape-playback survey according to DFG-recommended protocol to determine presence of California black rails in the emergent wetland habitat near MLTF's Jeffcoat and the Willow Springs trout farm facilities. If California black rails are discovered in the project area, construction activities shall be restricted seasonally to avoid disturbance during the rails' breeding and nesting season from March 1 to September 15. If approved by DFG, it may be possible to establish construction exclusion zones to protect the black rail from noise, dust, and other construction related disturbance to accommodate construction during the black rail breeding season.

If three protocol-level preconstruction surveys conducted once per month from June through August do not detect black rails during this survey season, the seasonal restrictions shall be lifted with written approval from DFG for the remainder of the breeding season during the year when the surveys took place.

Impact 16: Impacts due to disturbance of bats in canal tunnels and on rocky cliffs and outcrops along canyon walls

Project implementation could result in adverse impacts to special-status bats. This impact is considered significant.

Implementation of Mitigation Measures 1-2, 5, 8, and 28 will reduce this impact to a less than significant level. Mitigation Measure 28 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 28: Avoid and minimize disturbance of bat maternity colonies and roosting bats

Reclamation shall conduct bat surveys to determine the presence of bats in tunnels during the spring for maternity colonies, summer for roosting sites, fall for migrant stopover sites, and winter for hibernating sites. At sites that support maternity colonies

or large concentrations of roosting bats, Reclamation shall restrict construction activities where practical to non-use periods or outside the breeding and hibernation periods.

If impacts are unavoidable during any season, Reclamation shall implement selected minimizing actions, including temporary closure and soundproofing of tunnel entrances during the day, to reduce disturbance of roosting bats. Survey and construction scheduling, buffer zones, and other mitigation measures to protect bats that use project elements post-construction shall be developed in consultation with bat specialists, USFWS, and DFG. DFG and USFWS shall be provided a report prepared for or by Reclamation on the results of the bat surveys and any actions taken by Reclamation to avoid or minimize disturbance to bat maternity or roosting colonies during construction and operation of the project.

WATER QUALITY

Impact 17: Impacts due to increased erosion and subsequent discharge of settleable material into Battle Creek from construction activities

Project implementation could result in adverse impacts from increased erosion and subsequent discharge of settleable material into Battle Creek from construction activities. This impact is considered significant.

Implementation of Mitigation Measures 1, 4-6, 8, 10-11, and 19 will reduce this impact to a less than significant level.

Impact 18: Impacts due to spills of hazardous materials

Project implementation could result in adverse impacts from spills of hazardous materials. This impact is considered significant.

Implementation of Mitigation Measures 1-2, 5-7, 10, and 29 will reduce this impact to a less than significant level.

Mitigation Measure 29: Implement measures designed to avoid or minimize hazardous spills

To avoid or minimize potential impacts related to potentially hazardous spills or the finding of previously contaminated soils, Reclamation shall implement the following measures:

- Develop a Spill Prevention Control and Countermeasures Plan (as required by Mitigation Measures 6 and 9) in consultation with the Regional Water Board, and approved by the Deputy Director for Water Rights before beginning construction and or storing hazardous materials on the project site; and
- Train all construction workers to identify indicators of contaminated soils such as soil discoloration, odors, differences in soil properties, and buried debris. This

information shall be included in the Work Environmental Education Program (as required by Mitigation Measure 1).

The measures to avoid or minimize hazardous spills shall include, but may not be limited to, the following conditions:

- Soils contaminated with fuels or chemicals shall be disposed of in a suitable location to prevent discharge to surface waters and in accordance with the rules and regulations of the U.S. Department of Transportation, the U.S. Environmental Protection Agency, and the California Environmental Protection Agency;
- Suspected contaminated soils shall be tested at an approved certified laboratory. Reclamation shall notify the Deputy Director for Water Rights as soon as practicable of any soil tests that are positive for toxic or hazardous materials. Reclamation or its contractor shall inform the Deputy Director for Water Rights as to what measures are to be taken consistent with the SPCP and shall immediately implement the prescribed measures;
- Temporary cofferdams shall be used to separate construction areas from flowing waters;
- On-site fuels and toxic materials shall be placed or contained in an area protected from direct runoff;
- Immediately notify the Deputy Director for Water Rights, the Executive Officer of the Regional Water Board, and the Coleman National Fish Hatchery Manager if hazardous materials are released into Battle Creek or runoff waters that have the potential to enter Battle Creek;
- Cement and concrete delivery and transfer equipment shall be washed in contained areas protected from direct runoff until the material sets; and
- Implement provisions to protect worker and public safety as outlined in Mitigation Measures 35 and 36.

Impact 19: Impacts due to the reduction in beneficial uses of waters

Project implementation could result in adverse impacts from reduction in beneficial uses of California waters used at MLTF and Darrah Springs State Fish Hatchery. This impact is considered significant.

Implementation of Mitigation Measure 13 will reduce this impact to a less than significant level.

Impact 20: Impacts due to the reduction in beneficial uses of waters from the distribution of infected fish

Project implementation could result in adverse impacts from reduction in beneficial uses of California waters from the distribution of infected MLTF and Darrah Springs State Fish Hatchery fish. This impact is considered significant.

Implementation of Mitigation Measure 13 will reduce this impact to a less than significant level.

GROUNDWATER

Impact 21: Impacts due to contamination of the groundwater system

Project implementation could result in significant adverse impacts from spills of hazardous materials, which could contaminate the shallow groundwater system. This impact is considered significant.

Implementation of Mitigation Measures 1-2, 5- 7, and 29 will reduce this impact to a less than significant level.

GEOLOGY AND SOILS

Impact 22: Impacts due to water and wind erosion from construction activities

Project implementation could result in significant adverse impacts from accelerated water and wind erosion. This impact is considered significant.

Implementation of Mitigation Measures 1-2, 4, 6, 8, 16, and 19 will reduce this impact to a less than significant level.

AESTHETICS AND VISUAL RESOURCES

Impact 23: Impacts due to construction activities on the scenic views of the Oasis Springs Lodge

Project implementation could result in significant adverse impacts from construction of tailrace connectors, new fish screens and fish ladders, and associated facilities reducing the scenic quality at the Oasis Springs Lodge. This impact is considered significant.

Implementation of Mitigation Measure 30 will reduce this impact.

Mitigation Measure 30: Develop and implement a Revegetation Plan to improve the aesthetic quality of the new access road proposed at Inskip Diversion Dam

Upon completing installation of the proposed access road, Reclamation shall revegetate the area along the road to improve its aesthetic quality to the patrons of

Oasis Springs Lodge. Reclamation shall prepare, develop and implement a Revegetation Plan and receive approval from the Deputy Director for Water Rights before beginning any land disturbing activities. The Revegetation Plan shall include, but is not limited to, the following actions:

- Broadcast native seed with native straw mulch, at sufficient concentration to ensure even coverage and germination, to revegetate the area above the road's cutslope. The native seed mix shall consist of a mixture of grasses, forbs, and wild flowers native to the region and appropriate for site conditions;
- Apply rock-aging compound to the rock cutslope of the hill before native seed application. Because soil conditions are poor and little vegetation would adhesively grow on the cutslope, the rock-aging compound will improve the germination rate of the broadcasted seeds;
- Plant trees along the downhill side of the proposed access road at random intervals where soil conditions and terrain are appropriate to simulate natural distributions to eventually screen views of this cutslope from the Oasis Springs Lodge. Trees shall consist of a mixture of native oak species and grey pine in keeping with existing vegetation on the slope. Trees shall be planted in augured holes that are approximately 36 inches deep and 12 inches in diameter. Plastic plant-protection tubes shall be installed around all oak and pine seedlings. Watering basins for all seedlings shall be approximately 36 inches in diameter and 4 inches high; and
- Monitor all tree-planting sites. A qualified biologist designated by Reclamation shall visit all tree-planting sites biannually for the first 5 years after road installation to determine seedling survival rates. Planting sites shall be recorded as being dead if there is no viable aboveground growth visible. For example, if all the leaves on a tree are brown, but an examination of the stems and branches shows viable stem vigor, the plant shall be considered to be alive with a poor vigor rating. Where a tree is determined not to be alive, it shall be replaced.

In addition to implementing a Revegetation Plan, Reclamation shall apply an aging compound to the rock face along the proposed access road to break up the appearance of the cut in the hillside and improve its aesthetic quality to the patrons of Oasis Springs Lodge. The portion of road alignment directly visible from the lodge area will be constructed entirely in cut to avoid creating permanent fill sections. Road drainage elements will be incorporated that ensure that surface runoff is directed to existing drainage channels. No new drainage channels will be created on the hillside.

Services of a landscape architect shall be obtained to identify means of reducing visual impacts, including the use of plantings and other re-vegetation methods, and application of chemicals to soften the appearance of fresh rock cut surfaces.
To ensure safety of lodge patrons during and after construction of the access road the following criteria will be applied as much as possible:

- Implementing safe blasting and excavation practices, including:
- Adjusting/minimizing amounts of explosives used to accomplish the road excavation;
- Establishing as regular a schedule as possible, for blasting activities and notifying lodge owners;
- Using blasting mats to prevent flyrock;
- Monitoring vibrations and sound levels;
- Performing pre- and post surveys of structures that might be affected;
- Installing safety fencing systems downslope of the access road prior to excavation to catch rock that might become dislodged by the work activities and pose a risk to lodge patrons;
- Carefully and regularly inspecting the edge of the road cut and areas downslope, to remove rocks that may become dislodged by the work activities and pose a risk to lodge patrons; and
- Coordinating with and obtaining a temporary easement from the landowner to establish a "safe zone" on the south side of the creek below the access road construction.

Even with mitigation measure 30, there will remain significant impacts to the viewshed of the Oasis Springs Lodge because economic, legal, technological, and other considerations make additional mitigation measures or alternatives infeasible.

However, the State Water Board finds that specific overriding economic, legal, social, technological, and other benefits of the project outweigh the significant effects on the environment as described in the Statement of Overriding Concern found at the end of this document.

NOISE

Impact 24: Impacts due to the exposure of noise-sensitive uses to noise and vibrations from blasting

Project implementation could result in adverse impacts from exposure of noise-sensitive uses to temporary noise and vibrations from blasting during Project construction. This impact is considered significant.

Implementation of Mitigation Measure 31 will reduce this impact to a less than significant level.

Mitigation Measure 31: Implement a Blast Noise Mitigation and Notification Plan to minimize exposure of noise-sensitive land uses to noise and vibration impacts from blasting

To minimize noise sensitive resources to the exposure of noise and vibration from blasting, Reclamation shall implement a Blast Noise Mitigation and Notification Plan that shall include, but is not limited to, the following measures:

- Blasting notification identifying the date and time of blasting shall be provided to nearby residents, local law enforcement, newspapers, and any other noise sensitive location within 1,000 feet of blasting;
- Pre-blast alarms shall be sounded. Immediately before blasting, the construction contractor shall be required to sound a signal announcing the blast. Construction contractors shall follow a construction safety plan that shall provide for these measures;
- Best available practices shall be employed to limit airblast from blasting to 135 dB and vibration to U.S. Department of the Interior, Bureau of Mines (USBM) limits at the nearest noise-sensitive land uses; and
- Noise and vibration monitoring shall be performed at nearby residences and other noise sensitive locations to ensure that airblast from blasting is limited to 135 dB and that vibration is limited to USBM criteria.

Impact 25: Impacts due to exposure of noise-sensitive land uses to noise from construction activities

Project implementation could result in adverse impacts from the temporary exposure of noise-sensitive land use to noise from on-site construction activities. This impact is considered significant.
Implementation of Mitigation Measure 32 will reduce this impact to a less than significant level.

Mitigation Measure 32: Implement noise-reducing construction practices to minimize exposures of noise-sensitive land uses to noise impacts from on-site construction activities

Reclamation shall implement noise-reducing construction practices such that construction noise experienced by Oasis Springs Lodge and the residence adjacent to the proposed pipeline alignment for Eagle Canyon Canal does not exceed significance thresholds. These thresholds require that noise not exceed 70 dBA (L_{10}) at the nearest noise-sensitive land use during daytime hours and 50 dBA (L_{10}) during nighttime hours, or the ambient noise level by more than 5 dB. These practices include, but are not limited to, the following.

- Residents and other noise sensitive locations in the areas affected by noise generated during construction activities shall be notified of the approximate dates of construction and the potential resulting increases in noise at least 2 weeks before construction begins;

- Whenever practicable, noise-generating construction equipment shall be turned off or left running at the lowest setting possible when not in use;
- Construction equipment shall be properly outfitted and maintained to reduce noise output;
- Whenever practicable, noise-generating construction equipment shall be shielded from nearby noise sensitive locations by acoustical enclosures, berms, or temporary construction noise barriers;
- The time of day when construction occurs shall be modified to accommodate the patrons of Oasis Springs Lodge. No construction activities shall occur at the Inskip Diversion Dam/South Powerhouse site from 5 p.m. on Friday until 7 a.m. on Monday between the last weekend in April and November 15. Additionally, no construction activities shall occur on any federal or state-recognized holidays, from 5 p.m. the evening before the holiday until 7 a.m. the morning following the holiday; and
- The frequency and duration of construction activities shall be altered to reduce the level of exposure experienced by sensitive noise receptors in the vicinity of project construction.

Impact 26: Impacts due to exposure of noise-sensitive land uses to construction-related truck noise

Project implementation could result in adverse impacts from the temporary exposure of noise-sensitive land uses along site access roads to construction-related truck noise. This impact is considered significant.
Implementation of Mitigation Measure 33 will reduce this impact to a less than significant level.

Mitigation Measure 33: Construct an alternative haul route and limit the hours of trucking operations to minimize exposure of noise-sensitive land uses to construction-related truck noise

Reclamation shall construct an alternative haul route that is at least 750 feet from the nearest occupied residences and shall require the construction contractor to limit trucking operations to the hours of 7:00 a.m. to 9:00 p.m.

Even with implementation of Mitigation Measures 31, 32, and 33, there will remain unavoidable significant noise impacts during construction near the Oasis Springs Lodge because economic, legal, technological, and other considerations make additional mitigation measures or alternatives infeasible. However, the State Water Board finds that specific overriding economic, legal, social, technological, and other benefits of the project outweigh the significant effects on the environment as described in the Statement of Overriding Concern found at the end of this document.

AIR QUALITY

Impact 27: Impacts due to construction-related emissions

Project implementation could result in adverse impacts from construction-related emissions in excess of allowable thresholds. This impact is considered significant.

Implementation of Mitigation Measure 34 will reduce this impact to a less than significant level. Mitigation Measure 34 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 34: Implement BMPs to minimize construction-related emissions and obtain all applicable permits required by local air quality districts

Reclamation shall implement the following mitigation measures to minimize air quality impacts.

- To control the generation of construction-related PM10 emissions, Reclamation shall comply with BMPs summarized below.
    1. All disturbed areas, including storage piles that are not being actively used for construction purposes shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, tarp or other suitable cover, or vegetative ground cover.
    2. All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
    3. All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions by applying water or by presoaking.
    4. When materials are transported off site, all material shall be covered or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained.
    5. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions using sufficient water or chemical stabilizer/suppressant.
    6. All trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
- The BMPs listed above shall be made a component of the project description and incorporated into the working project and contract specifications.
- Reclamation shall obtain all applicable permits required by the Tehama County Air Pollution Control District (TCAPCD). To ensure that the operation of all

motors associated with construction of the Project does not result in significant air quality impacts, Reclamation's construction contractor shall obtain all applicable permits required by SCAQMD and TCAPCD.

Guidance from the U.S. Environmental Protection Agency indicates that the conformity rule applies only to nonattainment and maintenance areas (U.S. Environmental Protection Agency 1994). Because the proposed project area is in attainment for the criteria pollutants, the proposed project is not subject to a federal conformity analysis. Consequently, a federal conformity analysis was not completed. Further, permits may require additional measures to further reduce emissions.

PUBLIC HEALTH AND SAFETY

Impact 28: Impacts due to construction worker exposure to hazardous or toxic materials

Project implementation could result in adverse impacts on construction workers exposed to hazardous or toxic materials disturbed during construction, modification, or removal activities at the Project sites. This impact is considered significant.

Implementation of Mitigation Measures 1, 7, 9, 29 and 35 will reduce this impact to a less than significant level. Mitigation Measure 35 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 35: Implement measures to minimize exposure of construction workers to hazardous or toxic materials disturbed during construction activities

Reclamation shall implement the following measures to reduce construction workers' exposure to hazardous or toxic materials.

- Incorporate worker protections specified below into the SPCP required under Mitigation Measures 7, 9 and 29;
- Comply with all applicable regulations, including the use of appropriate transportation, storage, use, and disposal procedures;
- The SPCP shall ensure that all personnel are aware of the proper handling techniques and appropriate responses and actions to be taken if hazardous materials are accidentally released. It shall include specific handling techniques for those hazardous materials with the greatest potential to occur in the area (including PCBs, asbestos, lead-based paint, and pentachlorophenol);
- Implement measures to reduce the amounts of hazardous materials in use at the Project sites; and

- Evaluate the potential hazards at each dam site as part of the preconstruction design work. This evaluation shall be followed by a more detailed evaluation to confirm the presence and extent of any existing hazardous materials and to develop a plan (e.g., a Dam Decommissioning Plan) that recommends appropriate procedures to remove the materials and thus minimize the risk to public health.

Impact 29: Impacts due to exposure of the public to hazardous or toxic materials

Project implementation could result in adverse impacts from public exposure to hazardous or toxic materials associated with or disturbed during construction, modification, or removal activities at the Restoration Project sites. This impact is considered significant.

Implementation of Mitigation Measures 7, 9, 29 and 36 will reduce this impact to a less than significant level. Mitigation Measure 36 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 36: Implement measures to minimize exposure of the public to hazardous or toxic materials associated with construction activities

Reclamation shall implement the following measures to reduce exposure of the public to hazardous or toxic materials:

- Incorporate worker protections specified below into the SPCP required under Mitigation Measures 7, 9 and 29;
- Clearly mark all construction areas around each dam site as hazardous and off-limits to the public;
- Backfill or cover any excavated areas and other particular areas of hazard at the end of each workday;
- Fence off areas around the Project sites and gate and lock all access roads to deter public access; and
- Notify nearby sensitive receptors and residents (including the management of the Oasis Springs Lodge) of the schedule of activities expected to occur at the Project site.

Impact 30: Impacts due to increased vehicle traffic along private roads

Project implementation could result in adverse impacts from increased vehicle traffic along private access roads during construction activities which could endanger residents and domestic animals. This impact is considered significant.

Implementation of Mitigation Measures 37 will reduce this impact to a less than significant level. Mitigation Measure 37 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 37: Implement measures to reduce traffic hazards to people and domestic animals that live along Restoration Project access roads

Reclamation shall implement the following measures to reduce traffic hazards to people and domestic animals that live along Project access roads.

- During construction, traffic on private roads within 500 feet of residences and near the Oasis Springs Lodge shall be limited to a speed of 5 miles per hour. Notice of the upcoming speed zone shall be visibly posted in advance of the zone. The speed limit shall be posted visibly at the beginning of the restricted speed zone. Reclamation shall specify this limit in contract specifications with construction contractors;
- During construction, truck traffic on private roads shall be limited to daylight hours only. No trucks shall operate on private roads within 1 hour of sunset. Reclamation shall specify construction time constraints in contract specifications with construction contractors; and
- Reclamation shall establish a complaint line where residents may report allegations of excessive speed. When a complaint is made, Reclamation shall inform the contractor and advise them of the contract provisions limiting speeds along private roads.
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Impact 31: Impacts due to incidental development of mosquito breeding grounds

Project implementation could result in direct or indirect, potentially significant adverse impacts from dewatering activities which could provide breeding grounds for mosquitoes. This impact is considered significant.

Implementation of Mitigation Measure 1, 8, and 38 will reduce this impact to a less than significant level. Mitigation Measure 38 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 38: Implement measures to reduce mosquito breeding grounds at Restoration Project sites

Reclamation shall implement the following measures to reduce mosquito breeding grounds during construction at the Project sites.

- Maximize the protection of public health near Project sites during the mosquito breeding months by consulting with applicable mosquito abatement districts and

control agencies and undertaking their recommended actions for mosquito population control at Project sites; and

- Inform workers during the Worker Education Program (Mitigation Measure 1) of the potential for increases in mosquito breeding populations and of the appropriate precautions to take to protect their health.

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PUBLIC SERVICES AND UTILITIES

Impact 32: Impacts due to increased demand on local protective and emergency response services

Project implementation could result in adverse impacts from increased demands on fire, police, and emergency medical services. This impact is considered significant.

Implementation of Mitigation Measure 1, 2, and 39 will reduce this impact to a less than significant level. Mitigation Measure 39 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 39: Implement measures to minimize the need for protective and emergency response services

Reclamation shall follow the following measures to minimize the need for protective and emergency response services (e.g., fire, police, and emergency medical services):

- Practicable and conventional precautions shall be taken by the contractor to ensure the safety of workers and the general public by adequately securing work sites and fencing hazardous areas and trenches during construction activities. This action shall be the responsibility of the contractor and shall be made a part of the standards and specifications included in their contract;
- Physical barriers and sign postings (including "No Trespassing") consistent with standard construction safety management practices shall be used by the contractor to discourage and limit access to construction areas. This action shall be the responsibility of the contractor and shall be made a part of the standards and specifications included in their contract;
- The contractor shall provide notice to county law enforcement and fire protection agencies during proposed construction activities. This requirement shall be included in the standards and specifications included in their contract;
- During construction activities, the contractor shall adhere to standard precautions and approaches required by the California Department of Forestry and Fire Protection (CDFFP) and Shasta and Tehama County Fire Departments when dealing with very high fire hazard severity zones;
- Reclamation shall prepare a Fire Prevention and Control Plan in consultation with and for approval by the CDFFP and Shasta and Tehama County Fire

Departments, as outlined in the *Industrial Operations Fire Prevention Field Guide* published by the CDFFP and State Fire Marshal, and file the approved plan with the appropriate fire protection agency before beginning construction. Precautions shall include, but are not limited to, the use of Forest Service–approved spark arresters on all internal combustion engines, preplacement of fire suppression equipment, restriction of smoking and equipment refueling to cleared areas, and restriction of activities during "Red Flag" conditions. The Fire Prevention and Control Plan shall be included in the standards and specifications made part of the contract for construction work; and

- Reclamation shall inform workers in the Worker Education Program (Mitigation Measure 1) about the requirements of the Fire Prevention and Control Plan.

RECREATION

Impact 33: Impacts due to reduced recreational activities or opportunities at Oasis Springs Lodge

Project implementation could result in adverse impacts on recreational opportunities at Oasis Springs Lodge from construction activities at Inskip Diversion Dam. This impact is considered significant.

Implementation of Mitigation Measure 40 will reduce this impact.

Mitigation Measure 40: Reduce construction-related impacts on recreational activities offered by Oasis Springs Lodge

- Reclamation shall notify Oasis Springs Lodge as soon as possible and before construction activities begin, of the anticipated start date, duration, and type of construction;
- No construction activities shall occur at the Inskip Diversion Dam/South Powerhouse site from 5 p.m. on Friday until 7 a.m. on Monday between the last weekend in April and November 15. Additionally, no construction activities shall occur on any federal or state-recognized holidays, from 5 p.m. the evening before the holiday until 7 a.m. the morning following the holiday;
- At the end of each construction day, all equipment shall be stored at designated staging areas that are located outside the viewshed of Oasis Springs Lodge; and
- Reclamation shall consult with lodge operators to identify any additional impacts on recreational opportunities and determine whether any further mitigation measures are feasible and appropriate.

Even with implementation of Mitigation Measure 40, there will remain unavoidable significant impacts to recreation during construction near the Oasis Springs Lodge because economic, legal, technological, and other considerations make additional

mitigation measures or alternatives infeasible. However, the State Water Board finds that specific overriding economic, legal, social, technological, and other benefits of the project outweigh the significant effects on the environment as described in the Statement of Overriding Concern found at the end of this document.

Impact 34: Impacts due to reduced recreational resources from construction activities

Project implementation could result in adverse impacts from construction activities, which temporarily reduce recreational resources and activities. This impact is considered significant.

Implementation of Mitigation Measure 1, 5, and 41 will reduce this impact.

Mitigation Measure 41: Reduce construction-related impacts on recreational activities near the Restoration Project area

To reduce construction-related impacts on recreational activities near the Restoration Project area in Shasta and Tehama Counties, Reclamation shall implement the following measures:

- Provide nearby land and property owners notification of the anticipated start date and duration of activities and opportunity for collaboration before construction activities begin; and
- To the extent feasible, the duration of construction activities shall be minimized during those periods when recreational activities would be most affected.

Impact 35: Impacts due to impeded public access to Battle Creek from construction activities

Project implementation could result in adverse impacts to recreational opportunities from construction activities, including the use of equipment and storage areas, which may temporarily impede public access to Battle Creek for kayaking and to private property where landowners may grant public access by selling hunting and fishing rights. This impact is considered significant.

Implementation of Mitigation Measure 42 will reduce this impact to a less than significant level.

Mitigation Measure 42: Reduce construction-related impacts on access to public and private recreational areas

Reclamation shall implement the following measures:

- Notify nearby land and property owners prior to construction activities of the anticipated start date and duration of these activities;

- Post signs along access roads alerting recreationists to the presence of construction machinery and activities and advising them of the anticipated start date and duration of these activities prior to and during construction periods;
- Store heavy equipment alongside access roads and roadways to allow public passage; and
- Minimize the duration of construction activities when recreational activities would be most affected.

Even with mitigation, there will likely remain an unavoidable significant adverse short-term impact to the recreation activities provided by the Oasis Springs Lodge. A finding of overriding consideration has been made by the State Water Board for this project and is located at the end of this document.

CULTURAL RESOURCES

Impact 36: Impacts due to the removal of historical properties

Project implementation could result in adverse impacts when historic properties (Coleman Diversion Dam and Wildcat Diversion Dam) would be removed. This impact is considered significant.

Implementation of Mitigation Measure 43 will reduce this impact to a less than significant level. Mitigation Measure 43 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 43: Implement measures identified in the memorandum of agreement (MOA) between the State Historic Preservation Officer (SHPO) and Reclamation for historic properties that would be removed as a result of implementing the Restoration Project

To comply with Section 106 of the National Historic Preservation Act, Reclamation has consulted with the SHPO and the Advisory Council on Historic Preservation regarding the potential effects of the Restoration Project on significant cultural resources. A Memorandum of Agreement (MOA) between Reclamation and SHPO was prepared that outlines measures to mitigate the adverse effects to historic properties (see Appendix T in Volume II of the Final EIS/EIR).

Mitigation measures identified in the MOA include preparing Historic American Engineering Record (HAER) documentation for all eligible properties and seeking out and reproducing historic photographs and current and historic drawings for each property. A CD-ROM containing the interviews and summary report of the Battle Creek Watershed Conservancy's study (Paquin-Gilmore 2001) shall be prepared and distributed to historical societies and other interested parties.

Impact 37: Impacts due to disruption of historic properties from construction activities

Project implementation could result in adverse impacts to historic properties (Eagle Canyon and Inskip Diversion Dams) from construction of fish screens. This impact is considered significant.

Implementation of Mitigation Measure 43 will reduce this impact to a less than significant level. Mitigation Measure 43 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Impact 38: Impacts due to damage of archaeological deposits from construction vehicle traffic

Project implementation could result in adverse impacts to archaeological deposits associated with a prehistoric/historic campsite if vehicular traffic strays from the road and causes damage. This impact is considered significant.

Implementation of Mitigation Measure 44 will reduce this impact to a less than significant level. Mitigation Measure 44 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 44: Avoid and minimize potential damage to archaeological deposits as a result of vehicular traffic.

Impacts on the prehistoric/historic campsite would be reduced by avoiding the site, as specified in Reclamation's determination of effect (West 2001). The access road shall be flagged during construction and the contractor and construction crew shall be instructed to prevent any traffic or activities beyond the flagging.

Impact 39: Impacts due to disruption of potential cultural resources at the Jeffcoat aquaculture facility

Project implementation could result in adverse impacts on cultural resources at the Jeffcoat aquaculture facility. This impact is considered significant.

Implementation of Mitigation Measure 45 will reduce this impact to a less than significant level. Mitigation Measure 45 is within the responsibility and jurisdiction of DFG and other agencies and has been, or can and should be, required as a condition of those agencies' approvals.

Mitigation Measure 45: Avoid and minimize potential damage to archaeological deposits at the Jeffcoat aquaculture facility.

To comply with Section 106 of the National Historic Preservation Act, Reclamation shall complete a full assessment of the significance of cultural resources at the Jeffcoat aquaculture facility. Reclamation shall consult with the SHPO, the Advisory Council on Historic Preservation, and any other consulting parties in the Section 106 review process regarding eligibility of the significant resources. An MOA shall be developed among Reclamation, the SHPO, and any identified consulting parties if eligible cultural resources would be adversely affected by the proposed undertaking. The MOA shall describe methods for Reclamation to mitigate the adverse effects. Mitigation measures may include data recovery excavations and avoidance through project design. The Section 106 review process described here shall be completed before beginning construction of the Project.

STATEMENT OF OVERRIDING CONSIDERATIONS

The EIS/EIR was prepared to evaluate a range of alternatives that would achieve the goal of recovering habitat in Battle Creek to support the restoration of naturally produced Chinook and Steelhead. The final EIS/EIR identifies several potential significant adverse impacts that would result from adopting any particular alternative including the Proposed Project (5-Dam Alternative). The final EIS/EIR identifies avoidance and mitigation measures that could be adopted for the Proposed Project to reduce most of the potential significant adverse impacts to less than significant.

Notwithstanding the measures identified in the final EIS/EIR to avoid or lessen potential significant impacts, there will remain three unavoidable significant adverse impacts with regards to the Oasis Lodge.

1. There will remain unavoidable significant adverse visual or esthetics impacts due to construction activities (Impact 23);

2. There will remain an unavoidable significant adverse noise impact due to construction activities (Impacts 24, 25, 26); and

3. There will remain unavoidable short-term significant adverse recreational impacts (1- 6 years) due to project construction activities (Impact 33).

Based on substantial evidence in the record, the State Water Board has carefully balanced the benefits of the Project as a whole and, acting pursuant to California Code of Regulations, title 15, section 15093, finds that the remaining unavoidable and irreversible impacts of the Project are acceptable in light of the environmental, economic, legal, social, planning, technological, and other considerations set forth herein because the benefits of the Project outweigh any significant and unavoidable or irreversible environmental impacts. The State Water Board accordingly makes this Statement of Overriding Considerations in support of these findings.

Overriding Considerations

The Oasis Springs Lodge is located 200 feet from the Inskip Diverson Dam/South Powerhouse Project site. Under the previous owner, the Oasis Springs Lodge provided fishing and hunting opportunities on a 4,000 acre ranch, which included a 12,000 square-foot structure housing up to 22 visitors.

Construction of tailrace connectors, new fish screens and fish ladders, and associated facilities would reduce scenic quality at the Oasis Springs Lodge. Short-term visual impacts occur from the use and storage of construction equipment. The access road will permanently alter the viewscape. Mitigation Measure 30 provides for immediate revegetation and other measures around the new access road to the Inskip Dam that will reduce visual impacts. Mitigation Measure 32 limits the time when construction

activities may occur. Even with implementation of these measures, there will remain unavoidable significant visual impacts near the Oasis Springs Lodge.

Noise associated with construction activities at the Inskip Diversion Dam could temporarily impact the beneficial uses around the Oasis Springs Lodge. Mitigation Measures 31-33 reduce these impacts by establishing maximum noise levels for construction activities and by regulating construction activities to normal working hours. They also provide for ongoing monitoring of noise levels during construction and continues collaboration with affected parties to further reduce impacts. Even with these mitigation measures there will remain some unavoidable, short-term impacts on noise sensitive beneficial uses.

Construction activities at Inskip Diversion Dam could reduce recreational opportunities at Oasis Springs Lodge. Mitigation Measure 40 provides advance notice to the property owner before construction begins. It also provides for continued collaboration between the parties to develop additional feasible mitigation. Though the mitigation will reduce impacts to recreation at the Oasis Springs Lodge, there will remain some unavoidable, short-term impacts on recreation.

Environmental and Technical Considerations

Within the past century, anadromous salmonid fish species in the Sacramento River system have declined due to the loss and degradation of spawning habitat as a result of changes in hydrologic regimes caused by water management for flood control, irrigation, and hydropower production. There have been several legislative mandates, both federal and state, which establish objectives for protecting, restoring and enhancing naturally produced populations of salmon and steelhead in the upper Sacramento River basin through a variety of comprehensive actions. Both the federal and state plans include restoring habitat in Battle Creek via modifying flow and facilities at PG&E's Battle Creek Project. The opportunity to restore uniquely valuable habitat in Battle Creek provides the ecological equivalent of the historic habitat now blocked by Shasta Dam where the geology and hydrology is similar to Battle Creek.

The Sacramento River below Shasta Dam is not drought resistant. By restoring the most drought resistant spawning and rearing habitats in Battle Creek the Restoration Project provides one of the best options to facilitate growth and recovery of naturally produced anadromous salmonids in the Sacramento River and its tributaries. These salmonids include Central Valley spring-run Chinook salmon (state- and federally-listed as threatened), Sacramento River winter-run Chinook salmon (state- and federally-listed as endangered), and Central Valley steelhead, federally listed as threatened. The Project will modify PG&E's hydroelectric facilities and operations to enable safe passage for naturally produced salmonids and facilitate salmonid growth and recovery in the Sacramento River and its tributaries. The Project restores salmon and steelhead habitat in a manner that minimizes the loss of clean and renewable energy produced by the Battle Creek Hydroelectric Project. Mitigation is identified and will be implemented to substantially reduce the impacts from the Project to the Oasis Springs Lodge to the

extent possible. Two of the three impacts are not permanent, and there remains the opportunity to collaborate on further measures to reduce the longterm visual impact.

In addition, the current owner of Oasis Springs Lodge, Outfitters Properties, requested an alternative configuration at the Inskip Diversion Dam project site which they believed would reduce their aesthetic impacts by eliminating the necessity of an access road in the Oasis Springs Lodge viewshed and reduce potential noise impacts by reducing access on their property for construction traffic. However, based on substantial evidence in the record, a south side Inskip screen and ladder alternative is infeasible for biological, technological, and economic reasons. These factors include potential blunt trauma to juvenile fish which could occur from the changed and increased water velocities needed for a south side fish screen and greater adverse environmental impacts including, but not limited to, the increased need to excavate in an environmentally sensitive area for a south side facility because of a steep canyon and the increased need to grade and disturb soil in order to build an alternative access road configuration and large bridge.

Economic Considerations

Even with implementation of mitigation, construction of the Battle Creek project could have some significant adverse impacts on existing recreational opportunities, particularly at the Oasis Springs Lodge located near the Inskip reach. The Oasis Springs Lodge currently stocks the creek with non-resident trout. Once the South Fork of Battle Creek is considered “anadromous waters,” non-resident trout can no longer be stocked. However, this portion of Battle Creek will be considered anadromous water regardless of whether a new Inskip Diversion Dam ladder is constructed as part of the Battle Creek Project or the existing ladder is re-opened as per the current FERC license.

In the long term, implementing the Project would also result in increased flows in portions of both North Fork and South Fork Battle Creek. These increased flows could benefit recreational activities associated with using the creek for kayaking and rafting. In addition, after flows increase and new fish ladders and screens are constructed, populations of economically important resident fish species are expected to increase in the Inskip and South reaches of Battle Creek. The increased flows and improved fish passage would likely result in a substantially increased population of native resident and anadromous trout within the first 2 years, and resident populations would likely reach their full potential within 5 years. It is also expected that the size of native resident and anadromous trout would also increase in the upstream reaches of both forks as more habitat is made available.

This increased fish population could benefit recreational industries by providing more abundant and larger trout, which would result in higher catch rates. In return higher catch rates may result in the creation of more fishing clubs, guide services, and commercial fisheries. As a result, increased fish populations could contribute to an increase in the number of people fishing in the area. Information on the current number

of people fishing in the Battle Creek area is not available; therefore, the increased use of Battle Creek could not be quantified. While the number of people fishing in the area may increase, all commercial and sport fishing would continue to operate under strict fishing regulations until species listed under federal and state endangered species statutes have fully recovered and applicable fishing regulations have been modified.

Legal Considerations

Project proponents, including DFG, Reclamation and PG&E continue to attempt to work with the Outfitter Properties to reduce aesthetic and visual, noise, and recreational impacts at the Oasis Springs Lodge, as provide for under Mitigation Measure 40. Specifically, Mr. Val Vaden, of Outfitters Properties LLC, owners of the Oasis Springs Lodge was asked for his preference as to work windows and the locations of construction staging areas. In addition, he was asked to provide access to a landscape architect who could provide further refinements on aesthetic mitigation by evaluating the viewshed from the perspective of the Oasis Springs Lodge. Mr. Vaden has not provided answers to these specific questions and has refused access to the Oasis Springs Lodge property for this purpose. Therefore, by asserting an alleged legal right to bar persons from the property for the purpose of evaluating mitigation refinements, Outfitters Properties has made such further refinements technically infeasible. Additional mitigation measures may be developed and implemented in consultation with the landowners under Mitigation Measure 40 if the landowners avail themselves of the opportunity.

Social Benefits

A restored ecosystem will not only benefit species of concern, but will also help achieve societal goals. Restored habitats will provide for human uses and appreciation, such as enhanced recreation, aesthetics, scientific study, and other non-consumptive uses.

Finding

In light of the importance of taking steps to recover the listed salmonid species as well as the value to the public at large, the Proposed Project remains one of the best options to facilitate growth and recovery of natural anadromous salmonids in the Sacramento River and its tributaries. Therefore it is in the public interest to approve the five-dam alternative as described in the final EIS/EIR, adopt the mitigation measures proposed for that alternative to avoid or reduce significant adverse impacts to less than significant levels, and adopt overriding considerations for the remaining three unavoidable significant adverse impacts to the Oasis Lodge.

Location of the Record

The record for the Restoration Project is kept at the U.S. Department of Reclamation, 2800 Cottage Way in Sacramento and the State Water Resources Control Board, Division of Water Rights located at 1001 I Street, Sacramento, California.