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**GAVIN NEWSOM, Governor**  
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October 2, 2020

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Governor's Office of Planning & Research

**Oct 05 2020**

**STATE CLEARINGHOUSE**

Subject: La Grange Sluice and Tailrace Channel Improvement Project (Project)  
MITIGATED NEGATIVE DECLARATION (MND)  
State Clearinghouse No.: 2020080551

Dear Mr. Payne:

The California Department of Fish and Wildlife (CDFW) received an Notice of Intent to Adopt an MND from Turlock Irrigation District (TID), which is the Lead Agency for the Project pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.<sup>1</sup>

CDFW appreciates TID agreeing to extend the comment period and accept our comments by October 2, 2020. We thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

## **CDFW ROLE**

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically

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<sup>1</sup> CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources. CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 *et seq.*). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 *et seq.*), related authorization as provided by the Fish and Game Code will be required.

CDFW has jurisdiction over fully protected species of birds, mammals, amphibians and reptiles, and fish, pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species is prohibited and CDFW cannot authorize their incidental take.

## **PROJECT DESCRIPTION SUMMARY**

**Proponent:** TID

**Objective:** The TID La Grange diversion tunnel is a 600-foot-long partially concrete lined tunnel located on the Tuolumne River that conveys water from the La Grange Headpond through the left abutment of the La Grange Diversion Dam to the La Grange Forebay and headworks of TID's Upper Main Canal. Water that is not conveyed to the Upper Main Canal flows into the Tuolumne River through either a drain gate, two sluice gates, or two penstocks to the La Grange Powerhouse.

During dewatering of the diversion tunnel, which is required periodically for tunnel and forebay safety inspections, water may be passed into the Tuolumne River through using the TID sluice and tailrace channels, which may become isolated from the flow in the main river channel. Fish could potentially be stranded in both the sluice and tailrace channels during tunnel dewatering. As a result, the Project is intended to address the development of isolated pools in the sluice channel and prevent tailrace dewatering. The Project's objective is to minimize the chance of fish stranding in the sluice and tailrace channels during the periodic scheduled dewatering and inspection of the diversion tunnel and forebay

**Proposed Project:** The two primary components of the Project are (1) surfacing the sluice channel and (2) installing a diversion structure that would connect the upstream portion of the tailrace channel to the main river channel. In combination, these

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components are intended to meet the project goal of minimizing the potential for fish isolation and stranding and to provide TID facilities with durability and lower maintenance requirements during operations. Due to the potential for fish stranding during Project implementation, TID will develop and implement a Fish Rescue and Relocation Plan.

*Sluice Channel Surfacing:* TID is proposing to place a concrete-based finishing material (i.e., shotcrete or equivalent) over an approximately 300-foot-long portion of the sluice channel. The shotcrete would be applied to the existing sluice channel to create a smooth, continuous surface lacking pools or cover. The purpose of the surfacing would be to smooth out the contour and slope of the sluice channel and eliminate any small, localized pool areas, thereby eliminating the potential for the formation of small, localized isolated pools of water that could trap fish under low or no-flow conditions.

*Tailrace Channel Diversion Structure:* The existing tailrace channel is isolated from the Tuolumne River's main channel by a gravel bar, which creates a topographic highpoint of separation between the two channels until river flows exceed about 2,500 cubic feet per second (cfs). The tailrace channel enters the Tuolumne River approximately 500 feet downstream from the powerhouse. Until river flows exceed 2,500 cfs, the tailrace channel flows are currently limited to water flowing down the sluice channel or out of the powerhouse. TID is proposing to place a gated diversion structure through the topographic highpoint between the river channel and the tailrace to convey water from the main river channel to the upper tailrace channel during tunnel dewatering and maintenance events. In addition to the pipe, the diversion structure would include an inlet structure (river end) and discharge structure (tailrace end). The purpose of this connection would be to maintain adequate flows in the tailrace channel during times of tunnel dewatering and maintenance to sustain full connectivity with the Tuolumne River downstream, thereby minimizing the chance for fish stranding in the tailrace.

*Fish Rescue and Salvage:* Due to the potential for fish stranding during dewatering and construction, TID proposes that a qualified fisheries biologist would design and conduct a fish rescue and salvage effort for fish in the Project areas to be isolated for construction. This would involve the capture and relocation of fish and aquatic-dependent species to suitable habitat in the Tuolumne River. In addition, a fisheries biologist would provide observation during initial dewatering activities in the temporary isolation areas to minimize the potential for stranding as water recedes.

**Location:** The proposed Project is located approximately one mile from the City of La Grange at the La Grange Dam Powerhouse, La Grange Dam Road and Highway 132 (Yosemite Boulevard), Stanislaus County; Assessor's Parcel Number 008-043-008; Sections 16 and 17, Township 3 South, Range 14 East.

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**Timeframe:** The construction of the Project is proposed to be limited to a single dry season between May and September 30, 2021. It is estimated that the implementation of the Project, including fish rescue, would take nine weeks.

## COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist TID in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

Based on a review of aerial imagery, the California Natural Diversity Database (CNDDDB) records, and the Biological Resources section of the MND several special- status species and habitat types could potentially be impacted by Project activities. Project-related construction activities within the Project alignment and surrounding area could impact the following special status plant and wildlife species and habitats known to occur: the State threatened and fully protected bald eagle (*Haliaeetus leucocephalus*), State fully protected and State species of special concern golden eagle (*Aquila chrysaetos*) and peregrine falcon (*Falco peregrinus*), the State threatened Swainson's hawk (*Buteo swainsoni*), the State and federally endangered least Bell's vireo (*Vireo bellii pusillus*), the State and federally threatened California tiger salamander (*Ambystoma californiense*), the federally threatened and State species of special concern California red-legged frog (*Rana draytonii*), the State endangered foothill yellow-legged frog (*Rana boylei*), the Federally threatened steelhead (Central Valley Distinct Population Segment) (*Oncorhynchus mykiss irideus*), and the following State species of special concern: Townsend's big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), Chinook salmon (Central Valley fall/late fall-run Evolutionarily Significant Unit) (*Oncorhynchus tshawytscha*), hardhead (*Mylopharodon conocephalus*), San Joaquin roach (*Lavinia symmetricus*), Sacramento hitch (*Lavinia exilicauda exilicauda*), Pacific lamprey (*Entosphenus tridentatus*), and riffle sculpin (*Collus gulosus*).

Vegetation communities and habitats observed in the Project vicinity during reconnaissance surveys for the MND include blue oak (*Quercus douglasii*) and live oak (*Quercus wislizeni* var. *frutescens*) woodland, Oregon ash (*Fraxinus latifolia*) grove, willow thicket (*Salix* spp.), non-native annual grassland, non-native tree of heaven (*Ailanthus altissima*) thicket, ruderal disturbed areas, and barren unvegetated areas including bare ground and exposed rock. Aquatic features in and near the Project area include the Tuolumne River and associated riparian and fresh emergent wetlands, La Grange Reservoir, sluice and tailrace channel, and irrigation canals.

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Please note that the CNDDDB is populated by and records voluntary submissions of species detections. As a result, species may be present in locations not depicted in the CNDDDB but where there is suitable habitat and features capable of supporting species. Therefore, a lack of an occurrence record in the CNDDDB is not tantamount to a negative species finding. In order to adequately assess any potential Project related impacts to biological resources, surveys conducted by a qualified wildlife biologist/botanist during the appropriate survey period(s) and using the appropriate protocol survey methodology are warranted in order to determine whether or not any special status species are present at or near the Project area.

CDFW recommends that the following modifications and/or edits be incorporated into the MND.

### **I. Mitigation Measure or Alternative and Related Impact Shortcoming**

**Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or the United States Fish and Wildlife Service (USFWS)?**

**COMMENT 1: Nesting Bald Eagle (BAEA), Golden Eagle (GOEA), and Peregrine falcon (PEFA).**

**Issue:** Nesting BAEA, GOEA, PEFA, and other raptors have the potential to occur in the Project area and its vicinity, including the Tuolumne River and surrounding area. Two CNDDDB records for BAEA occur within one mile of the proposed Project area.

MND Mitigation Measures MM-10 and MM11 will require focused surveys for presence or absence of raptor species within 500 feet of the Project site, and require that a 500-foot no-disturbance buffer be established for all raptors.

**Specific impact:** Without appropriate avoidance and minimization measures, potentially significant impacts associated with the Project's construction include loss of foraging and/or nesting habitat, nest abandonment, reduced reproductive success, and reduced health and vigor of eggs and/or young.

**Evidence impact would be significant:** Without appropriate survey methods, eagles nesting in the vicinity of a project can remain undetected resulting in avoidance and minimization measures not being effectively implemented (American Eagle Research Institute 2010). In addition, human activity near nest sites can cause reduced provisioning rates of chicks by adults (Steidl *et al.* 1993 *in* Kochert *et al.* 2002). Depending on the timing of construction, Project activities including noise,

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vibration, odors, and movement of workers or equipment could affect nests and also have the potential to result in nest abandonment, significantly impacting local nesting raptors (Hayward *et al.* 2011).

**Recommended Potentially Feasible Mitigation Measure(s)**

To evaluate potential impacts to roosting or nesting eagles and PEFA associated with Project construction, CDFW recommends conducting the following evaluation of the Project area and including the following mitigation measures as conditions of approval.

**Recommended Mitigation Measure 1: Focused Surveys for Nesting Eagles and Peregrine Falcon**

CDFW recommends that a qualified wildlife biologist conduct surveys for nesting raptors following the Protocol for Golden Eagle Occupancy, Reproduction, and Prey Population Assessment (Driscoll 2010), and the Protocol for Evaluating Bald Eagle Habitat and Populations in California (Jackman and Jenkins 2004), if Project activities take place during the typical bird breeding season (February 1 through September 15).

**Recommended Mitigation Measure 2: Avoidance of Nesting Eagles and Peregrine Falcon**

If an active nest is found, CDFW recommends that the MND require implementation of a minimum ½-mile no-disturbance buffer until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. If nesting raptors are detected and the ½-mile no-disturbance nest buffer is not feasible, consultation with CDFW is warranted to determine if the Project can avoid take. Please note that BAEA, GOEA, and PEFA are State fully protected species and no take, incidental or otherwise, of those species may be authorized by CDFW.

**Recommended Mitigation Measure 3: Tree Replacement Plan**

CDFW recommends that the removal of known raptor nest trees, even outside of the nesting season, be replaced with an appropriate native tree species planting at a ratio of 3:1 at or near the Project area or in another area that will be protected in perpetuity. CDFW recommends that the MND include a Tree Replacement Plan to address this potential impact. This mitigation would offset the temporal impacts of nesting habitat loss.

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## **COMMENT 2: Swainson's Hawk (SWHA)**

**Issue:** SWHA have been historically documented near the Project area (CDFW 2020). Review of recent aerial imagery indicates that trees capable of supporting nesting SWHA occur along the streams within the Project boundary. Landscape trees may also provide suitable nesting habitat. In addition, grassland and agricultural land in the surrounding area provide suitable foraging habitat for SWHA, increasing the likelihood of SWHA occurrence within the vicinity.

**Specific impact:** Without appropriate avoidance and minimization measures for SWHA, potential significant impacts associated with Project activities include loss of foraging and/or nesting habitat, nest abandonment, reduced reproductive success, and reduced health and vigor of eggs and/or young.

**Evidence impact would be significant:** Lack of suitable nesting habitat in the San Joaquin Valley limits the local distribution and abundance of SWHA (CDFW 2016). The trees and riparian habitat within the Project area represent some of the only remaining suitable nesting habitat in the local vicinity. Depending on the timing of construction, activities including noise, vibration, and movement of workers or equipment could affect nests and have the potential to result in nest abandonment, significantly impacting local nesting SWHA. In addition, agricultural cropping patterns can directly influence distribution and abundance of SWHA. For example, SWHA can forage in grasslands, pasture, hay crops, and low growing irrigated crops; however, other agricultural crops such as orchards and vineyards are incompatible with SWHA foraging (Estep 2009, Swolgaard *et al.* 2008).

### **Recommended Potentially Feasible Mitigation Measure(s)**

To evaluate potential impacts to SWHA associated with Project development, CDFW recommends conducting the following evaluation of Project areas and implementing the following mitigation measures.

#### **Recommended Mitigation Measure 4: Focused SWHA Surveys**

To evaluate potential Project-related impacts, CDFW recommends that a qualified wildlife biologist conduct surveys for nesting SWHA following the entire survey methodology developed by the SWHA Technical Advisory Committee (2000) prior to Project initiation. SWHA detection during protocol level surveys warrants consultation with CDFW to discuss how to implement Project activities and avoid take.

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### **Recommended Mitigation Measure 5: SWHA Avoidance**

CDFW recommends that if Project-specific activities will take place during the SWHA nesting season (March 1 through August 31), and active SWHA nests are present, a minimum ½-mile no-disturbance buffer be delineated and maintained around each nest until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival, to prevent nest abandonment and other take (as defined pursuant to Fish and G. Code § 86) of SWHA as a result of Project activities.

### **Recommended Mitigation Measure 6: SWHA Take Authorization**

If implementation of a ½-mile no-disturbance nest buffer is not feasible, consultation with CDFW is warranted to determine if the Project can avoid take. If SWHA cannot be avoided, acquisition of an Incidental Take Permit pursuant (ITP) to Fish and Game Code section 2081 subdivision (b), prior to the start of Project activities, is warranted to comply with CESA.

### **COMMENT 3: Least Bell's Vireo (LBV)**

**Issue:** LBV are documented in the vicinity of the Project site (CDFW 2020). Review of aerial imagery indicates the presence of riparian woodland vegetation, suitable to support LBV, both within the Project site and its vicinity. Therefore, the Project has the potential to impact LBV.

**Specific impact:** Without appropriate avoidance and minimization measures for LBV, potential significant impacts associated with Project development include nest abandonment, reduced reproductive success, and reduced health and vigor of eggs and/or young.

**Evidence impact is potentially significant:** LBV were abundant and widespread in the United States until the 1950s (Grinnell and Miller 1944). By the 1960s, they were considered scarce (Monson 1960), and by 1980, there were fewer than 50 pairs remaining (Edwards 1980), although this number had increased to 2,500 by 2004 (Kus and Whitfield 2005). The primary cause of decline for this species has been the loss and alteration of riparian woodland habitats (USFWS 2006). Fragmentation of their preferred habitat has also increased their exposure to brown-headed cowbird (*Molothrus ater*) parasitism (Kus and Whitfield 2005). Current threats to their preferred habitat include colonization by non-native plants and altered hydrology (diversion, channelization, etc.) (USFWS 2006).

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**Recommended Potentially Feasible Mitigation Measure(s)**

To evaluate potential impacts to LBV, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the MND, and that these measures be made conditions of approval for the Project.

**Recommended Mitigation Measure 7: LBV Habitat Assessment**

CDFW recommends that a qualified biologist conduct a habitat assessment in advance of Project implementation, to determine if the Project site or its immediate vicinity contains suitable habitat for LBV.

**Recommended Mitigation Measure 8: LBV Avoidance**

CDFW recommends that Project activities be timed to avoid the typical bird breeding season (February 1 through September 15).

**Recommended Mitigation Measure 9: LBV Surveys**

If Project activities must take place during the typical bird breeding season, and suitable LBV habitat is detected during habitat assessments, CDFW recommends assessing presence/absence of LBV by conducting surveys following the USFWS "Least Bell's Vireo Survey Guidelines" (2001) in advance of the start of Project implementation, to evaluate presence/absence of LBV nesting in proximity to Project activities, and to evaluate potential Project-related impacts and permitting needs.

**Recommended Mitigation Measure 10: LBV Take Authorization**

LBV detection warrants consultation with CDFW to discuss how to avoid take, or if avoidance is not feasible, to acquire an ITP prior to Project activities, pursuant to Fish and Game Code section 2081 subdivision (b).

**COMMENT 4: California Tiger Salamander (CTS)**

**Issue:** CTS have the potential to occur in the Project site. Aerial imagery shows that the Project site consists of the riparian habitat and upland habitat that likely serve as refugia and breeding habitat for CTS that are dispersing from and into the area.

**Specific Impacts:** Potential ground- and vegetation-disturbing activities associated with Project activities include collapse of small mammal burrows, inadvertent entrapment, loss of upland refugia, water quality impacts to breeding sites, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

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**Evidence impact would be significant:** Up to 75% of historic CTS habitat has been lost to urban and agricultural development (Searcy *et al.* 2013). Loss, degradation, and fragmentation of habitat are the primary threats to CTS in both the Central and San Joaquin valleys. Contaminants and vehicle strikes are also sources of mortality for the species (CDFW 2015, USFWS 2017a). The Project site is within the range of CTS and has suitable habitat (i.e., grasslands interspersed with burrows and vernal pools). CTS have been determined to be physiologically capable of dispersing up to approximately 1.5 miles from seasonally flooded wetlands (Searcy and Shaffer 2011) and have been documented to occur near the Project site (CDFW 2020). Given the presence of suitable habitat within the Project site, ground-disturbing activities have the potential to significantly impact local populations of CTS.

#### **Recommended Potentially Feasible Mitigation Measure(s)**

Because suitable habitat for CTS is present throughout the Project site, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the MND, and that these measures be made conditions of approval for the Project.

#### **Recommended Mitigation Measure 11: Focused CTS Protocol-level Surveys**

CDFW recommends that a qualified biologist conduct protocol-level surveys in accordance with the USFWS “Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander” (USFWS 2003) at the appropriate time of year to determine the existence and extent of CTS breeding and refugia habitat. The protocol-level surveys for CTS require more than one survey season and are dependent upon sufficient rainfall to complete. As a result, consultation with CDFW and the USFWS is recommended well in advance of beginning the surveys and prior to any planned vegetation- or ground-disturbing activities. CDFW advises that the protocol-level survey include a 100-foot buffer around the Project area in all areas of wetland and upland habitat that could support CTS. Please be advised that protocol-level survey results are viable for two years after the results are reviewed by CDFW.

#### **Recommended Mitigation Measure 12: CTS Avoidance**

If CTS protocol level surveys are not conducted, CDFW advises that a minimum 50-foot no-disturbance buffer be delineated around all small mammal burrows in suitable upland refugia habitat within the Project site and a 50-foot buffer. Further, CDFW recommends that potential or known breeding habitat within and/or adjacent to the Project site be delineated with a minimum 250-foot no-disturbance buffer. Both upland burrow and wetland breeding no-disturbance buffers are intended to minimize impacts to CTS habitat and avoid take of individuals.

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### **Recommended Mitigation Measure 13: CTS Take Authorization**

If avoidance of CTS is not feasible through burrow and breeding habitat avoidance, or if surveys indicate that CTS are present or may be present, CDFW advises consultation with CDFW to determine if avoidance of take of CTS is feasible. If take will result from Project implementation, or if the applicant assumes presence of CTS without surveys, a State ITP for CTS in accordance with Fish and Game Code section 2081 subdivision (b), would be warranted.

### **COMMENT 5: Foothill Yellow-Legged Frog (FYLF) and California Red-Legged Frog (CRLF)**

**Issue:** FYLF are primarily stream dwelling and require shallow, flowing water in streams and rivers with at least some cobble-sized substrate. CRLF primarily inhabit ponds but can also be found in other waterways including marshes, streams, and lagoons, and the species will also breed in ephemeral waters (Thomson *et al.* 2016). FYLF and CRLF have been documented to occur in the vicinity of the Project site (CDFW 2020). The Project site contains habitat that could support both species.

**Specific impact:** Without appropriate avoidance and minimization measures for FYLF and CRLF, potentially significant impacts associated with Project activities could include burrow collapse, inadvertent entrapment, reduced reproductive success, reduction in health and vigor of eggs, larvae and/or young, and direct mortality of individuals.

**Evidence impact would be significant:** FYLF and CRLF populations throughout the State have experienced ongoing and drastic declines and many have been extirpated; historically, FYLF occurred in mountain streams from the San Gabriel River in Los Angeles County to southern Oregon west of the Sierra-Cascade crest (Thomson *et al.* 2016). Habitat loss from growth of cities and suburbs, invasion of nonnative plants, impoundments, water diversions, stream maintenance for flood control, degraded water quality, and introduced predators, such as bullfrogs are the primary threats to FYLF and CRLF (Thomson *et al.* 2016, USFWS 2017b).

### **Recommended Potentially Feasible Mitigation Measure(s)**

To evaluate potential impacts to FYLF and CRLF, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the MND, and that these measures be made conditions of approval for the Project.

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#### **Recommended Mitigation Measure 14: FYLF and CRLF Surveys**

CDFW recommends that a qualified wildlife biologist conduct surveys for FYLF and CRLF in accordance with the USFWS *“Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog”* (USFWS 2005) to determine if FYLF and CRLF are within or adjacent to the Project area. While this survey is designed for CRLF, the survey may be used for FYLF with focus on stream/river habitat.

#### **Recommended Mitigation Measure 15: FYLF and CRLF Avoidance**

If any FYLF or/and CRLF are found during preconstruction surveys or at any time during construction, consultation with CDFW is warranted to determine if the Project can avoid take. CDFW recommends that initial ground-disturbing activities be timed to avoid the period when FYLF and CRLF are most likely to be moving through upland areas (November 1 and March 31). If ground-disturbing activities must take place between November 1 and March 31, CDFW recommends that a qualified biologist monitor construction activity daily for FYLF and CRLF.

#### **Recommended Mitigation Measure 16: FYLF Take Authorization**

If through surveys or monitoring it is determined that FYLF occupies or has the potential to occupy the Project site and take cannot be avoided, take authorization would be warranted prior to initiating ground-disturbing activities, through issuance of a State ITP, pursuant to Fish and Game Code section 2081 subdivision (b).

#### **COMMENT 6: Special-Status Bat Species**

**Issue:** Townsend’s big-eared bat have been documented to occur in the vicinity of the Project area (CDFW 2020). In addition, habitat features that have the potential to support pallid bat, western mastiff bat, and western red bat are present within the Project area. The MND does recognize that bat species may occur in the Project vicinity; however, the MND does not consider Project impacts to special-status bat species.

**Specific impact:** Without appropriate avoidance and minimization measures for special-status bat species, potential significant impacts resulting from ground- and vegetation-disturbing activities associated with Project construction include habitat loss, inadvertent entrapment, roost abandonment, reduced reproductive success, reduction in health and vigor of young, and direct mortality of individuals.

**Evidence impact is potentially significant:** Western mastiff bat, pallid bat, and Townsend’s big-eared bat are known to roost in buildings, caves, tunnels, cliffs,

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crevices, trees. (Lewis 1994 and Gruver 2006). Western red bat is highly associated with riparian habitat (Peirson *et al.* 2004). Project activities have the potential to affect habitat upon which special-status bat species depend for successful breeding and have the potential to impact individuals and local populations.

**Recommended Potentially Feasible Mitigation Measure(s)**

CDFW recommends that the MND include the following measures and that these be made conditions of approval for the Project.

**Recommended Mitigation Measure 17: Bat Roost Habitat Assessment**

CDFW recommends that a qualified biologist conduct a habitat assessment well in advance of Project implementation to determine if the Project area or its immediate vicinity contains suitable roosting habitat for special-status bat species.

**Recommended Mitigation Measure 18: Bat Surveys**

If suitable habitat is present, CDFW recommends assessing presence/absence of special-status bat roosts by conducting surveys during the appropriate seasonal period of bat activity. CDFW recommends methods such as through emergence surveys or bat detectors to determine whether bats are present.

**Recommended Mitigation Measure 19: Bat Roost Disturbance Minimization and Avoidance**

If bats are present, CDFW recommends that a 100-foot no-disturbance buffer be placed around the roost and that a qualified biologist who is experienced with bats monitor the for signs of disturbance to bats from Project activity. If a bat roost is identified and work is planned to occur during the breeding season, CDFW recommends that no disturbance to maternity roosts occurs and that CDFW be consulted to determine measures to prevent breeding disruption or failure..

**COMMENT 7: Western Pond Turtle (WPT)**

**Issue:** The MND concluded that suitable habitat for WPT is not present and it did not include an impact analysis for WPT. WPT are documented in the vicinity of the Project (CDFW 2020), and a review of aerial imagery shows requisite habitat features that WPT utilize for nesting, overwintering, dispersal, and basking occur in the Project area. These features include aquatic and terrestrial habitats such as rivers, lakes, reservoirs, ponded areas, irrigation canals, riparian and upland habitat. WPT are known to nest in the spring or early summer within 100 meters of a water body, although nest sites as far away as 500 meters have also been reported (Thomson *et al.* 2016).

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**Specific impact:** Without appropriate avoidance and minimization measures for WPT, potentially significant impacts associated with Project activities could include nest reduction, inadvertent entrapment, reduced reproductive success, reduction in health or vigor of eggs and/or young, and direct mortality.

**Evidence impact is potentially significant:** WPT are known to nest in the spring or early summer within 100 meters of a water body, although nest sites as far away as 500 meters have also been reported (Thomson *et al.* 2016). Noise, vegetation removal, movement of workers, construction and ground disturbance as a result of Project activities have the potential to significantly impact WPT populations.

**Recommended Potentially Feasible Mitigation Measure(s)**

To evaluate potential impacts to WPT, CDFW recommends conducting the following evaluation of the Project site, and to including the following measures in the MND.

**Recommended Mitigation Measure 20: WPT Surveys**

CDFW recommends that a qualified biologist conduct focused surveys for WPT within ten days prior to Project implementation. In addition, CDFW recommends that focused surveys for nests occur during the egg-laying season (March through August).

**Recommended Mitigation Measure 21: WPT Avoidance and Minimization**

CDFW recommends that any WPT nests that are discovered remain undisturbed with a no-disturbance buffer maintained around the nest until the eggs have hatched and neonates are no longer in the nest or Project areas. If WPT individuals are discovered at the site during surveys or Project activities, CDFW recommends that they be allowed to move out of the area on their own volition without disturbance or harm.

**Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS?**

**COMMENT 8: Wetland and Riparian Habitats**

**Issues:** The Project area includes riparian and wetland habitat, and the MND states in the riparian and wetland impact analysis (page 48, item (c)) that a formal wetland delineation has not been verified by the United States Army Corps of Engineers (Corps). The MND states that construction activities within the Project alignment has the potential to involve temporary and permanent impacts to these features.

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Mitigation Measure (MM) 12 (page 48) states that mitigation for permanent impacts will be provided at a minimum 1:1 ratio, and that mitigation can include payment or purchase of mitigation credits at an approved mitigation bank. The MND defers mitigation by stating that required mitigation for Project-related regulatory permitting may be applied to satisfy MM 12.

**Specific impact:** The Project will remove riparian habitat and associated species adjacent to the Tuolumne River and could cause the degradation of wetland and riparian features through grading, fill, and related development and construction. Project activities could result in the diversion or obstruction of stream flows, modifications to stream morphology and function, or water pollution and degradation of water quality that affects riparian habitats and the fish and wildlife that depend upon them.

**Evidence impact is potentially significant:** Watershed and habitat protection are vital to maintaining California's diverse fish, wildlife, and plant resources. The various riparian zones around the Tuolumne River support riparian woodland habitat and associated annual grassland, may potentially support several sensitive species listed as threatened or endangered under CESA and the Federal Endangered Species Act (FESA), as well as several State fully-protected and other special-status species. The loss or degradation of riparian habitat could result in direct and cumulative adverse impacts to these fish and wildlife resources.

**Recommended Potentially Feasible Mitigation Measure(s)**

To evaluate potential impacts to special-status species associated with subsequent development, CDFW recommends conducting the following evaluation of project areas and implementing the following mitigation measures.

A riparian habitat assessment or other information will be needed to identify and analyze the impacts to riparian habitat around the Tuolumne River and Project footprint and the species supported by these habitats.

**Recommended Mitigation Measure 22: Riparian Habitat Analysis**

CDFW recommends that the MND analyze the impacts to the riparian woodland and aquatic habitats around the Project area and the species supported by these habitats.

Where a project could affect the hydrologic regime of a watershed, identification of the necessary elements to maintain the downstream biological diversity and avoid impacts to threatened and endangered species would facilitate sound management decisions. CDFW recommends that TID develop and implement a site-specific study to evaluate potential Project-related impacts to riparian habitat and determine

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appropriate measures to reduce impacts a to a less than significant level. CDFW recommends that the analysis provide a current assessment of the flora and fauna within, adjacent to, and downstream of the Project with particular emphasis on identifying endangered, threatened, and sensitive species and sensitive habitats, with information provided through accepted protocols. CDFW further recommends that the analysis describe potential losses of biological resources that would occur as a result of disturbance to riparian habitat, and evaluate the impacts to resources.

### **Recommended Mitigation Measure 23: Riparian Habitat Mitigation**

CDFW recommends that as a result of the analysis of impacts to riparian and other aquatic habitats, the MND include a mitigation plan to offset potentially significant impacts to riparian and aquatic habitats, and to provide value and function for the species described above.

## **II. Editorial Comments and/or Suggestions**

**Fish Rescue and Salvage Plan:** Page 14 of the MND states that a detailed Fish Rescue and Salvage Plan would be submitted to the National Marine Fisheries Service (NMFS) for review at least 30 days prior to isolation of the temporary in-water work areas. The MND does not acknowledge that CDFW would also have regulatory authority over the implementation of a Fish Rescue and Salvage Plan and does not address submitting the plan to CDFW for review and approval. The MND does not include information on how and where fish would be relocated. CDFW recommends that the MND include a Fish Rescue and Salvage Plan or describe the specific requirements of such a plan following Project approval.

**Project Timing:** The timing of Project-related water operation could impact adult salmon by encouraging salmon to migrate upstream in the tailrace, resulting in stranding. CDFW recommends that the MND include a measure that requires water operation activities to not occur during the seasonal period of October through November to avoid and minimize impacts to adult migrating salmonids.

**Diversion Structure:** CDFW is concerned about the ability to design and install a diversion structure in the Tuolumne River floodplain that can withstand the force of heavy flows (e.g., 10,000 cfs). The MND does not discuss the level of flows that the diversion structure will be able to withstand. CDFW recommends that the MND include this information and also provide an analysis of recontouring the flood plain as an alternative to the diversion structure in case it can be demonstrated the diversion structure is not able to withstand heavy flows.

**Drainage:** The MND did not provide a description of how the redesigned sluice and tailrace channel will drain, except for noting that there would be no pools for fish to

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become stranded in. The new channel designed may also significantly affect fish; depending upon the slope, the channel could drain quickly, resulting in fish stranding and mortality. CDFW recommends that the MND include a description of how the sluice and tailrace channel design will prevent fish stranding.

**Minimum Instream Flow Requirements:** The MND (page 37) describes that there is typically a minimum, continuous, 5 cfs instream flow from the La Grange Forebay. CDFW recommends that the MND describe the conditions under which the minimum flow will cease, measures to be taken so that fish will be able to avoid stranding, and measures to be taken if fish stranding occurs.

**Water Quality:** Section 2.4 of the MND states that dewatering of the tailrace channel and side channel of the Tuolumne River would be required for construction of the diversion structure and would be accomplished using pumps and cofferdams. During this construction all flows would be routed through the Modesto Irrigation District Hillside Gates and the La Grange Dam, both flowing into the plunge pool. During normal non-flood operation the majority of flows usually come through the La Grange powerhouse and sluice channel, with only minor contributions from the Hillside Gates. Because flow would be routed differently than normal, it is not clear if water quality would change, including effects to temperature and dissolved oxygen, and associated impacts to fisheries. CDFW recommends that the MND include a water quality analysis of the effects of re-routing the entire river flow, and associated impacts to water quality in the plunge pool.

**Federally Listed Species:** CDFW recommends consulting with USFWS and NMFS regarding potential impacts to federally listed species including but not limited to CTS, LBV, and California Central Valley steelhead populations. Take under FESA is more broadly defined than CESA; take under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS in order to comply with FESA is advised well in advance of any Project activities.

**Lake and Streambed Alteration:** Project activities have the potential to substantially change the bed, bank, and channel of waterways and associated wetlands. Jurisdictional Project activities are subject to the notification requirement of Fish and Game Code section 1602, which requires an entity to notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake (including the removal of riparian vegetation); (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent as well as those that are perennial. CDFW is required to comply with CEQA in the issuance of a

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Lake or Streambed Alteration Agreement (Agreement); therefore, if the CEQA document approved for the Project does not adequately describe the Project and its impacts, a subsequent CEQA analysis may be necessary for Agreement issuance. For additional information on notification requirements, resources are available on the CDFW website: <https://wildlife.ca.gov/Conservation/LSA>. The Central Region Lake and Streambed Alteration Program may also be reached at (559) 243-4593 or [R4LSA@wildlife.ca.gov](mailto:R4LSA@wildlife.ca.gov).

**Nesting birds:** CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

CDFW encourages Project implementation to occur during the bird non-nesting season; however, if Project activities must occur during the breeding season (February through mid-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

To evaluate Project-related impacts on nesting birds, CDFW recommends that a qualified wildlife biologist conduct pre-activity surveys for active nests no more than 10 days prior to the start of each Project activity to maximize the probability that nests that could potentially be impacted by the Project are detected. CDFW also recommends that surveys cover a sufficient area around the work site to identify nests and determine their status. A sufficient area means any area potentially affected by a project. In addition to direct impacts (i.e. nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends that a qualified biologist continuously monitor nests to detect behavioral changes resulting from the project. If behavioral changes occur, CDFW recommends that the work causing that change cease and CDFW be consulted for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or

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ecological reason to do so, such as when the construction area would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist advise and support any variance from these buffers, and monitor nests for signs of disturbance that warrant increasing the buffers.

## **ENVIRONMENTAL DATA**

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database, which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the CNDDDB. The CNDDDB field survey form can be found at the following link:

[http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDDB\\_FieldSurveyForm.pdf](http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDDB_FieldSurveyForm.pdf). The completed form can be mailed electronically to CNDDDB at the following email address: [CNDDDB@wildlife.ca.gov](mailto:CNDDDB@wildlife.ca.gov). The types of information reported to CNDDDB can be found at the following link: [http://www.dfg.ca.gov/biogeodata/cnddb/plants\\_and\\_animals.asp](http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp).

## **FILING FEES**

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

## **CONCLUSION**

CDFW appreciates the opportunity to comment on the ND to assist TID in identifying and mitigating Project impacts on biological resources. Questions regarding this letter or further coordination should be directed to Annette Tenneboe, Senior Environmental Scientist (Specialist), at (559) 243-4014 extension 231 or by email at [Annette.Tenneboe@wildlife.ca.gov](mailto:Annette.Tenneboe@wildlife.ca.gov).

Sincerely,

DocuSigned by:  
  
041A77B10D78486...  
Julie A. Vance  
Regional Manager

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## REFERENCES

- American Eagle Research Institute (AERI), 2010. Protocol for golden eagle occupancy, reproduction, and population assessment.
- California Department of Fish and Wildlife (CDFW). 2015. California Tiger Salamander Technical Review – Habitat, Impacts and Conservation. California Department of Fish and Wildlife, October 2015.
- CDFW. 2016. Status Review: Swainson's hawk (*Buteo swainsoni*) in California. Reported to California Fish and Game Commission. Five years status report.
- CDFW. 2020. Biogeographic Information and Observation System (BIOS). <https://www.wildlife.ca.gov/Data/BIOS>. Accessed September 28, 2020.
- Driscoll, D. 2010. Protocol for Golden Eagle Occupancy, Reproduction, and Prey Population Assessment. American Eagle Research Institute, Apache Jct., AZ. 55pp.
- Edwards, C. L. 1980. A report on the distribution, population trends and habitat trends and habitat requirements of the Bell's vireo on the Lower Colorado River. Yuma District Office of the Bureau of Land Management, Arizona Fish and Game Department, Yuma, AZ, USA.
- Estep, J. 2009. The influence of vegetation structure on Swainson's hawk (*Buteo swainsoni*) foraging habitat suitability in Yolo County, California. Prepared for the Yolo Natural Heritage Program, Woodland, CA.
- Grinnell, J., and A. H. Miller. 1944. The Distribution of Birds of California. Pacific Coast Avifauna 27. Cooper Ornithological Club, Berkeley, CA, USA.
- Gruver, J.C. and D.A. Keinath, 2006. Townsend's Big-eared Bat (*Corynorhinus townsendii*): A Technical Conservation Assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/townsendsbigearedbat.pdf>
- Hayward, L. S., A. E. Bowles, J. C. Ha, and S. K. Wasser. 2011. Impacts of acute and long-term vehicle exposure on physiology and reproductive success of the northern spotted owl. *Ecosphere* 2:art65.
- Jackman, R.E. and J.M. Jenkins. 2004. Protocol for Evaluating Bald Eagle Habitat and Populations in California. Prepared for U.S. Fish and Wildlife Service Endangered Species Division, Sacramento, CA, USA.

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- Kus, B. E., and M. j Whitfield. 2005. Parasitism, productivity, and population growth: Response of least Bell's vireos (*Vireo bellii extimus*) and Southwestern Willow Flycatchers (*Empidonax traillii extimus*) to cowbird (*Molothrus* spp.) control. *Ornithological Monographs* 57:16–27.
- Lewis, S. E., 1994. Night roosting ecology of pallid bats (*Antrozous pallidus*) in Oregon. *The American Midland Naturalist*, Vol. 132, pp. 219-226.
- Monson, G. 1960. The nesting season. Southwest Regional Report, Audubon Field Notes 14:469.
- Pierson, E.D., W.E. Rainey and C. Corben. 2006. Distribution and status of Western red bats (*Lasiurus blossevillii*) in California. Calif. Dept. Fish and Game, Habitat Conservation Planning Branch, Species Conservation and Recovery Program Report 2006-04, Sacramento, CA 45 pp
- Searcy, C.A. and H.B. Shaffer. 2011. Determining the migration distance of a vagile vernal pool specialist: How much land is required for conservation of California tiger salamanders? *In* Research and Recovery in Vernal Pool Landscapes, D. G. Alexander and R. A. Schlising, Eds. California State University, Chico, California.
- Searcy, C.A., E. Gabbai-Saldate, and H.B. Shaffer. 2013. Microhabitat use and migration distance of an endangered grassland amphibian. *Biological Conservation* 158: 80-87.
- Steidl, R. J., K. D. Kozie, G. J. Dodge, T. Pehovski, and E. R. Hogan. 1993. Effects of human activity on breeding behavior of golden eagles in Wrangell-St. Elias National Park and Preserve; a preliminary assessment. Copper Center, AK: National Park Service, Wrangell-St. Elias National Park Preserve.
- Swainson's Hawk Technical Advisory Committee. 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley of California. Swainson's Hawk Technical Advisory Committee. May 31, 2000.
- Swolgaard, C. A., K. A. Reeves, and D. A. Bell. 2008. Foraging by Swainson's hawks in a vineyard-dominated landscape. *Journal of Raptor Research* 42(3): 188-196.
- Thomson, R. C., A. N. Wright, and H. B. Shaffer. 2016. California Amphibian and Reptile Species of Special Concern. California Department of Fish and Wildlife and University of California Press: 84–92.
- United States Fish and Wildlife Service (USFWS). 2001. Least Bell's Vireo Survey Guidelines. January 2001. 3 pp.

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USFWS. 2003. Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander, October 2003.

USFWS. 2005. Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog. March 2005. 26 pp.

USFWS. 2006. Least Bell's vireo 5-year review: summary and evaluation. USFWS, Carlsbad, CA, USA.

USFWS. 2017a. Recovery Plan for the Central California Distinct Population Segment of the California Tiger Salamander (*Ambystoma californiense*). U. S. Fish and Wildlife Service, Region 8, Sacramento, California. June 2017.

USFWS, 2017b. Species Account for California Red-legged frog. March 2017. 1 pp.

**Attachment 1****CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE  
RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)****PROJECT: La Grange Sluice and Tailrace Channel Improvement Project**

<b>RECOMMENDED MITIGATION MEASURES</b>	<b>STATUS/DATE/INITIALS</b>
<b><i>Before Project Implementation</i></b>	
Recommended Mitigation Measure 1: Focused Surveys for Nesting Eagles and Peregrine Falcon	
Recommended Mitigation Measure 3: Tree Replacement Plan	
Recommended Mitigation Measure 4: Focused SWHA Surveys	
Recommended Mitigation Measure 6: SWHA Take Authorization	
Recommended Mitigation Measure 7: LBV Habitat Assessment	
Recommended Mitigation Measure 8: LBV Avoidance	
Recommended Mitigation Measure 9: LBV Surveys	
Recommended Mitigation Measure 10: LBV Take Authorization	
Recommended Mitigation Measure 11: Focused CTS Protocol-level Surveys	
Recommended Mitigation Measure 13: CTS Take Authorization	
Recommended Mitigation Measure 14: FYLF and CRLF Surveys	
Recommended Mitigation Measure 16: FYLF Take Authorization	
Recommended Mitigation Measure 17: Bat Roost Habitat Assessment	
Recommended Mitigation Measure 18: Bat Surveys	
Recommended Mitigation Measure 20: WPT Surveys	
Recommended Mitigation Measure 22: Riparian Habitat Analysis	
Recommended Mitigation Measure 23: Riparian Habitat Mitigation	
<b><i>During Project Implementation</i></b>	

<b>RECOMMENDED MITIGATION MEASURES</b>	<b>STATUS/DATE/INITIALS</b>
Recommended Mitigation Measure 2: Avoidance of Nesting Eagles and Peregrine Falcon	
Recommended Mitigation Measure 5: SWHA Avoidance	
Recommended Mitigation Measure 12: CTS Avoidance	
Recommended Mitigation Measure 15: FYLF and CRLF Avoidance	
Recommended Mitigation Measure 19: Bat Roost Disturbance Minimization and Avoidance	
Recommended Mitigation Measure 21: WPT Avoidance and Minimization	