California Department of Fish and Game
SACRAMENTO VALLEY CENTRAL SIERRA REGION
1701 NIMBUS RD, SUITE A
RANCHO CORDOVA, CALIFORNIA 95670

California Endangered Species Act
Incidental Take Permit No. **2081-2006-001-02**
Three Rivers Levee Improvement Authority (TRLIA)
Feather-Bear Rivers Levee Setback Project

Authority: This California Endangered Species Act ("CESA") Incidental Take Permit ("permit") is issued by the Department of Fish and Game ("Department") pursuant to Fish and Game Code section 2081(b) and section 2081(c), and California Code of Regulations, title 14, subdivision 3, chapter 6, article 1, commencing with section 783. CESA prohibits the take[1] of any species of wildlife that is included in the list of endangered species, the list of threatened species, or the list of candidate species[2]. However, the Department may authorize, by permit, the take of such species if the conditions set forth in section 2081(b) and section 2081(c) are met.

Permittee: **Three Rivers Levee Improvement Authority**
Government Center
914 Eight Street, Suite 115
Marysville, California, 95901
(530) 749-7575

Name and title of principal officer: **Mr. Paul G. Brunner, Yuba County Administrator**

Contact person: **Mr. Paul G. Brunner**

Mailing address: **Government Center**
914 Eight Street, Suite 115
Marysville, California, 95901

Effective date and expiration date of permit:
This permit shall be executed in duplicate original form and shall become effective once a duplicate original is acknowledged by applicant (see below) and returned to the Department. Unless renewed by the Department, this permit's authorization to take the Covered Species shall expire on December 31, 2009.

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[1]Pursuant to Fish and Game Code section 86, "'Take' means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill."

[2]"Candidate species" are species of wildlife that have not yet been placed on the list of endangered species or the list of threatened species, but which are under formal consideration for listing pursuant to Fish and Game Code section 2074.2.

Project location:
The project is located in southwestern Yuba County at the confluence of the Feather and Bear rivers.

Project description:
The applicant proposes to modify the levee system on the Bear River to address identified deficiencies in the system and to reduce river stages by increasing Bear River floodway capacity. The latter would be achieved through a levee setback on the lower Bear River. Primary project components include: (1) Construction of the embankment of the lower Bear River setback levee; (2) Degradation of portions of the existing lower Bear and Feather River levees; (3) Removal of approximately 166 acres of orchard in the lower Bear River floodway; and (4) Restoration of native habitat types in the lower Bear River floodway, and re-contouring and restoration of native habitat types on agricultural and developed lands in the levee setback area, including construction of a floodplain swale. The project is being completed in two stages. Incidental take associated with Stage 1 construction was not authorized pursuant to CESA because the Department determined pursuant to Fish and Game Code section 2080.1 that Federal Biological Opinion No. 1-1-05-F-0106 issued by the U.S. Fish and Wildlife Service (Service) was consistent with CESA. This permit authorizes incidental take that may result from Stage 2 activities, which are scheduled to be completed between July 2006 and December 2007. Federal Biological Opinion No. 1-1-05-F-0106 issued by the U.S. Fish and Wildlife Service (Service) for this project covers both phases.

A description of both stages follows, although the conditions and take authorization in this permit apply only to Stage 2 activities

Stage 1

Project Elements: Setback Levee

Feather-Bear Setback Levee Construction

- The new setback levee will extend northeastward from the existing Feather River levee for approximately 2 miles to its eastern terminus near station 130+00 on the existing Bear River north levee. The western terminus of the setback levee will tie into the Feather River east levee near station 65+00, just south of Pump Station No. 2. The area of the footprint of the setback levee would total approximately 55 acres. The distance between the setback levee and the existing Bear River levee will range from zero at the tie-in with the Bear River levee to 0.80 mile at the Feather River levee tie-in, encompassing approximately 320 acres (referred to as the setback area).

- Levee construction covered by this permit action (Stage 1) is described below.[3]

1. Tie-in levee sections will be constructed at the keyed connection points on the Feather River and Bear River levees. See Bookman-Edmonston/GEI sheet numbers C-1 and C-11 for the alignment and a typical cross section of the proposed setback levee.
2. The setback levee foundation will be prepared by clearing and grubbing, then stripping of the surficial soil to remove organic and other deleterious materials from the levee foundation.
3. An inspection trench will be excavated along the entire length of the setback levee alignment with a minimum depth and width of 6 feet and 12 feet, respectively, except that the depth of the inspection trench will be reduced to 4 feet where a slurry cutoff trench is also provided. The purpose of the inspection trench is to intercept any undesirable shallow underground features. The trench will be backfilled and compacted with the excavated material or replaced with low-permeability (i.e., select fill) material from detention basin excavation.
4. A slurry wall will be constructed, as needed, along the majority of the setback levee length. The top of the slurry wall will be at about the existing land-surface elevation. The maximum depth of the slurry wall is expected to be approximately 65 feet below the land surface. Slurry wall construction includes trench excavation, backfill preparation, and the placement of fill material.

- Construction of the setback levee will entail the use of heavy equipment, including excavators, scrapers, bulldozers, and haul trucks.

Detention Basins Construction

- Detention basins will be constructed within agricultural uplands adjacent to Clark Slough and north of the proposed setback levee to compensate for the loss of stormwater storage in the setback area. The final size and capacity of the detention

[3] In Stage 2, the setback levee embankment would be constructed with approximately 1 million cubic yards of material in accordance with USACE Engineering Manual EM 1110-2-1913. The levee would have a crown width of 20 feet with water-side and land-side slopes of 3:1 horizontal to vertical ratio (H:V). The levee height would be determined based on hydraulic analysis, but would generally range from about 18 feet to 30 feet above existing ground surface. Following completion of the setback levee, the setback area would be restored to native habitat cover types through active planting in Stage 2. Target habitats would include wetland, riparian, oak woodland, and grassland. Restored habitats may be used as project mitigation (presently under evaluation).

basins will be determined based on on-going hydraulic analyses; under preliminary analyses, it is anticipated that the detention basins may be up to 10 feet deep and total about 70 acres with a capacity of approximately 465 acre feet. Each detention basin will be connected to Clark Slough by two inlet/outlet channels. Material excavated from the detention basins will be used for construction of the Feather River tie-in and setback levee.

- See the Bookman-Edmonston/GEI drawing for the approximate layout and a typical cross section of the detention basins.

- Construction of the detention basins will occur simultaneously with levee and tie-in construction using heavy equipment, including scrapers and bulldozers.

Project Elements: Existing Bear River North Levee and Floodway

Bear River Levee Reconstruction (Bear River Station 122+00 to 130+00)

- In response to both stability (seepage) and height issues, the proposed treatment for the Bear River north levee between stations 122+00 and 130+00 is complete reconstruction. To reduce seepage, the reconstructed levee will be keyed into the existing ground by excavating a 10-feet wide by 3-feet deep toe-trench along the water-side toe. A new levee will be constructed with material borrowed from the existing levee and imported low-permeability material. It is estimated that up to 19,600 cubic yards of material would need to be imported to reconstruct the levee and create the water-side impervious zone described below. Levee reconstruction will begin with backfilling and compacting the toe-trench to reduce seepage in this area and then building up the levee prism, to a height greater than the existing levee. The new levee footprint would encroach into the Bear River floodway, covering an additional 0.09 acre. See HDR sheet number C-105 for a typical cross section of the reconstructed levee and the levee toe-trench.

Bear River Water-side Impervious Zone (Bear River Station 130+00 to 139+00)

- To reduce levee through-seepage between stations 130+00 and 139+00, an impervious layer of clay will be incorporated into the water-side slope of the levee. Construction will begin by removing approximately 7 feet of the existing levee slope material and excavating a 3-foot deep toe-trench on the water-side. The excavated material will be used for other project elements or spoiled on-site. Imported clay would

be incorporated onto the levee slope in a layer approximately 10-feet thick and keyed into the toe-trench. Finally, the impervious layer will be mechanically compacted. The levee toe will extend approximately three feet further to the water-side, but will be above the OHWM. See HDR sheet number C-105 for a typical cross section of the water-side impervious zone.

Bear River Levee Raise (Bear River Station 139+00 to 144+00 and 147+70 to 168+80)

- The Bear River levee lacks adequate freeboard between stations 139+00 and 144+00, and between stations 147+70 and 168+80. To raise the levee, material would be added to the crown and land-side slopes. Approximately 37,600 cubic yards of soil would be imported. Two bulldozers would position the material, and two compactors compact it into place. In addition, a 10-foot easement would be purchased to allow access for levee maintenance. It is anticipated that raising the levee would take up to 30 days. See HDR sheet numbers C-101 to C-103 and C-112 to C-119 for profiles and cross sections of Bear River levee raising.

Bear River Levee Raise (Bear River Station 122+00 to 140+00)

- At the Bear River, between stations 122+00 and 140+00, the levee freeboard would need to be increased an additional 0.3 feet from what was previously described to meet 200-year flood protection criteria. The waterside of the levee will need to be widened approximately 2.0 feet to accommodate the placement of additional material on the levee crown. As a result, approximately 0.08 acre of the Bear River floodway (a water of the U.S.) would be filled to accommodate widening of the levee footprint. This represents an additional discharge of fill material to waters of the U.S. than what was previously permitted.
- All work will occur with the construction easements previously identified and will not include any in-water work.

Bear River Erosion Protection (Bear River Station 164+00 to 168+80 and 168+50 to 169+15)

- Portions of the Bear River levee slopes would be armored with riprap to minimize erosion. Approximately 2,000 cubic yards of riprap would be placed on the Bear River levee between stations 164+00 to 168+80 and between stations 168+50 to 169+15.

- The riprap between stations 164+00 to 168+80 would be approximately 2.5 feet in diameter and would be placed on the water-side of the levee to protect against erosional forces, such as wind-generated waves and high flow velocities that occur during high water stages. This riprap will not be placed in the low-flow channel and would be placed entirely above the OHWM. The riprap would come from a permitted quarry within 25 miles of the project area. Areas temporarily disturbed by equipment or riprap stockpiling would be returned to pre-project conditions after placement is completed. No impacts to waters of the U.S. would occur in this area.

- The riprap between stations 168+50 and 169+15 would be approximately 2.5 feet in diameter and would be placed on the water-side of the levee within the low-flow channel and on channel banks to protect against erosional forces, such as wind-generated waves and high flow velocities. The riprap would come from a permitted quarry within 25 miles of the project area. Areas disturbed by the equipment or riprap stockpiling would be returned to pre-project conditions after placement is completed. Erosion protection at this area would result in the loss of 0.12 acre of waters of the U.S.

Pump Station No. 6 Relocation (Bear River Station 141+00)

- Pump Station No.6 is located just west of SR 70 and north of the Bear River levee at the southern terminus of the Algodon Canal. The pump station compromises levee stability and presents a potential seepage pathway due to its proximity to the levee. The proposed measure is to dismantle and relocate the pump station approximately 150 feet north. The area between the new and old location would be filled with approximately 5,300 cubic yards of imported borrow material.

- Construction would begin with the demolition of the existing pump station, gravity drains, outfall structure, and appurtenances. Water flow would be temporarily diverted around the construction area (i.e., pumped and piped to maintain the present discharge functions) during demolition, excavation, and relocation activities.

- The dismantled pump station would be removed using a crane, and waste materials would be disposed of off-site by truck. Approximately four truck trips would be necessary to remove the waste to a permitted disposal or recycling facility. An additional four truck trips would be required to import new pump station materials. A crane would place the new pump, and hand crews would secure it. The pump relocation/replacement would last approximately 7 days. It is anticipated that relocation of the pump station, and the associated backfill, would take up to 30 days.

- As of May 2006, the design for Pump Station No. 6 has been revised to include the construction of four pumps with a greater discharge capacity. The purpose of the proposed modifications to the pump station is to allow RD 784 to increase the interior drainage pumping capacity at Pump Station No.6 from 50 cfs to 200 cfs. The proposed actions would accommodate increased pumping capacity with the installation of four pumps in the Algodon Canal. The area of impact from the riprap at the outlet channel is the same design as previously proposed. Construction would be completed in fall 2006, assuming a start in early summer 2006.

- The overall length of the Pump Station No. 6 would increase an additional 11.3 feet north of the previously permitted location resulting in the additional permanent loss of 0.01 acre of other waters of the U.S. due to the extension of the pump station structure. The total length of this feature will be 241.3 feet, including 150 feet of earthen fill and the construction of the 91.3-foot long pump station structure. The overall width of the earthen fill area will increase from 40.5 to 51.5 feet to accommodate the new pump station design. This additional material will not result in any additional fill of other waters of the U.S.

- Prior to pump relocation and outfall construction, Algodon Canal would be dewatered using a coffer dam and allowed to dry out for a minimum of fifteen days per USFWS biological opinion. Dewatering at Algodon Canal is described below.

- All work will occur with the construction easements previously identified.

Algodon Canal – Feather River Boulevard Culvert Repairs and Upgrades

- Two existing culverts within Algodon Canal located under Feather River Boulevard are damaged and partially filled with sediments. These culverts would be repaired and sediment would be removed. Culvert maintenance would include cleaning out sediment and debris within the culverts with high pressure washing equipment. A trash rack would also be constructed upstream of the culverts. A final design is pending but is expected to include the construction of a steel beam cat-walk approximately 25 feet upstream of Feather River Boulevard. The steel beams would be placed perpendicular to the canal and would be embedded into the bank above the ordinary high water mark. A metal trash rack that extends into the canal will be placed on the upstream face of the cat-walk.

- Work would be limited to the banks of the canal and 25 feet upstream and downstream of the culverts. Cofferdams would be place to isolate the sluicing disturbance. The material sluiced from the culverts would be removed by a backhoe

and placed at the top of the bank. The material would be deposited in an upland location. Approximately 0.04 acre of the Algodon Canal would be temporarily disturbed and dewatered.

- This work was not previously permitted but is necessary to allow water in Algodon Canal to reach Pump Station No. 6 unimpeded when the pumps are operating.

Algodon Canal – Dewatering

- Dewatering of Algodon Canal will be required to reconstruct Pump Station No. 6 and to implement the Feather River Boulevard culvert repairs and upgrades. Dewatering activities in Algodon Canal will begin prior to April 15, 2006, with agency approvals, to allow for 15 days of drying out period prior to actually construction activities. The construction activities described would begin in early summer 2006 and culminate in fall 2006.
- Dewatering could be implemented using one of the following methods.
  - A coffer dam could be constructed north of Feather River Boulevard to dewater the entire area from the coffer dam to the Bear River Levee. Pump Station No. 6 would be turned on to dewater the canal from the cofferdam to the Bear River levee. The area affected by cofferdam construction and dewatering around would be approximately 1.17 acres.

(or)

  - Three cofferdams could be constructed: one north of the new pump station location, one south of Feather River Boulevard and one north of Feather River Boulevard. The area affected by cofferdam construction and dewatering around Feather River Boulevard would be approximately 0.04 acre. The area affected by cofferdam construction and dewatering in the area immediately upstream of Pump Station No. 6 would be the same as that proposed in the original certified EIR. Pump Station No. 6 would be used to dewater the canal from the first cofferdam to the Bear River levee and temporary pumps would be used to dewater the area adjacent to Feather River Boulevard. Water removed would be spray discharged to uplands or allowed to settle in upland tanks or sumps and then allowed to infiltrate back into the soil or discharged back into Algodon Canal upon meeting regional water quality standards.
- Algodon Canal is a mostly stagnant water body that flows to the Bear River only when Pump Station No. 6 is operating.

Walnut Orchard Removal (approximate Bear River Station 80+00 to 120+00)

- The land surface of the walnut orchard located within the Bear River floodway is below the OHWM of the river. Approximately 66 acres of the nearly 250-acre orchard will be removed to increase the hydraulic performance of the floodway and to provide an area for habitat restoration (suitable for partial mitigation of project impacts). The remainder of the orchard may also be removed to allow further restoration of the floodplain, but this action is not being pursued under Stage 1. Orchard removal, including complete stump excavation, would require dozers, haul trucks, and chain saws. The operation would be conducted following the harvest season in late summer 2005 and could take up to one month. All marketable tree material will be hauled off-site and the remaining slash will be chipped, delivered to biomass facilities, mulched, or composted. The two areas of Valley Oak riparian forest, 68.33 acres and 0.75 acre respectively, also located within the Bear River floodway, would not be affected by orchard removal activities.

Project Elements: WPIC West Levee

WPIC Borrow Ditch Fill (WPIC Station 0+00 to 130+00)

- The borrow ditch along the west side of the WPIC levee would be filled. The ditch was presumably excavated to create the railroad embankment on the land-side of the levee or to create the levee itself. The presence of the borrow ditch compromises the stability of the WPIC levee because it presents a potential seepage pathway under the levee. Filling the borrow ditch would reduce the hydraulic gradient values to USACE standards.

- Approximately 78,000 cubic yards of material would be used to fill the entire length of the borrow ditch to match the surrounding land surface. Fill may be imported, but would be primarily borrowed from excavation of the South Olivehurst detention basin. Up to 7,800 truck trips, occurring over a period of 90 days, would be necessary to import all the material. Filling of the borrow ditch would occur during the dry season (i.e., from August to October) and would include the removal of vegetation using a bulldozer, the tilling of the area to loosen the dirt, and the filling of the trench with borrow material. Two bulldozers would place the materials, and two sheepsfoot compactors would compact the soils into place. Alternatively, the material may be excavated and

transported via scrapers. After the fill material has been placed, all disturbed areas will be seeded with a mixture of native and naturalized grass and forb species.

WPIC Water-side Levee Raise (WPIC Station 0+30 to 137+50, 205+00 to 275+70, and 284+10 to 305+00)

- The WPIC would be raised an average of 1.2 feet by adding approximately 98,000 cubic yards of material to the crown and water-side slope between stations 0+30 to 137+50, 205+00 to 275+70, and 284+10 to 305+00. The existing rock slope protection located between stations 250+00 and 297+00 would be removed, stockpiled and restored to allow for levee work, as needed. Approximately 98,000 cubic yards of material would be imported. The WPIC levee footprint would be increased up to 6 feet into the WPIC channel, near and below the OHWM.
- Heavy equipment would access the levee using a temporary ramp constructed on the land-side of the levee, 12 feet wide and 60 feet long. Staging of equipment would be primarily on the levee crown, but some equipment would be kept adjacent to the land-side of the levee. During the levee raise, bulldozers would place and position the material on the water-side of the levee and crown, and compactors would compact the material. Four bulldozers and four compactors would complete the full levee raise in 30 days. The area disturbed for the construction of the ramp and staging areas would be returned to pre-project conditions after construction was completed.

WPIC Land-side Levee Raise (WPIC Station 305+00 to 311+58)

- The WPIC levee would be raised an average of 0.5 feet by adding material to the land-side and crown of the existing levee between stations 305+00 to 311+58.
- Approximately 17,720 cubic yards of soil would be imported. A total of 1,770 truck trips would be required. Two bulldozers and two compactors (one each at each site) would be needed to place, position, and compact material on the land-side slope and levee crown. The area would be returned to pre-project conditions after construction was completed.

WPIC Slurry Wall (WPIC Station 254+65 to 260+00 and 276+56 to 287+00)

- A 36-foot deep slurry cutoff wall would be constructed between stations 254+65 and 260+00, and a 44-foot deep slurry cutoff wall would be constructed between

stations 276+56 and 287+00 to reduce seepage in the levee by creating a low-permeability barrier and dispersing hydrostatic pressure. See HDR sheet numbers C-221 and C-223.

- The construction of the slurry cutoff walls would use conventional slot-trench methods: a trench would be excavated through the levee and subsurface materials and would then be backfilled with low-permeability materials. During construction, the trench, which would be 2- to 3-feet wide, would be kept open using a bentonite-water slurry. The soil excavated from the trench would be hauled to a mixing location near station 220+00, where it would be mixed with hydrated bentonite and cement to reduce permeability and increase strength. The soil-cement-bentonite mixture would then be hauled to the levee and backfilled into the trench. This mixture would create a low-permeability barrier in the levee.

- During slurry cutoff wall construction, one crew would be able to construct up to 100 linear feet of slurry wall (for wall depths of approximately 50 feet) in an 8-hour shift. A bentonite-soil mixing area would be constructed on the land-side of the WPIC levee. It is anticipated that one crew would be working on the levee. Equipment needed would include a long-stick excavator (80-foot reach), three or four dump trucks (10-cubic yard capacity each), and two loaders at the mixing location. Approximately 7,000 dump truck trips would be necessary to haul material between the excavator and the mixing area along the levee. The mixing area would be used to prepare the soil-bentonite mixture and supply the bentonite-water slurry. All of this equipment would operate simultaneously for 8 to 12 weeks.

- Materials imported to the site would include bentonite, cement, water (if a domestic supply is not available nearby), and construction support materials.

The only permanent facility associated with the construction of the slurry cutoff wall would be the wall itself, which would be 2- to 3-feet wide, up to 44-feet deep. The first wall would be 535 feet long and the second would be 1,044 feet long. The entire wall would be within the levee. The temporary mixing area (described under staging area above) would be restored to pre-project conditions after the slurry cutoff wall was completed.

WPIC Erosion Protection (WPIC Station 250+00 to 276+00)

- Between stations 250+00 and 276+00, riprap will need to be placed on the waterside of the levee to repair erosion that occurred in January 2006. The levee in this location was subject to wind and wave action during the high-water events and water

was observed splashing over the levee top. The additional riprap is necessary to repair areas of bank scour to dissipate wave energy. An additional 2,900 cy of riprap would be placed on the levee at this location. Approximately 0.24-acre (580 cy of riprap) would be placed below the ordinary high water mark.

Stage 2

■ Stage 1 of the Feather-Bear-WPIC Levee Improvements Project includes preliminary work on a Bear River levee setback. Stage 2 consists of the second phase of the Bear River levee setback and associated habitat restoration. Stage 2 includes the following components:

- construction of the embankment of the lower Bear River setback levee;
- degradation of portions of the existing lower Bear and Feather River levees;
- removal of approximately 166 acres of orchard in the lower Bear River floodway; and
- restoration of native habitat types in the Bear River floodway and recontouring and restoration of native habitat types on agricultural and developed lands in the levee setback area, including construction of a floodplain swale.

■ These Stage 2 elements are described in more detail below.

Setback Levee Embankment Construction

■ The embankment for a new setback levee would be constructed along the right (north) bank of the Bear River, tying in with the left (east) bank of the Feather River. The foundation for the setback levee, including sections of slurry wall, is currently under construction as part of Stage 1 construction activities. At its easternmost point, the setback levee alignment would tie in with the existing Bear River levee about 1,600 feet downstream of SR 70 and about 2,100 feet upstream of Road 512. On the west, the setback levee would tie in with the existing Feather River levee at approximately Project Levee Mile 12.8, a short distance downstream of Pump Station No. 2. At this point, the distance between the setback levee and the existing levee alignment would be about 4,200 feet (0.8 mile). The setback levee would replace approximately 2.4 miles of the Bear River levee and 0.9 mile of the Feather River levee. The setback levee would be

about 2.0 miles long with a setback area of about 337 acres (the area between the existing levee and the new setback levee, including the footprint of the new levee).

- Construction of the setback levee embankment would entail the use of heavy equipment, including excavators, scrapers, bulldozers, and haul trucks. The embankment would be constructed with approximately 1 million cubic yards of material in accordance with USACE Engineering Manual EM 1110-2-1913. The levee would have a crown width of 20 feet with waterside and landside slopes of 3:1 horizontal to vertical ratio (H:V). The levee height would range from about 18 feet to 30 feet above existing ground surface, with an average height of about 25 feet. A waterside berm would be constructed west of setback levee station 60+00 to allow the placement of excess soil from required excavations. This nonstructural berm would have an average width up to 300 feet and would not exceed one-fourth the height of the levee (maximum height roughly 5–7 feet). In addition, a landside stability berm with maximum width of 50 feet and maximum height of 20 feet would be constructed along segments of the western portion of the levee setback alignment. Slurry walls and relief wells would be used where necessary to reduce the hydraulic gradient and seepage flows to safe levels. Two segments of relief well ditch would be constructed along the landside toe of the setback levee. Flows from the eastern segment would be conveyed to the south detention basin, and those from the western segment would enter Clark Slough via an outfall just east of Pump Station No. 2.

- The setback levee alignment crosses an agricultural ditch that extends south from Clark Slough along the landside of the Feather River levee for approximately 2,000 feet, then east for approximately 1,700 feet. The ditch conveys irrigation runoff from adjacent agricultural lands and drains to the terminus of Clark Slough at Pump Station No. 2. The levee alignment crosses this ditch directly east of the Feather River levee. Approximately 950 feet of the northern portion of this ditch section were cleared and grubbed and two segments totaling approximately 400 feet were filled during Stage 1 to accommodate construction of the setback levee foundation and Feather River levee tie-in embankment. The remaining 550 feet of ditch fill covered under the Stage 1 permitting would be completed in association with the levee embankment construction under Stage 2. Culverts were installed at the ditch crossing during Stage 1 construction to allow for the temporary continuation of drainage flows until completion of Stage 2 construction. The culverts would be removed during Stage 2. The east-west portion of the ditch would be connected to the swale to be constructed in the levee setback area (described below).

Degradation of Portions of Existing Levees

■ Portions of the existing Bear River and Feather River levees would be degraded to allow water to flow into the setback area during high river stages. Two segments of the Bear River levee, totaling approximately 7,800 lineal feet, would be degraded to elevations ranging from 30 to 44 feet. The southern 1,500 feet of the Feather River levee would be degraded to an elevation of about 33-35 feet to facilitate hydraulic and ecological connectivity between the setback area and the adjacent Lake of the Woods Unit of California Department of Fish and Game's Feather River Wildlife Area. In addition, a 200-foot-long notch would be cut in the Feather River levee near the tie-in with the Bear River setback levee. The notch would be excavated down to an elevation of about 37 feet (toe of the levee). Additional sections of existing levee would be removed if additional borrow material is needed for construction of the setback levee. No loss of riparian vegetation along the Feather River or Bear River would occur as a result of the levee removal. The levee materials removed would be reused as borrow material for the setback levee and the landside stability berm. The portions of the existing levees that would remain in place would no longer be maintained as flood control structures and would be planted in riparian vegetation, as described below.

■ Although a goal of Stage 2 is to use existing levee materials as borrow for construction of the setback levee, Section 112 of the California Code of Regulations stipulates that existing levees may not be excavated, or left partially excavated, during the flood season. Therefore, construction of the setback levee would begin with material excavated from the detention basin sites. Once the USACE is assured that sufficient construction progress has been made on the setback levee and conditionally accepts the setback levee as a the project levee, it is expected that the existing project levee will be decommissioned following the end of the flood season and the levee material used for borrow material to complete the setback levee embankment. If levee removal is not allowed, a borrow area would need to be developed in the setback area that would later be restored with material from the existing levees.

Floodway Orchard Removal

■ Stage 2 includes removal of 166 acres of walnut orchard in the Bear River floodway and replacement of the orchard with native habitat types, as described below. Removal of the upper 66 acres of the orchard in the Bear River floodway was included in Stage 1 of the Feather-Bear-WPIC Levee Improvements Project to increase hydraulic performance of the floodway and provide an area for habitat restoration suitable for

mitigation of Stage 1 impacts on Swainson's hawk. Orchard removal, including complete stump excavation, would require dozers, haul trucks, and chain saws. All marketable tree material would be hauled off-site and the remaining slash would be chipped, delivered to biomass facilities, mulched, or composted. Areas of existing riparian vegetation within the Bear River floodway would not be affected by floodway orchard removal activities.

Restoration of the Levee Setback Area, Levee Remnants, and Bear River Floodway

■ The levee setback area consists of 145 acres of orchards and 110 acres of field crops and fallow and developed areas. The orchards in the levee setback area would be removed as described above for the floodway orchard removal. The levee setback area, remnants of the existing levees, areas where the existing levee will have been degraded, and the orchard removal area within the Bear River floodway would be restored to native habitat cover types through active planting. The primary goals of the habitat restoration are to:

- enhance and restore fish, wildlife, and riparian habitat within the levee setback area;
- maximize a variety of riparian plant communities and other floodplain habitat types;
- meet hydraulic roughness value objectives in the expanded floodway;
- enhance connectivity between adjacent riparian habitats and river channels;
- minimize long-term operations and maintenance costs;
- minimize the potential for fish stranding;
- provide mitigation for terrestrial resource impacts of Stage 1 of the Feather-Bear-WPIC Levee Improvements Project to the extent possible; and
- provide protection for a known archaeological site within the levee setback area.

■ The restoration design includes the planting of 521 acres of native habitat types, including high acreages of cottonwood/willow association, valley oak riparian forest,

riparian scrub, and grassland/savanna, and 68 acres of shaded riverine aquatic (SRA) habitat enhancement. (An additional 50 acres of grassland/savanna is being developed by Wildlands within the existing floodway as mitigation for effects of Stage 1 construction on Swainson's hawk foraging habitat; the 50 acres are part of the 66 acres permitted in Stage 1). Elderberry shrub transplants and new elderberry shrub plantings are included in the levee setback area design to compensate for the effects of Stage 1 and Stage 2 actions on Valley elderberry longhorn beetle. Specific areas of seasonal emergent wetland, open water channel, willow scrub, riparian scrub, valley oak forest, and riparian woodland are identified in the restoration design as mitigation for Stage 1 impacts pursuant to the Section 404 permit for Stage 1. The easternmost portion of the levee setback area and present floodway would be maintained as grassland to meet flood-control objectives and to provide foraging habitat for Swainson's hawk.

- The levee setback area (the outer historical floodplain) is, on average, approximately 4 feet below the inner contemporary floodplain adjacent to the Bear River. Because of this topography, and based on hydraulic modeling of the levee setback area, the potential for fish stranding following high-flow events was identified. Out-of-bank flows would tend to pass over the right bank of the Bear River and into the lower-lying setback area, ponding against the setback levee. Relatively high ground within the riparian area to the west of the Feather River levee may prevent flow from passing directly to the Feather River. To address this potential problem, a floodplain swale and low-flow channel would be constructed to allow water to drain and fish to escape from the setback area to the Bear River channel. The swale would be parallel to the remnant Feather River levee at the western boundary of the setback area, and would be 200 feet wide and about 2,900 feet long. The low-flow channel would be 20 feet wide by 2 feet deep and would drain from the swale apex south to the Bear River, in the vicinity of where the existing Bear and Feather River levees join (both levees would be degraded in this area). As noted above, the western waterside portion of the existing ditch that extends in an approximately east-west direction in the levee setback area would be connected to the upper end of the swale. The minor ditch that extends south from the western end of this ditch (between the Feather River levee and row crop field) to the confluence of the Feather River and Bear River levees would be filled and graded to slope toward the swale.

- An Operations and Maintenance Plan that outlines specific components for monitoring and maintenance of the restoration area, including the floodplain swale, is currently being developed. Monitoring of the swale and adjacent floodplain will be conducted on a regular basis for at least 5 years to note any substantial changes (including reestablishing vegetation and presence of potential barriers to fish passage)

in the overall structure since implementation of the project. Based on project design and hydraulic and sediment deposition analyses, potential maintenance and remediation is anticipated to be restricted to minor activities to remove debris and fish passage barriers, such as beaver dams, from the swale.

Covered species:

This permit covers the following species:

Name	**Status**[4]
Birds	
Swainson's hawk (*Buteo swainsoni*)	Threatened
Reptiles	
Giant garter snake (*Thamnophis gigas*)	Threatened
Fish	
Central Valley Chinook salmon (spring-run) (*Oncorhynchus twhawytscha*)	Threatened

These species and only these species are hereinafter referred to as "Covered Species."

Impacts to Covered Species:
The following impacts are anticipated as a result of Project activities:

1. Anticipated impacts to Swainson's hawk (*Buteo swainsoni*) include the loss of approximately 50 acres of foraging habitat, and the potential disturbance/failure of active nests. Specific activities associated with these impacts include removal of potential nest trees, construction disturbance (e.g., use of heavy equipment, earth

[4]Refers to status under CESA. Under CESA, a species may be on the list of endangered species, the list of threatened species, or the list of candidate species. All other species are "unlisted."

moving activities, etc.) during the nesting period, and removal of existing open grassland and cropland that provides potential foraging habitat for Swainson's hawks.

2. Anticipated impacts to Giant garter snake (*Thamnophis gigas*) (GGS) include the temporary habitat loss of 96.12 acres including 0.36 acres of aquatic habitat and 95.76 acres of upland habitat, and the permanent habitat loss of 44.79 acres including 19.81 acres of aquatic habitat and 24.98 acres of upland habitat. Specific activities associated with these impacts include dewatering of suitable aquatic habitat, filling of a portion of an existing ditch, building of a setback levee, and general earthmoving activities associated with the project.

3. Anticipated impacts to Central Valley Chinook salmon (spring-run) (*Oncorhynchus twhawytscha*) include juvenile stranding and general habitat degradation (water quality). Specific activities associated with these impacts include levee removal, on-river degradation of existing levees and associated water quality effects, and project design characteristics (placement of a new levee) that could result in stranding of juvenile salmon.

Incidental Take Authorization:
The Department authorizes the Permittee, its employees, contractors and agents to take Covered Species incidentally in carrying out the project, subject to the limitations described in this section and the conditions of approval identified below. This Permit does not authorize any intentional take of Covered Species except for trapping, relocation, or other possession of Covered Species that may be expressly required by this permit. Take of Covered Species from activities outside the scope of the project as described above, or take of Covered Species resulting from a permit violation.

Conditions of Approval:
The Department's issuance of this Permit and Permittee's authorization to take the Covered Species is subject to Permittee's compliance with and implementation of the following conditions of approval:

1. Permittee shall comply with all applicable state, federal and local laws in existence on the effective date of this permit or adopted thereafter.

2. Permittee shall fully implement and adhere to the conditions of this Permit within the time frames set forth in Attachment 1, the Mitigation Monitoring and Reporting

Program (MMRP), and shall comply with any requirements of the MMRP that are not otherwise set forth in this Permit. Reports required by this Permit including Attachment 1 shall be submitted to the following address:

California Department of Fish and Game
Sacramento Valley-Central Sierra Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670
Attn: Mr. Ian Drury

3. Permittee shall fully implement and adhere to the following conditions:

3.1. Swainson's Hawk

3.1.1. Preconstruction surveys shall be conducted during the breeding season (March 1 through September 15), within 0.5 mile of construction areas. Surveys shall be conducted by a qualified avian biologist approved by the Department prior to beginning construction and related activities in each construction phase. Survey results shall be provided to the Department by phone or e-mail prior to commencement of construction activities, and in a written report, within 30 days after commencement of construction activities. Results should be called-in or e-mailed to Mr. Ian Drury, (916) 358-2900; e-mail idrury@dfg.ca.gov. If nesting Swainson's hawks are found within 0.5 mile of construction areas, TRLIA shall consult with the Department prior to initiating any construction or related activities within 0.5 mile of the nest to determine whether such activities could cause reproductive failure (nest abandonment, loss of eggs, and/or loss of young). If, in the course of consultation with the Department, a determination is made that the construction activities could cause reproductive failure (nest abandonment and loss of eggs and/or young), no construction activities will be allowed between May 1 and September 15 within 0.5 miles from the nest site until young have fledged, or the adults are no longer nesting. .

3.1.2. TRLIA shall mitigate impacts to Swainson's hawk foraging habitat through the removal of an existing orchard and establishment of approximately 50 acres of annual grassland habitat within the levee setback area along the Bear River floodway. This habitat shall be protected in perpetuity through a conservation easement or other mechanism approved by the Department. Additionally, TRLIA shall fully fund all measures to ensure the suitability of

the mitigation habitat for Swainson's hawk in perpetuity and shall ensure implementation of the Operations and Maintenance Plan that the Permittee is developing for the restoration component of the project.

3.1.3. Removal of Swainson's hawk nest trees is not an activity covered by this Permit. In the event that a nest tree (defined as a tree that has been used for nesting at least once in the last three years) needs to be removed during project related activities, TRLIA shall obtain the Department's written approval for the tree removal and shall comply with any compensatory measures deemed necessary by the Department.

3.2. Giant Garter Snake

3.2.1. The project will result in the permanent loss of 44.79 acres of GGS habitat including 19.81 acres of aquatic and 24.98 acres of upland habitat, and 96.12 acres of temporary loss of GGS habitat including 0.36 acres of aquatic and 95.76 acres of upland habitat. TRLIA shall minimize and compensate for these impacts by implementing the following measures:

3.2.1.1. All construction activity within GGS habitat (including activity within aquatic habitat and activity within 200 feet of aquatic habitat) shall be conducted between May 1 and October 1. This is the active period for GGS when snakes are actively moving and more likely to avoid danger. More danger is posed to snakes during their inactive period, because they are occupying underground burrows or crevices and are more susceptible to direct effects, especially during excavation.

3.2.1.2. TRLIA shall establish environmentally sensitive areas (ESAs) to protect potential GGS habitat in the project area from construction-related disturbance. All potential GGS habitat that can reasonably be avoided during construction activities shall be identified as ESAs and shall be marked by the Qualified Biologist with 6-foot-high bright orange fencing. ESAs shall be avoided by all construction personnel. Staging areas, disposal of spoils, borrow pits, and construction equipment access shall avoid all ESAs.

3.2.1.3. Within 24 hours prior to commencement of construction activities, the project site shall be inspected by a Qualified Biologist who is

approved by the Department and the Service. The biologist will provide the Agencies with a field report form documenting the monitoring efforts within 24-hours of commencement of construction activities. In addition, the project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred.

3.2.1.4. The Qualified Biologist shall be on site throughout all phases of construction. If a snake is encountered during construction activities, the monitoring biologist shall have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed. GGS encountered during construction activities should be allowed to move away from construction activities on their own. The Qualified Biologist shall be required to immediately report by telephone, any incidental take, including capture and relocation, to the to the Department at (916) 358-2900 and to the Service at (916) 414-6700; and by written letter addressed to the Department at the address stated above (*Conditions of Approval #2*), and to Chief, Endangered Species Division, within three (3) working days. The report shall include date(s), location(s), habitat description, and any corrective measures taken to protect the snake(s) found. Any dead or severely injured GGS shall be transferred to the Service's Law Enforcement Office at 2800 Cottage Way, Room W2605, Sacramento, California, 95825-1846. Information on all documented GGS sightings shall be submitted to the Department using completed California Native Species Field Survey Forms or their equivalent, no more than 30 calendar days after completing the last field visit of the project site. Each form shall have an accompanying scale map of the site such as a photocopy of a portion of the appropriate 7.5 minute U.S. Geological Survey map and shall provide at least the following information: township, range, and quarter section; name of the 7.5 or 15 minute quadrangle; dates (day, month, year) of field work; number of individuals and life stage (where appropriate) encountered; and a description of the habitat by community-vegetation type. A high quality copy of this information shall also be submitted to Mr. Scott Flint, Program Manager, Environmental Review and Permitting Program 1416 Ninth Street, Sacramento, California 95814, and Mr. Ian Drury, Environmental Scientist, Sacramento Valley – Central Sierra Region, 1701 Nimbus Road, Suite A, Rancho Cordova,

California 95670

3.2.1.5. Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.

3.2.1.6. TRLIA shall confine clearing to the minimal area necessary to facilitate construction activities.

3.2.1.7. Movement of heavy equipment to and from the project site shall be restricted to established roadways to minimize habitat disturbance and shall avoid all ESAs.

3.2.1.8. TRLIA shall avoid construction activities within 200 feet from the banks of GGS aquatic habitat to the greatest extent practicable, and confine construction activities occurring within 200 feet of aquatic habitat to the minimal area necessary.

3.2.1.9. After completion of construction activities, the 96.12 acres of temporarily disturbed GGS habitat shall be restored to pre-project conditions. Restoration work will be implemented in accordance with the Operations and Maintenance Plan. Activities will include restoration of temporary fill areas and removal of construction debris and may include replanting of emergent vegetation. TRLIA shall fully fund all measures to ensure the successful restoration of all temporarily disturbed GGS habitat. TRLIA shall include documentation of the successful restoration in the Final Mitigation Report (described below).

3.2.1.10. Plastic mono-filament netting (erosion control matting) shall not be used for erosion control or in other areas where giant garter snakes may become entangled or trapped in it.

3.2.1.11. TRLIA shall acquire in fee title or through a Department-approved conservation easement 134.37 acres of suitable habitat management lands (HM lands) for GGS and shall permanently protect the land as provided in Condition 5.1. TRLIA shall obtain the Department's approval of the suitability of the HM lands, which shall either be located at the Tule Basin Giant Garter Snake Habitat Preserve, Sutter County,

or at another Department- and Service-approved site. The HM lands must be acquired and permanently preserved as provided in Condition 5.1 no later than 18 months following issuance of this Permit as a means of fully mitigating the project's impacts on GGS.

3.3. Central Valley Chinook salmon (spring-run)

3.3.1. To avoid impacts to spring-run Chinook salmon, any in-stream work on the Feather or Bear rivers shall be limited to the period extending from July 1 to October 15.

3.3.2. All intake pumps at waterways in the construction corridor shall be screened, using Department approved methods, to prevent the accidental take of spring-run Chinook salmon.

3.3.3. Drilling activities shall be closely monitored to detect accidental releases of drilling fluids ("frac-out"). Construction shall be immediately halted in the event of a frac-out and the drilling contractor will take immediate remedial actions to reduce drilling pressure and thicken drilling mud. The construction manager shall notify the Department immediately by telephone at (916) 358-2900 and by written letter addressed to the Regional Manager, Region 2, within three (3) working days following any construction event which may threaten fish species. Prior to re-initiating drilling activities, TRLIA shall meet with the Department on site to determine what modifications, if any, are required in the drilling activities, along with any remedial actions that are deemed necessary.

3.3.4. No in-stream containment or diversion shall occur without the approval and proper permits from the Department and other appropriate resource agencies.

3.3.5. To prevent accidental spills of hazardous materials from entering waterways, TRLIA shall implement Best Management Practices during fueling or servicing of construction and drilling equipment and machinery. Refueling and hazardous materials storage will be restricted to areas at least 100 feet from wetlands, streams, or drainages whenever possible. Where refueling or hazardous materials storage within 100 feet of a waterway cannot be avoided, those activities will be limited to designated

areas that are protected with berms lined with non-porous material to ensure that accidental spills will not contaminate the water body. All fuel spills and spills of other hazardous materials will be cleaned up immediately and disposed of properly.

3.3.6. A long-term mitigation and monitoring plan (Plan) shall be developed by a qualified biologist, and approved by the Department, NOAA Fisheries, and the Service, prior to implementation of the levee setback phase of the project. The purpose of this Plan shall be to evaluate the effectiveness of the grading and drainage features in the levee setback area in reducing the risk of fish stranding and the stability of the drainage features and to determine the need for maintenance or modification. The monitoring plan shall include provisions for remediation and mitigation for any take of Central Valley Chinook salmon should the design of the levee setback area prove to be unsuccessful in preventing fish stranding. These measures shall include, as appropriate, such activities as regarding or fill depressions in the levee setback area. The recommended monitoring scheme shall include monitoring on an annual basis for at least ten years. The length of any additional monitoring period shall depend on the success of the floodplain habitat development. Following each high-flow season, a letter report shall be submitted to the Department, NOAA Fisheries, and the Service, summarizing the overall condition of the floodplain habitat and any changes that have occurred for previous year(s). If any remediation measures are required, they will be outlined in the letter report, along with a schedule specifying when the remediation activities will occur. Appropriate remediation measures will be taken as soon is practicable to minimize the potential for fish stranding while maintaining the desired habitat values and hydraulic characteristics of the area. The performance of the grading and drainage features in the levee setback area will be considered successful if there is no isolated standing water and there are no barriers to fish passage following any flood event that inundates the levee setback area.

4. Other Minimization, Notification, and Reporting Conditions:

4.1. Construction personnel shall participate in a worker environmental awareness program approved by the Service and the Department. Under this program, workers shall be informed about the presence of the Covered Species and their associated habitats, and that unauthorized take of Covered Species or

destruction of habitat is a violation of the Federal Endangered Species Act and the California Endangered Species Act. Prior to construction activities, the Qualified Biologist, approved by the Department and the Service, shall instruct all construction personnel about: (1) the life history of the Covered Species; (2) the importance of irrigation canals, marshes/wetlands, and seasonally flooded areas, such as rice fields, to the giant garter snake; and (3) the terms and conditions of the Service's biological opinion and this Permit. Written documentation of the training shall be submitted to the Sacramento U.S. Fish and Wildlife Office and the Department's Region 2 Office, 1701 Nimbus Road, Suite A, Rancho Cordova, CA 95670 within 30 days of completion of training.

4.2. TRLIA shall immediately notify the Department in writing if it is not in compliance with any condition of approval of this Permit, including but not limited to any actual or anticipated failure to implement any of the conditions of this Permit including Attachment 1.

4.3. For the duration of construction activities, TRLIA shall conduct compliance inspections at least once every week to assess compliance with all construction-phase impact minimization and mitigation measures, including but not limited to those requiring creation and maintenance of exclusion zones or ESAs.

4.4. Beginning with issuance of the Permit and continuing during Project related construction and development activities, TRLIA shall provide the Department a monthly Status Report no later than the last calendar day of each month of project construction. Each Status Report shall include, at a minimum: 1) a general description of the status of the Project site and construction activities, including actual or projected completion dates, if known; 2) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; and 3) an assessment of the effectiveness of each completed or partially completed mitigation measure in minimizing and compensating for Project impacts.

4.5. No later than 45 days after completion of the project, including completion of all mitigation measures, TRLIA shall provide the Department with a Final Mitigation Report. The Final Mitigation Report shall be prepared by a knowledgeable, experienced biologist and shall include, at a minimum: 1) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; 2) all available information about project-related incidental take of

species named in the Permit; 3) information about other project impacts on the species named in the Permit; 4) construction dates; 5) an assessment of the effectiveness of the permit's conditions of approval in minimizing and compensating for project impacts; 6) recommendations on how mitigation measures might be changed to more effectively minimize and mitigate the impacts of future projects on the species; and 7) any other pertinent information.

4.6. TRLIA shall provide Department representatives with reasonable access to the project site and mitigation lands under its control, and shall otherwise fully cooperate with Department efforts to verify compliance with or effectiveness of mitigation measures.

4.7. Notwithstanding any expiration date on this Permit's take authorization, TRLIA's obligations under this permit do not end until the Department accepts the Final Mitigation Report as complete.

5. Funding and Compensation

5.1. For the HM lands described in condition 3.2.1.11 above, TRLIA shall transfer a conservation easement over the HM lands or fee title to the HM lands to the Department under terms approved by the Department. Alternatively, the transfer may be to another public entity or non-profit corporation approved by the Department under terms approved by the Department. As part of this condition, TRLIA shall provide a recent preliminary title report, initial hazardous materials survey report, and other documents identified in the Habitat Management Lands Checklist (Attached). All documents conveying the compensation lands and all conditions of title are subject to the approval of the Department and, if applicable, the Department of General Services. TRLIA may also satisfy this HM lands requirement by purchasing credits in a appropriate conservation bank that has been approved by the Department and Service.

5.1.1. TRLIA shall perform all work for the initial protection and enhancement of the HM lands (e.g. fencing, posting signs, trash removal, etc.) to the satisfaction of the Department.

5.1.2. TRLIA shall provide to the Department a permanent capital endowment for long-term management of the HM lands. TRLIA shall provide an amount sufficient to fund long-term management activities on the HM lands, as

calculated using a PAR analysis. Interest from this amount shall be available for the operation, management and protection of the HM lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action designed to protect or improve the habitat values of the HM lands. The endowment principal shall not be drawn upon unless such withdrawal is deemed necessary by the Department to ensure the continued viability of the species on the HM lands. Monies received by the Department pursuant to this provision shall be deposited in a special deposit account established pursuant to Fish and Game Code section 13014. The Department may pool the endowment with other endowments for the operation, management and protection of compensation lands for local populations of the Covered Species.

5.1.3. TRLIA shall reimburse the Department for reasonable expenses incurred during title and document review, expenses incurred from other state agency reviews and overhead related to transfer of HM lands to the Department. The Department estimates that this Project will create an additional cost to the Department of no more than $3,000 for every fee title deed or conservation easement processed.

5.2. TRLIA may proceed with ground-disturbing project activities before completing all of the required mitigation, monitoring, and reporting activities only if TRLIA ensures funding to complete those activities by providing the Department an irrevocable letter of credit, a pledged savings account, an escrow account, or another form of security approved by the Department's Office of the General Counsel ("Security"). TRLIA has established a Department-approved escrow account in the amount of $4,702,950.00 as a means of ensuring funding for the performance of the conditions of approval of this Permit. This amount is based on the estimated costs of acquiring 134.37 acres of GGS habitat and implementing the mitigation, monitoring and long-term management requirements for GGS on this land.

5.3. This Permit may be amended without the concurrence of the Permittee if the Department determines that continued implementation of the project under existing permit conditions would jeopardize the continued existence of a Covered Species or that changed biological conditions necessitate a permit amendment to ensure that impacts to the Covered Species are minimized and

fully mitigated. The Department may also amend the Permit at any time without the concurrence of the Permittee as required by law.

5.4. The Department may issue Permittee a written stop work order to suspend any activity covered by this permit for an initial period of up to 25 days to prevent a violation of this permit or the illegal take of an endangered, threatened or candidate species. Permittee shall comply with the stop work order immediately upon receipt thereof. The Department may extend a stop work order under this provision for a period not to exceed 25 additional days, upon written notice to the Permittee. The Department shall commence the formal suspension process pursuant to California Code of Regulations, title 14, section 783.7 within five working days of issuing a stop work order.

Compliance with Other Laws

This Permit contains the Department's requirements for the Project pursuant to CESA. This permit does not necessarily create an entitlement to proceed with the Project. The Permittee is responsible for complying with all other applicable state, federal, and local laws.

Notices

Written notices, reports and other communications relating to this Permit shall be delivered to the Department by first class mail at the following addresses, or at addresses the Department may subsequently provide the Permittee. Notices, reports, and other communications should reference the Project name, Permittee, and Permit Number (2081-2006-001-02) in a cover letter and on any other associated documents.

Original cover with attachment(s) to:

Sandra Morey, Regional Manager
1701 Nimbus Road
Rancho Cordova, CA 95670
Telephone (916) 358-2900
FAX (916) 358-2912

Copy of cover without attachment(s) to:

General Counsel
Department of Fish and Game
1416 Ninth Street, 12th Floor
Sacramento, CA 95814

And:

Habitat Conservation Planning Branch
1416 Ninth Street, Suite 1260
Sacramento, CA 95814

Unless Permittee is notified otherwise, the Department's Regional Representative for purposes of addressing issues that arise during implementation of permit conditions is:

Ian Drury
1701 Nimbus Road
Rancho Cordova, CA 95670
Telephone (916) 358-2900
FAX (916) 358-2912

Compliance with the California Environmental Quality Act

The Department's issuance of the Permit is subject to the California Environmental Quality Act, Public Resources Code, section 21000 et seq. ("CEQA"). The Department is a responsible agency under CEQA with respect to the Permit because of prior environmental review of the Project by the lead agency, Three Rivers Levee Improvement Authority (TRLIA). (See generally Pub. Resources Code, §§ 21067, 21069.) The lead agency's prior environmental review of the Project is set forth in the Environmental Impact Report (EIR) for the project dated November 2004 (SCH # 2004072113), that TRLIA approved on August 10, 2004. At the time the lead agency adopted the EIR and approved the Project it also adopted mitigation measures as "Conditions of Project Approval."

In fulfilling its obligations as a responsible agency, the Department's obligations under CEQA are more limited than the lead agency. (CEQA Guidelines, § 15096, subd.

(g)(1).)[5] The Department, in particular, is responsible for considering only the effects of those activities involved in the Project which it is required by law to carry out or approve and mitigating or avoiding only the direct or indirect environmental effects of those parts of the Project which it decides to carry out, finance, or approve. (Pub. Resources Code, § 21002.1, subd. (d); CEQA Guidelines, § 15096, subds. (f), (g)(1).) Accordingly, because the Department's exercise of discretion is limited to issuance of the Permit, the Department is responsible for considering only the environmental effects that fall within its permitting authority under CESA.

This Permit documents the Department's consideration of the lead agency's negative declaration for the Project and the environmental effects related to issuance of the Permit. (CEQA Guidelines, § 15096, subd. (f).) The Department finds that issuance of the Permit will not result in any previously undisclosed potentially significant effects on the environment or a substantial increase in the severity of any potentially significant environmental effects previously disclosed by the lead agency. Furthermore, to the extent the potential for such effects exists, the Department finds adherence to and implementation of the Conditions of Project Approval adopted by the lead agency, as well as adherence to and implementation of the conditions of approval imposed by the Department through the issuance of the Permit, will avoid or reduce to below a level of significance any such potential effects. In so doing, the Department finds that issuance of the Permit will not result in any significant, adverse impacts on the environment.

CESA Findings

With respect to CESA, the Department finds that, in issuing the Permit, all of the following conditions have been met:

(1) Take of Covered Species as defined in the Permit will be incidental to the otherwise lawful activities covered under the Permit;

(2) Impacts of the taking of the Covered Species will be minimized and fully mitigated through the implementation of measures required by this Permit and as described in the Mitigation Monitoring and Reporting Program (MMRP), Measures include but are not limited to: 1) biological monitoring during construction activities; 2) monthly compliance reports; 3) tree plantings as

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[5] The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

compensation for removal of nest trees; 4) an education program for all persons working on-site; 5) Site management measures to minimize direct impacts to Swainson's hawks; and 6) land compensation to replace permanent impacts to giant garter snakes.

(3) The take avoidance and mitigation measures required pursuant to the conditions of this Permit and its attachments are roughly proportional in extent to the impact of Permittee's take.

(4) The measures required by this Permit maintain Permittee's objectives to the greatest extent possible;

(5) All required measures are capable of successful implementation;

(6) The Permit is consistent with any regulations adopted pursuant to Fish and Game Code sections 2112 and 2114;

(7) Permittee has ensured adequate funding to implement the measures required by the Permit, as well as for monitoring compliance with, and the effectiveness of, those measures for the Project; and

(8) Issuance of the Permit will not jeopardize the continued existence of the Covered Species based on the best scientific and other information reasonably available, and this finding includes consideration of the species' capability to survive and reproduce, and any adverse impacts of the taking on those abilities in light of (a) known population trends; (b) known threats to the species; and (c) reasonably foreseeable impacts on the species from other related projects and activities. Moreover, the Department's finding is based, in part, on the Department's express authority to amend the terms and conditions of the Permit without concurrence of the Permittee as necessary to avoid jeopardy and as required by law.

Fully protected species

This Permit does not authorize the take of any fully protected species. See Fish and Game Code section 3511, section 4700, section 5050, and section 5515. The Department finds that the conditions of approval of this permit, if fully implemented and adhered to, will avoid the take of fully protected species. The Department therefore finds

that the Project as conditioned by this permit can be carried out in compliance with Fish and Game Code, section 3511.

If the Department discovers that such measures are not adequate to prevent take of one of these fully protected species, the Department shall notify the Permittee in writing and propose different conservation measures it believes are necessary to avoid take of these species. The Permittee shall implement such measures proposed by the Department or other measures agreed to by the Parties to avoid take of fully protected species.

ISSUED BY THE CALIFORNIA DEPARTMENT OF FISH AND GAME

on July 17, 2006.

Sandra Morey

Sandra Morey, Regional Manager
SACRAMENTO VALLEY-CENTRAL
SIERRA REGION

APPROVED AS TO FORM:

Stephen Adams, Deputy General Counsel

ACKNOWLEDGMENT

The undersigned: 1) warrants that he or she is acting as a duly authorized representative of the Permittee, 2) acknowledges receipt of this Permit, and 3) agrees on behalf of the Permittee to comply with all terms and conditions of the Permit.

By: Paul G. Brunner Date: 19 July 2006

Printed Name: ~~Brian D. Bo~~ Paul G. Brunner Title: Exec. Dir. TRLIA

REFERENCES

Three Rivers Levee Improvement Authority 2004. Final Environmental Impact Report for the Feather-Bear Rivers Levee Setback Project; State Clearing House No. 2004072113.

U.S. Fish and Wildlife Service. *Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat* and Appendix C, *Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake (Thamnophis gigas) Habitat.*

U. S. Fish and Wildlife. 2005. Section 7 Formal Consultation # 1-1-05-F-0106: Formal Consulation on the Proposed Feather River, Bear River, and Western Pacific Interceptor Canal Levee Improvements Project (Corps file number 200400685), Yuba County, California.

TRLIA 2081(b) PERMIT DISTRIBUTION LIST

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Attachment 1

DEPARTMENT OF FISH AND GAME
MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

CALIFORNIA INCIDENTAL TAKE PERMIT NO. 2081-2006-001-02

PERMITTEE: Three Rivers Levee Improvement Authority
Government Center
914 Eight Street, Suite 115
Marysville, California, 95901
(530) 749-7575

PROJECT: Feather-Bear Rivers Levee Setback Project

PURPOSE OF THE MMRP

The purpose of the MMRP is to ensure that the impact minimization and mitigation measures required by the Department of Fish and Game (Department) for the above-referenced project are properly implemented, and thereby to ensure compliance with section 2081(b) of the Fish and Game Code and section 21081.6 of the Public Resources Code. A table summarizing the mitigation measures required by the Department is attached. This table is a tool for use in monitoring and reporting on implementation of mitigation measures, but the descriptions in the table do not supersede the mitigation measures set forth in the California Incidental Take Permit ("Permit") and in attachments to the Permit, and the omission of a permit requirement from the attached table does not relieve Three Rivers Levee Improvement Authority (TRLIA) of the obligation to ensure the requirement is performed.

OBLIGATIONS OF PERMITTEE

Mitigation measures must be implemented within the time periods indicated in the table that appears below. TRLIA has the primary responsibility for monitoring compliance with all mitigation measures and for reporting to the Department on the progress in implementing those measures. These monitoring and reporting requirements are set forth in the Permit itself and are summarized at the front of the attached table.

VERIFICATION OF COMPLIANCE, EFFECTIVENESS

The Department may, at its sole discretion, verify compliance with any mitigation measure or independently assess the effectiveness of any mitigation measure.

Feather-Bear Rivers Levee Setback Project
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
1	Permittee shall immediately notify the Department in writing if it determines that any of the mitigation measures were not implemented during the period indicated in the MMRP, or if Permittee anticipates for any reason that measures may not be implemented within the time period indicated.	MMRP	Entire project	Permittee	
2	For the duration of construction activities, Permittee shall conduct compliance inspections at least once a week to assess compliance with all construction-phase impact minimization and mitigation measures, especially those requiring creation and maintenance of exclusion zones or environmentally sensitive areas within giant garter snake habitat.	MMRP	Entire project	Permittee	
3	Every month for the duration of construction activities, Permittee shall provide the Department with a written Compliance Report to communicate observations made during compliance monitoring, as well as other information obtained by Permittee.	MMRP	Entire project	Permittee	
4	Beginning with issuance of the Permit and continuing for the life of the project, Permittee shall provide the Department an annual Compliance Monitoring Status Report no later than December 15 of every year. Each Status Report shall include, at a minimum: 1) a general description of the status of the project, including actual or projected completion dates, if known; 2) a copy of the attached table with notes showing the current implementation status of each mitigation measure; and 3) an assessment of the effectiveness of each completed or partially completed mitigation measure in minimizing and compensating for project impacts.	MMRP	Entire project	Permittee	
5	The Permittee shall notify the Department fourteen (14) days before initiating ground-disturbing activities.	Permit	Pre-construction	Permittee	
6	The name and phone number of the biological monitor shall be given to the Department's regional representative within 14 days of ground disturbing activities.	Permit	Pre-construction	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
7	No later than 45 days after completion of the project, including completion of all mitigation measures, the Permittee shall provide the Department with a Final Mitigation Report. The Final Mitigation Report shall be prepared by a knowledgeable, experienced biologist and shall include, at a minimum: 1) a copy of this table with notes showing when each of the mitigation measures was implemented; 2) all available information about project-related incidental take of species named in the permit; 3) information about other project impacts on the species named in the permit; 4) construction dates; and 5) any other pertinent information. Permittee's monitoring and reporting obligations under this MMRP will end only after the Department accepts the Final Mitigation Report as complete.	Permit	Post-project	Permittee	
8	The Department accepts the Final Mitigation Report as complete.	MMRP	Post-project	Department	
9	The Department may, at its sole discretion, verify compliance with any mitigation measure or independently assess the effectiveness of any mitigation measures.	MMRP	Entire project	Department	
10	Permittee shall fully cooperate with the Department in its efforts to verify compliance with or effectiveness of mitigation measures.	MMRP	Entire project	Permittee	
11	TRLIA shall transfer a conservation easement over the HM lands or fee title to the HM lands to the Department under terms approved by the Department. Alternatively, the transfer may be to another public entity or non-profit corporation approved by the Department under terms approved by the Department. As part of this condition, TRLIA shall provide a recent preliminary title report, initial hazardous materials survey report, and other documents identified in the Habitat Management Lands Checklist (Attached). All documents conveying the compensation lands and all conditions of title are subject to the approval of the Department and, if applicable, the Department of General Services. TRLIA may also satisfy this HM lands requirement by purchasing credits in a appropriate conservation bank that has been approved by the Department and Service. TRLIA shall also provide associated funding and initial protection of the HM Lands as detailed in Condition 5.1 through 5.1.3 of the Permit.	Permit	Within 18 months of issuance of the Permit.	Permittee	
Swainson's hawk					

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
12	Because project construction activity would occur during the Swainason's Hawk breeding season (March 1 – September 15), a qualified biologist shall conduct preconstruction surveys to identify active nests in the non-orchard trees in the levee setback area, within 0.5 miles of the proposed levee alignment and proposed detention basin sites, as well as the riparian habitat within the levee setback area, and in riparian habitat of the Feather and Bear rivers on the river side of the existing levee within 0.5 miles. Because of the mostly liner nature of the project construction, preconstruction surveys may be phased to accommodate construction activities; suitable nesting habitat shall be surveyed only when construction activities would encroach within 0.5 miles of un-surveyed areas. Surveys shall be conducted no less than 14 days and no more than 30 days before construction activities may encroach within 0.5 miles of un-surveyed areas. Guidelines provided in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* shall be followed.	Permit	Entire project	Permittee	
13	Construction personnel shall participate in a worker environmental awareness program approved by the Department and the U.S. Fish and Wildlife Service (Service). Under this program, workers shall be informed about the presence of giant garter snakes, Swainson's Hawk, and spring-run Chinook salmon, and habitats associated with the species and that unlawful take of the animals or destruction of their habitat is a violation of the Federal Endangered Species Act and/or the California Endangered Species Act. Prior to construction activities, a qualified biologist approved by the Department and the Service shall instruct all construction personnel about: (1) the life history of the said named species; (2) the importance of the natural environment for said named species, and (3) the terms and conditions of the Services's biological opinion and this permit. Written documentation of the training shall be submitted to the Department and the Sacramento U.S. Fish and Wildlife Office within 30 days of completion of training.	Permit	Entire project	Permittee	
14	Permittee shall mitigate for any impacts to Swainson's hawk nest trees by developing a Department-approved mitigation plan that includes tree replacement. The mitigation plan shall include appropriate nest tree planting locations, planting ratios, and a maintenance and monitoring plan with criteria to ensure success and re-establishment of nest trees.	Permit	Post-project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
15	Permittee shall create 50 acres of suitable Swainson's hawk foraging habitat by creating 50 acres of Department –approved onsite habitat. All costs for acceptance and processing of compensation lands shall be borne by TRLIA.	Permit	Post-project	Permittee	
Giant garter snake					
16	All construction activity within giant garter snake habitat (including activity within aquatic habitat and activity within 200 feet of aquatic habitat) shall be conducted between May 1 and October 1.	Permit	Entire Project	Permittee	
17	Dewatering of aquatic habitat shall not occur between October 1 and April 15. Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.	Permit	Entire Project	Permittee	
18	Within 24-hours prior to commencement of construction activities, the project site shall be inspected by a qualified biologist who is approved by Services's Sacramento Fish and Wildlife Office. The biologist will provide the Agencies ,the Department and the Service, with a field report form documenting the monitoring efforts within 24-hours of commencement of construction activities. The project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred. If a Giant garter snake is found, all activity that could result in death or injury of Giant garter snakes shall be delayed until consultation with the Service and DFG has been completed and authorization to proceed has been received from those agencies.	Permit	Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
19	The qualified monitoring biologist shall be on site throughout all phases of construction. If a snake is encountered during construction activities, the monitoring biologist shall have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed. Giant garter snakes encountered during construction activities should be allowed to move away from construction activities on their own. The biologist shall be required to report any incidental take, including capture and relocation, to the Service immediately by telephone at (916) 414-6700 and by written letter addressed to the Chief, Endangered Species Division, within three (3) working days. The report shall include date(s), location(s), habitat description, and any corrective measures taken to protect the snake(s) found. Any dead or severely injured giant garter snake shall be transferred to the Fish and Wildlife Service's Law Enforcement Office at 2800 Cottage Way, Room W2605, Sacramento, California, 95825-1846. The Service-approved biologist shall submit locality information to the Department using completed California Native Species Field Survey Forms or their equivalent, no more than 30 calendar days after completing the last field visit of the project site. Each form shall have an accompanying scale map of the site such as a photocopy of a portion of the appropriate 7.5 minute U.S. Geological Survey map and shall provide at lease the following information: township, range, and quarter section; name of the 7.5 or 15 minute quadrangle; dates (day, month, year) of field work; number of individuals and life stage (where appropriate) encountered; and a description of the habitat by community-vegetation type. The Service-approved biologist shall also provide a high quality copy of this information to the Department staff biologist, 1807 13thStreet, Sacramento, California 95814.	Permit	During Construction	Permittee	
20	TRLIA shall confine clearing to the minimal area necessary to facilitate construction activities. Excavation of channel banks shall be accomplished by using equipment located on and operated from the top of the bank, with the least interference practical for emergent vegetation that would not be affected by the project.	Permit	During Construction	Permittee	
21	Movement of heavy equipment to and from the project site shall be restricted to areas outside the identified suitable habitat, unless it is being moved on established roadways or in areas that have been inspected by a qualified biologist.	Permit	During Construction	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
22	TRLIA shall avoid construction activities within 200 feet from the banks of giant garter snake aquatic habitat to the extent possible and confine construction activities occurring within 200 feet of aquatic habitat to the minimal area necessary. Avoided giant garter snake habitat shall be designated as "Environmentally Sensitive Areas" and shall be marked with 6-foot bright orange fencing, by a qualified biologist approved by the Service and avoided by all construction personnel. Staging areas, disposal of spoils, borrow pits, and construction equipment access shall avoid all ESAs. After completion of construction activities, any temporary fill and construction debris shall be removed disturbed areas shall be restored to pre-project conditions. Restoration work may include replanting emergent vegetation.	Permit	During Construction	Permittee	
23	Prior to ground disturbance, permanent losses and disturbance of habitat, excluding rice fields, shall be compensated at the ratio of 3:1 and meet the criteria listed in Attachment 2, *Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat* and Appendix C, *Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake (Thamnophis gigas) Habitat.* For each acre of temporary impacts to GGS aquatic (freshwater marsh, open water) or upland (wet meadow, clay flat, or other uplands) habitat TRLIA shall conserve one acre of habitat. For each acre of snake aquatic (freshwater, open water) or upland (wet meadow, clay flat, other uplands) habitat affected, TRLIA shall conserve 3 acres of snake habitat.	Permit	Within 1 year of Permit Issue Date	Permittee	
24	Mitigation for Giant garter snake will include avoidance of construction activities between October 1 and May 1 when the snake is hibernating. Additional mitigation for temporary and permanent impacts will include permanent protection of 134.37 acres of managed Giant garter snake habitat at a Department approved location. TRLIA will restore all temporary project impacts to wetlands to pre-project condition. In addition to conditions of the Department 2081(b) permit, TRLIA must also comply with all Giant garter snake avoidance and minimization measures set forth in the USFWS Guidelines for Restoration and or Replacement of Giant Garter Snake Habitat and Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake Habitat.	Permit	Within 1 year of Permit Issue Date	Permittee	
Central Valley Chinook salmon (spring-run)					

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
25	To avoid impacts to spring-run Chinook salmon, all Feather River and Bear River in-stream activities shall be limited to the period extending from July 1 to October 15. All activities which pose a risk of spill or other adverse impacts to waterways in the construction corridor shall be conducted during this period.	Permit	Entire Project	Permittee	
26	The construction manager shall notify the Department immediately by telephone at (916) 358-2900 and by written letter addressed to the Regional Manager, Region 2, within three (3) working days following any construction event which may threaten fish species.	Permit	Entire Project	Permittee	
27	No instream containment or diversion shall occur without the approval and proper permits from the Department and other appropriate resource agencies.	Permit	Entire Project	Permittee	
28	To prevent accidental spills of hazardous materials from entering waterways Best Management Practices shall be used during fueling or servicing of construction equipment and machinery. Refueling and hazardous materials storage will be restricted to areas at least 100 feet from wetlands, streams, or drainages. Where avoidance of 100 feet is not possible, refueling and hazardous materials storage will be limited to designated areas that are protected with berms lined with non-porous material to ensure that accidental spills will not contaminate the water body. All hazardous spills will be cleaned up immediately and disposed of properly	Permit	Entire Project	Permittee	
29	Drilling activities shall be closely monitored to detect accidental releases of drilling fluids. Construction shall be immediately halted in the event of a frac-out and the drilling contractor will take immediate remedial actions to reduce drilling pressure and thicken drilling mud. The construction manager shall notify the Department immediately by telephone at (916) 358-2900 and by written letter addressed to the Regional Manager, Region 2, within three (3) working days following any construction event which may threaten fish species. Prior to re-initiating drilling activities, the Department will meet with the appropriate parties on site to determine what modifications, if any, are required in the drilling activities, along with any remedial actions that are deemed necessary.	Permit	Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
30	A long-term mitigation and monitoring plan (Plan) shall be developed by a qualified biologist, and approved by the Department, NOAA Fisheries, and the Service, prior to implementation of the levee setback phase of the project. The purpose of this Plan shall be to evaluate the effectiveness of the grading and drainage features in the levee setback area in reducing the risk of fish stranding and the stability of the drainage features and to determine the need for maintenance or modification. The monitoring plan shall include provisions for remediation and mitigation for any take of Central Valley Chinook salmon should the design of the levee setback area prove to be unsuccessful in preventing fish stranding. These measures shall include, as appropriate, such activities as regarding or fill depressions in the levee setback area. The recommended monitoring scheme shall include monitoring on an annual basis for at least ten years. The length of any additional monitoring period shall depend on the success of the floodplain habitat development. Following each high-flow season, a letter report shall be submitted to the Department, NOAA Fisheries, and the Service, summarizing the overall condition of the floodplain habitat and any changes that have occurred for previous year(s). If any remediation measures are required, they will be outlined in the letter report, along with a schedule specifying when the remediation activities will occur. Appropriate remediation measures will be taken as soon is practicable to minimize the potential for fish stranding while maintaining the desired habitat values and hydraulic characteristics of the area. The performance of the grading and drainage features in the levee setback area will be considered successful if there is no isolated standing water and there are no barriers to fish passage following any flood event that inundates the levee setback area.	MMRP	Post Project	Permittee	

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MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

CALIFORNIA INCIDENTAL TAKE PERMIT NO. 2081-2006-001-02

PERMITTEE: Three Rivers Levee Improvement Authority
Government Center
914 Eight Street, Suite 115
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OBLIGATIONS OF PERMITTEE

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Feather-Bear Rivers Levee Setback Project
MITIGATION MONITORING AND REPORTING PROGRAM

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5	The Permittee shall notify the Department fourteen (14) days before initiating ground-disturbing activities.	Permit	Pre-construction	Permittee	
6	The name and phone number of the biological monitor shall be given to the Department's regional representative within 14 days of ground disturbing activities.	Permit	Pre-construction	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
7	No later than 45 days after completion of the project, including completion of all mitigation measures, the Permittee shall provide the Department with a Final Mitigation Report. The Final Mitigation Report shall be prepared by a knowledgeable, experienced biologist and shall include, at a minimum: 1) a copy of this table with notes showing when each of the mitigation measures was implemented; 2) all available information about project-related incidental take of species named in the permit; 3) information about other project impacts on the species named in the permit; 4) construction dates; and 5) any other pertinent information. Permittee's monitoring and reporting obligations under this MMRP will end only after the Department accepts the Final Mitigation Report as complete.	Permit	Post-project	Permittee	
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11	TRLIA shall transfer a conservation easement over the HM lands or fee title to the HM lands to the Department under terms approved by the Department. Alternatively, the transfer may be to another public entity or non-profit corporation approved by the Department under terms approved by the Department. As part of this condition, TRLIA shall provide a recent preliminary title report, initial hazardous materials survey report, and other documents identified in the Habitat Management Lands Checklist (Attached). All documents conveying the compensation lands and all conditions of title are subject to the approval of the Department and, if applicable, the Department of General Services. TRLIA may also satisfy this HM lands requirement by purchasing credits in a appropriate conservation bank that has been approved by the Department and Service. TRLIA shall also provide associated funding and initial protection of the HM Lands as detailed in Condition 5.1 through 5.1.3 of the Permit.	Permit	Within 18 months of issuance of the Permit.	Permittee	
Swainson's hawk					

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
12	Because project construction activity would occur during the Swainason's Hawk breeding season (March 1 – September 15), a qualified biologist shall conduct preconstruction surveys to identify active nests in the non-orchard trees in the levee setback area, within 0.5 miles of the proposed levee alignment and proposed detention basin sites, as well as the riparian habitat within the levee setback area, and in riparian habitat of the Feather and Bear rivers on the river side of the existing levee within 0.5 miles. Because of the mostly liner nature of the project construction, preconstruction surveys may be phased to accommodate construction activities; suitable nesting habitat shall be surveyed only when construction activities would encroach within 0.5 miles of un-surveyed areas. Surveys shall be conducted no less than 14 days and no more than 30 days before construction activities may encroach within 0.5 miles of un-surveyed areas. Guidelines provided in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* shall be followed.	Permit	Entire project	Permittee	
13	Construction personnel shall participate in a worker environmental awareness program approved by the Department and the U.S. Fish and Wildlife Service (Service). Under this program, workers shall be informed about the presence of giant garter snakes, Swainson's Hawk, and spring-run Chinook salmon, and habitats associated with the species and that unlawful take of the animals or destruction of their habitat is a violation of the Federal Endangered Species Act and/or the California Endangered Species Act. Prior to construction activities, a qualified biologist approved by the Department and the Service shall instruct all construction personnel about: (1) the life history of the said named species; (2) the importance of the natural environment for said named species, and (3) the terms and conditions of the Services's biological opinion and this permit. Written documentation of the training shall be submitted to the Department and the Sacramento U.S. Fish and Wildlife Office within 30 days of completion of training.	Permit	Entire project	Permittee	
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	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
15	Permittee shall create 50 acres of suitable Swainson's hawk foraging habitat by creating 50 acres of Department –approved onsite habitat. All costs for acceptance and processing of compensation lands shall be borne by TRLIA.	Permit	Post-project	Permittee	
Giant garter snake					
16	All construction activity within giant garter snake habitat (including activity within aquatic habitat and activity within 200 feet of aquatic habitat) shall be conducted between May 1 and October 1.	Permit	Entire Project	Permittee	
17	Dewatering of aquatic habitat shall not occur between October 1 and April 15. Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.	Permit	Entire Project	Permittee	
18	Within 24-hours prior to commencement of construction activities, the project site shall be inspected by a qualified biologist who is approved by Services's Sacramento Fish and Wildlife Office. The biologist will provide the Agencies ,the Department and the Service, with a field report form documenting the monitoring efforts within 24-hours of commencement of construction activities. The project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred. If a Giant garter snake is found, all activity that could result in death or injury of Giant garter snakes shall be delayed until consultation with the Service and DFG has been completed and authorization to proceed has been received from those agencies.	Permit	Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
19	The qualified monitoring biologist shall be on site throughout all phases of construction. If a snake is encountered during construction activities, the monitoring biologist shall have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed. Giant garter snakes encountered during construction activities should be allowed to move away from construction activities on their own. The biologist shall be required to report any incidental take, including capture and relocation, to the Service immediately by telephone at (916) 414-6700 and by written letter addressed to the Chief, Endangered Species Division, within three (3) working days. The report shall include date(s), location(s), habitat description, and any corrective measures taken to protect the snake(s) found. Any dead or severely injured giant garter snake shall be transferred to the Fish and Wildlife Service's Law Enforcement Office at 2800 Cottage Way, Room W2605, Sacramento, California, 95825-1846. The Service-approved biologist shall submit locality information to the Department using completed California Native Species Field Survey Forms or their equivalent, no more than 30 calendar days after completing the last field visit of the project site. Each form shall have an accompanying scale map of the site such as a photocopy of a portion of the appropriate 7.5 minute U.S. Geological Survey map and shall provide at lease the following information: township, range, and quarter section; name of the 7.5 or 15 minute quadrangle; dates (day, month, year) of field work; number of individuals and life stage (where appropriate) encountered; and a description of the habitat by community-vegetation type. The Service-approved biologist shall also provide a high quality copy of this information to the Department staff biologist, 1807 13thStreet, Sacramento, California 95814.	Permit	During Construction	Permittee	
20	TRLIA shall confine clearing to the minimal area necessary to facilitate construction activities. Excavation of channel banks shall be accomplished by using equipment located on and operated from the top of the bank, with the least interference practical for emergent vegetation that would not be affected by the project.	Permit	During Construction	Permittee	
21	Movement of heavy equipment to and from the project site shall be restricted to areas outside the identified suitable habitat, unless it is being moved on established roadways or in areas that have been inspected by a qualified biologist.	Permit	During Construction	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
22	TRLIA shall avoid construction activities within 200 feet from the banks of giant garter snake aquatic habitat to the extent possible and confine construction activities occurring within 200 feet of aquatic habitat to the minimal area necessary. Avoided giant garter snake habitat shall be designated as "Environmentally Sensitive Areas" and shall be marked with 6-foot bright orange fencing, by a qualified biologist approved by the Service and avoided by all construction personnel. Staging areas, disposal of spoils, borrow pits, and construction equipment access shall avoid all ESAs. After completion of construction activities, any temporary fill and construction debris shall be removed disturbed areas shall be restored to pre-project conditions. Restoration work may include replanting emergent vegetation.	Permit	During Construction	Permittee	
23	Prior to ground disturbance, permanent losses and disturbance of habitat, excluding rice fields, shall be compensated at the ratio of 3:1 and meet the criteria listed in Attachment 2, *Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat* and Appendix C, *Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake (Thamnophis gigas) Habitat.* For each acre of temporary impacts to GGS aquatic (freshwater marsh, open water) or upland (wet meadow, clay flat, or other uplands) habitat TRLIA shall conserve one acre of habitat. For each acre of snake aquatic (freshwater, open water) or upland (wet meadow, clay flat, other uplands) habitat affected, TRLIA shall conserve 3 acres of snake habitat.	Permit	Within 1 year of Permit Issue Date	Permittee	
24	Mitigation for Giant garter snake will include avoidance of construction activities between October 1 and May 1 when the snake is hibernating. Additional mitigation for temporary and permanent impacts will include permanent protection of 134.37 acres of managed Giant garter snake habitat at a Department approved location. TRLIA will restore all temporary project impacts to wetlands to pre-project condition. In addition to conditions of the Department 2081(b) permit, TRLIA must also comply with all Giant garter snake avoidance and minimization measures set forth in the USFWS Guidelines for Restoration and or Replacement of Giant Garter Snake Habitat and Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake Habitat.	Permit	Within 1 year of Permit Issue Date	Permittee	
Central Valley Chinook salmon (spring-run)					

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
25	To avoid impacts to spring-run Chinook salmon, all Feather River and Bear River in-stream activities shall be limited to the period extending from July 1 to October 15. All activities which pose a risk of spill or other adverse impacts to waterways in the construction corridor shall be conducted during this period.	Permit	Entire Project	Permittee	
26	The construction manager shall notify the Department immediately by telephone at (916) 358-2900 and by written letter addressed to the Regional Manager, Region 2, within three (3) working days following any construction event which may threaten fish species.	Permit	Entire Project	Permittee	
27	No instream containment or diversion shall occur without the approval and proper permits from the Department and other appropriate resource agencies.	Permit	Entire Project	Permittee	
28	To prevent accidental spills of hazardous materials from entering waterways Best Management Practices shall be used during fueling or servicing of construction equipment and machinery. Refueling and hazardous materials storage will be restricted to areas at least 100 feet from wetlands, streams, or drainages. Where avoidance of 100 feet is not possible, refueling and hazardous materials storage will be limited to designated areas that are protected with berms lined with non-porous material to ensure that accidental spills will not contaminate the water body. All hazardous spills will be cleaned up immediately and disposed of properly	Permit	Entire Project	Permittee	
29	Drilling activities shall be closely monitored to detect accidental releases of drilling fluids. Construction shall be immediately halted in the event of a frac-out and the drilling contractor will take immediate remedial actions to reduce drilling pressure and thicken drilling mud. The construction manager shall notify the Department immediately by telephone at (916) 358-2900 and by written letter addressed to the Regional Manager, Region 2, within three (3) working days following any construction event which may threaten fish species. Prior to re-initiating drilling activities, the Department will meet with the appropriate parties on site to determine what modifications, if any, are required in the drilling activities, along with any remedial actions that are deemed necessary.	Permit	Entire Project	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
30	A long-term mitigation and monitoring plan (Plan) shall be developed by a qualified biologist, and approved by the Department, NOAA Fisheries, and the Service, prior to implementation of the levee setback phase of the project. The purpose of this Plan shall be to evaluate the effectiveness of the grading and drainage features in the levee setback area in reducing the risk of fish stranding and the stability of the drainage features and to determine the need for maintenance or modification. The monitoring plan shall include provisions for remediation and mitigation for any take of Central Valley Chinook salmon should the design of the levee setback area prove to be unsuccessful in preventing fish stranding. These measures shall include, as appropriate, such activities as regarding or fill depressions in the levee setback area. The recommended monitoring scheme shall include monitoring on an annual basis for at least ten years. The length of any additional monitoring period shall depend on the success of the floodplain habitat development. Following each high-flow season, a letter report shall be submitted to the Department, NOAA Fisheries, and the Service, summarizing the overall condition of the floodplain habitat and any changes that have occurred for previous year(s). If any remediation measures are required, they will be outlined in the letter report, along with a schedule specifying when the remediation activities will occur. Appropriate remediation measures will be taken as soon is practicable to minimize the potential for fish stranding while maintaining the desired habitat values and hydraulic characteristics of the area. The performance of the grading and drainage features in the levee setback area will be considered successful if there is no isolated standing water and there are no barriers to fish passage following any flood event that inundates the levee setback area.	MMRP	Post Project	Permittee	

ATTACHMENT 3

CALIFORNIA DEPARTMENT OF FISH AND GAME
MITIGATION PAYMENT TRANSMITTAL FORM

Project Applicant Instructions: Please fill out and attach this form to payment. For conservation banks, also attach the Bill(s) of Sale for credits sold. One form may be used for multiple transactions, **BUT YOU MUST USE A SEPARATE FORM FOR EACH CHECK YOU TRANSMIT**. Make sure to include Project Name, Project Tracking Number, and FASB Mitigation Tracking Number (if available) on the attached payment type.

(1) **DATE:** _____

TO: Sandra Morey, Regional Manager
Department of Fish and Game
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

(2) **FROM:** _____
Name

_____
Mailing Address

_____
City, State, Zip

_____
Telephone Number/FAX Number

(3) **RE:** Three Rivers Levee Improvement Authority, Feather-Bear Rivers Levee Setback Project

(4) **AGREEMENT/ACCOUNT INFORMATION:**
(Check the applicable type)

X 2081 Permit ☐ Conservation Bank ☐ 1802 Agreement ☐ 2835 NCCP

2081-2006-001-02
[HCPB Project Tracking Number]

_____
[FASB Mitigation Tracking Number (if available)]

Index _____ PCA _____

(4) PAYMENT TYPE (One check per form only):The following funds are being remitted in connection with the above referenced project:

Check information:

Total $_____ Check No. _____

Account No. _____ Bank Routing No. _____

a. Endowment: for Management of Conservation Land

Subtotal $_____

b. Habitat Enhancement

Subtotal $_____

c. Security: Cash Refundable Security Deposit

Subtotal $_____

d. Letter of Credit

Subtotal $_____
1. Financial Institution: _____
2. Letter of Credit Number: _____
3. Date of Expiration: _____

ATTACHMENT 3

CALIFORNIA DEPARTMENT OF FISH AND GAME
MITIGATION PAYMENT TRANSMITTAL FORM

MITIGATION PAYMENT TRANSMITTAL FORM INSTRUCTIONS

(1) DATE: Applicant or Permittee enters date in month / day / year format.

(2) FROM:

a. Name – Enter first name, middle initial, last name and title of principal officer if permittee is a business and name of business; or contact person if different than permittee and principal officer.

b. Mailing Address – Enter complete business mailing address or mailing address of contact person.

c. Telephone Number / FAX Number – Telephone number and fax number of principal officer or contact person listed above.

(3) RE:

Project Name – Region enters project name as it appears on Permit or Agreement document.

(4) PERMIT OR AGREEMENT TYPE / ACCOUNT INFORMATION

a. Agreement Type – Check the appropriate agreement or permit type.

b. Tracking Number– Region enters the project tracking number as it appears on the Tracking Surname Cover Sheet and Permit or Agreement document.

c. FASB Mitigation Tracking Number (if available) – Region enters the Mitigation Tracking Number (MT #) assigned by FASB for the project specific mitigation account if account has been set up prior to receiving current mitigation payment.

d. Index and PCA – Region enters the mitigation account codes associated with the accounts for deposit and expenditures.

(5) PAYMENT TYPE: Applicant or Permittee enters the following information.

a. Permanent Endowment for Management of Conservation Land – Enter the amount of the attached payment. A permanent endowment is an account established for the long-term management of habitat management land for conservation purposes as required by a Permit or Agreement.

b. Habitat Enhancement Fees – Enter the amount of the attached payment. The habitat enhancement fees are intended for the initial preparation of the land for transfer as habitat management lands.

c. Cash Refundable Security Deposit – Enter the amount of the deposit attached. A cash refundable security deposit may be a required condition of a Permit or Agreement to ensure the proper and timely implementation of those conditions.

d. Letter of Credit – Enter the amount of the attached letter of credit. 1. Financial Institution - Include the name of the financial institution from which the letter of credit was issued. 2. Date of Expiration – Enter the date of expiration from the letter of credit.