



State of California – Natural Resources Agency  
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**GAVIN NEWSOM, Governor**  
**CHARLTON H. BONHAM, Director**



July 17, 2020

Governor's Office of Planning & Research

**Jul 20 2020**

## **STATE CLEARINGHOUSE**

Tim Ashlock  
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Subject: Palms Groundwater Recovery Project (Project)  
Notice of Preparation (NOP)  
State Clearinghouse No. 2020060315

Dear Mr. Ashlock:

The California Department of Fish and Wildlife (CDFW) received an NOP for an Environmental Impact Report (EIR) from the Buena Vista Water Storage District (BVWSD), as Lead Agency, for the Project pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.<sup>1</sup>

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

### **CDFW ROLE**

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on

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

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projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

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

## **PROJECT DESCRIPTION SUMMARY**

**Proponent:** BVWSD is the Project applicant and Lead Agency for the purpose of CEQA.

**Objective:** The Recovery Project has the following primary objectives:

- Increase conjunctive management on the west side of Kern County by improving the BVWSD's ability to meet demands during periods when supply of surface water is limited with previously banked water supplies.
- Improve conveyance of previously stored water throughout the BVWSD area and to neighboring districts.
- Provide water for urban use in Kern County and possibly elsewhere.

**Project Description:** The Project is the construction and replacement of a suite of 14 wells, including nine new wells and five replacement wells. Additionally, conveyance pipelines would be installed to connect these wells to the water delivery system. Construction activities would include excavation and trenching to install the wells, and approximately 11.9 miles of conveyance pipe. The total area of disturbance would be approximately 72 acres. The new and replacement wells would be drilled to a depth of up to 500 feet and include an 18-inch casing. Staging areas for the construction equipment and materials would be adjacent to the Project area on previously disturbed land. The water pipelines will be connected to BVWSD's existing turnout at the

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California Aqueduct at BV8, which can be used to either input water to, or withdraw water from, the California Aqueduct.

**Location:** The Project is located in the BVWSD service area, approximately 4 miles south of the unincorporated community of Buttonwillow, Kern County, California, within Sections 2 to 5, 8 to 11, 14, and 15; Township 30 South; Range 24 East; Mount Diablo Base & Meridian.

**Timeframe:** Construction activities are expected to begin in the fall of 2020 and be completed within 11 months.

## COMMENTS AND RECOMMENDATIONS

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

Aerial imagery of the Project boundary and its surroundings within the Project boundary shows nearby riparian corridors, riparian-lined canal corridors, large trees, Valley saltbush and Great Valley mesquite scrub habitat, upland grassland, and agricultural habitats. Tule Elk State Natural Reserve, managed by the California Department of Parks and Recreation, is located adjacent to the Project boundary. Based on a review of the Project description, a review of California Natural Diversity Database (CNDDB) records, and the surrounding habitat, several special-status species could potentially be impacted by Project activities.

Project-related construction activities within the Project boundary including but not limited to construction and operation of additional water banking facilities and introduction of surface water flows for storage could impact the following special-status plant and wildlife species and habitats known to occur in the area: the State threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*); the State and federally endangered Tipton kangaroo rat (*Dipodomys nitratooides nitratooides*); the State and federally endangered giant kangaroo rat (*Dipodomys ingens*); the State and federally endangered and State fully protected blunt-nosed leopard lizard (*Gambelia sila*); the State threatened Swainson's hawk (*Buteo swainsoni*), Nelson's antelope squirrel (*Ammospermophilus nelsoni*), and tricolored blackbird (*Agelaius tricolor*); the California Rare Plant Rank (CRPR) 1B.1 alkali-sink goldfields (*Lasthenia chrysantha*), oil nest straw (*Stylocline citroleum*), and slough thistle (*Cirsium crassicaule*); the CRPR 1B.2 recurved larkspur (*Delphinium recurvatum*); and the State species of special concern American badger (*Taxidea taxus*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), San Joaquin pocket mouse (*Perognathus inornatus*), burrowing owl

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(*Athene cunicularia*), Le Conte's thrasher (*Toxistoma lecontei*), western pond turtle (*Emys marmorata*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), California glossy snake (*Arizona elegans occidentalis*), western spadefoot (*Spea hammondi*), and coast horned lizard (*Phrynosoma blainvillii*).

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

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

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

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

##### **COMMENT 1: San Joaquin Kit Fox (SJKF)**

**Issue:** SJKF occurrences have been documented within the Project boundary (CDFW 2020a). The Project has the potential to temporarily disturb and permanently alter suitable habitat for SJKF and directly impact individuals if present during construction, recharge, and other activities.

SJKF den in a variety of areas such as rights-of-way, agricultural and fallow or ruderal habitat, dry stream channels, and canal levees, and populations can fluctuate over time. SJKF are also capable of occupying urban environments (Cypher and Frost 1999). SJKF may be attracted to Project areas due to the type and level of ground-disturbing activities and the loose, friable soils resulting from intensive ground disturbance. SJKF will forage in fallow and agricultural fields and utilize streams and canals as dispersal corridors. As a result, there is potential for SJKF to occupy all suitable habitat within the Project boundary and surrounding area.

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**Specific impact:** Without appropriate avoidance and minimization measures for SJKF, potential significant impacts associated with construction include habitat loss, den collapse, inadvertent entrapment, reduced reproductive success, reduction in health and vigor of young, and direct mortality of individuals.

**Evidence impact is potentially significant:** Habitat loss resulting from land conversion to agricultural, urban, and industrial development is the primary threat to SJKF (Cypher et al. 2013). Western Kern County supports relatively large areas of high suitability habitat and one of the largest remaining populations of SJKF (Cypher et al. 2013). The Project area is within this remaining highly suitable habitat, which is otherwise intensively managed for agriculture. Therefore, subsequent ground-disturbing activities have the potential to significantly impact local SJKF populations.

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

To evaluate potential impacts to SJKF associated with subsequent land conversion, ground disturbance and construction, CDFW recommends conducting the following evaluation of project areas and implementing the following mitigation measures.

**Recommended Mitigation Measure 1: SJKF Habitat Assessment**

For all Project-specific components including construction and land conversion, CDFW recommends that a qualified biologist conduct a habitat assessment in advance of Project implementation, to determine if the Project area or its immediate vicinity contains suitable habitat for SJKF.

**Recommended Mitigation Measure 2: SJKF Surveys and Minimization**

CDFW recommends assessing presence/absence of SJKF by having qualified biologists conducting surveys of Project areas and a 500-foot buffer of Project areas to detect SJKF and their sign. CDFW also recommends following the USFWS (2011) "Standardized recommendations for protection of the San Joaquin kit fox prior to and during ground disturbance".

**Recommended Mitigation Measure 3: SJKF Take Authorization**

SJKF detection warrants consultation with CDFW to discuss how to avoid take or, if avoidance is not feasible, to acquire an Incidental Take Permit (ITP) prior to ground-disturbing activities, pursuant to Fish and Game Code section 2081 subdivision (b).

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## **COMMENT 2: Blunt-nosed Leopard Lizard (BNLL)**

**Issue:** BNLL have been documented in suitable habitat within and adjacent to the Project boundary (CDFW 2020a). Suitable BNLL habitat includes areas of grassland and upland scrub that contain requisite habitat elements, such as small mammal burrows. BNLL also use open space patches between suitable habitats, including disturbed sites, unpaved access roadways, and canals.

**Specific impact:** Without appropriate avoidance and minimization measures for BNLL, potentially significant impacts associated with ground-disturbing activities include habitat loss, burrow collapse, reduced reproductive success, reduced health and vigor of eggs and/or young, and direct mortality.

**Evidence impact is potentially significant:** Habitat loss resulting from cultivation, agricultural, urban, industrial development, petroleum and mineral extraction, and construction of communication and irrigation infrastructure is the primary threat to BNLL (ESRP 2020a). The range for BNLL now consists of scattered parcels of undeveloped land within the valley floor and the foothills of the Coast Range (USFWS 1998). Some undeveloped areas with suitable BNLL habitat occur within the Project and surrounding area; therefore, ground disturbance and conversion of suitable habitat has the potential to significantly impact local BNLL populations.

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

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

#### **Recommended Mitigation Measure 4: BNLL Habitat Assessment**

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

#### **Recommended Mitigation Measure 5: BNLL Surveys**

If suitable habitat is present, then prior to initiating any vegetation- or ground-disturbance activities, CDFW recommends conducting surveys in accordance with the "Approved Survey Methodology for the Blunt-nosed Leopard Lizard" (CDFW 2019). This survey protocol, designed to optimize BNLL detectability, reasonably assures CDFW that ground disturbance will not result in take of this fully protected species.

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CDFW advises that BNLL surveys be completed no more than one year prior to initiation of ground disturbance. Please note that protocol-level surveys must be conducted on multiple dates during late spring, summer, and fall of the same calendar year, and that within these time periods, there are specific protocol-level date, temperature, and time parameters that must be adhered to. As a result, protocol-level surveys for BNLL are not synonymous with 30-day “preconstruction surveys” often recommended for other wildlife species. In addition, the BNLL protocol specifies different survey effort requirements based on whether the disturbance results from maintenance activities or if the disturbance results in habitat removal (CDFW 2019).

### **Recommended Mitigation Measure 6: BNLL Take Avoidance**

BNLL detection during protocol-level surveys warrants consultation with CDFW to discuss whether take of BNLL can be avoided during ground-disturbing Project activities.

### **COMMENT 3: San Joaquin Antelope Squirrel (SJAS)**

**Issue:** SJAS have been documented to occur within areas of suitable habitat within the Project vicinity (CDFW 2020a). Suitable SJAS habitat includes areas of grassland, upland scrub, and alkali sink habitats that contain requisite habitat elements, such as small mammal burrows.

**Specific impact:** Without appropriate avoidance and minimization measures for SJAS, potential significant impacts include loss of habitat, burrow collapse, inadvertent entrapment of individuals, reduced reproductive success such as reduced health or vigor of young, and direct mortality of individuals.

**Evidence impact is potentially significant:** Habitat loss resulting from agricultural, urban, and industrial development is the primary threat to SJAS. Very little suitable habitat for this species remains along the western floor of the San Joaquin Valley (ESRP 2020b). Areas of suitable habitat within the Project represent some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture. As a result, ground-disturbing activities within the Project may have the potential to significantly impact local populations of SJAS.

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

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

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### **Recommended Mitigation Measure 7: SJAS Habitat Assessment**

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

### **Recommended Mitigation Measure 8: SJAS Surveys**

In areas of suitable habitat, CDFW recommends that a qualified biologist conduct focused daytime visual surveys for SJAS using line transects with 10- to 30-meter spacing of Project areas and a 50-foot buffer around those areas. CDFW further advises that these surveys be conducted between April 1 and September 20, during daytime temperatures between 68° and 86° F (CDFG 1990a), to maximize detectability.

### **Recommended Mitigation Measure 9: SJAS Avoidance**

If suitable habitat is present and surveys are not feasible, CDFW advises maintenance of a 50-foot minimum no-disturbance buffer around all small mammal burrow entrances until the completion of Project activities.

### **Recommended Mitigation Measure 10: SJAS Take Authorization**

SJAS detection warrants consultation with CDFW to discuss how to avoid take or, if avoidance is not feasible, to acquire a State ITP prior to ground-disturbing activities, pursuant to Fish and Game Code section 2081 subdivision (b).

### **COMMENT 4: Tipton Kangaroo Rat (TKR)**

**Issue:** TKR have been documented to occur within areas of suitable habitat within and adjacent to the Project (CDFW 2020a). Suitable TKR habitat includes areas of grassland, upland scrub, and alkali sink habitats that contain requisite habitat elements, such as small mammal burrows.

**Specific impact:** Without appropriate avoidance and minimization measures for TKR, potential significant impacts include loss of habitat, burrow collapse, inadvertent entrapment of individuals, reduced reproductive success such as reduced health or vigor of young, and direct mortality of individuals.

**Evidence impact is potentially significant:** Habitat loss resulting from agricultural, urban, and industrial development is the primary threat to TKR. Very little suitable habitat for this species remains along the western floor of the San Joaquin Valley (ESRP 2020c). Areas of suitable habitat within the Project represent some of the

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only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture. As a result, ground-disturbing activities within the Project may have the potential to significantly impact local populations of TKR.

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

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

**Recommended Mitigation Measure 11: TKR Habitat Assessment**

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

**Recommended Mitigation Measure 12: TKR Avoidance**

If suitable habitat is present, CDFW advises maintenance of a 50-foot minimum no-disturbance buffer around all small mammal burrow entrances of suitable size for TKR use.

**Recommended Mitigation Measure 13: TKR Surveys**

If burrow avoidance is not feasible, CDFW recommends that focused protocol-level trapping surveys be conducted by a qualified wildlife biologist that is permitted to do so by both CDFW and USFWS, to determine if TKR occurs in the Project area. CDFW advises that these surveys be conducted in accordance with the USFWS (2013) "Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats," well in advance of ground-disturbing activities in order to determine whether impacts to TKR could occur.

**Recommended Mitigation Measure 14: TKR Take Authorization**

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

**COMMENT 5: Giant Kangaroo Rat (GKR)**

**Issue:** GKR have been documented within areas of suitable habitat adjacent to the Project area (CDFW 2020a). Suitable GKR habitat includes areas of grassland, upland scrub, and alkali sink habitats that contain requisite habitat elements, such as small mammal burrows.

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**Specific impact:** Without appropriate avoidance and minimization measures for GKR, potential significant impacts include loss of habitat, burrow collapse, inadvertent entrapment of individuals, reduced reproductive success such as reduced health or vigor of young, and direct mortality of individuals.

**Evidence impact is potentially significant:** Habitat loss resulting from agricultural and petroleum development is the primary threat to GKR. Very little suitable habitat for this species remains along the western floor of the San Joaquin Valley (ESRP 2020d). Areas of suitable habitat within the Project vicinity represent some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture. As a result, ground-disturbing activities within the Project may have the potential to significantly impact local populations of GKR.

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

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

**Recommended Mitigation Measure 15: GKR Habitat Assessment**

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

**Recommended Mitigation Measure 16: GKR Surveys**

In areas of suitable habitat, CDFW recommends that a qualified biologist conduct focused daytime visual surveys for GKR using line transects with 10- to 30-meter spacing of Project areas and a 50-foot buffer around those areas. Surveys should focus on the identification of their characteristic habitat types and burrow systems (burrow openings 50 to 55 mm in diameter) (CDFW 1990b).

**Recommended Mitigation Measure 17: GKR Avoidance**

If suitable habitat is present and surveys are not feasible, CDFW advises maintenance of a 50-foot minimum no-disturbance buffer around all small mammal burrow entrances until the completion of Project activities.

**Recommended Mitigation Measure 18: GKR Take Authorization**

GKR detection or presence of characteristic habitat or burrow systems warrants consultation with CDFW to discuss how to avoid take or, if avoidance is not feasible,

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to acquire an ITP prior to ground-disturbing activities, pursuant to Fish and Game Code section 2081 subdivision (b).

#### **COMMENT 6: Swainson's Hawk (SWHA)**

**Issue:** SWHA have been documented within the Project area. Review of recent aerial imagery indicates that trees capable of supporting nesting SWHA occur along nearby waterways and Tule Elk Reserve. Landscape trees may also provide suitable nesting habitat. In addition, grassland and agricultural land in the surrounding area provide suitable foraging habitat for SWHA, increasing the likelihood of SWHA occurrence within the vicinity.

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

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

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

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

#### **Recommended Mitigation Measure 19: Focused SWHA Surveys**

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

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### **Recommended Mitigation Measure 20: SWHA Avoidance**

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

### **Recommended Mitigation Measure 21: Tree Removal**

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

### **Recommended Mitigation Measure 22: SWHA Take Authorization**

If SWHA are detected and a ½-mile no-disturbance nest buffer is not feasible, consultation with CDFW is warranted to determine if the Project can avoid take. If SWHA take cannot be avoided, issuance of an ITP prior to Project activities is warranted to comply with CESA

### **COMMENT 7: Tricolored Blackbird (TRBL)**

**Issue:** TRBL are known to occur in the Project vicinity (CDFW 2020a, UC Davis 2020). Review of aerial imagery indicates that the Project boundary includes flood-irrigated agricultural land, which is an increasingly important nesting habitat type for TRBL, particularly in the San Joaquin Valley (Meese et al. 2017).

**Specific impact:** Without appropriate avoidance and minimization measures for TRBL, potential significant impacts associated subsequent development include nesting habitat loss, nest and/or colony abandonment, reduced reproductive success, and reduced health and vigor of eggs and/or young.

**Evidence impact would be significant:** As mentioned above, flood-irrigated agricultural land is an increasingly important nesting habitat type for TRBL, particularly in the San Joaquin Valley (Meese et al. 2014). This nesting substrate is present within the Project vicinity. TRBL aggregate and nest colonially, forming colonies of up to 100,000 nests (Meese et al. 2014). Approximately 86% of the

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global population is found in the San Joaquin Valley (Kelsey 2008, Weintraub et al. 2016). In addition, TRBL have been forming larger colonies that contain progressively larger proportions of the species' total population (Kelsey 2008). In 2008, for example, 55% of the species' global population nested in only two colonies, which were located in silage fields (Kelsey 2008). Nesting can occur synchronously, with all eggs laid within one week (Orians 1961). For these reasons, depending on timing, disturbance to nesting colonies can cause nest entire colony site abandonment and loss of all unfledged nests, significantly impacting TRBL populations (Meese et al. 2014).

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

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

### **Recommended Mitigation Measure 23: TRBL Surveys**

CDFW recommends that construction be timed to avoid the typical bird-breeding season of February 1 through September 15. If Project activity that could disrupt nesting must take place during that time, CDFW recommends that a qualified wildlife biologist conduct surveys for nesting TRBL no more than 10 days prior to the start of implementation to evaluate presence/absence of TRBL nesting colonies in proximity to Project activities and to evaluate potential Project-related impacts.

### **Recommended Mitigation Measure 24: TRBL Colony Avoidance**

If an active TRBL nesting colony is found during preconstruction surveys, CDFW recommends implementation of a minimum 300-foot no-disturbance buffer, in accordance with CDFW's "Staff Guidance Regarding Avoidance of Impacts to Tricolored Blackbird Breeding Colonies on Agricultural Fields in 2015" (CDFW 2015), until the breeding season has ended or until a qualified biologist has determined that nesting has ceased and the young have fledged and are no longer reliant upon the colony or parental care for survival. It is important to note that TRBL colonies can expand over time and for this reason, CDFW recommends that an active colony be reassessed to determine its extent within 10 days prior to Project initiation.

### **Recommended Mitigation Measure 25: TRBL Take Authorization**

In the event that a TRBL nesting colony is detected during surveys, consultation with CDFW is warranted to discuss whether the Project can avoid take; if take avoidance is not feasible, to acquire an ITP, pursuant to Fish and Game Code section 2081 subdivision (b), prior to any Project activities.

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## **COMMENT 8: Special-Status Plants**

**Issue:** Special-status plant species meeting the definition of rare or endangered under CEQA section 15380 are known to occur within the Project and surrounding area. Alkali-sink goldfields, oil nest straw, slough thistle, and recurved larkspur have been documented within the Project area.

**Specific impact:** Without appropriate avoidance and minimization measures for special-status plants, potential significant impacts associated with subsequent construction include loss of habitat, loss or reduction of productivity, and direct mortality.

**Evidence impact would be significant:** Alkali-sink goldfields, oil nest straw, slough thistle, recurved larkspur, and many other special-status plant species are threatened by grazing and agricultural, urban, and energy development. Many historical occurrences of these species are presumed extirpated (CNPS 2019). Though new populations have recently been discovered, impacts to existing populations have the potential to significantly impact populations of plant species.

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

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

#### **Recommended Mitigation Measure 26: Special-Status Plant Surveys**

CDFW recommends that individual Project sites be surveyed for special-status plants by a qualified botanist following the “Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities” (CDFG 2018b). This protocol, which is intended to maximize detectability, includes the identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period.

#### **Recommended Mitigation Measure 27: Special-Status Plant Avoidance**

CDFW recommends that special-status plant species be avoided whenever possible by delineating and observing a no-disturbance buffer of at least 50 feet from the outer edge of the plant population(s) or specific habitat type(s) required by special-status plant species. If buffers cannot be maintained, then consultation with CDFW may be warranted to determine appropriate minimization and mitigation measures for impacts to special-status plant species.

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### **Recommended Mitigation Measure 28: Listed Plant Species Take Authorization**

If a State-listed plant species is identified during botanical surveys, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, take authorization is warranted. Take authorization would occur through issuance of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b).

### **COMMENT 9: Burrowing Owl (BUOW)**

**Issue:** BUOW occur within and in the vicinity of the Project (CDFW 2020a). BUOW inhabit open grassland containing small mammal burrows, a requisite habitat feature used by BUOW for nesting and cover. Habitat both within and surrounding the Project supports grassland habitat. Therefore, there is potential for BUOW to occupy or colonize the Project.

**Specific impact:** Potentially significant direct impacts associated with subsequent activities and land conversion include habitat loss, burrow collapse, inadvertent entrapment, nest abandonment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

**Evidence impact is potentially significant:** BUOW rely on burrow habitat year-round for their survival and reproduction. Habitat loss and degradation are considered the greatest threats to BUOW in California's Central Valley (Gervais et al. 2008). The Project and surrounding area contain remnant undeveloped land but is otherwise intensively managed for agriculture; therefore, subsequent ground-disturbing activities associated with subsequent constructions have the potential to significantly impact local BUOW populations. In addition, and as described in CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), excluding and/or evicting BUOW from their burrows is considered a potentially significant impact under CEQA.

### **Recommended Potentially Feasible Mitigation Measure(s) (Regarding Environmental Setting and Related Impact)**

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

### **Recommended Mitigation Measure 29: BUOW Habitat Assessment**

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

Attachment 1

**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE  
RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM  
(MMRP)**

**PROJECT: Palms Groundwater Recovery Project**

<b>RECOMMENDED MITIGATION MEASURES</b>	<b>STATUS/DATE/INITIALS</b>
<i>Before Disturbing Soil or Vegetation</i>	
<b>Recommended Mitigation Measure 1: SJKF Habitat Assessment</b>	
<b>Recommended Mitigation Measure 2: SJKF Surveys and Minimization</b>	
<b>Recommended Mitigation Measure 3: SJKF Take Authorization</b>	
<b>Recommended Mitigation Measure 4: BNLL Habitat Assessment</b>	
<b>Recommended Mitigation Measure 5: BNLL Surveys</b>	
<b>Recommended Mitigation Measure 7: SJAS Habitat Assessment</b>	
<b>Recommended Mitigation Measure 8: SJAS Surveys</b>	
<b>Recommended Mitigation Measure 10: SJAS Take Authorization</b>	
<b>Recommended Mitigation Measure 11: TKR Habitat Assessment</b>	
<b>Recommended Mitigation Measure 13: TKR Surveys</b>	
<b>Recommended Mitigation Measure 14: TKR Take Authorization</b>	
<b>Recommended Mitigation Measure 15: GKR Habitat Assessment</b>	
<b>Recommended Mitigation Measure 16: GKR Surveys</b>	
<b>Recommended Mitigation Measure 18: GKR Take Authorization</b>	
<b>Recommended Mitigation Measure 19: Focused SWHA Surveys</b>	
<b>Recommended Mitigation Measure 21: Tree Removal</b>	
<b>Recommended Mitigation Measure 22: SWHA Take Authorization</b>	

<b>RECOMMENDED MITIGATION MEASURES</b>	<b>STATUS/DATE/INITIALS</b>
<b>Recommended Mitigation Measure 23: TRBL Surveys</b>	
<b>Recommended Mitigation Measure 25: TRBL Take Authorization</b>	
<b>Recommended Mitigation Measure 26: Special-Status Plant Surveys</b>	
<b>Recommended Mitigation Measure 28: Listed Plant Species Take Authorization</b>	
<b>Recommended Mitigation Measure 29: BUOW Habitat Assessment</b>	
<b>Recommended Mitigation Measure 30: BUOW Surveys</b>	
<b>Recommended Mitigation Measure 32: BUOW Passive Relocation and Mitigation</b>	
<b>Recommended Mitigation Measure 33: Habitat Assessment (Other Species of Special Concern)</b>	
<b>Recommended Mitigation Measure 34: Surveys (Other Species of Special Concern)</b>	
<b>Recommended Mitigation Measure 36: Stream and Wetland Mapping</b>	
<b>Recommended Mitigation Measure 37: Stream and Wetland Habitat Mitigation</b>	
<i>During Construction</i>	
<b>Recommended Mitigation Measure 6: BNLL Take Avoidance</b>	
<b>Recommended Mitigation Measure 9: SJAS Avoidance</b>	
<b>Recommended Mitigation Measure 12: TKR Avoidance</b>	
<b>Recommended Mitigation Measure 17: GKR Avoidance</b>	
<b>Recommended Mitigation Measure 20: SWHA Avoidance</b>	
<b>Recommended Mitigation Measure 24: TRBL Colony Avoidance</b>	
<b>Recommended Mitigation Measure 27: Special-Status Plant Avoidance</b>	
<b>Recommended Mitigation Measure 31: BUOW Avoidance</b>	

<b>RECOMMENDED MITIGATION MEASURES</b>	<b>STATUS/DATE/INITIALS</b>
<b>Recommended Mitigation Measure 35: Avoidance (Other Species of Special Concern)</b>	

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### **Recommended Mitigation Measure 30: BUOW Surveys**

If suitable habitat is present on or in the vicinity of the Project area, CDFW recommends assessing presence or absence of BUOW by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium's "Burrowing Owl Survey Protocol and Mitigation Guidelines" (CBOC 1993) and the "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), which suggest three or more surveillance surveys conducted during daylight with each visit occurring at least three weeks apart during the peak breeding season (i.e., April 15 to July 15), when BUOW are most detectable. In addition, CDFW advises that surveys include a minimum 500-foot buffer area around the Project area.

### **Recommended Mitigation Measure 31: BUOW Avoidance**

CDFW recommends that no-disturbance buffers, as outlined in the "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), be implemented prior to and during any ground-disturbing activities. Specifically, CDFW's Staff Report recommends that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

\* meters (m)

### **Recommended Mitigation Measure 32: BUOW Passive Relocation and Mitigation**

If BUOW are found within these recommended buffers and avoidance is not possible, it is important to note that according to the Staff Report (CDFG 2012), excluding birds from burrows is not a take avoidance, minimization, or mitigation method and is instead considered a potentially significant impact under CEQA. If it is necessary for Project implementation, CDFW recommends that burrow exclusion be conducted by qualified biologists and only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. CDFW recommends replacement of occupied burrows with artificial burrows at a ratio of one burrow

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collapsed to one artificial burrow constructed (1:1) to mitigate for evicting BUOW and the loss of burrows. BUOW may attempt to colonize or re-colonize an area that will be impacted; thus, CDFW recommends ongoing surveillance at a rate that is sufficient to detect BUOW if they return.

### **COMMENT 10: Other State Species of Special Concern**

**Issue:** Tulare grasshopper mouse, San Joaquin pocket mouse, San Joaquin coachwhip, western spadefoot, coast horned lizard, California glossy snake, Le Conte's thrasher, and American badger can inhabit grassland and upland scrub habitats (Shuford and Gardali 2008, Thomson et al. 2016). All the species mentioned above have been documented to occur in the vicinity of the Project, which supports requisite habitat elements for these species (CDFW 2020a).

**Specific impact:** Without appropriate avoidance and minimization measures for these species, potentially significant impacts associated with ground disturbance include habitat loss, nest/den/burrow abandonment, which may result in reduced health or vigor of eggs and/or young, and direct mortality.

**Evidence impact is potentially significant:** Habitat loss threatens all of the species mentioned above (Thomson et al. 2016). Habitat within and adjacent to the Project represents some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture. As a result, ground-and-vegetation-disturbing activities associated with development of the Project have the potential to significantly impact local populations of these species.

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

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

#### **Recommended Mitigation Measure 33: Habitat Assessment**

CDFW recommends that a qualified biologist conduct a habitat assessment in advance of project implementation, to determine if project areas or their immediate vicinity contain suitable habitat for the species mentioned above.

#### **Recommended Mitigation Measure 34: Surveys**

If suitable habitat is present, CDFW recommends that a qualified biologist conduct focused surveys for applicable species and their requisite habitat features to evaluate potential impacts resulting from ground and vegetation disturbance.

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### **Recommended Mitigation Measure 35: Avoidance**

Avoidance whenever possible is encouraged via delineation and observance a 50-foot no-disturbance buffer around dens of mammals like the American badger as well as the entrances of burrows that can provide refuge for small mammals, reptiles, and amphibians.

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

### **COMMENT 11: Wetland and Riparian Habitats**

**Issue:** The Project area is in the immediate vicinity of numerous waterways, riparian and wetland areas. Development within the Project has the potential to involve temporary and permanent impacts to these features.

**Specific impact:** Project activities have the potential to result in the loss of riparian and wetland vegetation, in addition to the degradation of wetland and riparian areas through grading, fill, and related development.

**Evidence impact is potentially significant:** The Project vicinity includes stream and wetland features within an agricultural landscape that also maintains undeveloped habitats. Riparian and associated floodplain and wetland areas are valuable for their ecosystem processes such as protecting water quality by filtering pollutants and transforming nutrients; stabilizing stream banks to prevent erosion and sedimentation/siltation; and dissipating flow energy during flood conditions, thereby spreading the volume of surface water, reducing peak flows downstream, and increasing the duration of low flows by slowly releasing stored water into the channel through subsurface flow. Within the San Joaquin Valley, modifications of streams to accommodate human uses has resulted in damming, canalizing, and channelizing of many streams, though some natural stream channels and small wetland or wetted areas remain (Edminster 2002). The Fish and Game Commission policy regarding wetland resources discourages development or conversion of wetlands that results in any net loss of wetland acreage or habitat value. Construction activities within these features also has the potential to impact downstream waters as a result of Project site impacts leading to erosion, scour, and changes in stream morphology.

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

To evaluate potential impacts to wetland and riparian habitats associated with subsequent development, CDFW recommends conducting the following evaluation of project areas and implementing the following mitigation measures.

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### **Recommended Mitigation Measure 36: Stream and Wetland Mapping**

CDFW recommends that formal stream mapping and wetland delineation be conducted by a qualified biologist or hydrologist, as warranted, to determine the baseline location, extent, and condition of streams (including any floodplain) and wetlands within and adjacent to the Project area. Please note that while there is overlap, State and Federal definitions of wetlands differ, and complete stream mapping commonly differs from delineations used by the United States (U.S.) Army Corps of Engineers specifically to identify the extent of Waters of the U.S.

Therefore, it is advised that the wetland delineation identify both State and Federal wetlands in the Project area as well as the extent of all streams including floodplains, if present, within the Project area. CDFW advises that site map(s) depicting the extent of any activities that may affect wetlands, lakes, or streams be included with any Project site evaluations, to clearly identify areas where stream/riparian and wetland habitats could be impacted from Project activities.

### **Recommended Mitigation Measure 37: Stream and Wetland Habitat Mitigation**

CDFW recommends that the potential direct and indirect impacts to stream/riparian and wetland habitat be analyzed according to each Project activity. Based on those potential impacts, CDFW recommends that the EIR include measures to avoid, minimize, and/or mitigate those impacts. CDFW recommends that impacts to riparian habitat (i.e., biotic and abiotic features) take into account the effects to stream function and hydrology from riparian habitat loss or damage, as well as potential effects from the loss of riparian habitat to special-status species already identified herein. CDFW recommends that any losses to stream and wetland habitats be offset with corresponding riparian and wetland habitat restoration incorporating native vegetation to replace the value to fish and wildlife provided by the habitats lost from Project implementation. If on-site restoration to replace habitats is not feasible, CDFW recommends offsite mitigation by restoring or enhancing in-kind riparian or wetland habitat and providing for the long-term management and protection of the mitigation area, to ensure its persistence.

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

**Federally Listed Species:** CDFW recommends consulting with USFWS regarding potential impacts to federally listed species. Take under the Federal Endangered Species Act (FESA) is more broadly defined than CESA; take under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS in order to comply with FESA is advised well in advance of any Project activities.

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**Lake and Streambed Alteration:** Project activities have the potential to substantially change the bed, bank, and channel of lakes, streams, and associated wetlands onsite and/or substantially extract or divert the flow of any such feature that is subject to CDFW's regulatory authority pursuant Fish and Game Code section 1600 et seq. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake (including the removal of riparian vegetation); (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent as well as those that are perennial.

CDFW is required to comply with CEQA in the issuance of a Lake or Streambed Alteration Agreement (LSAA); therefore, if the CEQA document approved for the Project does not adequately describe the Project and its impacts to lakes or streams, a subsequent CEQA analysis may be necessary for LSAA issuance. For information on notification requirements, please refer to CDFW's website (<https://wildlife.ca.gov/Conservation/LSA>) or contact CDFW staff in the Central Region Lake and Streambed Alteration Program at (559) 243-4593.

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

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

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

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recommends that a qualified biologist continuously monitor nests to detect behavioral changes resulting from the project. If behavioral changes occur, CDFW recommends that the work causing that change cease and CDFW be consulted for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction area would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist advise and support any variance from these buffers and notify CDFW in advance of implementing a variance.

## **ENVIRONMENTAL DATA**

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

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

## **FILING FEES**

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

## **CONCLUSION**

CDFW appreciates the opportunity to comment on the NOP to assist BVWSD in identifying and mitigating Project impacts on biological resources.

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If you have questions regarding these comments, please contact Annette Tenneboe, Senior Environmental Scientist (Specialist), at the address on this letterhead, by phone at (559) 243-4014 extension 231, or by email at [Annette.Tenneboe@wildlife.ca.gov](mailto:Annette.Tenneboe@wildlife.ca.gov).

Sincerely,

DocuSigned by:  
  
FA83F09FE08945A...  
Julie A. Vance  
Regional Manager

Attachment 1

ec: Office of Planning and Research  
State Clearinghouse  
[state.clearinghouse.opr.ca.gov](http://state.clearinghouse.opr.ca.gov)

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