State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

May 9, 2022

Rochelle Amrhein
California Department of Water Resources
P.O. Box 942836
Sacramento, California 94236
Rochelle.Amrhein@water.ca.gov

Subject: California Aqueduct Milepost 230.6 to 231.4 Investigation, Design, and Repair (Project)
MITIGATED NEGATIVE DECLARATION (MND)
State Clearinghouse No. 2022030757

Dear Ms. Amrhein:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt an MND from the California Department of Water Resources (DWR) for the above-referenced Project pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

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. While the comment period may have ended, CDFW would appreciate if you will still consider our comments.

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

[1] 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.

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.

Fully Protected Species: 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, respectively. Take of any fully protected species is prohibited and CDFW cannot authorize their incidental take for the Project.

Bird Protection: CDFW has jurisdiction over actions that may 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 section 3503 (regarding unlawful take, possession, or needless destruction of the nest or eggs of any bird), section 3503.5 (regarding the take, possession, or destruction of any birds-of-prey or their nests or eggs), and section 3513 (regarding unlawful take of any migratory nongame bird).

PROJECT DESCRIPTION SUMMARY

DWR proposes to investigate, design, and repair the California Aqueduct (Aqueduct) between Milepost (MP) 230.6 and 231.44. The following steps will address the unstable soils in the area and secure the surrounding infrastructure:

- Conduct geotechnical exploration to determine soil behavior types, weak areas, and soil moisture contents in the area.
- Reinforce approximately 1.18 miles of Aqueduct embankment to improve soil structure and reduce seepage.
- Restore the embankment to the design elevation to reduce risk of overtopping.
- Repair any damage to the Aqueduct liner to prevent seepage.
- Raise approximately 1.4 miles of Aqueduct liner to design elevation to prevent seepage and erosion.
- Reconstruct the road on top of the restored embankment to restore access

Geotechnical investigations are proposed to begin in 2023. Results and analysis from the investigations will determine the best repair option for the Project. Potential options have been identified as appropriate remediation and include ground compaction, permeation grouting, and cut-off walls.

Proponent: DWR

Objectives: The Project would repair the embankment of the California Aqueduct on the east side of Pool 27 and repair both sides of the liner. The Project would also involve geotechnical investigations prior to any repairs to collect data that would be used in the design of the repair.

Location: The proposed Project is approximately four miles south of Buttonwillow, in Kern County (UTM 277072.307m E and 3913732.073m N). DWR currently plans to repair the embankment on both sides of the California Aqueduct, in Pool 27, from MP 230.7 to 231.05 and MP 231.2 to 231.44.

Timeframe: Project implementation is proposed to begin in 2023.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist DWR in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife i.e., (biological) resources. Editorial comments or other suggestions may also be included to improve the document. Based on a review of the Project description, a review of California Natural Diversity Database (CNDDB) records, a review of aerial photographs of the Project and surrounding habitat, several special status species could potentially be impacted by Project activities.

In particular, CDFW is concerned regarding potential impacts for the following special status wildlife species and habitats known to occupy the Project area: the State threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*); the State and federally endangered Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*); the State and federally endangered giant kangaroo rat (*Dipodomys ingens*); the State threatened Nelson's (=San Joaquin) antelope squirrel (*Ammospermophilus nelsoni*); the State and federally endangered and State fully-protected blunt-nosed leopard lizard (*Gambelia sila*); the State species of special concern burrowing owl (*Athene cunicularia*), American badger (*Taxidea taxus*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), San Joaquin pocket mouse (*Perognathus inornatus*), short-nosed kangaroo rat (*Dipodomys nitratoides brevinasus*), and California glossy snake (*Arizona elegans occidentalis*); the federally endangered and California Rare Plant Rank (CRPR) 1B.2 Kern mallow (*Eremalche parryi* ssp. *kernesis*); the CRPR 1B.2 recurved larkspur (*Delphinium recurvatum*) and oil nestraw (*Stylocline citroleum*); and the CRPR 4.2 Hoover's eriastrum (*Eriastrum hooveri*). Suitable habitat for Crotch bumble bee (*Bombus crotchii*) occurs in the Project vicinity. Other species of birds, amphibians, reptiles, mammals, fish, and plants also compose the local ecosystem within the Project boundary. Valley saltbush scrub habitat is located in the Project vicinity.

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

CDFW recommends that the following modifications and/or edits be incorporated into the MND, including proposed avoidance, minimization, and compensatory measures, prior to its adoption by DWR.

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 United States Fish and Wildlife Service (USFWS)?

COMMENT 1: San Joaquin kit fox (SJKF)

Issues and Impacts: SJKF occurrences have been documented within the Project area (CDFW 2022), and the MND acknowledges presence of SJKF. Habitat loss resulting from land conversion to agricultural, urban, and industrial development is the primary threat to SJKF (Cypher et al. 2013). Kern County supports relatively large areas of high and medium suitability SJKF habitat (Cypher et al. 2013). The Project area is bordered by highly suitable habitat in an area that is otherwise under intensive agriculture.

SJKF den in rights-of-way, agricultural and fallow/ruderal habitat, dry stream channels, and canal levees, etc., 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. 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.

Recommended Mitigation Measure 1: 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 or during ground disturbance* during Project implementation.

Recommended Mitigation Measure 2: SJKF Take Authorization
SJKF activity or 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). Alternatively, species presence may be assumed and an ITP obtained prior to Project implementation.

COMMENT 2: Tipton Kangaroo Rat (TKR) and Giant Kangaroo Rat (GKR)

Issues and Impacts: The MND acknowledges presence of TKR and GKR in areas of suitable habitat within and adjacent to the Project (CDFW 2022). Suitable habitat includes areas of grassland, upland scrub, and alkali sink habitats that contain requisite habitat elements, such as small mammal burrows.

Habitat loss resulting from agricultural, urban, and industrial development is the primary threat to TKR and GKR. Very little suitable habitat for these species remains along the edges of the southern San Joaquin Valley floor (ESRP 2022a, ESRP 2022b). Areas of suitable habitat in the Project area along the California Aqueduct represents some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture. Without appropriate avoidance and minimization measures for TKR and 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.

Recommended Mitigation Measure 3: TKR and GKR Avoidance
CDFW advises maintenance of a 50-foot minimum no-disturbance buffer around all small mammal burrow entrances of suitable size for TKR and GKR use.

Recommended Mitigation Measure 4: TKR and GKR Surveys
Because suitable habitat for TKR and GKR is within the Project area, CDFW recommends that a trapping plan for determining presence of TKR and GKR be submitted to and approved by CDFW prior to subsequent trapping efforts. CDFW recommends these surveys to be conducted by a qualified biologist who holds a Memorandum of Understanding for TKR and GKR. CDFW further recommends that these surveys be conducted between April 1 and October 31, when kangaroo rats

are most active, and well in advance of ground-disturbing activities in order to determine if impacts to TKR and GKR could occur.

Recommended Mitigation Measure 5: TKR and GKR Take Authorization
TKR and GKR activity or 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 3: San Joaquin Antelope Squirrel (SJAS)

Issue and Impacts: The MND acknowledges presence, and SJAS have been documented within areas of suitable habitat in the Project vicinity (CDFW 2022). Suitable SJAS habitat includes areas of grassland, upland scrub, and alkali sink habitats that contain requisite habitat elements, such as small mammal burrows. 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 2022c). Areas of suitable habitat within the Project Area vicinity represent some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture, and ground-disturbing activities are anticipated during Project implementation. 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.

Recommended Mitigation Measure 6: SJAS Take Authorization
Because suitable habitat is present and SJAS is within and adjacent to the Project area, CDFW advises that avoidance of SJAS is not likely to be feasible. Therefore, in order to avoid costly delays to the project, CDFW advises that take authorization for SJAS be pursued and that acquisition of an ITP prior to ground-disturbing activities, pursuant to Fish and Game Code section 2081, subdivision (b) is warranted.

COMMENT 4: Blunt-Nosed Leopard Lizard (BNLL)

Issues and Impacts: The MND acknowledges a high potential for BNLL to occur within and adjacent to the Project due to species occurrence and suitable habitat documented within close proximity to the Project (CDFW 2022). 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 and unpaved access roadways.

Habitat loss resulting from agricultural, urban, and industrial development is the primary threat to BNLL (ESRP 2022d). 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).

Recommended Mitigation Measure 7: 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 8: BNLL Surveys
If suitable habitat is present, 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 is designed to optimize BNLL detectability. CDFW advises completion of BNLL surveys 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, and that within these time periods, there are specific protocol-level date, temperature, and time parameters, which 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 9: BNLL Take Avoidance
CDFW cannot authorize the Project-related incidental take of BNLL. BNLL detection during protocol level surveys warrants immediate consultation with CDFW to discuss whether take of BNLL can be avoided during Project activities.

COMMENT 5: Crotch Bumble Bee (CBB)

Issues and Impacts: CBB have been documented to occur within the vicinity of the Project area (CDFW 2022). Suitable CBB habitat includes areas of grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows. CBB primarily nest in late February through late October underground in abandoned small mammal burrows, but may also nest under perennial bunch grasses or thatched annual grasses, under brush piles, in old bird nests, and in dead trees or hollow logs (Williams et al. 2014, Hatfield et al. 2015). Overwintering sites utilized by CBB mated queens include soft, disturbed soil (Goulson 2010), or under leaf litter or other debris (Williams et al. 2014). Therefore, ground disturbance and vegetation removal associated with Project implementation has the potential to significantly impact local CBB populations.

CBB was once common throughout most of the central and southern California; however, it now appears to be absent from most of it, especially in the central

portion of its historic range within California's Central Valley (Hatfield et al. 2014). Analyses by the Xerces Society et al. (2018) suggest that there have been sharp declines in relative abundance of CBB by 98% and persistence by 80% over the last 10 years. Without appropriate avoidance and minimization measures for CBB, potentially significant impacts associated with ground- and vegetation-disturbing activities associated with construction of the Project include loss of foraging plants, changes in foraging behavior, burrow collapse, nest abandonment, reduced nest success, reduced health and vigor of eggs, young and/or queens, in addition to direct mortality.

Recommended Mitigation Measure 10: CBB Surveys and Avoidance
CDFW recommends that all small mammal burrows and thatched/bunch grasses be surveyed for the species during the optimal flight period of April 1 through July 31 during the peak blooming period of preferred plant species prior to Project implementation. Avoidance of detected queens or workers is encouraged to allow CBB to leave the Project site of their own volition. Avoidance and protection of detected nests prior to or during Project implementation is encouraged with delineation and observance of a 50-foot no-disturbance buffer.

COMMENT 6: Burrowing Owl (BUOW)

Issues and Impacts: BUOW inhabit open grassland containing small mammal burrows, a requisite habitat feature used by BUOW for nesting and cover. Habitat both within and bordering the Project supports grassland habitat. 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.

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 boundary contains undeveloped land located adjacent to intensively managed agriculture; therefore, subsequent ground-disturbing activities associated with subsequent constructions have the potential to significantly impact local BUOW populations.

Recommended Mitigation Measure 11: BUOW Habitat Assessment
CDFW recommends that a qualified biologist conduct a habitat assessment in advance of implementation of Project-specific activities, to determine if the Project area or its vicinity contains suitable habitat for BUOW.

Recommended Mitigation Measure 12: BUOW Surveys
If suitable habitat is present on or in the vicinity of the Project area, CDFW recommends assessing presence/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 CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Specifically, these reports 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 around the Project area.

Recommended Mitigation Measure 13: 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, and specifically 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 14: BUOW Passive Relocation and Mitigation
If BUOW are found within these recommended buffers and avoidance is not possible, it is important to note that excluding birds from burrows is not a take avoidance, minimization, or mitigation method and is instead considered a potentially significant impact under CEQA (CDFG 2012). 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 then recommends mitigation in the form of replacement of occupied burrows with artificial burrows at a ratio of 1 burrow collapsed to 1 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 7: Other State Species of Special Concern

Issues and Impacts: American badger, San Joaquin pocket mouse, Tulare grasshopper mouse, short-nosed kangaroo rat, and California glossy snake are known to inhabit grassland and upland shrub areas with friable soils (Williams 1986, Thomson et al. 2016). These species have been documented to occur in the vicinity of the Project, which supports requisite habitat elements for these species (CDFW 2022). Habitat loss threatens these species (Williams 1986, Thomson et al. 2016), and 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. 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.

Recommended Mitigation Measure 15: 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 16: Surveys
If suitable habitat is present, CDFW recommends that a qualified biologist conduct focused surveys for the species and their requisite habitat features to evaluate potential impacts resulting from ground and vegetation disturbance.

Recommended Mitigation Measure 17: Avoidance
Avoidance whenever possible is encouraged via delineation and observance of 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.

COMMENT 8: Special-Status Plants

Issue: The MND states that special-status plant species have potential to occur within the Project area. 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. Kern mallow, recurved larkspur, oil nestraw, and Hoover's eriastrum have been documented within the Project vicinity.

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: Kern mallow, recurved larkspur, oil nestraw, and Hoover's eriastrum, 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 Mitigation Measure 18: 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 2018). 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 19: 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.

Recommended Mitigation Measure 20: 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).

Editorial Comments and/or Suggestions

Incidental Take Authorization: The MND in Table 9 on page 29 acknowledges that obtaining State take authorization through an ITP may be required for the Project. However, the remainder of the MND does not specify whether DWR will obtain an ITP for activities that may result in take of State-listed species. The MND includes the following measures that are problematic from the standpoint of engaging in take (as defined pursuant to Fish and Game Code section 86) of listed species if implemented absent the acquisition of a State ITP:

- Mitigation Measure BIO-5 (MM BIO-5): a 50-foot-wide buffer will be established around small mammal burrows to avoid and minimize disturbance. If encroachment within a buffer is required, then DWR would consult with CDFW. If complete avoidance that would ensure no-net-loss of burrows potentially occupied by a listed species is infeasible, DWR will immediately contact CDFW

and USFWS regarding incidental take permits and purchase of credits at a mitigation bank at a minimum 1:1 ratio.

- MM BIO-6: small mammal exclusion fencing will be installed just outside the Project work boundary.
- MM BIO-7: if special status kangaroo rat or SJAS habitat would be affected by the Project, a compensatory mitigation plan would be developed and implemented in coordination with CDFW and USFWS. Unavoidable effects would be compensated through a combination of creation, preservation, and restoration of habitat or purchase of credits at an approved mitigation bank at a minimum 1:1 ratio or equivalent.
- MM BIO-8: recommends consultation with CDFW if SJKF are detected during pre-construction surveys, and establishing a 50-foot buffer to avoid the species and a 100-foot buffer to avoid known dens. MM BIO-8 also states that if natal dens are present or encroachment within a buffer is required, CDFW would be consulted to determine appropriate compensation measures for the loss of SJKF.
- MM BIO-9: if SJKF are observed inside a pipe, the pipe may be moved only once to avoid construction activity, the animal will be allowed to leave on its own, and CDFW and USFWS would be notified within 48 hours.

Due to the high risk of engaging in take, the activities described in the above mitigation measures warrant obtaining an ITP pursuant to Fish and Game Code section 2081, subdivision (b). CDFW advises that the MND be revised to clearly articulate that the above measures will not be implemented without having secured and ITP. Moreover; because TKR, SJAS, GKR, and SJKF are deemed present by the MND (Table 14, pages 49 and 50), CDFW further advises that an ITP be pursued for the Project as CDFW does not believe that full avoidance for these species can be consistently and reliably achieved. Consultation with CDFW in order to comply with CESA and to obtain an ITP is recommended well in advance of Project implementation.

Lake and Streambed Alteration: Project activities that have the potential to substantially change the bed, bank, and channel of streams and associated wetlands may be 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 (LSA) Agreement; therefore, if the CEQA document approved for the Project does not adequately describe the Project and its impacts, a subsequent CEQA analysis may be necessary for LSA Agreement

issuance. Additional information on notification requirements is available through the Central Region LSA Program at (559) 243-4593 or R4LSA@wildlife.ca.gov, and the CDFW website: https://wildlife.ca.gov/Conservation/LSA.

Nesting birds: CDFW encourages that Project implementation 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 the Project. In addition to direct impacts (i.e., nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends that a qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends that the work causing that change cease and that 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.

Endangered Species Act Consultation: CDFW recommends consultation with the USFWS prior to Project ground disturbance, due to potential impacts to Federal listed species. Take under the Federal Endangered Species Act (FESA) is more stringently defined than under CESA; take under FESA may also include 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 Project implementation.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database that 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 California Natural Diversity Database (CNDDB). The CNDDB field survey form can be obtained at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

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 MND to assist DWR in identifying and mitigating Project impacts on biological resources. If you have questions regarding this letter, please contact Annette Tenneboe, Senior Environmental Scientist (Specialist), at (559) 580-3202 or by email at Annette.Tenneboe@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Valerie Cook
96D42C58E092466...

Valerie Cook
Acting Regional Manager

ec: Office of Planning and Research, State Clearinghouse, Sacramento

Justin Sloan, Acting San Joaquin Valley Division Chief
United States Fish and Wildlife Service
Justin_Sloan@fws.gov

Annette Tenneboe, California Department of Fish and Wildlife

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Attachment 1

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

PROJECT: California Department of Water Resources
California Aqueduct Milepost 230.6 to 231.4 Investigation, Design, and Repair Project

STATE CLEARINGHOUSE No.: 2022030757

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
Before Project Activity	
Recommended Mitigation Measure 1: SJKF Surveys and Minimization	
Recommended Mitigation Measure 2: SJKF Take Authorization	
Recommended Mitigation Measure 3: TKR and GKR Avoidance	
Recommended Mitigation Measure 4: TKR and GKR Surveys	
Recommended Mitigation Measure 5: TKR and GKR Take Authorization	
Recommended Mitigation Measure 6: SJAS Take Authorization	
Recommended Mitigation Measure 7: BNLL Habitat Assessment	
Recommended Mitigation Measure 8: BNLL Surveys	
Recommended Mitigation Measure 9: BNLL Take Avoidance	
Recommended Mitigation Measure 10: CBB Surveys and Avoidance	
Recommended Mitigation Measure 11: BUOW Habitat Assessment	
Recommended Mitigation Measure 12: BUOW Surveys	
Recommended Mitigation Measure 13: BUOW Avoidance	
Recommended Mitigation Measure 14: BUOW Passive Relocation and Mitigation	

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
Recommended Mitigation Measure 15: Habitat Assessment – American badger, San Joaquin pocket mouse, Tulare grasshopper mouse, short-nosed kangaroo rate, and California glossy snake.	
Recommended Mitigation Measure 16: Surveys – American badger, San Joaquin pocket mouse, Tulare grasshopper mouse, short-nosed kangaroo rate, and California glossy snake.	
Recommended Mitigation Measure 17: Avoidance – American badger, San Joaquin pocket mouse, Tulare grasshopper mouse, short-nosed kangaroo rate, and California glossy snake.	
Recommended Mitigation Measure 18: Special-Status Plant Surveys	
Recommended Mitigation Measure 19: Special-Status Plant Avoidance	
Recommended Mitigation Measure 20: Listed Plant Species Take Authorization	
During Project Activity	
Recommended Mitigation Measure 1: SJKF Surveys and Minimization	
Recommended Mitigation Measure 3: TKR Avoidance	
Recommended Mitigation Measure 9: BNLL Take Avoidance	
Recommended Mitigation Measure 10: CBB Surveys and Avoidance	
Recommended Mitigation Measure 13: BUOW Avoidance	
Recommended Mitigation Measure 17: Avoidance – American badger, San Joaquin pocket mouse, Tulare grasshopper mouse, short-nosed kangaroo rate, and California glossy snake.	
Recommended Mitigation Measure 19: Special-Status Plant Avoidance	
Recommended Mitigation Measure 20: Listed Plant Species Take Authorization	