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Subject: California Aqueduct Subsidence Program – Groundwater Subsidence and Groundwater Monitoring Project (Project)
MITIGATED NEGATIVE DECLARATION (MND)
State Clearinghouse No. 2024060966

Dear Philip Meyer:

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 respectfully requests that the California Department of Water Resources 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

[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.

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

Fully Protected Species: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish, pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species was previously prohibited and CDFW was not able authorize their incidental take. Senate Bill No. 147, which became effective on July 10, 2023, amended Fish and Game Code sections 3511, 4700, 5050, and 5515, and added section 2081.15 to authorize CDFW to issue a permit under CESA that authorizes the take of a fully protected species resulting from impacts attributable to the implementation of specified projects, which include maintenance, repair, or improvement projects to critical regional or local water agency infrastructure, if certain conditions are satisfied. Blunt-nosed leopard lizard (*Gambelia sila*) is located within and adjacent to the Project boundary.

Other Special Status Species: Species of plants and animals need not be officially listed as Endangered, Rare, or Threatened on any State or federal list pursuant to CESA and/or the federal Endangered Species Act (ESA) to be considered Endangered, Rare, or Threatened under CEQA. If a species can be shown to meet the criteria specified in the CEQA Guidelines (Cal. Code Regs., tit. 14, Chapter 3, § 15380), it should be fully considered in the environmental analysis 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).

Water Rights: The capture of unallocated stream flows is subject to appropriation and approval by the State Water Resources Control Board (SWRCB) pursuant to Water

Code section 1200 et seq. CDFW, as Trustee Agency, is consulted by the SWRCB during the water rights process to provide terms and conditions designed to protect fish and wildlife prior to appropriation of the State's water resources. Certain fish and wildlife are reliant upon aquatic ecosystems, which in turn are reliant upon adequate flows of water. CDFW therefore has a material interest in assuring that adequate water flows within streams for the protection, maintenance, and proper stewardship of those resources. CDFW provides, as available, biological expertise to review and comment on environmental documents and impacts arising from project activities.

PROJECT DESCRIPTION SUMMARY

The proposed Project involves the installation of groundwater and subsidence monitoring stations that would provide real-time data to monitor groundwater levels and other spatial information as they relate to ground subsidence. The data would be used to help inform how subsidence is affecting the California Aqueduct and would assist in maintaining infrastructure of the State Water Project (SWP). The proposed Project involves ground disturbance such as drilling to a maximum depth of approximately 5 to 2,800 feet below ground surface, site preparation activities such as vegetation removal and grading from the embankment road to the work area, groundwater monitoring well installations and associated equipment, extensometer installations, and global positioning system antenna and telemetry/solar panel installations. Access to the sites would be made via the California Aqueduct embankment road. Some ground improvements may be required for accessibility during wet and muddy conditions such as spreading gravel over unimproved ground surfaces.

Once the proposed monitoring wells are installed, existing staff would resume regular maintenance and operation of the Project area. Proposed maintenance would include pothole repair; vegetation removal; erosion repairs; building maintenance and inspections; broken liner panels repair and/or replacement; debris removal; and repair and maintenance at check gates.

Proponent: DWR

Objectives: The proposed project would provide real-time data to monitor groundwater levels and other spatial information as they relate to ground subsidence. The data would be used to help inform how subsidence is affecting the California Aqueduct and would assist in maintaining infrastructure of the SWP.

Location: The proposed groundwater and subsidence monitoring stations would be located in five discontinuous areas totaling approximately 11.5 acres within the San Joaquin Field Division in Kern County. These sites are located along the California Aqueduct at Mile Post (MP) 213.0, MP 230.6, MP 259.6, MP 271.2, and MP 279.1.

Timeframe: Project construction is expected to begin summer of 2024 and conclude by the end of 2025 (approximately 18 months). Activities at each well site are expected to last from 45 to 60 days.

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 San Joaquin (= Nelson's) antelope squirrel (*Ammospermophilus nelsoni*) and Swainson's hawk (*Buteo swainsoni*); the State and federally endangered and State fully-protected blunt-nosed leopard lizard (*Gambelia sila*); the State candidate as threatened or endangered Temblor legless lizard (*Anniella alexanderae*); *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*), Northern legless lizard (*Anniella pulchra*), 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 State and federally endangered and CRPR 1B.1 Bakersfield cactus (*Opuntia basilaris* var. *treleasei*); the CRPR 1B.2 recurved larkspur (*Delphinium recurvatum*) and oil neststraw (*Stylocline citroleum*); and the CRPR 4.2 Hoover's eriastrum (*Eriastrum hooveri*), Douglas' fiddleneck (*Amsinckia douglasiana*), and San Joaquin bluecurls (*Trichostema ovatum*). Suitable habitat for the State candidate endangered Crotch's 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, Valley sink scrub, annual grassland, and riparian habitat are 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.

COMMENT 1: San Joaquin kit fox (SJKF)

Issues and Impacts: SJKF have been documented within the Project area along the California Aqueduct (CDFW 2024) and surrounding area, and the MND acknowledges a high potential for 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 may be attracted to the Project area due to the type and level of ground-disturbing activities and the loose, friable soil 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 conduct surveys of Project areas and within 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 Avoidance and/or Authorization
SJKF activity or detection warrants consultation with CDFW to discuss how to avoid take.If avoidance is not feasible, acquisition of an Incidental Take Permit (ITP) prior to ground-disturbing activities, pursuant to Fish and Game Code section 2081,

subdivision (b) is necessary to comply with CESA. 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 at MP 230.6. TKR and GKR also occur in areas of suitable habitat in the vicinity of the Project and California Aqueduct (CDFW 2024). 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 2024a, ESRP 2024b). 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 CDFW 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. If avoidance is not feasible, acquisition of an ITP prior to ground-disturbing activities, pursuant to Fish and Game Code section 2081, subdivision (b) is necessary to comply with CESA. Alternatively, species presence may be assumed, and an ITP obtained prior to Project implementation.

COMMENT 3: San Joaquin Antelope Squirrel (SJAS)

Issue and Impacts: The MND acknowledges presence of SJAS at MP 213.0, MP 230.6, MP 259.5, and portions of MP 271.2, and areas of suitable habitat occur in the Project area (CDFW 2024). 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 2024c). 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 potentially significant and costly delays to the project, CDFW advises that take authorization for SJAS be pursued through acquisition of an ITP prior to ground-disturbing activities, pursuant to Fish and Game Code section 2081, subdivision (b).

COMMENT 4: Swainson's Hawk (SWHA)

Issues and Impacts: The MND acknowledges that SWHA have been observed foraging in the Project area, but no nesting opportunities occur within the Project area. The MND specifies there are no nesting occurrences for SWHA within two miles of the Project area, and does not require avoidance, minimization, or mitigation measures specific for SWHA.

A review of aerial photographs show mature trees and riparian habitat capable of supporting nesting SWHA within ½ mile the Project area, including near MP 230.6. Suitable SWHA foraging habitat, including annual grassland, exists within the entire Project site. Project construction and habitat conversion may result in nest abandonment, and reduced reproductive success, including mortality of young and reduced health and vigor of eggs and/or young. In the San Joaquin Valley, suitable nest trees may be a limiting factor for SWHA productivity.

Recommended Mitigation Measure 7: Focused SWHA Surveys
To reduce potential Project-related impacts to SWHA, CDFW recommends that a qualified biologist conduct surveys for nesting birds of prey, including SWHA, following the survey methodology developed by the SWHA Technical Advisory Committee (SWHA TAC 2000) during the nesting season of or prior to Project initiation, within the Project area and a ½-mile buffer around the Project area. In addition, if Project activities will take place during the species nesting season (i.e., March 1 through September 15), CDFW recommends that additional preconstruction surveys for active nests be conducted by a qualified biologist no more than 10 days prior to the start of construction.

Recommended Mitigation Measure 8: SWHA Buffers
If an active SWHA nest is found during preconstruction surveys, CDFW recommends implementing a minimum ½-mile no-disturbance buffer until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest site or parental care for survival.

Recommended Mitigation Measure 9: SWHA Take Authorization
If a ½-mile no-disturbance nest buffer is not feasible, consultation with CDFW is warranted, and an ITP, pursuant to Fish and Game Code section 2081, subdivision (b), for SWHA may be necessary prior to project implementation to avoid unauthorized take.

COMMENT 5: Blunt-Nosed Leopard Lizard (BNLL)

Issues and Impacts: BNLL are known to occur in the Project vicinity (CDFW 2024). The MND documents suitable habitat occurring within the Project site at MP 230.6 but concludes the potential for occurrence as low for this species due to no observances within three miles of the project. Suitable BNLL habitat includes areas of grassland and upland scrub that contain requisite habitat elements, such as small mammal burrows (ESRP 2024d). A review of aerial imagery shows areas adjacent to the Project that contain these requisite features. BNLL also use open space patches between suitable habitats, including disturbed sites and unpaved access roadways.

Recommended Mitigation Measure 10: 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 11: 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 12: BNLL Take Authorization
With the passage of Senate Bill No. 147, the incidental take of BNLL may be authorized for certain categories of projects, including maintenance, repair, or improvement to critical regional or local water agency infrastructure. If BNLL protocol surveys find that the Project site is occupied, or if the Project proponent chooses to assume presence for BNLL, consultation with CDFW is warranted to discuss how to implement the Project and avoid take; or if avoidance is not feasible, acquisition of an ITP prior to any ground disturbing activities, pursuant Fish and Game Code section 2081, subdivision (b) is necessary to comply with CESA.

COMMENT 6: Crotch's Bumble Bee (CBB)

Issues and Impacts: CBB have been documented to occur within the vicinity of the Project area (CDFW 2024). 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, underbrush 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.

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 13: 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, following the methodology outlined in the *Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species* (CDFW 2023). 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.

Recommended Mitigation Measure 14: CBB Take Authorization
If CBB is identified during biological surveys, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, acquisition of an ITP, pursuant to Fish and Game Code section 2081, subdivision (b), prior to project implementation, is necessary to comply with CESA.

COMMENT 7: 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 15: 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 16: 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 17: 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 18: BUOW Consultation
If BUOW are found within these recommended buffers and avoidance is not possible, consultation with CDFW is recommended for guidance on the development of mitigation measures such as take avoidance minimization, and mitigation.

COMMENT 8: Temblor Legless Lizard (TLL)

Issues and Impacts: Current species information indicates that the range of TLL is restricted to a small areas along the east side of the Temblor Mountains, from the western edge of Kern County north to western Fresno County (Center for Biological Diversity 2021), and the TLL range includes a portion of the California Aqueduct in southern Kern County (CDFW 2022). TLL, like other *Annellia* species, has specific microhabitats due to its fossorial behavior. They are restricted to areas with loose soil or substrate and moderate plant cover; and cannot tolerate areas where soil has

been compacted or graded (Jennings and Hayes 1994; CDFW 2022). Aerial imagery indicates the Project footprint contains the requisite habitat elements for TLL.

Recommended Mitigation Measure 19: TLL Surveys
CDFW recommends that a qualified biologist conduct focused surveys for TLL and their requisite habitat features prior to any ground disturbance activities associated with the Project.

Recommended Mitigation Measure 20: TLL Avoidance Buffer
If a TLL is found prior to or during construction, CDFW recommends implementation of a minimum 50-foot no-disturbance buffer avoid take and potentially significant impacts. Any detection of TLL prior to or during Project implementation warrants consultation with CDFW to discuss how to avoid take. In the event that a TLL is detected during surveys, and a 50-foot no-disturbance buffer is not feasible, consultation with CDFW is warranted to discuss how to avoid take.

Recommended Mitigation Measure 21: TLL Take Authorization
In the event that a TLL is detected during surveys, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, take authorization prior to any ground disturbing activities would be warranted. Take authorization would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code section 2081(b).

COMMENT 9: Other State Species of Special Concern – Northern Legless Lizard (NLL)

Issue: NLL have been documented in the Project area (CDFW 2024). NLL are found primarily in areas with sandy or loose organic soils or where there is plenty of leaf litter (Zeiner et al. 1990).

Specific impact: Without appropriate avoidance and minimization measures for NLL potentially significant impacts associated with the Project's activities could include site abandonment which may result in reduced health or vigor of eggs and/or young, and/or direct mortality.

Evidence impact is potentially significant: Habitat loss is a primary threat to NLL (Zeiner et al. 1990). The Project area near habitats that might support the species and thus, the Project has potential to impact the species.

Recommended Mitigation Measure 22: NLL Surveys

CDFW recommends a qualified biologist determine if suitable habitat is present on the Project site. If suitable habitat is present, CDFW recommends that a qualified

biologist conduct focused surveys for NLL and their requisite habitat features to evaluate potential impacts resulting from ground-disturbance.

Recommended Mitigation Measure 23: NLL Avoidance
Avoidance whenever possible is encouraged via delineation. However, a qualified biologist with the appropriate permit may relocate NLL out of the project area into a nearby area with suitable habitat.

COMMENT 10: 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 2024). 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 24: 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 25: 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 26: 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 9: Special-Status Plants

Issue: The MND documents special-status plant species occurring within or immediately adjacent to the Project area. Special-status plant species meeting the

definition of rare or endangered under CEQA (Cal. Code Regs., tit. 14, Chapter 3, § 15380) are known to occur within the Project and surrounding area. Bakersfield cactus, Kern mallow, recurved larkspur, oil neststraw, and Hoover's eriastrum, Douglas' amsinckia, and San Joaquin bluecurls 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: Bakersfield cactus, Kern mallow, recurved larkspur, oil neststraw, and Hoover's eriastrum, Douglas' amsinckia, San Joaquin bluecurls, 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 27: 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* (CDFW 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 28: 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 29: 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, CDFW recommends acquiring an ITP, pursuant to Fish and Game Code section 2081, subdivision (b), prior to project implementation to comply with CESA.

Editorial Comments and/or Suggestions

Incidental Take Authorization: Although the MND acknowledges that State-listed species have been trapped and otherwise documented as occurring within or immediately adjacent to the Project footprint, 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 may result in unauthorized 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-2 (MM BIO-2): If special-status plants cannot be avoided then seed collection shall occur in consultation with CDFW and USFWS.
- MMs BIO-15 and BIO-17: a 50-foot-wide buffer will be established around small mammal burrows for SJAS, TKR, and GKR 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-16: small mammal exclusion fencing will be installed just outside the Project work boundary.
- MM BIO-18: 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-12: 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-13: 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.
- MM BIO-14: if SJKF 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.

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 either present or high potential for occurrence by the MND (Table 2, pages 29, 30, and 31), CDFW further advises that an ITP be pursued for the Project as CDFW is not confident that full avoidance for these species can be consistently and reliably achieved. Consultation with CDFW in order to obtain necessary take authorization and comply with CESA is recommended well in advance of Project implementation.

CDFW also recommends the MND address whether proposed Project activities, including operation and maintenance activities, would be covered by the proposed State Water Project San Joaquin Field Division Operations and Maintenance Habitat Conservation Plan.

Lake and Streambed Alteration: Project activities that substantially change the bed, bank, and channel of streams and associated wetlands are 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 will (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:
Gerald Hatler
37BF80A1646F41C...

For Julie A. Vance
Regional Manager

ec: Annette Tenneboe, California Department of Fish and Wildlife

State Clearinghouse
Governor's office of planning and Research
State.Clearinghouse@opr.ca.gov

United States Fish and Wildlife Service
Matthew Nelson, Matthew_Nelson@fws.gov

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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 Subsidence Program – Groundwater Subsidence and Groundwater Monitoring Project

STATE CLEARINGHOUSE No. 2024060966

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: Focused SWHA Surveys	
Recommended Mitigation Measure 8: SWHA Buffers	
Recommended Mitigation Measure 9: SWHA Take Authorization	
Recommended Mitigation Measure 10: BNLL Habitat Assessment	
Recommended Mitigation Measure 11: BNLL Surveys	
Recommended Mitigation Measure 12: BNLL Take Authorization	
Recommended Mitigation Measure 13: CBB Surveys and Avoidance	
Recommended Mitigation Measure 14: CBB Take Avoidance	
Recommended Mitigation Measure 15: BUOW Habitat Assessment	

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California Aqueduct Subsidence Program – Groundwater Subsidence and Groundwater Monitoring Project

STATE CLEARINGHOUSE No. 2024060966

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
Recommended Mitigation Measure 16: BUOW Surveys	
Recommended Mitigation Measure 17: BUOW Avoidance	
Recommended Mitigation Measure 18: BUOW Consultation	
Recommended Mitigation Measure 19: TLL Surveys	
Recommended Mitigation Measure 20: TLL Avoidance Buffer	
Recommended Mitigation Measure 21: TLL Take Authorization	
Recommended Mitigation Measure 22: NLL Surveys	
Recommended Mitigation Measure 23: NLL Avoidance	
Recommended Mitigation Measure 24: Habitat Assessment – American badger, San Joaquin pocket mouse, Tulare grasshopper mouse, short-nosed kangaroo rate, and California glossy snake.	
Recommended Mitigation Measure 25: Surveys – American badger, San Joaquin pocket mouse, Tulare grasshopper mouse, short-nosed kangaroo rate, and California glossy snake.	

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PROJECT: California Department of Water Resources
California Aqueduct Subsidence Program – Groundwater Subsidence and Groundwater Monitoring Project

STATE CLEARINGHOUSE No. 2024060966

RECOMMENDED MITIGATION MEASURES	**STATUS/DATE/INITIALS**
Recommended Mitigation Measure 26: Avoidance – American badger, San Joaquin pocket mouse, Tulare grasshopper mouse, short-nosed kangaroo rate, and California glossy snake.	
Recommended Mitigation Measure 27: Special-Status Plant Surveys	
Recommended Mitigation Measure 28: Special-Status Plant Avoidance	
Recommended Mitigation Measure 29: Listed Plant Species Take Authorization	
During Project Activity	
Recommended Mitigation Measure 1: SJKF Surveys and Minimization	
Recommended Mitigation Measure 3: TKR and GKR Avoidance	
Recommended Mitigation Measure 8: SWHA Buffers	
Recommended Mitigation Measure 13: CBB Surveys and Avoidance	
Recommended Mitigation Measure 17: BUOW Avoidance	
Recommended Mitigation Measure 20: TLL Avoidance Buffer	
Recommended Mitigation Measure 23: NLL Avoidance	

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STATE CLEARINGHOUSE No. 2024060966

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
Recommended Mitigation Measure 26: Avoidance – American badger, San Joaquin pocket mouse, Tulare grasshopper mouse, short-nosed kangaroo rate, and California glossy snake.	
Recommended Mitigation Measure 28: Special-Status Plant Avoidance	