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May 07 2021

May 7, 2021

STATE CLEARINGHOUSE

Jeevan Muhar, Engineer-Manager
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**Subject: Arvin-Edison Water Storage District Expansion of District Distribution System Pipelines into Groundwater Service Area Lands Project (Project) MITIGATED NEGATIVE DECLARATION (MND)
State Clearinghouse No.: 2021040213**

Dear Mr. Muhar:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt an MND from Arvin-Edison Water Storage District (AEWSD) for the above-referenced Project pursuant to 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.

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.

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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.

Water Rights: The capture of unallocated stream flows to artificially recharge groundwater aquifers are 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 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 and riparian 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 Project is for the construction of up to 44 miles of pipelines, manholes, and turnouts. The Area of Potential Effect (APE) is approximately 267 acres and the Project goal is to deliver wet-period surface water to landowners who would otherwise pump groundwater. The pipelines will be operated when excess surface water is available (approximately every three years) and/or when water transfers are scheduled. The pipelines will be mainly low-head gravity distribution pipelines ranging from 12 inches to 72-inches in diameter. The largest pipe sizes would be proportionally short distances near the heads of the branching gravity pipeline networks serving the various private agricultural fields and orchards in the APE. The proposed pipeline sizes and capacities will vary depending upon the number of acres served. Pipeline sizing will follow the conservative value of approximately eight gallons per minute per acre and/or the AEWSD Lateral Demand Sizing Criteria. The proposed pipelines will commence from various existing AEWSD facilities, such as the Forrest Frick Discharge Pipeline, North

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Canal, South Canal, or other smaller lateral pipelines. A 0.75-mile open canal is also proposed from the existing Tejon Spreading Works.

Proponent: AEWSD

Location: The Project area is located in central Kern County, California, southeast of the City of Bakersfield, within the Arvin Edison Water Storage District. The various portions of pipeline work are located east of Lamont, east of and within Arvin, and north of Mettler.

Timeframe: None given.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist AEWSD 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 (CNDDDB) records, a review of aerial photographs of the Project and surrounding habitat, and information provided in the MND, 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 threatened Nelson's antelope squirrel (*Ammospermophilus nelsoni*) and Swainson's hawk (*Buteo swainsoni*); the State and federally endangered Tipton's kangaroo rat (*Dipodomys nitratooides nitratooides*); the State and federally endangered and State fully protected blunt-nosed leopard lizard (*Gambelia sila*); the State and federally endangered and California Rare Plant Rank (CRPR) 1B.1 Bakersfield cactus (*Opuntia basilaris* var. *treleasei*); the federally endangered and CRPR 1B.2 San Joaquin woollythreads (*Monolopia congdonii*); the federally endangered and CRPR 1B.2 Kern mallow (*Eremalche parryi kernensis*); the CRPR 1B.1 Comanche Point layia (*Layia leucopappa*), Horn's milk-vetch (*Astragalus hornii* var. *hornii*), and hispid salty bird's-beak (*Chloropyron molle hispidum*); and the State species of special concern burrowing owl (*Athene cunicularia*), American badger (*Taxidea taxus*), Tehachapi pocket mouse (*Perognathus alticola inexpectatus*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), coast horned lizard (*Phrynosoma blainvillii*), and California glossy snake (*Arizona elegans occidentalis*). Suitable habitat for the rare and endemic Crotch bumble bee (*Bombus crotchii*) also occurs in the Project vicinity. The MND acknowledged the presence of Cooper's hawk (*Accipiter cooperii*) within the Project boundary during reconnaissance field surveys.

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Please note that the CNDDDB is populated by and records voluntary submissions of species detections. As a result, species may be present in locations not depicted in the CNDDDB but where there is suitable habitat and features capable of supporting species. A lack of an occurrence record in the CNDDDB 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 AEWSD.

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)

Issue: SJKF occurrences have been documented within the vicinity of the Project boundary (CDFW 2021). The MND acknowledges the potential for the Project to temporarily disturb and permanently alter suitable habitat for special-status species including SJKF, and to directly impact individuals if present during construction activities.

Mitigation Measure BIO-1e (MM BIO-1e) of the MND states that a pre-construction clearance survey for SJKF will be conducted not less than 14 days and not more than 30 days prior to the initiation of ground-disturbing activities. The survey areas will include the entire study area and all accessible undeveloped habitat within 200 feet in accordance with the "*Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance*". (USFWS 2011). If SJKF use of a den is observed, the den will be avoided using the buffers recommended by USFWS (2011) and both the USFWS and CDFW will be immediately notified regarding incidental take permits.

Specific impact: 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

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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.

Evidence impact is potentially significant: Habitat loss resulting from land conversion to agricultural, urban, and industrial development is the primary threat to SJKF, and Kern County supports relatively large areas of high and medium suitability SJKF habitat (Cypher et al. 2013). The Project area is currently inactive or fallowed agricultural land that can provide suitable habitat in an area that is otherwise under intensive agriculture.

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 or absence of SJKF by having qualified biologists conduct surveys of Project areas and a 500-foot buffer of Project areas to detect SJKF and their sign. CDFW also recommends following the recommendations by USFWS (2011) during Project implementation.

Recommended Mitigation Measure 3: 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 any ground disturbing activities, pursuant to Fish and Game Code section 2081 subdivision (b).

COMMENT 2: Swainson's Hawk (SWHA)

Issue: Mitigation Measure BIO-1f (MM BIO-1f) specifies that for ground disturbance and vegetation removal activities occurring during the bird nesting season of February 1 to September 15, general pre-construction nesting bird surveys will be conducted by a qualified biologist within 30 days prior to the initiation of construction activities. Surveys will include a ½-mile buffer for SWHA.

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MM BIO-1f states if active SWHA nests are observed, an appropriate avoidance buffer will be established. The avoidance buffer would be established by the biologist on a case-by-case basis. If SWHA are documented nesting within 500-feet of construction activities CDFW should be consulted on appropriate avoidance and minimization methods. The MND analysis does not provide a biological basis for how no-disturbance buffers would be determined as adequate to avoid significant impacts, including but not limited to take of individuals through nest failure or other means, as a result of Project implementation.

Specific impact: SWHA are known to the Project area and have the potential to nest in mature trees located within ½ mile of the Project. In addition, suitable foraging habitat for these species exists within the Project site and surrounding area; annual grassland, alfalfa or grain fields, and livestock pasture that may be used for foraging are present in the Project vicinity. Without appropriate avoidance and minimization measures for SWHA, potential significant impacts include nest abandonment and reduced reproductive success that includes mortality of young, and reduced health and vigor of eggs and/or young.

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

Project activities near the nest that differ from baseline disturbance regimes in type, timing, and/or magnitude can affect adults caring for eggs and young in the nest, and can affect nestling behavior. Project activities including noise, vibration, odors, visual disturbance, and movement of workers or equipment could affect nesting individuals and have the potential to result in nest abandonment or reduced nesting success, significantly impacting local nesting SWHA.

Recommended Mitigation Measure 4: Focused SWHA Surveys

To reduce potential Project-related impacts to SWHA, CDFW recommends that a qualified wildlife biologist conduct surveys following the survey methodology developed by the SWHA Technical Advisory Committee (2000) prior to Project initiation, within the Project area and a ½-mile buffer around the Project area. In

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addition, if Project activities will take place during the typical breeding season (February 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 5: SWHA Buffers

If an active SWHA nest is found during preconstruction surveys or at any time during the Project, 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 6: SWHA Take Authorization

If a ½-mile no-disturbance nest buffer is not feasible, consultation with CDFW is warranted, and acquisition of a State ITP for SWHA may be necessary prior to Project implementation, to avoid unauthorized take, pursuant to Fish and Game Code section 2081 subdivision (b).

COMMENT 3: San Joaquin Antelope Squirrel (SJAS)

Issue: The MND acknowledges the potential for the Project to temporarily disturb and permanently alter suitable habitat for special status species including SJAS, and to directly impact individuals if present during construction activities. Suitable SJAS habitat includes areas of grassland, upland scrub, and alkali sink habitats that contain requisite habitat elements such as small mammal burrows.

Mitigation Measures BIO-1b and BIO-1c (MM BIO-1b and MM BIO-1c) specify that preconstruction clearance surveys will be conducted for special status species including SJAS within 30 days prior to construction and include the entire disturbance footprint plus a minimum 100-foot buffer within suitable habitat. If listed species that utilize burrows are detected during preconstruction survey, all suitable burrows will be flagged for avoidance by a minimum distance of 50-feet. If no special-status species are suspected to occupy any burrows within the Project alignment, no further actions are required. CDFW is concerned that preconstruction clearance surveys alone may not be adequate to detect presence of SJAS or other special status species in areas of suitable habitat.

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.

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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 2021a). 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.

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 within Project areas and a minimum 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 1990), 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 of suitable size for SJAS use until the completion of Project activities. CDFW also recommends that a qualified biologist be present during all work that may impact the species, to identify any SJAS individuals that may be present above ground, and to halt any work that would impact the individual, until the SJAS individual leaves the area of its own volition.

Recommended Mitigation Measure 10: SJAS Take Authorization

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

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COMMENT 4: Tipton Kangaroo Rat (TKR)

Issue: The MND acknowledges the potential for the Project to temporarily disturb and permanently alter suitable habitat for special status species including TKR, and to directly impact individuals if present during construction activities. TKR have been documented to occur within areas of suitable habitat within and adjacent to the Project area (CDFW 2021). Suitable TKR habitat includes areas of grassland, upland scrub, and alkali sink habitats that contain requisite habitat elements, such as small mammal burrows.

Mitigation Measures BIO-1b and BIO-1c (MM BIO-1b and MM BIO-1c) specify that preconstruction clearance surveys shall be conducted for special status species including TKR within 30 days prior to construction start and include the entire disturbance footprint plus a minimum 100-foot buffer within suitable habitat. If listed species that utilize burrows are detected during preconstruction survey, all suitable burrows will be flagged for avoidance by a minimum distance of 50 feet. If no special-status species are suspected to occupy any burrows within the Project alignment, no further actions are required. CDFW is concerned that preconstruction clearance surveys alone may not be adequate to detect presence of TKR or other special status species.

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 2021b). Areas of suitable habitat within the Project area represents some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture.

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.

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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 holding permits 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: Blunt-Nosed Leopard Lizard (BNLL)

Issue: BNLL have been documented in suitable habitat within and adjacent to the Project boundary (CDFW 2021). 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 agricultural, urban, and industrial development is the primary threat to BNLL (ESRP 2020c). 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.

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Recommended Mitigation Measure 15: 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 16: 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*” (CDFG 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.

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 (CDFG 2019).

Recommended Mitigation Measure 17: BNLL Take Avoidance

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

COMMENT 6: Special-Status Plants

Issue: The MND states that no 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. Bakersfield cactus, Comanche Point layia, Horn’s milk vetch, San Joaquin woollythreads, Kern mallow, and hispid salty bird’s-beak 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

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construction include loss of habitat, loss or reduction of productivity, and direct mortality.

Evidence impact would be significant: Bakersfield cactus, Comanche Point layia, Horn's milk vetch, hispid salty bird's-beak, San Joaquin woollythreads, 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(b).

COMMENT 7: Burrowing Owl (BUOW)

Issue: BUOW inhabit open grassland containing small mammal burrows, a requisite habitat feature used by BUOW for nesting and cover. BUOW may also occur in some agricultural areas, ruderal grassy fields, vacant lots and pastures if the vegetation structure is suitable and there are useable burrows and foraging habitat

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in the area (Gervais et al. 2008). Habitat both within and bordering the Project site supports suitable habitat for BUOW (CDFW 2021).

Mitigation Measure BIO-1d (MM BIO-1d) states if any occupied BUOW burrows are observed, protective buffers should be implemented in accordance with CDFW's "*Staff Report on Burrowing Owl Mitigation*" (CDFG 2012) and California Burrowing Owl Consortium "*Burrowing Owl Survey Protocol and Mitigation Guidelines*" (CBOC 1993) during both the breeding and non-breeding season. If BUOW avoidance is not feasible, then additional measures such as passive relocation during the nonbreeding season should be implemented in consultation with CDFW. In addition, a Burrowing Owl Exclusion Plan and Mitigation and Monitoring Plan will be developed by a qualified biologist in accordance with the CDFW and CBOC guidelines.

CDFW is concerned that the avoidance buffers for BUOW may not be adequately implemented according to CDFW and CBOC guidelines because the MM BIO-1d states that these buffer guidelines "should" be implemented rather than "shall" be implemented. It is not clear what actions will be enforceable to address protections for BUOW.

Specific impact: Potentially significant impacts to nesting and non-nesting burrowing owls can occur as a result of ground-impacting activity, such as grading and flooding within active and fallow agricultural areas, and as a result of noise, vibration, and other disturbance caused by equipment and crews. Potential impacts associated with Project 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 contains 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.

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Recommended Mitigation Measure 21: BUOW Habitat Assessment

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

Recommended Mitigation Measure 22: 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 CDFG (2012) "*Staff Report on Burrowing Owl Mitigation*". Specifically, these documents suggest three or more surveillance surveys conducted during daylight with each visit occurring at least three weeks apart during the peak breeding season of April 15 to July 15, when BUOW are most detectable. In addition, CDFW advises that surveys include a minimum 500-foot survey radius around the Project area.

Recommended Mitigation Measure 23: BUOW Avoidance

CDFW recommends that no-disturbance buffers, as outlined by 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 24: BUOW Eviction and Mitigation

If BUOW are found within these recommended buffers and avoidance is not possible, it is important to note that according to CDFG (2012), evicting 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

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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 minimum ratio of one burrow 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 8: Other State Species of Special Concern

Issue: Tehachapi pocket mouse, American badger, San Joaquin coachwhip, coast horned lizard, and California glossy snake are known to inhabit grassland 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 2021).

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 (Williams 1986, 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 Mitigation Measure 25: 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 26: 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 27: 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.

COMMENT 9: Crotch Bumble Bee (CBB)

Issue: Suitable habitat for CBB, a rare and endemic bumble bee species, has been documented to occur within the vicinity of the Project area (CDFW 2021). 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.

Specific impact: 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.

Evidence impact is potentially significant: 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 there have been sharp declines in relative abundance by 98% and persistence by 80% over the last ten years.

Recommended Mitigation Measure 28: 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 peak blooming period of preferred plant species prior to Project implementation. Avoidance of detected CBB queens or workers is encouraged to allow CBBs to leave the Project site on their own volition. Avoidance and protection

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of a detected CBB nest prior to or during Project implementation is encouraged with delineation and observance of a 50-foot no-disturbance buffer.

Editorial Comments and/or Suggestions

Water Rights: The MND states does not specify the source of surface water available for use in the Project. CDFW recommends that the MND include a detailed description of the water rights and water entitlements for the points of diversion and places of use that pertain to the Project. CDFW recommends including information on the historic and current water rights and water use agreements/contracts including pre-1914 and appropriative rights, riparian rights, prescriptive rights, and adjudications.

CDFW recommends that the MND address whether AEWS D will be filing a change petition or a new application for additional surface water. As stated previously, 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. Given the potential for impacts to sensitive species and their habitats, it is advised that required consultation with CDFW occur well in advance of the SWRCB water right application process.

Surface Water Diversions from outside the Project Boundary: Project-related diversions acquiring surface water from outside of the Project boundary, including the Sacramento-San Joaquin River Delta (Delta) and the San Joaquin and Kern River watersheds, may impact additional riparian, wetland, fisheries, and terrestrial (i.e., upland) wildlife species and habitats. Special-status species and habitats located in watersheds outside of the Project area vary depending upon location. They may include, but are not limited to, the Federal threatened Central Valley distinct population segment steelhead (*Oncorhynchus mykiss*), the Federal and State threatened Central Valley spring-run evolutionary significant unit (ESU) Chinook salmon (*O. tshawytscha*), the Federal candidate and State species of special concern Central Valley fall-run and late fall-run ESU Chinook salmon (*O. tshawytscha*), the State species of special concern hardhead (*Mylopharodon conocephalus*), the State and Federal threatened giant garter snake (*Thamnophis gigas*), the State threatened Swainson's hawk and tricolored blackbird (*Agelaius tricolor*), the State species of special concern burrowing owl and western pond turtle (*Actinemys marmorata*), and numerous additional special-status species and habitats. CDFW recommends that the MND analyze the proposed acquisition of surface water from all watersheds and any potential direct, indirect, and cumulative biological impacts to fish and wildlife species and their habitats, as well as to properties permanently conserved to protect those resources.

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

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

To evaluate Project-related impacts to 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.

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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 (CNDDDB). The CNDDDB field survey form can be obtained at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data> . The completed form can be mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>

FILING FEES

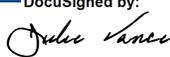
The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order 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).

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CONCLUSION

CDFW appreciates the opportunity to comment on the MND to assist AEWSD 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 the address on this letterhead, or by email at Annette.Tenneboe@wildlife.ca.gov.

Sincerely,

DocuSigned by:

FA83F09FE08945A...

Julie A. Vance
Regional Manager

Attachment

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

ec: 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: Arvin Edison Water Storage District Expansion of District
Distribution System Pipelines into Groundwater Service Area Lands Project**

STATE CLEARINGHOUSE No.: 2021040213

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
<i>Before Project Activity</i>	
Recommended Mitigation Measure 1: SJKF Habitat Assessment	
Recommended Mitigation Measure 2: SJKF Surveys and Minimization	
Recommended Mitigation Measure 3: SJKF Take Authorization	
Recommended Mitigation Measure 4: Focused SWHA Surveys	
Recommended Mitigation Measure 5: SWHA Buffers	
Recommended Mitigation Measure 6: SWHA Take Authorization	
Recommended Mitigation Measure 7: SJAS Habitat Assessment	
Recommended Mitigation Measure 8: SJAS Surveys	
Recommended Mitigation Measure 9: SJAS Avoidance	
Recommended Mitigation Measure 10: SJAS Take Authorization	
Recommended Mitigation Measure 11: TKR Habitat Assessment	
Recommended Mitigation Measure 12: TKR Avoidance	
Recommended Mitigation Measure 13: TKR Surveys	
Recommended Mitigation Measure 14: TKR Take Authorization	
Recommended Mitigation Measure 15: BNLL Habitat Assessment	
Recommended Mitigation Measure 16: BNLL Surveys	

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
Recommended Mitigation Measure 17: BNLL Avoidance	
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	
Recommended Mitigation Measure 21: BUOW Habitat Assessment	
Recommended Mitigation Measure 22: BUOW Surveys	
Recommended Mitigation Measure 23: BUOW Avoidance	
Recommended Mitigation Measure 24: BUOW Eviction and Mitigation	
Recommended Mitigation Measure 25: Habitat Assessment – Tehachapi pocket mouse, American badger, San Joaquin coachwhip, coast horned lizard, California glossy snake	
Recommended Mitigation Measure 26: Surveys – Tehachapi pocket mouse, American badger, San Joaquin coachwhip, coast horned lizard, California glossy snake	
Recommended Mitigation Measure 27: Avoidance – Tehachapi pocket mouse, American badger, San Joaquin coachwhip, coast horned lizard, California glossy snake	
Recommended Mitigation Measure 28: CBB Surveys Avoidance	
<i>During Project Activity</i>	
Recommended Mitigation Measure 2 SJKF Surveys and Minimization	
Recommended Mitigation Measure 5: SWHA Buffers	
Recommended Mitigation Measure 9: SJAS Avoidance	
Recommended Mitigation Measure 12: TKR Avoidance	
Recommended Mitigation Measure 17: BNLL Avoidance	

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
Recommended Mitigation Measure 19: Special-Status Plant Avoidance	
Recommended Mitigation Measure 23: BUOW Avoidance	
Recommended Mitigation Measure 27: Avoidance – Tehachapi pocket mouse, American badger, San Joaquin coachwhip, coast horned lizard, California glossy snake	
Recommended Mitigation Measure 28: CBB Surveys and Avoidance	