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Governor's Office of Planning & Research

SEP 30 2019

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Westlands Water District
3130 West Fresno Street
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STATE CLEARINGHOUSE

Subject: Agricultural Aquifer Storage and Recovery Program (Project)
Mitigated Negative Declaration (MND)
State Clearinghouse No. 2019089109

Dear Mr. Freeman:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt an MND from Westlands Water District (WWD) 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.

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.

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

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.

alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in “take” as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

Fully Protected Species: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians and reptiles, and fish, pursuant to Fish and Game Code §§ 3511, 4700, 5050, and 5515, respectively. Take of any fully protected species is prohibited and CDFW cannot authorize their incidental take for the Project. The blunt-nosed leopard lizard (*Gambelia sila*) is a fully protected species known to occur in the Project vicinity and could be impacted by the Project.

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 §§ 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).

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 § 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

With the proposed Project, surface water from existing sources would be recharged into groundwater aquifers during times when surplus or supplemental surface water is available, and later extracted by landowners for irrigation when it is needed. The Project includes the incremental additions of about 20 well conversions per year for recharge with a target of 400 operational aquifer storage and recovery (ASR) wells over the next 15 to 20 years. The proposed Project would include direct recharge of surface water into retrofitted groundwater production wells. The underground water supplies would be increased by injecting water into the aquifer in times of abundant supply, and later extracted when it is needed.

Imported surface water within the Westside Subbasin will be derived largely from Central Valley Project (CVP) water deliveries and smaller amounts from flood flows off the Kings River. Surface water from the San Luis Canal and from the Kings River, diverted from a location near the upstream end of the Mendota Pool, would be the main sources of supply for the Project. The Project would average up to 29,000 acre-feet annually.

The Project would convey surface water available at the diversion points through existing turnouts, pumping plants, equalization storage, and pressurized pipeline distribution facilities. Private landowners within WWD would also use temporary diversion and privately-owned pipelines to further distribute water.

Proponent: WWD

Objectives: The Westside Subbasin has been designated as a critically overdrafted basin. The Sustainable Groundwater Management Act (SGMA) requires governments and water agencies of high and medium priority basins, such as WWD, to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. WWD, as the Groundwater Sustainability Agency (GSA) for the Westside Subbasin, proposes to implement the Project with the following objectives:

- Comply with the requirements of the SGMA and program-specific Waste Discharge Requirements issues by the Central Valley Regional Water Quality Control Board.
- Develop the Project as an augmentation strategy in the WWD's Groundwater Sustainability Plan
- Provide a source of supplemental water to landowners for drought years and maintain sustainability under the SGMA.
- Assist in improving statewide water management by increasing local storage that will be responsive to the needs of local communities and environmental resources.

Location: The proposed Project components will be implemented within WWD's service area, which includes 1,000 square miles of farmland on the west side of the San Joaquin Valley within Fresno County and the northern portion of Kings County.

Timeframe: From three to 10 Project-related ASR wells will be identified before March 2020. WWD expects up to 20 additional well conversions per year until landowners and WWD achieve sufficient capacities based on market and water availability factors. Modeling for the Project assumed 400 operational ASR wells by the 2037 model year.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist WWD 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, several special status species could potentially be impacted by Project activities.

Currently, the MND indicates that the Project's impacts would be less than significant with the implementation of Mitigation Measures BIO-1 and BIO-2 described in the MND:

BIO-1. During the well application process with the landowners, WWD shall review the locations of the wells and needed improvements. If the wells and improvements are within or along roadways and disturbed areas, no further action is needed. Otherwise, Mitigation Measure BIO-2 shall be implemented.

BIO-2. If the wells and needed improvements are in close proximity to any natural areas, WWD will then engage a qualified biologist who will assess the well conversion, conduct a field study if deemed necessary, and develop siting or construction-related mitigation to address the issue at hand.

As currently drafted, it appears that the mitigation measures described above are not measurable and might not therefore be enforceable or sufficient in reducing impacts to a level that is less than significant. In addition, Measure BIO-2 defers the identification of potential impacts and the development of measures to reduce impacts to less than significant levels to a future process not necessarily subject to public review or Trustee agency input. In particular, CDFW is concerned regarding adequacy of mitigation measures for the following special status plant and 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 and State fully protected blunt-nosed leopard lizard (*Gambelia sila*), the State threatened Swainson's hawk (*Buteo swainsoni*), the State threatened Nelson's antelope squirrel (*Ammospermophilus nelsoni*), the State threatened tricolored blackbird (*Agelaius tricolor*), the federally endangered and California Rare Plant Rank (CRPR) 1B.2 San Joaquin woollythreads (*Monolopia congdonii*), the CRPR 1B.2 Munz's tidy-tips (*Layia munzii*), the State candidate crotch bumble bee (*Bombus crotchii*), and the State species of special concern American badger (*Taxidea taxus*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), and burrowing owl (*Athene cunicularia*).

The above list of special status species is based on a review of California Natural Diversity Database (CNDDDB) records. Please note that the CNDDDB is populated by and records voluntary submissions of species detections. As a result, species may be present in locations not depicted in the CNDDDB but where there is suitable habitat and features capable of supporting species. Therefore, a lack of an occurrence record in the CNDDDB 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 prior to its adoption by WWD.

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 WWD boundary (CDFW 2019). 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.

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

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

Evidence impact is potentially significant: Habitat loss resulting from land conversion to agricultural, urban, and industrial development is the primary threat to SJKF (Cypher et al. 2013). Western Fresno and Kings Counties supports relatively large areas of high and medium suitability habitat (Cypher et al. 2013). The Project

area is bordered by this remaining highly suitable habitat, which is otherwise intensively managed for agriculture. Therefore, subsequent ground-disturbing activities have the potential to significantly impact local SJKF populations.

Recommended Potentially Feasible Mitigation Measure(s)

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

Recommended Mitigation Measure 1: SJKF Habitat Assessment

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

Recommended Mitigation Measure 2: SJKF Surveys and Minimization

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

Recommended Mitigation Measure 3: SJKF Take Authorization

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

COMMENT 2: Blunt-nosed leopard lizard (BNLL)

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

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 2019a). 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 WWD boundary; therefore, ground disturbance and conversion of suitable habitat has the potential to significantly impact local BNLL populations.

Recommended Potentially Feasible Mitigation Measure(s)

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

Recommended Mitigation Measure 4: BNLL Habitat Assessment

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

Recommended Mitigation Measure 5: BNLL Surveys

If suitable habitat is present, 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 2004). This recommended 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 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 (CDFG 2004).

Recommended Mitigation Measure 6: BNLL Take Avoidance

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

COMMENT 3: San Joaquin Antelope Squirrel (SJAS)

Issue: SJAS have been documented to occur within areas of suitable habitat within and adjacent to WWD (CDFW 2019). Suitable SJAS habitat includes areas of grassland, upland scrub, and alkali sink habitats that contain requisite habitat elements, such as small mammal burrows.

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

Evidence impact is potentially significant: Habitat loss resulting from agricultural, urban, and industrial development is the primary threat to SJAS. Very little suitable habitat for this species remains along the western floor of the San Joaquin Valley (ESRP 2019b). Areas of suitable habitat within WWD represents some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture. As a result, ground-disturbing activities within the WWD may have the potential to significantly impact local populations of SJAS.

Recommended Potentially Feasible Mitigation Measure(s)

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

Recommended Mitigation Measure 7: SJAS Habitat Assessment

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

Recommended Mitigation Measure 8: SJAS Surveys

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

Recommended Mitigation Measure 9: SJAS Avoidance

If suitable habitat is present and surveys or trapping 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 until the completion of Project activities.

Recommended Mitigation Measure 10: SJAS Take Authorization

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

COMMENT 4: Tipton Kangaroo Rat (TKR)

Issue: TKR have been documented to occur within areas of suitable habitat within and adjacent to WWD (CDFW 2019). Suitable TKR habitat includes areas of grassland, upland scrub, and alkali sink habitats that contain requisite habitat elements, such as small mammal burrows.

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

Evidence impact is potentially significant: Habitat loss resulting from agricultural, urban, and industrial development is the primary threat to TKR. Very little suitable habitat for this species remains along the western floor of the San Joaquin Valley (ESRP 2019c). Areas of suitable habitat within WWD represents some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture. As a result, ground-disturbing activities within the WWD may have the potential to significantly impact local populations of TKR.

Recommended Potentially Feasible Mitigation Measure(s)

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

Recommended Mitigation Measure 11: TKR Habitat Assessment

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

Recommended Mitigation Measure 12: TKR Avoidance

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

Recommended Mitigation Measure 13: TKR Surveys

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

Recommended Mitigation Measure 14: TKR Take Authorization

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

COMMENT 5: Swainson's Hawk (SWHA)

Issue: Several SWHA sightings are documented in the Project boundary (CDFW 2019). Review of recent aerial imagery indicates that trees capable of supporting nesting SWHA occur along the Panoche Creek, Cantua Creek, Los Gatos Creek, San Luis Canal, and Fresno Slough area within and adjacent to the WWD boundary. Landscape trees may also provide suitable nesting habitat. In addition, grassland and agricultural land in the surrounding area provide suitable foraging habitat for SWHA, increasing the likelihood of SWHA occurrence within the vicinity.

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

Evidence impact would be significant: 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 Potentially Feasible Mitigation Measure(s)

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

Recommended Mitigation Measure 15: Focused SWHA Surveys

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

Recommended Mitigation Measure 16: SWHA Avoidance

CDFW recommends that if Project-specific activities will take place during the SWHA nesting season (March 1 through August 31), and active SWHA nests are present, a minimum ½-mile no-disturbance buffer be delineated and maintained around each nest until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival, to prevent nest abandonment and other take (as defined pursuant to Fish and Game Code § 86) of SWHA as a result of Project activities. If implementation of a ½-mile no-disturbance nest buffer is not feasible, consultation with CDFW is warranted to determine if the Project can avoid take. If SWHA cannot be avoided through the use of the above no-disturbance nest buffer, acquisition of an ITP pursuant to Fish and Game Code § 2081(b), prior to the start of Project activities, is warranted to comply with CESA.

Recommended Mitigation Measure 17: SWHA Avoidance

If an active SWHA nest is found, CDFW recommends implementation of a minimum ½-mile no-disturbance buffer until the nesting season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.

Recommended Mitigation Measure 18: SWHA Nest Tree Avoidance

In addition to avoiding occupied nest trees, CDFW recommends that impacts to known nest trees be avoided at all times of year. Although the Project description does not mention tree removal, the removal of mature trees is a potentially significant impact to nesting birds of prey and CDFW advises mitigation of these impacts. Removal of known nest trees is a potentially significant impact under CEQA and could also result in take under CESA. This is especially true with species such as SWHA, which exhibit high nest-site fidelity year after year. Regardless of nesting status, if potential or known SWHA nesting trees are removed, CDFW recommends they be replaced with an appropriate native tree species, planted at a ratio of 3:1 (replaced to removed), in an area that will be protected in perpetuity. This mitigation will offset potential impacts of the loss of potential nesting habitat.

Recommended Mitigation Measure 19: SWHA Take Authorization

If SWHA are detected and a ½-mile no-disturbance nest buffer is not feasible, consultation with CDFW is warranted to determine if the Project can avoid take. If SWHA cannot be avoided then acquisition of an ITP, pursuant to Fish and Game Code § 2081(b), prior to Project-specific activities may be necessary to comply with CESA.

COMMENT 6: Tricolored blackbird (TRBL)

Issue: TRBL are known to occur in Fresno Slough area adjacent to the WWD boundary (CDFW 2019). Review of aerial imagery indicates that the WWD boundary includes flood-irrigated agricultural land, which is an increasingly important nesting habitat type for TRBL, particularly in the San Joaquin Valley (Meese et al. 2014).

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

Evidence impact would be significant: As mentioned above, flood-irrigated agricultural land is an increasingly important nesting habitat type for TRBL, particularly in the San Joaquin Valley (Meese et al. 2014). This nesting substrate is present within the WWD area. TRBL aggregate and nest colonially, forming colonies of up to 100,000 nests (Meese et al. 2014). Approximately 86% of the global population is found in the San Joaquin Valley (Kelsey 2008, Weintraub et al. 2016). In addition, TRBL have been forming larger colonies that contain progressively larger proportions of the species' total population (Kelsey 2008). In 2008, for example, 55% of the species' global population nested in only two colonies, which were located in silage fields (Kelsey 2008). Nesting can occur synchronously, with all eggs laid within one week (Orians 1961). For these reasons, depending on timing, disturbance to nesting colonies can cause nest site abandonment, significantly impacting TRBL populations (Meese et al. 2014).

Recommended Potentially Feasible Mitigation Measure(s)

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

Recommended Mitigation Measure 20: TRBL Surveys

CDFW recommends that construction be timed to avoid the typical bird-breeding season of February 1 through September 15. If Project activity that could disrupt

nesting must take place during that time, CDFW recommends that a qualified wildlife biologist conduct surveys for nesting TRBL no more than 10 days prior to the start of implementation to evaluate presence/absence of TRBL nesting colonies in proximity to Project activities and to evaluate potential Project-related impacts.

Recommended Mitigation Measure 21: TRBL Avoidance

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

Recommended Mitigation Measure 22: TRBL Take Avoidance

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

COMMENT 7: Crotch Bumble Bee (CBB)

Issue: On June 28, 2019, the Fish and Game Commission published findings of its decision to advance CBB to candidacy as endangered. Pursuant to Fish and Game Code Section 2074.6, CDFW has initiated a status review report to inform the Commission's decision on whether listing of CBB, pursuant to CESA, is warranted. During the candidacy period, consistent with CEQA Guidelines, Section 15380, the status of the CBB as an endangered candidate species under CESA (Fish and Game Code, § 2050 et seq.) qualifies it as an endangered, rare, or threatened species under CEQA. It is unlawful to import into California, export out of California or take, possess, purchase, or sell within California, CBB and any part or product thereof, or attempt any of those acts, except as authorized pursuant to CESA. Under Fish and Game Code Section 86, take means to hunt, pursue, catch, capture, or kill, or to attempt to hunt pursue, catch, capture, or kill. Consequently, take of CBB during the status review period is prohibited unless authorization pursuant to CESA is obtained.

CBB have been documented to occur within the vicinity of the Project area (CDFW 2019). 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 in violation of Fish and Game Code.

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 10 years.

Recommended Potentially Feasible Mitigation Measure(s)

To evaluate potential impacts to CBB associated with the Project, CDFW recommends implementing the following mitigation measure as a condition of approval for the Project.

Recommended Mitigation Measure 23: CBB Take Avoidance

CDFW recommends that all small mammal burrows and thatched/bunch grasses be avoided by a minimum of 50 feet to avoid take and potentially significant impacts. If ground-disturbing activities will occur during the overwintering period (October through February), consultation with CDFW is warranted to discuss how to implement Project activities and avoid take. Any detection of CBB prior to or during Project implementation warrants consultation with CDFW to discuss how to avoid take.

COMMENT 8: Special-Status Plants

Issue: Special-status plants meeting the definition of rare or endangered under CEQA § 15380 are known to occur in the vicinity of WWD. The federally endangered and CRPR 1B.2 San Joaquin woollythreads and CRPR 1B.2 Munz's tidy-tips have been documented within the WWD area (CDFW 2019).

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

Evidence impact would be significant: San Joaquin woollythreads is threatened by grazing and agricultural, urban, and energy development. Munz's tidy tips are also threatened by competition from non-native species and ground disturbances. Many historical occurrences of these species are presumed extirpated (CNPS 2019). New populations have recently been discovered, and impacts to existing populations have the potential to significantly impact populations of plant species.

Recommended Potentially Feasible Mitigation Measure(s)

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

Recommended Mitigation Measure 24: 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 25: 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 26: Special-Status Plant 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 may be warranted. Take authorization would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code § 2081(b).

COMMENT 9: Burrowing Owl (BUOW)

Issue: BUOW occur within and in the vicinity of the WWD (CDFW 2019). 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 WWD, supports grassland habitat.

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

Evidence impact is potentially significant: BUOW rely on burrow habitat year-round for their survival and reproduction. Habitat loss and degradation are considered the greatest threats to BUOW in California's Central Valley (Gervais et al. 2008). The WWD boundary 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.

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

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

Recommended Mitigation Measure 27: 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 28: 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, CBOC and CDFW's Staff Report suggest three or more surveillance surveys conducted during daylight with each visit occurring at least three weeks apart during the peak breeding

season (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 29: BUOW Avoidance

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

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

* meters (m)

Recommended Mitigation Measure 30: BUOW Passive Relocation and Mitigation

If BUOW are found within these recommended buffers and avoidance is not possible, it is important to note that according to the Staff Report (CDFG 2012), excluding birds from burrows is not a take avoidance, minimization, or mitigation method and is instead considered a potentially significant impact under CEQA. If it is necessary for Project implementation, CDFW recommends that burrow exclusion be conducted by qualified biologists and only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. CDFW recommends replacement of occupied burrows with artificial burrows at a ratio of 1 burrow collapsed to 1 artificial burrow constructed (1:1) to mitigate for evicting BUOW and the loss of burrows. BUOW may attempt to colonize or re-colonize an area that will be impacted; thus, CDFW recommends ongoing surveillance at a rate that is sufficient to detect BUOW if they return.

COMMENT 10: Other State Species of Special Concern

Issue: Tulare grasshopper mouse, San Joaquin coachwhip, and American badger can inhabit grassland and upland scrub habitats (ESRP 2019d, Thomson et al. 2016). These species have been documented to occur in the vicinity of the WWD

boundary, which supports requisite habitat elements for these species (CDFW 2018).

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 fragmentation and loss threatens these species (ESRP 2019, Thomson et al. 2016). Habitat within and adjacent to the WWD 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 WWD have the potential to significantly impact local populations of these species.

Recommended Potentially Feasible Mitigation Measure(s)

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

Recommended Mitigation Measure 31: Habitat Assessment

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

Recommended Mitigation Measure 32: 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.

Recommended Mitigation Measure 33: Avoidance

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

Editorial Comments and/or Suggestions

Lake and Streambed Alteration: Project activities have the potential to substantially change the bed, bank, and channel of wetlands and waterways onsite that 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 may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake (including the removal of riparian vegetation); (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent as well as those that are perennial. CDFW is required to comply with CEQA in the issuance of a Lake or Streambed Alteration Agreement (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 Agreement issuance. For additional information on notification requirements, please contact CDFW staff in the Central Region Lake and Streambed Alteration Program at (559) 243-4593.

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

CDFW encourages Project implementation 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 Codes as referenced above.

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

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of

non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction area would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist advise and support any variance from these buffers and notify CDFW in advance of implementing a variance.

Endangered Species Act Consultation: CDFW recommends consultation with the USFWS prior to any ground disturbance related to this Project due to potential impacts to Federal listed species. Take under the Federal Endangered Species Act (ESA) is more stringently defined than under CESA; take under ESA 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 ESA is advised well in advance of Project implementation.

Surface Water Diversions from the upstream end of Mendota Pool: The Project proposes to import surface water from the Kings River by diverting from a location near the upstream end of the Mendota Pool. Project-related diversions acquiring surface water from the Kings River watershed may impact additional riparian, wetland, fisheries and terrestrial (upland) wildlife species and habitats, including the Fresno Slough and Mendota Wildlife Area (MWA), and the San Joaquin River. Affected special status species and habitats vary depending upon location and may include, but are not limited to, the Federal threatened Central Valley DPS steelhead (*Oncorhynchus mykiss*), the Federal and State threatened Central Valley spring-run 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 and Federal threatened giant garter snake (*Thamnophis gigas*), the State threatened Swainson's hawk, the State candidate tricolored blackbird, the State species of special concern burrowing owl and western pond turtle, and numerous additional special status species and habitats. The Project proposes to divert an average of up to 29,000 AF annually, and the Mendota Pool would be one of two main sources for this diversion amount. CDFW recommends revising the MND to identify potential impacts to riparian and other natural resources listed above due to surface flow diversion from the Kings River and Fresno Slough, and proposing measures that minimize and mitigate potential impacts to a less than significant level.

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>

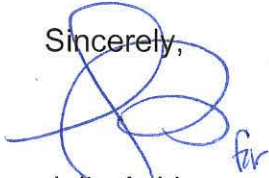
FILING FEES

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).

CONCLUSION

CDFW appreciates the opportunity to comment on the MND to assist WWD in identifying and mitigating Project impacts on biological resources. Questions regarding this letter or further coordination should be directed to Annette Tenneboe, Senior Environmental Scientist (Specialist) at (559) 243-4014 ext. 231 or by email at annette.tenneboe@wildlife.ca.gov.

Sincerely,



Julie A. Vance
Regional Manager

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

ec: Andrew Gordus, PhD.
Briana Seapy
Annette Tenneboe
California Department of Fish and Wildlife

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