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APR 22 2019

STATE CLEARINGHOUSE

April 22, 2019

Ms. Gina Dorrington
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Subject: Comments on the Draft Environmental Impact Report for the Ventura Water Supply Project (SCH# 2017111004), Ventura County

Dear Ms. Dorrington:

The California Department of Fish and Wildlife (CDFW) has reviewed the above-referenced Draft Environmental Impact Report (DEIR) for the Ventura Water Supply Project (Project) prepared pursuant to the California Environmental Quality Act (Public Resources Code 21000 et seq.) and its administrative regulations (CEQA Guidelines)¹ with the City of Ventura acting as lead agency.

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, we appreciate 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 (Fish & G. Code § 1802). Similarly, for purposes of CEQA, CDFW is directed to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Pub. Resources Code § 21069; CEQA Guidelines § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration (LSA) 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.) or the Native Plant

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.

Protection Act (NPPA; Fish & Game Code §1900 et seq.), CDFW recommends the project proponent obtain appropriate authorization under the Fish and Game Code.

Proponent: City of Ventura (City)

Project Location: Cities of Ventura, Oxnard and Port Hueneme in Ventura County. The Ventura Wastewater Reclamation Facility (VWRF) currently discharges recycled water into the Santa Clara River Estuary (SCRE), and several pipelines will cross the following drainages: the Santa Clara River, Arundell-Barranca, Brown Barranca, Harmon Barranca, and Bubbling Springs.

Project Description/Objective: The Project objective is to protect the ecology of the SCRE, develop additional water supply sources to meet water demands for planned future growth, and enhance supply reliability including in drought years. The Project would be implemented in two phases. The first phase (Phase 1) would divert 4.7 million gallons per day (MGD) of tertiary treated water to the VenturaWaterPure Project (VenturaWaterPure) for additional treatment and to provide a new potable water supply, with flows continued to protect the ecology of the SCRE. The second phase (Phase 2) would provide additional needed water supply if Phase 1 is insufficient to meet the needs of planned growth.

Based on the Scientific Review Panel (SRP)'s recommendation [supported by the Technical Review Team (TRT)], and feedback from the agencies, the City is proposing additional phasing to the implementation approach that would commit to a Continued Discharge Level (CDL) of 1.9 MGD by the end of 2025, with a planned reduction to a CDL of 0 to 0.5 MGD during closed berm conditions by the end of 2030. The City has calculated that the addition of approximately 1.2 MGD [1,400 acre-feet per year (AFY)] of purified groundwater, in conjunction with the new potable reuse supply, would provide sufficient blending of existing groundwater supplies to improve delivered potable water supply with the objective of meeting the secondary maximum contaminants (MCLs). The amount of desalted groundwater needed to meet objective for Phase 2 would expand to 2,000 AFY.

VenturaWaterPure would include diversion of the VWRF tertiary-treated flows and low-quality groundwater to a new advanced water purification facility (AWPF) to produce highly purified water. The groundwater would be pumped from the Oxnard Plain Basins (Oxnard Basin) and treated at the AWPF, where the water would be used for groundwater augmentation and/or direct potable reuse (DPR). A brief description of the Project's phases and components are provided below:

- Phase 1 - Water Conveyance System: The Project would require the installation of several pipelines to convey source water and product water throughout the new system. The following pipelines would be constructed:
 - A Polyvinyl chloride (PVC) pipeline conveying tertiary-treated water from VWRF to the AWPF. A pump station would be constructed at the VWRF.
 - A PVC pipeline conveying raw groundwater from existing extraction wells at the City Gold Course to the AWPF. While the existing well pumps may be sufficient to convey the water to the AWPF, additional pump stations may be needed.
 - A PVC pipeline conveying purified water from the APWF to groundwater wells in the Oxnard Basin for indirect potable reuse (IPR) project and/or to the Bailey Waste Conditioning Facility (WCF) and/or Saticoy WCF for the DPR project.

- A PVC pipeline conveying extracted groundwater from the groundwater wells to the Baily WCF for the IPR project.
- A PVC pipeline to return backwash waste or emergency shutdown water between the AWPf and VWRf that is returned to the influence of the VWRf for retreatment.

The pipelines would be constructed within public right-of-way (ROW) where feasible. A new pump station would be constructed at AWPf to pump the water to the groundwater wells.

- Phase 1 - Groundwater Wells: The Project includes the construction of up to six wells within the Oxnard Basin. Up to three wells would be located at Well Site 1 and up to three wells would be located at either Well Site 2 or Well Site 3 (final configuration to be determined by detailed groundwater modeling). Each well would have capacity to inject/extract between 1,250 – 2,750 gallons per minute (depending on the site) of purified water in the Oxnard Basin. The wells in the Oxnard Basin would be constructed in the Oxnard Aquifer within the Upper Aquifer System to a depth of approximately up to 250 feet. Each wellhead would require approximately 1,500 square feet, including room for construction drill rigs and maintenance truck parking. A pump station would also be located at the well sites to deliver the extracted groundwater and/or the DPR water to Bailey WCF.
- Phase 1 - Wildlife/Treatment Wetlands: Part of the Project includes up to 35 acres of wildlife/treatment wetlands that may be constructed east of the VWRf to provide additional treatment to the effluent prior to being discharged to the SCRE.
- Phase 1 - VWRf Treatment Upgrades: The Project includes VWRf treatment upgrades that would be implemented in combination with the modified and/or new wildlife/treatment wetlands to further reduce nitrogen in VWRf effluent discharged from the wildlife/treatment wetlands to the SCRE.
- Phase 1 - Concentrate Discharge Facility: The AWPf treatment process would produce a concentrated effluent that would contain several times the concentration of salts as the influent water. The concentrate would need to be discharged to the ocean in compliance with California Ocean Plan water quality standards for ocean discharge. In addition to handling concentrate, the new outfall options would be designed to accommodate some tertiary treated flows that exceed AWPf capacity during wet weather events or during times of emergency shutdown.
- Phase 2 - Option A (AWPF Expansion): The City would pursue Option A to divert the remaining wastewater flows from the VWRf to the AWPf to reach a CDFL of 0 (zero) during closed berm, dry weather conditions. The wildlife ponds would still be utilized but would operate as terminal wetlands during dry weather months. During winter open sand berm conditions, reflecting the steelhead migratory period, flows in excess of the AWPf facility's capacity would be discharged to the SCRE. This option would require an AWPf expansion to reliably produce up to an additional 1.2 MGD (1,400 AFY) of product water, and an additional 600 AFY of treated groundwater. The combined Phase 1 and Phase 2 project total would result in 6.7 MGD (7,400 AFY) of reliable new water supply. Additional flow routing modifications and/or storage would be required at VWRf site to accommodate a CDL of 0 (zero).
- Phase 2 - Option B (Ocean Water Desalination): If the necessary regulatory approvals do not allow for a consistent, reliable water supply based on the tertiary-treated water, or if the

supply is insufficient to meet the City's reliable water supply and water quality demands, an ocean desalination treatment facility would be needed. The new ocean desalination treatment facility would be located at the AWPF site and could produce an estimated additional 1.2 MGD (1,400 AFY) of desalinated water.

Five alternatives were selected for detailed analysis. A general description of each alternative to the proposed project is provided below:

- Alternative 1 - No Project: There would be no development of new water supplies to augment the City's water supply portfolio.
- Alternative 2 - Zero Percent Diversion: Tertiary-treated discharge from the VWRP would not be diverted for potable reuse and would continue to flow into a 20-acre system of freshwater wildlife/treatment ponds prior to discharge to SCRE. Under this alternative, the City would seek to construct the ocean desalination facility.
- Alternative 3 - 60 Percent Diversion: This alternative would divert 60 percent of the current flow of VWRP tertiary-treated discharge during dry-weather, closed-berm conditions (currently an average monthly flow of 2.8 MGD) as recommended by the Phase 3 Study (submitted to Regional Water Board on February 20, 2018). Since this volume of water is insufficient to meet water supply demands, this alternative requires construction of ocean water desalination in Phase 1 to meet water supply demands.
- Alternative 4 - 100 Percent Diversion in Phase 1: This alternative would consistently divert the entire current flow of VWRP tertiary-treated discharge during dry-weather, closed-berm conditions (currently an average monthly flow of 4.7 MGD) to the new AWPF for potable reuse. The VWRP would have zero discharge during dry weather, normal operating conditions. Existing wildlife ponds would be retained as endorheic/terminal wetlands during dry-weather flow. This alternative does not require construction of an ocean water desalination facility. Up to 2,000 AFY of groundwater desalting would be implemented similar to the proposed project. This alternative would not provide for a staged implementation approach to 100 percent diversion. Therefore, unlike the proposed Project, this alternative would not incorporate data collection following the reduction to a 1.9 MGD discharge to inform the final flow reduction and ensure that the decreased discharge to the SCRE would not reduce habitat values.
- Alternative 5 - Conveyance of Tertiary Effluent to Oxnard Wastewater Treatment Plant: Tertiary-treated discharge from the VWRP above the amount of the approved CDL (up to 100 percent of VWRP direct discharges) would be conveyed 10 miles to the Oxnard Wastewater Treatment Plant. The effluent would be available to the City of Oxnard to reuse for non-local supply offset or to supplement its supply. The project would not augment water supplies for the City of Ventura. Under this alternative, the City would need to develop an ocean desalination facility to meet future water supply and potable water quality needs.
- Alternative 6 - Rehabilitation of Existing Fairgrounds Outfall: All components of the proposed projects would remain the same, except for the Concentrate Discharge Facility component. There are two potential existing outfalls that are no longer in operation in the proximity of the AWPF sites that could potentially be re-purposed for the concentrate

discharge. These outfalls served the former Seaside Sewage Treatment Plant, which was owned by the City. Both pipelines come from a single point on the fairgrounds property.

The DEIR identifies Alternative 4 as the environmentally superior alternative (other than No Project Alternative) because it coincides with the SRP/TRT Report conclusions of a range of 0 – 0.5 MGD CDL.

Timeframe: Phase 1 would be achieved in two steps:

- Phase 1A would be implemented by the end of year 2025 with the VVWRF committing to a CDL of 1.9 MGD, and 2.8 MGD of minimum VVWRF flow diverted to other uses.
- Phase 1B would be implemented by the end of year 2030 with the VVWRF committing to a CDL of between 0-0.5 MGD, and 4.2-4.7 MGD of minimum VVWRF flow diverted to other uses.

Phase 2 Option A or Option B would be implemented between 2030 and 2035 to meet dry-year demands.

HISTORY

The City has been working with CDFW, U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), and Los Angeles Regional Water Quality Control Board (LARWQCB) to address concerns regarding the potential impacts to biological resources associated with the proposed diversion of tertiary-treated water discharges into SCRE to potable reuse. In coordination with FWS and NMFS, CDFW submitted a letter dated December 13, 2018, to RWQCB to response to a request for information regarding the issuance of the National Pollutant Discharge Elimination System (NPDES) permit for the City's proposed VenturaWaterPure Project and proposed changes to effluent discharges into the SCRE. The RWQCB requested CDFW to provide flow recommendations and monitoring requirements for the reduction in discharge from the VVWRF located in the SCRE. CDFW recommended a minimum average annual flow of 1.9 MGD for summertime closed berm conditions.

The City will be required to submit a wastewater change petition to the State Water Resources Control Board to approve the reduction of wastewater associated with the DEIR. CDFW will have the opportunity to protest the petition and propose measures to remedy any unresolved concerns related to potential impacts to biological resources.

Biological Significance

The SCRE provides open water, sand dune, nearshore, riparian, mudflat, and other habitats that support a number of sensitive species (some listed) throughout their life cycles, including the tidewater goby (*Eucyclogobius newberryi*), Southern California steelhead trout (*Oncorhynchus mykiss*), California least tern (*Sterna antillarum browni*), and western snowy plover (*Charadrius nivosus*). SCRE is a core resource area strategically located along the coast that provides food, shelter, stopover, and safety for wildlife. The protection and preservation of the SCRE for the above-named species remains a high priority for CDFW. The Santa Clara River, Arundell-Barranca, Brown Barranca, Harmon Barranca, and Bubbling Springs provide breeding and foraging habitat for local fish and wildlife resources. Sensitive riparian habitat adjacent to the groundwater wells along the Santa Clara River support

southwestern willow flycatcher (*Empidonax traillii extimus*), and least Bell's vireo (*Vireo bellii pusillus*), yellow warbler (*Setophaga petechia*), and yellow breasted chat (*Icteria virens*). Impacts to California species of special concern (SSC), including yellow warbler, yellow breasted chat, and steelhead, should be considered a significant direct and cumulative adverse effect under CEQA without implementing appropriate avoidance and/or mitigation measures (CEQA Guidelines §§ 15064, 15065, 15125[c] and 15380).

COMMENTS AND RECOMMENDATIONS

CDFW offers the following comments and recommendations to assist the City in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

CDFW also recommends the environmental document include measures or revisions (outlined below) in a science-based monitoring program, with adaptive management strategies, as part of the Project's CEQA mitigation, monitoring and reporting program (Public Resources Code, § 21081.6 and CEQA Guidelines, § 15097).

I. Project Description

Comment #1: Minimum Flows Analysis and the Identification of Alternative 4 as the Environmentally Superior Alternative

Issue #1: *Alternative 4 (100 Percent Diversion)*. The DEIR identifies Alternative 4 as the environmentally superior alternative, other than No Project Alternative ([CEQA Guidelines § 15126.6 (e)(2)]. Alternative 4 is described as the environmentally superior alternative because it coincides with the SRP/TRT Report conclusions of a range of 0 – 0.5 MGD CDL.

Issue #2: *Health of the Entire Estuary*. The DEIR focuses on the tidewater goby as the key resident fish species. CDFW is concerned that primarily utilizing the tidewater goby does not fully identify the minimum flow criteria to address steelhead smolt and the health of the whole 160-acre estuary. Habitat diversity should be the primary metric that informs minimum flow discharge to provide for a variety of habitat vegetation types, water temperature, water salinity, and water-column depths to support the variety of existing species.

Issue #3: *Dry Weather Closed Sand Berm Conditions*. The current average annual discharge of 4.7 MGD provides approximately 108 acres of open water. Phase 1A (60 percent diversion) with a flow of 1.9 MGD would result in approximately 86 acres of open water. Phase 1B (90 percent diversion) with a flow of 0.5 MGD would result in 49 acres of open water habitat, Phase 1B (100 percent diversion) with zero discharge would result in 41 acres of open water habitat.

Specific Impact: Southern California steelhead trout is the largest species that depends on the SCRE for vital life-history and ecological function and should be at the forefront in the existing and future models. This species utilizes all areas of the estuary including the open water habitat. The SCRE has long been recognized as important rearing habitat for steelhead trout fingerling and smolt until they reach maturity as adults to survive the tough conditions of the Pacific Ocean.

Why impact would occur: The SCRE receives groundwater inflow upstream in the Santa Clara River. Water quality conditions in the estuary have the potential to affect juvenile

steelhead. The SCRE currently has approximately 108 acres of open water which provides a combination of fairly shallow open water and water that is generally deep enough to provide some protection from terrestrial and larger avian predators. The Project proposes to divert current flows that would result in a reduction of open water habitat, and decrease the amount of water that dilutes contaminants from surface runoff and concentrations of nutrients and other contaminants present in the groundwater upwelling such as total dissolved solids, sulfates, manganese (Burton et al. 2011) during dry weather closed berm conditions. Alternative 4, identified in the DEIR as the superior alternative, proposes a 100 percent diversion and would eliminate flows that currently dilute contaminants.

Evidence impact would be significant: Habitat conditions in the SCRE could be unsuitable or lethal to any out-migrating juvenile steelhead during closed sand berm conditions due to a decrease in the VVWRF discharges.

Surface runoff from local urban and agricultural uses located along the Santa Clara River flows into the SCRE. High levels of pesticides can alter benthic macroinvertebrate assemblages and reduce prey availability for steelhead and estuarine species (Grimmaldo et al. 2009; Anderson et al. 2014). Pesticides may also disrupt olfactory sensory neurons necessary for salmonid species homing and predator avoidance (Anderson et al. 2014).

The Stillwater Report (Stillwater, 2018) recommends 1.9 MGD for the Enhancement Discharge Levels, CDL, and Maximum Ecologically Protective Diversion Volume (MEPDV). The 1.9 MGD minimum average flow reflects Alternative 3 (60 Percent Diversion) and would include sufficient contingency to account for the level of uncertainty described in the City's Estuary Studies, Stillwater (2018) report, and unforeseen factors. CDFW believes this flow represents a conservative best estimate to maintain ecological functions, minimize reduction of surface water and habitat for wildlife, and monitor changes to habitat and species in SCRE.

Recommended Potentially Feasible Mitigation Measure(s)

Mitigation Measure #1: CDFW recommends a minimum average flow of 1.9 MGD for dry weather closed sand berm conditions to ensure enough open water habitat is present for steelhead and tidewater goby to avoid predation, and water is flowing during dry weather periods to dilute contaminants from surface runoff and groundwater upwelling.

Mitigation Measure #2: CDFW recommends water samples and sediment samples to be collected in the SCRE to analyze toxicity levels for invertebrates.

Comment #2: Groundwater Dependent Ecosystems

Issue: CDFW has a vested interest in the sustainable management of groundwater, as many sensitive ecosystems and public trust resources are dependent on groundwater. The Oxnard Basin is a critically overdrafted basin (COB). The final EIR should consider and analyze impacts to groundwater dependent ecosystems (GDEs) in the Project.

Specific Impact: The Oxnard Basin is subject to critical conditions of overdraft when continuation of present water management practices could result in significant adverse environmental, social, or economic impacts. For this reason, additional extractions to COBs (depending on the specific reason for its listing) are likely to have adverse impacts.

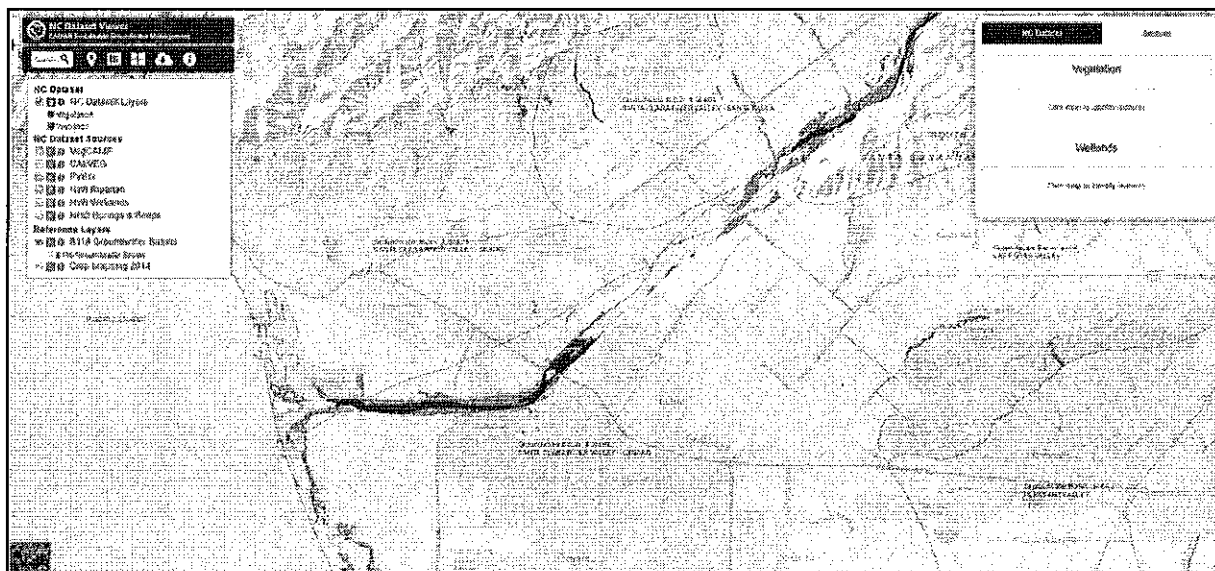
Why impact would occur: The Department of Water Resources (DWR)'s Natural Communities Commonly Associated with Groundwater Dataset identifies many potential GDEs in the Project's geographic scope (DWR 2019). The potential GDEs identified in orange in Figure 1 of DWR's dataset likely consists of phreatophytic vegetation, which rely on water supply from the groundwater table.

Evidence impact would be significant: Phreatophytic vegetation is a critical contributor to nesting and foraging habitat for a wide range of species and can be affected by depth to groundwater (Naumburg et al. 2005, Froend and Sommer 2010). This sensitivity to groundwater level thresholds means that localized pumping and recharge actions altering groundwater levels, such as those proposed in the Project, can impact the health and extent of phreatophyte vegetation. Both decreasing (drying out) or increasing (drowning) groundwater elevation has the potential to stress phreatophytes depending on the plant species and the groundwater elevation and duration (e.g., short term wetness/dryness versus prolonged wetness/dryness). Proposed groundwater management actions included in the Project should be managed with consideration to impacts to potential GDEs.

Recommended Potentially Feasible Mitigation Measure(s)

Mitigation Measure #1: The final EIR should verify the existence of GDE that could be affected by the Project and identify vegetation communities (e.g., species compositions, structural diversity, and integrity) and associated rooting depths/optimal groundwater table elevations. This will allow Project proponents to: 1) determine which proposed phase or alternative is most likely to impact GDEs based on basin hydrology; 2) deploy representative groundwater monitoring stations within GDEs to track groundwater levels and vegetation responses over time; and, 3) establish thresholds/triggers for adaptive management to respond to stressed vegetation as needed. If the Project is expected to result in habitat benefits to GDE's, monitoring should be utilized to track and confirm positive and negative outcomes.

Figure 1: Potential groundwater dependent ecosystems within the Oxnard Basin and the proposed Project areas.



Comment #3: Groundwater Impact Analysis

Issue #1: The DEIR on page 3.6-9 states, “[a] very significant area in Ventura County is experiencing subsidence, including the project area (County of Ventura 2013). Data suggests that groundwater has been extracted from the aquifers underlying the Oxnard Basin at a rate that exceeds the rate of replenishment, referred to as ‘overdraft’”. An evaluation of subsidence impacts to GDEs from the Project should be included in the EIR.

Issue #2: The DEIR on page 3.9-56 states, “[f]or wells near the coast, groundwater extraction could promote seawater intrusion under certain operating scenarios. Avoiding seawater intrusion would be accomplished through extraction of the injected water within a short time frame to avoid excessive subsurface migration. Similarly, long-term storage of injected water in the Oxnard Basin could displace naturally recharged groundwater”. An evaluation of increase saltwater intrusion or the displacement of naturally recharged groundwater to GDEs from the Project should be included in the EIR.

Specific impact: The DEIR lists on page 3.9-57 specific actions to be implemented if potable wells are found to be adversely affected by the aquifer storage and recovery (ASR) operations through a reduction in water quality or impeding access to groundwater.

Why impact would occur: The Project proposes phases that may increase groundwater production and treatment. Increased groundwater extraction during dry water years can lower groundwater tables. This lowering of the groundwater table can potentially cut phreatophytes off from a water supply causing vegetation stress (and possibly death) depending on vegetation needs and duration of lower quality groundwater levels. Groundwater recharge with treated water may also raise local groundwater table elevations. As increased recharge raises the groundwater table, phreatophyte roots can be ‘drowned’ in fully saturated soil zones causing vegetation stress (and possibly death) depending on vegetation needs and duration of high groundwater levels. Groundwater activities such as pumping, treating, extracting, and recharging within two (2) month intervals may further contribute to possible subsidence.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: The final EIR should address how the groundwater activities such as pumping, treatment, extracting, and recharging within two (2) month intervals may impact GDEs. CDFW also recommends that the City coordinate with the Fox Canyon Groundwater Management Agency to discuss effective/reliable methods to monitor and manage for impacts to GDEs.

Comment # 4: Vegetation and Habitat Communities

Issue: Chapter 3.4.3. of the DEIR identifies within the Project area arroyo willow thickets, mulefat thickets, riverwash herbaceous, coyote brush scrub, giant reed breaks, hardstem bulrush marsh, dune mat, shining willow groves, Pacific silverweed marsh, creeping rye grass turf, and FWS-designated critical habitat (DCH) for southwestern willow flycatcher. These vegetation communities such as the arroyo willow thickets, mulefat thickets, riverwash herbaceous, and FWS- DCH for southwestern willow flycatcher are present in the Santa Clara River adjacent to the proposed groundwater wells, but are not quantified.

Specific impact: Impacts to specific habitat communities and vegetation adjacent to proposed groundwater wells (see Figure 3.4-1) are not provided (quantified) in the DEIR. All impacts to sensitive habitat communities should be identified, mapped and quantified in the final EIR. Without an impact analysis and proposed avoidance, minimization and mitigation measures, impacts to vegetation and habitat communities should be considered significant and unmitigated under CEQA.

Why impact would occur: Increased groundwater extraction during dry water years can lower groundwater tables, which can potentially cut phreatophytes off from water causing vegetation stress (and possibly death) depending on vegetation needs and duration of lower quality groundwater levels. Groundwater recharge with treated water may also raise local groundwater table elevations, potentially resulting in root "drowning" in fully saturated soil zones causing vegetation stress (and possibly death).

Evidence impact would be significant: The Project area includes sensitive species such as southwestern willow flycatcher, and least Bell's vireo, yellow warbler, and yellow breasted chat that depend on the sensitive riparian habitat. The DEIR should list specific habitat community acreages, provide the calculations for the potential loss of acreages, and propose avoidance/minimization and mitigation measures. Without this information in the EIR, adverse impacts to these sensitive vegetation and habitat communities should be considered significant and unmitigated under CEQA.

Recommended Potentially Feasible Mitigation Measure(s)

Mitigation Measure # 1: CDFW recommends that the City identify the vegetation and habitat communities within the GDEs and conduct floristic-based assessments of special status plants and natural communities following CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (<http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959>). Please note, this protocol has been recently updated and the 2018 version referenced here should be used.

Comment #5: Focused Pre-Construction and Post-Construction Aquatic Surveys

Issue: The Project may potentially affect existing aquatic species and/or their habitats.

Specific impact: Project implementation may result in reduced reproductive capacity, population declines, or local extirpation of rare, special-status, or threatened and endangered species.

Why impact would occur: Project implementation could substantially reduce aquatic species habitat and/or degrade the quality of habitat, which may cause aquatic populations to drop below self-sustaining levels.

Evidence impact would be significant: CDFW considers adverse impacts to habitat for aquatic species, for the purposes of CEQA, to be significant without mitigation. Project-related impacts to aquatic species and their habitats, supported by current survey results, should be analyzed in the EIR.

Recommended Potentially Feasible Mitigation Measure(s)

Mitigation Measure #1: CDFW recommends that focused surveys for fish, amphibians, and marine species be conducted with focus on identifying special status species and species abundance. CDFW recommends that aquatic surveys be conducted by a qualified fisheries biologist to identify the fish species and quantify the fish populations that are present within: 1) the areas within the open water habitat of the SCRE; and, 2) upstream of the SCRE adjacent to the proposed groundwater pumping well sites along the Santa Clara River. Focused species-specific surveys should consider seasonal variations and be conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable.

Comment #6: Focused Pre-Construction and Post-Construction Avian Surveys

Issue: The Project may potentially affect existing avian species and/or their habitats.

Specific impact: Project implementation may result in reduced reproductive capacity, population declines, or local extirpation of rare, special-status, or threatened and endangered species.

Why impact would occur: Project implementation could substantially reduce avian species habitat and/or degrade quality of habitat, which may cause avian populations to drop below self-sustaining levels.

Evidence impact would be significant: CDFW considers adverse impacts to habitat for avian species, for the purposes of CEQA, to be significant without mitigation. Project-related impacts to avian species and their habitats, supported by current survey results, should be analyzed in the EIR. As mentioned previously, impacts to avian SSC avian should be considered a significant direct and cumulative adverse effect under CEQA without implementing appropriate avoidance and/or mitigation measures (CEQA Guidelines §§ 15064, 15065, 15125[c] and 15380).

Recommended Potentially Feasible Mitigation Measure(s)

Mitigation Measure #1: CDFW recommends that focused surveys for avian species be conducted with focus on identifying special status species such as California least tern, western snowy plover, southwestern willow flycatcher, least Bell's vireo, yellow warbler, yellow chat, and all raptor species. CDFW recommends that avian surveys be conducted by a qualified ornithologist prior to adoption of the final EIR to identify avian species that are present within: 1) the SCRE; and, 2) upstream of the SCRE adjacent to the proposed groundwater pumping well sites along the Santa Clara River. Focused species-specific surveys should consider seasonal variations and be conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable.

Comment #7: Deferred Mitigation

Issue: The DEIR concludes that the Project would result in a 90-100 percent reduction of VWRP discharges and cause a reduction of open water estuary acreages and mudflat estuary acreages by 55-62 percent. The Project would also reduce the acreage of spawning and rearing habitat for tidewater goby, rearing habitat for subadult steelhead, and foraging habitat for California least tern and western snowy plover.

Specific Impact: The SCRE currently receives an annual average of 4.7 MGD. The VRWF discharges have altered the baseline hydrograph and have created ecosystem reliance on the discharge flows. Project implementation will result in impacts to the SCRE, sensitive vegetation communities, and listed/sensitive wildlife. This could result in direct mortality, reduced reproductive capacity, population declines, or local extirpation of several sensitive species.

Why impact would occur: CDFW considers the Post Construction SCRE Monitoring, Assessment, and Adaptive Management Program (MAAMP) proposed in DEIR to address impacts and mitigation measures as deferred analysis impacts and mitigation to a future date after the Project has already been approved. Without a supporting impact analysis and proposed avoidance, minimization and mitigation measures in the EIR, impacts to vegetation and habitat communities should be considered significant and unmitigated under CEQA.

Evidence Impact would be significant: CEQA Guidelines sections 15070 and 15071 require the EIR to analyze if the Project may have a significant effect on the environment as well as review if the Project will "avoid the effect or mitigate to a point where clearly no significant effects would occur". In order to analyze if a project may have a significant effect on the environment, Project-related impacts, including survey results for species that occur in the entire Project footprint should be included in the DEIR for public review. This information allows CDFW to comment on alternatives to avoid impacts as well as to assess the significance of the specific impact relative to the species (e.g., current range, distribution, population trends, and connectivity).

In addition, CEQA Guidelines section 15126.4(a)(1)(B) states "[f]ormulation of mitigation measures should not be deferred until some future time." CDFW considers the planned preparation of the MAAMP as a deferral of mitigation; therefore, it would not adequately avoid, minimize, or mitigate significant impacts in accordance with CEQA and not be disclosed during the DEIR review process. At a minimum, the EIR should include draft MAAMP for review and comment with the EIR.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends that the final EIR include specific information regarding potential impacts to streambed vegetation communities that may be considered groundwater dependent and could be affected by Project-related changes in the water quality and quantity of groundwater. This information should include the location and acreage of any impacts and proposed avoidance, minimization, and mitigation measures.

Mitigation Measure #2: The final EIR should evaluate the Project-related and cumulative effects of upstream water diversions. Such diversions can result in reduced fresh-water contributions upstream and should be factored into determining the appropriate baseline condition for recommendations.

Mitigation Measure #3: BIO-5 should be updated to implement a 5-year Pre-Construction SCRE Monitoring Program. The Monitoring Program should include:

- a) Approaches and methods to establish pre-project baseline conditions;
- b) The continuous deployment of four or five datasondes strategically placed within the SCRE to determine real-time, short-term, long-term, and seasonal variation of water

conditions within the estuary, water levels, temperature, salinity, pH, and dissolved oxygen. Data should be collected hourly, and downloaded every two weeks;

- c) Protocol surveys:
 - i) Water samples within the SCRE;
 - ii) Sediment samples within the SCRE;
 - iii) Surveys to collect data on the horizontal and vertical availability of nearshore and open water habitat to be maintained at a minimum amount of acreage to support adult Southern California steelhead trout;
 - iv) Surveys to collect data on the width of buffer zones for willow riparian and mudflat habitats from roads, bridges, state facilities, and Ventura infrastructure to ensure continued use by wildlife; and,
 - v) Identification and preservation of habitat elements that support special status species (e.g., wrack and dunes for birds and nearshore habitat for fish).

Mitigation Measure #4: BIO-6 should also be updated to include:

- a) Statistics, sampling sizes, surveys, and methods used to detect significant changes and how it will be monitoring and analyzed;
- b) Approaches to establish the proposed timeline and seasonal restrictions for data collection, monitoring, and proposed discharge reductions;
- c) Monitoring of bathymetric or water depth measurements with acreage calculations;
- d) Monitoring of species abundance, and habitat within the estuary (nearshore and open water areas) to document changes in water depth and species/habitat composition). Depth measurements should be conducted no less that weekly at two locations (upper third and lower third) in the open water area;
- e) Seasonal and annual monitoring/quantification of changes in aquatic and terrestrial habitat types/distributions and sensitive species within the SCRE;
- f) The continuous deployment of four or five datasondes strategically placed within the SCRE to determine real-time, short-term, long-term, and seasonal variation of water conditions within the estuary, water levels, temperature, salinity, pH, and dissolved oxygen. Data should be collected hourly, and downloaded every two weeks;
- g) Measurable performance standards to verify sufficient ecological functions for all species;
- h) Identification and analysis of the source of nutrients that exist within the shallow groundwater inflows and discharges from the treatment plant;
- i) Regular sampling of SCRE sediment to monitor toxicity levels for invertebrates (prey for fish species);
- j) Monitoring/control measures for invasive plant, animal, and aquatic species;
- k) Developing all adaptive strategies for effluent discharge based on ecological needs of special status species that occupy SCRE including how to balance the competing needs of special status species. This may include an increase in discharge to dilute contaminants levels to benefit fish species during dry weather conditions, but this increase may breach the sand berm or cause nest failure along the sand berm;
- l) Ecological parameters for the trigger thresholds;
- m) Mechanisms for annual review of the minimum and maximum monthly average flows; and,
- n) Courses of actions, adjustments to the discharge amounts, and mitigation measures to be implemented in the event that thresholds are triggered.

Mitigation Measure #5: To offset the loss of habitat acreage that supports sensitive species, CDFW recommends the following compensatory mitigation for the City's proposed changes to effluent discharge to the SCRE:

- a) *Arundo (Arundo donax)* removal around the periphery and within the SCRE to promote overall increase in habitat quality for nesting birds;
- b) Maintenance of wrack on the sandy beach areas of McGrath State Park for endangered terrestrial bird species;
- c) Installation of new gauges to monitor effluent surface flows (down the Santa Clara River and into the SCRE) and groundwater upwelling (at the mouth of the SCRE) to collect and analyze data on the natural hydrology of SCRE and to inform needs for seasonal effluent discharge; and,
- d) Creation of estuarine open water, freshwater, and mudflat habitat. If on-site mitigation is not feasible or would not be biologically viable and, therefore, would not adequately mitigate the loss of biological functions and values, off-site mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed.

Comment #8: Impacts to Streambed Resources

Issue #1: The final EIR should identify all perennial, intermittent, and ephemeral stream features, and any associated biological resources/habitats present within the entire Project footprint (including access and staging areas). The Project activities are within the bed, bank and channel of two ephemeral streams and the River. The Project may be subject to notification under Fish and Game Code § 1600 et seq. The Brine Discharge Pipeline for the Concentrate Outfall will cross the Arundell-Barranca drainage. The Advanced Treatment Water Pipeline will cross numerous streams such as the Brown Barranca and the Harmon Barranca drainages. The two potential connections for the Callagues Salinity Management Pipeline (SMP) Alignment will cross the Bubbling Springs drainage. Within the Santa Clara River, the Project activities and groundwater pumping from six groundwater wells may have an impact resulting in a measurable or visual change in water surface elevation or a visual reduction in the width of the stream surface flow. The final EIR should analyze all potential temporary, permanent, direct, indirect, and/or cumulative impacts to the above-mentioned stream areas that may occur as a result of the Project.

Comment #9: Discharge Location

Issue #1: The current discharge point should be evaluated for relocation further upstream in the estuary (e.g., closer to Victoria Avenue Bridge) to create more "natural" hydrology in the SCRE. The relocated discharge point would move the freshwater input away from the mouth of the estuary, further upstream.

Comment #10: Saltwater Intrusion

Issue #1: Saltwater contribution from wave over-wash can significantly contribute to the open water volume and increase the salinity within SCRE. Therefore, saltwater should be further studied and calculated directly into the water balance model. In addition, the City should identify the rate and contributions for filling of the SCRE (e.g., water-surface elevations relative to tides, wave action, stratification, limits of inundation), including changes to the bathymetry of the estuary following large storm events and changes to the beach dynamics associated with

dredge spoil placement. The City should also evaluate and quantify the contribution of groundwater to nutrient input and water volume in SCRE.

Issue #2: The final EIR should consider and address changes to SCRE hydrology, flows from the United Water Conservation District's water management practices, and proposed restoration actions at McGrath State Park.

Comment #11: Impacts to Streambed Resources

Issue #1: The Project may result in potential effects to marine resources from impingement and entrainment by the proposed subsurface intake system such as slant wells, beach wells, or infiltration galleries. CDFW prefers the method of drawing salt water from directionally drilled wells (slant wells) for desalination to avoid fish, fish egg, and larvae entrainment and impingement that would occur when using direct ocean intakes with wire mesh. Impacts to marine organisms other than fish may occur. These impacts to marine organisms should be analyzed in the final EIR. Additionally, long-term monitoring, testing, and fish impact analysis should be conducted if fish screens and direct ocean draw are proposed alternatives.

Comment #12: Desalination Brine Discharge and Water Quality

Issue #1: Discharge of brine effluent to the marine environment may cause potential harmful impacts to marine life. Several brine discharges should be analyzed, pilot tested, and chosen based on scientific data indicating it will avoid marine water quality impacts, marine species impacts, or based on data collected to show that impacts will be reduced to below a level of significance. The final EIR should fully describe potential marine environmental effects from each brine effluent discharge alternative. In addition, a detailed monitoring plan is recommended for any alternatives that propose direct ocean discharge of brine waste to ensure that the discharged effluent is fully mixed and is properly diluted for protection of marine resources.

Comment #13: General Construction Recommendations

Issue #1: Parking, driving, lay-down, stockpiling, and vehicle and equipment storage should be limited to previously compacted and developed areas and the designated staging area. No off-road vehicle use should be permitted beyond the project site and designated access routes. Disturbances to the adjacent native vegetation should be minimized. Nonnative plants, including noxious weeds (as listed by the California Invasive Plant Council), should be prevented from establishing in temporarily disturbed areas, either by hand-weeding or selective application of herbicide.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports be incorporated into a database which may be used to make subsequent or supplemental environmental determinations [Pub. Resources Code, § 21003, subd. (e)]. Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDDB_FieldSurveyForm.pdf. The completed form can be mailed electronically to CNDDDB at the following email address:

Gina Dorrington
City of Ventura
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CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

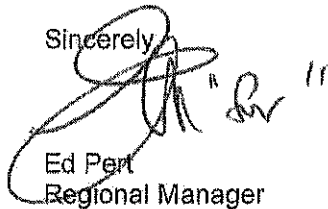
FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife and assessment of CEQA 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 DEIR for the Ventura Water Supply Project to assist the City of Ventura in identifying and mitigating Project impacts on biological resources. For any questions regarding this letter and further coordination on these issues, please contact Mary Ngo at (562) 342-2140 and Mary.Ngo@wildlife.ca.gov.

Sincerely,



Ed Pert
Regional Manager

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