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Santa Ana Regional Water Quality Control Board

April 10, 2019

Governor's Office of Planning & Research

APR 10 2019

STATE CLEARINGHOUSE

ATTN: Megan Wong
U.S. Army Corps of Engineers, Los Angeles District
CESPL-PDR-N
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Los Angeles, CA 90017

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DRAFT FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL IMPACT REPORT (FR/EIS/EIR), PRADO BASIN ECOSYSTEM RESTORATION AND WATER CONSERVATION INTEGRATED FEASIBILITY STUDY – U.S. ARMY CORPS OF ENGINEERS (USACE) AND ORANGE COUNTY WATER DISTRICT (OCWD), RIVERSIDE, ORANGE, AND SAN BERNARDINO COUNTIES, SCH# 2016041002

Dear Ms. Wong:

Staff of the Regional Water Quality Control Board, Santa Ana Region (Regional Board staff) has reviewed the Draft Feasibility Report and Environmental Impact Statement/Report (FR/EIS/EIR) for the joint USACE/OCWD Prado Basin Ecosystem Restoration and Water Conservation Integrated Feasibility Study (Project). During a 50-year period, implementation would be divided between proposed Water Conservation and Ecosystem Restoration Plans to adjust resource management both upstream and downstream of Prado Dam to a greater storage capacity within the Prado Basin.

The Water Conservation Plan would intercept sediment transported into Prado Basin by the Santa Ana River (SAR), Reach 3 for removal and multiple uses (predominantly downstream re-entrainment in SAR Reach 2). This Plan would increase allowable temporary storage behind Prado Dam[1], and reduce the volumes released during floods, yet strategize these releases at an optimal rate for the recharge of Orange County aquifers.

The Ecosystem Restoration Plan is intended to improve the quality and function of primarily wetland and riparian habitats. Management measures would include the planting of native species and control of invasive plants in portions of the tributaries entering the Prado Basin (Chino Creek, Mill Creek, upstream SAR; Temescal Creek not discussed) with much of this

[1] Flood season elevation would be increased from 498 feet to the current non-flood season elevation of 505 feet, creating a year-round, maximum maintained elevation of 505 feet, but flood event releases downstream to SAR Reach 2 would be more prompt (FR/EIS/EIR Water Conservation & Sediment Transport Analysis Report, p.14).

program extended downstream into SAR Reach 2; channel restoration (Chino Creek); and aid to wildlife movement. Such habitat management is intended to protect these threatened or endangered species: the Santa Ana sucker, least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and coastal California gnatcatcher.

Regional Board staff recommend that the Final FR/EIS/EIR incorporate the following comments in order for the Project to best protect water quality standards (water quality objectives, beneficial uses, and an antidegradation policy), as defined in the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan):

1. Regional Board staff has participated with USACE and OCWD staff during this decade, by meetings and written CEQA letters (see Enclosure, our October 18, 2017 letter), to formulate Project plans. In addition, we issued two Clean Water Act (CWA) Section 401 Water Quality Standards Certifications: Certification No. 33-2014-09, the Prado Basin Sediment Demonstration Project (to excavate and re-entrain 200,000 cubic yards (cy) of sediment into SAR Reach 2, not initiated) and Certification No. 332017-21, the Prado Basin Habitat Restoration Project (to excavate 120,000 cy to the El Sobrante Landfill, still anticipated). The combinations of the certified tasks, or new tasks under any future Certification, should be distinguished in the Final FR/EIS/EIR. In all the above, we have stressed the need for the transfer of coarse-grained clastics (coarse sand, gravel, cobbles, even small boulders) from the Prado Basin to SAR Reach 2. Measure WC-1, Water Conservation with Incidental Sediment Removal (p.17-8), recognizes the impacts of depleted sediment deposition downstream of Prado Dam and proposes Project methods for sediment removal and re-entrainment below the Dam. Measure SU-1A, Sediment Management, considers the most favorable coarse sediment for re-entrainment to be that composition entering the Prado Basin along SAR Reach 3 (p. 59) and therefore continues the concept of a "sediment removal channel" from a related 2017 CEQA document (see Enclosure). Further, Measure SU-1A notes a preferred Detailed Alternative VI (entrainment by slurry pipelines, p.58) but lists numerous revisions (p.58-82) that depart from direct re-entrainment to downstream deposition sites; instead, it describes an elaborate engineered system (both upstream and downstream of the River Road Bridge) for sediment trapping, extraction, and permanent stockpiling.

   In sequence from upstream to downstream, the Project would construct a forebay to an Entrainment Groin that would span the SAR. The Entrainment Groin would constrain SAR flows (normal flows, and storm flows of depth lower than the Groin) to two separate openings that create parallel channels continuing beneath the River Road Bridge: a Transition Channel, and a OCWD Wetlands Pilot Channel connecting to the existing OCWD Wetlands Diversion Channel. The Transition Channel would direct the SAR flows into an 11.8- acre excavated pit that would gradually fill up with sediment (Sediment Trap). The Sediment Trap would then be visited as the source of all sediment for the Project. These features would be adjacent to the site of a native planting measure ("Widen Floodplain"). It appears incongruous that the floodplain would be widened and excavated immediately adjacent to the Transition Channel and Sediment Trap feature, which serves to constrict the floodplain. Further, this entire sequence of engineered features is vulnerable to larger flow events that would overtop the Entrainment Groin and spread sediment throughout the SAR's entry into the Prado Basin; the design storm/storm flow that the Sediment Basin would be able to withstand should be discussed in the Final FS/EIS/EIR.

At the Sediment Trap itself, dry excavation (trucks and scrapers) or hydraulic dredging (pumping slurry) would variously move the sediment out of the Prado Basin, to dewatering and storage in two enormous piles to be situated on either side of the USACE Prado Field Office (Water Conservation Measure WC-1, p.19; Sediment Management Measure SU-1A, p.60). This storage would allow latitude in planning when to re-wet the sediments to re-entrain through pipelines during planned Dam releases and planning for additional uses for the sediment (landfill cover, beach replenishment, etc.). We question the necessity of the above planned sequence for the following reasons:

a. The Sediment Trap is planned to be cleared only twice over the 50-year life of the Project, with sediment "removed from the trap area on average once every 25 years" (Measure WC-1, p.19). No explanation is given as to why this remarkable interval of time is chosen. A more streamlined procedure for incremental sediment removal and re-entrainment is clearly needed (Comments 1b, 1c, and 1d). Add in the sediment for initial Project excavations of the above-referenced engineered features, and apparently these two planned 60-ft-high storage piles (15- and 27-acre tops, with 5:1 slopes) would effectively remain for a half-century directly north of SR-91 (windward side), in the path of Santa Ana winds and therefore, constitute a potential nuisance.

b. The Sediment Trap provides the basis of all six Detailed Alternatives (Measure SU-1A, p.57) with no other design. Regional Board staff are of the opinion that as an alternative to constraining SAR Reach 3 flows to a sediment trap, the Project should consider short-term, periodic surface excavations and hydraulic dredging in open areas around the Prado Basin interior, and from within all streams entering Prado Basin (not merely SAR Reach 3). During the proposed Project's focus on extracting only coarse sediments from the SAR, we note that silts and clay from the finer sediments of the other tributaries would continue to accumulate ("silt up") behind Prado Dam unless those "fines" are also removed to the storage pile(s).

   Further, we have recognized that predominantly coarse sediments are needed in early phases of the Project's re-entrainment program, in order to offset the existing excess of fines that settle downstream in OCWD recharge basins. However, over time an imbalance of coarse sediments should be prevented. Later phases of re-entrainment must add at least a low percentage of fines, toward optimizing a mix of fine and coarse sediments that act together (as suspended load and bed load) to minimize extremes of streambed erosion (scour) versus aggradation (deposits and braiding). By satisfying particle recruitment by clear ("hungry") water, these fines will help achieve the sediment-to-water ratio necessary in the suspended load to minimize the extent of erosion experienced in recent years in SAR Reach 2.

c. Regional Board staff understand that depending on the water content of the sediments during a removal episode, sediment removal could involve the use of dump trucks or other "heavy equipment" for dry excavations, and/or hydraulic dredging with pumps for evacuating natural slurries (Measure SU-1A, p.19, 60, 73). The Final Feasibility Report and EIS/EIR should analyze how these sediments could be simply be transferred by truck, connected slurry pipelines, or by other means directly from the Prado Basin to the re-entrainment point(s) below the Dam.

d. For the proposed Project, the Sediment Management Measure would have permanent impacts to 145 acres of wetlands, temporary impacts to 123 acres of wetlands, and permanent impacts to 64.87 acres of unvegetated waters of the U.S./state (no temporary impacts), requiring a Certification from the Regional Board. We believe that a less-engineered, more holistic approach to ecological dynamics would reduce this impacted acreage and beneficial uses, while removing sediment incrementally and economically. For example, the FR/EIS/EIR generally states that the sandy substrate in the vicinity of River Road Bridge is poor habitat for the Santa Ana sucker, which seeks streambeds with stones and other rocky clasts. In the Project's portion of SAR Reach 3, the Entrainment Groin and Transition Channel construction may impede sucker movement. A potentially more effective program would be no groin/channel and to conduct periodic episodes of shallow dredging for the prevalent sand along this Reach 3 portion. Then, some of the stones recovered downstream within the Prado Basin could be redistributed on the bed of Reach 3 to enhance sucker habitat. Such measures would be discussed in our Certification among others advancing the RARE beneficial use of the Basin Plan.

   The Final FS/EIS/EIR should explore how such planned enhancement ("managing for sucker") could provide additional sucker habitat that would augment the restoration efforts of the existing Upper Santa Ana River Watershed Habitat Conservation Plan (HCP; Seven Oaks Dam area to downstream potential habitat). The Final FS/EIS/ EIR should reference this HCP and document whether the Project could negatively affect, or positively augment, those efforts.

2. The Chino Creek Channel Restoration Measure CC-2C would create a bypass channel to the west of the main channel in Reach 1A, i.e., the golf course area upstream of Prado Basin. There would be permanent impacts to 5.10 acres of wetlands, temporary impacts to 0.08 acres of wetlands, permanent impacts to 2.01 acres of unvegetated waters of the U.S./state, and temporary impacts to 0.17 acre of unvegetated waters. Regional Board staff have no objection to the implementation of Measure CC-2C, but from previous meetings, we have understood that the bypass channel location was to occur farther upstream, where soft-bottomed Reach 1B has suffered head-cutting as far as the armored Reach 2. Please clarify whether the mitigation site has changed for the FS/EIS/EIR.

3. The FR/EIS/EIR has evaluated Cumulative Impacts, in terms of hydromodification to the tributary streams entering Prado Basin, during projected full inundation to elevation 505 feet. However, when inundation occurs, the currently supported beneficial uses of these stream reaches (WARM, RARE, REC1 and REC2 of the Basin Plan) will be temporarily lost. Therefore, the Final FR/ EIS/EIR should explain what of the Project's proposed mitigation measures outside of the submerged areas will compensate for the submergence of habitat and its organic components--with attendant increased levels of nitrogen, turbidity, and stormwater pollutants in the fully pooled Basin.

4. Further, another reason for the enclosure of our October 18, 2017 letter is to have our still-relevant question answered (p.2) regarding the analysis of upstream cumulative impacts beyond only those issues immediately affecting Prado Basin. To paraphrase, Regional Board staff noted that several stormwater retention projects are planned for the Upper Santa Ana River Watershed that may reduce the amount of stormwater flows that reach the

Prado Basin, and we asked whether these flow reductions could potentially impact the proposed Project, and by extension, areas downstream of the Prado Basin.

These stormwater retention projects include the proposed "Enhanced Recharge Project" conceived by the Western Municipal Water District and the San Bernardino Valley Water District, and the City of Riverside's "North Aquifer Storage and Recovery Project" (RNASR)," which would inflate a rubber dam across SAR Reach 4 downstream of the La Cadena Avenue bridge. Additionally, the proposed San Bernardino Municipal Water Department's "Clean Water Factory Project" would lessen current discharges of treated effluent to the Santa Ana River, diverting flow to upgraded treatment and use in the San Bernardino area. Please state in the Final FS/EIS/EIR whether the above water uses would pose a decrease of needed flows that the Project expected to reach Prado Basin.

5. Pursuant to CWA Section 303(d), a Total Maximum Daily Load (TMDL) was adopted by the Regional Board for "Bacterial Indicators for the Middle Santa Ana River Watershed Waterbodies," and is under implementation (includes SAR Reach 3, Mill Creek Reach 1, and Chino Creek). SAR Reach 3 has a separate TMDL for nitrate, under implementation. Also, pursuant to CWA Section 303(d), SAR Reach 3 is listed as impaired for copper and lead; Mill Creek Prado Area for nutrients; Mill Creek Reach 1 for pathogens; Chino Creek Reach 1A for pathogens and nutrients; and Chino Creek Reach 1B for chemical oxygen demand (COD), pathogens, and nutrients. The Final FS/EIS/EIR should discuss how the cumulative impacts of the Project will affect, or be affected by, these impairments, particularly when full inundation backs up floodwaters as indicated in Project drawings. Also, discuss whether the Project will include activities to address these impairments.

If you have any questions, please contact Glenn Robertson at (951) 782-3259 / Glenn.Robertson@waterboards.ca.gov , or me at (951) 782-4995 / Terri.Reeder@waterboards.ca.gov .

Sincerely,

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Enclosure: October 18, 2017 Letter to Dan Bott, OCWD

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