Colorado River Basin Regional Water Quality Control Board

March 4, 2020

Coachella Valley Water District
Attn: William Patterson
75-515 Hovley Lane East
Palm Desert, CA 92211
wpatterson@cvwd.org

SUBJECT: NOTICE OF PREPARATION AND PUBLIC SCOPING MEETING DRAFT ENVIRONMENTAL IMPACT REPORT

SITE: WHITEWATER RIVER GROUNDWATER REPLENISHMENT PROJECT SCH# 2020020004

The California Regional Water Quality Control Board, Colorado River Basin Region (Regional Water Board) appreciates the opportunity to comment on the Notice of Preparation (NOP) to prepare an Environmental Impact Report (EIR) for the proposed Whitewater River Groundwater Replenishment Project (Project). The NOP provided a summary of the Project description, location, and the expected scope of environmental analysis in the EIR.

Coachella Valley Water District (CVWD) is requesting a right-of-way (ROW) grant from the Bureau of Land Management (BLM) for continued operation and maintenance of CVWD's existing Whitewater River Groundwater Replenishment Facility (Facility), located north of Palm Springs in the Whitewater River Channel. In the early 1900's, CVWD engineered holding ponds in the vicinity of the Facility to capture natural flow and snow melt, and in 1973 began diverting imported Colorado River water from the Colorado River Aqueduct to the Facility. The proposed ROW grant would allow CVWD to continue groundwater replenishment of up to 511,000 acre-feet (AF) of imported Colorado River water per year to the Facility. The NOP states that the EIR will evaluate the potential environmental effects associated with the proposed ROW grant including hydrology, water quality and other topics identified during scoping.

Regional Water Board Comments

As the principal agency with primary responsibility for the coordination and control of water quality in the region, the Regional Water Board provides the following comments regarding significant environmental issues resulting from the Project activities, alternatives, and mitigation measures.

Significant Environmental Issues

Imported Colorado River water used for groundwater replenishment at the Facility has higher total dissolved solid (TDS) concentrations, a measure of the salt content, than most native groundwater in the Coachella Valley. Prior to recharging with Colorado River water, concentrations of TDS in groundwater at the Facility were approximately 210 milligrams per liter (mg/L). In 1992[1], United States Geological Survey (USGS) evaluated the quality of groundwater in the vicinity and downgradient of the Facility and determined that after recharging the aquifer with approximately 960,000 AF of Colorado River water, TDS concentrations in groundwater near the Facility had increased to greater than 500 mg/L. TDS concentrations in groundwater near the Facility had more than doubled after just 14 years of recharging the groundwater with Colorado River water.

The Project description states up to 511,000 AF per year of Colorado River water will be recharged at the Facility. The 1992 USGS report established that the effect of recharging just 960,000 AF of Colorado River water over 14 years (an average of 68,000 AF per year) substantially increased the TDS concentration in groundwater, with the effect extending at least 4.5 miles downgradient of the Facility. The effect on groundwater quality of adding 511,000 AF per year of Colorado River water with an estimated salt mass of over 500,000 tons[2] is expected to be substantial. The Regional Water Board does not believe the aquifer has the assimilative capacity to accommodate this substantial salt loading in such a short period of time.

The EIR must assess changes in water quality resulting from the groundwater recharge activities. This must include detailed evaluation of historic (before groundwater recharge activities) and current groundwater analytical data for TDS, electric conductivity, chloride, sulfate, and other 'general mineral' constituents from prior to 1973 to present, and include predictions of how the proposed continued recharge activities will impact groundwater quality for a range of recharge scenarios.

Reasonable Alternatives

The 2002 Coachella Valley Water Management Plan and the 2010 Update[3] state that importing water into the Coachella Valley is an integral part of the water management plan, but also recognize that recharging the local groundwater with Colorado River water has a significant impact on groundwater quality. Even while recognizing importation of water for groundwater replenishment as the most important activity to sustain the valleys water sources, CVWD only proposed two alternatives in these documents to mitigate the significant and irreversible effects to the environment from the recharge activities. Neither alternative was found to be environmentally or economically feasible at that time; CVWD

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[1] Evaluation of a Ground-Water Flow and Transport Model of the Upper Coachella Valley, California. Eric G. Reichard and J. Kevin Meadows. U.S. GEOLOGICAL SURVEY, Water-Resources Investigations Report 91-4142. 1992.

[2] Draft Coachella Valley Salt and Nutrient Management Plan. MWH, In Association with GEI Consultants, Inc., Krieger & Stewart, Inc., and Michael Welch Consulting Engineer. June 2015.

[3] Coachella Valley Water Management Plan 2010 Update. Administrative Draft-Subsequent Program Environmental Impact Report. SCH No. 2007091099. Coachella Valley Water District with Assistance from MWH Americas, Inc. and Water Consult, Inc. July 2011.

therefore adopted a Statement of Overriding Considerations for the water quality impact. No new alternatives have been proposed for consideration since 2002, and each subsequent environmental evaluation has relied on the same Statement of Overriding Considerations.

Maintaining the quality of the valley's only drinking water source warrants a vigorous evaluation of numerous importation, mitigation, and conservation alternatives that reduce the need for groundwater recharge with imported Colorado River water. Alternatives that should be considered include:

1. Reducing groundwater consumption through improved water conservation;
2. Reducing groundwater extraction and the need for subsequent recharge by blending imported Colorado River water with groundwater for direct use;
3. Increase the volume of Colorado River water used for non-potable purposes, thereby reducing the need for and use of Colorado River water for groundwater recharge;
4. Use of Colorado River water for groundwater recharge in areas of the basin where the receiving water has a higher TDS content, and therefore has less of an impact on water quality; and
5. Importing low TDS water from the California State Water Project for groundwater recharge at the Whitewater Facility.

Any use of the statement of overriding considerations must be supported by substantial evidence in the record. To claim that nothing can be done to mitigate and/or avoid the adverse impacts of added salts is not acceptable.

Mitigation Measures

The lack of adequate management practices to mitigate the effects of recharging the aquifer with ever-increasing volumes of imported Colorado River water at the Facility is not sustainable. To ensure that impacts to water quality from salt loading to the closed Indio Groundwater Subbasin via imported Colorado River water are addressed, a feasible mitigation plan must be included in the EIR. Project mitigation measures could include:

1. Reducing the salt content of the Colorado River water prior to infiltration using a desalination system;
2. Using imported Colorado River water to recharge areas of the basin with higher naturally occurring TDS concentrations;
3. Maximize storm water capture for groundwater recharge to decrease the need for imported Colorado River water;
4. Establish groundwater monitoring programs to ensure beneficial uses of the groundwater are being protected; and
5. Develop and implement a salt management and disposal plan that addresses all of the salt sources throughout the Coachella Valley, including importation of Colorado River water, and lays out a framework for maintaining high quality groundwater for decades to come.

The project mitigation plan should include a description of activities, time schedule for implementation of the activities, and a groundwater monitoring work plan to assure compliance with water quality objectives.

We appreciate the opportunity to review this NOP for the Facility draft EIR and are available to discuss our comments. When the draft EIR is prepared for this action and released for public review, please send a copy to cathy.sanford@waterboards.ca.gov. If you have questions regarding this matter, please contact me at (760) 776-8934 or cathy.sanford@waterboards.ca.gov.

Sincerely,

Cathy L. Sanford, PG
Engineering Geologist
Colorado River Basin
Regional Water Quality Control Board

cc: State Clearing House, Office of Planning & Research
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