September 15, 2015

Mark Ban, Assistant General Manager
Hi-Desert Water District
55439 29 Palms Hwy
Yucca Valley, CA 92284

Dear Mr. Ban,

SUBJECT: RESPONSE TO COMMENTS, HI-DESERT WATER DISTRICT, TENTATIVE WASTE DISCHARGE REQUIREMENTS (WDRs) R7-2015-0043, YUCCA VALLEY WASTEWATER RECLAMATION PLANT, YUCCA VALLEY, RIVERSIDE COUNTY

California Regional Water Quality Control Board, Colorado River Basin Region (Colorado River Basin Water Board) staff drafted tentative Waste Discharge Requirements (WDRs) for Hi-Desert Water District (HDWD), Owner/Operator of the proposed Yucca Valley Wastewater Reclamation Facility. The tentative WDRs are scheduled to be considered for adoption at the Colorado River Basin Water Board's September 17, 2015 Board Meeting. We received comments from Carollo Engineers on behalf of Hi-Desert Water District on the draft WDRs via email on September 8, 2015.

We have reviewed and considered your comments (*in italics*) and provide the following responses (in ordinary type):

Comment:

1. *Page 2, paragraph 9, first line*
   Please replace the word "with" with "for".

Response:

The paragraph will be revised accordingly to address your comment.

Comment:

2. *Page 9, Section A - Effluent Limitations.*
   It is requested that the Total Nitrogen limit of 10 mg/L (as a 30-day arithmetic mean) be changed to a 12-month average Total Inorganic Nitrogen (TIN) limit of 10 mg/L. The reason for this request is that total nitrogen includes both organic and inorganic species, and while the secondary treatment process can be designed and optimized to reduce the inorganic nitrogen, there is less control over the effluent organic nitrogen concentration. Organic nitrogen typically contributes 1 to 2 mg/L to the total nitrogen in the effluent, implying that the

total inorganic nitrogen concentration would have to be maintained at levels consistently below 8 mg/L. This is challenging to achieve, particularly in the winter months, and would require additional treatment processes, which will increase the cost of treatment for HDWD without providing any additional protection for the Basin in terms of the established nitrogen limits. Organic nitrogen is also a more expensive laboratory test, and performing it on a regular basis would add to the operating cost of the plant.

Response:

A conventional secondary wastewater treatment plant can remove a significant amount of inorganic nitrogen, in particular when the plant contains nitrification-denitrification processes as the proposed Wastewater Reclamation Plant does. In addition, the design for the treatment plant calls for membrane filtration which should further reduce suspended organic particulates containing nitrogen. The WRP, as the proposed design indicates, should reduce the total inorganic nitrogen content to a level where the remaining dissolved organic nitrogen should not cause the 30-day limit for total nitrogen of 10 mg/L to be exceeded. Therefore, we are recommending, that Effluent Limitation, 1, regarding Total Nitrogen remain the same (i.e., as shown in the draft WDRs).

Comment:

3. *Page 10, Section A, Item 4*
   It is understood that the dissolved oxygen (DO) concentration would need to be measured in the water column within the pond. When the plant is started up it is likely that percolation of the effluent in the basins will be rapid and that it will take some time before the level in the basins gets to a point where it is safe to manually insert a DO probe in the water to obtain a reading. Accordingly, HDWD would like to request a grace period of 6 to 12- months after plant start-up before being required to measure the requested DO concentration. The ability to take such DO readings will depend on the water percolation rate and the proximity of the water level to the edge of the ponds.

Response:

Effluent Limitation, 4 will be modified to contain a condition which will state "If there is little or no water in the percolation ponds, the monitoring report shall state 'No standing water in ponds and/or not sufficient water in the ponds to sample safely' in place of reporting dissolved oxygen concentration."

Comment:

4. *Page 11, Section C, Item 3*
   It should be noted that the predicted 1.0 MGD flowrate at the completion of Phase 1 is based on flow projections. While the flow projections used are based on the best available information, and may even be conservative given the on-going push for additional water conservation, HDWD wish to point out that the actual 30-day average dry weather discharge flow at the completion of Phase 1 will only be known once all dischargers have been connected to the new system.

Response:

Colorado River Basin Water Board staff understands that the WRP will be constructed with a design flow capacity 1.6 MGD, however, membrane units and pumps installed for Phase I will be installed to treat 1.0 MGD. Discharge Specification, 3 which states "The 30-day average daily dry weather discharge from the WRP into the recharge basins shall not exceed 1.0 MGD at the completion of Phase 1" is based on the treatment capacity of the WRP as described in the conceptual design documents. Section F, Provisions 27 states "The Discharger shall provide a report to the Colorado River Basin Water Board when it determines that the plant's average dry-weather flow rate for any month exceeds 80 percent of the design capacity. The report should indicate what steps, if any, the Discharger intends to take to provide for the expected wastewater treatment capacity necessary when the plant reaches design capacity." If when constructed, the actual flows exceed the treatment capacity of the WRP, HDWD will be required to submit plant design modification documents, which may include an updated Report of Waste Discharge, and install plant upgrades to treat actual flows.

Comment:

5. *Page 12, Section D, Item 1.f*
   This section includes the requirement to perform on-site check-point bioassay of the UV disinfection system. We recognize that this requirement is part of the NWRI UV Guidelines for previously validated UV reactors, which is what the project will require. Our comment relates to operating the Wastewater Reclamation Plant prior to and during the period that the Department of Drinking Water (DDW) is approving the on-site check-point bioassay results. Our previous experience is that it can take 6 weeks or more from the time of testing to obtain approval from DDW for operation of the UV system for a recycled water application. During this period the treated effluent would need to be discharged somewhere. Accordingly, HDWD would like to request a grace period of 3-months after the point at which sufficient wastewater flow is achieved to enable the on-site check-point bioassay of the UV system to be performed. Prior to approval HDWD would operate the UV system at the design UV dose and discharge the effluent to the percolation ponds

Response:

Section D, UV Disinfection Requirements, are stated as recommended by the Division of Drinking Water (DDW). As you may know, we have been in consultation with DDW staff and understand that DDW will work with HDWD during the commissioning phase to address the concerns and expedite the review.

Comment:

6. *Page 13, Section E, Item 2*
   This section refers to reporting of daily average UV transmittance and UV dose. HDWD would like to request a grace period until the on-site check-point bioassay of the UV disinfection system has been completed and approved by DDW (see Item 5 above) before reporting the daily average and lowest daily transmittance and operational UV dose on the monthly monitoring reports. This grace period would also apply to the diversion requirements for low transmittance and low UV dose.

Response:

See response to comment 5.

Comment:

7. *Page 14, Section F, Item 4*
   Instead of submitting an updated ROWD when the construction of the Phase 1 WRP has reached 90 percent completion, HDWD would like to request that the updated ROWD be submitted once the Phase 2 project has been planned and designed. With this approach, more realistic information will be available for the updated ROWD. Alternatively, if for some reason the flows from Phase 1 should be greater than the projections (see Item 4), and the Phase 1 30-day average dry weather discharge from the WRP should exceed 1.0 MGD, the HDWD will submit and updated ROWD.

Response:

Section F, Special Provision, 4 will be revised. The requirement to submit an updated ROWD when the construction of the Phase I WRP has reached 90 percent completion will be replaced with a requirement to submit the design engineering documents and as-built drawings certified by a registered engineer. Should the documents submitted indicate that an updated ROWD is required, Colorado River Basin Water Board staff will notify HDWD at that time.

Comment:

8. *Page 14, Section F, Item 5*
   This section refers to the need for a TDS study to evaluate the incremental increase in TDS above the average TDS of the source water for the town of Yucca Valley. HDWD would like to suggest that a long-term approach be used for assessing the Basin wide impact of TDS that takes into consideration the TDS concentrations from existing drinking water wells. This method would exhibit the overall impacts the Project has on the entire Basin instead of just those located within the discharge area. Also, because no sewage flow is currently available for most dischargers, measuring the wastewater TDS is not possible. Accordingly, HDWD would like to request that the characterization of the wastewater TDS be delayed until Phase 1 of the project is fully implemented. That way, HDWD will have access to sewer flows from all connections and can conduct a meaningful TDS evaluation.

Response:

Special Provision, 5 requires HDWD to provide a technical report to perform a TDS study and provides minimum requirements to be addressed in the study. It is not a requirement for the results of the study. The report, which is due September 15, 2016, should provide recommendations as to the date of commencement of the study as suggested in your comment as well as the length and scope of the study. The report is subject to the approval of the Colorado River Basin Water Board's Executive Officer.

Comment:

9. *Monitoring and Reporting Program, Page 4, WRP Effluent Monitoring*
   a. Due to the nature of the WRP project, HDWD requests a grace period of 3 to 6-months after plant start-up before beginning the Effluent Monitoring and Reporting program.
   b. Please clarify the constituent "Chlorine Chlorine". If this is based upon the use of chlorine, the District requests its removal due to the intended use of UV disinfection.

c. Also, for the parameters UV Transmittance, and UV Dose, these measurements are requested in the Effluent. HDWD would like to request that these measurement be taken at the UV disinfection equipment instead of the final Effluent.
d. Based on the earlier request regarding Total Inorganic Nitrogen (see Item 2 above), HDWD would like to request that Total Nitrogen be removed from the list of constituents for monitoring, and Total Inorganic Nitrogen added in its place.
e. HDWD would like to request that once the long term performance of the plant has been established, perhaps 1 to 2 years after start-up, consideration be given to phasing out some of the constituent analyses to reduce the analytical costs.
f. Priority Pollutants. If no Priority Pollutants are detected in the WRP Effluent, the District would like to request that once Phase 1 is fully implemented, sampling for Priority Pollutants be reduced to every 3 - 5 years to match on-going UCMR sampling for EPA.

Responses to Monitoring and Reporting Program, Page 4, WRP Effluent Monitoring:

a. Monitoring and Reporting Program (MRP) R7-2015-0043 becomes effective upon adoption by the Board. MRP Section A.12 Monitoring, states " If the Facility is not in operation, or there is no discharge during a required reporting period, the Discharger shall forward a letter to the Colorado River Basin Water Board indicating that there has been no activity during the required reporting period." Monitoring will commence according to the monitoring schedule in the MRP as soon as the Facility becomes operational and there is a discharge from the WRP, hence, no grace period will be permitted. The WDRs will contain additional requirements for the WRP to provide sufficient storage capacity so that during start-up, should treated wastewater not meet the effluent limits it may be stored and further treated.
b. The term "Chlorine Chlorine" is a typographical error. The requirement to monitor for chlorine will be dropped from the MRP.
c. See response to comment No. 5.
d. See response to comment No. 2.
e. When the WRP has been in operation for two years, HDWD may submit a letter requesting modifications to the MRP. The request must be supported by a detailed explanation justifying modifications. Please be aware that a significant portion of the monitoring and reporting program is required by DDW's recycled water policy as it applies to Groundwater Recharge and Reuse Projects and is a requirement in Title 22 of the California Code of Regulations. Reducing the constituents and frequencies may not be optional.
f. The requirement to monitor priority pollutants is established in DDW's recycled water policy as it applies to GRRPs and is a requirement of CCR, Title 22. Reducing the monitoring frequency may not be optional.

Comment:

10. Monitoring and Reporting Program, Page 4, Domestic Water Supply
HDWD would like to request that once Phase 1 is fully implemented and the TDS increment in the WRF Effluent has been established (see Item 8 above), TDS monitoring and reporting in the water supply network be reduced to bi-annually as it is now. The rationale is that the District already collects these samples at that frequency and the impacts to TDS brought about by the WRP would be very slow across the entire basin.

Response:

After completion of the TDS study required in Special Provisions, 5, HDWD may make a recommendation in the final report requesting a reduced monitoring frequency for water supply TDS. The recommendation must be supported by a detailed explanation justifying a reduced monitoring schedule. Alternatively, HDWD may submit a letter the Colorado River Basin Water Board requesting a modified monitoring and reporting schedule and frequency. The request must be supported by a detailed explanation justifying a reduced monitoring schedule.

Comment:

11. Monitoring and Reporting Program, Page 5, Groundwater Monitoring
a. Since the plant will be in start-up mode for some time as homes and businesses are connected to the sewer system during the Phase 1 project, it will take some time for the plant flows to reach the Phase 1 value and for plant performance to stabilize. Accordingly, HDWD would like to request a grace period of 6 - 12-months after WRP start-up to allow plant performance to stabilize before the first year of monthly sampling associated with groundwater monitoring begins.
b. HDWD would like to request that once the long term performance of the plant has been established, perhaps 1 to 2 years after start-up, consideration be given to phasing out or reducing the sampling frequency of some of the constituent analyses to reduce the analytical costs.

Responses to Monitoring and Reporting Program, Page 5, Groundwater Monitoring:

a. Section F, Special Provisions, 6 requires HDWD to submit a technical report two years before initial start-up of the WRP. Groundwater monitoring is required to begin one year prior to plant start-up to establish baseline or background conditions prior to discharge. The request to postpone groundwater monitoring up one year after start-up may not be technically sound. Therefore, we are recommending that background monitoring begin prior to any discharge from the WRP.
b. See response to comment 9.e.

Thank you for cooperation and your comments on the draft the WDRs. We trust this response adequately addresses your comments. If you have any questions, please call me at (760) 776-8963.

Sincerely,

for Douglas Wylie P.E.
Jose Cortez, P.E.
Water Resources Control Engineer
Colorado River Basin
Regional Water Quality Control Board

JC/hv

cc: Camden O'Toole, Carollo Engineers
Graham J.G. Juby, Carollo Engineers
Tom Vandenberg, SWRCB, OCC

cc: (via email)
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File: 7A360122001, Hi-Desert Water District, Yucca Valley WRP, R7-2015-0043, CW-806008