

June 4, 2015

Mr. Robert Eben
Bureau of Indian Affairs
Southern California Agency
1451 Research Park Drive, Suite 100
Riverside, California 92507

Dear Mr. Eben:

Thank you for your letter and participation in the Coachella Valley Salt and Nutrient Management Planning process. This letter is in response to your comment letter, received May 19, 2015, regarding the Coachella Valley Salt and Nutrient Management Plan (SNMP), Draft SNMP.

The Coachella Valley Water District (CVWD), Coachella Water Authority (CWA), Desert Water Authority (DWA), and Indio Water Authority (IWA) are finalizing the preparation of the SNMP for the Technical Group for the Whitewater (Indio), Mission Creek, Garnet Hill, and Desert Hot Springs Groundwater Subbasins. The SNMP is being prepared in response to the requirements of the California Recycled Water Policy. The Technical Group and their consultant, MWH, have reviewed and responded to your comments, as well as modified the SNMP to reflect your comments where appropriate. Listed below is a summary of each of your comments and the Technical Group's response.

Comment No.1: Tribal lands, federal lands, and other lands set aside for conservation represent a significant proportion of the Coachella Valley, and in many cases can represent areas of significant water input outside the jurisdiction of the various water management agencies. In many cases, the management zones include a significant portion of these lands. Included as Figure 1) is a simple map representing federal land holdings, including tribal trust lands, within the Coachella Valley basin. We encourage the inclusion of similar maps within the basins and sub-basins described by the plan as this may assist in explaining where data gaps may exist due to lands outside the jurisdiction of the various management agencies.

Response to Comment No.1: *Additional GIS data was collected and a map representing federal land holdings and tribal lands was prepared; see Figure 1-4.*

Comment No.2: The calculations of the water budgets within the differing management zones appear incomplete. The west whitewater management zone does not contain any outflow due to phreatophyte evapotranspiration. Given that this is the second largest management zones, it is unrealistic that the smaller management zones have measureable phreatophyte evapotranspiration while large one containing a river system is without evapotranspiration.

Response to Comment No.2: *The physical conditions that promote the existence of phreatophytes within each management zone varies significantly. In general, phreatophytic*

vegetation occurs where shallow groundwater exists. These groundwater conditions can be caused by localized faulting which acts as a barrier to groundwater flow forcing water to the surface or by the presence of fine-grained sediments that inhibit vertical groundwater flow leading to semi-perched groundwater. In the West Whitewater management zone, neither of these conditions exist to a sufficient extent to allow establishment of phreatophytes. The evapotranspiration discussion in Section 6.1.2 has been revised accordingly.

Comment No.3: The calculations of the water budgets within the differing management zones appear inaccurate. It is understood that calculations of water budgets over spatial areas is a challenging task, however the implication that water budgets during any given year are accurate to a single acre foot is simply not realistic. For example in Table 6-4, the natural recharge to the West Whitewater River Management Zone is listed at 40,823 acre-feet for 2013. Calculations of natural groundwater recharge are difficult to measure directly, and estimations can be highly variable, so these numbers are often inferred and highly variable depending upon the estimation technique utilized, not accurate to such a high degree.

Response to Comment No.3: *The comment is correct that presentation of values to the acre-foot can imply an accuracy that is not realistic. The values are rounded to the nearest hundred acre-feet. The water budgets have also been revised to show representative values for 10 year periods and ranges of potential values. The water budgets were labeled 2013 in error and were not intended to represent a single year. Table 6-4 has been updated along with the water and salt/nutrient budgets in Section 6.*

Comment No.4: Planned projections for the estimates of future water quality are based upon potential impacts of 10% to 20% of estimated assimilative capacity depending upon project qualifications. The choice to use a single AWQ for the water management zones within the SNMP, without ranges or standard deviations, requires faith in the veracity of the estimates. A quick review of the draft document however shows some basic flaws in the estimates leading to questions of its veracity. One a missing component in a water balance (bullet 2), and the second an inferred calculation to an unreasonable level of accuracy (bullet 3). Lastly high levels of natural variability of the TDS and Nitrate concentrations exist within the management zones (For example, shown in the layers 1-3 of Table 5-4). Explaining natural variability via ranges or standard deviations for predictive measures is common, much the same way a weather forecast includes a range of temperature or precipitation amounts rather than a single number, where utilizing a single number for this purpose is far more likely to lead to inaccuracies. Consequently, it is recommended that ranges or standard deviations be included within the predictive tool to eliminate potential misunderstandings of the accuracy of AWQ value.

Response to Comment No.4: *The use of a single water quality value for the ambient water quality and thereby assimilative capacity is required. The Recycled Water Policy requires the determination of "basin/sub-basin assimilative capacity". The assimilative capacity is defined as the water quality objective minus the ambient water quality. Historically, Regional Water Quality Control Boards (RWQCB) throughout the State have used a single number for water quality objectives and ambient water quality (AWQ), hence assimilative capacity is then a single number.*

As noted in Response to Comment No. 3, the water balance tables were prepared to illustrate representative water budget conditions as opposed to a single year. The water budget tables have been revised and rounded to the nearest hundred acre-foot.

To address the issue of uncertainty, the following changes were made to the SNMP:

- Additional discussion is provided in Section 6.3 to acknowledge the uncertainty associated with inputs to the model used to estimate future average water quality.*
- Recommendations for improvements to the ambient water quality method and the salt/nutrient loading model are included in a new Section 5.7 and Section 6.5, respectively.*

Again, the SNMP Technical Group would like to thank you and your agency for your letter and participation in the Coachella Valley Salt and Nutrient Management Planning process. Stakeholder participation is integral to the success of the SNMP. If you have any other comments please feel free to call or email Ms. Patti Reyes, PE, the Technical Group's point of contact at (760) 398-2661, ext. 2270 or PReyes@cvwd.org.

Sincerely,

The Salt and Nutrient Management Plan Technical Group