Chino Basin Watermaster & Inland Empire Utilities Agency joint comments on TM 5 and TM6 of the Wasteload Allocation Model update.

Thank you for the opportunity to review and provide comments on TM5 and TM6. Our overall assessment is that it is unclear if the information produced by these TMs adds value to the body of work produced for the wasteload allocation analysis or if there is a regulatory use for this information at this time. We recommend that no further effort and budget be expended to address comments or revise these TMs until the Task Force can discuss and agree that updating and finalizing the TMs is warranted. Specifically, the Task Force should discuss the regulatory purpose of each TM, what specific questions the TMs are addressing, and how the information reported will be used by the Task Force, its members, or the Regional Board.

The following are our specific comments on:

TM5:

1. What is the regulatory purpose of this document? What question is the regulatory question it answering and how will the information reported be used by the Task Force, its members, or the Regional Board? This is not explained in the document.
2. The term "off-channel recharge" as used in TM-5 refers to the deep infiltration of precipitation that is assumed to reach groundwater. It is not clear how estimates of this recharge term have any value in the regulatory process to assess with the wasteload allocation to the Santa Ana River. The TM should explain how the information presented in this TM would be used to inform the Basin Plan SNMP process and related wastewater discharge permits.
3. There are other "off-channel recharge" components that that have more significant groundwater quality implications and they are not discussed. Without this context the information presented in the TM has no meaning.
4. The volume of precipitation that infiltrates past the root zone depends in part on whether the overlying land on which it falls is irrigated or not. There is no discussion of that in the text. Is irrigation considered in the model, and if so, how?
5. There is no detail to support the TM findings. At a minimum, the TM should report:
    a. a water budget table produced that starts with precipitation at the land surface and shows the fate of the precipitation;
    b. a mass balance table that shows the mass entering the soil from precipitation, stored in the soil, mass lost/gained due to geochemical processes and mass discharged to groundwater. As to mass lost/gained due to geochemical processes, there are other TDS and nitrate loads that need to be considered and described, e.g., TDS and nitrate of fertilizers applied to the land surface.
6. The TDS and TIN concentrations that are assigned to the off-channel recharge are not comparable to the streambed recharge in the Santa Ana River because the evapotranspiration and transport processes that affect the TDS and nitrate concentrations in the off-channel recharge can be more significantly altered in transport than in the streambed infiltration in the Santa Ana River.
7. What is the significance of the specific years analyzed in Table 1 and averaged in Table 2-1? Why not use the same planning period used for the WLAM streambed infiltration estimates and provide comparable statistics?

8. What is the significance of the GMZs included and excluded from the evaluation? Why are Chino North GMZ analyzed give that it is not part of any other assessment within the required WLAM analysis?

TM6:

1. What is the regulatory purpose of this document? What questions is it answering and how will the information reported be used by the Task Force, its members, or the Regional Board? This is not explained in the document and thus makes it difficult to review the work.
2. The title of Task 6 is confusing. It seems that you can either estimate what occurred; or measure what occurred. You cannot estimate what "actually" occurred. The phrase "estimate the actual" is used in the TM and is misleading. Everything produced by the model is an estimate.
3. The use of the term "retrospective" is confusing. How is the "retrospective run" different than the calibration run? If there is no difference, then new terminology should not be introduced, or it should be stated clearly that they are one-in-the-same.
4. The discussion of the results for many of the GMZs is very difficult to follow and understand as written. Given the absence of an explanation of the purpose of the TM and how the information will be used, it is difficult to provide a suggestion for improvement.
5. The content in Figure 1 is not as described in the text at the end of the first paragraph in Section 1.1
6. On Page 17, the TM concludes that "the TDS and TIN concentrations of the retrospective run did not exceed the TDS or TIN objectives for SAR Reach 3 or Reach 2." Since about 2015, the Task Force has engaged in discussions about the increase in the summertime TDS concentration of the Santa Ana River and how it has exceeded the Reach 3 objective. This is not evident based on the "retrospective run". This suggests a problem with the model calibration or how the information is analyzed for comparison to the regulatory metric. It seems that it would be more valuable to compare the model output to measured data.
7. The Reach 2 metrics computed for the "retrospective" run should be compared to the estimates made by the Santa Ana River Watermaster and by SAWPA in the SAR Annual Report.