

## Basin Monitoring Program Task Force

June 16, 2009

### ATTENDEES:

Jack Nelson, YVWD	David Aladjem, SBVMWD/WMWD
Tom Field, City of Riverside	Al Javier, EMWD
Chandra Johannesson, City of Riverside	Greg Woodside, OCWD
Val Housel, San Bernardino MWD	Marsha Westropp, OCWD
Gerard Thibeault, CRWQCB	Mark Wildermuth, WE Inc.
Hope Smythe, CRWQCB	Andy Malone, WE Inc.
Linda Garcia, WMWD	Mark Norton, SAWPA
Tim Moore, Risk Sciences	Rick Whetsel, SAWPA
Sam Fuller, SBVMWD	Regina Patterson, SAWPA

### Call to Order

The Basin Monitoring Program Task Force meeting was called to order at 1:35 p.m. at the Santa Ana Watershed Project Authority office located at 11615 Sterling Avenue, Riverside, California. Introductions were made.

### Meeting Summary Approval – May 18, 2009

Mark Norton presented the May 18, 2009 Meeting Summary for approval. There were several comments and revisions received. After discussion, the Meeting Summary was received and filed as amended.

### Draft Annual SAR Water Quality Report – SAWPA

Rick Whetsel reported the Draft Annual Santa Ana River Water Quality Report was distributed by email on last Friday. Based on discussion last year, the report would be similar to the previous year with the idea that it would be revised whenever the HCMP was upgraded (IEUA and Chino Basin Watermaster). There were no stations to add or remove. The boron data are limited because no data were collected. One sample collected by the Regional Board for below Prado Dam had a COD of 1700. Data are much more limited than in the past due to a low rainfall year. Comments were briefly discussed among the Task Force and Mr. Whetsel requested that any **additional comments be received by June 26, 2009.**

### Other

Mr. Norton reported the Task Orders for Wildermuth Environmental and Risk Sciences were approved by the SAWPA Commission today. The budget was also approved with a request that invoices be sent out this fiscal year.

### Basin Plan Amendment for SAR Wasteload Allocation – WE Inc. and Risk Sciences

Tim Moore stated he will identify the groundwater management zones where the water quality objectives need to be reconsidered. They could include maximum benefit. Recommendations will be provided for the various issues that are arising.

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Chino South Nitrate-Nitrogen Objective - Mr. Moore reported that in the Chino South Management Zone the current objective is 4.2 mg/L nitrate-nitrogen. The current ambient quality is 25.7 mg/L nitrate-nitrogen, much worse than the objective. Whether it became worse or was always bad is almost immaterial, because we are now not only over the objective, but also over the beneficial use protection threshold of 10 mg/L nitrate-nitrogen. The management zone is not meeting the objective and there is no assimilative capacity available so the discharge limits have to be written to assure compliance with the objective under Rancho Caballero. There was a Reach 3 demonstration made by Riverside that there was a larger nitrogen loss occurring in the percolation process than was normally assumed in the rest of the watershed. The assumption is there is a 50% loss and the default 25% percent is used elsewhere. Consequently, if you see that half the nitrate-nitrogen would go away upon percolation, then the most you can discharge at the surface, and be sure of making 4.2 mg/L nitrate-nitrogen at the aquifer, is 8.4 mg/L nitrate-nitrogen.

In the calculations done by WE Inc. for the wasteload allocations, the average year Reach 3 ranges for nitrogen concentration are estimated between 4.8 and 5.0 mg/L with surface reflux. On a 5-year average the volume-weighted recharge ran between 4.6 and 4.8 mg/L nitrate-nitrogen. This is including the nitrogen loss. This is their best estimate of the volume-weighted transfer (what the groundwater will see). There is no problem in Reach 3, it is only slightly over the objective. All modeling scenarios came back in this range. Based on discussion in the TIN-TDS study, that is thought not to be a problem. We are trying to find a way to legalize the status quo because the operations being done now are doing good things for Chino South - but they are not legal. We cannot continue this way unless something is altered by doing an offset, changing the objective or revising the wasteload allocation. He proposed revising the nitrate-nitrogen objective in Chino South to at least 5 mg/L, given that we have an accepted nitrogen loss coefficient of 50% without changing that loss coefficient, then the effluent discharge would be limited to concentrations of not more than 10 mg/L. The groundwater we would see would be fully protective of the beneficial use study.

Mr. Moore stated he is confident that it would not be difficult or controversial to change the nitrogen objective to 5 mg/L. Based on WE Inc. data, it can easily be shown that we are already within a decimal point or two of what's expected to occur, there would not be an antidegradation, safety, or public health issue, and it would resolve most of the legal questions. He suggested measuring this kind of compliance as a 5-year rolling average, not as an annual number.

Orange County's management zone objective for nitrate-nitrogen is 3.4 mg/L. Another nitrogen loss will occur as it percolates through the soil column in Orange County. Dilution is not included. Reach 2 runs in the 6.7 and 7.5 mg/L nitrate-nitrogen range for all model scenarios.

Mr. Moore proposed only going to 5 mg/L for nitrate-nitrogen, looking for a long term average for attainment with the wasteload allocation and determining how that will work with the permit limit.

Mr. Norton asked if at one time we showed that there was more nitrogen loss than 50% in the reach within Chino South? Mark Wildermuth said the data show this, but it was dropped down to 50% to be conservative. Mr. Moore said that is on his list of alternatives. As each level drops

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it becomes more expensive with more studies and it takes longer. It is irrespective to what the nitrogen loss may or may not be in Reach 3, and it's already taken into account when you start measuring water quality below Prado Dam. The measurements below Prado Dam are what they are.

Mr. Moore said we went in to this with the assumption that it would not be controversial to change the Chino South objective to 5 mg/L for nitrate-nitrogen. The data we have for Reach 2 isn't quite enough. If you put in the value to go with the Reach 2 runoff, then that by itself may be enough. He agreed with Val Housel's statement that if we got a higher nitrogen loss in Chino South we would not have to change the objective. As a watershed and as a task force, we could agree to do the studies necessary to take the wasteload allocation from Prado down to Orange County for Reach 2. If we agree to make this change and commit to taking the model to the next level as part of the next regularly scheduled modeling cycle, then this could be a requirement for a successful maximum benefit demonstration for the change in nitrate-nitrogen at Chino South.

The Task Force adjourned for a break at 3:05 p.m. and reconvened at 3:15 p.m.

Mr. Moore said he has to write the first draft of the Basin Plan Amendment to adopt the wasteload allocation. He requested the approval of the idea that we are going to propose a Basin Plan Amendment to change the Chino South management zone nitrogen objective to 5 mg/L, and the rationale that goes with it. In the next cycle, the commitment to validate the assumptions to go into Orange County's protection will be part of the Basin Plan Amendment resolution of adoption. We have all the data needed to support the arguments we intend to make so no additional technical analysis is needed. The objective is being changed to improve water quality, not to degrade water quality.

Mr. Norton asked if everyone was okay with Mr. Moore's approach? Chandra Johannesson and Val Housel said they are okay with the approach. Mr. Moore said we will be at less than 5 mg/L nitrate-nitrogen with current discharge practices in all model scenarios. Mr. Moore said we want to keep doing what we are doing so we protect Chino South. The findings that go with Riverside A will also be included, we just have to make the finding of the use of assimilative capacity. There is no rate of use calculation, but he said he would like to have that built in over the next three years.

Sam Fuller said simply determining a rate of use is no small task. You have to do a complete basin model to do that. Mr. Wildermuth said there are many ways to build a flow model. Mr. Moore requested deferring that discussion to the next meeting.

TDS Discussion - Mr. Moore said with respect to Reach 3 and Temescal Creek there has been interest in looking at salinity. It would be very difficult to change objectives, not only for nitrogen, but also for TDS in Orange County. The issue is how can we achieve more flexibility upstream while continuing to comply with the downstream objectives? Is there a way to comply while continuing to not change objectives and assure that Orange County's water is protected. The first and obvious answer isn't to just change objectives. The wasteload allocation for Reach 3 is 650 mg/L TDS and the objective for Reach 2 is a 5-year rolling average of 650 mg/L below Prado and the wasteload allocation runs on the same number. The true driving

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number is 580 mg/L in Orange County's groundwater basin. That is measured as a 20-year average using our calculation technique. The most recent estimate of Orange County is at 590 mg/L TDS, 580 mg/L TDS is the Orange County groundwater objective for water quality. At the objective, there is no assimilative capacity. The TDS surface water objective for Reach 2 is 650 mg/L measured as a 5-year running average. How do we conclude that a 650 mg/L TDS objective in Reach 2 protects a 580 mg/L TDS objective in the groundwater when TDS is preserved? We measure a Reach 2 compliance immediately below Prado Dam with no adjustment made for stormwater runoff that is coming in to Reach 2 through tributary drainage.

As a starting point, Mr. Moore suggested using the first model run and that everyone think about their own operations, trends and abilities to comply.

Mr. Norton said we may need to take the six scenarios and strategize about what we think is the most likely scenario that would meet the need.

Mr. Moore will **provide first draft language for the Basin Plan Amendment by July 15<sup>th</sup>**.

**RWQCB Reclamation Guidance Document (RGD) Policy – Risk Sciences**  
Mr. Moore said he needs no further direction to proceed.

**Interpretive Tools and Calculations for Future Ambient Water Quality Updates – WE Inc. and Risk Sciences**  
Mr. Moore reported the Imported Recharge Workgroup, through the Cooperative Agreement, had to do estimates of salinity and nitrogen impacts of their plant recharge and submit a report by July 18<sup>th</sup> to the Regional Board detailing that and describing the projected impact. All of the reports were drafted, in review and moving forward and there was a question raised at the last meeting of whether we should have an executive summary. The consensus was yes, and we determined we wanted a template executive summary where the details of what's in the report can be found in a standardized form at the beginning of the document. He presented a fill-in-the-blank form that includes some of the most critical numbers from elsewhere in those reports into the first two pages. This form is meant to summarize what is calculated. Mr. Norton reminded the Task Force that each individual agency is responsible for submitting the executive summary to the Regional Board by the July 18<sup>th</sup> deadline.

**Future Meeting** - The next meeting is scheduled for Wednesday, July 15, 2009 at 1:30 p.m.

**Adjournment** - The Basin Monitoring Program Task Force meeting adjourned at 4:35 p.m.

#### Handouts

1. Reconsidering the Nitrate-Nitrogen Objective for Chino South Management Zone – Risk Sciences
2. FY 09-10 BMP Task Force Budget and Funding Allocation – SAWPA
3. Summary Template for Cooperative Agreement Reports – Risk Sciences
4. Task 3 – Well Attrition Analysis – WE Inc.
5. Work Breakdown Structure and Fee Estimate – WE Inc.
6. Task Order No. WILD374-03 – WE Inc.
7. Task Order No. RISK374-02 – Risk Sciences