



Update on Santa Ana River QAPP and Sampling

Basin Monitoring Task Force Meeting
January 29, 2024

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Major Task Force Deliverables to Santa Ana Regional Water Quality Control Board

Deliverable	Description/Purpose	Timeline for Completion
Ambient Water Quality Update	Analysis of salt* and nutrients** in Santa Ana River Watershed's 35 groundwater management zones.	Performed every three years (going forward it will be done every five years).
Annual Report of SAR Water Quality	Preparation of Santa Ana River surface water quality report.	Performed annually and submitted by August 1.
Wasteload Allocation Model	Development of a surface discharge allocation to confirm compliance of surface water discharges with ground water quality regulatory requirements.	Performed every ten years.

*Salt is more specifically regulated as the broader pollutant category of total dissolved solids (TDS).

**Nutrients are regulated as Total Inorganic Nitrogen (TIN).

CWE Scope and Budget

Task No.	Task Name	Total Budget	CWE Hours	CWE Costs	Subcontractor Costs
1	Gaining Property Access for Monitoring	\$3,650	20	\$3,650	NA
2	Establishing Workflow for Monitoring	\$2,594	9	\$2,594	NA
3	Developing Quality Assurance Project Plan	\$19,896	102	\$19,896	NA
4	Quarterly Monitoring and Implementing QAPP	\$53,789	243	\$48,107	\$5,682
5	Upload Data to CEDEN	\$13,782	75	\$13,782	NA
Totals		\$93,711	449	\$88,029	\$5,682

Legend:

OCWD Sites

USGS Sites

Santa Ana River REACH

2

3

4

5

Map of Santa Ana River Reaches

2

3

4

5

SAR @ Riverside Ave

SAR @ E Street

SAR @ Mission

SAR-ETIWANDA-01

SAR-MISSION-01

SAR-MWDXING-01

SAR-VANBUREN-01

SAR-HAMNER-01

SAR-RIVERRD-01

SAR-WATERMAN-01

SAR-LACADENA-01

SAR-RIVERSIDEAVE-01

SAR-BELOWPRADODAM-01

Prado Wetlands

Prado Dam

RWQCB Baseflow
Monitoring

11074000

11066460

11059300



0 2 4 Miles




PARAMETERS TO SAMPLE

Total Dissolved Solids (TDS)	Ammonia as Nitrogen	Nitrite as Nitrogen
Electrical Conductivity (Specific Conductance)	Nitrate as Nitrogen	Total Inorganic Nitrogen (TIN), Calculated




SUMMARY OF COMMENT PROCESS

- DRAFT QAPP SENT OUT DECEMBER 4, 2023
 - SEVERAL COMMENTS RECEIVED BY DECEMBER 20, 2023, DEADLINE
 - EDITS MADE BY SAWPA AND CWE TO DRAFT QAPP
 - FINAL DRAFT QAPP SENT OUT JANUARY 2, 2024
 - COMMENTS RECEIVED FROM ORANGE COUNTY WATER DISTRICT (OCWD), INLAND EMPIRE UTILITIES AGENCY (IEUA), AND YUCAIPA VALLEY WATER DISTRICT (YVWD) BY JANUARY 16, 2024 DEADLINE
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SUMMARY OF MAJOR COMMENTS AND EDITS TO FINAL DRAFT QAPP

- NEXT SEVERAL SLIDES SHOW THE RELEVANT COMMENT AT TOP
 - ON THE BOTTOM OF THE SLIDE IS THE RELEVANT SECTION OF THE QAPP WITH EDITS/RESPONSES BY CWE/SAWPA ALSO SHOWN
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- IEUA COMMENT: IF THERE IS SIGNIFICANT DEVIATIONS AS STATED, POSSIBLY INCLUDE
- LANGUAGE ON HOW THE TASK FORCE WOULD BE INFORMED ON SUCH ACTIONS TAKEN BY THE QA/QC OFFICER.

Edits in response to comment in red -

SECTION 1.4.1 SAWPA (PAGE 5)

THE QA/QC OFFICER IS RESPONSIBLE FOR OVERSEEING OVERALL QA/QC PROCEDURES AND WILL ENSURE THAT DATA REPORTED HAS FOLLOWED APPROPRIATE PROTOCOLS. THE QA/QC OFFICER IS ALSO RESPONSIBLE FOR REPORTING FINDINGS TO THE PM, INCLUDING REQUESTS FOR CORRECTIVE ACTIONS. IF THERE IS EVIDENCE OF SIGNIFICANT DEVIATIONS FROM PROTOCOLS STATED IN THE QAPP, OR IF THERE IS EVIDENCE OF SYSTEMATIC FAILURE, THE QA/QC OFFICER HAS THE AUTHORITY TO STOP ACTIVITIES UNTIL CORRECTIVE ACTIONS CAN BE DOCUMENTED AND PERFORMED. **THE TASK FORCE WILL BE INFORMED ON SIGNIFICANT DEVIATIONS OF THE QAPP PROTOCOLS AND THE ASSOCIATED RESOLUTION WITHIN APPROXIMATELY TWO WEEKS.**

YVWD COMMENT:

I WOULD PERHAPS DESIGNATE A 2-WEEK WINDOW FOR SAMPLING. THE 2-WEEK WINDOW MAY PROVIDE MORE CONSISTENCY OF WHEN THE SAMPLE. IF THE GOAL IS TO CHARACTERIZE SEASONAL VARIABILITY IN WATER QUALITY, THEN PERHAPS SO, AS LONG AS THE SAMPLING ISN'T ALWAYS FOLLOWING RIGHT AFTER A STORM EVENT [WE ARE OK].

Edits in response to comment in red -

SECTION 2.1.1 MONITORING SCHEDULE (PAGE 15)

THERE IS LIMITED PRECIPITATION IN SUMMER MONTHS, ESPECIALLY IN QUARTER 3 AS SHOWN IN TABLES 2-1 AND TABLE 2-2. SOME YEARS, SUCH AS 2018-2020, THERE IS MINIMAL PRECIPITATION AND STREAM FLOW TO COLLECT WATER QUALITY SAMPLES AT E STREET.

DUE TO THE VARIABILITY IN PRECIPITATION AND STREAM FLOW FROM THIS ANALYSIS, IT WAS AGREED TO CONDUCT **SAMPLING EVENTS AT THREE MONITORING SITES ON THE SAME DAY DURING THE LAST WEEK** IN EACH OF THE FOUR SAMPLING MONTHS DESCRIBED IN SECTION 1.4.3:

- QUARTER 1: JANUARY
- QUARTER 2: APRIL
- QUARTER 3: AUGUST
- QUARTER 4: NOVEMBER

THE SAMPLING EVENT WILL OCCUR IN THE FIRST MONTH OF QUARTER 1 AND QUARTER 2 SINCE JANUARY AND APRIL HAVE MORE SIGNIFICANT PRECIPITATION. IN QUARTER 3 AND QUARTER 4, THE SECOND MONTH OF THE QUARTER IS SELECTED SINCE JULY AND OCTOBER RECEIVE LIMITED PRECIPITATION AND IS LESS LIKELY TO COLLECT WATER QUALITY SAMPLES AT E STREET.

OCWD COMMENT: IF UNSAFE CONDITIONS ARE TEMPORARY WILL SUBSEQUENT SAMPLE COLLECTION EFFORTS BE ATTEMPTED DURING SAMPLE WINDOW?

IF DATA FAILS QA/QC OR IS HIGHLY IRREGULAR ARE RE-SAMPLES WITHIN THE QUARTER CONSIDERED FOR THIS PROJECT?

Edits in response to comment in red -

SECTION 2.1.1 MONITORING SCHEDULE (ALSO PAGE 15)

THIS SAMPLING WILL OCCUR DURING STANDARD BUSINESS HOURS. IF A STORM IS PRESENT **DURING THE SAMPLING MONTH/WEEK**, THE SAMPLING WOULD OCCUR AT THE TAIL END **OF THE STORM** FOR SAFETY. IF FLOW IS ABSENT AT E STREET, A FIELD VISIT WILL STILL OCCUR TO CONFIRM NO WATER IS PRESENT (OR IF FLOWING WATER IS ACTUALLY PRESENT, A WATER QUALITY SAMPLE WILL BE TAKEN). FIELD VISITS WHERE NO FLOW TO TAKE A WATER QUALITY SAMPLE WILL FOLLOW THE STANDARD APPROACH OF COMPLETING THE FIELD DATA SHEET.

IF WEATHER CONDITIONS, SAFETY CONDITIONS, OR RE-SAMPLING IS NEEDED, MONITORING WILL TAKE PLACE AS SOON THEREAFTER AS CONDITIONS ALLOW.

OCWD COMMENT: IF UNSAFE CONDITIONS ARE TEMPORARY WILL SUBSEQUENT SAMPLE COLLECTION EFFORTS BE ATTEMPTED DURING SAMPLE WINDOW?

IF DATA FAILS QA/QC OR IS HIGHLY IRREGULAR ARE RE-SAMPLES WITHIN THE QUARTER CONSIDERED FOR THIS PROJECT?

PER OCWD'S COMMENTS, SAWPA STAFF ANALYZED SCOPE AND BUDGET. THEN CLARIFIED WITH CWE THAT ADDITIONAL BUDGET WOULD BE NEEDED TO COVER THESE TYPES OF COSTS:



SAFETY ISSUES ENCOUNTERED BEFORE A SAMPLE CAN BE TAKEN CALL FOR A FOLLOW UP
SAMPLE VISIT

(FOR ONE SITE \$2,864)*



AFTER A SAMPLE IS TAKEN, FOLLOW UP QA/QC REVIEW CALLS FOR A RE-SAMPLE

(FOR ONE SITE \$3,015)*

*The difference is the lab costs.

OCWD COMMENT: IF DATA FAILS QA/QC OR IS HIGHLY IRREGULAR ARE RE-SAMPLES WITHIN THE QUARTER CONSIDERED FOR THIS PROJECT? IF SO, SUGGEST DISCUSSION OF WHAT THOSE RE-SAMPLE TRIGGERS WOULD BE.

SECTION 4.2 VERIFICATION AND VALIDATION METHODS (PAGE 33)

ISSUES, INCLUDING MISSING DATA, INCOMPLETE SITE VISITS, REPORTING ERRORS (SUCH AS INCORRECT UNITS OF MEASURE OR INCORRECT DATE/TIME INFORMATION, ETC.), OR DATA MANAGEMENT ERRORS WILL BE COMMUNICATED TO THE RESPONSIBLE PARTY IMMEDIATELY AND DOCUMENTED IN THE QA/QC REPORTS FOR EITHER FIELD SAMPLING, LABORATORY ACTIVITIES, OR DATABASE MANAGEMENT. RECONCILIATION AND CORRECTION WILL BE DONE BY A COMMITTEE COMPOSED OF THE QA/QC OFFICER AND PM. CORRECTIONS REQUIRE A UNANIMOUS AGREEMENT THAT THE CORRECTION IS APPROPRIATE.

SAWPA RESPONSE: REGARDING RETRIGGERS, PLEASE NOTE QUALITY CONTROL FOR THE DATA, INCLUDING BOTH FIELD AND LABORATORY CHECK SAMPLES, ARE COVERED PER THE PROCEDURES DESIGNED TO ASSESS AND DOCUMENT THE OVERALL QUALITY OF THE DATA.

THOSE PROCEDURES ARE SPECIFICALLY DEFINED IN TABLES 1-7 DATA QUALITY OBJECTIVES (FOR BOTH LAB AND FIELD DATA), AND TABLE 2-6 QC REQUIREMENTS. NOTE THE TABLE 2-6 REPRESENTS "APPROPRIATE CORRECTIVE ACTION IF THE ACCEPTANCE LIMIT IS EXCEEDED PER THE SWAMP QAPP MQOS."

Next Steps

- January 29, 2024 – After meeting today, SAWPA to email Task Force members the budget outlook for this surface water monitoring work.
- January 31, 2024, COB – Any Last Clarifying Questions on the QAPP from Task Force
- February 5, 2024 – Fully Sign QAPP
- Early February 2024 – First Monitoring for the QAPP
- February 2024 – Adjust CWE/SAWPA Task Order Budget to reflect some “contingency” for the re-sampling potential
- April 2024 – Second Monitoring for the QAPP