CITY OF STOCKTON

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September 26, 2022

Ms. Elizabeth Lee, Unit Chief
Municipal Storm Water Permitting Unit
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

CITY OF STOCKTON AND COUNTY OF SAN JOAQUIN STORM WATER MANAGEMENT PROGRAMS 2021-2022 ANNUAL REPORT (ORDER NO. R5-2016-0040, NPDES PERMIT NO. CAS0085324)

Dear Ms. Lee:

For your review and consideration, the City of Stockton (City) and County of San Joaquin (County) are jointly submitting this 2021-2022 Annual Report, in accordance with the National Pollutant Discharge Elimination System Permit (NPDES) and Waste Discharge Requirements (WDR) General Permit for Discharges from Municipal Separate Storm Sewer Systems (MS4) (General Permit), Part V.F.4. The report reflects the required components of the programmatic and storm water monitoring activities conducted during Fiscal Year 2021-2022.

A copy has been submitted to centralvalleysacramento@waterboards.ca.gov.

If you have any questions, please contact Dagmara Saini of City of Stockton at (209) 937-8155 or dagmara.saini@stocktonca.gov or Roy Valadez of San Joaquin County at (209) 468-3605 or rvaladez@sjgov.org.

Sincerely,

CITY OF STOCKTON
JEFF MARASOVICH
DEPUTY DIRECTOR, COLLECTIONS & STORMWATER

COUNTY OF SAN JOAQUIN
MATT ZIDAR
WATER RESOURCES DIRECTOR

Attachment: 2021-2022 Annual Report

Cc: Karen Ashby, Larry Walker Associates
Rachel Warren, Larry Walker Associates

OCTOBER 2022

CITY OF STOCKTON AND COUNTY OF SAN JOAQUIN

National Pollutant Discharge Elimination System

(Order Nos. R5-2016-0040-002 and R5-2016-0040-003)

Municipal Stormwater Program 2021-2022 Annual Report

PREPARED BY:

LARRY WALKER ASSOCIATES
science | policy | solutions

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CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations. [40 CFR 122.22(d)]

Executed on the 29 day of September 2022, at the City of Stockton.

Jeff Marasovich
City of Stockton
Deputy Director, Wastewater Operations

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CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations. [40 CFR 122.22(d)]

Executed on the 21st day of September 2022, at the County of San Joaquin.

Matthew Zidar
County of San Joaquin
Water Resources Manager

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1. INTRODUCTION

The most recent National Pollutant Discharge Elimination System (NPDES) and Waste Discharge Requirements (WDR) General Permit for Discharges from Municipal Separate Storm Sewer Systems (MS4) (Region-wide Permit) was adopted June 23, 2016.[1] The City of Stockton (City) and County of San Joaquin (County) submitted a Notice of Intent (NOI) application package on November 1, 2016, and each received a Notice of Applicability (NOA) from the Central Valley Regional Water Quality Control Board (Regional Water Board) on November 30, 2016.[2] Among other things, the NOI package included a Work Plan (NOI Work Plan) outlining how the current Stormwater Management Plan (SWMP) and any previously proposed modifications will be implemented within the jurisdictional limits of City and the Phase I and Phase II urbanized areas of the County[3] until a revised SWMP is submitted to and approved by the Regional Water Board.

The City and County submitted the final *Assessment and Prioritization of Water Quality Constituents in the Stockton Urbanized Area* (Assessment and Prioritization) in October 2018.[4] This document identified the priority water quality constituents (PWQCs)—indicator bacteria, methylmercury, dissolved oxygen, and trash—that will be the focus of the stormwater program and the revised SWMP.

In July 2019, the City and County submitted a *Reasonable Assurance Analysis* (RAA) that identified strategies, activities, and milestones to address the PWQCs. The RAA results will assist in guiding the revision of the SWMP and identifying prioritized strategies that can be implemented based on available capital and operations and maintenance resources. The revised SWMP will be structured to address the identified PWQCs and include milestones, strategies, and activities that will, over time (as identified through the RAA), ensure that the City's and the County's discharges will not cause or contribute to exceedances of applicable water quality objectives (WQOs) within the relevant receiving waters.

A SWMP has been and continues to be implemented within the jurisdictional limits of the City and the urbanized areas of the County regulated under the Region-wide Permit (i.e., the Stockton Urbanized Area or SUA).[5] The SWMP represents the strategy for controlling the discharge of pollutants from the MS4 to the Maximum Extent Practicable (MEP) and includes a wide range of Best Management Practices (BMPs). This Annual Report focuses on the control measures and BMPs included in the currently approved SWMP, with the modifications as noted in previous annual reports and the NOI Work Plan.

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[1] https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0040_ms4.pdf

[2] City of Stockton under Order No. R5-2016-0040-002; County of San Joaquin under Order No. R5-2016-0040-003.

[3] The Regional Water Quality Control Board amended the County's Notice of Applicability (NOA) to include the County's Phase II MS4 jurisdictional area and terminate the County's enrollment under the State Water Resources Control Board's Phase II MS4 General Order for Storm Water Discharges from Small MS4s (Order WQ 2013-0001-DWQ, as amended). [Central Valley Regional Water Quality Control Board. Amended Notice of Applicability; General Permit for Discharges from Municipal Separate Storm Sewer Systems, Order R5-2016-0040. 11 February 2022]

[4] The draft Assessment and Prioritization was submitted May 30, 2017 and a revised, final version submitted on October 2, 2018.

[5] The current SWMP was approved by the Central Valley Regional Water Quality Control Board on October 9, 2009 (Resolution R5-2009-0105).

The Region-wide Permit requires Annual Reports, Mid-Term Reports, and End-Term Reports. The Mid-Term and End-Term Reports serve as the Annual Report for the years submitted and include the applicable effectiveness assessment(s). A summary of the annual reporting schedule is provided in **Table 1**. The Region-wide Permit has expired and has been administratively continued; thus, the five-year reporting cycle begins again with the 2021-2022 Annual Report.

Table 1. Annual Reporting Schedule

Permit/Fiscal Year[a]	Report Type & Reporting Period	Status
Year 1 (2016-2017)	Annual Report (2016-2017)	*Complete*
Year 2 (2017-2018)	Annual Report (2017-2018)	*Complete*
Year 3 (2018-2019)	Mid-Term Report (2016-2019)	*Complete*
Year 4 (2019-2020)	Annual Report (2019-2020)	*Complete*
Year 5 (2020-2021)	End-Term Report (2016-2021)	*Complete*
Year 6 (2021-2022)	**Annual Report (2021-2022)**	**Current Submittal**

[a] **Bold, blue text** indicates the current report type.

This 2021-2022 Annual Report is being submitted in accordance with Region-wide Permit Provisions V.F.4 and includes the items summarized in **Table 2**.

Table 2. Summary of Annual Report Requirements

Report Requirement	Location
(a.i) Certification that the Storm Water Management Plan and Work Plan were implemented as approved.	Section 2
(a.ii) A summary of activities and tasks scheduled to be implemented in the upcoming year.	Section 2
(a.iii) Proposed minor modifications to the Storm Water Management Program; or any proposed Work Plan Modification.	Section 6
(a.iv) A completed certification statement, in accordance with the signatory requirements in Attachment H (Standard Permit Provisions and General Provisions).	Certification Statements
(c) Water quality data (annual).	Appendix B, C
(d) Additional requirements described in 40 CFR §122.42(c) (Attachment H, Standard Permit Provisions and General Provisions).	Certification Statements Section 3 Section 4 & Appendix B, C Section 5

2. IMPLEMENTATION STATEMENT

The City and County have implemented the stormwater program within the SUA consistent with the intent of the approved 2009 SWMP (and modifications thereto) and as described by the NOI Work Plan submitted to, and approved by, the Regional Water Board in November 2016 (**Appendix A**, *2016 NOI Work Plan*).

During 2021-2022, the City and County implemented the stormwater program within the SUA consistent with the SWMP and the 2016 NOI Work Plan. During 2022-2023, until a revised SWMP and Work Plan are approved, the City and County will continue to implement the stormwater program within the SUA as outlined by the 2016 NOI Work Plan.

3. FISCAL ANALYSIS

The City and County annually assess the current NPDES expenditures, as well as the projected expenditures for the next fiscal year. The City's and County's fiscal analyses are provided in **Table 3** and **Table 4,** respectively.

Table 3. 2021-2022 Fiscal Analysis, City of Stockton

Program Element	Expenditures During Fiscal Year 2021-2022	Estimated Budget for Fiscal Year 2022-2023[a]
Program Management: Staff salaries, utility billing, phone charges, computer software/rentals, memberships, permit fees, indirect cost allocations, training, consultant contracts	$2,098,613	$3,090,807
Public Outreach: Staff salaries, industrial, commercial, and residential programs, including media and community events	$26,207	$24,966
Municipal Operations: Staff salaries, CIPs, and Storm Drain System Cleaning and Maintenance (includes Illicit Discharges, illegal connections mitigation, and clean-up)[b]	$3,304,757	$4,243,971
Industrial and Commercial: Staff salaries, inspections, and follow-up inspections[c]	$126,775	$155,701
Construction: Staff salaries, outreach	$153,659	$187,833
Planning and Land Development: Staff salaries	$208,706	$152,916
Water Quality Monitoring: Includes monitoring at six water bodies on an annually rotating basis	$228,843	$249,374
Water Quality Based Programs: Includes pollutant-specific work efforts (e.g., Trash Implementation Plans, Pyrethroid Control Program)	--[d]	--[d]
TOTAL	**$6,147,560**	**$8,105,569**

[a] Annually, the City compartmentalizes the overall budget into individual Program Element expenditures. The City has developed and is implementing a consistent methodology for tracking stormwater program expenditures.

[b] Facility Pollution Prevention Plans (FPPPs) are paid for out of Public Works budget and are not a Stormwater Expense.

[c] The Industrial and Commercial Inspection Program is conducted in-house by Stormwater and Environmental Control Staff.

[d] Expenditures associated with Water Quality Based Programs are reflected and reported in the Water Quality Monitoring Program expenditures.

Table 4. 2021-2022 Fiscal Analysis, County of San Joaquin

Program Element	Expenditures During Fiscal Year 2020-2021[a]	Estimated Budget for Fiscal Year 2022-2023
Program Management	$479,967	$600,000
Illicit Discharges	$0	$20,000
Public Outreach	$41,964	$50,000
Municipal Operations	$11,198	$20,000
Industrial and Commercial	$2,896	$10,000
Construction	$19,300	$40,000
Planning and Land Development	$86,625	$80,000
Water Quality Monitoring Programs and Water Quality Based Programs[b]	$70,429	$60,000
TOTAL	**$ 712,379**	**$ 880,000**

[a] Actual expenditures for fiscal year 2021-2022 do not reflect the County's 2021-2022 shared costs of co-permittee expenditures with the City of Stockton.

[b] Effective in fiscal year 2018-2019, actual expenditures associated with Water Quality Based Programs are reflected and reported in the Water Quality Monitoring Program expenditures.

The City's stormwater program is funded primarily by a storm drain maintenance or user fee of $2.10/month per Equivalent Residential Unit. During 2021-2022, this program generated $5,578,050 in revenue. The City predicts a total revenue of $5,122,231 for 2022-2023.

The County's funding sources are summarized in **Table 5**. The County's stormwater program is funded primarily by a storm drain maintenance or user fee assessed at $35/year per Equivalent Residential Unit. During 2021-2022, these programs generated $742,324 in revenue. The County predicts a total revenue of $754,000 for 2022-2023.

Table 5. 2021-2022 Funding Sources, County of San Joaquin

Source	Funding for Fiscal Year, by Percentage 2021-2022	Estimated Funding for Fiscal Year 2022-2023, by Percentage
Assessment Fee/Special District Fund (Fee $35/parcel)	82.25%	81.03%
Inspection/plan check fees	16.91%	17.91%
Miscellaneous Revenue – Interest Income	0.84%	1.06%
Operating Transfers	0.00%	0.00%

4. WATER QUALITY MONITORING ANNUAL ASSESSMENT (2021-2022)

Provision V.E of the Region-wide Permit requires monitoring of urban runoff and receiving waters within the MS4 jurisdiction. In accordance with the previous permit, the City and County received approval from the Regional Water Board in 2015 for conducting an Alternative Monitoring Program (AMP).[6] The AMP is consistent with the proposed monitoring program from the Report of Waste Discharge (June 2012 ROWD),[7] meets the objectives of the Region-wide Permit, directs resources to the most critical water quality issues, and collects data to support management decisions to address those critical issues.

The AMP's primary objective is to focus on Pollutants of Concern (POCs), as identified within the June 2012 ROWD, and implement an intensive monitoring approach to determine the source(s) of pollutants in urban discharges. In addition to the AMP, the City and County were approved to participate in the Delta Regional Monitoring Program (Delta RMP) in lieu of conducting some of the local water quality monitoring.[8]

As a result, the revised monitoring program was initiated during the 2015-2016 reporting period and has been implemented since that time. The AMP will form the basis of the monitoring program that will be submitted as a part of the revised SWMP and will shift the monitoring program focus from the POCs to the PWQCs identified in the Assessment and Prioritization.

The monitoring program is a focused effort conducted within six key water bodies on a rotating basis. The schedule for the staggered waterbody monitoring was updated in June and August of 2021[9] and is shown in **Table 6**.

[6] City of Stockton and County of San Joaquin. Submittal of Alternative Stormwater Monitoring Program (Order No. R5-2015-0024). June 10, 2015; Central Valley Regional Water Quality Control Board. Approval of City of Stockton and County of San Joaquin's 27 October Alternative Monitoring Program. 4 November 2015.

[7] National Pollutant Discharge Elimination System Municipal Stormwater Program – Report of Waste Discharge & Proposed Stormwater Management Plan, June 2012 (Section 2.7; Tables 2-42, 2-43, 2-44, 2-45, 2-46, and 2-47).

[8] Central Valley Regional Water Quality Control Board. Approval to Allow the City of Stockton and County of San Joaquin to Reduce Local Water Quality Monitoring and Participate in the Delta Regional Monitoring Program. 4 November 2015.

[9] In June and August of 2021, the City and County received approval to alter the fiscal year 2021-2022 annual water body rotation (switching the order of Mosher Slough and Calaveras River) so that the stormwater monitoring was also aligned with the Pyrethroid Baseline Monitoring [See Approval to Allow the City of Stockton and County of San Joaquin to Alter Fiscal Year 2021-2022 Water Body Monitoring. June 7, 2021 and Response to Request to Modify the City of Stockton & County of San Joaquin's Municipal Separate Storm Sewer System Alternative Monitoring Plan, August 6, 2021.]

Table 6. AMP Staggered Waterbody Monitoring Schedule

Waterbody[a]	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Mosher Slough[b]							
Calaveras River[a]							
Duck Creek[b]							
Smith Canal[b]							
Mormon Slough[b]							
Five-Mile Slough[b]							

[a] Blue text indicates the most recent year's monitoring location.
[b] Historical monitoring locations.

Monitoring results for each previous fiscal year have been summarized in the corresponding Annual Report. Constituents monitored for each waterbody are summarized in **Table 7**.

Table 7. Summary of Constituents Monitored by Waterbody from 2015-2022

Constituents Monitored	Monitoring Type	Waterbody					
		Mosher Slough	Calaveras River	Duck Creek	Smith Canal	Mormon Slough	Five-Mile Slough
Full suite of constituents (**Table 13**)	Water quality	✓	✓	✓	✓		
Dissolved Oxygen	Water quality	✓	✓	✓	✓	✓	✓
Methylmercury and mercury	Water quality	✓	✓	✓	✓		
E. coli & fecal coliform	Water quality	✓	✓	✓	✓	✓	✓
Chlorpyrifos and pyrethroids	Water quality	✓	✓	✓	✓		✓
Sediment toxicity & sediment chemistry	Sediment	✓	✓	✓	✓		
Water column toxicity	Water column	✓	✓	✓	✓		

4.1 WATERBODY AND DRAINAGESHED MONITORING

The Calaveras River drainageshed primarily comprises residential and commercial land uses, with some industrial land use. The Calaveras River flows southwest from its origin the Sierra Nevada foothills to its confluence with the San Joaquin River in the City of Stockton. Passing through residential and commercial areas of Stockton, the Calaveras River receives both urban runoff and upstream agricultural flow from the Stockton Diversion Canal and "old" Calaveras channel.

Sites monitored at Calaveras River are shown in **Figure 1** and listed in **Table 8**. Monitoring at Calaveras River focused on the POCs identified in the 2012 ROWD[7] which include:

- Indicator bacteria (E. coli and fecal coliform)
- Pesticides
- Dissolved oxygen (DO)
- Mercury

Several modifications to the AMP for the 2021-2022 monitoring season were requested by the City and County to prioritize monitoring based on current water quality conditions (i.e., removal of chlorpyrifos due to the constituent's removal from 303(d) listing) and to align pyrethroid and toxicity monitoring with Pyrethroid Baseline Monitoring requirements. These requested modifications were approved by the Regional Water Board in August 2021.[10]

[10] Central Valley Regional Water Quality Control Board. Response to Request to Modify the City of Stockton & County of San Joaquin's Municipal Separate Storm Sewer System Alternative Monitoring Plan (WDID#s: 5 S39M1000205 & 5S39M1000204). 6 August 2021.

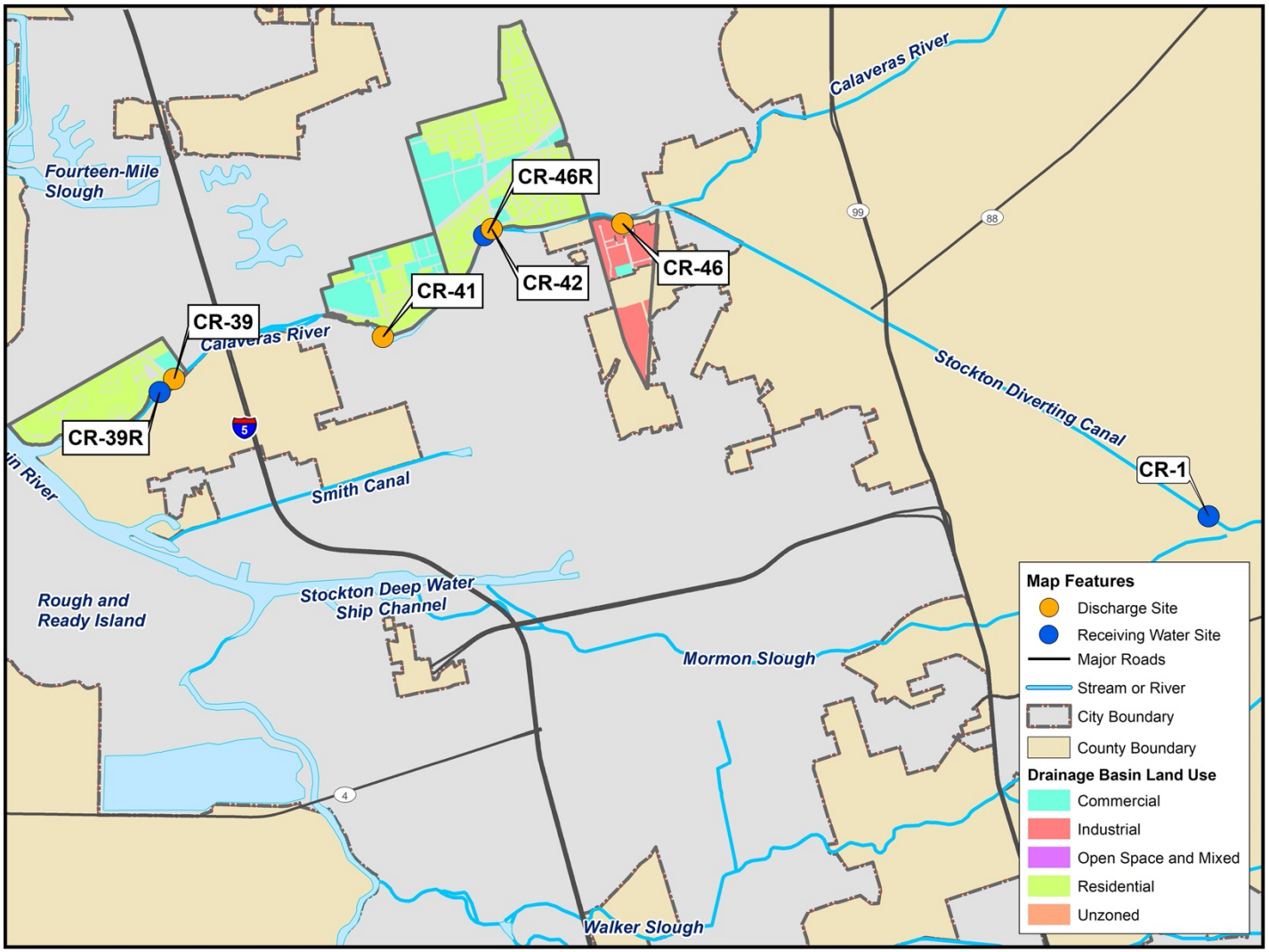

Figure 1. Calaveras River Monitoring Sites and Discharge Site Drainagesheds

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Table 8. Calaveras River Monitoring Sites and Constituents Monitored

Constituents Monitored	Monitoring Type	Sites Monitored					
		CR-46a,b	CR-46Ra	CR-42	CR-41	CR-39	CR-39R
Field parameters	Water quality	C	G	G	G	G	G
E. coli and fecal coliform	Water quality	C	G	G	G	G	G
Methylmercury	Water quality	C	G	G	G	G	G
Dissolved Oxygen	Water quality	C	G	G	G	G	G
Full suite of constituents[c]	Water quality	C	G				
Sediment toxicity	Sediment		Sed				
Water column toxicity	Water quality		G				
Mercury	Water quality	C	G				
Oil and Grease	Water quality	C	G				
Total Aluminum	Water quality	C	G				

Notes:
G = Grab
C = Composite
Sed= Sediment
[a] Historical Monitoring Site
[b] Samples at this site were collected as grab samples due to autosampler malfunctions.
[c] Full suite of constituents includes Pyrethroids, DOC and TOC, BOD, Mercury, Oil and Grease, Total Aluminum, and Total Iron.

Monitoring activities completed during 2021-2022 are summarized in **Table 9**, with the results presented in the subsequent sections.

Table 9. 2021-2022 Monitoring Program Activities

Monitoring Program Activity	Status
Outfall and Receiving Water Monitoring (**Section 4.1.2**)	• 3 wet weather events[a] monitored at 4 urban discharge[b] and 2 receiving water sites • 4 dry weather events monitored at 4 urban discharge and 2 receiving water sites
Rainwater/Atmospheric Deposition Monitoring (**Section 4.1.3**)	• Rainwater was monitored at 2 locations during 3 wet weather events

[a] Wet weather events were completed for all three periods defined in the AMP (October-November, December-March, and April-June). However, no qualifying storm event occurred in the January 1 through March 19 time period, as defined by pyrethroid baseline monitoring requirements.
[b] Due to site access issues, the urban discharge site CR-41 was not sampled during the April 22, 2022, wet weather event.

4.1.1 Storm Tracking and Selection

Monitoring of stormwater runoff is a key component of the monitoring program[11] and requires a high level of equipment and field crew coordination. Incoming storms are tracked and assessed against storm selection criteria (e.g., expected amount of precipitation, days since last rain event, anticipated duration of event) and the forecasted reliability that the storm will occur in the SUA. Wet weather monitoring is particularly challenging in the SUA, as rainfall forecasts are often unreliable due to the convective nature of incoming storms. In addition, because storms normally intersect Stockton traveling from the west to the east, it is not unusual for northern Stockton to receive substantial rainfall, while southern Stockton remains dry, or vice versa.

Wet weather events are timed to attempt to capture urban runoff impacts with the highest possible representation of the targeted storm event (i.e., high percent capture) using flow-based composite samplers at urban discharge stations when possible. Grab sampling techniques, when feasible, are conducted near the peak of storm event hydrographs, and are used at all receiving water stations. Due to standard method requirements, grab sampling is used for the following constituents, when monitored at the applicable waterbody:

- Oil and grease
- Indicator bacteria
- Mercury/methylmercury
- Pesticides

The daily total rainfall at the Stockton Metropolitan Airport[12] during the 2021-2022 monitoring year is shown in **Figure 2**. The total cumulative total seasonal rainfall (relative to the historical average[13]) and monitoring event timing are also shown. Historical average annual rainfall at the Stockton Metropolitan Airport is 14 inches. The 2021-2022 monitoring year had below-average precipitation with 9.84 inches of rain, which is 70.6% of historical annual rainfall. The 2022 water year classification is not expected to be determined until May 2023. However, the California Department of Water Resources classified the previous wet season for the 2021 water year (ending September 30, 2021) as “critical” for the San Joaquin Valley.[14]

[11] The Region-wide Permit defines the “monitoring year” as October 1 through September 30. Monitoring events are reported for the fiscal year, due to the time needed for data reporting and processing.

[12] https://cdec.water.ca.gov/dynamicapp/staMeta?station_id=SOC

[13] Based on 1981-2010 data. https://www.cnrfc.noaa.gov/awipsProducts/RNORR4RSA.php

[14] http://cdec.water.ca.gov/cgi-progs/iodir/WSIHIST

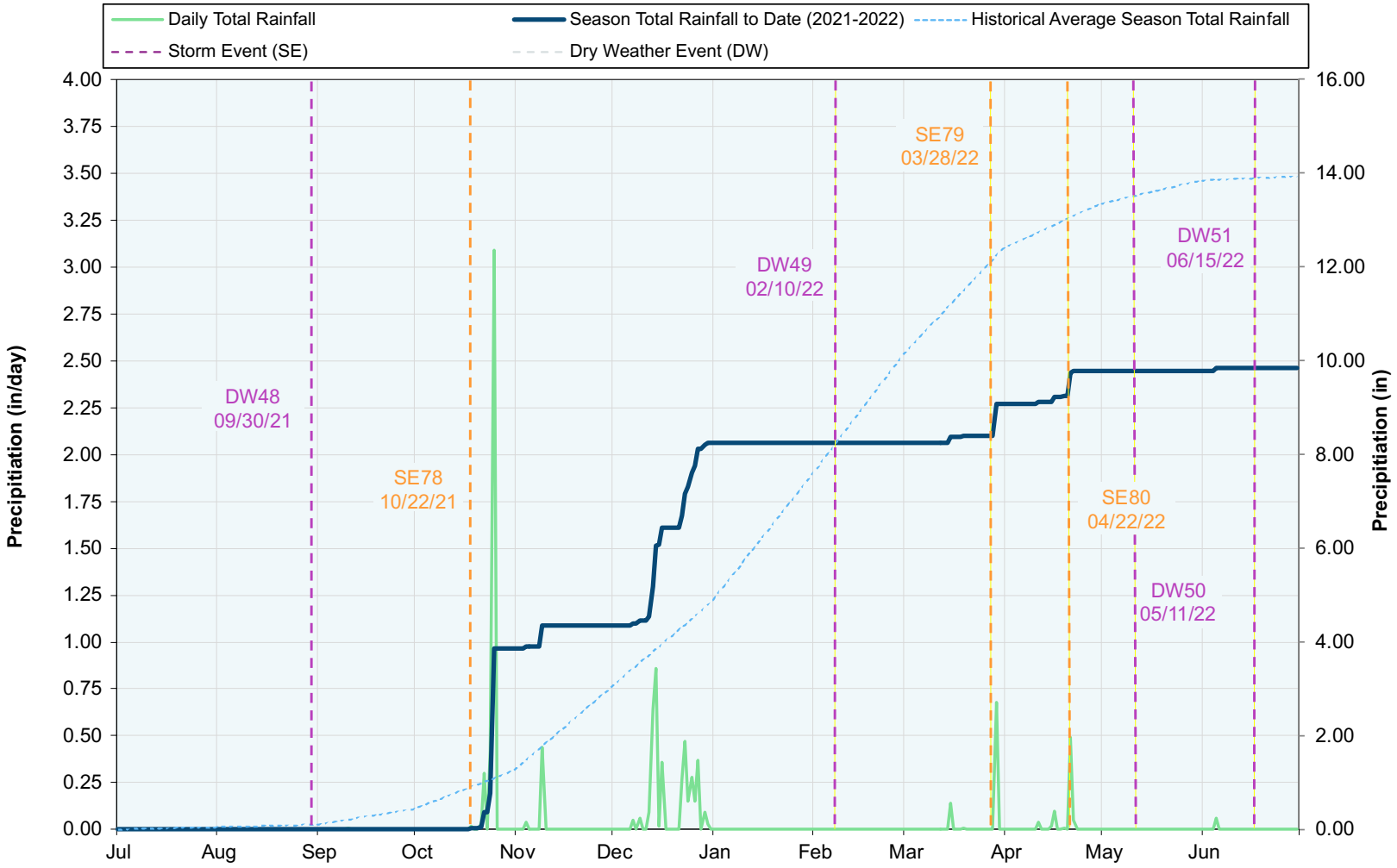

Figure 2. 2021-2022 Precipitation at Stockton Metropolitan Airport and Captured Monitoring Events

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4.1.1.1 Details of 2021-2022 Wet Weather Monitoring Events

Each monitoring event is unique in terms of the antecedent weather conditions, flow in the receiving waterbody, field conditions, etc. Runoff quality is particularly influenced by the amount and intensity of rainfall and time of sampling with respect to the rainfall hydrograph. The conditions for wet weather events conducted in 2021-2022 are summarized in **Table 10**.

Table 10. Details of 2021-2022 Wet Weather Monitoring Events

Storm Events[a][b]	SE78 10/22/2021	SE79 3/28/2022	SE80 4/22/2022
Time of first rain	10/22/2021 05:55	03/27/2022 22:55	04/21/2022 16:55
Time of last rain	10/22/2021 10:55	03/28/2022 14:55	04/22/2022 3:55
Total rain (in)	0.30	0.68	0.38
Antecedent Conditions			
Date of last precipitation	10/21/2021	03/19/2022	04/16/2022
Date of last storm > 0.1 in	3/19/2021	03/15/2022	03/28/2022
Days since last storm	217 Days	8 Days	24 Days
Date of last storm > 0.25 in	3/10/2021	12/27/2021	03/28/2022
Days since last storm	226 days	90 Days	24 Days
Cumulative rainfall to date (in)	0.35	9.04	9.75

[d] Precipitation data are collected at the Stockton Metropolitan Airport, available at: https://mesowest.utah.edu/cgi-bin/droman/download_api2.cgi?stn=KSCK&year1=2014&day1=19&month1=6&hour1=&timetype=LOCAL&unit=0

[e] Per the AMP approved by the Regional Water Board, rainfall events of 0.15''- 0.25'' are targeted for the monitoring program. However, per the approved Pyrethroid Baseline Monitoring Plan, rainfall events of 0.25" in 24 hours are targeted. Therefore, rainfall events of 0.25" were targeted for the monitoring program to accommodate pyrethroid baseline monitoring requirements.

4.1.2 Outfall and Receiving Water Monitoring

The monitoring program includes urban discharge outfall and receiving water monitoring. Urban discharge outfall monitoring characterizes the quality of urban runoff discharged from three storm drain outfalls along the Calaveras River. In addition, receiving water monitoring characterizes the quality of the receiving waters within the SUA. Two receiving water sites were sampled downstream of the urban discharge sites. The co-located sites are used to help determine if the urban discharge is potentially causing or contributing to contemporaneous in-stream exceedances of applicable water quality objectives.

Monitoring sites sampled in 2021-2022 are shown in **Table 8** and **Table 11**.

- Urban discharge sites are labeled with a station and number code (e.g., CR-46).
- Receiving water sites are labeled with an "R" for receiving water (e.g., CR-46R).

Table 11. Sites Sampled and Type of Sample Collected in 2021-2022

Event Code	Sample Date	Site Type and Station ID					
		Urban Outfall				Receiving Water	
		CR-46	CR-42	CR-41	CR-39	CR-46R	CR-39R
DW48	8/30/2021	G	G	G	G	G	G
SE78	10/22/2021	G	G	G	G	G	G
DW49	2/10/2022	G	G	G	G	G	G
SE79	3/28/2022	G	G	G	G	G	G
SE80[a]	4/22/2022	G	G	NS	G	G	G
DW50	5/11/2022	G	G	G	G	G	G
DW51	6/15/2022	G	G	G	G	G	G

G : Grab
NS : Not Sampled
[a] Due to site access issues, CR-41 was not sampled during the April 22, 2022 storm event (SE80).

The outfall and receiving water monitoring sites and predominant land uses are summarized in **Table 12**.

Table 12. 2021-2022 Outfall and Receiving Water Monitoring Sites for Calaveras River

Site Type	Station ID	Monitoring Site Description	Predominant Land Use	Drainage Area (acres)
Urban Outfall	CR-39	Brookside Estates Pump Station (north side of Calaveras River)	Upscale Residential with minor commercial	297
	CR-41	Pershing Avenue/Brookside Pump Station (north side of Calaveras River)	Residential/ Campus/ Commercial	310
	CR-42	El Dorado Street/Brookside Pump Station (north side of Calaveras River)	Residential/ Commercial	844
	CR-46	West Lane Pump Station (southeast side of Calaveras River at West Lane Bridge)	Industrial with mixed commercial/ residential	230
Receiving Water	CR-39R	Calaveras River downstream of CR-39 Pump Station	Upscale Residential with minor commercial	NA
	CR-46R	Calaveras River at El Dorado Bridge	Industrial with mixed commercial/ residential	NA

Monitoring is generally conducted during three (3) wet weather events and four (4) dry weather events each year. During 2021-2022, monitoring was completed at each urban discharge and receiving water site three (3) times during the wet season and four (4) times during the dry season. Rainwater samples were captured during all three storm events. The timeline of the events and sites sampled during each event are shown in **Figure 2**. Wet weather events (labeled "SE" for storm event) and dry weather events (labeled "DW" for dry weather) are numbered sequentially from the time when wet weather and dry weather monitoring events were initiated within the SUA (in 1992 and 2004, respectively).

4.1.2.1 Monitored Constituents and Analytical Methods

The constituents and corresponding analytical methods for urban discharge and receiving water monitoring comply with the Method Detection Limits (MDLs) specified in the monitoring program.[15] The MDLs for the constituents sampled during the 2021-2022 monitoring events are shown in **Table 13.**

[15] Some questions exist as to the applicability of these water quality objectives and criteria to stormwater discharges because an appropriate Water Code section 13241 analysis was not performed on the state water quality objectives used herein and an implementation plan relative to stormwater discharges was not prepared under Water Code section 13242. In addition, the State Water Resources Control Board (SWRCB) has determined that the federal water quality criteria, such as are contained in the CTR, do "not apply to regulation of storm water discharges." See SWRCB Policy for Implementation of Toxics Standards for the Inland Surface Waters, Enclosed Bays, and Estuaries of California at pg. 1, fn 1; see also CTR Preamble, 65 Fed. Reg. 31682 (5/18/00), which does not identify municipal stormwater as a potentially affected entity. Moreover, these objectives and criteria were never intended to be applied to stormwater discharges at the end of pipe without dilution and mixing being considered. Nevertheless, these objectives and criteria are utilized herein for the purposes of this report.

Table 13. Constituent Analysis for Outfall and Receiving Water Monitoring in 2021-2022

Constituents	Method Detection Limits (MDLs)	Water Quality Objectives (WQOs)	WQO Source
Conventional Pollutants / Field Measurements			
Date	mm/dd/yyyy	-	-
Sample Time	hr:min (regular time)	-	-
Weather	Degrees F	-	-
Water Temperature	Degrees C	-	-
pH	0 - 14	6.5 – 8.5	Basin Plan[a]
Dissolved Oxygen	Sensitivity to 5 mg/L	>5 or >6[b]	Basin Plan
Indicator Bacteria, MPN/100mL			
E. coli	<20	235[c]	Stockton Urban Waterbodies Pathogen TMDL (Basin Plan)
Fecal Coliform	<20	400	
General, mg/L			
Biochemical Oxygen Demand	2	-	-
Mercury, ng/L			
Mercury, Total	0.2	50	CTR
Methylmercury, Total	0.02	-	Basin Plan[d]
Pesticides, ng/L			
Chlorpyrifos	0.5	15	Basin Plan
Pyrethroids, ng/L			
Bifenthrin	0.1 - 2	-	-[e]
Cyfluthrin	0.2 - 2		
Cypermethrin	0.2 - 2		
Esfenvalerate:Fenvalerate	0.2 - 2		
Lambda-Cyhalothrin	0.2 - 2		
Permethrin	2 - 10		

[a] Water Quality Control Plan for the Sacramento River and San Joaquin River basins.

[b] The WQO is >6 mg/L from September 1 – November 30.

[c] This is not a WQO; it is the Stockton Urban Waterbodies Pathogen TMDL single sample maximum water quality target.

[d] The methylmercury objective is a tissue-based objective. For the Sacramento-San Joaquin Delta and Yolo Bypass waterways listed in Basin Plan Appendix 43 (including waterways in the Stockton Urbanized Area), the average methylmercury concentrations shall not exceed 0.08 and 0.24 mg methylmercury/kg, wet weight, in muscle tissue of trophic level 3 and 4 fish, respectively (150-500 mm total length). The average methylmercury concentrations shall not exceed 0.03 mg methylmercury/kg, wet weight, in whole fish less than 50 mm in length.

[e] The Central Valley Pyrethroid Pesticide Basin Plan Amendment (BPA) was approved by the USEPA Office of Administrative Law on February 19, 2019 and became effective during the 2018-2019 monitoring year. The BPA establishes pyrethroid concentration goals and pyrethroid triggers based on the sum of freely dissolved individual pyrethroid concentrations divided by their concentration goals. Pyrethroid concentrations in future monitoring years will be evaluated using the Basin Plan pyrethroid triggers.

The Region-wide Permit requires the submittal of water quality monitoring data to the Regional Water Board. As such, all annual water quality monitoring data are provided in **Appendix B**, *2021-2022 Monitoring Results*. The Region-wide Permit also requires that the water quality monitoring data be uploaded to the California Environmental Data Exchange Network (CEDEN) or the Storm Water Multi-Application Reporting and Tracking System (SMARTS) database, when available. Notably, SMARTS is not currently able to accept the formatted data. Thus, only the receiving water data (not urban discharge data) from 2021-2022 has been uploaded just to CEDEN.

The waterbody/drainage shed monitoring results include the following information:

- Sample location and Station type (urban discharge [UD] or receiving water [RW])
- Sampling method (composite or grab)
- Sample date and time
- Sample result
- MDLs and Reporting Limits (RLs)
- Data qualifiers
- Comparison to the lowest applicable water quality objective (WQO)
- Name of the analyzing laboratory

For results that were non-detect (ND), the value is reported as less than the MDL, where the MDL is provided by the lab; otherwise, the value is reported as less than the RL.

Monitoring results for the constituents identified as water quality POCs for Calaveras River are presented graphically to provide an overview of the characterization of Calaveras River:

- Dissolved oxygen (**Figure 3**)
- *E. coli* and fecal coliform (**Figure 4**)
- Mercury and Methylmercury (**Figure 5**)
- Pyrethroid pesticides[16] (**Figure 6**)

Data for the POCs are summarized in **Appendix C**, *2021-2022 Data Summary Tables*. General observations about the 2021-2022 monitoring year are provided below:

- Dissolved oxygen (DO):
    - DO levels were below the minimum WQO of 5 mg/ L during all dry weather events at CR-46, and select dry weather events at CR-39, and CR-42.
    - DO levels were generally higher in receiving water sites than discharge sites. DO was measured above the minimum WQO during all dry weather events at both receiving water sites, CR-39R, and CR-46R.

[16] Chlorpyrifos was only detected during DW44 at 5M-28R; therefore, a graphical presentation was not included.

    - Except for SE78 at CR-39, CR-41, and CR-42, DO levels were above the minimum WQO during all storm events.

- Indicator bacteria *(E. coli* and fecal coliform):
    - *E. coli* and fecal coliform levels varied between sites but were generally lower at receiving water sites than discharge sites.
    - Levels of *E. coli* and fecal coliform were generally lower at discharge site CR-39 and the corresponding receiving water site CR-39R than at other locations.
    - Frequent *E. coli* and fecal coliform exceedances occurred at discharge sites CR-42 and CR-41.
    - Exceedances were less frequent at CR-39 and the associated receiving water site, CR-39R.
- Mercury and Methylmercury:
    - Mercury levels were well below the WQO of 50 ng/L at all sites, for all events.
    - Methylmercury and mercury measurements did not show major variation across sites and events.
- Pyrethroids:
    - A greater number, and higher levels of pyrethroid compounds were detected in discharge samples than receiving water samples.
    - At the receiving water site, pyrethroids were detected more frequently during storm events in comparison to dry weather events.
    - Bifenthrin was detected most frequently and at the highest concentrations.
    - Esfenvalerate/ fenvalerate was not detected at any location.

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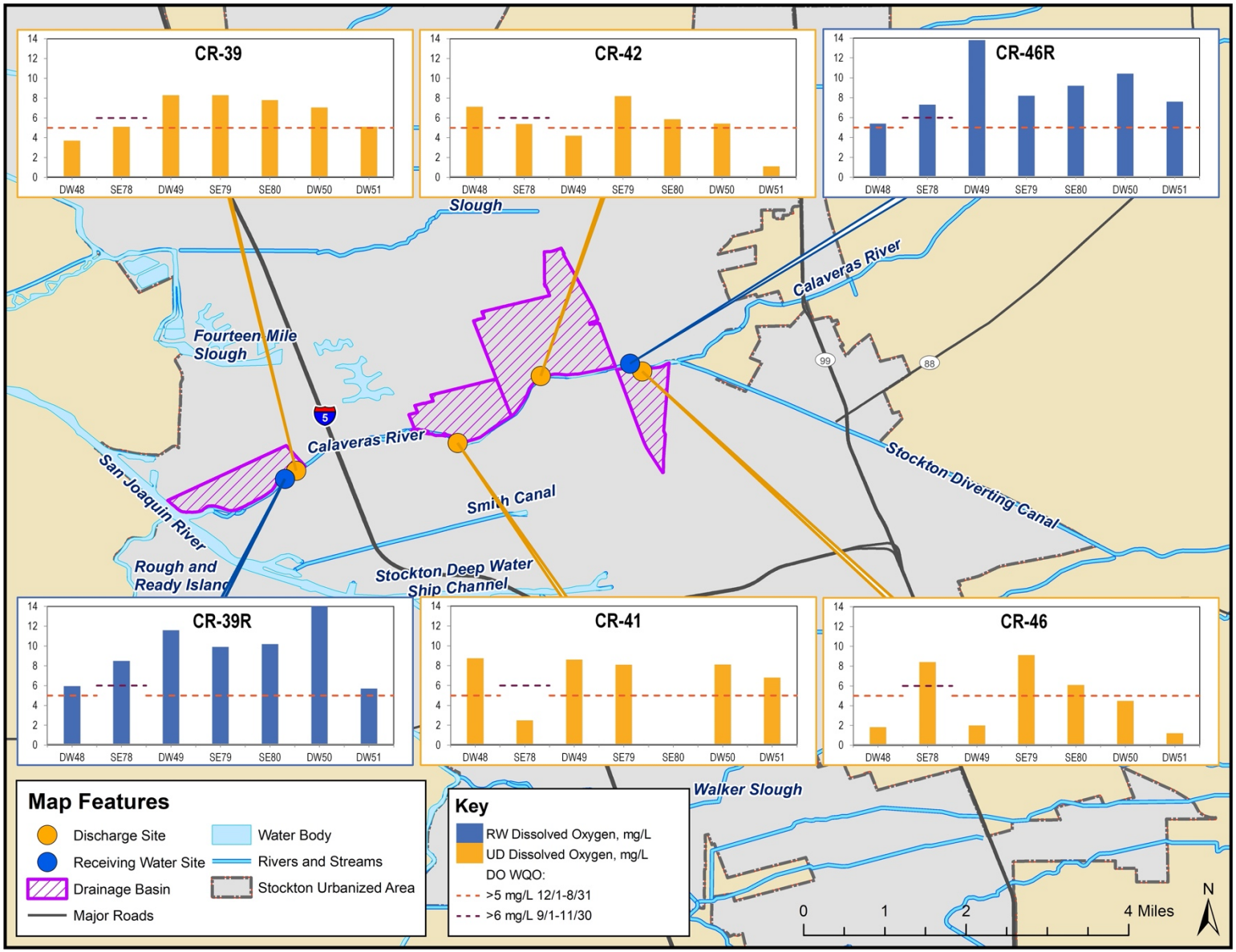

Figure 3. Calaveras River 2021-2022 Dissolved Oxygen Concentrations (mg/L)

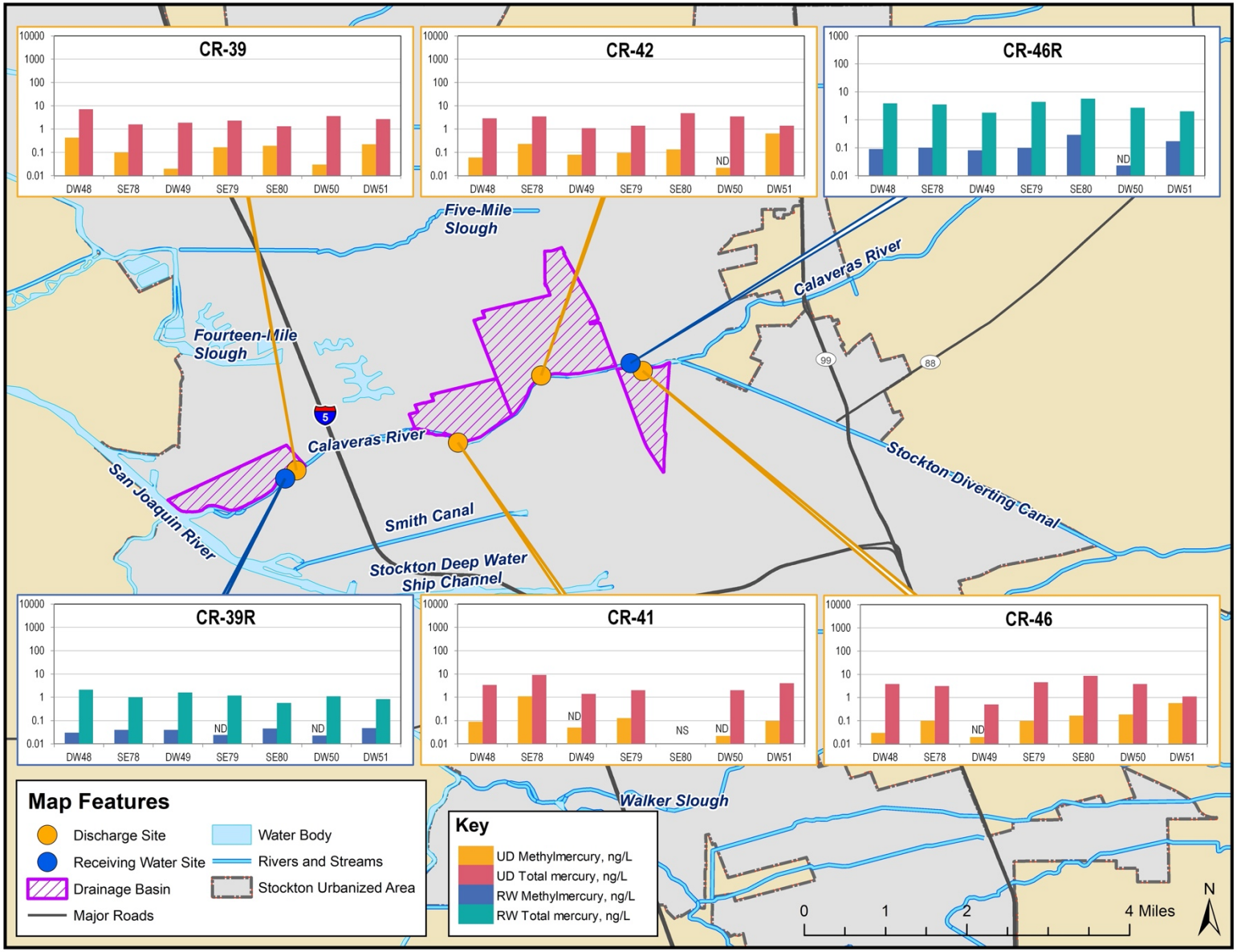

Figure 4. Calaveras River 2021-2022 Mercury and Methylmercury Concentrations (ng/L)

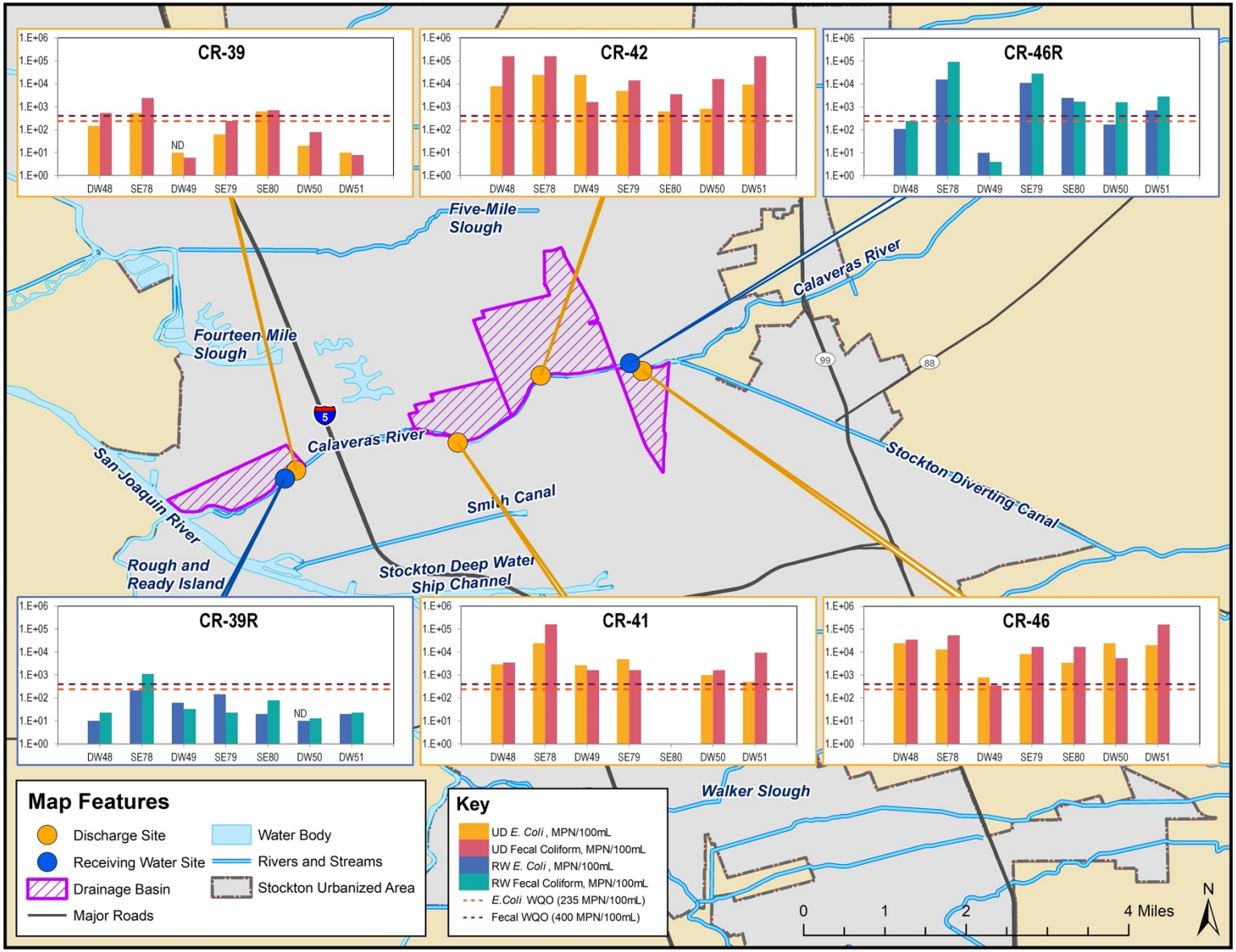

Figure 5. Calaveras River 2021-2022 *E. Coli* and Fecal Coliform Concentrations (MPN/100mL)

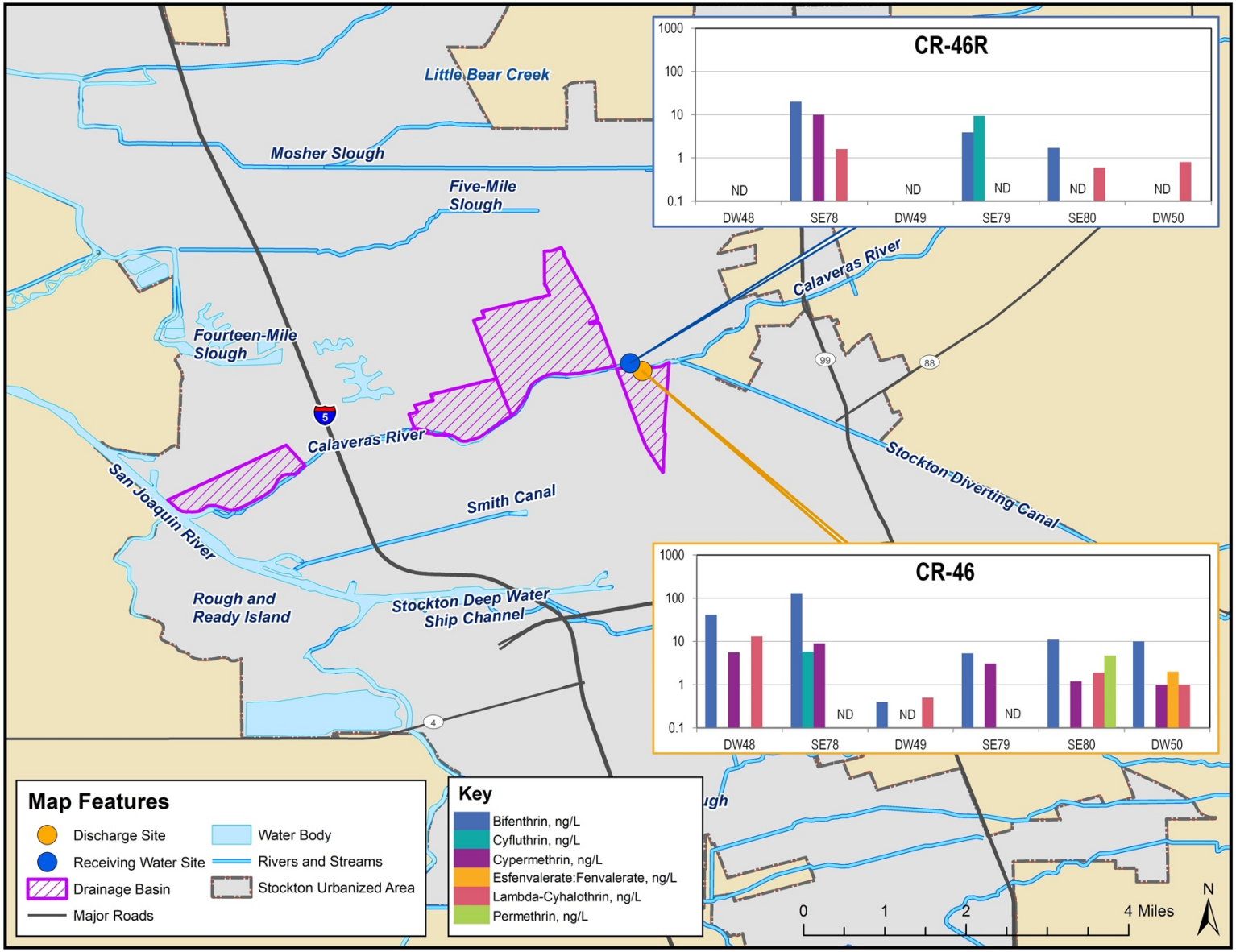

Figure 6. Calaveras River 2021-2022 Pyrethroid Pesticides (ng/L)

4.1.3 Rainwater/Atmospheric Deposition Monitoring

During 2021-2022, rainwater/atmospheric deposition was monitored for methylmercury, total mercury, and pesticides (chlorpyrifos and pyrethroids) at two representative locations in the SUA. The NW rain gage was removed for 2021-2022 monitoring.[17] These two locations are the NE and SC rain gages, shown in **Figure 7**.

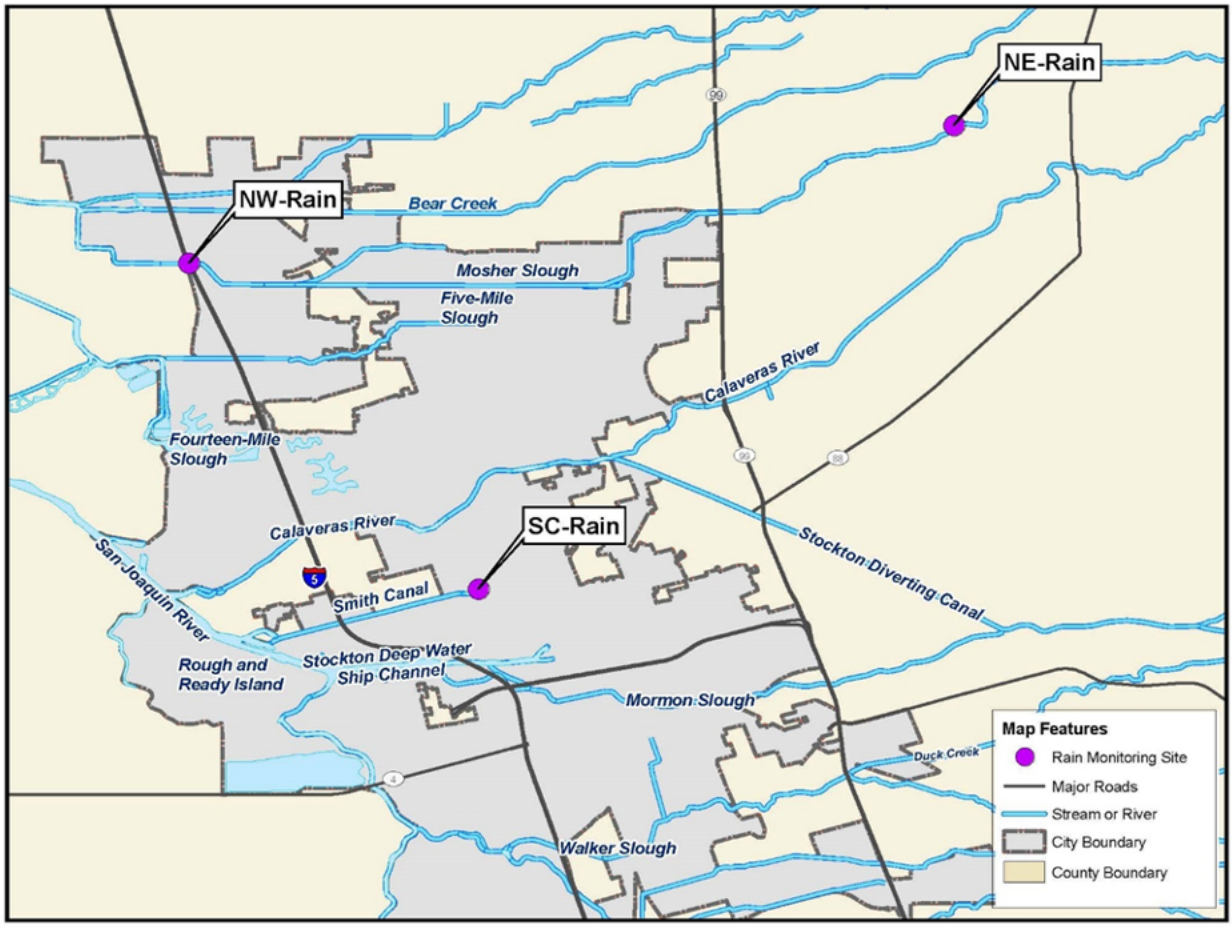

Figure 7. Rainwater/Atmospheric Deposition Monitoring Locations

The monitoring sites include the following:

- NE-Rain – Located along Mosher Slough outside of the SUA, to the northeast. This site has been historically monitored for the Pesticide Plan and is representative of atmospheric deposition generated outside of the SUA.
- SC-Rain – Located at the Legion Park Pump Station, in the center of the SUA. This site is representative of atmospheric deposition generated within the SUA.

[17] See Response to Request to Modify the City of Stockton & County of San Joaquin's Municipal Separate Storm Sewer System Alternative Monitoring Plan, August 6, 2021.

Rainwater was monitored during all three storm events sampled for outfall and receiving water monitoring (SE78, SE79, and SE80). Rainwater monitoring results are shown in **Figure 8**. General observations are summarized below:

- Methylmercury and total mercury:
    - Methylmercury concentrations in rainwater were similar at both locations.
    - Total mercury was detected in rainwater at concentrations well below the WQO of 50 ng/L.
- Pesticides:
    - Pyrethroids were detected at both rainfall sites during all events except for SE79.
    - Bifenthrin was the most frequently detected.
    - Esfenvalerate was never detected in rainfall samples
    - The highest concentrations and greatest number of pyrethroids were detected during the first storm event, SE78. Bifenthrin, cyfluthrin, cypermethrin, lambda-cyhalothrin, and permethrin were all detected at both rain stations during this event.

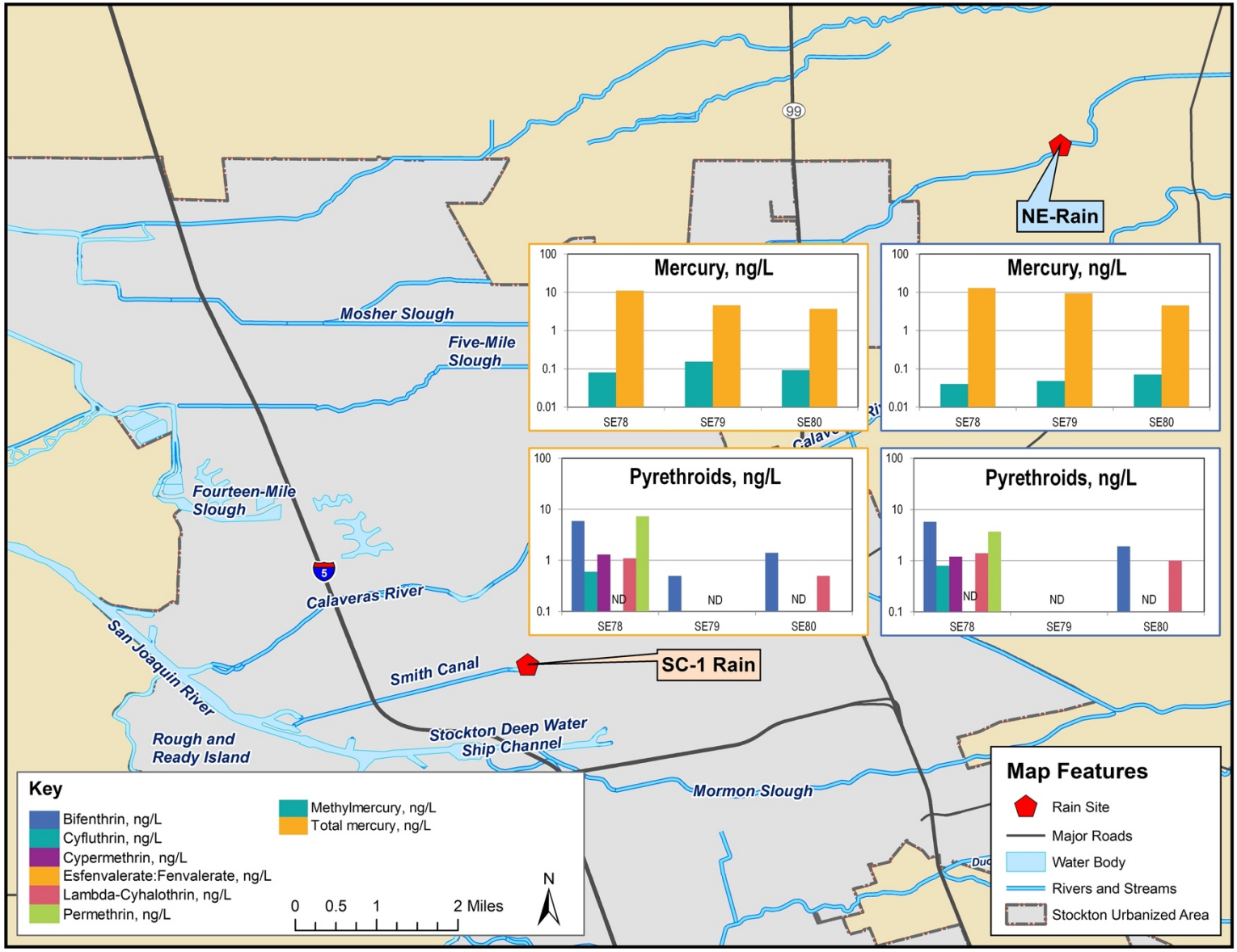

Figure 8. 2021-2022 Rainwater/Atmospheric Deposition Monitoring Results

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4.2 DATA QUALITY EVALUATION

Quality Assurance/Quality Control (QA/QC) refers to the process of reviewing lab and "field" initiated checks on the sampling and analytical process. These checks, which include field blanks, method blanks, field duplicates, lab duplicates, and matrix spike/matrix spike duplicates (MS/MSD), and data review are used to confirm that data are of high quality. Lab reports are initially screened by the field monitoring contractor for missing analytical data (both environmental and QA/QC), holding time exceedances, discrepancies in analytical methods or detection limits, and any apparent out-of-range environmental results. If the analytical work appears to be missing for any requested analyses, the lab is asked to complete the missing analyses, if it is possible to do so within the specified holding time. Periodically, data analyses are requested even if samples exceed the specified hold time. Data qualifiers are appended to the environmental data points, where appropriate, by applying the data quality objectives provided by the laboratories. The QA/QC process allows for the identification of isolated incidents of out-of-range lab and sampling performance, but, more importantly, the process allows for the identification of potential long-term trends in lab and sampling performance. An important and ongoing component of the QA/QC program is to report and correct any identified problems.

Overall, no significant problems with data quality were identified during 2021-2022. Isolated instances of field duplicates not meeting relative percent difference standards (RPD) occurred. Additionally, *E.coli* samples from the March 2022 storm event (SE79) were analyzed outside of the hold time. When conducting such a large monitoring and reporting program, field, lab, and/or analytical issues occasionally arise. In general, the data collected and reported were considered high quality and suitable for data analysis with the qualifications noted in **Appendix B**, *2021-2022 Monitoring Results*. The main qualifiers used are summarized in **Table 14**.

Table 14. Definitions of Commonly Used QA/QC Qualifiers and Instances of Application

Qualifier	Definition of Qualifier	Qualifier Description/ Applicability 2021-2022
FB	The concentration of a given constituent was detected in the field blank. The associated environmental sample taken at the same site is considered an estimate.	One set of field blanks were taken for DOC and TOC during the dry weather event DW48.
FD	The RPD between the concentrations of a given constituent in the field duplicate and the associated environmental sample was outside the acceptable limit. This indicates that the duplicability and precision of the results for this constituent may be low.	One set of field duplicates were collected for DOC and TOC during the storm event SE78, and for mercury, methylmercury, *E. coli*, fecal coliform, during the dry weather event DW48.
J	The concentration of a given constituents is between the MDL and the RL and is, therefore, an estimated value. The J qualifier does not indicate poor data quality because all the RLs used met permit requirements.	The J-flag qualifier is common in all data in the monitoring program and was frequently applied.
ND	A given constituent was not detected and is recorded as < MDL. The ND qualifier does not indicate poor data quality, but rather indicates that a constituent was simply not detected.	The ND qualifier is common in all data in the monitoring program and was frequently applied.

4.3 DELTA REGIONAL MONITORING PROGRAM

The Delta RMP is a stakeholder-directed project formed to develop a regional water quality monitoring program designed to improve understanding of water quality issues in the Sacramento-San Joaquin Delta. The goal of the Delta RMP is to better coordinate and design current and future monitoring activities in and around the Delta to create a cost-effective approach for providing critically needed water quality information to better inform policy and regulatory decisions of the Regional Water Board and other federal, state and local agencies and organizations.[18] The Delta RMP focused the initial monitoring efforts on mercury, pesticides, nutrients, and pathogens. The City and County are contributing members of the Delta RMP, which commenced monitoring in 2015. Delta RMP monitoring and data evaluation efforts during 2021-2022 continued to focus on mercury, pesticides, and nutrients. As the data are collected and results are reported, the City and County will reference this data within the annual reports and future Mid-Term and End-Term Reports, as needed.

4.4 TOTAL MAXIMUM DAILY LOADS

The Region-wide Permit requires the City and County to continue implementation of the stormwater monitoring program, including implementation actions and assessments related to applicable TMDLs. Efforts to fulfill TMDL monitoring requirements (included in Attachment G of

[18] http://www.waterboards.ca.gov/centralvalley/water_issues/delta_water_quality/delta_regional_monitoring/index.shtml

the Region-wide Permit) are summarized in the following sections, along with other relevant water quality control programs.

4.4.1 Sacramento-San Joaquin Delta Diazinon and Chlorpyrifos TMDL (Resolution R5-2006-0061)

The Sacramento San Joaquin Delta Diazinon and Chlorpyrifos TMDL was adopted by the Regional Water Board on June 23, 2006 (Resolution R5-2006-0061) and became effective on October 10, 2007. The TMDL establishes waste load allocations (WLAs) for the sum of diazinon and chlorpyrifos concentrations relative to their respective WQOs. Attachment G of the Region-wide Permit requires that, within one year of the receipt of their NOA under the Region-wide Permit, the City and County must submit an assessment to determine the diazinon and chlorpyrifos levels and attainment of WLAs in urban discharge and WQOs in the receiving water. The City and County performed this assessment during 2016-2017 and submitted the information with the Assessment and Prioritization of Water Quality Constituents in the Stockton Urbanized Area.[19] The assessment indicated that, with the exception of Duck Creek, the targets and allocations for the TMDL are largely being met. In addition, Calaveras River, Mosher Slough, and Smith Canal all met the 303(d) delisting criteria. The Regional Water Board approved the assessment in 2020.[20] Calaveras River, Mosher Slough, and Smith Canal were de-listed for diazinon and chlorpyrifos in the 2020-2022 303(d) list.[21]

The City and County identified pyrethroids as a POC in the AMP and monitored for pyrethroids at Calaveras River during 2020-2021, as described in **Section 4.1**.

4.4.2 Central Valley Pyrethroid Pesticides Basin Plan Amendment and TMDL (Resolution R5-2017-0057)

The Central Valley Pyrethroid Pesticides Basin Plan Amendment (BPA) and TMDL were adopted by the Regional Water Board on June 8, 2017 (Resolution R5-2017-0057). The BPA became effective on February 19, 2019, and the TMDL for the nine urban creeks in Sacramento and Roseville became effective on April 22, 2019. This BPA established pyrethroid concentration goals and an implementation program to control pyrethroids in the Sacramento and San Joaquin River watersheds and establishes TMDLs for waterbodies that are 303(d) listed for pyrethroids.

Accordingly, the Basin Plan requires Baseline Monitoring to be conducted to evaluate pyrethroid concentrations in discharges relative to numeric triggers. The Regional Water Board

[19] City of Stockton and County of San Joaquin. Assessment and Prioritization of Water Quality Constituents in the Stockton Urbanized Area. Prepared by Larry Walker Associates. May 30, 2017.

[20] Central Valley Regional Water Quality Control Board. Sacramento and San Joaquin Delta Diazinon and Chlorpyrifos Total Maximum Daily Load Attainment Assessment, Dated 30 May 2017. 17 April 2020.

[21] https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html

provided guidance for Baseline Monitoring in their July 30, 2019 Letter to MS4 Dischargers[22]. that was further clarified in its July 13, 2020 13267 Order.[23]

The City and County developed their Pyrethroid Baseline Monitoring Plan and Quality Assurance Project Plan (QAPP) during 2020-2021 and received Regional Water Board approval on June 25, 2021.[24] The City and County conducted Baseline Monitoring during 2021-2022 at the Calaveras River for the following constituents:

- Pyrethroids (bifenthrin, cyfluthrin, cypermethrin, esfenvalerate, lambda-cyhalothrin, permethrin)
- Total and dissolved organic carbon
- *Hyalella azteca* water column toxicity
- *Hyalella azteca* sediment toxicity

Separately from Baseline Monitoring, the City and County identified pyrethroids as a POC in the AMP and, during 2020-2021, monitored for pyrethroids at Calaveras River, as described in **Section 4.1.2**.

Baseline Monitoring results revealed an exceedance of a pyrethroid prohibition trigger, identified on October 22, 2021. As required by the 13267 Order, the City and County began working to develop and submit a Pyrethroid Monitoring Plan to the Regional Water Board within one year from the date of the exceedance.

The 13267 Order also specified that the Baseline Monitoring Report be submitted by September 19, 2022 to the Regional Water Board and include: summary of monitoring results for pyrethroids and toxicity (i.e., water and sediment toxicity to the test organism *Hyalella* Azteca) and an assessment of compliance with the conditional prohibition triggers in the Basin Plan. However, the City and County's request to the Regional Board to remove the requirement for continued Baseline Monitoring and development of a Baseline Monitoring Report was approved on June 10, 2022.[25]

4.4.3 Stockton Urban Water Bodies Pathogen TMDL (Resolution No. R5-2009-0030)

The Stockton Urban Waterbodies Pathogen TMDL was adopted by the Regional Water Board on March 14, 2008 (Resolution R5-2008-0030) and became effective on May 13, 2008. The TMDL includes WLAs for fecal coliform and *E. coli*. Attachment G of the Region-wide Permit requires that the City and County continue monitoring and document, in Mid-Term and End-Term

[22] Letter from Regional Water Board to All MS4 Dischargers in the Sacramento and San Joaquin River Basins, Pyrethroid Control Program Baseline Monitoring Requirements for Municipal Stormwater Dischargers in the Sacramento and San Joaquin River Basins, July 30, 2019.

[23] Letter from Regional Water Board to City of Stockton, Order to Submit Technical and Monitoring Reports Pursuant to California Water Code Sections 13267 and 13383, July 13, 2020.

[24] Letter from Regional Water Board to the City of Stockton and County of San Joaquin. Approval of the Pyrethroid Baseline Monitoring Plan for the City of Stockton and County of San Joaquin. 25 June 2021.

[25] Letter from the Regional Water Board to the City of Stockton and Count of San Joaquin. Response to Request to Modify the City of Stockton & County of San Joaquin's Municipal Separate Storm Sewer System Alternative Monitoring Plan (WDID#s: S39M1000205 & 5S39M1000204). 10 June 2022.

Reports, the implementation of BMPs to control the discharge of pathogens (indicator bacteria) in their urban discharge, as well as submit effectiveness assessments of implemented BMPs. These efforts were reported in the *Municipal Stormwater Program 2016-2021 End-Term Report*. During 2021-2022, the City and County monitored for indicator bacteria at Calaveras River, as described in **Section 4.1.2**.

4.4.4 Delta Methylmercury TMDL (Resolution No. R5-2010-0043)

The Sacramento-San Joaquin Delta Methylmercury TMDL was adopted by the Regional Water Board on April 22, 2010 (Resolution R5-2010-0043) and became effective on October 20, 2011. This TMDL for mercury and methylmercury consists of two phases.

- Phase 1 of the TMDL was from October 20, 2011 through October 20, 2020 and focused on control studies and pilot projects to develop and evaluate management practices to control methylmercury.

The City and County conducted a Methylmercury Control Study (Control Study), which evaluated mercury and methylmercury removal performance of a detention basin within the SUA, along with the potential for methylmercury formation within the basin and achievement of the WLAs. The *Methylmercury Control Study Final Report* was submitted to the Regional Water Board on October 19, 2018 and approved by the Regional Water Board on June 19, 2020. The City and County also participated in the Mercury Exposure Reduction Program (MERP). This program is discussed in **Section 4.4.4.1**.

The Regional Water Board is continuing to conduct its review of the TMDL and evaluating the fish tissue objectives, the linkage analysis, and attainability of the allocations and adjusting the objectives, allocations, linkage analysis, and schedule.

- Phase 2 will begin after the Phase 1 review or October 20, 2022, whichever occurs first and will end in 2030. During Phase 2, the City and County will implement methylmercury control programs, continue inorganic (total) mercury reduction programs, and continue to implement the monitoring program.

In addition, Attachment G of the Region-wide Permit requires the submittal of a plan for methylmercury monitoring within one year of the Delta Mercury Control Program review or 20 October 2022, whichever date occurs first for Executive Officer approval.

In June 2015, the City and County submitted an Alternative Monitoring Program (AMP) that directed resources to the most critical water quality issues, including methylmercury. The AMP describes the monitoring locations, timeframes, and constituents. The AMP was approved by the Executive Officer (EO) in November 2015. Since the AMP includes the plan for the continued methylmercury monitoring and was approved by the Regional Water Board EO, the requirement in Attachment G has been met.

4.4.4.1 Delta Mercury Exposure Reduction Program Participation

The Delta Mercury Control Program requires the entities identified in the Basin Plan to develop and implement a MERP. The Delta MERP participants include those entities and agencies that formally submitted a letter describing their intent to participate in the collective exposure

reduction program. The City and County submitted their letter during 2013-2014 and participated in the Delta MERP through its six-year duration that ended during 2019-2020. Activities under the MERP are discussed in previous annual reports and the *Municipal Stormwater Program 2016-2021 End-Term Report*. Although the Delta MERP ended in 2019-2020, the Regional Water Board continues to make limited materials available to past contributors and community groups by request.

4.4.5 Lower San Joaquin River, Stockton Deep Water Ship Channel Organic Enrichment and Low Dissolved Oxygen TMDL (Resolution No. R5-2005-0005)

The Lower San Joaquin River Dissolved Oxygen TMDL was adopted by the Regional Water Board on January 27, 2005 (Resolution R5-2005-0005) and became effective on February 27, 2007. The TMDL requires that responsible parties implement BMPs to control and abate the discharge of oxygen-demanding substances. Attachment G of the Region-wide Permit requires covered City and County to continue implementation of BMPs identified in their SWMP to control oxygen-demanding substances in their stormwater discharges. These implementation efforts were reported in the Municipal Stormwater Program 2016-2021 End-Term as required under the Region-wide Permit. During 2021-2022, the City and County monitored for dissolved oxygen at Calaveras River using grab samples, as described in **Section 4.1.2**.

4.4.6 Trash Implementation

The Statewide Trash Amendments[26] were adopted by the State Water Resources Control Board on April 7, 2015 (Resolution 2015-0019) and became effective on December 2, 2015. The Trash Amendments require MS4 permittees to comply with the prohibition of trash discharge through Track 1 or Track 2.

The Regional Water Board issued a Water Code section 13383 Order on June 1, 2017 requiring the City to submit a letter identifying the selected compliance option (Track 1 or Track 2) by September 1, 2017. The City selected the Track 2 compliance method (full capture system equivalency).

The County's jurisdiction includes both Phase I and Phase II areas. Prior to February 2022[27], the County was subject to two separate stormwater permits: the Region-wide Permit and the Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit[28] (Phase II Permit) issued by the State Water Board. The County received the Water Code section 13383 Order issued by the Regional Board (June 1, 2017), as well as a Water Code section 13383 Order issued by the State Water Board (June 1, 2017). The County responded to both orders by

[26] Proposed Final Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan).

[27] Letter from Regional Water Board to the County of San Joaquin. Amended Notice of Applicability; General Permit for Discharges from Municipal Separate Storm Sewer Systems, Order R5-2016-0040. 11 February 2022. After this date, the County was no longer subject to the Phase II Permit and is solely regulated by the Region-wide Permit for stormwater discharges from its Phase I and Phase II areas.

[28] Order No. 2013-001-DWQ, effective July 1, 2013.

selecting the Track 2 approach to compliance and submitted the preliminary jurisdictional maps required for Phase II areas.

The City and County each submitted Trash Implementation Plans[29,30] to the Regional Water Board on December 1, 2018, that included the following:

a. A description of the combination of controls selected and the rationale for the selection;
b. The rationale for how the combination of controls is designed to achieve Full Capture System Equivalency (FCSE); and
c. The rationale for how FCSE will be demonstrated.

The City and County have completed baseline assessments and are in the process of implementing the trash program within their jurisdictions. Results will be reported in future annual reports and as required by the Region-wide Permit upon reissuance.

[29]City of Stockton, 2018. Statewide Trash Amendments: Track 2 Implementation Plan. December.

[30] County of San Joaquin, 2018. Statewide Trash Amendments: Track 2 Implementation Plan. December.

5. PROGRAM IMPLEMENTATION

Consistent with Attachment H to the Region-wide Permit (*Standard Permit Provisions and General Provisions*),[31] this section provides a summary of the status of the implementation of the stormwater program, focusing on the number and nature of inspections, enforcement actions, and public education programs during 2021-2022.

As described in **Section 2**, the City and County submitted a NOI Work Plan as part of their NOI application package (**Appendix A**, *2016 NOI Work Plan*). During 2021-2022, the City and County implemented the activities outlined in the 2016 NOI Work Plan.

In addition, throughout the reporting period, the City and County tracked the data and information necessary to conduct short-term and long-term program effectiveness assessments. The short-term program effectiveness assessment was included in the *2016-2019 Mid-Term Report*. The long-term program effectiveness assessment was included in the completed as part of the *2016-2021 End-Term Report*. Although information may change slightly from year to year, a summary of the programmatic data and information generally tracked for each stormwater program element is provided in **Table 15**.[32]

Table 15. Data and Information Tracked Annually for Each Program Element

Data/Information Tracked Annually (by Program Element)
Program Management
Fiscal Analysis (i.e., current NPDES expenditures, projected expenditures for the next fiscal year)
Illicit Discharges (ID)
Number of water pollution complaints received/verified and source of complaints
Number of water pollution issues observed/verified by field staff
Number of illegal connections reported/verified/eliminated
Number of illicit discharges reported/verified/investigated/requiring clean-up
Types of materials involved in the verified incidents
Location of illicit discharges (Illicit Discharges Location Map)
Number/types enforcement actions taken for illicit discharges and illegal connections
Training sessions held; pre- and post-training survey results
Public Outreach (PO)
Summary of stream cleanup events, volunteer organizations, and number of volunteers
Amount used oil and household hazardous waste collected

[31] Attachment H includes applicable provisions from 40 CFR §122.41 and 40 CFR §122.42.

[32] On March 19, 2020, the California State Public Health Officer and Director of the California Department of Public Health ordered all individuals living in the State of California to stay home or at their place of residence, except as needed to maintain continuity of operation of the federal critical infrastructure sectors (Executive Order N-33-20). Although this Executive Order was rescinded on June 11, 2021, any specific and/or residual impacts on stormwater program implementation will continue to be tracked.

Data/Information Tracked Annually (by Program Element)
Number hotline calls received/verified
Website updates made
Outreach performed to implement pet waste outreach program
Summary of installation of pet waste bag dispensing stations
Summary of community-wide events
Number/types mixed media campaigns conducted
Community relations provided
Pesticide outreach provided to staff, residents, retail stores, and pest control operators
Summary of events held for school-age children
Municipal Operations (MO)
Summary of sanitary sewer overflows
Information about municipal Capital Improvement Projects (CIPs)/Priority Project status
Number acres treated with fertilizers; amount applied
Number acres treated with pesticides
Number acres under IPM program
Total pesticide use (by active ingredient, when available) at parks/golf courses/medians
Information regarding catch basin prioritization/inspection/cleaning; overall storm drain system maintenance activities
Information regarding pump station inspection/cleaning; overall pump station maintenance activities
Information regarding detention basin inspection/cleaning
Number of catch basins stenciled
Number events required to obtain special use permits and address trash and debris removal
Total street miles swept, amount debris removed, and amount green waste collected
Training sessions held; pre- and post-training survey results
Industrial and Commercial (IC)
Number industrial facilities
Number commercial facilities (significant sources) by category
Self-certifications mailed/received from carpet cleaners
Number/results industrial facility inspections conducted
Number/results commercial facility inspections conducted
Number/results follow-up inspections conducted
Number BMP Fact Sheets distributed during inspections
Number/types enforcement actions taken during inspections/illicit discharge responses
Number/cause of referrals made to Regional Water Board due to illicit discharge violations

Data/Information Tracked Annually (by Program Element)
Training sessions held; pre- and post-training survey results
Construction (CO)
Number grading permits issued; number requiring SWPPPs and NOIs
Number private/public construction sites requiring SWPPP; number of sites completed
Number/type outreach materials distributed during inspections
Number active construction sites; number regular/follow-up inspections conducted
Number/types of enforcement actions taken
Training sessions held; pre- and post-training survey results
Planning and Land Development (LD)
Number project plans reviewed for stormwater BMPs
Number Priority Projects, by category
Total acreage covered by approved Priority Projects
Number/type of approved control measures
Number of inspections of completed priority projects
Number stormwater treatment device access and maintenance agreements executed
Training sessions held; pre- and post-training survey results

5.1 CITY PROGRAM IMPLEMENTATION

5.1.1 Inspections (City)

5.1.1.1 Industrial and Commercial Program Element (IC)

The City prioritizes all industrial facilities, and commercial facilities that may be significant sources of pollutants, as high priority and inspects each facility twice during the five-year permit term.

The inspection results for industrial facilities in 2021-2022 are shown in **Table 16**.

Table 16. Summary of Industrial Inspections (City)

Data/Information Tracked	Total Number
Industrial facilities in current inventory	114
Facilities prioritized as high	114
Facilities inspected during the reporting period	91
Facilities with SWPPPs on site[a]	72
Facilities in compliance with stormwater control requirements[c]	76
Facilities requiring follow-up inspections	1
Facilities in compliance after follow-up inspections	1

[a] The number of facilities with SWPPPs on site is tabulated as the total number of facilities minus the number with "SWPPP not on site" written in the inspector comments.

The inspection results for commercial facilities in 2021-2022 are shown in **Table 17**.

Table 17. Summary of Commercial Inspections (City)

Data/Information Tracked	Total Number
Commercial facilities in current inventory	1,676
Facilities prioritized as high and requiring inspection	1,676
Facilities inspected during the reporting period	373
Facilities adequately implementing BMPs[a]	132
Facilities in general compliance[a]	132
Facilities requiring follow-up inspections[b]	12
Facilities in compliance after follow-up inspections	10

[a] City inspectors use a defined checklist to evaluate the results of commercial facility inspections. Five categories are scored between 0-5, where 0 represents lack of information, 1-2 are passing, and 3-5 represent serious deficiencies. The number of facilities adequately implementing BMPs and in general compliance is tabulated as the number of facilities that pass the inspection, those which have no issues, or those which have an inspection score no greater than 2 for the following four inspection categories: "Facility Structure", "Waste Management", "Fluid Management", and "Illicit Connections". Inspections that receive a score of 3 in any of these four inspection categories are considered to be "out of general compliance". Storm drain-related issues that result in failing scores were not tallied because they are property owner issues (not business-related). A correction order is sent to the property owner for any storm drain-related issues observed during an inspection.

[b] Commercial facilities with multiple or egregious BMP implementation failures are re-inspected. Commercial facilities with minor BMP implementation failures are issued a Notice of Warning and documentation is required to show compliance in lieu of a follow-up inspection. A single enforcement action may be sent to the owner of multiple properties.

5.1.1.2 Construction Program Element (CO)

The City inspects all construction sites greater than or equal to one (1) acre during the wet and dry seasons. The inspection program ensures that the specific minimum requirements are effectively implemented at construction sites.

A summary of the active construction sites and inspections conducted by the City in 2021-2022 is shown in **Table 18**.

Table 18. Summary of Construction Site Inspections (City)

Data/Information Tracked	Total Number
Active construction sites ≥1 acre in size[a]	60
Regular inspections conducted at active construction sites	706
Follow-up inspections conducted due to violations	14
Repeat offenders	2

[a] The number of active construction sites includes sites that were active at any time during the fiscal year.
[b] Follow-up inspections were performed at 14 unique construction sites in 2021-2022.

5.1.1.3 Planning and Land Development Program Element (LD)

The City performs post-construction BMP maintenance oversight to ensure that post-construction BMPs continue to function correctly and minimize water quality impacts.

The number of completed priority projects with post-construction BMPs and the number of inspections conducted in 2021-2022 are shown in **Table 19**.

Table 19. Post-Construction BMP Inspections and Enforcement (City)

Data/Information Tracked	Total Number
Completed priority projects with post-construction BMPs	30
Inspections conducted on priority projects	139

5.1.2 Enforcement (City)

5.1.2.1 Illicit Discharges Program Element (ID)

The Enforcement Control Measure establishes policies and procedures and outlines the progressive levels of enforcement applied to responsible parties not complying with City ordinances. By adopting and implementing a progressive enforcement policy, the City ensures that the program is effectively prohibiting and reducing illicit discharges and illegal connections. The City tracked enforcement actions in the Illicit Discharges Database.

The number and types of enforcement actions taken by the City during 2021-2022 are summarized in **Table 20**. No repeat offenders were identified. Two referrals were made to the Regional Water Board by the City due to compliance issues during 2021-2022.

Table 20. Illicit Discharge Program Enforcement Actions Taken (City)

Type of Enforcement Action	Number of Actions
Administrative	
Verbal Warning	10
Violation Warning Notice	0
Notice of Violation	13
Correction Order	16
Notice to Clean	27
Cease and Desist Order	0
Stop Work Order	0
Administrative Citation (Fine)	0
Criminal Enforcement[a]	
Misdemeanor	0
Infraction	0
Total	**66**

[a] This category presumes that an action turned over to the District Attorney resulted in a criminal prosecution within the year of the incident. However, data for this category can only be updated in subsequent years (i.e., after criminal prosecution has been successful).

5.1.2.2 Industrial and Commercial Program Element (IC)

The Enforcement Control Measure outlines the progressive levels of enforcement applied to industrial and commercial facilities that are out of compliance with local ordinances and establishes the protocol for referring apparent violations of facilities subject to the Industrial General Permit to the Regional Water Board.

The number and types of enforcement actions taken by the City during 2021-2022 are summarized in **Table 21**. One repeat offender was identified, and no referrals were made to the Regional Water Board by the City during 2021-2022.

Table 21. Industrial and Commercial Program Enforcement Actions Taken (City)

Type of Enforcement Action	Number of Actions[a]
Administrative	
Violation Warning Notice	69
Notice of Violation	7
Cease and Desist Order	0
Stop Work Order	0
Administrative Citation (Fine)	0
Criminal Enforcement[b]	
Misdemeanor	0
Infraction	0
Total	**76**

[a] The total number of enforcement actions taken may be smaller than the number of facilities with inadequate BMPs due to enforcement actions that are issued to the owners of multiple properties.

[b] This category presumes that an action turned over to the District Attorney resulted in a criminal prosecution within the year of the incident. However, data for this section can only be updated in subsequent years (i.e., after criminal prosecution has been successful).

5.1.2.3 Construction Program Element (CO)

The Enforcement Control Measure outlines the progressive levels of enforcement applied to construction sites that are out of compliance with local ordinances and establishes the protocol for referring apparent violations of construction sites subject to the General Construction Permit to the Regional Water Board. The progressive enforcement and referral policy, as well as the accompanying legal authority to execute this policy, is an important tool for providing a fair and equitable approach to bringing contractors and developers into compliance with the City's municipal code requirements.

The number and types of enforcement actions taken by the City in 2021-2022 during construction site inspections are summarized in **Table 22**. Two repeat offenders (unique construction sites) were identified, and no referrals were made to the Regional Water Board by the City during 2021-2022.

Table 22. Construction Program Enforcement Actions Taken (City)

Type of Enforcement Action	Number of Actions
Administrative	
Violation Warning Notice	144
Notice of Violation	14
Cease and Desist Order	0
Stop Work Order	0
Administrative Citation (Fine)	0
Criminal Enforcement	
Misdemeanor	0
Infraction	0
Total	**158**

5.1.3 Public Education (City)

5.1.3.1 Public Outreach Program Element (PO)

The City implemented a number of public education and outreach programs during the 2021-2022 reporting period. A summary of these efforts is provided below.

- **Conduct Mixed Media Campaigns:** The City conducted three mixed media campaigns for the general public that reached an estimated total of 75,080 people. These efforts included a video promoting storm drain marker installation that aired regularly on Channel 97 and a cable television channel devoted to the Stockton City government, outfield signage at the Stockton Ports Baseball stadium, and broadcast of a storm drain marker educational video on the City of Stockton YouTube channel.
- **Participate in Community-Wide Events:** The City conducted seven community-wide events with an estimated 13,625 total attendees.
- **Provide Outreach to School-Age Children:** SAWS held 245 events at Stockton area schools, reaching an estimated 8,705 students. The City held an additional four AgVenture and one Tully Knoles events for children which reached 10,470 students. A total of 19,175 students were reached.
- **Distribute Educational Material to Selected Businesses:** The City distributed an estimated 276 BMP Fact Sheets to high priority commercial businesses (82 to automotive-related facilities and 194 to restaurants/food service establishments) and 72 to industrial facilities in 2021-2022.

5.2 COUNTY PROGRAM IMPLEMENTATION

5.2.1 Inspections (County)

5.2.1.1 Industrial and Commercial Program Element (IC)

The County prioritizes all industrial facilities, and commercial facilities that may be significant sources of pollutants, as high priority and inspects each facility twice during the five-year permit term.

The inspection results for industrial facilities in 2021-2022 are shown in **Table 23**.

Table 23. Summary of Industrial Inspections (County)

Data/Information Tracked	Total Number
Industrial facilities in current inventory	44
Facilities prioritized as high	6
Facilities inspected during the reporting period[a]	4
Facilities with SWPPPs on site	4
Facilities in compliance with stormwater control requirements	3
Facilities requiring follow-up inspections	0

[a] The County intends to inspect the 20 Phase II industrial facilities during 2022-2023.

The inspection results for commercial facilities in 2021-2022 are shown in **Table 24**.

Table 24. Summary of Commercial Inspections (County)

Data/Information Tracked	Total Number
Commercial facilities in current inventory	142
Facilities prioritized as high and requiring inspection	142
Facilities inspected during the reporting period	142
Facilities requiring follow-up inspections	12
Facilities in compliance after follow-up inspections	142

In past years, as part of the commercial business inventory and inspection efforts and on behalf of both the City and County, the County has implemented and tracked the Self-Certification program for mobile carpet cleaning businesses. Although not conducted during 2021-2022, the County intends to implement the program in 2022-2023.

5.2.1.2 Construction Program Element (CO)

The County inspects all construction sites greater than or equal to one (1) acre during the wet and dry seasons. The inspection program ensures that the specific minimum requirements are effectively implemented at construction sites.

A summary of the active construction sites and inspections conducted by the County in 2021-2022 is shown in **Table 25**.

Table 25. Summary of Construction Site Inspections (County)

Data/Information Tracked	Total Number
Active construction sites ≥1 acre in size[a]	8
Regular inspections conducted at active construction sites	28
Follow-up inspections conducted due to violations	0
Repeat offenders	0

[a] The number of active construction sites includes sites that were active at any time during the fiscal year.

5.2.1.3 Planning and Land Development Program Element (LD)

The County performs post-construction BMP maintenance oversight to ensure that post-construction BMPs continue to function correctly and minimize water quality impacts. No completed priority projects had post-construction BMPs in 2021-2022, therefore no inspections were conducted.

5.2.2 Enforcement (County)

5.2.2.1 Illicit Discharge Program Element (ID)

The Enforcement Control Measure establishes policies and procedures and outlines the progressive levels of enforcement applied to responsible parties not complying with County ordinances. By adopting and implementing a progressive enforcement policy, the County ensures that the program is effective at reducing illicit discharges and illegal connections. The County tracked enforcement actions in the Illicit Discharges Database.

Only one verified illicit discharge was identified by the County during 2021-2022 and no enforcement actions were taken. No repeat offenders were identified, and two referrals were made to other agencies by the County during 2021-2022.

5.2.2.2 Industrial and Commercial Program Element (IC)

The Enforcement Control Measure outlines the progressive levels of enforcement applied to industrial and commercial facilities that are out of compliance with local ordinances and establishes the protocol for referring apparent violations of facilities subject to the Industrial General Permit to the Regional Water Board.

The number and types of enforcement actions taken by the County in 2021-2022 are summarized in **Table 26.** No repeat offenders were identified, and no referrals were made to the Regional Water Board by the County during 2021-2022.

Table 26. Industrial and Commercial Program Enforcement Actions Taken (County)

Type of Enforcement Action	Number of Actions
Verbal Warnings	12
Administrative Remedies	
Warning or Notice to Clean	0
Notice of Violation	0
Legal Action	
Misdemeanor	0
Infraction	0
Total	**12**

5.2.2.3 Construction Program Element (CO)

The Enforcement Control Measure outlines the progressive levels of enforcement applied to construction sites that are out of compliance with local ordinances and establishes the protocol for referring apparent violations of construction sites subject to the General Construction Permit to the Regional Water Board. The progressive enforcement and referral policy, as well as the accompanying legal authority, is an important tool for ensuring a fair and equitable approach to bringing contractors and developers into compliance with the County Code and ordinance requirements. No enforcement actions were taken by the County in 2021-2022 during construction site inspections.

5.2.3 Public Education (County)

5.2.3.1 Public Outreach Program Element (PO)

The County implemented a number of public education and outreach programs during the 2021-2022 reporting period. A summary of these efforts is provided below.

- **Conduct Mixed Media Campaigns:** The County conducted six mixed media campaigns for the general public. These efforts included radio advertisements in English and Spanish, radio public service announcements, and a video advertisement. An estimated total of 1,333,331 impressions were made through these campaigns.
- **Participate in Community-Wide Events:** The County was not able to conduct community-wide events in 2021-2022 due to staffing shortages.
- **Provide Outreach to School-Age Children:** SAWS held six events at schools, reaching an estimated 185 students.
- **Distribute Educational Material to Selected Businesses:** The County distributed 141 BMP Fact Sheets to high-priority commercial businesses in 2021-2022 (77 to automotive-related facilities and 64 to restaurants/food service establishments).

6. PROPOSED SWMP MODIFICATIONS

The 2021-2022 Annual Report has been developed during the period when the RAA remains under review by the Regional Water Board and the revised SWMP is in progress. As a part of the SWMP development process, the City and the County will qualitatively evaluate the effectiveness of the stormwater program over time, as well as the experience that staff has had in implementing the program, to identify potential modifications. No specific modifications are identified within the 2021-2022 Annual Report.

APPENDIX

Appendices for the Municipal Stormwater Program 2021-2022 Annual Report

Appendix A: NOI Work Plan as Submitted November 1, 2016

Appendix B: 2021-2022 Monitoring Results

Appendix C: 2021-2022 Data Summary Tables

APPENDIX A

NOI Work Plan as Submitted November 1, 2016

City of Stockton and County of San Joaquin SWMP Annual Work Plan

ID	Task Name	Q3	Q4	Q1	Q2
1	**Section 1 - Program Management**				
2	**Program Coordination**				
3	Review/revise SWMP as needed				
4	Co-permittees meet quarterly				
5	Participate in internal quarterly Stormwater Program Meetings				
6	Participate in statewide stormwater-related meetings, conferences, and stakeholder groups as needed				
7	Review/revise MOUs as necessary				
8	Establish, review, and revise cooperative agreements as needed				
9	**Fiscal Analysis**				
10	Review and revise the Fiscal Analysis reporting format as needed				
11	**Legal Authority**				
12	Review the legal authority as needed				

ID	Task Name	Q3	Q4	Q1	Q2
13	**Section 2 - Illicit Discharges Program Element (ID)**				
14	**ID1 - Detection of Illicit Discharges and Illegal Connections**				
15	Public Reporting				
16	Maintain and advertise Hotline				
17	Coordinate with other agencies and departments				
18	Field Crew Inspections				
19	Continue field observations for IDIC				
20	**ID2 - Illegal Connection Identification and Elimination**				
21	Investigate and eliminate illegal connections				
22	Coordinate with Planning and Land Development program				
23	Coordinate with Construction program				
24	**ID3 - Investigation/Inspection and Follow Up**				
25	Respond to illicit discharges				
26	Maintain contractual services for incident clean-up				
27	Maintain Illicit Discharges Database				
28	**ID4 - Enforcement**				
29	Implement progressive enforcement policy and procedures				
30	Track enforcement actions in Illicit Discharges Database				
31	**ID5 - Training**				
32	Conduct training				

ID	Task Name	Q3	Q4	Q1	Q2
33	**Section 3 - Public Outreach (PO)**				
34	**PO1 - Public Participation**				
35	Implement Storm Drain Marker Program				
36	Organize, support, and/or participate in stream cleanup events				
37	Promote Used Oil and Household Hazardous Waste Programs				
38	Coordinate with Household Hazardous Waste program for pesticide disposal				
39	**PO2 - Hotline**				
40	Maintain 24-hr hotline number				
41	Promote/publicize the 24-hr hotline				
42	**PO3 - Public Outreach Implementation**				
43	Update Website as needed				
44	Implement pet waste outreach program				
45	Track installation of pet waste bag dispensing stations				
46	Participate in community-wide events throughout the year				
47	Conduct mixed media campaigns				
48	Provide community relations				
49	Implement pesticide outreach efforts for staff, residents, retail stores, and PCOs				
50	**PO4 - Public School Education**				
51	Continue to identify opportunities to reach out to school age children				

ID	Task Name	Q3	Q4	Q1	Q2
52	**Section 4 - Municipal Operations (MO)**				
53	**MO1 - Sanitary Sewer Maintenance & Overflow and Spill Response**				
54	Implement the Sanitary Sewer Overflow Emergency Response Plan (SSOERP)				
55	Review the SSOERP and revise as changes occur				
56	**MO2 - Construction Requirements for Municipal Capital Improvement Projects**				
57	Review CIP designs to ensure specifications and notes are included				
58	Require submission of NOI for CIPs greater than or equal to one acre				
59	If a priority project, develop in conformance with the SWQCCP				
60	Improve interdepartamental communication to facilitate accurate recordkeeping and reporting of data				
61	**MO3 - Pollution Prevention at City Facilities**				
62	Assess facilities to determine if they require coverage under the General Industrial Permit				
63	Implement SWPPP/FPPP for Corporation Yard and other facilities as needed				
64	Review CIP projects for compliance with general stormwater requirements, including review for vehicle or equipment wash areas				
65	**MO4 - Landscape and Pest Management**				
66	Implement pesticide and fertilizer application protocol at park sites, landscaped medians, and golf courses				
67	Implement IPM program				
68	Maintain and expand internal inventory on pesticide use and track Parks Division reported pesticide use				
69	Implement Landscaping Standards				
70	**MO5 - Storm Drain System Maintenance**				
71	Implement storm drain system mapping				
72	Review/revise prioritization for catch basin cleaning as needed				
73	Maintain and annually update Catch Basin Database				
74	Implement catch basin maintenance program				
75	Implement pump station maintenance program				
76	Implement detention basin maintenance program				
77	Implement notification procedures for ID/IC and missing catch basin markers or illegible stencils				
78	Require large events and venues to address trash and debris removal, including containerization and street sweeping as appropriate				

ID	Task Name	Q3	Q4	Q1	Q2
79	**MO6 - Street Cleaning and Maintenance**				
80	Implement street sweeping program				
81	Review/revise prioritization of streets for street sweeping program as needed				
82	Implement green waste collection program				
83	Implement Maintenance Staff Guide -- Road Maintenance and Small Construction BMPs				
84	**MO7 - Training**				
85	Conduct training				
86	**Section 5 - Industrial and Commercial Program Element (IC)**				
87	**IC1 - Facility Inventory**				
88	Internal audit of database				
89	Maintain and annually update the inventory and database				
90	Map the industrial and commercial facilities on an annual basis				
91	Implement and track a self-certification program for carpet cleaners				
92	**IC2 - Prioritization and Inspection**				
93	Prioritization				
94	Prioritize facilities as necessary				
95	Inspections				
96	Review/revise industrial inspection checklists as needed				
97	Conduct inspections				
98	Conduct follow-up inspections as needed				
99	**IC3 - BMP Implementation**				
100	Review/revise BMP fact sheets for high priority facilities as needed				
101	Distribute BMP Fact Sheets				
102	Implement outreach efforts to carpet cleaners				
103	**IC4 - Enforcement**				
104	Implement progressive enforcement and referral policy and procedures				
105	Track enforcement actions in the industrial/commercial database				
106	Implement procedures for Regional Water Board based complaints				
107	Review and Revise Industrial General Permit referral policy as needed				
108	**IC5 - Training**				
109	Conduct training				

ID	Task Name	Q3	Q4	Q1	Q2
110	**Section 6 - Construction (CO)**				
111	**CO1 - Municipal Code for Construction Sites**				
112	**CO2 - Plan Review and Approval Process**				
113	Review grading and building permit applications for SWPPP requirements				
	Review erosion control plans				
114	Distribute the Plan & Permit Application Review Procedure handout				
115	**CO3 - Construction Projects Inventory**				
116	Maintain and update the Construction Project Database				
117	**CO4 - Construction Outreach**				
118	Distribute appropriate BMP fact sheets during inspections				
119	**CO5 - Construction Site Inspections & BMP Implementation**				
120	Inspect construction sites >=1 acre monthly				
121	**CO6 - Enforcement**				
122	Implement progressive enforcement policy				
123	Track enforcement actions using the construction database				
124	**CO7 - Training**				
125	Conduct training				

ID	Task Name	Q3	Q4	Q1	Q2
126	**Section 7 - Planning and Land Development (LD)**				
127	**LD1 - Incorporation of Water Quality Protection Principles into City Procedures and Policies**				
128	Revise General Plan as needed				
129	**LD2 - New Development Standards**				
130	Require priority projects to comply with the revised SWQCCP				
131	**LD3 - Plan Review Sign-off**				
132	Revise Post-Construction Plan Review Database as needed				
133	Use Post-Construction Plan Review Database				
134	Review project plans and grading plans for stormwater BMPs				
135	Track projects with post-construction treatment control BMPs				
136	Conduct inspections of completed priority projects to ensure that all approved control measures have been implemented and are being maintained				
137	**LD4 - Maintenance Agreement and Transfer**				
138	Require Stormwater Treatment Device Access and Maintenance Agreement				
139	Implement Post-Construction BMP Maintenance Oversight Protocols				
140	**LD5 - Training**				
141	Conduct training				
142	**Section 8 - Monitoring and Reporting Program**				
143	**Water Quality Monitoring (waterbody varies annually)**				
144	Water quality parameters as needed				
145	Sediment toxicity and sediment chemistry as needed				
146	Water column toxicity as needed				
147	**Delta Regional Monitoring Program**				
148	**Section 9 - Program Implementation, Evaluation, and Reporting**				
149	**Program Implementation**				
150	Update Work Plan as needed				
151	**Annual Report**				

APPENDIX B

2021-2022 Monitoring Results

City of Stockton and County of San Joaquin
Ambient Monitoring Program 2021-2022 Data

Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
DW48	CR-39	8/30/2021	E. Coli	SM 9223 B-04	=	146	10	10	MPN/100mL	Caltest	8/30/21	8/31/21
SE78	CR-39	10/22/2021	E. Coli	SM 9223 B-04	=	529	10	10	MPN/100mL	Caltest	10/22/21	10/23/21
DW49	CR-39	2/10/2022	E. Coli	SM 9223 B-04	<	ND		10	MPN/100mL	Caltest	2/10/22	2/11/22
SE79	CR-39	3/28/2022	E. Coli	SM 9223 B-04	=	63	1	1	MPN/100mL	Caltest	3/28/22	3/29/22
SE80	CR-39	4/22/2022	E. Coli	SM 9223 B-04	=	613	10	10	MPN/100mL	Caltest	4/22/22	4/23/22
DW50	CR-39	5/11/2022	E. Coli	SM 9223 B	=	20	10	10	MPN/100mL	Caltest	5/11/22	5/11/22
SW51	CR-39	6/15/2022	E. Coli	SM 9223 B-04	=	10	10	10	MPN/100mL	Caltest	6/15/22	6/16/22
DW48	CR-39R	8/30/2021	E. Coli	SM 9223 B-04	=	10	10	10	MPN/100mL	Caltest	8/30/21	8/31/21
SE78	CR-39R	10/22/2021	E. Coli	SM 9223 B-04	=	211	10	10	MPN/100mL	Caltest	10/22/21	10/23/21
DW49	CR-39R	2/10/2022	E. Coli	SM 9223 B-04	=	62		10	MPN/100mL	Caltest	2/10/22	2/11/22
SE79	CR-39R	3/28/2022	E. Coli	SM 9223 B-04	=	146	1	1	MPN/100mL	Caltest	3/28/22	3/29/22
SE80	CR-39R	4/22/2022	E. Coli	SM 9223 B-04	=	20	10	10	MPN/100mL	Caltest	4/22/22	4/23/22
DW50	CR-39R	5/11/2022	E. Coli	SM 9223 B	<	ND	10	10	MPN/100mL	Caltest	5/11/22	5/11/22
SW51	CR-39R	6/15/2022	E. Coli	SM 9223 B-04	=	20	10	10	MPN/100mL	Caltest	6/15/22	6/16/22
DW48	CR-41	8/30/2021	E. Coli	SM 9223 B-04	=	2909	10	10	MPN/100mL	Caltest	8/30/21	8/31/21
SE78	CR-41	10/22/2021	E. Coli	SM 9223 B-04	>	24196	10	10	MPN/100mL	Caltest	10/22/21	10/23/21
DW49	CR-41	2/10/2022	E. Coli	SM 9223 B-04	=	2613		10	MPN/100mL	Caltest	2/10/22	2/11/22
SE79	CR-41	3/28/2022	E. Coli	SM 9223 B-04	=	4884	1	1	MPN/100mL	Caltest	3/28/22	3/29/22
DW50	CR-41	5/11/2022	E. Coli	SM 9223 B	=	988	10	10	MPN/100mL	Caltest	5/11/22	5/11/22
SW51	CR-41	6/15/2022	E. Coli	SM 9223 B-04	=	504	10	10	MPN/100mL	Caltest	6/15/22	6/16/22
DW48	CR-42	8/30/2021	E. Coli	SM 9223 B-04	=	7700	10	10	MPN/100mL	Caltest	8/30/21	8/31/21
SE78	CR-42	10/22/2021	E. Coli	SM 9223 B-04	>	24196	10	10	MPN/100mL	Caltest	10/22/21	10/23/21
DW49	CR-42	2/10/2022	E. Coli	SM 9223 B-04	=	24196		10	MPN/100mL	Caltest	2/10/22	2/11/22
SE79	CR-42	3/28/2022	E. Coli	SM 9223 B-04	=	4884	1	1	MPN/100mL	Caltest	3/28/22	3/29/22
SE80	CR-42	4/22/2022	E. Coli	SM 9223 B-04	=	617	10	10	MPN/100mL	Caltest	4/22/22	4/23/22
DW50	CR-42	5/11/2022	E. Coli	SM 9223 B	=	809	10	10	MPN/100mL	Caltest	5/11/22	5/11/22
SW51	CR-42	6/15/2022	E. Coli	SM 9223 B-04	=	9208	10	10	MPN/100mL	Caltest	6/15/22	6/16/22
DW48	CR-46	8/30/2021	E. Coli	SM 9223 B-04	>	24196	10	10	MPN/100mL	Caltest	8/30/21	8/31/21
SE78	CR-46	10/22/2021	E. Coli	SM 9223 B-04	=	12990	10	10	MPN/100mL	Caltest	10/22/21	10/23/21
DW49	CR-46	2/10/2022	E. Coli	SM 9223 B-04	=	789		10	MPN/100mL	Caltest	2/10/22	2/11/22
SE79	CR-46	3/28/2022	E. Coli	SM 9223 B-04	=	8164	1	1	MPN/100mL	Caltest	3/28/22	3/29/22
SE80	CR-46	4/22/2022	E. Coli	SM 9223 B-04	=	3436	10	10	MPN/100mL	Caltest	4/22/22	4/23/22

City of Stockton and County of San Joaquin
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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
DW50	CR-46	5/11/2022	E. Coli	SM 9223 B	>	24196	10	10	MPN/100mL	Caltest	5/11/22	5/11/22
SW51	CR-46	6/15/2022	E. Coli	SM 9223 B-04	=	19863	10	10	MPN/100mL	Caltest	6/15/22	6/16/22
DW48	CR-46R	8/30/2021	E. Coli	SM 9223 B-04	=	109	10	10	MPN/100mL	Caltest	8/30/21	8/31/21
SE78	CR-46R	10/22/2021	E. Coli	SM 9223 B-04	=	15530	10	10	MPN/100mL	Caltest	10/22/21	10/23/21
DW49	CR-46R	2/10/2022	E. Coli	SM 9223 B-04	=	10		10	MPN/100mL	Caltest	2/10/22	2/11/22
SE79	CR-46R	3/28/2022	E. Coli	SM 9223 B-04	=	11199	1	1	MPN/100mL	Caltest	3/28/22	3/29/22
SE80	CR-46R	4/22/2022	E. Coli	SM 9223 B-04	=	2481	10	10	MPN/100mL	Caltest	4/22/22	4/23/22
DW50	CR-46R	5/11/2022	E. Coli	SM 9223 B	=	169	10	10	MPN/100mL	Caltest	5/11/22	5/11/22
SW51	CR-46R	6/15/2022	E. Coli	SM 9223 B-04	=	708	10	10	MPN/100mL	Caltest	6/15/22	6/16/22
DW48	CR-39	8/30/2021	Fecal Coliform	SM 9221 B/E-06	=	540	1.8	1.8	MPN/100mL	Caltest	8/30/21	9/2/21
SE78	CR-39	10/22/2021	Fecal Coliform	SM 9221 B/E-06	=	2400	1.8	1.8	MPN/100mL	Caltest	10/22/21	10/24/21
DW49	CR-39	2/10/2022	Fecal Coliform	SM 9221 B/E-06	=	6		1.8	MPN/100mL	Caltest	2/10/22	2/13/22
SE79	CR-39	3/28/2022	Fecal Coliform	SM 9221 B/E-06	HT	240	1.8	1.8	MPN/100mL	Caltest	3/28/22	3/31/22
SE80	CR-39	4/22/2022	Fecal Coliform	SM 9221 B/E-06	=	700	1.8	1.8	MPN/100mL	Caltest	4/22/22	4/25/22
DW50	CR-39	5/11/2022	Fecal Coliform	SM 9221 E	=	79	1.8	1.8	MPN/100mL	Caltest	5/11/22	5/11/22
SW51	CR-39	6/15/2022	Fecal Coliform	SM 9221 B/E-06	=	7.8	1.8	1.8	MPN/100mL	Caltest	6/15/22	6/18/22
DW48	CR-39R	8/30/2021	Fecal Coliform	SM 9221 B/E-06	=	23	1.8	1.8	MPN/100mL	Caltest	8/30/21	9/2/21
SE78	CR-39R	10/22/2021	Fecal Coliform	SM 9221 B/E-06	=	1100	1.8	1.8	MPN/100mL	Caltest	10/22/21	10/24/21
DW49	CR-39R	2/10/2022	Fecal Coliform	SM 9221 B/E-06	=	33		1.8	MPN/100mL	Caltest	2/10/22	2/13/22
SE79	CR-39R	3/28/2022	Fecal Coliform	SM 9221 B/E-06	>	23	1.1	1.1	MPN/100mL	Caltest	3/28/22	3/31/22
SE80	CR-39R	4/22/2022	Fecal Coliform	SM 9221 B/E-06	=	79	1.8	1.8	MPN/100mL	Caltest	4/22/22	4/25/22
DW50	CR-39R	5/11/2022	Fecal Coliform	SM 9221 E	=	13	1.8	1.8	MPN/100mL	Caltest	5/11/22	5/11/22
SW51	CR-39R	6/15/2022	Fecal Coliform	SM 9221 B/E-06	=	23	1.8	1.8	MPN/100mL	Caltest	6/15/22	6/18/22
DW48	CR-41	8/30/2021	Fecal Coliform	SM 9221 B/E-06	=	3500	1.8	1.8	MPN/100mL	Caltest	8/30/21	9/2/21
SE78	CR-41	10/22/2021	Fecal Coliform	SM 9221 B/E-06	>	160000	1.8	1.8	MPN/100mL	Caltest	10/22/21	10/24/21
DW49	CR-41	2/10/2022	Fecal Coliform	SM 9221 B/E-06	=	1600		1.8	MPN/100mL	Caltest	2/10/22	2/13/22
SE79	CR-41	3/28/2022	Fecal Coliform	SM 9221 B/E-06	HT	1600	1.8	1.8	MPN/100mL	Caltest	3/28/22	3/31/22
DW50	CR-41	5/11/2022	Fecal Coliform	SM 9221 E	=	1600	1.8	1.8	MPN/100mL	Caltest	5/11/22	5/11/22
SW51	CR-41	6/15/2022	Fecal Coliform	SM 9221 B/E-06	=	9400	1.8	1.8	MPN/100mL	Caltest	6/15/22	6/18/22
DW48	CR-42	8/30/2021	Fecal Coliform	SM 9221 B/E-06	>	160000	1.8	1.8	MPN/100mL	Caltest	8/30/21	9/1/21
SE78	CR-42	10/22/2021	Fecal Coliform	SM 9221 B/E-06	>	160000	1.8	1.8	MPN/100mL	Caltest	10/22/21	10/24/21
DW49	CR-42	2/10/2022	Fecal Coliform	SM 9221 B/E-06	=	1600		1.8	MPN/100mL	Caltest	2/10/22	2/12/22

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE79	CR-42	3/28/2022	Fecal Coliform	SM 9221 B/E-06	=	14000	1.8	1.8	MPN/100mL	Caltest	3/28/22	3/30/22
SE80	CR-42	4/22/2022	Fecal Coliform	SM 9221 B/E-06	=	3500	1.8	1.8	MPN/100mL	Caltest	4/22/22	4/25/22
DW50	CR-42	5/11/2022	Fecal Coliform	SM 9221 E	>	16000	1.8	1.8	MPN/100mL	Caltest	5/11/22	5/11/22
SW51	CR-42	6/15/2022	Fecal Coliform	SM 9221 B/E-06	>	160000	1.8	1.8	MPN/100mL	Caltest	6/15/22	6/18/22
DW48	CR-46	8/30/2021	Fecal Coliform	SM 9221 B/E-06	=	35000	1.8	1.8	MPN/100mL	Caltest	8/30/21	9/2/21
SE78	CR-46	10/22/2021	Fecal Coliform	SM 9221 B/E-06	=	54000	1.8	1.8	MPN/100mL	Caltest	10/22/21	10/24/21
DW49	CR-46	2/10/2022	Fecal Coliform	SM 9221 B/E-06	=	350	1.8	1.8	MPN/100mL	Caltest	2/10/22	2/13/22
SE79	CR-46	3/28/2022	Fecal Coliform	SM 9221 B/E-06	=	17000	1.8	1.8	MPN/100mL	Caltest	3/28/22	3/30/22
SE80	CR-46	4/22/2022	Fecal Coliform	SM 9221 B/E-06	=	17000	1.8	1.8	MPN/100mL	Caltest	4/22/22	4/25/22
DW50	CR-46	5/11/2022	Fecal Coliform	SM 9221 E	=	5400	1.8	1.8	MPN/100mL	Caltest	5/11/22	5/11/22
SW51	CR-46	6/15/2022	Fecal Coliform	SM 9221 B/E-06	>	160000	1.8	1.8	MPN/100mL	Caltest	6/15/22	6/17/22
DW48	CR-46R	8/30/2021	Fecal Coliform	SM 9221 B/E-06	=	240	1.8	1.8	MPN/100mL	Caltest	8/30/21	9/2/21
SE78	CR-46R	10/22/2021	Fecal Coliform	SM 9221 B/E-06	=	92000	1.8	1.8	MPN/100mL	Caltest	10/22/21	10/24/21
DW49	CR-46R	2/10/2022	Fecal Coliform	SM 9221 B/E-06	=	4		1.8	MPN/100mL	Caltest	2/10/22	2/13/22
SE79	CR-46R	3/28/2022	Fecal Coliform	SM 9221 B/E-06	=	28000	1.8	1.8	MPN/100mL	Caltest	3/28/22	3/30/22
SE80	CR-46R	4/22/2022	Fecal Coliform	SM 9221 B/E-06	=	1700	1.8	1.8	MPN/100mL	Caltest	4/22/22	4/25/22
DW50	CR-46R	5/11/2022	Fecal Coliform	SM 9221 E	=	1600	1.8	1.8	MPN/100mL	Caltest	5/11/22	5/11/22
SW51	CR-46R	6/15/2022	Fecal Coliform	SM 9221 B/E-06	=	2800	1.8	1.8	MPN/100mL	Caltest	6/15/22	6/18/22
DW48	CR-39	8/30/2021	Dissolved Oxygen	Field	=	3.71			mg/L	Field Log		
SE78	CR-39	10/22/2021	Dissolved Oxygen	Field	=	5.1			mg/L	Field Log		
DW49	CR-39	2/10/2022	Dissolved Oxygen	Field	=	8.3			mg/L	Field Log		
SE79	CR-39	3/28/2022	Dissolved Oxygen	Field	=	8.3			mg/L	Field Log		
SE80	CR-39	4/22/2022	Dissolved Oxygen	Field	=	7.8			mg/L	Field Log		
DW50	CR-39	5/11/2022	Dissolved Oxygen	Field	=	7.05			mg/L	Field Log		
DW51	CR-39	6/15/2022	Dissolved Oxygen	Field	=	5.1			mg/L	Field Log		
DW48	CR-39R	8/30/2021	Dissolved Oxygen	Field	=	5.94			mg/L	Field Log		
SE78	CR-39R	10/22/2021	Dissolved Oxygen	Field	=	8.5			mg/L	Field Log		
DW49	CR-39R	2/10/2022	Dissolved Oxygen	Field	=	11.6			mg/L	Field Log		
SE79	CR-39R	3/28/2022	Dissolved Oxygen	Field	=	9.9			mg/L	Field Log		
SE80	CR-39R	4/22/2022	Dissolved Oxygen	Field	=	10.2			mg/L	Field Log		
DW50	CR-39R	5/11/2022	Dissolved Oxygen	Field	=	16.12			mg/L	Field Log		
DW51	CR-39R	6/15/2022	Dissolved Oxygen	Field	=	5.7			mg/L	Field Log		

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
DW48	CR-41	8/30/2021	Dissolved Oxygen	Field	=	8.74			mg/L	Field Log		
SE78	CR-41	10/22/2021	Dissolved Oxygen	Field	=	2.5			mg/L	Field Log		
DW49	CR-41	2/10/2022	Dissolved Oxygen	Field	=	8.6			mg/L	Field Log		
SE79	CR-41	3/28/2022	Dissolved Oxygen	Field	=	8.09			mg/L	Field Log		
DW50	CR-41	5/11/2022	Dissolved Oxygen	Field	=	8.11			mg/L	Field Log		
DW51	CR-41	6/15/2022	Dissolved Oxygen	Field	=	6.8			mg/L	Field Log		
DW48	CR-42	8/30/2021	Dissolved Oxygen	Field	=	7.13			mg/L	Field Log		
SE78	CR-42	10/22/2021	Dissolved Oxygen	Field	=	5.4			mg/L	Field Log		
DW49	CR-42	2/10/2022	Dissolved Oxygen	Field	=	4.2			mg/L	Field Log		
SE79	CR-42	3/28/2022	Dissolved Oxygen	Field	=	8.2			mg/L	Field Log		
SE80	CR-42	4/22/2022	Dissolved Oxygen	Field	=	5.86			mg/L	Field Log		
DW50	CR-42	5/11/2022	Dissolved Oxygen	Field	=	5.44			mg/L	Field Log		
DW51	CR-42	6/15/2022	Dissolved Oxygen	Field	=	1.1			mg/L	Field Log		
DW48	CR-46	8/30/2021	Dissolved Oxygen	Field	=	1.83			mg/L	Field Log		
SE78	CR-46	10/22/2021	Dissolved Oxygen	Field	=	8.4			mg/L	Field Log		
DW49	CR-46	2/10/2022	Dissolved Oxygen	Field	=	2			mg/L	Field Log		
SE79	CR-46	3/28/2022	Dissolved Oxygen	Field	=	9.12			mg/L	Field Log		
SE80	CR-46	4/22/2022	Dissolved Oxygen	Field	=	6.1			mg/L	Field Log		
DW50	CR-46	5/11/2022	Dissolved Oxygen	Field	=	4.5			mg/L	Field Log		
DW51	CR-46	6/15/2022	Dissolved Oxygen	Field	=	1.22			mg/L	Field Log		
DW48	CR-46R	8/30/2021	Dissolved Oxygen	Field	=	5.4			mg/L	Field Log		
SE78	CR-46R	10/22/2021	Dissolved Oxygen	Field	=	7.3			mg/L	Field Log		
DW49	CR-46R	2/10/2022	Dissolved Oxygen	Field	=	13.8			mg/L	Field Log		
SE79	CR-46R	3/28/2022	Dissolved Oxygen	Field	=	8.2			mg/L	Field Log		
SE80	CR-46R	4/22/2022	Dissolved Oxygen	Field	=	9.21			mg/L	Field Log		
DW50	CR-46R	5/11/2022	Dissolved Oxygen	Field	=	10.43			mg/L	Field Log		
DW51	CR-46R	6/15/2022	Dissolved Oxygen	Field	=	7.6			mg/L	Field Log		
SE80	NE-RAIN	4/22/2022	Dissolved Oxygen	Field	=	11.1			mg/L	Field Log		
SE80	SC-RAIN	4/22/2022	Dissolved Oxygen	Field	=	8			mg/L	Field Log		
SW51	CR-46	6/15/2022	Oil & Grease	EPA 1664A	<	ND	1.4	5	mg/L	Caltest		6/23/22
SW51	CR-46R	6/15/2022	Oil & Grease	EPA 1664A	<	ND	1.4	5	mg/L	Caltest		6/23/22
DW48	CR-46	8/30/2021	Oil and Grease	EPA 1664A	=	51	1.4	5	mg/L	Caltest		9/9/21

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE78	CR-46	10/22/2021	Oil and Grease	EPA 1664A	J	1.5	1.4	5	mg/L	Caltest		11/3/21
DW49	CR-46	2/10/2022	Oil and Grease	EPA 1664A	<	ND	1.4	5	mg/L	Caltest		2/23/22
SE79	CR-46	3/28/2022	Oil and Grease	EPA 1664A	<	ND	1.4	5	mg/L	Caltest		4/8/22
SE80	CR-46	4/22/2022	Oil and Grease	EPA 1664A	<	ND	1.4	5	mg/L	Caltest		4/28/22
DW50	CR-46	5/11/2022	Oil and Grease	EPA 1664A	<	ND	1.4	5	mg/L	Caltest	5/11/22	5/17/22
DW48	CR-46R	8/30/2021	Oil and Grease	EPA 1664A	<	ND	1.4	5	mg/L	Caltest		9/9/21
SE78	CR-46R	10/22/2021	Oil and Grease	EPA 1664A	J	1.8	1.4	5	mg/L	Caltest		11/3/21
DW49	CR-46R	2/10/2022	Oil and Grease	EPA 1664A	<	ND		5	mg/L	Caltest		2/23/22
SE79	CR-46R	3/28/2022	Oil and Grease	EPA 1664A	<	ND	1.4	5	mg/L	Caltest		4/8/22
SE80	CR-46R	4/22/2022	Oil and Grease	EPA 1664A	<	ND	1.4	5	mg/L	Caltest		4/28/22
DW50	CR-46R	5/11/2022	Oil and Grease	EPA 1664A	<	ND	1.4	5	mg/L	Caltest	5/11/22	5/17/22
DW48	CR-39	8/30/2021	pH	Field	=	7.7			SU	Field Log		
SE78	CR-39	10/22/2021	pH	Field	=	8.29			SU	Field Log		
DW49	CR-39	2/10/2022	pH	Field	=	7.51			SU	Field Log		
SE79	CR-39	3/28/2022	pH	Field	=	7.59			SU	Field Log		
SE80	CR-39	4/22/2022	pH	Field	=	7.39			SU	Field Log		
DW50	CR-39	5/11/2022	pH	Field	=	7.38			SU	Field Log		
DW51	CR-39	6/15/2022	pH	Field	=	7.35			SU	Field Log		
DW48	CR-39R	8/30/2021	pH	Field	=	7.83			SU	Field Log		
SE78	CR-39R	10/22/2021	pH	Field	=	8.12			SU	Field Log		
DW49	CR-39R	2/10/2022	pH	Field	=	7.65			SU	Field Log		
SE79	CR-39R	3/28/2022	pH	Field	=	8.03			SU	Field Log		
SE80	CR-39R	4/22/2022	pH	Field	=	7.94			SU	Field Log		
DW50	CR-39R	5/11/2022	pH	Field	=	9.02			SU	Field Log		
DW51	CR-39R	6/15/2022	pH	Field	=	7.7			SU	Field Log		
DW48	CR-41	8/30/2021	pH	Field	=	7.52			SU	Field Log		
SE78	CR-41	10/22/2021	pH	Field	=	6.73			SU	Field Log		
DW49	CR-41	2/10/2022	pH	Field	=	7.71			SU	Field Log		
SE79	CR-41	3/28/2022	pH	Field	=	7.07			SU	Field Log		
DW50	CR-41	5/11/2022	pH	Field	=	7.2			SU	Field Log		
DW51	CR-41	6/15/2022	pH	Field	=	7.55			SU	Field Log		
DW48	CR-42	8/30/2021	pH	Field	=	7.3			SU	Field Log		

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE78	CR-42	10/22/2021	pH	Field	=	6.76			SU	Field Log		
DW49	CR-42	2/10/2022	pH	Field	=	7.33			SU	Field Log		
SE79	CR-42	3/28/2022	pH	Field	=	7.04			SU	Field Log		
SE80	CR-42	4/22/2022	pH	Field	=	6.92			SU	Field Log		
DW50	CR-42	5/11/2022	pH	Field	=	7.08			SU	Field Log		
DW51	CR-42	6/15/2022	pH	Field	=	6.83			SU	Field Log		
DW48	CR-46	8/30/2021	pH	Field	=	7			SU	Field Log		
SE78	CR-46	10/22/2021	pH	Field	=	7.04			SU	Field Log		
DW49	CR-46	2/10/2022	pH	Field	=	7.45			SU	Field Log		
SE79	CR-46	3/28/2022	pH	Field	=	7.04			SU	Field Log		
SE80	CR-46	4/22/2022	pH	Field	=	6.45			SU	Field Log		
DW50	CR-46	5/11/2022	pH	Field	=	7.17			SU	Field Log		
DW51	CR-46	6/15/2022	pH	Field	=	6.52			SU	Field Log		
DW48	CR-46R	8/30/2021	pH	Field	=	7.43			SU	Field Log		
SE78	CR-46R	10/22/2021	pH	Field	=	6.93			SU	Field Log		
DW49	CR-46R	2/10/2022	pH	Field	=	8.57			SU	Field Log		
SE79	CR-46R	3/28/2022	pH	Field	=	7.06			SU	Field Log		
SE80	CR-46R	4/22/2022	pH	Field	=	7.6			SU	Field Log		
DW50	CR-46R	5/11/2022	pH	Field	=	6.85			SU	Field Log		
DW51	CR-46R	6/15/2022	pH	Field	=	7.03			SU	Field Log		
SE80	NE-RAIN	4/22/2022	pH	Field	=	7.83			SU	Field Log		
SE80	SC-RAIN	4/22/2022	pH	Field	=	7.26			SU	Field Log		
DW48	CR-39	8/30/2021	Temperature	Field	=	23.4			degrees C	Field Log		
DW49	CR-39	2/10/2022	Temperature	Field	=	14.3			degrees C	Field Log		
SE79	CR-39	3/28/2022	Temperature	Field	=	17.9			degrees C	Field Log		
SE80	CR-39	4/22/2022	Temperature	Field	=	18.9			degrees C	Field Log		
DW50	CR-39	5/11/2022	Temperature	Field	=	18.4			degrees C	Field Log		
DW51	CR-39	6/15/2022	Temperature	Field	=	20.4			degrees C	Field Log		
DW48	CR-39R	8/30/2021	Temperature	Field	=	27.4			degrees C	Field Log		
DW49	CR-39R	2/10/2022	Temperature	Field	=	13.3			degrees C	Field Log		
SE79	CR-39R	3/28/2022	Temperature	Field	=	16.9			degrees C	Field Log		
SE80	CR-39R	4/22/2022	Temperature	Field	=	19.3			degrees C	Field Log		

Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
DW50	CR-39R	5/11/2022	Temperature	Field	=	21.06			degrees C	Field Log		
DW51	CR-39R	6/15/2022	Temperature	Field	=	25.2			degrees C	Field Log		
DW48	CR-41	8/30/2021	Temperature	Field	=	21.8			degrees C	Field Log		
DW49	CR-41	2/10/2022	Temperature	Field	=	18.4			degrees C	Field Log		
SE79	CR-41	3/28/2022	Temperature	Field	=	16.6			degrees C	Field Log		
DW50	CR-41	5/11/2022	Temperature	Field	=	17.8			degrees C	Field Log		
DW51	CR-41	6/15/2022	Temperature	Field	=	20.4			degrees C	Field Log		
DW48	CR-42	8/30/2021	Temperature	Field	=	23.6			degrees C	Field Log		
DW49	CR-42	2/10/2022	Temperature	Field	=	14.4			degrees C	Field Log		
SE79	CR-42	3/28/2022	Temperature	Field	=	15.8			degrees C	Field Log		
SE80	CR-42	4/22/2022	Temperature	Field	=	18.3			degrees C	Field Log		
DW50	CR-42	5/11/2022	Temperature	Field	=	17.6			degrees C	Field Log		
DW51	CR-42	6/15/2022	Temperature	Field	=	20.4			degrees C	Field Log		
DW48	CR-46	8/30/2021	Temperature	Field	=	19.9			degrees C	Field Log		
DW49	CR-46	2/10/2022	Temperature	Field	=	10.7			degrees C	Field Log		
SE79	CR-46	3/28/2022	Temperature	Field	=	16			degrees C	Field Log		
SE80	CR-46	4/22/2022	Temperature	Field	=	17.1			degrees C	Field Log		
DW50	CR-46	5/11/2022	Temperature	Field	=	12.8			degrees C	Field Log		
DW51	CR-46	6/15/2022	Temperature	Field	=	19.6			degrees C	Field Log		
DW48	CR-46R	8/30/2021	Temperature	Field	=	20.9			degrees C	Field Log		
DW49	CR-46R	2/10/2022	Temperature	Field	=	10			degrees C	Field Log		
SE79	CR-46R	3/28/2022	Temperature	Field	=	15.7			degrees C	Field Log		
SE80	CR-46R	4/22/2022	Temperature	Field	=	16.9			degrees C	Field Log		
DW50	CR-46R	5/11/2022	Temperature	Field	=	15.8			degrees C	Field Log		
DW51	CR-46R	6/15/2022	Temperature	Field	=	21.4			degrees C	Field Log		
SE80	NE-RAIN	4/22/2022	Temperature	Field	=	13.3			degrees C	Field Log		
SE80	SC-RAIN	4/22/2022	Temperature	Field	=	29.4			degrees C	Field Log		
DW48	CR-46	8/30/2021	Alkalinity (as CaCO3)	SM 2320 B-97/-11	=	175	1.2	10	mg/L	Caltest		9/1/21
SE78	CR-46	10/22/2021	Alkalinity (as CaCO3)	SM 2320 B-97/-11	=	20	1.2	10	mg/L	Caltest		10/26/21
DW49	CR-46	2/10/2022	Alkalinity (as CaCO3)	SM 2320 B-97/-11	=	109	1.2	10	mg/L	Caltest		2/15/22
SE79	CR-46	3/28/2022	Alkalinity (as CaCO3)	SM 2320 B-97/-11	=	12	1.2	10	mg/L	Caltest		4/1/22
SE80	CR-46	4/22/2022	Alkalinity (as CaCO3)	SM 2320 B-97/-11	=	15	1.2	10	mg/L	Caltest		4/29/22

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
DW50	CR-46	5/11/2022	Alkalinity (as CaCO3)	SM 2320 B	=	50	1.2	10	mg/L	Caltest		5/13/22
SW51	CR-46	6/15/2022	Alkalinity (as CaCO3)	SM 2320 B-97/-11	=	95	1.2	10	mg/L	Caltest		6/28/22
DW48	CR-46R	8/30/2021	Alkalinity (as CaCO3)	SM 2320 B-97/-11	=	94	1.2	10	mg/L	Caltest		9/1/21
SE78	CR-46R	10/22/2021	Alkalinity (as CaCO3)	SM 2320 B-97/-11	=	26	1.2	10	mg/L	Caltest		11/2/21
DW49	CR-46R	2/10/2022	Alkalinity (as CaCO3)	SM 2320 B-97/-11	=	81		10	mg/L	Caltest		2/15/22
SE79	CR-46R	3/28/2022	Alkalinity (as CaCO3)	SM 2320 B-97/-11	=	44	1.2	10	mg/L	Caltest		4/1/22
SE80	CR-46R	4/22/2022	Alkalinity (as CaCO3)	SM 2320 B-97/-11	=	72	1.2	10	mg/L	Caltest		4/29/22
DW50	CR-46R	5/11/2022	Alkalinity (as CaCO3)	SM 2320 B	=	82	1.2	10	mg/L	Caltest		5/13/22
SW51	CR-46R	6/15/2022	Alkalinity (as CaCO3)	SM 2320 B-97/-11	=	78	1.2	10	mg/L	Caltest		6/28/22
DW48	CR-46	8/30/2021	Ammonia-N	SM 4500-NH3 B,C-11	=	15	0.04	0.1	mg/L	Caltest		9/4/21
SE78	CR-46	10/22/2021	Ammonia-N	SM 4500-NH3 B,C-11	=	2.3	0.04	0.1	mg/L	Caltest		10/27/21
DW49	CR-46	2/10/2022	Ammonia-N	SM 4500-NH3 B,C-11	=	1.1	0.04	0.1	mg/L	Caltest		2/19/22
SE79	CR-46	3/28/2022	Ammonia-N	SM 4500-NH3 B,C-11	=	0.91	0.04	0.1	mg/L	Caltest		3/31/22
SE80	CR-46	4/22/2022	Ammonia-N	SM 4500-NH3 B,C-11	=	0.79	0.04	0.1	mg/L	Caltest		4/27/22
DW50	CR-46	5/11/2022	Ammonia-N	SM 4500-NH3 BC v22	=	2.5	0.04	0.1	mg/L	Caltest	5/11/22	5/21/22
SW51	CR-46	6/15/2022	Ammonia-N	SM 4500-NH3 B,C-11	=	7.2	0.04	0.1	mg/L	Caltest		6/25/22
DW48	CR-46R	8/30/2021	Ammonia-N	SM 4500-NH3 B,C-11	<	ND	0.04	0.1	mg/L	Caltest		9/4/21
SE78	CR-46R	10/22/2021	Ammonia-N	SM 4500-NH3 B,C-11	=	2.3	0.04	0.1	mg/L	Caltest		10/27/21
DW49	CR-46R	2/10/2022	Ammonia-N	SM 4500-NH3 B,C-11	=	0.2		0.1	mg/L	Caltest		2/19/22
SE79	CR-46R	3/28/2022	Ammonia-N	SM 4500-NH3 B,C-11	=	0.75	0.04	0.1	mg/L	Caltest		3/31/22
SE80	CR-46R	4/22/2022	Ammonia-N	SM 4500-NH3 B,C-11	=	0.21	0.04	0.1	mg/L	Caltest		5/6/22
DW50	CR-46R	5/11/2022	Ammonia-N	SM 4500-NH3 BC v22	<	ND	0.04	0.1	mg/L	Caltest	5/11/22	5/21/22
SW51	CR-46R	6/15/2022	Ammonia-N	SM 4500-NH3 B,C-11	<	ND	0.04	0.1	mg/L	Caltest		6/25/22
DW48	CR-46	8/30/2021	Bicarbonate	SM 2320 B-97/-11	=	175	1.2	10	mg/L	Caltest		9/1/21
SE78	CR-46	10/22/2021	Bicarbonate	SM 2320 B-97/-11	=	20	1.2	10	mg/L	Caltest		10/26/21
DW49	CR-46	2/10/2022	Bicarbonate	SM 2320 B-97/-11	=	109	1.2	10	mg/L	Caltest		2/15/22
SE79	CR-46	3/28/2022	Bicarbonate	SM 2320 B-97/-11	=	12	1.2	10	mg/L	Caltest		4/1/22
SE80	CR-46	4/22/2022	Bicarbonate	SM 2320 B-97/-11	=	15	1.2	10	mg/L	Caltest		4/29/22
DW50	CR-46	5/11/2022	Bicarbonate	SM 2320 B	=	50	1.2	10	mg/L	Caltest		5/13/22
DW48	CR-46R	8/30/2021	Bicarbonate	SM 2320 B-97/-11	=	94	1.2	10	mg/L	Caltest		9/1/21
SE78	CR-46R	10/22/2021	Bicarbonate	SM 2320 B-97/-11	=	26	1.2	10	mg/L	Caltest		11/2/21
DW49	CR-46R	2/10/2022	Bicarbonate	SM 2320 B-97/-11	=	78		10	mg/L	Caltest		2/15/22

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE79	CR-46R	3/28/2022	Bicarbonate	SM 2320 B-97/-11	=	44	1.2	10	mg/L	Caltest		4/1/22
SE80	CR-46R	4/22/2022	Bicarbonate	SM 2320 B-97/-11	=	72	1.2	10	mg/L	Caltest		4/29/22
DW50	CR-46R	5/11/2022	Bicarbonate	SM 2320 B	=	82	1.2	10	mg/L	Caltest		5/13/22
SW51	CR-46	6/15/2022	Bicarbonate (as CACO3)	SM 2320 B-97/-11	=	95	1.2	10	mg/L	Caltest		6/28/22
SW51	CR-46R	6/15/2022	Bicarbonate (as CACO3)	SM 2320 B-97/-11	=	78	1.2	10	mg/L	Caltest		6/28/22
DW48	CR-39	8/30/2021	Biological Oxygen Demand (I	SM 5210 B-11	=	35	5	5	mg/L	Caltest	8/31/21	9/5/21
SE78	CR-39	10/22/2021	Biological Oxygen Demand (I	SM 5210 B-11	=	59	5	5	mg/L	Caltest	10/23/21	10/28/21
DW49	CR-39	2/10/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	7		5	mg/L	Caltest	2/11/22	2/16/22
SE79	CR-39	3/28/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	24	5	5	mg/L	Caltest	3/29/22	4/3/22
SE80	CR-39	4/22/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	23	5	5	mg/L	Caltest	4/23/22	4/28/22
DW50	CR-39	5/11/2022	Biological Oxygen Demand (I	SM 5210 B	=	6	5	5	mg/L	Caltest		5/17/22
SW51	CR-39	6/15/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	28	5	5	mg/L	Caltest	6/16/22	6/21/22
DW48	CR-39R	8/30/2021	Biological Oxygen Demand (I	SM 5210 B-11	<	ND	5	5	mg/L	Caltest	8/31/21	9/5/21
SE78	CR-39R	10/22/2021	Biological Oxygen Demand (I	SM 5210 B-11	=	11	5	5	mg/L	Caltest	10/23/21	10/28/21
DW49	CR-39R	2/10/2022	Biological Oxygen Demand (I	SM 5210 B-11	<	ND		5	mg/L	Caltest	2/11/22	2/16/22
SE79	CR-39R	3/28/2022	Biological Oxygen Demand (I	SM 5210 B-11	<	ND	5	5	mg/L	Caltest	3/29/22	4/3/22
SE80	CR-39R	4/22/2022	Biological Oxygen Demand (I	SM 5210 B-11	<	ND	5	5	mg/L	Caltest	4/23/22	4/28/22
DW50	CR-39R	5/11/2022	Biological Oxygen Demand (I	SM 5210 B	=	68	5	5	mg/L	Caltest		5/17/22
SW51	CR-39R	6/15/2022	Biological Oxygen Demand (I	SM 5210 B-11	<	ND	5	5	mg/L	Caltest	6/16/22	6/21/22
DW48	CR-41	8/30/2021	Biological Oxygen Demand (I	SM 5210 B-11	=	7	5	5	mg/L	Caltest	8/31/21	9/5/21
SE78	CR-41	10/22/2021	Biological Oxygen Demand (I	SM 5210 B-11	=	213	5	5	mg/L	Caltest	10/23/21	10/28/21
DW49	CR-41	2/10/2022	Biological Oxygen Demand (I	SM 5210 B-11	<	ND		5	mg/L	Caltest	2/11/22	2/16/22
SE79	CR-41	3/28/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	48	5	5	mg/L	Caltest	3/29/22	4/3/22
DW50	CR-41	5/11/2022	Biological Oxygen Demand (I	SM 5210 B	<	ND	5	5	mg/L	Caltest		5/17/22
SW51	CR-41	6/15/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	9	5	5	mg/L	Caltest	6/16/22	6/21/22
DW48	CR-42	8/30/2021	Biological Oxygen Demand (I	SM 5210 B-11	=	61	5	5	mg/L	Caltest	8/31/21	9/5/21
SE78	CR-42	10/22/2021	Biological Oxygen Demand (I	SM 5210 B-11	=	147	5	5	mg/L	Caltest	10/23/21	10/28/21
DW49	CR-42	2/10/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	12		5	mg/L	Caltest	2/11/22	2/16/22
SE79	CR-42	3/28/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	39	5	5	mg/L	Caltest	3/29/22	4/3/22
SE80	CR-42	4/22/2022	Biological Oxygen Demand (I	SM 5210 B-11	<	ND	5	5	mg/L	Caltest	4/23/22	4/28/22
DW50	CR-42	5/11/2022	Biological Oxygen Demand (I	SM 5210 B	=	10	5	5	mg/L	Caltest		5/17/22
SW51	CR-42	6/15/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	31	5	5	mg/L	Caltest	6/16/22	6/21/22

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
DW48	CR-46	8/30/2021	Biological Oxygen Demand (I	SM 5210 B-11	=	62	5	5	mg/L	Caltest	8/31/21	9/5/21
SE78	CR-46	10/22/2021	Biological Oxygen Demand (I	SM 5210 B-11	=	57	5	5	mg/L	Caltest	10/23/21	10/28/21
DW49	CR-46	2/10/2022	Biological Oxygen Demand (I	SM 5210 B-11	<	ND	5	5	mg/L	Caltest	2/11/22	2/16/22
SE79	CR-46	3/28/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	44	5	5	mg/L	Caltest	3/29/22	4/3/22
SE80	CR-46	4/22/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	6	5	5	mg/L	Caltest	4/23/22	4/28/22
DW50	CR-46	5/11/2022	Biological Oxygen Demand (I	SM 5210 B	=	11	5	5	mg/L	Caltest		5/17/22
SW51	CR-46	6/15/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	22	5	5	mg/L	Caltest	6/16/22	6/21/22
DW48	CR-46R	8/30/2021	Biological Oxygen Demand (I	SM 5210 B-11	<	ND	5	5	mg/L	Caltest	8/31/21	9/5/21
SE78	CR-46R	10/22/2021	Biological Oxygen Demand (I	SM 5210 B-11	=	50	5	5	mg/L	Caltest	10/23/21	10/28/21
DW49	CR-46R	2/10/2022	Biological Oxygen Demand (I	SM 5210 B-11	<	ND		5	mg/L	Caltest	2/11/22	2/16/22
SE79	CR-46R	3/28/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	17	5	5	mg/L	Caltest	3/29/22	4/3/22
SE80	CR-46R	4/22/2022	Biological Oxygen Demand (I	SM 5210 B-11	=	8	5	5	mg/L	Caltest	4/23/22	4/28/22
DW50	CR-46R	5/11/2022	Biological Oxygen Demand (I	SM 5210 B	<	ND	5	5	mg/L	Caltest		5/17/22
SW51	CR-46R	6/15/2022	Biological Oxygen Demand (I	SM 5210 B-11	<	ND	5	5	mg/L	Caltest	6/16/22	6/21/22
DW48	CR-46	8/30/2021	Carbonate	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		9/1/21
SE78	CR-46	10/22/2021	Carbonate	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		10/26/21
DW49	CR-46	2/10/2022	Carbonate	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		2/15/22
SE79	CR-46	3/28/2022	Carbonate	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		4/1/22
SE80	CR-46	4/22/2022	Carbonate	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		4/29/22
DW50	CR-46	5/11/2022	Carbonate	SM 2320 B	<	ND	1.2	10	mg/L	Caltest		5/13/22
DW48	CR-46R	8/30/2021	Carbonate	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		9/1/21
SE78	CR-46R	10/22/2021	Carbonate	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		11/2/21
DW49	CR-46R	2/10/2022	Carbonate	SM 2320 B-97/-11	J	3		10	mg/L	Caltest		2/15/22
SE79	CR-46R	3/28/2022	Carbonate	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		4/1/22
SE80	CR-46R	4/22/2022	Carbonate	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		4/29/22
DW50	CR-46R	5/11/2022	Carbonate	SM 2320 B	<	ND	1.2	10	mg/L	Caltest		5/13/22
SW51	CR-46	6/15/2022	Carbonate (as CACO3)	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		6/28/22
SW51	CR-46R	6/15/2022	Carbonate (as CACO3)	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		6/28/22
DW48	CR-46	8/30/2021	Chemical Oxygen Demand ((	EPA 410.4-93 / SM 5220 I	=	456	6	50	mg/L	Caltest		8/31/21
SE78	CR-46	10/22/2021	Chemical Oxygen Demand ((	EPA 410.4-93 / SM 5220 I	=	188	6	50	mg/L	Caltest		10/23/21
DW49	CR-46	2/10/2022	Chemical Oxygen Demand ((	EPA 410.4-93 / SM 5220 I	J	6	3	50	mg/L	Caltest		2/18/22
SE79	CR-46	3/28/2022	Chemical Oxygen Demand ((	EPA 410.4-93 / SM 5220 I	=	63	3	50	mg/L	Caltest		4/2/22

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE80	CR-46	4/22/2022	Chemical Oxygen Demand ((	EPA 410.4-93 / SM 5220 I	=	66	3	50	mg/L	Caltest		4/27/22
DW50	CR-46	5/11/2022	Chemical Oxygen Demand ((	SM 5220 D	J	48	3	50	mg/L	Caltest	5/11/22	5/14/22
SW51	CR-46	6/15/2022	Chemical Oxygen Demand ((	EPA 410.4-93 / SM 5220 I	=	142	3	50	mg/L	Caltest		6/17/22
DW48	CR-46R	8/30/2021	Chemical Oxygen Demand ((	EPA 410.4-93 / SM 5220 I	J	17	6	50	mg/L	Caltest		8/31/21
SE78	CR-46R	10/22/2021	Chemical Oxygen Demand ((	EPA 410.4-93 / SM 5220 I	=	174	6	50	mg/L	Caltest		10/23/21
DW49	CR-46R	2/10/2022	Chemical Oxygen Demand ((	EPA 410.4-93 / SM 5220 I	J	26		50	mg/L	Caltest		2/18/22
SE79	CR-46R	3/28/2022	Chemical Oxygen Demand ((	EPA 410.4-93 / SM 5220 I	=	64	3	50	mg/L	Caltest		4/2/22
SE80	CR-46R	4/22/2022	Chemical Oxygen Demand ((	EPA 410.4-93 / SM 5220 I	J	44	3	50	mg/L	Caltest		4/27/22
DW50	CR-46R	5/11/2022	Chemical Oxygen Demand ((	SM 5220 D	J	14	3	50	mg/L	Caltest	5/11/22	5/14/22
SW51	CR-46R	6/15/2022	Chemical Oxygen Demand ((	EPA 410.4-93 / SM 5220 I	J	8	3	50	mg/L	Caltest		6/17/22
DW48	CR-46	8/30/2021	Dissolved Organic Carbon	SM 5310 B-00/-11	=	9.7	0.3	0.5	mg/L	Caltest		9/8/21
SE78	CR-46	10/22/2021	Dissolved Organic Carbon	SM 5310 B-00/-11	=	58	0.3	0.5	mg/L	Caltest		10/28/21
DW49	CR-46	2/10/2022	Dissolved Organic Carbon	SM 5310 B-00/-11	=	3.6	0.3	0.5	mg/L	Caltest		2/15/22
SE79	CR-46	3/28/2022	Dissolved Organic Carbon	SM 5310 B-00/-11	=	14	0.3	0.5	mg/L	Caltest		3/31/22
SE80	CR-46	4/22/2022	Dissolved Organic Carbon	SM 5310 B-00/-11	=	8.3	0.3	0.5	mg/L	Caltest		4/27/22
DW50	CR-46	5/11/2022	Dissolved Organic Carbon	SM 5310 B	=	9.6	0.3	0.5	mg/L	Caltest	5/11/22	5/21/22
SW51	CR-46	6/15/2022	Dissolved Organic Carbon	SM 5310 B-00/-11	=	39	0.3	0.5	mg/L	Caltest		6/21/22
DW48	CR-46R	8/30/2021	Dissolved Organic Carbon	SM 5310 B-00/-11	=	3.7	0.3	0.5	mg/L	Caltest		9/9/21
SE78	CR-46R	10/22/2021	Dissolved Organic Carbon	SM 5310 B-00/-11	=	45	0.3	0.5	mg/L	Caltest		10/28/21
DW49	CR-46R	2/10/2022	Dissolved Organic Carbon	SM 5310 B-00/-11	=	8.2		0.5	mg/L	Caltest		2/15/22
SE79	CR-46R	3/28/2022	Dissolved Organic Carbon	SM 5310 B-00/-11	=	15	0.3	0.5	mg/L	Caltest		3/31/22
SE80	CR-46R	4/22/2022	Dissolved Organic Carbon	SM 5310 B-00/-11	=	6.6	0.3	0.5	mg/L	Caltest		4/27/22
DW50	CR-46R	5/11/2022	Dissolved Organic Carbon	SM 5310 B	=	5.5	0.3	0.5	mg/L	Caltest	5/11/22	5/21/22
SW51	CR-46R	6/15/2022	Dissolved Organic Carbon	SM 5310 B-00/-11	=	5	0.3	0.5	mg/L	Caltest		6/21/22
SW51	CR-46	6/15/2022	Hardness as CaCO3	SM 2340 C-97/-11	=	160	17	50	mg/L	Caltest		6/29/22
SW51	CR-46R	6/15/2022	Hardness as CaCO3	SM 2340 C-97/-11	=	100	1.7	5	mg/L	Caltest		6/29/22
DW48	CR-46	8/30/2021	Hydroxide	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		9/1/21
SE78	CR-46	10/22/2021	Hydroxide	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		10/26/21
DW49	CR-46	2/10/2022	Hydroxide	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		2/15/22
SE79	CR-46	3/28/2022	Hydroxide	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		4/1/22
SE80	CR-46	4/22/2022	Hydroxide	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		4/29/22
DW50	CR-46	5/11/2022	Hydroxide	SM 2320 B	<	ND	1.2	10	mg/L	Caltest		5/13/22

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
DW48	CR-46R	8/30/2021	Hydroxide	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		9/1/21
SE78	CR-46R	10/22/2021	Hydroxide	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		11/2/21
DW49	CR-46R	2/10/2022	Hydroxide	SM 2320 B-97/-11	<	ND		10	mg/L	Caltest		2/15/22
SE79	CR-46R	3/28/2022	Hydroxide	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		4/1/22
SE80	CR-46R	4/22/2022	Hydroxide	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		4/29/22
DW50	CR-46R	5/11/2022	Hydroxide	SM 2320 B	<	ND	1.2	10	mg/L	Caltest		5/13/22
SW51	CR-46	6/15/2022	Hydroxide (as CACO3)	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		6/28/22
SW51	CR-46R	6/15/2022	Hydroxide (as CACO3)	SM 2320 B-97/-11	<	ND	1.2	10	mg/L	Caltest		6/28/22
DW48	CR-46	8/30/2021	Nitrogen, Total Kjeldahl	SM 4500-Norg C/NH3 B,C	=	23	0.08	0.1	mg/L	Caltest	9/3/21	9/4/21
SE78	CR-46	10/22/2021	Nitrogen, Total Kjeldahl	SM 4500-Norg C/NH3 B,C	=	5.5	0.08	0.1	mg/L	Caltest	11/2/21	11/3/21
DW49	CR-46	2/10/2022	Nitrogen, Total Kjeldahl	SM 4500-Norg C/NH3 B,C	=	1.5	0.08	0.1	mg/L	Caltest	2/17/22	2/17/22
SE79	CR-46	3/28/2022	Nitrogen, Total Kjeldahl	SM 4500-Norg C/NH3 B,C	=	2.3	0.08	0.1	mg/L	Caltest	4/13/22	4/14/22
SE80	CR-46	4/22/2022	Nitrogen, Total Kjeldahl	SM 4500-Norg C/NH3 B,C	=	1.7	0.08	0.1	mg/L	Caltest	5/4/22	5/5/22
DW50	CR-46	5/11/2022	Nitrogen, Total Kjeldahl	SM 4500-N org C/SM 450	=	3.4	0.08	0.1	mg/L	Caltest	5/11/22	6/1/22
DW48	CR-46R	8/30/2021	Nitrogen, Total Kjeldahl	SM 4500-Norg C/NH3 B,C	=	0.22	0.08	0.1	mg/L	Caltest	9/3/21	9/4/21
SE78	CR-46R	10/22/2021	Nitrogen, Total Kjeldahl	SM 4500-Norg C/NH3 B,C	=	5.5	0.08	0.1	mg/L	Caltest	11/2/21	11/3/21
DW49	CR-46R	2/10/2022	Nitrogen, Total Kjeldahl	SM 4500-Norg C/NH3 B,C	=	1.1		0.1	mg/L	Caltest	2/24/22	2/25/22
SE79	CR-46R	3/28/2022	Nitrogen, Total Kjeldahl	SM 4500-Norg C/NH3 B,C	=	2.3	0.08	0.1	mg/L	Caltest	4/13/22	4/14/22
SE80	CR-46R	4/22/2022	Nitrogen, Total Kjeldahl	SM 4500-Norg C/NH3 B,C	=	1.3	0.08	0.1	mg/L	Caltest	5/4/22	5/5/22
DW50	CR-46R	5/11/2022	Nitrogen, Total Kjeldahl	SM 4500-N org C/SM 450	=	0.47	0.08	0.1	mg/L	Caltest	5/11/22	6/1/22
SW51	CR-46	6/15/2022	Solids, Total Dissolved (TDS)	SM 2540 C-97/-11	=	260	4	10	mg/L	Caltest		6/18/22
SW51	CR-46R	6/15/2022	Solids, Total Dissolved (TDS)	SM 2540 C-97/-11	=	120	4	10	mg/L	Caltest		6/18/22
DW48	CR-46	8/30/2021	Solids, Total Suspended (TS	SM 2540 D-11	=	3780	1	3	mg/L	Caltest		8/31/21
SE78	CR-46	10/22/2021	Solids, Total Suspended (TS	SM 2540 D-11	=	72	1	3	mg/L	Caltest		10/26/21
DW49	CR-46	2/10/2022	Solids, Total Suspended (TS	SM 2540 D-11	=	6	1	3	mg/L	Caltest		2/11/22
SE79	CR-46	3/28/2022	Solids, Total Suspended (TS	SM 2540 D-11	=	47	1	3	mg/L	Caltest		3/29/22
SE80	CR-46	4/22/2022	Solids, Total Suspended (TS	SM 2540 D-11	=	156	1	3	mg/L	Caltest		4/23/22
DW50	CR-46	5/11/2022	Solids, Total Suspended (TS	SM 2540 D	=	29	1	3	mg/L	Caltest		5/14/22
SW51	CR-46	6/15/2022	Solids, Total Suspended (TS	SM 2540 D-11	=	33	1	3	mg/L	Caltest		6/17/22
DW48	CR-46R	8/30/2021	Solids, Total Suspended (TS	SM 2540 D-11	=	61	1	3	mg/L	Caltest		8/31/21
SE78	CR-46R	10/22/2021	Solids, Total Suspended (TS	SM 2540 D-11	=	109	1	3	mg/L	Caltest		10/26/21
DW49	CR-46R	2/10/2022	Solids, Total Suspended (TS	SM 2540 D-11	=	8		3	mg/L	Caltest		2/11/22

Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE79	CR-46R	3/28/2022	Solids, Total Suspended (TS	SM 2540 D-11	=	38	1	3	mg/L	Caltest		3/29/22
SE80	CR-46R	4/22/2022	Solids, Total Suspended (TS	SM 2540 D-11	=	75	1	3	mg/L	Caltest		4/23/22
DW50	CR-46R	5/11/2022	Solids, Total Suspended (TS	SM 2540 D	=	4.4	1	3	mg/L	Caltest		5/14/22
SW51	CR-46R	6/15/2022	Solids, Total Suspended (TS	SM 2540 D-11	=	5.6	1	3	mg/L	Caltest		6/17/22
DW48	CR-39	8/30/2021	Specific Conductance (EC)	Field	=	1012			umhos/cm	Field Log		
SE78	CR-39	10/22/2021	Specific Conductance (EC)	Field	=	921			umhos/cm	Field Log		
DW49	CR-39	2/10/2022	Specific Conductance (EC)	Field	=	1179			umhos/cm	Field Log		
SE79	CR-39	3/28/2022	Specific Conductance (EC)	Field	=	830			umhos/cm	Field Log		
SE80	CR-39	4/22/2022	Specific Conductance (EC)	Field	=	407.7			umhos/cm	Field Log		
DW50	CR-39	5/11/2022	Specific Conductance (EC)	Field	=	832			umhos/cm	Field Log		
DW51	CR-39	6/15/2022	Specific Conductance (EC)	Field	=	1079			umhos/cm	Field Log		
DW48	CR-39R	8/30/2021	Specific Conductance (EC)	Field	=	347.1			umhos/cm	Field Log		
SE78	CR-39R	10/22/2021	Specific Conductance (EC)	Field	=	756			umhos/cm	Field Log		
DW49	CR-39R	2/10/2022	Specific Conductance (EC)	Field	=	781			umhos/cm	Field Log		
SE79	CR-39R	3/28/2022	Specific Conductance (EC)	Field	=	719			umhos/cm	Field Log		
SE80	CR-39R	4/22/2022	Specific Conductance (EC)	Field	=	722			umhos/cm	Field Log		
DW50	CR-39R	5/11/2022	Specific Conductance (EC)	Field	=	477.5			umhos/cm	Field Log		
DW51	CR-39R	6/15/2022	Specific Conductance (EC)	Field	=	471			umhos/cm	Field Log		
DW48	CR-41	8/30/2021	Specific Conductance (EC)	Field	=	377.3			umhos/cm	Field Log		
SE78	CR-41	10/22/2021	Specific Conductance (EC)	Field	=	178			umhos/cm	Field Log		
DW49	CR-41	2/10/2022	Specific Conductance (EC)	Field	=	554			umhos/cm	Field Log		
SE79	CR-41	3/28/2022	Specific Conductance (EC)	Field	=	161			umhos/cm	Field Log		
DW50	CR-41	5/11/2022	Specific Conductance (EC)	Field	=	461			umhos/cm	Field Log		
DW51	CR-41	6/15/2022	Specific Conductance (EC)	Field	=	389			umhos/cm	Field Log		
DW48	CR-42	8/30/2021	Specific Conductance (EC)	Field	=	429.1			umhos/cm	Field Log		
SE78	CR-42	10/22/2021	Specific Conductance (EC)	Field	=	161			umhos/cm	Field Log		
DW49	CR-42	2/10/2022	Specific Conductance (EC)	Field	=	175			umhos/cm	Field Log		
SE79	CR-42	3/28/2022	Specific Conductance (EC)	Field	=	94			umhos/cm	Field Log		
SE80	CR-42	4/22/2022	Specific Conductance (EC)	Field	=	104.3			umhos/cm	Field Log		
DW50	CR-42	5/11/2022	Specific Conductance (EC)	Field	=	244.1			umhos/cm	Field Log		
DW51	CR-42	6/15/2022	Specific Conductance (EC)	Field	=	318			umhos/cm	Field Log		
DW48	CR-46	8/30/2021	Specific Conductance (EC)	Field	=	421			umhos/cm	Field Log		

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE78	CR-46	10/22/2021	Specific Conductance (EC)	Field	=	123			umhos/cm	Field Log		
DW49	CR-46	2/10/2022	Specific Conductance (EC)	Field	=	310			umhos/cm	Field Log		
SE79	CR-46	3/28/2022	Specific Conductance (EC)	Field	=	49.8			umhos/cm	Field Log		
SE80	CR-46	4/22/2022	Specific Conductance (EC)	Field	=	490			umhos/cm	Field Log		
DW50	CR-46	5/11/2022	Specific Conductance (EC)	Field	=	26.9			umhos/cm	Field Log		
DW51	CR-46	6/15/2022	Specific Conductance (EC)	Field	=	346			umhos/cm	Field Log		
DW48	CR-46R	8/30/2021	Specific Conductance (EC)	Field	=	245			umhos/cm	Field Log		
SE78	CR-46R	10/22/2021	Specific Conductance (EC)	Field	=	129			umhos/cm	Field Log		
DW49	CR-46R	2/10/2022	Specific Conductance (EC)	Field	=	229			umhos/cm	Field Log		
SE79	CR-46R	3/28/2022	Specific Conductance (EC)	Field	=	159			umhos/cm	Field Log		
SE80	CR-46R	4/22/2022	Specific Conductance (EC)	Field	=	181			umhos/cm	Field Log		
DW50	CR-46R	5/11/2022	Specific Conductance (EC)	Field	=	251			umhos/cm	Field Log		
DW51	CR-46R	6/15/2022	Specific Conductance (EC)	Field	=	193			umhos/cm	Field Log		
SE80	NE-RAIN	4/22/2022	Specific Conductance (EC)	Field	=	4			umhos/cm	Field Log		
SE80	SC-RAIN	4/22/2022	Specific Conductance (EC)	Field	=	3			umhos/cm	Field Log		
DW48	CR-46	8/30/2021	TOC	SM 5310 B-00/-11	=	12	0.3	0.5	mg/L	Caltest		9/8/21
SE78	CR-46	10/22/2021	TOC	SM 5310 B-00/-11	=	52	0.3	0.5	mg/L	Caltest		11/2/21
DW49	CR-46	2/10/2022	TOC	SM 5310 B-00/-11	=	3.9	0.3	0.5	mg/L	Caltest		2/16/22
SE79	CR-46	3/28/2022	TOC	SM 5310 B-00/-11	=	14	0.3	0.5	mg/L	Caltest		3/31/22
SE80	CR-46	4/22/2022	TOC	SM 5310 B-00/-11	=	8.1	0.3	0.5	mg/L	Caltest		4/27/22
DW50	CR-46	5/11/2022	TOC	SM 5310 B	=	12	0.3	0.5	mg/L	Caltest	5/11/22	5/18/22
DW48	CR-46R	8/30/2021	TOC	SM 5310 B-00/-11	=	3.8	0.3	0.5	mg/L	Caltest		9/8/21
SE78	CR-46R	10/22/2021	TOC	SM 5310 B-00/-11	=	39	0.3	0.5	mg/L	Caltest		11/2/21
DW49	CR-46R	2/10/2022	TOC	SM 5310 B-00/-11	=	8.1		0.5	mg/L	Caltest		2/16/22
SE79	CR-46R	3/28/2022	TOC	SM 5310 B-00/-11	=	16	0.3	0.5	mg/L	Caltest		3/31/22
SE80	CR-46R	4/22/2022	TOC	SM 5310 B-00/-11	=	6.9	0.3	0.5	mg/L	Caltest		4/28/22
DW50	CR-46R	5/11/2022	TOC	SM 5310 B	=	6	0.3	0.5	mg/L	Caltest	5/11/22	5/18/22
DW48	CR-46	8/30/2021	Total Dissolved Solids	SM 2540 C-97/-11	=	210	4	10	mg/L	Caltest		8/31/21
SE78	CR-46	10/22/2021	Total Dissolved Solids	SM 2540 C-97/-11	=	90	4	10	mg/L	Caltest		10/27/21
DW49	CR-46	2/10/2022	Total Dissolved Solids	SM 2540 C-97/-11	=	150	4	10	mg/L	Caltest		2/11/22
SE79	CR-46	3/28/2022	Total Dissolved Solids	SM 2540 C-97/-11	=	38	4	10	mg/L	Caltest		4/1/22
SE80	CR-46	4/22/2022	Total Dissolved Solids	SM 2540 C-97/-11	=	39	4	10	mg/L	Caltest		4/26/22

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
DW50	CR-46	5/11/2022	Total Dissolved Solids	SM 2540 C	=	73	4	10	mg/L	Caltest	5/13/22	5/13/22
DW50	CR-46	5/11/2022	Total Dissolved Solids	SM 2540 C	=	68	4	10	mg/L	Caltest	5/13/22	5/13/22
DW48	CR-46R	8/30/2021	Total Dissolved Solids	SM 2540 C-97/-11	=	170	8	20	mg/L	Caltest		8/31/21
SE78	CR-46R	10/22/2021	Total Dissolved Solids	SM 2540 C-97/-11	=	130	4	10	mg/L	Caltest		10/27/21
DW49	CR-46R	2/10/2022	Total Dissolved Solids	SM 2540 C-97/-11	=	130		10	mg/L	Caltest		2/11/22
SE79	CR-46R	3/28/2022	Total Dissolved Solids	SM 2540 C-97/-11	=	95	4	10	mg/L	Caltest		4/1/22
SE80	CR-46R	4/22/2022	Total Dissolved Solids	SM 2540 C-97/-11	=	120	4	10	mg/L	Caltest		4/26/22
DW50	CR-46R	5/11/2022	Total Dissolved Solids	SM 2540 C	=	110	4	10	mg/L	Caltest	5/13/22	5/13/22
DW48	CR-46	8/30/2021	Total Hardness as CaCO3	SM 2340 C-97/-11	=	170	3.4	10	mg/L	Caltest		9/9/21
SE78	CR-46	10/22/2021	Total Hardness as CaCO3	SM 2340 C-97/-11	=	40	1.7	5	mg/L	Caltest		10/28/21
DW49	CR-46	2/10/2022	Total Hardness as CaCO3	SM 2340 C-97/-11	=	110	1.7	5	mg/L	Caltest		2/25/22
SE79	CR-46	3/28/2022	Total Hardness as CaCO3	SM 2340 C-97/-11	=	16	1.7	5	mg/L	Caltest		4/2/22
SE80	CR-46	4/22/2022	Total Hardness as CaCO3	SM 2340 C-97/-11	=	18	1.7	5	mg/L	Caltest		4/30/22
DW50	CR-46	5/11/2022	Total Hardness as CaCO3	SM 2340 C	=	42	1.7	5	mg/L	Caltest	5/11/22	5/19/22
DW48	CR-46R	8/30/2021	Total Hardness as CaCO3	SM 2340 C-97/-11	=	110	1.7	5	mg/L	Caltest		9/9/21
SE78	CR-46R	10/22/2021	Total Hardness as CaCO3	SM 2340 C-97/-11	=	44	1.7	5	mg/L	Caltest		10/28/21
DW49	CR-46R	2/10/2022	Total Hardness as CaCO3	SM 2340 C-97/-11	=	86		5	mg/L	Caltest		2/25/22
SE79	CR-46R	3/28/2022	Total Hardness as CaCO3	SM 2340 C-97/-11	=	52	1.7	5	mg/L	Caltest		4/2/22
SE80	CR-46R	4/22/2022	Total Hardness as CaCO3	SM 2340 C-97/-11	=	72	1.7	5	mg/L	Caltest		4/30/22
DW50	CR-46R	5/11/2022	Total Hardness as CaCO3	SM 2340 C	=	84	1.7	5	mg/L	Caltest	5/11/22	5/19/22
SW51	CR-46	6/15/2022	Total Kjeldahl Nitrogen	SM 4500-Norg C/NH3 B,C	=	11	0.08	0.1	mg/L	Caltest	6/22/22	6/23/22
SW51	CR-46R	6/15/2022	Total Kjeldahl Nitrogen	SM 4500-Norg C/NH3 B,C	=	0.28	0.08	0.1	mg/L	Caltest	6/22/22	6/23/22
SW51	CR-46	6/15/2022	Total Organic Carbon	SM 5310 B-00/-11	=	45	0.3	0.5	mg/L	Caltest		6/22/22
SW51	CR-46R	6/15/2022	Total Organic Carbon	SM 5310 B-00/-11	=	5	0.3	0.5	mg/L	Caltest		6/21/22
DW48	CR-46	8/30/2021	Turbidity	SM 2130 B-01/11	=	150	0.35	0.35	NTU	Caltest		8/31/21
SE78	CR-46	10/22/2021	Turbidity	SM 2130 B-01/11	=	65	0.14	0.14	NTU	Caltest		10/23/21
DW49	CR-46	2/10/2022	Turbidity	SM 2130 B-01/11	=	1.8	0.07	0.07	NTU	Caltest		2/11/22
SE79	CR-46	3/28/2022	Turbidity	SM 2130 B-01/11	=	30	0.07	0.07	NTU	Caltest		3/29/22
SE80	CR-46	4/22/2022	Turbidity	SM 2130 B-01/11	=	65	0.14	0.14	NTU	Caltest		4/22/22
DW50	CR-46	5/11/2022	Turbidity	SM 2130 B	=	24	0.07	0.07	NTU	Caltest		5/12/22
SW51	CR-46	6/15/2022	Turbidity	SM 2130 B-01/11	=	30	0.07	0.07	NTU	Caltest		6/15/22
DW48	CR-46R	8/30/2021	Turbidity	SM 2130 B-01/11	=	33	0.07	0.07	NTU	Caltest		8/31/21

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE78	CR-46R	10/22/2021	Turbidity	SM 2130 B-01/11	=	95	0.35	0.35	NTU	Caltest		10/23/21
DW49	CR-46R	2/10/2022	Turbidity	SM 2130 B-01/11	=	2.1		0.07	NTU	Caltest		2/11/22
SE79	CR-46R	3/28/2022	Turbidity	SM 2130 B-01/11	=	30	0.07	0.07	NTU	Caltest		3/29/22
SE80	CR-46R	4/22/2022	Turbidity	SM 2130 B-01/11	=	45	0.14	0.14	NTU	Caltest		4/22/22
DW50	CR-46R	5/11/2022	Turbidity	SM 2130 B	=	2.7	0.07	0.07	NTU	Caltest		5/12/22
SW51	CR-46R	6/15/2022	Turbidity	SM 2130 B-01/11	=	3.8	0.07	0.07	NTU	Caltest		6/15/22
SW51	CR-39	6/15/2022	Mercury	EPA 1631E	=	2.7	0.2	0.5	ng/L	Caltest	6/21/22	6/22/22
SW51	CR-39R	6/15/2022	Mercury	EPA 1631E	=	0.84	0.2	0.5	ng/L	Caltest	6/21/22	6/22/22
SW51	CR-41	6/15/2022	Mercury	EPA 1631E	=	4	0.2	0.5	ng/L	Caltest	6/21/22	6/22/22
SW51	CR-42	6/15/2022	Mercury	EPA 1631E	=	1.4	0.2	0.5	ng/L	Caltest	6/21/22	6/22/22
SW51	CR-46	6/15/2022	Mercury	EPA 1631E	=	1.1	0.2	0.5	ng/L	Caltest	6/21/22	6/22/22
SW51	CR-46R	6/15/2022	Mercury	EPA 1631E	=	2	0.2	0.5	ng/L	Caltest	6/21/22	6/22/22
DW48	CR-39	8/30/2021	Mercury, Total	EPA 1631E	=	7.2	0.2	0.5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-39	10/22/2021	Mercury, Total	EPA 1631E	=	1.6	0.2	0.5	ng/L	Caltest	10/27/21	10/28/21
DW49	CR-39	2/10/2022	Mercury, Total	EPA 1631E	=	1.9		0.5	ng/L	Caltest	2/23/22	2/24/22
SE79	CR-39	3/28/2022	Mercury, Total	EPA 1631E	=	2.3	0.2	0.5	ng/L	Caltest	3/30/22	4/1/22
SE80	CR-39	4/22/2022	Mercury, Total	EPA 1631E	=	1.3	0.2	0.5	ng/L	Caltest	4/25/22	4/26/22
DW50	CR-39	5/11/2022	Mercury, Total	EPA 1631E	=	3.6	0.2	0.5	ng/L	Caltest	5/11/22	6/2/22
DW48	CR-39R	8/30/2021	Mercury, Total	EPA 1631E	=	2.1	0.2	0.5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-39R	10/22/2021	Mercury, Total	EPA 1631E	=	1	0.2	0.5	ng/L	Caltest	10/27/21	10/28/21
DW49	CR-39R	2/10/2022	Mercury, Total	EPA 1631E	=	1.6		0.5	ng/L	Caltest	2/23/22	2/24/22
SE79	CR-39R	3/28/2022	Mercury, Total	EPA 1631E	=	1.2	0.2	0.5	ng/L	Caltest	3/30/22	4/1/22
SE80	CR-39R	4/22/2022	Mercury, Total	EPA 1631E	=	0.57	0.2	0.5	ng/L	Caltest	4/25/22	4/26/22
DW50	CR-39R	5/11/2022	Mercury, Total	EPA 1631E	=	1.1	0.2	0.5	ng/L	Caltest	5/11/22	6/2/22
DW48	CR-41	8/30/2021	Mercury, Total	EPA 1631E	=	3.4	0.2	0.5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-41	10/22/2021	Mercury, Total	EPA 1631E	=	9.1	0.2	0.5	ng/L	Caltest	10/27/21	10/28/21
DW49	CR-41	2/10/2022	Mercury, Total	EPA 1631E	=	1.4		0.5	ng/L	Caltest	2/23/22	2/24/22
SE79	CR-41	3/28/2022	Mercury, Total	EPA 1631E	=	2	0.2	0.5	ng/L	Caltest	3/30/22	4/1/22
DW50	CR-41	5/11/2022	Mercury, Total	EPA 1631E	=	2	0.2	0.5	ng/L	Caltest	5/11/22	6/2/22
DW48	CR-42	8/30/2021	Mercury, Total	EPA 1631E	=	2.9	0.2	0.5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-42	10/22/2021	Mercury, Total	EPA 1631E	=	3.5	0.2	0.5	ng/L	Caltest	10/27/21	10/28/21
DW49	CR-42	2/10/2022	Mercury, Total	EPA 1631E	=	1.1		0.5	ng/L	Caltest	2/23/22	2/24/22

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE79	CR-42	3/28/2022	Mercury, Total	EPA 1631E	=	1.4	0.2	0.5	ng/L	Caltest	3/30/22	4/1/22
SE80	CR-42	4/22/2022	Mercury, Total	EPA 1631E	=	4.8	0.2	0.5	ng/L	Caltest	4/25/22	4/26/22
DW50	CR-42	5/11/2022	Mercury, Total	EPA 1631E	=	3.5	0.2	0.5	ng/L	Caltest	5/11/22	6/2/22
DW48	CR-46	8/30/2021	Mercury, Total	EPA 1631E	=	3.8	0.2	0.5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Mercury, Total	EPA 1631E	=	3.1	0.2	0.5	ng/L	Caltest	10/27/21	10/28/21
DW49	CR-46	2/10/2022	Mercury, Total	EPA 1631E	=	0.5	0.2	0.5	ng/L	Caltest	2/23/22	2/24/22
SE79	CR-46	3/28/2022	Mercury, Total	EPA 1631E	=	4.5	0.2	0.5	ng/L	Caltest	3/30/22	4/1/22
SE80	CR-46	4/22/2022	Mercury, Total	EPA 1631E	=	8.6	0.2	0.5	ng/L	Caltest	4/25/22	4/26/22
DW50	CR-46	5/11/2022	Mercury, Total	EPA 1631E	=	3.8	0.2	0.5	ng/L	Caltest	5/11/22	6/2/22
DW48	CR-46R	8/30/2021	Mercury, Total	EPA 1631E	=	3.9	0.2	0.5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Mercury, Total	EPA 1631E	=	3.5	0.2	0.5	ng/L	Caltest	10/27/21	10/28/21
DW49	CR-46R	2/10/2022	Mercury, Total	EPA 1631E	=	1.8		0.5	ng/L	Caltest	2/23/22	2/24/22
SE79	CR-46R	3/28/2022	Mercury, Total	EPA 1631E	=	4.4	0.2	0.5	ng/L	Caltest	3/30/22	4/1/22
SE80	CR-46R	4/22/2022	Mercury, Total	EPA 1631E	=	5.7	0.2	0.5	ng/L	Caltest	4/25/22	4/26/22
DW50	CR-46R	5/11/2022	Mercury, Total	EPA 1631E	=	2.7	0.2	0.5	ng/L	Caltest	5/11/22	6/2/22
SE78	NE-RAIN	10/22/2021	Mercury, Total	EPA 1631E	=	13	0.2	0.5	ng/L	Caltest	10/27/21	10/28/21
SE79	NE-RAIN	3/28/2022	Mercury, Total	EPA 1631E	=	9.4	0.2	0.5	ng/L	Caltest	3/30/22	4/1/22
SE80	NE-RAIN	4/22/2022	Mercury, Total	EPA 1631E	=	4.5	0.2	0.5	ng/L	Caltest	4/25/22	4/26/22
SE78	SC-RAIN	10/22/2021	Mercury, Total	EPA 1631E	=	11	0.2	0.5	ng/L	Caltest	10/27/21	10/28/21
SE79	SC-RAIN	3/28/2022	Mercury, Total	EPA 1631E	=	4.6	0.2	0.5	ng/L	Caltest	3/30/22	4/1/22
SE80	SC-RAIN	4/22/2022	Mercury, Total	EPA 1631E	=	3.7	0.2	0.5	ng/L	Caltest	4/25/22	4/26/22
DW48	CR-39	8/30/2021	Methyl Mercury	EPA 1630	=	0.43	0.02	0.05	ng/L	Caltest	9/1/21	9/1/21
SE78	CR-39	10/22/2021	Methyl Mercury	EPA 1630	=	0.1	0.02	0.05	ng/L	Caltest	11/1/21	11/2/21
DW49	CR-39	2/10/2022	Methyl Mercury	EPA 1630	J	0.02		0.05	ng/L	Caltest	2/24/22	2/25/22
SE79	CR-39	3/28/2022	Methyl Mercury	EPA 1630	=	0.166	0.023	0.05	ng/L	Brooks Applied	5/19/22	5/20/22
SE80	CR-39	4/22/2022	Methyl Mercury	EPA 1630	=	0.192	0.023	0.049	ng/L	Brooks Applied		
DW50	CR-39	5/11/2022	Methyl Mercury	EPA 1630	J	0.03	0.023	0.05	ng/L	Brooks Applied	5/11/22	6/3/22
SW51	CR-39	6/15/2022	Methyl Mercury	EPA 1630	=	0.222	0.023	0.049	ng/L	Brooks Applied	7/11/22	7/12/22
DW48	CR-39R	8/30/2021	Methyl Mercury	EPA 1630	J	0.03	0.02	0.05	ng/L	Caltest	9/1/21	9/1/21
SE78	CR-39R	10/22/2021	Methyl Mercury	EPA 1630	J	0.04	0.02	0.05	ng/L	Caltest	11/1/21	11/2/21
DW49	CR-39R	2/10/2022	Methyl Mercury	EPA 1630	J	0.04		0.05	ng/L	Caltest	2/24/22	2/25/22
SE79	CR-39R	3/28/2022	Methyl Mercury	EPA 1630	<	0.024	0.024	0.051	ng/L	Brooks Applied	5/19/22	5/20/22

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE80	CR-39R	4/22/2022	Methyl Mercury	EPA 1630	J	0.046	0.023	0.05	ng/L	Brooks Applied		
DW50	CR-39R	5/11/2022	Methyl Mercury	EPA 1630	<	ND	0.023	0.049	ng/L	Brooks Applied	5/11/22	6/3/22
SW51	CR-39R	6/15/2022	Methyl Mercury	EPA 1630	J	0.048	0.023	0.048	ng/L	Brooks Applied	7/11/22	7/12/22
DW48	CR-41	8/30/2021	Methyl Mercury	EPA 1630	=	0.09	0.02	0.05	ng/L	Caltest	9/1/21	9/1/21
SE78	CR-41	10/22/2021	Methyl Mercury	EPA 1630	=	1.1	0.02	0.05	ng/L	Caltest	11/1/21	11/2/21
DW49	CR-41	2/10/2022	Methyl Mercury	EPA 1630	<	ND		0.05	ng/L	Caltest	2/24/22	2/25/22
SE79	CR-41	3/28/2022	Methyl Mercury	EPA 1630	=	0.128	0.022	0.049	ng/L	Brooks Applied	5/19/22	5/20/22
DW50	CR-41	5/11/2022	Methyl Mercury	EPA 1630	<	ND	0.022	0.048	ng/L	Brooks Applied	5/11/22	6/3/22
SW51	CR-41	6/15/2022	Methyl Mercury	EPA 1630	=	0.098	0.023	0.049	ng/L	Brooks Applied	7/11/22	7/12/22
DW48	CR-42	8/30/2021	Methyl Mercury	EPA 1630	=	0.06	0.02	0.05	ng/L	Caltest	9/1/21	9/1/21
SE78	CR-42	10/22/2021	Methyl Mercury	EPA 1630	=	0.23	0.02	0.05	ng/L	Caltest	11/1/21	11/2/21
DW49	CR-42	2/10/2022	Methyl Mercury	EPA 1630	=	0.08		0.05	ng/L	Caltest	2/24/22	2/25/22
SE79	CR-42	3/28/2022	Methyl Mercury	EPA 1630	=	0.095	0.023	0.049	ng/L	Brooks Applied	5/19/22	5/20/22
SE80	CR-42	4/22/2022	Methyl Mercury	EPA 1630	=	0.134	0.023	0.05	ng/L	Brooks Applied		
DW50	CR-42	5/11/2022	Methyl Mercury	EPA 1630	<	ND	0.022	0.049	ng/L	Brooks Applied	5/11/22	6/3/22
SW51	CR-42	6/15/2022	Methyl Mercury	EPA 1630	=	0.641	0.023	0.051	ng/L	Brooks Applied	7/11/22	7/12/22
DW48	CR-46	8/30/2021	Methyl Mercury	EPA 1630	J	0.03	0.02	0.05	ng/L	Caltest	9/1/21	9/1/21
SE78	CR-46	10/22/2021	Methyl Mercury	EPA 1630	=	0.1	0.02	0.05	ng/L	Caltest	11/1/21	11/2/21
DW49	CR-46	2/10/2022	Methyl Mercury	EPA 1630	<	ND	0.02	0.05	ng/L	Caltest	2/24/22	2/25/22
SE79	CR-46	3/28/2022	Methyl Mercury	EPA 1630	=	0.097	0.023	0.051	ng/L	Brooks Applied	5/19/22	5/20/22
SE80	CR-46	4/22/2022	Methyl Mercury	EPA 1630	=	0.167	0.023	0.049	ng/L	Brooks Applied		
DW50	CR-46	5/11/2022	Methyl Mercury	EPA 1630	=	0.185	0.023	0.049	ng/L	Brooks Applied	5/11/22	6/3/22
SW51	CR-46	6/15/2022	Methyl Mercury	EPA 1630	=	0.577	0.023	0.05	ng/L	Brooks Applied	7/11/22	7/12/22
DW48	CR-46R	8/30/2021	Methyl Mercury	EPA 1630	=	0.09	0.02	0.05	ng/L	Caltest	9/1/21	9/1/21
SE78	CR-46R	10/22/2021	Methyl Mercury	EPA 1630	=	0.1	0.02	0.05	ng/L	Caltest	11/1/21	11/2/21
DW49	CR-46R	2/10/2022	Methyl Mercury	EPA 1630	=	0.08		0.05	ng/L	Caltest	2/24/22	2/25/22
SE79	CR-46R	3/28/2022	Methyl Mercury	EPA 1630	=	0.098	0.023	0.051	ng/L	Brooks Applied	5/19/22	5/20/22
SE80	CR-46R	4/22/2022	Methyl Mercury	EPA 1630	=	0.292	0.022	0.048	ng/L	Brooks Applied		
DW50	CR-46R	5/11/2022	Methyl Mercury	EPA 1630	<	ND	0.023	0.049	ng/L	Brooks Applied	5/11/22	6/3/22
SW51	CR-46R	6/15/2022	Methyl Mercury	EPA 1630	=	0.17	0.023	0.05	ng/L	Brooks Applied	7/11/22	7/12/22
SE78	NE-RAIN	10/22/2021	Methyl Mercury	EPA 1630	J	0.04	0.02	0.05	ng/L	Caltest	11/1/21	11/2/21
SE79	NE-RAIN	3/28/2022	Methyl Mercury	EPA 1630	J	0.048	0.022	0.049	ng/L	Brooks Applied	5/19/22	5/20/22

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE80	NE-RAIN	4/22/2022	Methyl Mercury	EPA 1630	=	0.071	0.023	0.049	ng/L	Brooks Applied		
SE78	SC-RAIN	10/22/2021	Methyl Mercury	EPA 1630	=	0.08	0.02	0.05	ng/L	Caltest	11/1/21	11/2/21
SE79	SC-RAIN	3/28/2022	Methyl Mercury	EPA 1630	=	0.155	0.023	0.05	ng/L	Brooks Applied	5/19/22	5/20/22
SE80	SC-RAIN	4/22/2022	Methyl Mercury	EPA 1630	=	0.093	0.023	0.05	ng/L	Brooks Applied		
SW51	CR-46	6/15/2022	Aluminum	EPA 200.8	=	180	4	10	ug/L	Caltest	6/20/22	6/23/22
SW51	CR-46	6/15/2022	Aluminum	EPA 200.8 (filtrate)	=	20	4	10	ug/L	Caltest	6/27/22	6/28/22
SW51	CR-46R	6/15/2022	Aluminum	EPA 200.8	=	140	4	10	ug/L	Caltest	6/20/22	6/23/22
SW51	CR-46R	6/15/2022	Aluminum	EPA 200.8 (filtrate)	J	8	4	10	ug/L	Caltest	6/27/22	6/28/22
DW48	CR-46	8/30/2021	Aluminum, Dissolved	EPA 200.8 (filtrate)	<	ND	4	10	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Aluminum, Dissolved	EPA 200.8 (filtrate)	=	110	4	10	ug/L	Caltest	10/26/21	10/27/21
DW49	CR-46	2/10/2022	Aluminum, Dissolved	EPA 200.8 (filtrate)	<	ND	4	10	ug/L	Caltest	2/14/22	2/15/22
SE79	CR-46	3/28/2022	Aluminum, Dissolved	EPA 200.8 (filtrate)	=	29	4	10	ug/L	Caltest	4/8/22	4/11/22
SE80	CR-46	4/22/2022	Aluminum, Dissolved	EPA 200.8 (filtrate)	=	48	4	10	ug/L	Caltest	5/2/22	5/5/22
DW50	CR-46	5/11/2022	Aluminum, Dissolved	EPA 200.8	J	9.5	4	10	ug/L	Caltest	5/11/22	5/20/22
DW50	CR-46	5/11/2022	Aluminum, Dissolved	EPA 200.8	=	104	4	10	ug/L	Caltest	5/11/22	5/20/22
DW50	CR-46	5/11/2022	Aluminum, Dissolved	EPA 200.8	=	103	4	10	ug/L	Caltest	5/11/22	5/20/22
DW48	CR-46R	8/30/2021	Aluminum, Dissolved	EPA 200.8 (filtrate)	=	10	4	10	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Aluminum, Dissolved	EPA 200.8 (filtrate)	=	75	4	10	ug/L	Caltest	10/26/21	10/27/21
DW49	CR-46R	2/10/2022	Aluminum, Dissolved	EPA 200.8 (filtrate)	<	ND		10	ug/L	Caltest	2/14/22	2/15/22
SE79	CR-46R	3/28/2022	Aluminum, Dissolved	EPA 200.8 (filtrate)	=	48	4	10	ug/L	Caltest	4/8/22	4/11/22
SE80	CR-46R	4/22/2022	Aluminum, Dissolved	EPA 200.8 (filtrate)	=	32	4	10	ug/L	Caltest	5/2/22	5/5/22
DW50	CR-46R	5/11/2022	Aluminum, Dissolved	EPA 200.8	J	5.4	4	10	ug/L	Caltest	5/11/22	5/20/22
DW48	CR-46	8/30/2021	Aluminum, Total	EPA 200.8	=	640	20	25	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Aluminum, Total	EPA 200.8	=	2200	40	50	ug/L	Caltest	10/28/21	11/4/21
DW49	CR-46	2/10/2022	Aluminum, Total	EPA 200.8	=	44	4	10	ug/L	Caltest	2/15/22	2/16/22
SE79	CR-46	3/28/2022	Aluminum, Total	EPA 200.8	=	850	8	10	ug/L	Caltest	3/31/22	4/5/22
SE80	CR-46	4/22/2022	Aluminum, Total	EPA 200.8	=	1900	20	25	ug/L	Caltest	4/25/22	5/4/22
DW50	CR-46	5/11/2022	Aluminum, Total	EPA 200.8	=	150	4	10	ug/L	Caltest	5/11/22	5/17/22
DW48	CR-46R	8/30/2021	Aluminum, Total	EPA 200.8	=	1600	16	20	ug/L	Caltest	9/2/21	9/7/21
SE78	CR-46R	10/22/2021	Aluminum, Total	EPA 200.8	=	3500	40	50	ug/L	Caltest	10/28/21	11/4/21
DW49	CR-46R	2/10/2022	Aluminum, Total	EPA 200.8	=	420		10	ug/L	Caltest	2/15/22	2/17/22
SE79	CR-46R	3/28/2022	Aluminum, Total	EPA 200.8	=	1200	16	20	ug/L	Caltest	3/31/22	4/5/22

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE80	CR-46R	4/22/2022	Aluminum, Total	EPA 200.8	=	2100	20	25	ug/L	Caltest	4/25/22	5/4/22
DW50	CR-46R	5/11/2022	Aluminum, Total	EPA 200.8	=	130	4	10	ug/L	Caltest	5/11/22	5/17/22
SW51	CR-46	6/15/2022	Copper	EPA 200.8	=	19	0.36	0.5	ug/L	Caltest	6/20/22	6/23/22
SW51	CR-46	6/15/2022	Copper	EPA 200.8 (filtrate)	=	1.4	0.36	0.5	ug/L	Caltest	6/27/22	6/28/22
SW51	CR-46R	6/15/2022	Copper	EPA 200.8	=	3.1	0.36	0.5	ug/L	Caltest	6/20/22	6/23/22
SW51	CR-46R	6/15/2022	Copper	EPA 200.8 (filtrate)	=	2.1	0.36	0.5	ug/L	Caltest	6/27/22	6/28/22
DW48	CR-46	8/30/2021	Copper, Dissolved	EPA 200.8 (filtrate)	=	1.7	0.15	0.5	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Copper, Dissolved	EPA 200.8 (filtrate)	=	21	0.15	0.5	ug/L	Caltest	10/26/21	10/27/21
DW49	CR-46	2/10/2022	Copper, Dissolved	EPA 200.8 (filtrate)	J	0.45	0.36	0.5	ug/L	Caltest	2/14/22	2/15/22
SE79	CR-46	3/28/2022	Copper, Dissolved	EPA 200.8 (filtrate)	=	8.1	0.36	0.5	ug/L	Caltest	3/31/22	4/1/22
SE80	CR-46	4/22/2022	Copper, Dissolved	EPA 200.8 (filtrate)	=	8	0.36	0.5	ug/L	Caltest	5/2/22	5/5/22
DW50	CR-46	5/11/2022	Copper, Dissolved	EPA 200.8	=	1.8	0.36	0.5	ug/L	Caltest	5/11/22	5/20/22
DW48	CR-46R	8/30/2021	Copper, Dissolved	EPA 200.8 (filtrate)	=	2.2	0.15	0.5	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Copper, Dissolved	EPA 200.8 (filtrate)	=	7.6	0.15	0.5	ug/L	Caltest	10/26/21	10/27/21
DW49	CR-46R	2/10/2022	Copper, Dissolved	EPA 200.8 (filtrate)	=	3.7		0.5	ug/L	Caltest	2/14/22	2/15/22
SE79	CR-46R	3/28/2022	Copper, Dissolved	EPA 200.8 (filtrate)	=	6.9	0.36	0.5	ug/L	Caltest	3/31/22	4/1/22
SE80	CR-46R	4/22/2022	Copper, Dissolved	EPA 200.8 (filtrate)	=	4.6	0.36	0.5	ug/L	Caltest	5/2/22	5/5/22
DW50	CR-46R	5/11/2022	Copper, Dissolved	EPA 200.8	=	2.2	0.36	0.5	ug/L	Caltest	5/11/22	5/20/22
DW48	CR-46	8/30/2021	Copper, Total	EPA 200.8	=	69	0.75	2.5	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Copper, Total	EPA 200.8	=	36	0.15	0.5	ug/L	Caltest	10/28/21	10/29/21
DW49	CR-46	2/10/2022	Copper, Total	EPA 200.8	=	1.6	0.36	0.5	ug/L	Caltest	2/15/22	2/16/22
SE79	CR-46	3/28/2022	Copper, Total	EPA 200.8	=	19	0.36	0.5	ug/L	Caltest	3/31/22	4/1/22
SE80	CR-46	4/22/2022	Copper, Total	EPA 200.8	=	17	0.36	0.5	ug/L	Caltest	4/25/22	4/29/22
DW50	CR-46	5/11/2022	Copper, Total	EPA 200.8	=	9.3	0.36	0.5	ug/L	Caltest	5/11/22	5/17/22
DW48	CR-46R	8/30/2021	Copper, Total	EPA 200.8	=	6.1	0.15	0.5	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Copper, Total	EPA 200.8	=	51	0.15	0.5	ug/L	Caltest	10/28/21	10/29/21
DW49	CR-46R	2/10/2022	Copper, Total	EPA 200.8	=	6		0.5	ug/L	Caltest	2/15/22	2/17/22
SE79	CR-46R	3/28/2022	Copper, Total	EPA 200.8	=	13	0.36	0.5	ug/L	Caltest	3/31/22	4/1/22
SE80	CR-46R	4/22/2022	Copper, Total	EPA 200.8	=	12	0.36	0.5	ug/L	Caltest	4/25/22	4/29/22
DW50	CR-46R	5/11/2022	Copper, Total	EPA 200.8	=	2.9	0.36	0.5	ug/L	Caltest	5/11/22	5/17/22
SW51	CR-46	6/15/2022	Iron	EPA 200.8	=	6.2	0.005	0.05	mg/L	Caltest	6/20/22	6/23/22
SW51	CR-46R	6/15/2022	Iron	EPA 200.8	=	0.27	0.005	0.05	mg/L	Caltest	6/20/22	6/23/22

City of Stockton and County of San Joaquin
Ambient Monitoring Program 2021-2022 Data

Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
DW48	CR-46	8/30/2021	Iron, Total	EPA 200.8	=	24	0.025	0.12	mg/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Iron, Total	EPA 200.8	=	3	0.005	0.05	mg/L	Caltest	10/28/21	10/29/21
DW49	CR-46	2/10/2022	Iron, Total	EPA 200.8	=	0.56	0.005	0.05	mg/L	Caltest	2/15/22	2/16/22
SE79	CR-46	3/28/2022	Iron, Total	EPA 200.8	=	1.4	0.005	0.05	mg/L	Caltest	3/31/22	4/1/22
SE80	CR-46	4/22/2022	Iron, Total	EPA 200.8	=	3	0.005	0.05	mg/L	Caltest	4/25/22	4/29/22
DW50	CR-46	5/11/2022	Iron, Total	EPA 200.8	=	4.7	0.005	0.05	mg/L	Caltest	5/11/22	5/17/22
DW48	CR-46R	8/30/2021	Iron, Total	EPA 200.8	=	2.1	0.005	0.05	mg/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Iron, Total	EPA 200.8	=	5.1	0.005	0.05	mg/L	Caltest	10/28/21	10/29/21
DW49	CR-46R	2/10/2022	Iron, Total	EPA 200.8	=	0.68		0.05	mg/L	Caltest	2/15/22	2/17/22
SE79	CR-46R	3/28/2022	Iron, Total	EPA 200.8	=	1.9	0.005	0.05	mg/L	Caltest	3/31/22	4/1/22
SE80	CR-46R	4/22/2022	Iron, Total	EPA 200.8	=	3	0.005	0.05	mg/L	Caltest	4/25/22	4/29/22
DW50	CR-46R	5/11/2022	Iron, Total	EPA 200.8	=	0.23	0.005	0.05	mg/L	Caltest	5/11/22	5/17/22
SW51	CR-46	6/15/2022	Lead	EPA 200.8	=	2.7	0.07	0.25	ug/L	Caltest	6/20/22	6/23/22
SW51	CR-46	6/15/2022	Lead	EPA 200.8 (filtrate)	J	0.16	0.07	0.25	ug/L	Caltest	6/27/22	6/28/22
SW51	CR-46R	6/15/2022	Lead	EPA 200.8	=	0.29	0.07	0.25	ug/L	Caltest	6/20/22	6/23/22
SW51	CR-46R	6/15/2022	Lead	EPA 200.8 (filtrate)	<	ND	0.07	0.25	ug/L	Caltest	6/27/22	6/28/22
DW48	CR-46	8/30/2021	Lead, Dissolved	EPA 200.8 (filtrate)	J	0.05	0.03	0.25	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Lead, Dissolved	EPA 200.8 (filtrate)	=	1.1	0.03	0.25	ug/L	Caltest	10/26/21	10/27/21
DW49	CR-46	2/10/2022	Lead, Dissolved	EPA 200.8 (filtrate)	<	ND	0.07	0.25	ug/L	Caltest	2/14/22	2/15/22
SE79	CR-46	3/28/2022	Lead, Dissolved	EPA 200.8 (filtrate)	=	1.4	0.07	0.25	ug/L	Caltest	3/31/22	4/1/22
SE80	CR-46	4/22/2022	Lead, Dissolved	EPA 200.8 (filtrate)	=	0.37	0.07	0.25	ug/L	Caltest	5/2/22	5/5/22
DW50	CR-46	5/11/2022	Lead, Dissolved	EPA 200.8	J	0.17	0.07	0.25	ug/L	Caltest	5/11/22	5/20/22
DW48	CR-46R	8/30/2021	Lead, Dissolved	EPA 200.8 (filtrate)	J	0.03	0.03	0.25	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Lead, Dissolved	EPA 200.8 (filtrate)	=	1.2	0.03	0.25	ug/L	Caltest	10/26/21	10/27/21
DW49	CR-46R	2/10/2022	Lead, Dissolved	EPA 200.8 (filtrate)	<	ND		0.25	ug/L	Caltest	2/14/22	2/15/22
SE79	CR-46R	3/28/2022	Lead, Dissolved	EPA 200.8 (filtrate)	J	0.23	0.07	0.25	ug/L	Caltest	3/31/22	4/1/22
SE80	CR-46R	4/22/2022	Lead, Dissolved	EPA 200.8 (filtrate)	<	ND	0.07	0.25	ug/L	Caltest	5/2/22	5/5/22
DW50	CR-46R	5/11/2022	Lead, Dissolved	EPA 200.8	<	ND	0.07	0.25	ug/L	Caltest	5/11/22	5/20/22
DW48	CR-46	8/30/2021	Lead, Total	EPA 200.8	=	16	0.15	0.5	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Lead, Total	EPA 200.8	=	9.5	0.03	0.25	ug/L	Caltest	10/28/21	10/29/21
DW49	CR-46	2/10/2022	Lead, Total	EPA 200.8	=	0.67	0.07	0.25	ug/L	Caltest	2/15/22	2/16/22
SE79	CR-46	3/28/2022	Lead, Total	EPA 200.8	=	5.1	0.07	0.25	ug/L	Caltest	3/31/22	4/1/22

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Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE80	CR-46	4/22/2022	Lead, Total	EPA 200.8	=	8	0.07	0.25	ug/L	Caltest	4/25/22	4/29/22
DW50	CR-46	5/11/2022	Lead, Total	EPA 200.8	=	2	0.07	0-Jan	ug/L	Caltest	5/11/22	5/17/22
DW48	CR-46R	8/30/2021	Lead, Total	EPA 200.8	=	1.4	0.03	0.25	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Lead, Total	EPA 200.8	=	18	0.03	0.25	ug/L	Caltest	10/28/21	10/29/21
DW49	CR-46R	2/10/2022	Lead, Total	EPA 200.8	=	0.6		0.25	ug/L	Caltest	2/15/22	2/17/22
SE79	CR-46R	3/28/2022	Lead, Total	EPA 200.8	=	2.1	0.07	0.25	ug/L	Caltest	3/31/22	4/1/22
SE80	CR-46R	4/22/2022	Lead, Total	EPA 200.8	=	3.4	0.07	0.25	ug/L	Caltest	4/25/22	4/29/22
DW50	CR-46R	5/11/2022	Lead, Total	EPA 200.8	J	0.22	0.07	0.25	ug/L	Caltest	5/11/22	5/17/22
SW51	CR-46	6/15/2022	Zinc	EPA 200.8	=	350	1.4	10	ug/L	Caltest	6/20/22	6/24/22
SW51	CR-46R	6/15/2022	Zinc	EPA 200.8	J	5.9	0.7	10	ug/L	Caltest	6/20/22	6/23/22
DW48	CR-46	8/30/2021	Zinc, Total	EPA 200.8	=	520	3.5	10	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Zinc, Total	EPA 200.8	=	710	2.8	10	ug/L	Caltest	10/28/21	11/4/21
DW49	CR-46	2/10/2022	Zinc, Total	EPA 200.8	=	70	0.7	10	ug/L	Caltest	2/15/22	2/16/22
SE79	CR-46	3/28/2022	Zinc, Total	EPA 200.8	=	190	0.7	10	ug/L	Caltest	3/31/22	4/1/22
SE80	CR-46	4/22/2022	Zinc, Total	EPA 200.8	=	160	0.7	1	ug/L	Caltest	4/25/22	4/29/22
DW50	CR-46	5/11/2022	Zinc, Total	EPA 200.8	=	100	0.7	10	ug/L	Caltest	5/11/22	5/17/22
DW48	CR-46R	8/30/2021	Zinc, Total	EPA 200.8	=	15	0.7	10	ug/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Zinc, Total	EPA 200.8	=	500	2.8	10	ug/L	Caltest	10/28/21	11/4/21
DW49	CR-46R	2/10/2022	Zinc, Total	EPA 200.8	J	9		10	ug/L	Caltest	2/15/22	2/17/22
SE79	CR-46R	3/28/2022	Zinc, Total	EPA 200.8	=	51	0.7	10	ug/L	Caltest	3/31/22	4/1/22
SE80	CR-46R	4/22/2022	Zinc, Total	EPA 200.8	=	41	0.7	1	ug/L	Caltest	4/25/22	4/29/22
DW50	CR-46R	5/11/2022	Zinc, Total	EPA 200.8	J	5.8	0.7	10	ug/L	Caltest	5/11/22	5/17/22
DW48	CR-46	8/30/2021	Bifenthrin	EPA 625.1	=	41	3	5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Bifenthrin	EPA 625.1	=	130	2	2.5	ng/L	Caltest	10/23/21	11/5/21
DW49	CR-46	2/10/2022	Bifenthrin	EPA 625.1	J	0.4		0.5	ng/L	Caltest	2/11/22	2/16/22
SE79	CR-46	3/28/2022	Bifenthrin	EPA 625.1	=	5.3	3	5	ng/L	Caltest	3/31/22	4/21/22
SE80	CR-46	4/22/2022	Bifenthrin	EPA 625.1	=	11	0.6	1	ng/L	Caltest	4/25/22	5/12/22
DW50	CR-46	5/11/2022	Bifenthrin	EPA 625.1	=	10	2	2	ng/L	Caltest		5/20/22
DW48	CR-46R	8/30/2021	Bifenthrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Bifenthrin	EPA 625.1	=	20	2	2.5	ng/L	Caltest	10/23/21	11/5/21
DW49	CR-46R	2/10/2022	Bifenthrin	EPA 625.1	<	ND		0.5	ng/L	Caltest	2/11/22	2/16/22
SE79	CR-46R	3/28/2022	Bifenthrin	EPA 625.1	J	3.9	3	5	ng/L	Caltest	3/31/22	4/21/22

Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE80	CR-46R	4/22/2022	Bifenthrin	EPA 625.1	=	1.7	0.3	0.5	ng/L	Caltest	4/25/22	5/6/22
DW50	CR-46R	5/11/2022	Bifenthrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest		5/19/22
SE78	NE-RAIN	10/22/2021	Bifenthrin	EPA 625.1	=	5.8	0.3	0.5	ng/L	Caltest	10/23/21	11/5/21
SE79	NE-RAIN	3/28/2022	Bifenthrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest	3/31/22	4/14/22
SE80	NE-RAIN	4/22/2022	Bifenthrin	EPA 625.1	=	1.9	0.3	0.5	ng/L	Caltest	4/25/22	5/6/22
SE78	SC-RAIN	10/22/2021	Bifenthrin	EPA 625.1	=	5.9	0.3	0.5	ng/L	Caltest	10/23/21	11/5/21
SE79	SC-RAIN	3/28/2022	Bifenthrin	EPA 625.1	=	0.5	0.3	0.5	ng/L	Caltest	3/31/22	4/14/22
SE80	SC-RAIN	4/22/2022	Bifenthrin	EPA 625.1	=	1.4	0.3	0.5	ng/L	Caltest	4/25/22	5/6/22
DW48	CR-46	8/30/2021	Cyfluthrin	EPA 625.1	<	ND	4	5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Cyfluthrin	EPA 625.1	=	5.8	2	2.5	ng/L	Caltest	10/23/21	11/5/21
DW49	CR-46	2/10/2022	Cyfluthrin	EPA 625.1	<	ND		0.5	ng/L	Caltest	2/11/22	2/16/22
SE79	CR-46	3/28/2022	Cyfluthrin	EPA 625.1	<	ND	0.4	0.5	ng/L	Caltest	3/31/22	4/14/22
SE80	CR-46	4/22/2022	Cyfluthrin	EPA 625.1	<	ND	0.8	1	ng/L	Caltest	4/25/22	5/12/22
DW50	CR-46	5/11/2022	Cyfluthrin	EPA 625.1	<	ND	0.4	0.5	ng/L	Caltest		5/19/22
DW48	CR-46R	8/30/2021	Cyfluthrin	EPA 625.1	<	ND	0.4	0.5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Cyfluthrin	EPA 625.1	<	ND	2	2.5	ng/L	Caltest	10/23/21	11/5/21
DW49	CR-46R	2/10/2022	Cyfluthrin	EPA 625.1	<	ND		0.5	ng/L	Caltest	2/11/22	2/16/22
SE79	CR-46R	3/28/2022	Cyfluthrin	EPA 625.1	=	9.4	4	5	ng/L	Caltest	3/31/22	4/21/22
SE80	CR-46R	4/22/2022	Cyfluthrin	EPA 625.1	<	ND	0.4	0.5	ng/L	Caltest	4/25/22	5/6/22
DW50	CR-46R	5/11/2022	Cyfluthrin	EPA 625.1	<	ND	0.4	0.5	ng/L	Caltest		5/19/22
SE78	NE-RAIN	10/22/2021	Cyfluthrin	EPA 625.1	=	0.8	0.4	0.5	ng/L	Caltest	10/23/21	11/5/21
SE79	NE-RAIN	3/28/2022	Cyfluthrin	EPA 625.1	<	ND	0.4	0.5	ng/L	Caltest	3/31/22	4/14/22
SE80	NE-RAIN	4/22/2022	Cyfluthrin	EPA 625.1	<	ND	0.4	0.5	ng/L	Caltest	4/25/22	5/6/22
SE78	SC-RAIN	10/22/2021	Cyfluthrin	EPA 625.1	=	0.6	0.4	0.5	ng/L	Caltest	10/23/21	11/5/21
SE79	SC-RAIN	3/28/2022	Cyfluthrin	EPA 625.1	<	ND	0.4	0.5	ng/L	Caltest	3/31/22	4/14/22
SE80	SC-RAIN	4/22/2022	Cyfluthrin	EPA 625.1	<	ND	0.4	0.5	ng/L	Caltest	4/25/22	5/6/22
DW48	CR-46	8/30/2021	Cypermethrin	EPA 625.1	=	5.6	3	5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Cypermethrin	EPA 625.1	=	9	2	2.5	ng/L	Caltest	10/23/21	11/5/21
DW49	CR-46	2/10/2022	Cypermethrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest	2/11/22	2/16/22
SE79	CR-46	3/28/2022	Cypermethrin	EPA 625.1	J	3.1	3	5	ng/L	Caltest	3/31/22	4/21/22
SE80	CR-46	4/22/2022	Cypermethrin	EPA 625.1	=	1.2	0.6	1	ng/L	Caltest	4/25/22	5/12/22
DW50	CR-46	5/11/2022	Cypermethrin	EPA 625.1	=	1	0.3	0.5	ng/L	Caltest		5/19/22

Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
DW48	CR-46R	8/30/2021	Cypermethrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Cypermethrin	EPA 625.1	=	10	2	2.5	ng/L	Caltest	10/23/21	11/5/21
DW49	CR-46R	2/10/2022	Cypermethrin	EPA 625.1	<	ND		0.5	ng/L	Caltest	2/11/22	2/16/22
SE79	CR-46R	3/28/2022	Cypermethrin	EPA 625.1	<	ND	3	5	ng/L	Caltest	3/31/22	4/21/22
SE80	CR-46R	4/22/2022	Cypermethrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest	4/25/22	5/6/22
DW50	CR-46R	5/11/2022	Cypermethrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest		5/19/22
SE78	NE-RAIN	10/22/2021	Cypermethrin	EPA 625.1	=	1.2	0.3	0.5	ng/L	Caltest	10/23/21	11/5/21
SE79	NE-RAIN	3/28/2022	Cypermethrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest	3/31/22	4/14/22
SE80	NE-RAIN	4/22/2022	Cypermethrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest	4/25/22	5/6/22
SE78	SC-RAIN	10/22/2021	Cypermethrin	EPA 625.1	=	1.3	0.3	0.5	ng/L	Caltest	10/23/21	11/5/21
SE79	SC-RAIN	3/28/2022	Cypermethrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest	3/31/22	4/14/22
SE80	SC-RAIN	4/22/2022	Cypermethrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest	4/25/22	5/6/22
DW48	CR-46	8/30/2021	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	4	10	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest	10/23/21	11/6/21
DW49	CR-46	2/10/2022	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest	2/11/22	2/16/22
SE79	CR-46	3/28/2022	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	2	5	ng/L	Caltest	3/31/22	4/14/22
SE80	CR-46	4/22/2022	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.8	2	ng/L	Caltest	4/25/22	5/12/22
DW50	CR-46	5/11/2022	Esfenvalerate:Fenvalerate	EPA 625.1	=	2	0.4	1	ng/L	Caltest		5/19/22
DW48	CR-46R	8/30/2021	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest	10/23/21	11/6/21
DW49	CR-46R	2/10/2022	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND		1	ng/L	Caltest	2/11/22	2/16/22
SE79	CR-46R	3/28/2022	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest	3/31/22	4/14/22
SE80	CR-46R	4/22/2022	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest	4/25/22	5/6/22
DW50	CR-46R	5/11/2022	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest		5/19/22
SE78	NE-RAIN	10/22/2021	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest	10/23/21	11/5/21
SE79	NE-RAIN	3/28/2022	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest	3/31/22	4/14/22
SE80	NE-RAIN	4/22/2022	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest	4/25/22	5/6/22
SE78	SC-RAIN	10/22/2021	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest	10/23/21	11/5/21
SE79	SC-RAIN	3/28/2022	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest	3/31/22	4/14/22
SE80	SC-RAIN	4/22/2022	Esfenvalerate:Fenvalerate	EPA 625.1	<	ND	0.4	1	ng/L	Caltest	4/25/22	5/6/22
DW48	CR-46	8/30/2021	Lambda-Cyhalothrin	EPA 625.1	=	13	3	5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Lambda-Cyhalothrin	EPA 625.1	<	ND	2	2.5	ng/L	Caltest	10/23/21	11/5/21

Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
DW49	CR-46	2/10/2022	Lambda-Cyhalothrin	EPA 625.1	=	0.5	0.3	0.5	ng/L	Caltest	2/11/22	2/16/22
SE79	CR-46	3/28/2022	Lambda-Cyhalothrin	EPA 625.1	<	ND	2	2.5	ng/L	Caltest	3/31/22	4/14/22
SE80	CR-46	4/22/2022	Lambda-Cyhalothrin	EPA 625.1	=	1.9	0.6	1	ng/L	Caltest	4/25/22	5/12/22
DW50	CR-46	5/11/2022	Lambda-Cyhalothrin	EPA 625.1	=	1	0.3	0.5	ng/L	Caltest		5/19/22
DW48	CR-46R	8/30/2021	Lambda-Cyhalothrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Lambda-Cyhalothrin	EPA 625.1	J	1.6	2	2.5	ng/L	Caltest	10/23/21	11/5/21
DW49	CR-46R	2/10/2022	Lambda-Cyhalothrin	EPA 625.1	<	ND		0.5	ng/L	Caltest	2/11/22	2/16/22
SE79	CR-46R	3/28/2022	Lambda-Cyhalothrin	EPA 625.1	<	ND	2	2.5	ng/L	Caltest	3/31/22	4/14/22
SE80	CR-46R	4/22/2022	Lambda-Cyhalothrin	EPA 625.1	=	0.6	0.3	0.5	ng/L	Caltest	4/25/22	5/6/22
DW50	CR-46R	5/11/2022	Lambda-Cyhalothrin	EPA 625.1	=	0.8	0.3	0.5	ng/L	Caltest		5/19/22
SE78	NE-RAIN	10/22/2021	Lambda-Cyhalothrin	EPA 625.1	=	1.4	0.3	0.5	ng/L	Caltest	10/23/21	11/5/21
SE79	NE-RAIN	3/28/2022	Lambda-Cyhalothrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest	3/31/22	4/14/22
SE80	NE-RAIN	4/22/2022	Lambda-Cyhalothrin	EPA 625.1	=	1	0.3	0.5	ng/L	Caltest	4/25/22	5/6/22
SE78	SC-RAIN	10/22/2021	Lambda-Cyhalothrin	EPA 625.1	=	1.1	0.3	0.5	ng/L	Caltest	10/23/21	11/5/21
SE79	SC-RAIN	3/28/2022	Lambda-Cyhalothrin	EPA 625.1	<	ND	0.3	0.5	ng/L	Caltest	3/31/22	4/14/22
SE80	SC-RAIN	4/22/2022	Lambda-Cyhalothrin	EPA 625.1	=	0.5	0.3	0.5	ng/L	Caltest	4/25/22	5/6/22
DW48	CR-46	8/30/2021	Permethrin	EPA 625.1	<	ND	20	50	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46	10/22/2021	Permethrin	EPA 625.1	<	ND	10	25	ng/L	Caltest	10/23/21	11/5/21
DW49	CR-46	2/10/2022	Permethrin	EPA 625.1	<	ND	2	5	ng/L	Caltest	2/11/22	2/16/22
SE79	CR-46	3/28/2022	Permethrin	EPA 625.1	<	ND	10	25	ng/L	Caltest	3/31/22	4/14/22
SE80	CR-46	4/22/2022	Permethrin	EPA 625.1	J	4.7	4	10	ng/L	Caltest	4/25/22	5/12/22
DW50	CR-46	5/11/2022	Permethrin	EPA 625.1	<	ND	2	5	ng/L	Caltest		5/19/22
DW48	CR-46R	8/30/2021	Permethrin	EPA 625.1	<	ND	2	5	ng/L	Caltest	9/2/21	9/3/21
SE78	CR-46R	10/22/2021	Permethrin	EPA 625.1	<	ND	10	25	ng/L	Caltest	10/23/21	11/5/21
DW49	CR-46R	2/10/2022	Permethrin	EPA 625.1	<	ND		5	ng/L	Caltest	2/11/22	2/16/22
SE79	CR-46R	3/28/2022	Permethrin	EPA 625.1	<	ND	10	25	ng/L	Caltest	3/31/22	4/14/22
SE80	CR-46R	4/22/2022	Permethrin	EPA 625.1	<	ND	2	5	ng/L	Caltest	4/25/22	5/6/22
DW50	CR-46R	5/11/2022	Permethrin	EPA 625.1	<	ND	2	5	ng/L	Caltest		5/19/22
SE78	NE-RAIN	10/22/2021	Permethrin	EPA 625.1	J	3.7	2	5	ng/L	Caltest	10/23/21	11/5/21
SE79	NE-RAIN	3/28/2022	Permethrin	EPA 625.1	<	ND	2	5	ng/L	Caltest	3/31/22	4/14/22
SE80	NE-RAIN	4/22/2022	Permethrin	EPA 625.1	<	ND	2	5	ng/L	Caltest	4/25/22	5/6/22
SE78	SC-RAIN	10/22/2021	Permethrin	EPA 625.1	=	7.3	2	5	ng/L	Caltest	10/23/21	11/5/21

Ambient Monitoring Program 2021-2022 Data

Event	Site Code	Date Sampled	Analyte	Analytical Method	Q	Result	MDL	RL/ML	Units	Lab Name	Prep Date	Analysis Date
SE79	SC-RAIN	3/28/2022	Permethrin	EPA 625.1	<	ND	2	5	ng/L	Caltest	3/31/22	4/14/22
SE80	SC-RAIN	4/22/2022	Permethrin	EPA 625.1	<	ND	2	5	ng/L	Caltest	4/25/22	5/6/22
DW48	CR-46R	8/30/2021	Water Column Toxicity	EPA-821-R-02-012	=	100			% survival	Pacific EcoRisk		8/31/21

Notes:

HT = Hold time exceedance

J = Estimated (Data Not Quantified) above the MDL and below the RL

APPENDIX C

2021-2022 Data Summary Tables

CALAVERAS RIVER 2021-2022 ANNUAL MONITORING DATA TABLES

Table 1. Urban Discharge and Receiving Water Data

Event	Date	CR-46	CR-46R	CR-42	CR-41	CR-39	CR-39R	WQO
Fecal Indicator Bacteria, MPN/100mL								
E. Coli								
DW48	8/30/2021	>24,196	109	7,700	2,909	146	10	235
SE78	10/22/2021	12,990	15,530	>24,196	>24,196	529	211	235
DW49	2/10/2022	789	10	>24,196	2,613	<10	62	235
SE79	3/28/2022	8,164	11,199	4,884	4,884	63	146	235
SE80	4/22/2022	3,436	2,481	617	---[a]	613	20	235
DW50	5/11/2022	24,196	169	809	988	20	<10	235
DW51	6/15/2022	19,863	708	9,208	504	10	20	235
Fecal Coliform								
DW48	8/30/2021	35,000	240	>160,000	3,500	540	23	400
SE78	10/22/2021	54,000	92,000	>160,000	>160,000	2,400	1,100	400
DW49	2/10/2022	350	4	1,600	1,600	6	33	400
SE79	3/28/2022	17,000	28,000	14,000	HT 1,600	HT 240	>23	400
SE80	4/22/2022	17,000	1,700	3,500	---[a]	700	79	400
DW50	5/11/2022	5,400	1,600	>16,000	1,600	79	13	400
DW51	6/15/2022	>160,000	2,800	>160,000	9,400	7.8	23	400
Conventionals, mg/L								
Dissolved Oxygen								
DW48	8/30/2021	1.83	5.4	7.13	8.74	3.71	5.94	>5
SE78	10/22/2021	8.4	7.3	5.4	2.5	5.1	8.5	>6
DW49	2/10/2022	2	13.8	4.2	8.6	8.3	11.6	>5
SE79	3/28/2022	9.12	8.2	8.2	8.09	8.3	9.9	>5
SE80	4/22/2022	6.1	9.21	5.86	---[a]	7.8	10.2	>5
DW50	5/11/2022	4.5	10.43	5.44	8.11	7.05	16.12	>5
DW51	6/15/2022	1.22	7.6	1.1	6.8	5.1	5.7	>5
Oil and Grease								
DW48	8/30/2021	51	<1.4	-	-	-	-	-
SE78	10/22/2021	J 1.5	J 1.8	-	-	-	-	-
DW49	2/10/2022	<1.4	<5	-	-	-	-	-
SE79	3/28/2022	<1.4	<1.4	-	-	-	-	-
SE80	4/22/2022	<1.4	<1.4	-	-	-	-	-
DW50	5/11/2022	<1.4	<1.4	-	-	-	-	-
DW51	6/15/2022	<1.4	<1.4	-	-	-	-	-

Event	Date	CR-46	CR-46R	CR-42	CR-41	CR-39	CR-39R	WQO
General, mg/L								
Biological Oxygen Demand (BOD)								
DW48	8/30/2021	62	<5	61	7	35	<5	-
SE78	10/22/2021	57	50	147	213	59	11	-
DW49	2/10/2022	<5	<5	12	<5	7	<5	-
SE79	3/28/2022	44	17	39	48	24	<5	-
SE80	4/22/2022	6	8	<5		23	<5	-
DW50	5/11/2022	11	<5	10	<5	6	68	-
DW51	6/15/2022	22	<5	31	9	28	<5	-
Dissolved Organic Carbon (DOC)								
DW48	8/30/2021	9.7	3.7	-	-	-	-	-
SE78	10/22/2021	58	45	-	-	-	-	-
DW49	2/10/2022	3.6	8.2	-	-	-	-	-
SE79	3/28/2022	14	15	-	-	-	-	-
SE80	4/22/2022	8.3	6.6	-	-	-	-	-
DW50	5/11/2022	9.6	5.5	-	-	-	-	-
DW51	6/15/2022	39	5.0	-	-	-	-	-
Total Organic Carbon (TOC)								
DW48	8/30/2021	12	3.8	-	-	-	-	-
SE78	10/22/2021	52	39	-	-	-	-	-
DW49	2/10/2022	3.9	8.1	-	-	-	-	-
SE79	3/28/2022	14	16	-	-	-	-	-
SE80	4/22/2022	8.1	6.9	-	-	-	-	-
DW50	5/11/2022	12	6.0	-	-	-	-	-
DW51	6/15/2022	45	5.0	-	-	-	-	-
Mercury, ng/L								
Methyl Mercury								
DW48	8/30/2021	J 0.03	0.09	0.06	0.09	0.43	J 0.03	-
SE78	10/22/2021	0.1	0.1	0.23	1.1	0.1	J 0.04	-
DW49	2/10/2022	<0.02	0.08	0.08	<0.05	J 0.02	J 0.04	-
SE79	3/28/2022	0.097	0.098	0.095	0.128	0.166	<0.024	-
SE80	4/22/2022	0.167	0.292	0.134	---[a]	0.192	J 0.046	-
DW50	5/11/2022	0.185	<0.023	<0.022	<0.022	J 0.03	<0.023	-
DW51	6/15/2022	0.577	0.17	0.641	0.098	0.222	J 0.048	-
Total Mercury								
DW48	8/30/2021	3.8	3.9	2.9	3.4	7.2	2.1	0.05
SE78	10/22/2021	3.1	3.5	3.5	9.1	1.6	1.0	0.05
DW49	2/10/2022	0.5	1.8	1.1	1.4	1.9	1.6	0.05
SE79	3/28/2022	4.5	4.4	1.4	2.0	2.3	1.2	0.05

Event	Date	CR-46	CR-46R	CR-42	CR-41	CR-39	CR-39R	WQO
SE80	4/22/2022	8.6	5.7	4.8	---[a]	1.3	0.6	0.05
DW50	5/11/2022	3.8	2.7	3.5	2.0	3.6	1.1	0.05
DW51	6/15/2022	1.1	2.0	1.4	4.0	2.7	0.8	0.05
Total Metals								
Total Aluminum, µg/L								
DW48	8/30/2021	640	1,600	-	-	-	-	200
SE78	10/22/2021	2,200	3,500	-	-	-	-	750
DW49	2/10/2022	44	420	-	-	-	-	200
SE79	3/28/2022	850	1,200	-	-	-	-	750
SE80	4/22/2022	1,900	2,100	-	-	-	-	750
DW50	5/11/2022	150	130	-	-	-	-	200
DW51	6/15/2022	180	140	-	-	-	-	750
Total Iron, mg/L								
DW48	8/30/2021	24	2.1	-	-	-	-	0.3
SE78	10/22/2021	3	5.1	-	-	-	-	0.3
DW49	2/10/2022	0.56	0.68	-	-	-	-	0.3
SE79	3/28/2022	1.4	1.9	-	-	-	-	0.3
SE80	4/22/2022	3	3	-	-	-	-	0.3
DW50	5/11/2022	4.7	0.23	-	-	-	-	0.3
DW51	6/15/2022	6.2	0.27	-	-	-	-	0.3
Pyrethroids, ng/L								
Bifenthrin								
DW48	8/30/2021	41	<0.3	-	-	-	-	-
SE78	10/22/2021	130	20	-	-	-	-	-
DW49	2/10/2022	J 0.4	<0.5	-	-	-	-	-
SE79	3/28/2022	5.3	J 3.9	-	-	-	-	-
SE80	4/22/2022	11	1.7	-	-	-	-	-
DW50	5/11/2022	10	<0.3	-	-	-	-	-
DW51	6/15/2022	41	<0.3	-	-	-	-	-
Cyfluthrin								
DW48	8/30/2021	<4	<0.4	-	-	-	-	-
SE78	10/22/2021	5.8	<2	-	-	-	-	-
DW49	2/10/2022	<0.5	<0.5	-	-	-	-	-
SE79	3/28/2022	<0.4	9.4	-	-	-	-	-
SE80	4/22/2022	<0.8	<0.4	-	-	-	-	-
DW50	5/11/2022	<0.4	<0.4	-	-	-	-	-
DW51	6/15/2022	<4	<0.4	-	-	-	-	-
Cypermethrin								
DW48	8/30/2021	5.6	<0.3	-	-	-	-	-

Event	Date	CR-46	CR-46R	CR-42	CR-41	CR-39	CR-39R	WQO
SE78	10/22/2021	9	10	-	-	-	-	-
DW49	2/10/2022	<0.3	<0.5	-	-	-	-	-
SE79	3/28/2022	J 3.1	<3	-	-	-	-	-
SE80	4/22/2022	1.2	<0.3	-	-	-	-	-
DW50	5/11/2022	1	<0.3	-	-	-	-	-
DW51	6/15/2022	5.6	<0.3	-	-	-	-	-
Esfenvalerate:Fenvalerate								
DW48	8/30/2021	<4	<0.4	-	-	-	-	-
SE78	10/22/2021	<0.4	<0.4	-	-	-	-	-
DW49	2/10/2022	<0.4	<1	-	-	-	-	-
SE79	3/28/2022	<2	<0.4	-	-	-	-	-
SE80	4/22/2022	<0.8	<0.4	-	-	-	-	-
DW50	5/11/2022	2	<0.4	-	-	-	-	-
DW51	6/15/2022	<4	<0.4	-	-	-	-	-
Lambda-Cyhalothrin								
DW48	8/30/2021	13	<0.3	-	-	-	-	-
SE78	10/22/2021	<2	J 1.6	-	-	-	-	-
DW49	2/10/2022	0.5	<0.5	-	-	-	-	-
SE79	3/28/2022	<2	<2	-	-	-	-	-
SE80	4/22/2022	1.9	0.6	-	-	-	-	-
DW50	5/11/2022	1	0.8	-	-	-	-	-
DW51	6/15/2022	13	<0.3	-	-	-	-	-
Permethrin								
DW48	8/30/2021	<20	<2	-	-	-	-	-
SE78	10/22/2021	<10	<10	-	-	-	-	-
DW49	2/10/2022	<2	<5	-	-	-	-	-
SE79	3/28/2022	<10	<10	-	-	-	-	-
SE80	4/22/2022	J 4.7	<2	-	-	-	-	-
DW50	5/11/2022	<2	<2	-	-	-	-	-
DW51	6/15/2022	<20	<2	-	-	-	-	-

[a] Due to site access issues, CR-41 was not sampled during SE80 on April 22, 2022.
HT = Hold time exceedance
J = Estimated (Data Not Quantified) above the MDL and below the RL

Table 2. Rainwater/Atmospheric Deposition Monitoring Data

	NE-RAIN	SC-RAIN
Dissolved Oxygen (mg/L)		
SE78	-	-
SE79	-	-
SE80	11.1	8.0
Mercury		
Methyl Mercury, Total (ng/L)		
SE78	J 0.04	0.08
SE79	J 0.048	0.155
SE80	0.071	0.093
Mercury, total (ng/L)		
SE78	13	11
SE79	9.4	4.6
SE80	4.5	3.7
Pyrethroids (ng/L)		
Bifenthrin (ng/L)		
SE78	5.8	5.9
SE79	<0.3	0.5
SE80	1.9	1.4
Cyfluthrin (ng/L)		
SE78	0.8	0.6
SE79	<0.4	<0.4
SE80	<0.4	<0.4
Cypermethrin (ng/L)		
SE78	1.2	1.3
SE79	<0.3	<0.3
SE80	<0.3	<0.3
Esfenvalerate:Fenvalerate (ng/L)		
SE78	<0.4	<0.4
SE79	<0.4	<0.4
SE80	<0.4	<0.4
Lambda-Cyhalothrin (ng/L)		
SE78	1.4	1.1
SE79	<0.3	<0.3
SE80	1	0.5

	NE-RAIN	SC-RAIN
Permethrin (ng/L)		
SE78	J 3.7	7.3
SE79	<2	<2
SE80	<2	<2

J = Estimated (Data Not Quantified) above the MDL and below the RL