February 3, 2025

Mr. Patrick Pulupa, Executive Officer
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

Sent via electronic mail to Patrick.Pulupa@waterboards.ca.gov

RE: SUBMITTAL OF FY 23-24 DELTA REGIONAL MONITORING PROGRAM ANNUAL REPORT PER RESOLUTION R5-2021-0054

Dear Mr. Pulupa,

Please find attached the Delta Regional Monitoring Program's (DRMP) fiscal year (FY) 2023-2024 Annual Report, as required by Resolution R5-2021-0054, Item 5 of Attachment A.

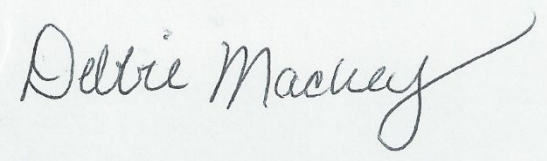
As required by the Resolution, the 2023-2024 Annual Report summarizes all monitoring projects or studies conducted during fiscal year 2023-2024 (FY 23-24). The report includes a list of all publicly available datasets (including data and metadata), explanations for why any aspect of the Monitoring Workplan was not completed, and any deviations from the Monitoring Workplan, Data Management Plan, or the Quality Assurance Project Plans (QAPPs).

The Annual Report includes two quality assurance sections, one for data managed by the DRMP and one where data is not managed by the DRMP. The Annual Report identifies and describes all QAPP deviations and any other project deviations that impacted the quality of the DRMP data to ensure data are of known and documented quality. This section also includes: a list and description of all deviations to the QAPP; the corrective action(s) taken to address the deviation(s); a description of how the DRMP monitors the effectiveness of any corrective actions and ensures any deviations do not occur frequently in the future; a summary of dataset completeness, precision, and accuracy; a list and description of sample comparisons or tests that did not meet minimum test acceptability criteria for analyses or were considered invalid; results for all analyses completed during the reporting period and comparison of results to previous year's observations, if applicable; and, a list of monitoring data (and associated metadata) that do not meet predetermined quality control measures and measurement quality objectives.

The FY 23-24 Annual Report is included below. Additionally, two files (Attachment A and B) are attached separately as Excel workbooks and transmitted in the email with this letter.

If you have any questions regarding the report, please do not hesitate to reach out to Melissa Turner, the DRMP's Program Director at mturner@mljenvironmental.com or by phone at (530) 756-5200, or to me at eofficer@cvcwa.org or at (530) 268-1338.

Sincerely,



Debbie Mackey, President
Delta Regional Monitoring Program

Attached Separately:
Attachment A Current Use Pesticides and Toxicity for FY 23-24 Data
Attachment B Constituents of Emerging Concern Year 3

cc: via email
Adam Laputz - CVRWQCB
Meredith Howard – CVRWQCB
Ryan Brown - CVRWQCB
Melissa Turner – DRMP Program Manager
Jennifer Glenn – DRMP Program Administrator
DRMP Board of Directors

Delta Regional Monitoring Program Annual Report

Fiscal Year July 1, 2023 – June 30, 2024

Submitted to the Central Valley Regional Water Quality Control Board on February 3, 2025

Prepared By:

MLJ ENVIRONMENTAL

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ATTACHMENTS

LIST OF ACRONYMS

AFDW	Ash Free Dry Weight
AMS	Applied Marine Sciences
AQT	Advanced Query Tool
ASC	Aquatic Science Center
BOD	Board of Directors
CDEC	California Data Exchange Center
CEC	Constituent of Emerging Concern
CEDEN	California Environmental Data Exchange Network
CHAB	Cyanobacteria Harmful Algal Bloom
CUP	Current Use Pesticides
CV RDC	Central Valley Regional Data Center
CVRWQCB	Central Valley Regional Water Quality Control Board
DRMP	Delta Regional Monitoring Program
DIN	Dissolved Inorganic Nitrogen
DOC	Dissolved Organic Carbon
DWR	Department of Water Resources
EDD	Electronic Data Deliverable
EPA	Environmental Protection Agency
EVR	Effluent Valve Replacement
FY 21-22	Fiscal Year 2021-2022
FY 22-23	Fiscal Year 2022-2023
FY 23-24	Fiscal Year 2023-2024
FY 24-25	Fiscal Year 2024-2025
HAB	Harmful Algal Bloom
IAV	Invasive Aquatic Vegetation
LCS	Laboratory Control Spike
MDL	Method Detection Limit
MDM	Middle River station
MeHg	Methylmercury
MLML	Moss Landing Marine Laboratories
MQO	Measurement Quality Objective
MS	Matrix Spike

MSD	Matrix Spike Duplicate
NWIS	National Water Information System
OCRL	Organic Chemistry Research Laboratory
P	Phosphorus
PER	Pacific EcoRisk
PFAS	Per- and Polyfluoroalkyl Substances
PPCP	Pharmaceuticals and Personal Care Product
POTW	Publicly Owned Treatment Works
QA	Quality Assurance
QAQC	Quality Assurance Quality Control
QAPP	Quality Assurance Project Plan
QC	Quality Control
qPCR	Quantitative Polymerase Chain Reaction
RL	Reporting Limit
RMA	Resource Management Associates
SEP	Supplemental Environmental Project
SFEI	San Francisco Estuary Institute
SOP	Standard Operating Procedure
SPATT	Solid Phase Adsorption Toxin Tracking
SRiNCS	Sacramento River Nutrient Change Study
SRWTP	Sacramento Regional Wastewater Treatment Plant
SSC	Suspended Sediment Concentration
SWAMP	State Board Surface Water Ambient Monitoring Program
SWRCB	State Water Resource Control Board
TAC	Technical Advisory Committee
TAccC	Test Acceptability Criteria
TIE	Toxicity Identification Evaluation
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TOC	Total Organic Carbon
TSS	Total Suspended Solids
USGS	United States Geological Survey
VSS	Volatile Suspended Solids
WY	Water Year

1 INTRODUCTION

This Annual Report is being submitted to the Central Valley Regional Water Quality Control Board (Regional Board or CVRWQCB) in accordance with Resolution R5-2021-0054 which was adopted October 15, 2021. The Annual Report documents the status of monitoring and special studies conducted by the Delta Regional Monitoring Program (DRMP) during the 2023-2024 Fiscal Year (FY 23-24), spanning from July 1, 2023, through June 30, 2024. Work conducted during this period was based on the Monitoring Workplan for Fiscal Year 2023-2024 recommended by the DRMP Steering Committee and approved by the Board of Directors (BOD) on April 11, 2023.

Monitoring during FY 23-24 occurred across four monitoring sectors and is described in the Monitoring Workplan for FY 2023-2024:

- Current Use Pesticides (CUP)
- Constituents of Emerging Concern (CEC)
- Nutrients
- Mercury

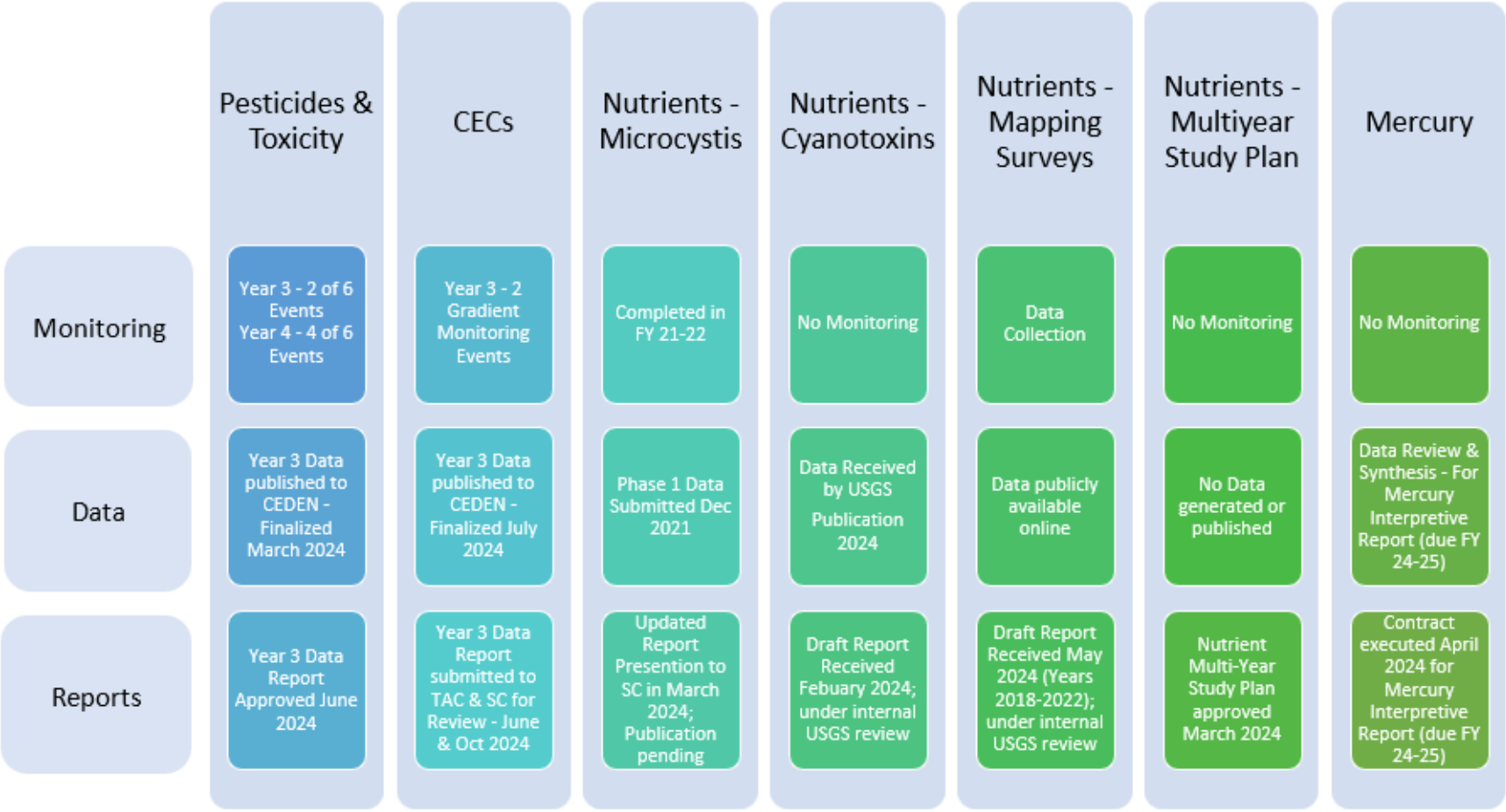
The status of each planned monitoring project is outlined below. A **Summary of Public Datasets**, **Deviations and Corrective Actions**, and the status of all projects and studies conducting **DRMP Monitoring** is provided below in **Progress of FY 23-24 Monitoring Projects**. Quality assurance assessments for each project and study are provided in the **Quality Assurance** sections according to the requirements outlined in Table 1. An overview of the progress of monitoring events, data acquisition, and reports for each of the DRMP projects and studies during FY 23-24 is summarized in **Figure 1**.

Table 1. Quality assurance assessment requirements of Resolution R5-2021-0054.

Annual Report Requirement from Resolution (Attachment A, 5)	Section Number	Section Header
Summarize all monitoring projects or studies conducted during the prior fiscal year.	2.2	DRMP Monitoring
Explanation for why any aspect of the Monitoring Workplan was not completed.	2.2	DRMP Monitoring
List of all publicly available datasets (including data and metadata).	2.1	Summary of Public Datasets
Deviations from the Monitoring Workplan, Data Management Plan, and Quality Assurance Project Plan (QAPP).	2.2, 2.3	DRMP Monitoring, Deviations and Corrective Actions
Quality Assurance Section	3	Quality Assurance – Data Managed by the DRMP
	4	Quality Assurance – Data Not Managed by the DRMP
List and description of all deviations to the QAPP.	2.3	Deviations and Corrective Actions
Corrective action(s) taken to address the deviation(s).	2.3	Deviations and Corrective Actions
Description of how the DRMP monitors the effectiveness of any corrective actions and ensure any deviations do not occur frequently in the future.	2.3	Deviations and Corrective Actions
Summary of dataset completeness.	3.1.1.1	Quality Control Sample Completeness
Summary of dataset precision.	3.1.1.2	Acceptability of Precision Measurements
Summary of dataset accuracy.	3.1.1.3	Acceptability of Accuracy Measurements
List and description of sample comparisons or tests that did not meet minimum test acceptability criteria for analyses or were considered invalid.	3.1.1.4	Invalid Data
Results for all analyses completed during the reporting period and comparison of results to previous year's observations, if applicable.	Attachments A and B	NA

Annual Report Requirement from Resolution (Attachment A, 5)	Section Number	Section Header
List of monitoring data (and associated metadata) that do not meet predetermined quality control measures and measurement quality objectives (MQOs).	Attachments A and B	NA

Figure 1. Overview of progress of DRMP projects and studies during FY 23-24.
Not all studies start and end within a fiscal year; the number of events listed indicates the number of events completed in the fiscal year.



2 PROGRESS OF FY 23-24 MONITORING PROJECTS

2.1 SUMMARY OF PUBLIC DATASETS

A summary of datasets collected for the DRMP are outlined in **Table 2** for data in the California Environmental Data Exchange Network (CEDEN) and in **Table 3** for data in other publicly available databases such as National Water Information System (NWIS).

In FY 23-24, two of the five monitoring sectors had datasets transferred to CEDEN:

- Current Use Pesticides
- Constituents of Emerging Concern

In February 2024, the water year (WY) 2023 CUP project results were transferred to CEDEN. The transfer of these data to CEDEN coincided with a data report which evaluated the WY 2023 dataset (October 2022- September 2023) in its entirety. Data for WY 2023 Events 1 through 4 were provided in the previous FY 22-23 Annual Report in Attachment B whereas Events 5 (August) and 6 (September) are discussed in the FY 23-24 Annual Report.

The CEC Year 3 dataset (sampled October - November 2023) was successfully transferred from the Central Valley Regional Data Center (CV RDC) to CEDEN in July of 2024; data transferred to CEDEN only includes ambient water data. All CEC data (including runoff and effluent data) are available on the DRMP website. The CEC Year 3 data are presented and discussed in the CEC Year 3 Data Report.

Table 2. Publicly available datasets on CEDEN under the Program Code Delta RMP.

Parent Project Name	Parent Project Code	Project Name	Project Code	Agency	Sample Period	Status
Delta RMP – Current Use Pesticides	DRMP_CUP	2022 Delta RMP Current Use Pesticides	22DRMP5CUP	USGS	10/1/2022 – 9/30/2023	Available on CEDEN.
		2020 Delta RMP Current Use Pesticides	20DRMP5CUP	USGS	10/1/2020 – 9/30/2021	Available on CEDEN.
		2019 Delta RMP Current Use Pesticides	19DRMP5CUP	USGS	10/1/2019 – 9/30/2020	Available on CEDEN.
		2018 Delta RMP Current Use Pesticides	18DRMP5CUP	USGS	10/1/2018 – 9/30/2019	Available on CEDEN.
		2016 Delta RMP Current Use Pesticides	16DRMP5CUP	USGS	7/1/2016 – 6/30/2017	Available on CEDEN.
		2015 Delta RMP Current Use Pesticides	15DRMP5CUP	USGS	7/1/2015 – 6/30/2016	Available on CEDEN.
Delta RMP - Constituents of Emerging Concern	DRMP_CEC	2023 Delta RMP Constituents of Emerging Concern	23DRMP5CEC	MLJ	7/1/2023 – 6/30/2024	Available on CEDEN [1].
		2021 Delta RMP Constituents of Emerging Concern	21DRMP5CEC	MLJ	7/1/2021 – 6/30/2022	Available on CEDEN [2].
		2020 Delta RMP Constituents of Emerging Concern	20DRMP5CEC	SFEI	7/1/2020 – 6/30/2021	Available on CEDEN.

Parent Project Name	Parent Project Code	Project Name	Project Code	Agency	Sample Period	Status
Delta RMP - Mercury	DRMP_Hg	2022 Delta RMP Mercury	22DRMP5Hg	MPSL-DFW	7/1/2022 – 6/30/2023	Available on CEDEN.
		2022 Delta RMP Wetland Restoration Fish Mercury	22DRMP5Rest	MPSL-DFW	7/1/2022 – 6/30/2023	Available on CEDEN.
		2021 Delta RMP Mercury	21DRMP5Hg	MPSL-DFW	7/1/2021 – 6/30/2022	Available on CEDEN.
		2021 Delta RMP Wetland Restoration Fish Mercury	21DRMP5Rest	MPSL-DFW	7/1/2021 – 6/30/2022	Available on CEDEN.
		2020 Delta RMP Mercury	20DRMP5Hg	MPSL-DFW	7/1/2020 – 6/30/2021	Available on CEDEN.
		2020 Delta RMP Wetland Restoration Fish Mercury	20DRMP5Rest	MPSL-DFW	7/1/2020 – 6/30/2021	Available on CEDEN.
		2019 Delta RMP Mercury	19DRMP5Hg	MPSL-DFW	7/1/2019 – 6/30/2020	Available on CEDEN.
		2019 Delta RMP Wetland Restoration Fish Mercury	19DRMP5Rest	MPSL-DFW	7/1/2019 – 6/30/2020	Available on CEDEN.
		2018 Delta RMP Mercury	18DRMP5Hg	MPSL-DFW	7/1/2018 – 6/30/2019	Available on CEDEN.
		2017 Delta RMP Mercury	17DRMP5Hg	MPSL-DFW	7/1/2017 – 6/30/2018	Available on CEDEN.
		2016 Delta RMP Mercury	16DRMP5Hg	MPSL-DFW	7/1/2016 – 6/30/2017	Available on CEDEN.

Parent Project Name	Parent Project Code	Project Name	Project Code	Agency	Sample Period	Status
Delta RMP - Pathogens	DRMP_PAT	2016 Delta RMP Pathogens	16DRMP5PAT	SFEI	4/1/2016 – 3/31/2017	Available on CEDEN.
		2015 Delta RMP Pathogens	15DRMP5PAT	SFEI	4/1/2015 – 3/31/2016	Available on CEDEN.

[1] Source monitoring data (runoff and effluent) are available on the DRMP website only (CEC Year 3 Monitoring Data).
[2] Source monitoring data (runoff and effluent) are available on the DRMP website only (CEC Year 2 Monitoring Data).

The results of the cyanotoxin study conducted by the United States Geological Survey (USGS) and California Department of Water Resources (DWR) are not yet ready for publication. Once these data are received and finalized, they will be uploaded to a combination of USGS and DWR public databases. The whole water sample analysis results generated by this study will be uploaded to NWIS under the USGS site numbers identified in **Table 3**. These results, along with those generated by the analyses of the Solid Phase Adsorption Toxin Tracking (SPATT) samples, will be published to the USGS National Water Dashboard; data are expected to be publicly available in FY 24-25.

Table 3. Publicly available datasets not on CEDEN.

Study	Location	Type	Site Code	USGS Site Numbers	Sample Period	Status
USGS/DWR Cyanobacteria Study	NWIS Web Interface [1]	Whole Water Cyanotoxin Results	LIB	11455315	3/1/2021 – 2/1/2023	Data publication expected in FY 24-25
			MDM	11312676		
			P8	375841121225601		
			RRI	375747121215401		
			C10A	374045121155200		
	USGS ScienceBase [2]	Whole Water and SPATT Sampler Cyanotoxin Results	NA	NA	3/1/2021 – 2/1/2023	Data publication expected in FY 24-25

[1] NWIS Web Interface is located: https://nwis.waterdata.usgs.gov/usa/nwis/qwdata
[2] USGS National Water Dashboard is located: https://dashboard.waterdata.usgs.gov/app/nwd/en/

2.2 DRMP MONITORING

During FY 23-24, monitoring, planning, and reporting activities occurred for pesticides and aquatic toxicity, CECs, nutrients, and mercury. **Figure 2** is an overview of the monitoring events that occurred during FY 23-24 relative to the monitoring design study period. Below is a description of the monitoring studies and associated activities that occurred during FY 23-24.

2.2.1 Pesticides and Toxicity Multi-Year Study

Water Year 2023 (October 1, 2022 – September 30, 2023; WY 2023) and Water Year 2024 (October 1, 2023 – September 30, 2024; WY 2024) represented Year 3 and Year 4, respectively, of a multi-year study of current-use pesticides and aquatic toxicity in the Sacramento-San Joaquin Delta. A rotating basin monitoring design with monitoring at two

fixed sites began in October 2018. The study design originally included a 4-year monitoring program covering six Delta sub-regions followed by an interpretive report that will inform adaptive management and improve future monitoring. Due to various delays in monitoring, the 4-year monitoring design took six years to complete (completed September 2024). The CUP project data are processed and evaluated on a WY basis. This report includes CUP data collected during the final two of six monitoring events of WY 2023 and the first four of six monitoring events of WY 2024. These events include Year 3 Event 5 (August 2023), Year 3 Event 6 (September 2023), Year 4 Event 1 (December 2023), Year 4 Event 2 (January 2024), Year 4 Event 3 (April 2024), and Year 4 Event 4 (June 2024) (**Figure 2**). All results associated with WY 2023 are summarized in the WY 2023 CUP Data Report and are publicly available on CEDEN (as of March 2024). Likewise, results associated with WY 2024 will be summarized in the WY 2024 CUP Data Report, which will be finalized in coordination with the publication of the WY 2024 data to CEDEN by March 11, 2025. The results associated with the two WY 2023 CUP events and four WY 2024 CUP events that occurred during FY 23-24 are provided as Attachment A to this report.

Samples were analyzed for a suite of 178 pesticides by the USGS Organic Chemistry Research Laboratory (OCRL). Compounds include fungicides, herbicides, insecticides, and their degradation products. In addition, crews measured field parameters (water temperature, pH, conductivity, dissolved oxygen, and turbidity), and documented conditions at the field site. For CUP WY 2023 and CUP WY 2024, Babcock Laboratories analyzed samples for copper and ancillary parameters (total nitrogen (TN), calcium, magnesium, hardness as $CaCO_3$, nitrate + nitrite as N, nitrogen, total Kjeldahl nitrogen (TKN), total organic carbon (TOC), and dissolved organic carbon (DOC)).

Pacific EcoRisk (PER) analyzed the toxicity of water samples for a suite of test organisms based on Environmental Protection Agency (EPA) and Surface Water Ambient Monitoring Program (SWAMP) methods:

- *Ceriodaphnia dubia*, a daphnid or water flea (survival, reproduction) – sensitive to organophosphate pesticides.
- *Hyalella azteca*¸ an aquatic invertebrate (survival) – sensitive to pyrethroids
- *Selenastrum capricornutum* (also known as *Raphidocelis subcapitata*), a single-celled algae (growth) – sensitive to herbicides.
- *Chironomus dilutus*, midge larvae (formerly *Chironomus tentans*) – sensitive to fipronil and more sensitive in chronic exposures to imidacloprid than *C. dubia*.
- *Pimephales promelas* (growth, survival) – chronic and acute effects on whole organism growth and survival.

There was one sample requiring a Toxicity Identification Evaluation (TIE) to be performed during FY 23-24 on a sample collected on June 24, 2024.

The WY 2023 data was summarized in the CUP WY 2023 Data Report which was reviewed and recommended by the CUP Technical Advisory Committee (TAC) and Steering Committee, and subsequently approved by the DRMP BOD on June 11, 2024. The WY 2024 data will be summarized in the CUP WY 2024 Data Report during FY 24-25.

2.2.2 Constituents of Emerging Concern

During FY 23-24, the DRMP completed Year 3 of the Central Valley Pilot Study for Monitoring Constituents of Emerging Concern Work Plan (CEC Stakeholder Workplan). Implementation of the Stakeholder Work Plan by the DRMP is referred to as the CEC Pilot Study. The CEC Pilot Study includes a three-year study design beginning in 2020 for Year 1 and continuing through June 2022 for Year 2. Year 3 sampling was conducted under the study design approved in the FY 22-23 Monitoring Workplan.

Year 3 CEC monitoring and data management was conducted under the Quality Assurance Project Plan (QAPP) for the Pilot Study of Constituents of Emerging Concern under the Sacramento-San Joaquin Delta Regional Monitoring Program, Version 3.3 (CEC QAPP (v3.3)). The CEC QAPP was revised ahead of the third year of monitoring, with the final revision receiving approval from all signatories, including the State Water Resource Control Board (SWRCB) Quality Assurance (QA) Officer on October 9, 2023.

The third year of CEC monitoring continued source monitoring from Year 2 and added gradient sampling upstream and downstream of publicly owned treatment works (POTWs) and other identified sources. Monitoring efforts for CECs in Year 3 included the sampling and analysis for two major groups of CEC constituents: per- and polyfluoralkyl substances (PFAS) and pharmaceutical and personal care products (PPCPs) in water. In addition, two ancillary parameters, turbidity and suspended sediment concentration (SSC), were analyzed to facilitate interpretation of the ecotoxicity of the targeted CEC analytes.

The Year 3 gradient study evaluates two POTW effluent gradients, each consisting of one upstream site, one POTW effluent site, and up to five downstream sites in Dry Creek in Roseville, CA (Gradient Study Area 1) and Old Alamo Creek near Vacaville, CA (Gradient Study Area 2. Municipal separate storm sewer systems (MS4) urban runoff monitoring sites were also sampled in Roseville and Sacramento CA, and while they do not directly inform the gradient study, they were monitored as part of the full three-year CEC study.

Year 3 CEC monitoring occurred over two sampling events in October and November of 2023. For each of the two events, the DRMP collected water or effluent samples at a total of sixteen site locations. Event 1 occurred October 16 through 19, 2023 and Event 2 occurred October 30 through November 1 of 2023. Both events were scheduled to

capture dry weather conditions prior to the first major storm event, as required by the CEC QAPP (v3.3) (**Figure 2**).

The data from CEC Year 3 were reviewed and assessed by MLJ Environmental and Moss Landing Marine Laboratories (MLML); all results have been shared with the Regional Board and were uploaded into the CV RDC throughout FY 23-24. Data were finalized and transferred to CEDEN on July 27, 2024. All surface water data collected in Year 3 are available on the Delta RMP website.

MLJ Environmental provided a Year 3 Data Report to the CEC TAC for initial review on June 24, 2024. Following review and revisions, the CEC TAC recommended the report be sent for review and recommendation of approval by the Steering Committee. The Steering Committee reviewed the report and provided a recommendation on December 10, 2024, and the CEC Year 3 Data Report was approved by the BOD on December 16, 2024.

2.2.3 Nutrient Studies

2.2.3.1 Sacramento River Nutrient Change Study (SRiNCS)

Sampling for the Sacramento River Nutrient Change Study (SRiNCS) Phase 1: Effluent Valve Replacement Hold was conducted in September 2019. This study was a collaborative effort between Regional San (now Sacramento Area Sewer District), Applied Marine Sciences (AMS), USGS, and San Francisco State University. This study tracked the effects of changes in nutrient loading resulting from a short-term wastewater hold at the Sacramento River Wastewater Treatment Plant (SRWTP). In the summer of 2019, scheduled wastewater effluent holds occurred during the Effluent Valve Replacement (EVR) project, part of the EchoWater upgrade at the SRWTP. During an EVR hold, no treated effluent entered the Sacramento River for a period of up to 48 hours. Based on prior USGS research, this was expected to create a parcel of effluent-free river water over six miles long in the Sacramento River. The impacts of short-term changes in nutrient loading were tracked in parcels of water with and without effluent during movement downstream in the Sacramento River and nearby channels.

The project consisted of a one week-long river sampling campaign, field measurements, laboratory analyses, numeric modeling, and reporting. The project used multiple methods, including boat-mounted, high frequency monitoring of nutrients and fluorescence; discrete sampling for analyses of water quality, phytoplankton and zooplankton abundances, clam biomass, and phytoplankton carbon uptake (to determine growth rates). Data and hydrodynamic modeling were used to evaluate the response of phytoplankton to a range of nutrient loads and forms, as well as factors of light, turbidity,

water residence time, and grazing by zooplankton and clams. A modeling report by Resource Management Associates (RMA) (a standalone deliverable for the SRiNCS project) was distributed to the DRMP Nutrients Subcommittee for review in 2020. A draft report of the SRiNCS project was provided to the Nutrient TAC on March 28, 2022. After the initial TAC review concluded on June 17, 2022, the report underwent an internal USGS review. The report was brought back to the Nutrient TAC on May 11, 2023, where it was recommended by the TAC for approval. The Steering Committee voted by email to recommend the SRiNCS report (voting ended July 16, 2023) and the report was approved by the DRMP Executive Committee on July 27, 2023.

The final report is available via the DRMP website (https://deltarmp.org/Documents/Sacramento_River_Nutrient_Change_Study.pdf).

2.2.3.2 Microcystis Study

Cyanobacteria harmful algal blooms (CHABs) are a rising ecological issue in the Delta. Some locations are more prone to CHABs, but it is unclear where CHABs originate. The Source Tracking of Cyanobacteria Blooms in the Sacramento-San Joaquin Delta (also referred to as the *Microcystis* Study) is focused on the knowledge gap of understanding where blooms of the common CHAB genus, *Microcystis*, originate in the Delta. The project's primary hypothesis is that there are specific areas, where flows and tidal velocity are low, that contain high concentrations of benthic resting cells (*Microcystis* cells that overwinter at the sediment surface). These benthic resting cells ultimately recruit to the water column, grow into blooms at sites of overwintering, and are transported elsewhere in the Delta. It is also hypothesized that areas where CHABs are frequently observed and have higher flows and tidal velocities have relatively low-to-no benthic resting populations due to physical export from the system. This project was approved by the DRMP in August 2020 and was funded using Supplemental Environmental Project (SEP) funds obtained by the CVRWQCB as a result of enforcement actions. The first phase of the project began in November 2020. Water samples were collected during four events at eight sites and sediment was collected during four events at seven to eight sites depending on the event.

Molecular tools were used to analyze the samples including Quantitative Polymerase Chain Reaction (qPCR) to quantify *Microcystis* and metagenomic sequencing of c-phycocyanin genes specific to cyanobacteria to develop unique genetic signatures or "fingerprints" of *Microcystis* assemblages in water and sediment samples. *Microcystis* source-tracking was accomplished by comparing local sediment and water column abundances and strain profiles with adjacent sites across temporally relevant distances. Each molecular fingerprint indicated the proportions of different strains of *Microcystis* in

sediment and water and changes in proportions of strains over time and space. Abundances of *Microcystis* resting cells and genetic characteristics of *Microcystis* in the water column and sediment were used to test hypothesis about bloom origins. This work is useful for identifying locations for implementation of focused CHAB management measures.

In support of this effort, additional (non-DRMP) funding was secured to perform Phase II of the project. Phase II funding allowed for an assessment of 12 sites located in the south and central Delta, including: main channel, outlet, flooded island, and static peripheral sampling locations across the study duration from November 2020 through April 2022. For Phase II of the study, sampling was conducted from November 2021 thru April 2022, and additional sampling across more sites and time periods allowed for an in-depth assessment and exploration of the following hypotheses:

1. Overwintering *Microcystis* seedstock from a few specific locations are a source of CHABs in distant but hydrologically connected locations.
2. By spring, little *Microcystis* biomass will remain in sediments of flooded island sites/channels to serve as bloom inoculum.
3. Peripheral sites (Discovery Bay, Stockton Waterfront) will carry high seed stocks into spring and are primary sources of *Microcystis* in the Southern/Central Delta.

Dr. Ellen Preece, project lead, presented the initial Phase I results from the study at the September 22, 2021, DRMP TAC meeting. The Phase I final report was submitted to the CVRWQCB and the DRMP on December 31, 2021. The report was reviewed by the Nutrient TAC on February 25, 2022. The Nutrient TAC decided to wait until Phase II of the study was complete before recommending the final report to be made available on the DRMP website. On March 11, 2024, Dr. Preece presented an updated report titled, "*Benthic overwintering cyanobacteria seed stock plays an important role in Delta bloom dynamics*" to the DRMP Steering Committee. The updated study report focused on understanding the contribution of overwintering cells/seed stock to bloom events in the Stockton Waterfront and Discovery Bay which are known hotspots for CHABs. The final *Microcystis* report has been organized as a manuscript and will be submitted to a scientific journal for publication. The article will be published as an open access article once fully reviewed, revised, and accepted for publication.

2.2.3.3 USGS/DWR Cyanobacteria Study

The DRMP agreed to contribute funds to the following USGS / DWR monitoring effort, "Cyanotoxin Monitoring in the Delta: Leveraging existing USGS and DWR field efforts to identify cyanotoxin occurrence, duration and drivers" which included additional funds for

the deployment of an additional instrument that monitors phytoplankton taxonomy continuously (i.e., a bbe Fluoroprobe) at the Middle River station.

The study originally proposed to collect cyanotoxin data year-round (fall 2020 to fall 2021) from four stations in the Delta to enhance existing monitoring programs for flow, nutrients, water quality and phytoplankton, including harmful algal blooms (HABs). Monitoring at two additional stations was funded by internal USGS funds. Due to COVID-19 restrictions, sampling did not begin until March 2021. The DRMP agreed to continue contributing funds in 2022 for an additional 12 months from March 2022 until March 2023 for monitoring at the Middle River location (MDM) outlined in an amendment to the FY 21-22 Workplan (approved by the BOD on January 24, 2022). Monitoring at the other five sites will continue with Proposition 1 funding. Data are available through the USGS tableau site which includes visualizations of spatial and temporal trends.

The monitoring at MDM project includes measuring the presence of cyanotoxins with SPATT samplers and with discrete whole water sample collection. The MDM station measures flow and is equipped with a YSI EXO sonde platform (water temperature, specific conductance, turbidity, pH, dissolved oxygen, chlorophyll-a/BGA), a SUNA nitrate analyzer, and a bbe Fluoroprobe.

The data will help identify linkages between environmental drivers (nutrients, flow, temperature) on HAB formation and cyanotoxin production, and can be used by managers and modelers to inform the design of future monitoring programs and to develop predictive models.

The Nutrient TAC received a draft of the USGS report titled "*Cyanotoxin Monitoring in the Delta: Leveraging existing USGS and DWR field efforts to identify cyanotoxin occurrence, duration, and drivers*" on February 8, 2024, for review. The Nutrient TAC met on February 27, 2024, to discuss the report. During the February 27, 2024, TAC meeting, Keith Bouma-Gregson presented the report to the TAC and subsequently revised the report based on feedback and comments received. The report is currently under internal USGS review, and the authors plan to release the report as a USGS Scientific Investigation Report in parallel with the DRMP approval process. Keith Bouma-Gregson presented the results of the study to the DRMP Steering Committee in December 2024; review and recommendation to the BOD for approval of the report is pending the internal review by USGS but is expected in FY 24-25.

2.2.3.4 USGS High Resolution Mapping Surveys

The USGS conducted high frequency mapping surveys from 2018 to 2024 with the objective to document the variability of nutrients and related water quality parameters at high spatial resolution within the Sacramento-San Joaquin Delta. This DRMP supported study examined the abundance and distribution of nutrients and phytoplankton in the tidal aquatic environments of the Sacramento–San Joaquin Delta (Delta) using continuous underway, high-frequency sampling and measurements onboard a high-speed boat to characterize spatial variation across the extent of the Delta. The method used involved simultaneously collecting information about the concentration and spatial distribution of all major nutrient forms with analogous information about the major classes of phytoplankton and associated water-quality conditions. The data collected documented the spatial and temporal variability of parameters including nitrate, ammonium, phosphate, DOC, temperature, conductivity, dissolved oxygen, chlorophyll, and information about phytoplankton community composition. The results showed substantial variation across space and time, providing an unprecedented snapshot of the dynamic environmental processes that shape the ways nutrients interact with and affect aquatic habitats in the Delta. The surveys resulting from this study are a benchmark against which future environmental change may be evaluated, including changes to nutrient management or water exports, drought, large-scale wetland restoration, and climate change. Data was collected in the spring, summer, and fall of 2018, 2020, 2021, 2022, 2023, and 2024. Data is publicly available online at https://www.sciencebase.gov/catalog/item/5f284f1782cef313ed9df50e.

The DRMP Nutrient TAC received a draft of the USGS high frequency mapping surveys report titled "Assessing Spatial Variability of Nutrients, Phytoplankton, and Related Water Quality Constituents in the California Sacramento–San Joaquin Delta at the Landscape Scale: Comparison of Four Spring (2018, 2020, 2021, 2022) High Resolution Mapping Surveys" on April 30, 2024, for review. The Nutrient TAC met on May 20, 2024, to discuss the report. Tamara Kraus with the USGS provided a presentation titled "Assessing Spatial Variability of Nutrients, Phytoplankton, and Related Water-Quality Constituents in the California Sacramento–San Joaquin Delta at the Landscape Scale: Comparison of Four Spring (2018, 2020, 2021, 2022) High Resolution Mapping Surveys" during the May 20, 2024, TAC meeting. An accompanying report that documented methodologies related to the high frequency mapping surveys titled "A novel boat-based field application of a high-frequency conductometric ammonium analyzer to characterize spatial variation in aquatic ecosystems", which has been published in "Limnology and Oceanography: Methods", was also discussed during the presentation. Additionally, it was noted that the USGS has created an online Data Visualization Dashboard that provides

users with data exploration and visualization tools to assist users in accessing and understanding data products related to the high frequency mapping surveys.

The Nutrient TAC provided feedback and comments during their review of the high frequency mapping surveys report and the next steps for the report were discussed which included: revisions to address comments from the Nutrient TAC members, USGS review and finalization, Nutrient TAC recommendation to the DRMP Steering Committee for review and recommendation, DRMP Steering Committee review and recommendation to the DRMP BOD, DRMP BOD approval, and finally, publication by the USGS as a Scientific Investigations Report. On June 6, 2024, Emily Richardson with the USGS provided a presentation that highlighted findings from the draft high frequency mapping surveys report to the DRMP Steering Committee. It is currently planned for the final report to be presented to the DRMP Steering Committee in FY 24-25 for review and recommendation to the BOD for approval.

2.2.3.5 Long Term Planning and the Nutrient Multi-Year Study Plan

The DRMP has been conducting long-term planning for nutrients which includes monitoring and assessments of HABs. A Nutrient Symposium was held on September 27, 2022, and the symposium had the following goals:

1. Informing upcoming DRMP long-term nutrient planning efforts,
2. Informing DRMP stakeholders on recent nutrient activities in the Delta including an assessment of data gaps and an evaluation of management questions, and
3. Improving understanding of management activities associated with water quality problems identified in the Delta Nutrient Research Plan.

The Nutrient TAC developed a Nutrient Symposium report which detailed key takeaways from the symposium. The symposium report included a summary of DRMP funded research (what do we know?), data gaps (what do we need to know about nutrients in the Delta?), and next steps (what can we get in the next 3-5 years from the research, special studies, and/or modeling?). As part of the summary of next steps, a table of nineteen study questions was created associating Core Management and Assessment questions to more specific study questions related to potential research methods and information gained. The Steering Committee discussed the key takeaways from Nutrient Symposium on November 30, 2022, with follow-up discussion on December 15, 2022. Based on the feedback from the Steering Committee regarding priorities, the Nutrient TAC narrowed down the original nineteen study questions into two final study plan questions. A third study plan question was added subsequently based on continued discussion at the Joint Steering Committee and Nutrient TAC meeting held on March 16, 2023. The three study plan questions revolved around three priority focus areas: 1) capability to predict current

and future nutrient concentrations in the Delta, 2) research to identify nutrient thresholds that cause harmful algal blooms and cyanotoxin accumulations, and 3) status and long-term trends of harmful cyanobacteria blooms in the Delta. Utilizing this guidance, the Nutrient TAC began a series of ten meetings that occurred between June 20, 2023, through December 14, 2023, to focus on the development of a Nutrient Multi-Year Study Plan. On December 14, 2023, the Nutrient TAC recommended the Nutrient Multi-Year Study Plan for Steering Committee review and recommendation to the DRMP BOD for approval. The DRMP BOD subsequently approved the Nutrient Multi-Year Study Plan comprised of three focus areas (outlined below) on March 18, 2024.

Focus Area 1: capability to predict current and future nutrient concentrations in the Delta

This project effort will model reductions in dissolved inorganic nitrogen (DIN), TN, and phosphorus (P) inputs to the Delta from various sources to determine if and how these reductions can affect the delivery of nutrients to, or concentrations within regions of the Delta, in particular regions that experience HABs or invasive aquatic vegetation (IAV), and/or locations that are critical to the survival of pelagic fish in the Delta (primarily the north Delta). A series of biogeochemical modeling efforts involving hypothesis-based modeling scenarios will be used to address the following question:

- Following a reduction in nutrient loading, what ranges of nutrient concentrations are expected to occur throughout the Delta, and how might they be affected by climate change, wetland restorations, and water management and routing?

The proposed high-level goals and approaches for Focus Area #1 are summarized below:

1. Quantify the effects of nutrient source load reductions on nutrient concentrations throughout the Delta, including how those effects vary spatially, temporally (seasonally, interannually), and as a function of water management or flow-routing.
2. Evaluate in greater detail and provide visualizations of changes in nutrient concentrations within, or nutrient delivery to, regions of the Delta that are impacted by HABs and IAV.
3. Investigate additional priority hypotheses, including one or more of the following:
    a. Quantify the importance of remaining nutrient sources (beyond those included in scenarios) within HAB- and IAV- prone regions, including Delta non-point sources;
    b. Assess the relative importance of IAV on nutrient concentrations and cycling;

c. Characterize the relative importance of factors regulating phytoplankton biomass or productivity, including potential effects of decreased nutrient availability due to load reductions on 'beneficial production'.

To address these goals, the project will:

- Simulate hydrodynamics and biogeochemistry during water year 2022 (WY 2022) and water year 2016 (WY 2016), using actual nutrient loads during those years (i.e., "Base") to predict nutrient transport, cycling, and concentrations throughout the Delta.
- Re-simulate WY 2022 and WY 2016 biogeochemistry for a priority set of load reduction scenarios to forecast nutrient concentrations under each of those conditions.
- Quantify differences in nutrient concentrations between the Base and Scenario simulations, including their variability spatially (map-view concentrations), temporally (time-series at specific locations), and interannually.
- Test additional priority hypotheses by undertaking targeted analyses of model output, including through, e.g., mass-budgets/control-volume analyses, numerical tracers (source-tracking, age/travel-time tracers), or sensitivity analyses.

Early work on the project will begin in FY 24-25 and include a set of tasks to extend hydrodynamic and biogeochemical simulations to WY 2022 and improve model performance during low-flow conditions and reduced-load scenarios. The hydrodynamic and biogeochemical models will then be calibrated and validated for WY 2022 and WY 2016, and the updated model will be used for Base and Scenario simulations. All modeling work will be performed by staff at the Aquatic Science Center (ASC) at the San Francisco Estuary Institute (SFEI). Modeling refinements and initial parametrization work will begin in FY 24-25, and a final report is expected by Fall of 2026.

Focus Area 2: Research to Identify Nutrient Thresholds that Cause Harmful Algal Blooms and Cyanotoxin Accumulations

The study objective for this focus area is to understand how reductions in N and P concentrations might affect phytoplankton species composition, biomass, and cyanotoxin production in the Delta and to identify if other environmental factors will influence phytoplankton growth at low N or P concentrations (potentially altering the outcomes of nutrient reduction actions). This study effort will use controlled and replicated bioassay experiments to investigate how phytoplankton sourced from the south Delta responds to limited N or P availability. Bioassay experiments simplify complex natural processes by controlling specific factors and they can be used to test a hypothesis in a similar but

controlled experimental environment. To assist with understanding the ecological effects of nutrient reductions, the bioassay study will be used to answer the following overarching Focus Area #2 question:

- What are the thresholds for nutrients (N and P and their ratios) that can limit HAB biomass and cyanotoxin accumulation to safe levels, limit the abundance and distribution of nuisance macrophytes, and support robust growth of desirable phytoplankton and macrophytes throughout the Delta?

The bioassay experiments are an exploratory study that seeks to inform the specific questions listed below using nutrient dilution assays:

- Would N or P reduction reduce HAB growth in the Delta? If so, what level of N or P reduction is needed to significantly reduce HAB growth and cyanotoxin concentrations to acceptable levels in the Delta?
- Would N or P reduction reduce the biomass of desirable phytoplankton in the Delta? If so, is the reduction significant and meaningful?
- Would N or P reduction significantly alter the growth of specific cyanobacteria that cause taste and odor problems for drinking water systems?
- How do other environmental factors, such as light limitation, aquatic plant growth, or clam grazing, alter the effects of N or P reductions on HABs and/or phytoplankton populations?

An initial set of pilot studies, testing different variables of the project design, such as sampling locations, water volumes, incubation duration, dilution water chemistry, N and P concentrations, salinities, light levels, clam biomass, and macrophyte biomass, will be performed prior to running the fully replicated study. A QAPP for this project will be developed in FY 24-25 for approval by the CVRWQCB. It is anticipated that the pilot study will be conducted in late summer / early fall of 2025 to allow for the first bioassay experiment to occur in spring of 2026 and the second bioassay experiment to occur in fall of 2026.

Focus Area 3: Status and Long-Term Trends of Harmful Cyanobacteria Blooms in the Delta

For Focus Area #3, the DRMP will look for opportunities to collaborate or leverage funding to address the following question:

- How are characteristics of harmful cyanobacteria blooms in the Delta changing over time including the status of cyanobacteria blooms and cyanotoxins in the Delta and factors that affect their magnitude, geographic extent, and timing?

The primary study objective for this focus area is to support the collection of data to better understand changes in cyanobacteria status and risks in the Delta. Currently, there is no comprehensive monitoring of cyanotoxins in place in the Delta. The DRMP has effectively contributed to HABs science by adding funding to studies led by others. The DRMP added Focus Area #3 into the Nutrient Multi-Year Study Plan with the objective to monitor cyanobacteria blooms and toxins by collaborating with, and/or augmenting other data collection efforts, or funding SEP studies (pending the ability for DRMP to use SEP funds in the future). Cyanotoxin analyses are relatively expensive, and bloom conditions vary significantly over space and seasons. Therefore, leveraging DRMP funds by collaborating with other efforts is important to expand the scope of information that can potentially be gained in this area of critical concern. The DRMP is currently developing an outreach effort to identity and facilitate funding opportunities that support studies looking to gain additional information to help understand what can be done to prevent and/or minimize HABs in the Delta.

The DRMP will explore partnerships and funding opportunities with existing monitoring programs such as Department of Water Resources for Environmental Monitoring Program's discrete phytoplankton monitoring and regular fixed monitoring station maintenance crews, California Department of Fish and Wildlife for Interagency Ecological Program fish trawls and the Fish Restoration Program, and USGS Water Science Center studies. The DRMP is receptive to providing funds toward sample supplies, laboratory analyses, and shipping to add cyanotoxins and cyanobacteria monitoring to existing efforts.

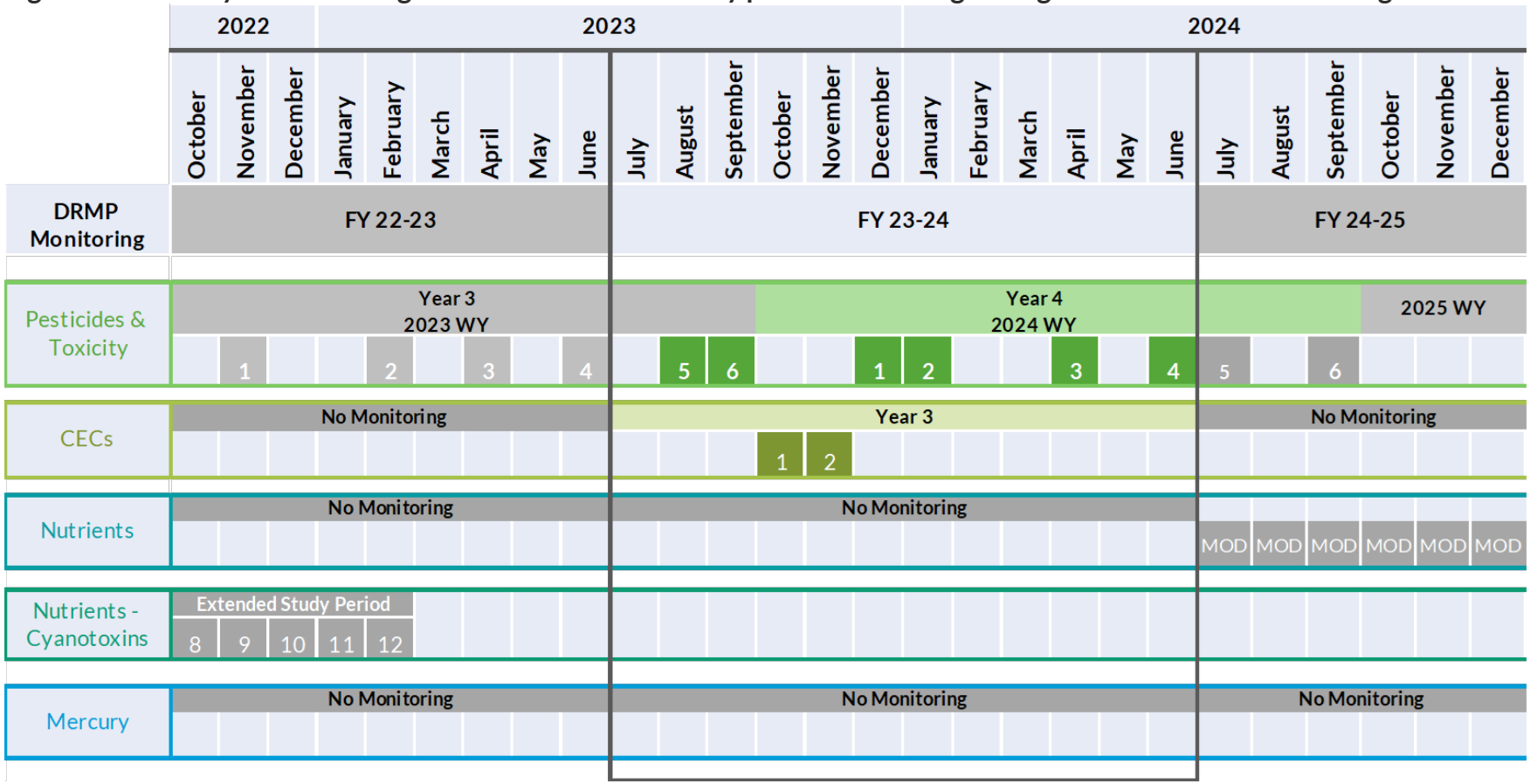
2.2.4 Mercury Study

The information collected as part of the DRMP mercury monitoring sector is critical to implementing the Delta Methylmercury (MeHg) Total Maximum Daily Load (TMDL), providing calibration and validation data for a DWR mercury model, and informing other management and regulatory decisions related to water quality improvement and ecosystem restoration in the Delta. This monitoring has provided essential evidence for regulators implementing the TMDL and contributes to ongoing analytical work by DWR. The DWR model was used to guide regulations and operational decisions related to farming, flood control, and wetland management. Regional Board staff used these data to inform the 2024 Delta Mercury Control Program Phase 1 Review of the Sacramento - San Joaquin Estuary Total Maximum Daily Load for Methylmercury Staff Report for Scientific Review, including Phase 2 potential modifications and options.

Annual sport fish sampling was last conducted in September 2022; no mercury monitoring occurred in the most recent fiscal year. The indicator of primary interest was total mercury in muscle fillet of 350-mm largemouth bass (or similar predator species). Total mercury is a close surrogate for the element's more toxic form, MeHg. The locations of the trend sites for black bass collection represented different subareas of the Delta and were co-located with the water monitoring sites. Water sampling was conducted in conjunction with sport fish monitoring. Indicators of primary interest were concentrations of MeHg and total mercury in water. Important ancillary parameters included chlorophyll-a, DOC, suspended sediment concentrations, total suspended solids (TSS), and volatile suspended solids (VSS).

Since FY 22-23, mercury monitoring has rotated into a long-term planning stage. As part of the long-term planning process, an interpretive report is being developed with a primary audience of the CVRWQCB and Methylmercury TMDL stakeholders and an objective to assess trends in fish tissue and aqueous MeHg concentrations and evaluate other factors impacting trends in MeHg concentrations. Data utilized in the report will include data generated from 2016-2022 and will evaluate trends in aqueous and fish tissue mercury concentrations since 2000 in the context of water year type and subarea. The Mercury Interpretive Report is being paid for using CVRWQCB allocated SWAMP funds from SWRCB. The SWRCB has contracted with San Francisco Estuary Institute – Aquatic Sciences Center (SFEI-ASC) to complete the Mercury Interpretive Report and develop a Fact Sheet. On April 30, 2024, the DRMP was notified that the contract with SFEI-ASC and SWRCB was executed for the Mercury Interpretive Report and Fact Sheet. SFEI-ASC will begin work on the Mercury Interpretive Report and Fact Sheet as outlined in the contract beginning in Quarter 1 of FY 24-25. The DRMP Mercury TAC in coordination with SFEI-ASC and the CVRWQCB have set up a series of meetings in FY 24-25 to review data sets, analysis, results, and interpretation and provide comments and feedback on draft and final reports. The final Mercury Interpretive Report and Fact Sheet will be recommended for approval by the DRMP Steering Committee to the DRMP BOD. The approved Mercury Interpretive Report and Fact Sheet will be submitted to the CVRWQCB by March 7, 2025.

Figure 2. Summary of monitoring events in relation to study periods occurring during FY 23-24 for all monitoring sectors.



MOD – Modeling
WY - Water Year

2.3 DEVIATIONS AND CORRECTIVE ACTIONS

The process to track deviations using the DRMP deviation forms was first implemented in 2019 by ASC. Under Resolution R5-2021-0054, all procedures that constitute a deviation from the associated approved QAPP must be approved by the CVRWQCB prior to implementation. Where deviations occur due to unanticipated circumstances and prior approval is not possible, the DRMP must notify the CVRWQCB QA Representative within seven calendar days of becoming aware of the deviation.

Deviations from approved QAPPs are documented via deviation forms which include:

- Description of the deviation that occurred
- Reason for the deviation
- Impact on the present and completed work
- Corrective actions taken as a result, by when and by whom

The deviation forms generated during FY 23-24 the associated corrective actions, and any resolutions are summarized below in **Table 4**.

Table 4. Summary of QAPP deviation forms submitted during FY 23-24.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2022-10	Final	08/01/2023	Delta RMP CUP QAPP 2022 v1.3	CUP Event 5 PER Sample Receipt at Elevated Temperature	When the July 31 samples were logged in by PER on the morning of August 1, 2023, it was discovered that three of the four samples had temperatures above the acceptable range of ≤6°C.	Foam inserts and wet ice will be used instead of bubble wrap and blue ice packs. PER couriers are instructed to not leave samples in vehicles overnight and ensure that coolers are packed appropriately with wet ice for the night.	Resampling and testing was initiated for samples CENT-009, CENT010, and 544LSAC13.
2022-11	Final	08/01/2023	Delta RMP CUP QAPP 2022 v1.3	CUP Event 5 *Chironomus* Batch Failed Test Acceptability Criteria in One Batch	PER observed on August 4, that the control from samples initiated on August 1, 2023, for *C. dilutus* toxicity testing would not meet test acceptability criteria (TAccC) of ≥ 80% average survival in the control. There was 67.5% average survival in the control treatment.	The client decided to resample to address the invalid testing that occurred on August 1, 2023. PER determined that organism quality was the most likely cause for not meeting TAccC. An internal PER laboratory investigation determined there were no likely additional contributing factors for the test control not meeting TAccC.	It was agreed to resample 511ULCABR and retest for *C. dilutus* (survival and growth) because resampling was going to occur on August 10, 2023, as a result of the sample receipt temperature of >6°C for the other samples collected on July 31, 2023.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2022-12	Final	08/11/2023	Delta RMP CUP QAPP 2022 v1.3	CUP Event 5R *Hyalella* Incorrect Number Org Per Rep	On July 31 and August 1, 2023, samples were collected by USGS for the Event 5 CUP water quality monitoring collection. A resample event occurred on August 10 for 3 sites which included retesting for *H. azteca*. On August 11, 2023, PER determined that at test setup the water test was initiated with five organisms per replicate instead of the 10 organisms per rep required by the DRMP to achieve comparability with SWAMP MQOs.	Additional notes were added by PER to the Organism Order log indicating that the DRMP requires 10 organisms per replicate.	Five organisms per test meets the EPA requirements for *H. azteca* water column toxicity testing. The reduction of organisms could have an impact on statistical robustness. Based on the statistical analysis of the samples, this does not appear to be an issue. All three samples were not statistically significant with percent survival(s) of 90%, 90%, and 95% compared to the control (control was 100% survival). Summary Results were flagged with the following QA Code [TOQ].

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2022-13	Final	09/15/2023	Delta RMP CUP QAPP 2022 v1.3	CUP Event 6 *Ceriodaphnia* Batch No Final Ammonia in One Batch	It was discovered upon routine quality assurance review steps by PER that *C. dubia* final ammonia results were not collected at test termination which occurred on 9/13/2023.	Upon investigation, it was found that the deviation resulted from an analyst error. Future DRMP toxicity tests will be restricted to a select subset of PER staff who have multiple years of experience with the DRMP testing procedures.	The final ammonia result is missing for one *C. dubia* batch which had environmental samples collected from sites 511ULCABR and SOUT-021. No toxicity occurred in either of these samples for the percent survival or reproduction endpoints. A Tox Test Level QA Code of TWN (i.e., required water quality parameters not measured) was applied to the samples in the test batch.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2022-14	Final	11/03/2023	Delta RMP CUP QAPP 2022 v1.3	CUP USGS Batches Missing Lab Duplicates and a Lab Blank	The USGS-OCRL conducted pesticide analysis of samples for WY 2023 CUP over the course of six events. Pesticide batches associated with Event 1 (November 9-10, 2022), 3 (April 26-27, 2023), and 5 and 5R (July 31-August 1 and Aug 10, 2023) were missing a lab duplicate. Two TSS batches were analyzed during Events 5 and 5R; the TSS batch associated with samples collected on July 31-August 1 was missing a lab blank and the TSS batch associated with samples collected on August 10 was missing a laboratory duplicate.	1) Retraining with MLJ data management staff highlighting the laboratory duplicate requirement for all batches in context of the revised CUP QAPP tables., 2) Communication with USGS-OCRL to clarify that a laboratory duplicate must be performed with every pesticide batch and if a matrix spike (MS) is not performed, a laboratory duplicate, or a laboratory control spike duplicate must be performed (*per Table 6 of the QAPP*)., and 3) Amend CUP QAPP Table 16 to be clear that a laboratory duplicate must be performed with each batch.	All batches missing the required quality control (QC) were flagged with a QI code. A Lab Batch Comment was added to indicate which batch QC frequency was not met and why.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-01	Final	10/19/2023	Delta RMP CEC QAPP 2023 v3.3	CEC Year 3 Event 1 Roseville Turbidity Measures Recorded with Probe	Turbidity was measured in the field instead of collecting water for a laboratory analysis at the POTW 1 sites sampled on 10/19/2023. At these sites, turbidity was measured using a Hanna Turbidity Meter following method EPA 180.1, instead of submitting samples to Physis Laboratories for analysis by method EPA 180.1, as outlined in the approved QAPP.	MLJ field crews collected turbidity as a field measurement in lieu of a laboratory analysis for the POTW 1 samples to avoid holding time violations for that analyte due to shipping considerations. As such, there were no corrective actions for this deviation.	While not defined in the current version of the QAPP, previous years of the CEC Pilot Study obtained turbidity results as field measurements; therefore, turbidity field results are consistent with previous project data. Data usability was unaffected by the substitution of a field measurement for the laboratory analysis, and the field turbidity data obtained on October 19, 2023, met the project needs for interpreting associated CEC data.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-02	Final	11/27/2023	Delta RMP CEC QAPP 2023 v3.3	CEC Year 3 Event 2 Enthalpy Missing Laboratory Control Sample Duplicate (LCSD)	The CEC QAPP v 3.3 requires a laboratory duplicate to be analyzed on a per batch basis. An LCSD is used by Enthalpy Analytical to meet this requirement. On 11/27/2023, the Enthalpy Analytical Project Manager, Rajwinder Kaur, informed the DRMP Program Manager, Melissa Turner, that the laboratory missed analyzing the LCSD during the analysis of the samples associated with Event 2.	The reason for this error was laboratory oversight. The oversight was noted by Enthalpy Analytical, and no additional follow-up corrective actions were prescribed.	The Lab Batch was flagged following the DRMP Data Management Standard Operating Procedure (SOP) where the Lab Submission Code is updated to QI to indicate incomplete QC. A Lab Batch Comment will be added to indicate which batch QC frequency was not met and why in this case the cause was lab oversight.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-03	Final	12/19/2023	Delta RMP CUP QAPP 2022 v1.4	CUP Event 1 (WY 2024) *Chironomus* larvae initial weights greater than 0.012 mg/ individual Ashe Free Dry Weight (AFDW)	PER discovered that the t(0) weights of *C. dilutus* were greater than the SWAMP MQO of ≤0.12 mg/individual AFDW for two Event 1 control batches. The first control batch had a mean AFDW of 0.15 mg/individual and the second control batch a mean AFDW of 0.14 mg/individual at time t(0). It was determined that no impact on the test results was expected in Control Batch 1 since there was no pupation, while in Control Batch 2, three of four organisms pupated with one transitioning to an adult during testing. Pupated organisms were excluded from both the survival and growth endpoint statistics per the Data Management Standard Operating Procedure (v2.4).	It was noted that historically larvae ordered from outside venders often have a greater likelihood of initial weights above AFDW threshold compared to organisms reared in-house from egg casings by PER staff. Accordingly, PER requested 2.5 weeks of advance notice for remaining CUP non-storm sampling events to allow for rearing of egg cases in-house. The Program Manager will help coordinate communication between the sampling team and PER for non-storm events that can be scheduled in advance to provide advance notice.	1) The Tox Test Level QA Code of TAF [Test organisms exceed the maximum weight requirement at test initiation] was applied to the samples in both Control Batches. 2) The Tox Test Level QA Code of TMO [Test organisms escaped or are otherwise missing] was applied to the effected samples in Control 2 that had pupation. and 3) A Tox Result Comment was added to the replicate records that had pupation: “1 organism pupated; 9 organisms used in statistics”.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-04	Final	12/28/2023	Delta RMP CEC QAPP 2023 v3.3	CEC Event1 Missed Physis Reporting Deadline and Extraction Hold Time Exceedance.	1) Physis Laboratories reported Event 1 Electronic Data Deliverable (EDDs) to MLJ on 12/21/2023 for all results (turbidity and PPCPs). Eight samples collected on 10/18/2023 had a turbidity analysis date of 10/20/2023, and the resolution preliminary reporting deadline (60 days from the analysis date) was missed by 7 days for these results. 2) Upon a cursory review of the Physis results, it was noted that the two samples (519PGC010 and 519SACUR3) that were collected on 10/16/2023 and extracted on 10/25/2023 missed the 7-day extraction hold time by 2 days.	1) The laboratory has reminded staff about requirement to report results within 60 days of the analysis date. 2) The laboratory reviewed the error with staff and reminded them to confirm analysis dates of all samples when scheduling extractions to ensure hold times are not missed.	The affected data were flagged with a QA Code of H and a batch comment was added indicating there was a two-day extraction hold time violation on two samples in batch.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-05	Final	01/11/2024	Delta RMP CEC QAPP 2023 v3.3	CEC Events 1 and 2 Weck Missed Preliminary Reporting Deadline	On January 11, 2024, the DRMP notified the CVRWQCB that the CEC Event 1 PPCP preliminary reporting deadline was missed by Weck Laboratories for Event 1 collections (i.e., the 60-day timeframe for reporting). Specifically, samples collected on October 16 and 18, 2023 were reported 10 days past deadline, and samples collected on October 19, 2023, were reported seven days past deadline. On January 18, 2024, the DRMP notified Regional Board that Event 2 Weck files were received on January 17, 2024, with the preliminary reporting timeline being missed by three days for Event 2 PPCP results.	Corrective action: For future DRMP projects with Weck, the 60-day reporting timeline will be discussed in a kickoff meeting with the laboratory in addition to noting this requirement in contract language and analysis quote requests.	There were no hold time violations associated with these results. Accordingly, this deviation was deemed to have no impact on the results themselves.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-06	Final	12/13/2023	Delta RMP CUP QAPP 2022 v1.4	CUP Event 1 (WY 2024) Missed Tests Due to High Salinity	It was determined that salinities were above threshold levels for three species (*Selenastum*, *Ceriodaphnia and Pimephales*) at Confluence sites during Event 1 sampling on December 11, 2023. Four stations had a total of eight tests (14 endpoints) that were not conducted due to elevated salinities in surface water.	Prior to sample events, conductivity will be checked remotely using results from the California Data Exchange Center (CDEC) site at Antioch and the timing of sample collection will be reviewed by USGS in all confluence sites for Events 2-6. This will allow time for additional communication and planning for implementing the alternative salinity procedures if deemed necessary.	Guidance was developed (QAPP CUP Amendment v1.5 and SOPs) for next time high salinities are encountered.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-07	Final	01/24/2024	Delta RMP CUP QAPP 2022 v1.4	CUP Event 2 (WY 2024) *Chironomus* 10-day Toxicity Test Missed Hold Tim	On January 23, 2024, PER contacted the DRMP Program Manager, the CVRWQCB, and DRMP TIE Advisory Committee with an email indicating that an order of *C. dilutus* organisms had been delayed during shipping. Organisms arrived on 01/24/2024 in acceptable condition, and the 10-day toxicity tests were initiated on 01/24/2024 at 13:50, which was outside of the 48-hour holding time limit for two samples.	The laboratory is already working diligently to avoid missing hold times for organisms that are shipped to the laboratory during storm season, including; effective communication with the samplers, laboratory, vendor, and Project Manager. Shipping delays are not in the control of the laboratory; therefore, PER uses in-house organisms whenever possible to limit situations where shipping delays could result in hold time violations. However, storm sampling events often result in the need for using outside vendor organisms.	The Tox Test Level QA Code of H was applied to *Chironomus* test(s) initiation outside of hold time (samples 511ULCABR and 544LSAC13); a summary result comment was added indicating how far out of hold time the toxicity testing occurred.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-08	Out for Regional Board Review	1/30/2024	Delta RMP CEC QAPP 2023 v3.3	CEC Events 1 and 2 Physis Field Contamination	Physis Laboratories reported Event 1 and Event 2 EDDs to the Data Management Team on December 20, 2023, for all results (turbidity and PPCPs). It was noted by the Data Management Team upon review of the EDD data (submitted on December 20, 2023, and reviewed January 30, 2024) that there was field contamination for galaxolide and turbidity (MQO for field blank is < Reporting Limit (RL)) in field and equipment blanks for Event 1 and Event 2 sampling).	Corrective actions: 1) Field samplers went through extensive training prior to CEC Year 3 sampling with special attention paid to field contamination. Field staff were reminded about sampling procedures to reduce contamination, and the laboratory was also communicated with regarding contamination concerns. 2) Add recommendations to the Year 3 Data Report that additional blank samples be added to future CEC projects to assess possible sources of contamination in both the field and laboratory.	It was noted that all laboratory blanks analyzed with samples from these sampling events were non-detect (ND) for all parameters. Also, a QA Code was added to records where the result is greater than the Reporting Limit with a QA Code of IP [Analyte detected in field or lab generated blank].

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-09	Final	01/30/2024	Delta RMP CEC QAPP 2023 v3.3	CEC Events 1 and 2 Physis Missing LCS samples for Turbidity	On January 30, 2024, the Data Management Team reviewed Physis EDDs for Events 1 and 2 and noted that a turbidity LCS was not performed by Physis for two batches. The Data Management Team contacted Physis Laboratories on January 30, 2024 regarding the missing turbidity LCS, and Rachael Hansen (Physis) responded indicating that Physis did not perform LCS for turbidity.	Rich Gossett (Physis) responded to the Data Management Team on January 30, 2024, and indicated that Physis only performed lab blanks and lab duplicates for quality assurance and quality control (QAQC) purposes in relation to turbidity. Physis confirmed that all other required QC were performed including a mid-level calibration check, laboratory blanks, and laboratory duplicates for all turbidity batches. Future kickoff meetings will continue to emphasize batch QC requirements including references to QAPP tables.	All batches missing the required QC were flagged with a QA Code of QI and a lab batch comment was added to indicate which batch QC frequency was not met and why.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-10	Final	01/29/2024	Delta RMP CUP QAPP 2022 v1.4	CUP Event 2 (WY 2024) USGS Missed Turbidity on Sampling Day 1	On January 31, 2024, USGS-OCRL informed the DRMP Data Manager via email indicating that turbidity was not measured in the field from two targeted sites (511ULCABR & 544LSAC13) during Event 2 (Day 1 sampling, January 22, 2024) due to instrument failure.	The probe was exchanged with a working probe in time for Day 2 sampling on January 23, 2024. It was noted that field equipment is maintained by USGS according to the requirements outlined in the CUP QAPP. Since this was an unforeseen probe failure, there are minimum corrective actions.	Results for turbidity were flagged with a QA Code of FIF [Instrument/Probe Failure] for results.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-11	Final	01/24/2024	Delta RMP CUP QAPP 2022 v1.4	CUP Event 2 (WY 2024) *Chironomus* larvae initial weights greater than 0.012 mg/ individual AFDW	PER discovered that the t(0) weights of *C. dilutus* were greater than SWAMP MQO of ≤0.12 mg/individual AFDW for one of two control batches associated with Event 2 sampling. While neither sample was toxic to *C. dilutus*, Control Batch 2 did include two organisms which pupated.	Pupated organisms were excluded from both the survival and growth endpoint statistics and data were flagged per the Data Management SOP(v2.4). Additionally, PER requested 2.5 weeks advance notice for remaining CUP non-storm sampling events to allow for rearing of egg cases in-house. The Program Manager will help coordinate communication between the sampling team and PER for non-storm events that can be scheduled in advance to provide advance notice.	The Tox Test Level QA Code of TAF [Test organisms exceed the maximum weight requirement at test initiation] was applied to the samples for Control Batch #2, the Tox Test Level QA Code of TMO was applied to the affected samples in Control Batch #2 that had pupation, and a Tox Result Comment was added to the replicate records that had pupation.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-12	Final	02/26/2024	Delta RMP CUP QAPP 2022 v1.4	CUP Event 1 (WY 2024) Babcock Lab Blank Contamination for TOC	There was a detection in the TOC lab blank for Event 1 samples analyzed on 12/27/2023 by Babcock Laboratories. Contamination was detected at a level above the MDL in the detected not quantified (DNQ) range.	This deviation does not meet the DRMP lab blank contamination MQO, but does meet the SWAMP MQO which is followed by the CVRWQCB as the contracting agency for analysis conducted by Babcock for the DRMP CUP; therefore, the results did not require reconfirmation from the laboratory, but were flagged by the DRMP as not meeting project MQOs.	The TOC blank result was flagged with an IP [Analyte detected in field or lab generated blank]; environmental samples in the analytical batch were flagged with an QA Code of FI [Analyte in field sample and associated blank]. The lab batch comment included the following "TOC reported in lab blank at levels above MDL but below RL".

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-13	Out for Regional Board Review	05/01/2024	Delta RMP CUP QAPP 2022 v1.5	CUP Event 3 (WY 2024) *Pimephales* 7-day Toxicity Test Missed Hold Time	A shipment of *P. promelas* to PER was delayed in shipping, and toxicity test initiation was delayed beyond the 36 hours hold time limit. Consequently, four of the 24 samples collected for *P. promelas* toxicity testing for this Event were not tested and are incomplete. This might have an impact on the interpretation of toxicity to fish in the Confluence Subregion. However, all samples collected from the two fixed sites (Buckley Cove and Ulatis Creek) have been tested for toxicity to *P. promelas*.	Since shipping delays are outside of the control of the laboratory or the DRMP, the only corrective action to take is to add comments in the database indicating why there are not *P. promelas* results for these samples.	It was the consensus of the TIE committee members to forego testing for the affected samples as delayed toxicity testing would occur either outside of the holding time limits for water samples and/or past the organismal age (time limit) for use of the test specimens. A sample and collection comment was added to Station(s) Conf-009, Conf-010, Conf-011 and Conf-012 which states: "*Pimephales* was not tested at this station due to delays in shipping larvae."

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-14	Out for Regional Board Review	05/02/2024	Delta RMP CUP QAPP 2022 v1.5	CUP Event 3 (WY 2024) *Ceriodaphnia* Toxicity Test Lost Control	PER accidentally disposed of *C. dubia* control treatments for four toxicity tests related to samples collected on April 30, 2024 (Event 3). PER staff re-started the affected tests on May 2, 2024, outside of the standard 48-hour holding time limit, but within the maximal 72 hour holding time limit as outlined in EPA testing methods.	1) The PER staff member involved with the incident was re-trained on culturing and toxicity testing methods (which is required by the quality management system at PER when incidents such as this occur); 2) Future laboratory performance will be monitored against the completeness requirements of the CUP QAPP v1.5; and 3) A Lab Batch comment that samples were run out of hold time was added to the results.	Station locations Conf-009, Conf-010, Conf011 and Conf-012 sampled on April 30, 2024 (Event 3) have a toxicity test level QA Code of H [A holding time violation has occurred] added to the *C. dubia* summary records along with a comment with the time out of hold based on the collection time of each sample. All other corrective actions were completed at the time of the deviation report.
2023-15	Out for Regional Board Review	05/01/2024	Delta RMP CUP QAPP 2022 v1.5	CUP Event 3 (WY 2024) *Chironomus* larvae final ash free dry weights measured incorrectly; t(0) AFDW not calculated	The t(0) final AFDW measurements associated with DRMP's 10-day chronic water exposure *C. dilutus* toxicity tests for Control Batch 1 (associated with Event 3 monitoring) were measured incorrectly by PER staff, so the t(0) AFDW could not be calculated.	The responsible PER staff member was issued a Performance Evaluation, and the staff member was retrained on the weighing of test organisms, and 2) Future laboratory performance will be monitored against the completeness requirements of the CUP QAPP v1.5.	The QA Code MN [Method procedures not followed] was applied to Control 1 results and associated samples. The following lab batch comment was added "MN: Initial weight of LABQA could not be determined due to technician error with weights."

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-16	Out for Regional Board Review	05/01/2024	Delta RMP CUP QAPP 2022 v1.5	CUP Event 3 (WY 2024) *Chironomus* larvae initial weights greater than 0.012 mg/individual AFDW	Upon completion of the drying process, the initial AFDW was recorded by PER staff for *C. dilutus* larvae in Control Batch #2 (Event 3 monitoring). The larvae exceeded the MQO of ≤0.12 mg/individual AFDW for t(0) weights.	An investigation was performed by PER to determine the cause of the increased weight of the organisms used for test initiation on May 1, 2024. It was determined that organism quality (e.g., large larvae) appeared to be a contributing factor to the test exceeding the SWAMP MQO for initial weight. Results will be flagged with a QA Code indicating test organisms exceeded the maximum weight.	1) The SWAMP MQO of AFDW ≤0.12 mg/individual is presumably targeted to reduce the likelihood of pupation/hatching during the 10-day test. Even though the larval t(0) weight in Control Batch 2 was 0.16 mg/individual, there were no pupating organisms in this control batch. Therefore, it is not expected that the larger larvae at the test start had an effect on the test batch results., and 2) The Tox Test Level QA Code of TAF [Test organisms exceed the maximum weight requirement at test initiation] will be applied to the affected samples in Control Batch#2.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-17	Ready for Regional Board Review	06/11/2024	Delta RMP CUP QAPP 2022 v1.5	CUP Event 3 (WY 2024) Babcock Missed Hold Time for TKN	Due to low spike recoveries, Babcock laboratories reanalyzed the TKN batch for five environmental samples which were approximately 5 days out of hold time.	Babcock Laboratories noted in their original email correspondence related to the deviation that meeting holding times is a part of the laboratory's key performance indicators (KPI) criteria and that Babcock Laboratories will investigate all "past holding time" data occurrences. Babcock Laboratories is currently performing a root cause analysis assessment and developing a corrective action plan to ensure similar incidents do not occur in the future.	Results were flagged with a QA Code of H [A holding time violation has occurred] on the samples out of hold time. A lab batch and lab result comment was added.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-18	Ready for Regional Board Review	07/08/2024	Delta RMP CUP QAPP 2022 v1.5	CUP Events 1 and 3 (WY 2024) PER Missing Required WQ Measures	Cassandra Lamerdin (at MLJ Environmental) documented two deviations that occurred in the DRMP CUP Year 4 study during WY 2024 due to missed water quality measurements by PER staff. Event 1 (WY 2024) had one site (511ULCABR) with no final *P. promelas* dissolved oxygen measure and Event 3 (WY 2024) had two missing water quality measurements at site Cent-018 (missing dissolved oxygen for *C. dubia* and missing conductivity for *S. capricornutum*).	1) The PER Quality Management team reminded the analysts involved in all three incidents to follow the process of their training and laboratory testing procedures, and 2) future laboratory performance will be monitored against the completeness requirements of DRMP CUP QAPP 2022 v1.5.	A Tox Test Level QA Code of TWN (i.e., required water quality parameters not measured) was applied to the samples in each test batch.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-19	Ready for Regional Board Review	08/02/2024	DRMP CEC QAPP v3.3	CEC Events 1 and 2 MLJ Environ. Discharge Measurement and Data Entry Error	On August 2, 2024, MLJ staff reviewing field measurement datasheets and flow discharge calculations for Events 1 and 2 (CEC Year 3) noted two data entry errors and two field protocol measurement errors which resulted in erroneous flow discharge estimates across Event 1 and Event 2 sampling efforts	1) For the 511OACUNA (Event 1) and 511NACDOA (Event 2) field data entry errors, the spreadsheet data entry was corrected and revised estimates for total discharge were calculated. 2) For the 519DRYWAB and 511NACUOA (Event 1) protocol errors, a QA Code of MN [Method procedures not followed] was applied to the discharge results, the compliance codes were updated to "Qual" and a comment was added to the result.	1) Corrected values were updated in ancillary datasets and any published public data products. 2) Additional training for field crew staff on the correct sampling protocol was taken.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2023-22	Under Internal MLJ Review	09/10/2024	Delta RMP CUP QAPP 2022 v1.5	CUP Event 4 (WY 2024) Babcock Lab Blank Contamin-ation for Copper	The final CUP deviation (Deviation 2023-22) occurred on September 10, 2024, when Babcock Laboratories notified MLJ Environmental and the CVRWQCB that two blank results (for C4F3403 samples) were noted to have copper contamination that was detected but not quantified [DNQ], indicating an estimated sample concentration that is less than the RL, but above the method detection limit (MDL) and subject to a high degree of uncertainty.	It was noted that no further corrective actions were needed on behalf of Babcock Laboratories given that the affected lab blanks met the SWAMP MQO guidelines, but did not meet DRMP QAPP requirements.	The results associated with the method blank contamination was flagged with a QA Code of FI [Analyte in field sample and associated blank]. A comment was added to the LabBatch indicating "Copper detected in LabBlank and FieldBlank. (>1/2xRL)"

2.3.1 Summary of Deviations from DRMP CUP QAPP v1.5

Current Use Pesticides and Aquatic Toxicity

There were eighteen deviations to the Delta RMP CUP QAPP v1.5 which occurred during FY 23-24 and were associated with current use pesticides and aquatic toxicity (**Table 4**).

Deviation 2022-10 (CUP Event 5) was related to samples that were collected on July 31 and August 1, 2023, by the USGS for the Event 5 CUP water quality monitoring collection. It was determined by PER during sample log-in that the temperatures were above the acceptable limit of 6°C for three of four samples collected on July 31, 2023. The courier had brought the samples to PER and added blocks of blue ice instead of wet ice (as stated in the PER SOP) to the coolers. Also, the coolers were left in a locked vehicle overnight. The next morning, when the samples were logged in, the measured temperatures were above the acceptable range. Resampling and testing was initiated for samples CENT-009, CENT010, and 544LSAC13, and all samples out of hold temperature were resampled on August 10, 2023. As a corrective action for future sampling, it was specified that foam inserts and wet ice will be used instead of bubble wrap and blue ice packs. Additionally, PER couriers were instructed to not leave samples in vehicles overnight and ensure that coolers are packed appropriately with wet ice for the night. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2022-11 (CUP Event 5) occurred on August 4, 2023, for samples collected on July 31, 2023, when it was observed by PER that the *C. dilutus* control would not meet test acceptability criteria (TAccC) of ≥ 80% average survival in the control. There was 67.5% average survival in the control treatment. The invalid test was terminated on August 4, 2023, and this affected results for the 511ULCABR environmental sample. The other species tested for toxicity in samples collected from 511ULCABR were unaffected. PER conducted an internal investigation and determined that organism quality was the most likely cause for not meeting TAccC. The DRMP decided to resample to address the invalid testing that occurred on August 1, 2023, and it was agreed to resample 511ULCABR and retest for toxicity to *C. dilutus* during a scheduled re-sampling event on August 10, 2023. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2022-12 (CUP Event 5) was related to the resample event that occurred on August 10, 2023, and the three samples (Cent-009, Cent-010, 544LSAC13) that were resampled for *H. azteca* toxicity testing. On August 11, 2023, PER determined at test initiation that the water test for *H. azteca* was initiated with five organisms per replicate instead of the ten organisms per replicate required by the DRMP to achieve comparability with SWAMP MQOs. Five organisms per test meets the EPA requirements for *H. azteca*

water column toxicity testing, but not the SWAMP MQOs that the DRMP follows. The reduction of organisms could have had an impact on statistical robustness. Based on the statistical analysis of the samples, this does not appear to have been an issue. All three samples were not statistically significant with percent survival(s) of 90%, 90%, and 95% compared to the control (control was 100% survival). As a preventive measure moving forward, PER added additional notes to their Organism Order log indicating that the DRMP requires 10 organisms per replicate. Finally, the summary results will be flagged with a QA Code of [TOQ]. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2022-13 (CUP Event 6) occurred on September 15, 2023, when it was discovered upon routine quality assurance review steps by PER that *C. dubia* final ammonia results were not collected at test termination which occurred on September 13, 2023. Upon investigation, it was found that the deviation resulted from an analyst error. PER indicated that future DRMP toxicity tests will be restricted to a select subset of PER staff who have multiple years of experience with the DRMP testing procedures. It was noted that the final ammonia result will be missing for one *C. dubia* batch which had environmental samples collected from sites 511ULCABR and SOUT-021, and that no toxicity occurred in either of these samples for the percent survival or reproduction endpoints. A Tox Test Level QA Code of TWN (i.e., required water quality parameters not measured) was applied to the samples in the test batch. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2022-14 (multiple CUP Events) occurred on November 3, 2023, and was related to USGS-OCRL monitoring and analysis. The USGS-OCRL conducted pesticide analysis of samples over the course of six events in WY 2023, and it was subsequently determined that pesticide batches associated with Event 1 (November 9 and 10, 2022), Event 3 (April 26 and 27, 2023), and Event 5 and 5R (July 31, August 1, and Aug 10, 2023) were missing a lab duplicate(s). Additionally, a TSS batch associated with samples collected on July 31 and August 1 (Event 5) was missing a lab blank, and a TSS batch associated with samples collected on August 10 (Event 5R) was missing a laboratory duplicate. For WY 2023, this deviation was associated with missing laboratory duplicates in seven out of 107 chemistry batches for DRMP CUP monitoring and missing laboratory blanks in one out of 107 chemistry batches. Regarding impacts on present and completed work related to chemistry analysis, it was determined that the project will still meet its completeness goal of 90%. An assessment of TSS precision indicates that six out of seven batches met the precision MQO in batches where laboratory duplicates were run, and all TSS laboratory blanks performed were non-detections (six of seven batches). It was determined that the completeness requirement of 90% or more of analytes meeting

MQOs for precision was met for the project. Regarding corrective actions, retraining with MLJ data management staff was conducted, highlighting the laboratory duplicate requirement for all batches in context of the revised CUP QAPP tables. Additionally, there was communication with USGS-OCRL to clarify that a laboratory duplicate must be performed with every pesticide batch and if a matrix spike (MS) is not performed (per Table 6 of the QAPP). Finally, CUP QAPP Table 16 was amended to make it clear that a laboratory duplicate must be performed with each batch. Regarding data flagging, all batches missing the required QC were flagged with a QI code, and a Lab Batch Comment will be added to indicate which batch QC frequency was not met and why. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2023-03 occurred on December 19, 2023 (CUP Event 1, WY 2024). Upon completion of the drying process, PER discovered that the t(0) initial weights of *C. dilutus* were greater than the SWAMP MQO of ≤0.12 mg/individual ash free dry weight (AFDW) for two control batches. Test batches were initiated on December 12, 2023 (Control Batch 1) and December 13, 2023, respectively (Control Batch 2). The first batch (Control Batch 1) had a mean t(0) AFDW of 0.15 mg/individual. The second batch (Control Batch 2) had a mean t(0) of 0.14 mg/individual. It was determined that no impact on the test results was expected in Control Batch 1 since there was no pupation and the age of the organisms was confirmed at 9-10 days old at time of test initiation. In Control Batch 2, three of four organisms pupated with one transitioning to an adult during this testing. Pupation occurred in tests performed on samples collected from stations CONF-001 (Replicate C), CONF-003 (Replicate A and C) and CONF-004 (Replicate D). Pupated organisms were excluded from both the survival and growth endpoint statistics per the Data Management Standard Operating Procedure (v2.4). It was noted that historically larvae ordered from outside venders often have a greater likelihood of initial weights above AFDW threshold compared to organisms reared in-house from egg casings by PER staff. Accordingly, PER requested 2.5 weeks of advance notice for remaining CUP non-storm sampling events to allow for rearing of egg cases in-house. The DRMP Program Manager agreed to help coordinate communication between the sampling team and PER for non-storm events that can be scheduled in advance to provide advance notice. Flagging of data results for the deviation included the following; 1) the Tox Test Level QA Code of TAF [Test organisms exceed the maximum weight requirement at test initiation] was applied to the samples in both Control Batches, 2) the Tox Test Level QA Code of TMO [Test organisms escaped or are otherwise missing] was applied to the affected samples in Control 2 that had pupation, and 3) a Tox Result Comment was added to the replicate records that had pupation: “1 organism pupated; 9 organisms used in statistics”. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2023-06 (December 13, 2023) was related to CUP Event 1 (WY 2024) missed tests due to high salinity. It was determined that salinities were above threshold levels for three species (*S. capricornutum*, *C. dubia and P. promelas*) at Confluence sites during Event 1 sampling on December 12, 2023. Four stations had a total of eight tests (14 endpoints) that were not conducted due to elevated salinities in surface water. Corrective actions included: 1) prior to sample events, conductivity will be checked remotely using results from the California Data Exchange Center (CDEC) site at Antioch and the timing of sample collection will be reviewed by USGS in all confluence sites for Events 2-6. This will allow time for additional communication and planning for implementing the alternative salinity procedures if deemed necessary. In addition, guidance was developed (i.e., QAPP CUP Amendment v1.5 and SOPs) for next time high salinities are encountered. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2023-07 occurred on January 24, 2024 (CUP Event 2, WY 2024). On January 23, 2024, Stephen Clark at PER contacted the DRMP Program Manager, the CVRWQCB QA Representative, and DRMP TIE Advisory Committee members with an email indicating that an order of *C. dilutus* organisms that were due to arrive for toxicity test initiation on January 23, 2024, had been delayed due to flight mechanical issues during shipping. It was noted that if the organisms did not arrive by the end of day, then testing would be initiated outside of the 48-hour hold time limit for the two samples (511ULCABR and 544LSAC13) collected during Event 2 monitoring on January 22, 2024. (Note: outside of the hold time limit, but within the maximum of 72 hours cited in EPA method manuals for justifications such as shipping delays.) The organisms arrived on January 24, 2024, in acceptable condition, and the 10-day toxicity tests were initiated on January 24, 2024, at 13:50 hours, which was outside of the 48-hour holding time limit. Sample 511ULCABR was five hours outside of the 48-hour hold time and sample 544LSAC13 was one hour outside of the 48-hour hold time. Although these organisms were received later than planned, they were within weight requirements and there was no pupation. The toxicity results associated with both samples for all organisms were not toxic. The Tox Test Level QA Code of H was applied to *Chironomus* test(s) initiation outside of hold time (samples 511ULCABR and 544LSAC13); and a summary result comment was added indicating how far out of hold time the toxicity testing occurred. Regarding future sampling and testing, PER noted that the laboratory was working diligently to avoid missing hold times for organisms that are shipped to the laboratory during storm season, including effective communication with the samplers, laboratory, vendor, and Project Manager. Shipping delays are not in the control of the laboratory; therefore, PER uses in-house organisms whenever possible to limit situations where shipping delays could result in hold time violations. However, storm sampling events often result in the need for using outside vendor organisms. Since this was an issue due to

shipping delays outside of the control of the laboratory, there were no additional corrective actions identified. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2023-10 occurred on January 29, 2024 (CUP Event 2, WY 2024). On January 31, 2024, Matt Uychutin from the USGS-OCRL informed the DRMP Data Manager via email that turbidity was not able to be measured in the field from two targeted sites (511ULCABR & 544LSAC13) during Event 2 (i.e., Day 1 sampling, January 22, 2024). This deviation occurred due to a probe failure of instrument YSI EXO Multiparameter Sonde (YSI EXO1). The probe was exchanged with a working probe in time for Day 2 sampling on January 23, 2024. It was noted that there was minimal impact expected on missing two turbidity results. Overall, the project will still meet its completeness goal of 90%. Field equipment is maintained by USGS according to the requirements outlined in the CUP QAPP. Since this was an unforeseen probe failure, there are minimum corrective actions. Results for turbidity were flagged with a QA Code of FIF [Instrument/Probe Failure] for results. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2023-11 occurred on January 24, 2024 (CUP Event 2, WY 2024). The toxicity laboratory, PER, discovered that the t(0) weights of *C. dilutus* were greater than the SWAMP MQO of ≤0.12 mg/individual AFDW for one of two control batches associated with Event 2 sampling. Two control batch tests were initiated on January 24, 2024 (Control Batch 1 and Control Batch 2). The first batch (Control Batch 1) had a mean AFDW of 0.09 mg/individual and the second batch (Control Batch 2) a mean of 0.19 mg/individual at time t(0). Control Batch 2 included two organisms which pupated during tests for samples collected on January 23, 2024, from sites CONF-005 and CONF-006; Control Batch 1 did not have any pupating organisms. The SWAMP MQO of AFDW ≤0.12 mg/individual is presumably targeted to reduce the likelihood of pupation/hatching during the 10-day test. Pupated organisms were excluded from both the survival and growth endpoint statistics and data were flagged per the Data Management SOP (v2.4). Neither sample was toxic to *C. dilutus* and it is expected that the omission of one organism in one replicate had minimal to no impact on the statistical analysis to determine toxicity for these two samples. The Data Management Team flagged the results and added comments explaining the situation following the procedures in the Data Management SOP: 1) the Tox Test Level QA Code of TA" [Test organisms exceed the maximum weight requirement at test initiation] was applied to the samples for Control Batch #2, 2) the Tox Test Level QA Code of TMO [Test organisms escaped or are otherwise missing] was applied to the effected samples in Control Batch #2 that had pupation, and 3) a Tox Result Comment was added to the replicate records that had pupation: "1 organism pupated; 9

organisms used in statistics". The deviation has been finalized, approved, and signed by all required parties.

Deviation 2023-12 occurred on February 26, 2024 (CUP Event 1, WY 2024). Upon review of a revised Babcock Lab Report for WY 2024 CUP Event 1 sampling, the Data Management Team discovered there was a detection in the TOC lab blank for Event 1 samples analyzed on December 27, 2023, by Babcock Laboratories. Contamination was detected at a level above the MDL in the detected not quantified (DNQ) range. This deviation does not meet the DRMP lab blank contamination MQO, but does meet the SWAMP MQO which is followed by the Central Valley Water Quality Regional Board as the contracting agency for analysis conducted by Babcock for the DRMP CUP; therefore, the results did not require reconfirmation from the laboratory, but were flagged by the DRMP as not meeting project MQOs. The affected result(s) were flagged as follows: 1) the TOC blank result will be flagged with an IP [Analyte detected in field or lab generated blank], 2) environmental samples in the analytical batch were flagged with a QA Code of FI [Analyte in field sample and associated blank], and 3) the lab batch comment includes the following "TOC reported in lab blank at levels above MDL but below RL". The deviation has been finalized, approved, and signed by all required parties.

Deviation 2023-13 (May 1, 2024) was related to CUP Event 3 WY 2024 sampling and *P. promelas* seven-day toxicity test missed hold time. Stephen Clark, Technical Director at PER, informed the DRMP and CVRWQCB on May 1, 2024, that an order of fathead minnows (*P. promelas*) was packaged and shipped via overnight delivery on April 30, 2024 (for test initiation on May 1, 2024), but the delivery was delayed in route. PER staff called FedEx, and FedEx representatives indicated that the package would arrive at PER by 3:00 p.m. on May 1, 2024 (in time for test initiation). However, the package did not arrive on May 1, 2024, and testing could not be initiated for the samples collected on April 30, 2024. After some discussion, the TIE Advisory Committee members agreed to forgo *P. promelas* testing for the affected samples since the delayed toxicity testing would occur outside of the CUP QAPP holding time limits for water samples and the organisms would be older than specified (>48 hours) in the test procedures. This deviation affected four environmental samples collected on April 30, 2024, from stations Conf-009, Conf-010, Conf-011 and Conf-012 and for *P. promelas* Control Batch 2 only. Since shipping delays are outside of the control of the laboratory or the DRMP, the only corrective action was to add comments in the database indicating why there are not *P. promelas* results for these samples. Sample and collection comments were added to Stations Conf-009, Conf-010, Conf-011 and Conf-012 which stated: "*Pimephales* was not tested at this station due to delays in shipping larvae.". The deviation is currently under review by CVRWQCB staff.

Deviation 2023-14 occurred on May 2, 2024 (CUP Event 3, WY 2024) and was related to the accidental disposal of *C. dubi*a control treatments for four toxicity tests related to samples collected on April 30, 2024 (Event 3). This deviation affected the following locations/stations: Conf-009, Conf-010, Conf-011, and Conf-012. Stephen Clark at PER indicated that on May 2, 2024, PER staff had re-started the affected tests outside of the standard 48 hour holding time limit (but within the maximum 72 hour holding time limit as outlined in EPA testing methods). Stephen Clark indicated that the staff member involved was an experienced analyst, and that the pre-mature disposal of the control treatments was accidental. The staff member self-reported the mistake and was subsequently required to undergo re-training on culturing and toxicity testing methods (which is required by the quality management system at PER when indictments such as this occur). In summary, a technical mistake by PER staff was the contributing factor to this test being invalidated. Data results for the affected samples were flagged as follows: 1) Station locations Conf-009, Conf-010, Conf011 and Conf-012 sampled on April 30, 2024 (Event 3) will have toxicity test level QA Code of H [A holding time violation has occurred] added to the *C. dubia* summary records along with a comment with the time out of hold based on the collection time of each sample, and 2) a lab batch comment that samples were run out of hold time was applied. Finally, it was noted that future Laboratory performance will be monitored against the completeness requirements of the CUP QAPP v1.5. The deviation is currently under review by CVRWQCB staff.

Deviation 2023-15 occurred on May 1, 2024 (CUP Event 3, WY 2024) and was related to *C. dilutus* testing by PER in which toxicity tests for Control Batch 1 were measured incorrectly, so the initial time [t(0)] AFDW prior to the start of the 10-day toxicity test could not be calculated. In this incident, the wrong pans were weighed by PER staff prior to placing pans and organisms in the muffle furnace for ashing. The dry weights of the small pans with the organisms should have been weighed prior to placing the pans into the muffle furnace for two hours at 550°C. However, only the outer pans were weighed prior to placement into the furnace (outer pans are only used for easier identification of pans and organisms). As only the outer pans were weighed before placing everything in the furnace (and not the inner pans that contained the organisms), there was no way to calculate the dry weight of the *C. dilutus* larvae. This deviation affected the following Event 3 samples: 511ULCABR_2024_04_29, 544LSAC13_2024_04_29 (replicate1), 544LSAC13_2024_04_29 (replicate2), Cent017_2024_04_29, and Cent-018_2024_04_29). An investigation was subsequently performed by PER to determine the cause of incorrectly weighed pans. The staff member responsible for the incident was interviewed by PER staff, and it was confirmed that he had been trained in the relevant laboratory procedures, which included reading the SOPs that outlined procedures for performing weighing for *C. dilutus* testing. The responsible PER staff member noted he

failed to recognize that the pan he was weighing had no organisms or notice that the weights he was recording were more than four times the initial weights, which is anomalous. The staff member responsible also indicated that he did not recall that the SOP specifically states that "Only the inner foil pans will be weighed". The staff member responsible also failed to measure the QA pans, as is required to ensure that weights are consistent. Therefore, a technical mistake by PER staff was the cause for the test failing to meet test acceptability criteria. Corrective Actions included 1) the responsible PER staff member was issued a Performance Evaluation, and 2) the staff member was retrained on the weighing of test organisms. Affected data results were flagged with the following: 1) QA Code MN [Method procedures not followed] was applied to control and samples for Control 1, and 2) a lab batch comment was applied; “NR: Initial weight of LABQA could not be determined due to technician error with weights”. The deviation is currently under review by CVRWQCB staff.

Deviation 2023-16 occurred on May 01, 2024 (CUP Event 3, WY 2024). On May 13, 2024, Stephen Clark notified (via email) Melissa Turner of a deviation regarding *C. dilutus* testing that was initiated with organisms above the MQO of ≤0.12 mg/individual AFDW for Control Batch #2 associated with Event 3 sampling. The mean AFDW was 0.16 mg/individual for organisms used to start toxicity testing on May 1, 2024. An investigation was performed to determine the cause of the increased weight of the organisms used for test initiation on May 1, 2024. The following Event 3 samples were affected by this deviation: Conf009_2024_04_30, Conf-010_2024_04_30, Conf-011_2024_04_30, and Conf012_2024_04_30. Control Batch 2 testing was initiated on May 1, 2024, using 10-day old larvae reared from egg cases received on April 20, 2024, from Aquatic BioSystems Inc. (PER's primary vendor). The egg cases were received by PER in good condition at arrival with acceptable water quality parameters and all egg cases were noted as hatching on April 21, 2024. At 10 days old, the organisms were used for test initiation which is within the required age range for the test method. Both the PER Quality Manager and the Assistant Lab Manager noted that the organisms used for test initiation were larger than is typical for 10-day old organisms, but that they appeared to be in excellent health. When organisms are received by PER as larvae, the organisms tend to have higher weights than when PER receives egg cases and raises the larvae in-house. However, these organisms were larger and more active than is typically seen from larvae raised from egg cases at PER. The visual observation of large larvae at test initiation is consistent with the larger larval t(0) weight. The larvae were fed consistently with PER's SOP and by experienced analysts throughout the husbandry period, and there were no mistakes made during organism husbandry that could account for the weight exceeding the SWAMP MQO. However, the hatch from egg cases can vary from several hundred organisms to over a 2000 count, so it is possible that a lower hatching density occurred for these affected

trays, which can cause the organisms to grow larger than usual due to having more food per organism in the culture. It should be noted that *C. dilutus* larvae are very small (near microscopic), making food adjustments based on the quantity of hatching organisms next to impossible. Therefore, food density cannot be ruled out as a contributing factor to the test exceeding the SWAMP MQO. It was concluded that organism quality (e.g., large larvae) appeared to be a contributing factor to the test exceeding the SWAMP MQO. Affected samples for Control Batch #2 were flagged with a Tox Test Level QA Code of TAF [Test organisms exceed the maximum weight requirement at test initiation]. It was further noted that even though the larval t(0) weight in Control Batch 2 was 0.16 mg/individual, there were no pupating organisms in this control batch; therefore, it is not expected that having larger larvae at the start of the toxicity test had an effect on the test batch results. The deviation is currently under review by CVRWQCB staff.

Deviation 2023-17 occurred on June 11, 2024 (CUP Event 3, WY 2024). Babcock Laboratories notified MLJ Environmental and the CVRWQCB on June 11, 2024, that five samples related to Event 3 (April 29-30, 2024) sampling had experienced a "Blank Spike fail low" during TKN dissolved laboratory analysis. Given this occurrence, there was a need to reanalyze the samples. Due to a laboratory oversight the re-analysis happened (~ 5 days) after the holding time had already expired. Therefore, five samples were reported past holding time for TKN. Babcock Laboratories noted in their original email related to the deviation that meeting holding times is a part of the laboratory's key performance indicators (KPI) criteria and that Babcock Laboratories does investigate all "past holding time" data occurrences. Babcock Laboratories is currently performing a root cause analysis assessment and developing a corrective action plan to ensure similar incidents do not occur in the future. Results were flagged with a QA Code of H [A holding time violation has occurred] on the samples out of hold time. A lab batch and lab result comment was added. The deviation has been reviewed by MLJ Environmental staff and is ready for Regional Board review.

Deviation 2023-18 occurred on July 8, 2024 (CUP Events 1 and 3, WY 2024) when Cassandra Lamerdin (at MLJ Environmental) documented two deviations that occurred in the DRMP CUP Year 4 study during WY 2024 in relation to missed water quality measurements by PER staff. Event 1 (WY 2024) had one site (511ULCABR) with no final *P. promelas* dissolved oxygen measure, and Event 3 (WY 2024) had two missing water quality measurements at site Cent-018 (missing dissolved oxygen for *C. dubia* and missing conductivity for *S. capricornu*tum). For the Event 1, *P. promelas* toxicity test (511ULCABR), the solutions were renewed without collecting an aliquot for the old water quality on Day 1 of the test. This was documented by the analyst that made the error, and the lab Quality Management team reminded the analyst to pay close attention to collecting the aliquot

for old water into the pre-labeled cup before renewing the test solutions. For the Event 3, *C. dubia* toxicity test (CENT-018), the Day 2 old water quality cup collected after solution renewals was tipped over before the pH and dissolved oxygen could be measured. The Quality Management team reminded the analyst to follow the process of their training, including securing the old water quality cups in a way that they will not be tipped over. For the Event 3, *S. capricornutum* toxicity test (CENT-018), the solutions were collected for old water quality data. The analyst recorded the temperature, pH, and dissolved oxygen, but failed to record conductivity on the bench sheet prior to pouring out the solution, even though the parameters are all measured concurrently. The Quality Management team reminded the analyst to follow the process of their training, including doble checking the bench sheet to ensure that all water quality parameters have been recorded prior to disposing of the solution. A Tox Test Level QA Code of TWN (i.e., required water quality parameters not measured) was applied to the samples in each test batch. Finally, it was noted that future laboratory performance will be monitored against the completeness requirements of DRMP CUP QAPP 2022 v1.5. The deviation has been reviewed by MLJ Environmental staff and is ready for Regional Board review.

The final CUP deviation (Deviation 2023-22) for FY 23-24 occurred on September 10, 2024, when Babcock Laboratories notified MLJ Environmental and the CVRWQCB on 09/10/2024 that the revised Final Report for C4F3403 samples (WY 2024, Event 4 sampling) contained an update regarding a rounding issue for two contaminated dissolved copper blank results. This rounding issue resulted in sample C4F3403-02 not being re-analyzed as required by the DRMP QAPP lab blank requirements (i.e., trace metal acceptability limits; < the method detection limits [MDL]). Affected blank result(s) were noted to have copper contamination that was detected but not quantified [DNQ] in the result, indicating an estimated sample concentration that is less than the reporting limit (RL), but above the MDL and subject to a high degree of uncertainty. The results associated with the method blank contamination will be flagged with a QA Code of FI [Analyte in field sample and associated blank]. A comment has been added to the LabBatch indicating “Copper detected in LabBlank and FieldBlank. (>1/2xRL)”. It was noted that no further corrective actions were needed on behalf of Babcock Laboratories given that the affected lab blanks met the SWAMP MQO guidelines, but did not meet DRMP QAPP requirements. The deviation has been reviewed by MLJ Environmental staff and is ready for Regional Board review.

2.3.2 Summary of Deviations from DRMP CEC QAPP v3.3

Constituents of Emerging Concern

There were seven deviations to the Delta RMP CEC QAPP v3.3 which occurred during FY 23-24 and were associated with constituents of emerging concern (**Table 4**).

Deviation 2023-01 occurred on October 19, 2023, was related to Year 3 Event 1 CEC monitoring conducted on October 16, 18, and 19, 2023. Turbidity was measured in the field instead of collecting water for a laboratory analysis at the POTW 1 sites sampled on October 19, 2023. At these sites, turbidity was measured using a Hanna Turbidity Meter following method EPA 180.1, instead of submitting samples to Physis Laboratories for analysis by method EPA 180.1, as outlined in the approved QAPP. MLJ field crews collected turbidity as a field measurement in lieu of a laboratory analysis for the POTW 1 samples to avoid holding time violations for that analyte given potential shipping and delivery errors that could have compromised the analyte sample handling requirements. While not defined in the current version of the QAPP, previous years of the CEC Pilot Study obtained turbidity results as field measurements; therefore, turbidity field results are consistent with previous project data. In addition, turbidity is an ancillary measurement, not one of the targeted CECs to be monitored, and the resolution of the field instrument (0.1 NTU) is comparable to the laboratory reporting limit (0.5 NTU). Data usability was unaffected by the substitution of a field measurement for the laboratory analysis. The field turbidity measurements obtained on October 19, 2023, met the project needs for interpreting associated CEC data. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2023-02 (November 27, 2023) occurred in relation to missing laboratory control sample duplicates for CEC Year 3 Event 2 monitoring. Enthalpy Analytics was contracted to run PFAS constituents testing and analysis. The CEC QAPP (v3.3) requires that a laboratory duplicate be analyzed on a per batch basis. A laboratory control sample duplicate (LCSD) is used by Enthalpy to meet this requirement. On November 27, 2023, the Enthalpy Project Manager, Rajwinder Kaur, informed the DRMP Program Manager, Melissa Turner, that the laboratory missed analyzing the LCSD during the analysis of the samples associated with Event 2. The reason for this error was laboratory oversight. The oversight was noted by Enthalpy Analytical, and no additional follow-up corrective actions were prescribed. The Lab Batch has been flagged following the DRMP Data Management SOP where the Lab Submission Code was updated to QI to indicate incomplete QC. A Lab Batch Comment will be added to indicate which batch QC frequency was not met and the cause, which was lab oversight in this instance. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2023-04 (December 28, 2023) was related to CEC Event 1 monitoring reporting deadlines and samples(s) extraction hold time requirements. Physis Environmental Laboratories (Physis) reported Event 1 EDDs to MLJ on December 21, 2023, for all results (turbidity and PPCPs). It was noted that eight samples collected on October 18, 2023, had a turbidity analysis date of October 20, 2023, and the resolution preliminary reporting deadline (60 days from the analysis date) was missed by seven days for these results. This aspect of the deviation only affects the timing for when preliminary results were received and there were no hold time violations associated with the turbidity analysis results. Therefore, it was concluded that this portion of the deviation had no impact on the findings of the results. The second part of the deviation occurred during a cursory review of the Physis results, when it was noted that the two samples (519PGC010 and 519SACUR3) collected on October 16, 2023 (and extracted on October 25, 2023) missed the seven-day extraction hold time by two days. Physis Laboratories was contacted and confirmed the hold time exceedance. Corrective actions by Physis included the following: 1) the Laboratory reminded staff about requirements to report results within 60 days of the analysis date, and 2) the Laboratory reviewed the error with staff and reminded them to confirm analysis dates of all samples when scheduling extractions to ensure hold times are not missed. Affected data results were flagged with a QA Code of H and a batch comment was added indicating there was a two-day extraction hold time violation on two samples in the batch. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2023-05 occurred on January 10, 2024, and was related to missed preliminary reporting deadlines for CEC Events 1 and 2. As per Resolution R5-2021-0054, preliminary raw data and monitoring results shall be provided to the CVRWQB within sixty calendar days from the date of sample analysis. MLJ Environmental collected samples for CEC Year 3 Event 1 on October 16, 18, and 19, 2024. Event 2 samples were collected on October 30 and November 1, 2024. On January 4, 2024, Weck Laboratories sent Event 1 PPCP lab reports and electronic data deliverables (EDDs) for samples collected on October 16, 2023 (3J20079) and October 18, 2023 (3J20081) to the Data Management Team, with an acknowledgement that results for samples collected on October 19, 2023, as well as all results from Event 2, were still pending. On January 10, 2024, Weck sent the PPCP Lab Report and EDD for sample date October 19, 2023 (3J24067) to the Data Management Team, with a further acknowledgement the Data Management Team had requested Event 2 results from Weck. Once all results for Event 1 were reported (January 10, 2024), the DRMP Data Manager assessed whether preliminary reporting deadlines were missed. On January 11, 2024, the DRMP Data Manager sent an email to Selina Cole (QA Representative, CVRWQCB) to provide notification that the CEC Event 1 PPCP preliminary reporting deadline was missed for the Event 1 collections. Specifically, the

samples collected on October 16 and 18, 2023 were analyzed on October 26, 2023, and reported on January 4, 2024 (10 days past deadline). The samples collected on October 19, 2023, were analyzed on November 4, 2024, and reported on January 10, 2024 (7 days past deadline). Additionally, Selina Cole was notified that the analysis dates for Event 2 samples were currently unknown, and it was anticipated that those results might also be received by the Data Management Team outside the 60 days reporting timeline. On January 17, 2024, the DRMP Data Manager sent an additional reminder to Weck requesting data for Event 2. On January 17, 2024, Weck sent Event 2 sample date(s) October 19, 2023 (3K03096) and November 1, 2023 (3K03096, 3K03103) lab reports and EDDs to the Data Management Team. On January 18, 2024, the DRMP Data Manager sent an email to Selina Cole (Regional Board QA Officer) with a notification that Event 2 Weck files were received on January 17, 2024, and the analysis was done on November 15, 2023. The preliminary reporting timeline was missed by three days for Event 2 PPCP results. The deviation only affected the timing for when preliminary results were received and there were no hold time violations associated with these results. Accordingly, this deviation had no impact on the results themselves. The corrective action is for future DRMP projects with Weck; the 60-day reporting timeline will be discussed in future kickoff meetings with the laboratory in addition to noting this requirement in contract language and analysis quote requests. The deviation has been finalized, approved, and signed by all required parties.

Deviation 2023-08 occurred on December 20, 2023 (CEC Events 1 and 2, WY 2024). Physis Laboratories reported Event 1 and Event 2 EDDs to the Data Management Team on December 20, 2023, for all results (turbidity and PPCPs). It was noted by the Data Management Team upon review of the EDD data (submitted on December 20, 2023) that there was field contamination for galaxolide and turbidity (MQO for field blank is < RL) in field and equipment blanks for Event 1 and Event 2 sampling performed on October 18, October 19, and November 1, 2023, and appropriate flags were applied following the Data Management SOP. It was also noted that all laboratory blanks analyzed with samples from these sampling events were non-detect (ND) for all parameters. Specifically, the samples affected were the following: 1) October 18, 2023 (sample ID # 511NACDOA-EB), 2) October 19, 2023 (sample ID # 519POTW01-EB and 519DRYRLB-FB), and 3) November 1, 2023 (sample ID # 511NACDOA-EB, 511OACCLN-FB, and 519POTW01-EB). A majority of the samples with field contamination are associated with equipment blanks where the blank water supplied by the laboratory is processed through the sampling equipment prior to the laboratory bottle (same process as collecting an environmental sample), whereas a field blank is created by pouring blank water directly into the bottle. MLJ field sampling staff confirmed that Physis supplied the blank water used by MLJ staff during CEC Event 1 and Event 2 field sampling and that the blank water

was received and handled according to the DRMP CEC Field Sampling SOP. On January 30, 2024, CVRWQCB QA Representative, Selina Cole, was contacted to determine if this constituted a deviation since the samples were correctly flagged. Selina Cole noted that field contamination(s) that will impact data quality should be documented in a deviation form that identifies corrective actions to hopefully prevent similar issues in future monitoring events. This deviation resulted in the following corrective actions: 1) Field samplers went through extensive training prior to CEC Year 3 sampling with special attention paid to field contamination. Staff were reminded about sampling procedures to reduce contamination, and the laboratory was also communicated with regarding contamination concerns, and 2) a QA Code was added to records where the result is greater than the RL with a QA Code of IP [Analyte detected in field or lab generated blank]. The deviation is currently under review by CVRWQCB staff.

Deviation 2023-09 occurred on January 30, 2024 (CEC Events 1 and 2, WY 2024). On January 30, 2024, the Data Management Team reviewed the Physis EDDs for Events 1 and 2 (CEC Year 3) and noted that a turbidity laboratory control spike (LCS), as required per batch in QAPP Table 6, was not performed by the laboratory for two batches. Samples were collected on October 16, 18, and 19, 2023 for Event 1 and October 30 and November 1, 2023, for Event 2. The EDDs were received by the Data Management Team on January 17, 2024. Following a review of EDDs, Cassandra Lamerdin (DRMP Data Manager) contacted Physis Laboratories on January 30, 2024, to inquire about missing LCS for turbidity in the following lab batches: 1) Physis_DRMP_CEC_C74082_W_TURB and 2) Physis_DRMP_CEC_C-74089_W_TURB. Rachael Hansen at Physis responded on January 30, 2024, and indicated Physis did not perform an LCS for turbidity. Rich Gossett at Physis further responded on January 30, 2024, and indicated Physis only performed lab blanks and lab duplicates for quality assurance and quality control (QAQC) purposes in relation to turbidity. It is anticipated that the completeness requirement of 90% or more of analytes meeting MQOs for accuracy will still be met for the project. Physis confirmed that all other required quality control (QC) were performed including a mid-level calibration check, laboratory blanks, and laboratory duplicates for all turbidity batches. Affected data were flagged with a QA Code of QI and a lab batch comment was added to indicate which batch QC frequency was not met and the cause. Additionally, it was agreed that future kickoff meetings and discussions related to testing and analysis will emphasize batch QC requirements including references to QAPP tables. The deviation has been finalized, approved, and signed by all required parties.

The final CEC deviation (Deviation 2023-19: CEC Events 1 and 2 MLJ Environmental Discharge Measurement and Data Entry Error) occurred on August 2, 2024 (CEC Events 1 and 2, WY 2024). On August 2, 2024, MLJ staff reviewing field measurement datasheets

and flow discharge calculations for Events 1 and 2 (CEC Year 3) noted two data entry errors and two field protocol measurement errors which resulted in erroneous flow discharge estimates across Event 1 and Event 2 sampling involving the following station locations: 511OACUNA (Event 1, October 18, 2023), 511NACDOA (Event 2, November 1, 2023), 519DRYWAB (Event1, October 19, 2023) and 511NACUOA (Event1, October 18, 2023). Melissa Turner (DRMP Program Manager) was notified and briefed on the deviation during an in-person meeting on August 5, 2024, and Ryan Brown at the CVRWQCB was sent notification of the Deviation on August 9, 2024. For the 511OACUNA (Event 1) and 511NACDOA (Event 2) field data entry errors, the spreadsheet data entry was corrected and revised estimates for total discharge were calculated. Corrected values were updated in ancillary datasets and any published public data products. For the 519DRYWAB and 511NACUOA (Event 1) measurement protocol errors, a QA Code of MN [Method procedures not followed] was applied to the discharge results, and the compliance codes were updated to "Qual" and a comment was added to the results. Finally, additional training for field crew staff on the correct sampling protocol was undertaken. The deviation is currently under internal review by MLJ Environmental staff.

2.4 QAPP AMENDMENTS

When appropriate, an amendment to the approved QAPP is required. Amendments that were created and/or approved during the FY 23-24 reporting period are summarized in **Table 5**.

Table 5. Summary of QAPP Amendments submitted or approved during FY 23-24.

QAPP Name	Amendment	Monitoring Sector	Title	Description	Approval Status
Delta RMP CUP QAPP 2022 v1.3	Version 1.4	CUP	Amendment to update pesticide MDLs and RLs, analyte names, and SOP reference.	The analytical method reference for the OCRL pesticide suite has been updated to reflect the most recent SOP used by USGS of "OCRL-WATER-PEST_06". Forty pesticides were updated to reflect the current MDL and/or RL values and two analyte names were updated to reflect current CEDEN analyte names. Updates were made to clarify the requirements for calculating relative percent difference for laboratory duplicates and to include TSS sample handling requirements.	Approved 10/25/2023

QAPP Name	Amendment	Monitoring Sector	Title	Description	Approval Status
Delta RMP CUP QAPP 2022 v1.3	Version 1.5	CUP	Amendment to add high-conductivity toxicity testing procedures and update the copper MDL value.	The CUP QAPP was updated to include procedures for toxicity testing in samples with high salinity concentrations. In addition, it identified salinity thresholds for each prescribed test organism and an alternate species to test if the upper salinity threshold is exceeded by the sample. The use of alternate species and high-conductivity controls for samples with elevated salinity allows for a better understanding of whether toxicity is a result of salinity or other contaminants such as pesticides. SWAMP MQOs recommend that alternate species be tested when sample conditions are outside of the standard test organism tolerance limits. This amendment (CUP QAPP v1.5) identifies the alternate test species and other test protocols. Additionally, the QAPP is being updated to reflect the most recent MDL value for copper.	Approved on May 7, 2024

3 QUALITY ASSURANCE – DATA MANAGED BY THE DRMP

3.1 PESTICIDES AND AQUATIC TOXICITY

Current-use pesticides and associated aquatic toxicity monitoring are conducted on a WY basis (October 1 through September 30). The samples collected during FY 23-24 were for Year 3 and Year 4 of the four-year monitoring design. Samples collected for pesticide analysis and toxicity testing during FY 23-24 included Events 5 and 6 of WY 2023 and Events 1 through 4 of WY 2024:

- WY 2023; Event 5, July 31 and August 1, 2023
- WY 2023; Event 6, September 5 and 6, 2023
- WY 2024; Event 1, December 11 and 12, 2023
- WY 2024; Event 2, January 22 and 23, 2024
- WY 2024; Event 3, April 29 and 30, 2024
- WY 2024; Event 4, June 24 and 25, 2024

All WY 2023 and 2024 samples were collected by USGS sampling crews for pesticide analysis by the USGS OCRL, copper and ancillary parameters analysis by Babcock Laboratories, and toxicity testing by PER. The CUP WY 2023 Data Report was approved by the BOD on June 11, 2024, and data for WY 2023 Events 5 and 6 were published to CEDEN on March 2, 2024. The CUP WY 2024 Data Report will be finalized in coordination with the publication of the WY 2024 data to CEDEN by March 11, 2025. Assessments of completeness, precision, and accuracy for sampling events that occurred during FY 23-24 are provided in **Appendix I** and are briefly summarized here.

3.1.1 FY 23-24 Monitoring Results for Pesticides and Aquatic Toxicity

Quality Control Sample Completeness

Of the samples planned for CUP monitoring during FY 23-24, all samples were successfully collected and delivered to the laboratories for analysis for 100% (52 of 52) of monitoring locations; 99.89% (19,205 of 19,227) of the expected analysis results were reported by USGS OCRL, Babcock, and PER. The results that were not reported were associated with missed toxicity testing due to high sample salinity levels (*C. dubia*, *P. promelas*, and *S. capricornutum*, see **Deviation 2023-06**), and missed hold times (*P. promelas* toxicity tests, see **Deviation 2023-13**).

The Delta RMP CUP QAPP (v1.5) requires that field duplicates and field blanks be collected with associated chemistry analyses at an annual rate of 5%, if applicable. For Events 5 and 6 of WY 2023 and Events 1 through 4 of WY 2024, field blanks comprised 5.78% (1,089 of 18,843) and field duplicates comprised 5.85% (1,123 of 19,205) of results received. Laboratory QC sample requirements for chemistry analyses are a combination of method blanks, laboratory duplicates, MS, and LCS and are method/analyte specific. Laboratory QC are required at a frequency of 1 in 20 samples. Laboratory QC for toxicity testing entails the inclusion of a negative control sample with each batch. For samples collected during FY 23-24 (Events 5 and 6 of WY 2023 and Events 1 through 4 of WY 2024), laboratory QC completeness was met by each laboratory at the following rates:

- 89.5% (17 of 19) of batches analyzed for pesticides by the OCRL,
- 100% (88 of 88) of batches analyzed by Babcock, and
- 100% (62 of 62) of the toxicity batches analyzed by PER.

During Events 5 and 6 of WY 2023 and Events 1 through 4 of WY 2024, overall batch completeness was 98.8% (167 of 169). A comprehensive assessment of the QC completeness for WY 2023 was provided in the DRMP CUP WY 2023 Data Report. Similarly, a complete assessment of QC completeness for WY 2024 will be provided in the DRMP CUP WY 2024 Data Report.

Acceptability of Precision Measurements

Precision is measured by a combination of field and laboratory duplicate samples including matrix spike duplicates (MSDs) and/or LCSDs for chemistry analyses.

During FY 23-24 (Events 5 and 6 of WY 2023 and Events 1 through 4 of WY 2024), precision acceptability criteria were met at the following rates for all chemistry and toxicity results:

- 99.8% (1,121 of 1,123) of field duplicate samples,
- 99.8% (1,483 of 1,486) of laboratory duplicate samples,
- 99.9% (1,127 of 1,128) of MSD samples.

Analyte-specific precision acceptability evaluations are provided in **Appendix I**.

Acceptability of Accuracy Measurements

Accuracy and bias in the field and laboratory are measured through a combination of negative and positive control samples. Bias introduced by field or chemistry laboratory contamination is monitored through field and laboratory blank samples. Laboratory accuracy for chemistry samples is also monitored through LCS and MS samples, which contain a known amount of the target analytes and are processed alongside environmental samples and assessed against the expected results. Similarly, the accuracy of environmental results can be assessed with surrogate samples in which environmental

samples are fortified with a known amount of an analyte that is chemically similar to the target analytes and therefore expected to perform similarly to laboratory conditions. Accuracy and bias in toxicity testing is assessed through the use of negative control samples performed with each batch and reference toxicant tests performed periodically by the laboratory.

During FY 23-24 (Events 5 and 6 of WY 2023 and Events 1 through 4 of WY 2024), accuracy acceptance criteria were met at the following rates:

- 100% (1,089 of 1,089) of field blank samples,
- 99.9% (2,203 of 2,206) of laboratory blank samples,
- 99.8% (2,176 of 2,180) of LCS samples,
- 99.8% (2,264 of 2,269) of MS samples,
- 100% (1,280 of 1,280) of surrogate samples, and
- 100% (100 of 100) of toxicity negative control samples.

Analyte-specific accuracy acceptability evaluations are provided in **Appendix I**.

INVALID DATA

All results analyzed by USGS OCRL, Babcock Laboratories, and PER for Events 5 and 6 of WY 2023 and Events 1 through 4 of WY 2024 are considered valid and flagged according to the Delta RMP CUP QAPP (v1.5) criteria.

3.2 CONSTITUENTS OF EMERGING CONCERN

During FY 23-24, the DRMP completed Year 3 of CEC monitoring, and a QA Report evaluating the Year 3 results was included in the CEC Year 3 Data Report which was approved by the DRMP BOD on December 16, 2024.

4 QUALITY ASSURANCE – DATA NOT MANAGED BY THE DRMP

4.1 NUTRIENTS

4.1.1 Cyanotoxin Monitoring in the Delta, USGS, and DWR

Data collection for the cyanotoxin study was originally planned for a 12-month period ending in February 2022 but was extended through March 2023. Data collection began in March 2021.

Quality assurance and QC procedures for these samples are conducted according to the individual quality assurance manuals and standard operating procedures maintained by USGS and DWR. Field QC sample collection follows the USGS and DWR quality assurance protocols for blanks and replicates. A minimum of one QC sample (e.g., blank, replicate) will be collected every 10 samples (10% of the total environmental samples). Quality control data will be reviewed by the project chief and QC failures are assessed by staff. Corrective actions are taken with either field or laboratory staff, as necessary.

A draft report titled "*Cyanotoxin Monitoring in the Delta: Leveraging existing USGS and DWR field efforts to identify cyanotoxin occurrence, duration, and drivers*" was submitted and reviewed by the Nutrient TAC in FY 23-24. The report is currently under internal USGS review, and the authors plan to release the report as a USGS Scientific Investigation Report in parallel with the DRMP approval process.

Completed project water sample results are available on Water Data for the Nation, and finalized project data will be available through the USGS ScienceBase website.

4.1.2 Source Tracking of Cyanotoxin Blooms in the Delta, Bend Genetics, and CVRWQCB

Field sampling began in November 2020 and concluded in August 2021 for Phase 1 of the *Microcystis* study with funding by the DRMP. The Phase 1 final report, "*Mapping benthic overwintering Microcystis sp. within the Sacramento-San Joaquin Delta"* was submitted to CVRWQCB and the DRMP on December 31, 2021. The report was reviewed by the Nutrient TAC on February 25, 2022. Additional (non-DRMP) funding was secured to do Phase II of the project. Sampling was conducted in November 2021 and April 2022 for Phase II. On March 11, 2024, Dr. Ellen Preece presented an updated report titled, "*Benthic overwintering cyanobacteria seed stock plays an important role in Delta bloom dynamics*" to the

DRMP Steering Committee. The final *Microcystis* report has been organized as a manuscript and has been submitted to a scientific journal for peer review and publication. The article will be published as an open access article once fully reviewed, revised, and accepted for publication.

4.1.3 USGS High Resolution Mapping Surveys

The USGS conducted high frequency mapping surveys from 2018 to 2023 which documented the variability of nutrients and related water quality parameters at high spatial resolution within the Sacramento-San Joaquin Delta. Finalized data from this effort is publicly available online at USGS ScienceBase.

The Nutrient TAC received a draft of the USGS high frequency mapping surveys report titled "Assessing Spatial Variability of Nutrients, Phytoplankton, and Related Water Quality Constituents in the California Sacramento–San Joaquin Delta at the Landscape Scale: Comparison of Four Spring (2018, 2020, 2021, 2022) High Resolution Mapping Surveys" on April 30, 2024, for review, and the final report will be presented to the DRMP Steering Committee in December 2024 for review and recommendation to the BOD for approval.

4.2 MERCURY MONITORING

Since FY 22-23, mercury monitoring has rotated into a long-term planning stage. As part of the long-term planning process, an interpretive report is being developed with a primary audience of the CVRWQCB and Methylmercury TMDL stakeholders. The DRMP Mercury TAC in coordination with SFEI-ASC and the CVRWQCB have set up a series of meetings in FY 24-25 to review data sets, analysis, results, and interpretation and provide comments and feedback on draft and final reports. Data utilized in the report will include data generated from 2016 – 2022 and will evaluate trends in aqueous and fish tissue mercury concentrations since 2000 in the context of water year type and subarea.

The finalized data generated during mercury monitoring and sampling are currently available to the public via the CEDEN Advanced Query Tool (AQT).

APPENDIX I – SUMMARY OF COMPLETENESS AND QUALITY CONTROL SAMPLE ACCEPTABILITY FOR EVENTS 5 AND 6 OF CUP WY 2023 AND EVENTS 1 THROUGH 4 OF CUP WY 2024.

Appendix I Contents:

Table I.1. Field duplicate (FD) sample acceptability for CUP samples collected during FY 23-24.
Sample counts include Events 5 and 6 of CUP WY 2023 and Events 1 through 4 of CUP WY 2024. A complete assessment of WY 2023 data was provided in the DRMP CUP WY 2023 Data Report. Similarly, a complete assessment of WY 2024 data will be provided in the DRMP CUP WY 2024 Data Report.

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
Calculated	Babcock	Water	Dissolved, Total	Nitrogen, Total	RPD ≤ 25 [1]	8	8	100.0
EPA 200.7	Babcock	Water	Dissolved	Calcium	RPD ≤ 25 [1]	4	4	100.0
EPA 200.7	Babcock	Water	Dissolved	Magnesium	RPD ≤ 25 [1]	4	4	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	RPD ≤ 25 [1]	4	4	100.0
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	RPD ≤ 25 [1]	7	5	71.4
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	RPD ≤ 25 [1]	4	4	100.0
SM 2340 B	Babcock	Water	Dissolved	Hardness as CaCO3	RPD ≤ 25 [1]	4	4	100.0
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	RPD ≤ 25 [1]	4	4	100.0
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	RPD ≤ 25 [1]	4	4	100.0
EPA 160.2	OCRL	Water	Particulate	Total Suspended Solids	RPD ≤ 25 [1]	3	3	100.0
EPA 600/R-99-064M	PER	Water	Survival, Growth	*Chironomus dilutus*	RPD ≤ 25	6	6	100.0
EPA 821/R-02-012	PER	Water	Survival	*Hyalella azteca*	RPD ≤ 25	3	3	100.0
EPA 821/R-02-013	PER	Water	Reproduction, Survival	*Ceriodaphnia dubia*	RPD ≤ 25	6	6	100.0
EPA 821/R-02-013	PER	Water	Survival, Growth	*Pimephales promelas*	RPD ≤ 25	6	6	100.0
EPA 821/R-02-013	PER	Water	Growth	*Selenastrum capricornutum*	RPD ≤ 25	3	3	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Acibenzolar-S-methyl	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Allethrin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Benfluralin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Bifenthrin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorfenapyr	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorothalonil	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyfluthrin, Total	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalofop-butyl	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalothrin, Total	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cypermethrin, Total	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dacthal	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDD(p,p')	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDE(p,p')	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDT(p,p')	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Deltamethrin	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dithiopyr	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Esfenvalerate	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethalfluralin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethofenprox	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpropathrin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoprene	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Nitrapyrin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloroanisole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloronitrobenzene	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin, Total	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Phenothrin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tefluthrin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetramethrin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	T-Fluvalinate	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Acetamiprid	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Azoxystrobin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	RPD ≤ 25 [1]	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzobicyclon	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzovindiflupyr	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid-5-hydroxy	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Broflanilide	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Bromuconazole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Butralin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbaryl	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbendazim	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbofuran	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorantraniliprole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl)acetamide, 2-	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos oxon	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clomazone	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin-Desmethyl	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Coumaphos	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyantraniliprole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyazofamid	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyclaniliprole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cycloate	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cymoxanil	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyproconazole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyprodinil	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desethyl-Atrazine	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desisopropyl-Atrazine	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desnitro-imidacloprid	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desthio-prothioconazole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazinon	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazoxon	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichloroaniline, 3,5-	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorobenzenamine, 3,4-	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl Urea, 3,4-	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl-3-methyl Urea, 3,4-	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorvos	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Difenoconazole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dimethomorph	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dinotefuran	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diuron	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	EPTC	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethaboxam	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Etoxazole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Famoxadone	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenamidone	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenbuconazole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenhexamid	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpyroximate	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl Amide	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfide	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfone	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flonicamid	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Florpyrauxifen-Benzyl	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluazinam	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fludioxonil	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flufenacet	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluindapyr	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flumetralin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopicolide	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopyram	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluoxastrobin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flupyradifurone	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluridone	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutolanil	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutriafol	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluxapyroxad	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Halauxifen-methyl	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hexazinone	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hydroxy-Imidacloprid, 5-	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Imazalil	RPD ≤ 25 [1]	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid olefin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid urea	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indaziflam	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indoxacarb	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ipconazole	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Iprodione	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Isofetamid	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Kresoxim-methyl	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malaoxon	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malathion	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandestrobin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandipropamid	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl-hydroxymethyl	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metconazole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoxyfenozide	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Myclobutanil	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Naled	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Napropamide	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Novaluron	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oryzalin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxadiazon	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxathiapiprolin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxyfluorfen	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Paclobutrazol	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pendimethalin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	RPD ≤ 25 [1]	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Penthiopyrad	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Phosmet	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picarbutrazox	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picoxystrobin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Piperonyl Butoxide	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prodiamine	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometon	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometryn	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propanil	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propargite	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propiconazole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propyzamide	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pydiflumetofen	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyraclostrobin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyridaben	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyrimethanil	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyriproxyfen	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Quinoxyfen	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sedaxane	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Simazine	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sulfoxaflor	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	RPD ≤ 25 [1]	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebufenozide	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos oxon	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetraconazole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiabendazole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiacloprid	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam Degradate (CGA-355190)	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	RPD ≤ 25 [1]	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiobencarb	RPD ≤ 25 [1]	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FD Samples	FD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tolfenpyrad	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimefon	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimenol	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triallate	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tributyl Phosphorotrithioate, S,S,S-	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifloxystrobin	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triflumizole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triticonazole	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Valifenalate	RPD ≤ 25 [1]	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Zoxamide	RPD ≤ 25 [1]	6	6	100.0
Total						**1123**	**1121**	**99.8**

[1] Not applicable if concentration of either sample < RL.

Table I.2. Laboratory duplicate (LD) sample acceptability for CUP samples collected during FY 23-24.
Sample counts include Events 5 and 6 of CUP WY 2023 and Events 1 through 4 of CUP WY 2024. A complete assessment of WY 2023 data was provided in the DRMP CUP WY 2023 Data Report. Similarly, a complete assessment of WY 2024 data will be provided in the DRMP CUP WY 2024 Data Report.

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
EPA 200.7	Babcock	Water	Dissolved	Calcium	RPD ≤ 20	6	6	100.0
EPA 200.7	Babcock	Water	Dissolved	Magnesium	RPD ≤ 20	6	6	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	RPD ≤ 25	6	5	83.3
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	RPD ≤ 25	20	20	100.0
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	RPD ≤ 20	15	15	100.0
SM 2340 B	Babcock	Water	Dissolved	Hardness as CaCO3	RPD ≤ 25	4	4	100.0
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	RPD ≤ 25	11	11	100.0
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	RPD ≤ 25	8	8	100.0
EPA 160.2	OCRL	Water	Particulate	Total Suspended Solids	RPD ≤ 25	6	4	66.7
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Acibenzolar-S-methyl	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Allethrin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Benfluralin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Bifenthrin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorfenapyr	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorothalonil	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyfluthrin, Total	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalofop-butyl	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalothrin, Total	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cypermethrin, Total	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dacthal	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDD(p,p')	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDE(p,p')	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDT(p,p')	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Deltamethrin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dithiopyr	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Esfenvalerate	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethalfluralin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethofenprox	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpropathrin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoprene	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Nitrapyrin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloroanisole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloronitrobenzene	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin, Total	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Phenothrin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tefluthrin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetramethrin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	T-Fluvalinate	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Acetamiprid	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Azoxystrobin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzobicyclon	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzovindiflupyr	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid-5-hydroxy	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Broflanilide	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Bromuconazole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Butralin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbaryl	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbendazim	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbofuran	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorantraniliprole	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl)acetamide, 2-	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos oxon	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clomazone	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin-Desmethyl	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Coumaphos	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyantraniliprole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyazofamid	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyclaniliprole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cycloate	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cymoxanil	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyproconazole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyprodinil	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desethyl-Atrazine	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desisopropyl-Atrazine	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desnitro-imidacloprid	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desthio-prothioconazole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazinon	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazoxon	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichloroaniline, 3,5-	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorobenzenamine, 3,4-	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl Urea, 3,4-	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl-3-methyl Urea, 3,4-	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorvos	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Difenoconazole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dimethomorph	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dinotefuran	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diuron	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	EPTC	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethaboxam	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Etoxazole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Famoxadone	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenamidone	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenbuconazole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenhexamid	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpyroximate	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl Amide	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfide	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfone	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flonicamid	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Florpyrauxifen-Benzyl	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluazinam	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fludioxonil	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flufenacet	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluindapyr	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flumetralin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopicolide	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopyram	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluoxastrobin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flupyradifurone	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluridone	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutolanil	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutriafol	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluxapyroxad	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Halauxifen-methyl	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hexazinone	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hydroxy-Imidacloprid, 5-	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Imazalil	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid olefin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid urea	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indaziflam	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indoxacarb	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ipconazole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Iprodione	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Isofetamid	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Kresoxim-methyl	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malaoxon	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malathion	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandestrobin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandipropamid	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl-hydroxymethyl	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metconazole	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoxyfenozide	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Myclobutanil	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Naled	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Napropamide	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Novaluron	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oryzalin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxadiazon	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxathiapiprolin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxyfluorfen	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Paclobutrazol	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pendimethalin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	RPD ≤ 25	4	4	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Penthiopyrad	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Phosmet	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picarbutrazox	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picoxystrobin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Piperonyl Butoxide	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prodiamine	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometon	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometryn	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propanil	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propargite	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propiconazole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propyzamide	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pydiflumetofen	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyraclostrobin	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyridaben	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyrimethanil	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyriproxyfen	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Quinoxyfen	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sedaxane	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Simazine	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sulfoxaflor	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebufenozide	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos oxon	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetraconazole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiabendazole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiacloprid	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam Degradate (CGA-355190)	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiobencarb	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tolfenpyrad	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimefon	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimenol	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triallate	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tributyl Phosphorotrithioate, S,S,S-	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifloxystrobin	RPD ≤ 25	8	8	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LD Samples	LD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triflumizole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triticonazole	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Valifenalate	RPD ≤ 25	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Zoxamide	RPD ≤ 25	8	8	100.0
Total						**1486**	**1483**	**99.8**

Table I.3. Matrix spike duplicate (MSD) acceptability for CUP samples collected during FY 23-24.
Sample counts include Events 5 and 6 of CUP WY 2023 and Events 1 through 4 of CUP WY 2024. A complete assessment of WY 2023 data was provided in the DRMP CUP WY 2023 Data Report. Similarly, a complete assessment of WY 2024 data will be provided in the DRMP CUP WY 2024 Data Report.

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
EPA 200.7	Babcock	Water	Dissolved	Calcium	RPD ≤ 20	8	8	100.0
EPA 200.7	Babcock	Water	Dissolved	Magnesium	RPD ≤ 20	8	8	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	RPD ≤ 25	8	8	100.0
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	RPD ≤ 25	20	20	100.0
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	RPD ≤ 20	15	15	100.0
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	RPD ≤ 25	9	9	100.0
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	RPD ≤ 25	7	7	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Acibenzolar-S-methyl	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Allethrin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Benfluralin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Bifenthrin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorfenapyr	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorothalonil	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyfluthrin, Total	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalofop-butyl	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalothrin, Total	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cypermethrin, Total	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dacthal	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDD(p,p')	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDE(p,p')	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDT(p,p')	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Deltamethrin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dithiopyr	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Esfenvalerate	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethalfluralin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethofenprox	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpropathrin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoprene	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Nitrapyrin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloroanisole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloronitrobenzene	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin, Total	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Phenothrin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tefluthrin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetramethrin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	T-Fluvalinate	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Acetamiprid	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Azoxystrobin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	RPD ≤ 25	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzobicyclon	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzovindiflupyr	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid-5-hydroxy	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Broflanilide	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Bromuconazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Butralin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbaryl	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbendazim	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbofuran	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorantraniliprole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl)acetamide, 2-	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos oxon	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clomazone	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin-Desmethyl	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Coumaphos	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyantraniliprole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyazofamid	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyclaniliprole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cycloate	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cymoxanil	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyproconazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyprodinil	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desethyl-Atrazine	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desisopropyl-Atrazine	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desnitro-imidacloprid	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desthio-prothioconazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazinon	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazoxon	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichloroaniline, 3,5-	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorobenzenamine, 3,4-	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl Urea, 3,4-	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl-3-methyl Urea, 3,4-	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorvos	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Difenoconazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dimethomorph	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dinotefuran	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diuron	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	EPTC	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethaboxam	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Etoxazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Famoxadone	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenamidone	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenbuconazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenhexamid	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpyroximate	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl Amide	RPD ≤ 25	6	5	83.3
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfide	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfone	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flonicamid	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Florpyrauxifen-Benzyl	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluazinam	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fludioxonil	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flufenacet	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluindapyr	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flumetralin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopicolide	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopyram	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluoxastrobin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flupyradifurone	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluridone	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutolanil	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutriafol	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluxapyroxad	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Halauxifen-methyl	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hexazinone	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hydroxy-Imidacloprid, 5-	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Imazalil	RPD ≤ 25	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid olefin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid urea	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indaziflam	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indoxacarb	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ipconazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Iprodione	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Isofetamid	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Kresoxim-methyl	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malaoxon	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malathion	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandestrobin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandipropamid	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl-hydroxymethyl	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metconazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoxyfenozide	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Myclobutanil	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Naled	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Napropamide	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Novaluron	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oryzalin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxadiazon	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxathiapiprolin	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxyfluorfen	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Paclobutrazol	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pendimethalin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	RPD ≤ 25	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Penthiopyrad	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Phosmet	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picarbutrazox	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picoxystrobin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Piperonyl Butoxide	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prodiamine	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometon	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometryn	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propanil	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propargite	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propiconazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propyzamide	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pydiflumetofen	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyraclostrobin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyridaben	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyrimethanil	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyriproxyfen	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Quinoxyfen	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sedaxane	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Simazine	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sulfoxaflor	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	RPD ≤ 25	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebufenozide	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos oxon	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetraconazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiabendazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiacloprid	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam Degradate (CGA-355190)	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	RPD ≤ 25	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiobencarb	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tolfenpyrad	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimefon	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimenol	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triallate	RPD ≤ 25	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MSD Samples	MSD Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tributyl Phosphorotrithioate, S,S,S-	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifloxystrobin	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triflumizole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triticonazole	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Valifenalate	RPD ≤ 25	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Zoxamide	RPD ≤ 25	6	6	100.0
Total						**1128**	**1127**	**99.9**

Table I.4. Field blank (FB) sample acceptability for CUP samples collected during FY 23-24.
Sample counts include Events 5 and 6 of CUP WY 2023 and Events 1 through 4 of CUP WY 2024. A complete assessment of WY 2023 data was provided in the DRMP CUP WY 2023 Data Report. Similarly, a complete assessment of WY 2024 data will be provided in the DRMP CUP WY 2024 Data Report.

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
Calculated	Babcock	Water	Dissolved, Total	Nitrogen, Total	< RL	6	6	100.0
EPA 200.7	Babcock	Water	Dissolved	Calcium	< RL	3	3	100.0
EPA 200.7	Babcock	Water	Dissolved	Magnesium	< RL	3	3	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	< RL	3	3	100.0
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	< RL	6	6	100.0
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	< RL	3	3	100.0
SM 2340 B	Babcock	Water	Dissolved	Hardness as CaCO3	< RL	3	3	100.0
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	< RL	3	3	100.0
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	< RL	3	3	100.0
EPA 160.2	OCRL	Water	Particulate	Total Suspended Solids	< RL	3	3	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Acibenzolar-S-methyl	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Allethrin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Benfluralin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Bifenthrin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorfenapyr	< RL	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorothalonil	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyfluthrin, Total	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalofop-butyl	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalothrin, Total	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cypermethrin, Total	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dacthal	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDD(p,p')	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDE(p,p')	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDT(p,p')	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Deltamethrin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dithiopyr	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Esfenvalerate	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethalfluralin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethofenprox	< RL	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpropathrin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoprene	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Nitrapyrin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloroanisole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloronitrobenzene	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin, Total	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Phenothrin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tefluthrin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetramethrin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	T-Fluvalinate	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Acetamiprid	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Azoxystrobin	< RL	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	< RL	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzobicyclon	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzovindiflupyr	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid-5-hydroxy	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Broflanilide	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Bromuconazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Butralin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbaryl	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbendazim	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbofuran	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorantraniliprole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl)acetamide, 2-	< RL	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos oxon	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clomazone	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin-Desmethyl	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Coumaphos	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyantraniliprole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyazofamid	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyclaniliprole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cycloate	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cymoxanil	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyproconazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyprodinil	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desethyl-Atrazine	< RL	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desisopropyl-Atrazine	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desnitro-imidacloprid	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desthio-prothioconazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazinon	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazoxon	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichloroaniline, 3,5-	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorobenzenamine, 3,4-	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl Urea, 3,4-	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl-3-methyl Urea, 3,4-	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorvos	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Difenoconazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dimethomorph	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dinotefuran	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diuron	< RL	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	EPTC	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethaboxam	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Etoxazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Famoxadone	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenamidone	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenbuconazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenhexamid	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpyroximate	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl Amide	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfide	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfone	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flonicamid	< RL	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Florpyrauxifen-Benzyl	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluazinam	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fludioxonil	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flufenacet	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluindapyr	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flumetralin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopicolide	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopyram	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluoxastrobin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flupyradifurone	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluridone	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutolanil	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutriafol	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluxapyroxad	< RL	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Halauxifen-methyl	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hexazinone	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hydroxy-Imidacloprid, 5-	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Imazalil	< RL	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid olefin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid urea	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indaziflam	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indoxacarb	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ipconazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Iprodione	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Isofetamid	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Kresoxim-methyl	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malaoxon	< RL	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malathion	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandestrobin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandipropamid	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl-hydroxymethyl	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metconazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoxyfenozide	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Myclobutanil	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Naled	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Napropamide	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Novaluron	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oryzalin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxadiazon	< RL	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxathiapiprolin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxyfluorfen	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Paclobutrazol	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pendimethalin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	< RL	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Penthiopyrad	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Phosmet	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picarbutrazox	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picoxystrobin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Piperonyl Butoxide	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prodiamine	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometon	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometryn	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propanil	< RL	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propargite	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propiconazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propyzamide	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pydiflumetofen	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyraclostrobin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyridaben	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyrimethanil	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyriproxyfen	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Quinoxyfen	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sedaxane	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Simazine	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sulfoxaflor	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	< RL	3	3	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebufenozide	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos oxon	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetraconazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiabendazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiacloprid	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam Degradate (CGA-355190)	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	< RL	3	3	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiobencarb	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tolfenpyrad	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimefon	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimenol	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triallate	< RL	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total FB Samples	FB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tributyl Phosphorotrithioate, S,S,S-	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifloxystrobin	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triflumizole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triticonazole	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Valifenalate	< RL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Zoxamide	< RL	6	6	100.0
Total						**1089**	**1089**	**100.0**

Table I.5. Laboratory blank (LB) sample acceptability for CUP samples collected during FY 23-24.
Sample counts include Events 5 and 6 of CUP WY 2023 and Events 1 through 4 of CUP WY 2024. A complete assessment of WY 2023 data was provided in the DRMP CUP WY 2023 Data Report. Similarly, a complete assessment of WY 2024 data will be provided in the DRMP CUP WY 2024 Data Report.

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
EPA 200.7	Babcock	Water	Dissolved	Calcium	< MDL	16	16	100.0
EPA 200.7	Babcock	Water	Dissolved	Magnesium	< MDL	16	16	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	< MDL	11	9	81.8
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	< MDL	20	20	100.0
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	< MDL	15	15	100.0
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	< MDL	9	9	100.0
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	< MDL	7	6	85.7
EPA 160.2	OCRL	Water	Particulate	Total Suspended Solids	< MDL	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Acibenzolar-S-methyl	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Allethrin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Benfluralin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Bifenthrin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorfenapyr	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorothalonil	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyfluthrin, Total	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalofop-butyl	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalothrin, Total	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cypermethrin, Total	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dacthal	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDD(p,p')	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDE(p,p')	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDT(p,p')	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Deltamethrin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dithiopyr	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Esfenvalerate	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethalfluralin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethofenprox	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpropathrin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoprene	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Nitrapyrin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloroanisole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloronitrobenzene	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin, Total	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Phenothrin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tefluthrin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetramethrin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	T-Fluvalinate	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Acetamiprid	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Azoxystrobin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	< MDL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzobicyclon	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzovindiflupyr	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid-5-hydroxy	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Broflanilide	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Bromuconazole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Butralin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbaryl	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbendazim	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbofuran	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorantraniliprole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl)acetamide, 2-	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos oxon	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clomazone	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin-Desmethyl	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Coumaphos	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyantraniliprole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyazofamid	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyclaniliprole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cycloate	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cymoxanil	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyproconazole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyprodinil	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desethyl-Atrazine	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desisopropyl-Atrazine	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desnitro-imidacloprid	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desthio-prothioconazole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazinon	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazoxon	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichloroaniline, 3,5-	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorobenzenamine, 3,4-	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl Urea, 3,4-	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl-3-methyl Urea, 3,4-	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorvos	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Difenoconazole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dimethomorph	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dinotefuran	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diuron	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	EPTC	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethaboxam	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Etoxazole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Famoxadone	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenamidone	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenbuconazole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenhexamid	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpyroximate	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl Amide	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfide	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfone	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flonicamid	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Florpyrauxifen-Benzyl	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluazinam	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fludioxonil	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flufenacet	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluindapyr	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flumetralin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopicolide	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopyram	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluoxastrobin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flupyradifurone	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluridone	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutolanil	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutriafol	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluxapyroxad	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Halauxifen-methyl	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hexazinone	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hydroxy-Imidacloprid, 5-	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Imazalil	< MDL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid olefin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid urea	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indaziflam	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indoxacarb	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ipconazole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Iprodione	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Isofetamid	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Kresoxim-methyl	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malaoxon	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malathion	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandestrobin	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandipropamid	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl-hydroxymethyl	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metconazole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoxyfenozide	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Myclobutanil	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Naled	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Napropamide	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Novaluron	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oryzalin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxadiazon	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxathiapiprolin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxyfluorfen	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Paclobutrazol	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pendimethalin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	< MDL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Penthiopyrad	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Phosmet	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picarbutrazox	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picoxystrobin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Piperonyl Butoxide	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prodiamine	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometon	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometryn	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propanil	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propargite	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propiconazole	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propyzamide	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pydiflumetofen	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyraclostrobin	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyridaben	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyrimethanil	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyriproxyfen	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Quinoxyfen	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sedaxane	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Simazine	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sulfoxaflor	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	< MDL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebufenozide	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos oxon	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetraconazole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiabendazole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiacloprid	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam Degradate (CGA-355190)	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	< MDL	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiobencarb	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tolfenpyrad	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimefon	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimenol	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triallate	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tributyl Phosphorotrithioate, S,S,S-	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifloxystrobin	< MDL	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LB Samples	LB Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triflumizole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triticonazole	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Valifenalate	< MDL	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Zoxamide	< MDL	12	12	100.0
Total						**2206**	**2203**	**99.9**

Table I.6. Laboratory control spike (LCS) sample acceptability for CUP samples collected during FY 23-24.
Sample counts include Events 5 and 6 of CUP WY 2023 and Events 1 through 4 of CUP WY 2024. A complete assessment of WY 2023 data was provided in the DRMP CUP WY 2023 Data Report. Similarly, a complete assessment of WY 2024 data will be provided in the DRMP CUP WY 2024 Data Report.

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
EPA 200.7	Babcock	Water	Dissolved	Calcium	PR 85-115	8	8	100.0
EPA 200.7	Babcock	Water	Dissolved	Magnesium	PR 85-115	8	8	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	PR 85-115	7	7	100.0
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	PR 90-110	20	16	80.0
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	PR 90-110	15	15	100.0
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	PR 80-120	9	9	100.0
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	PR 80-120	7	7	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Acibenzolar-S-methyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Allethrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Benfluralin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Bifenthrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Chlorfenapyr	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Chlorothalonil	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyfluthrin, Total	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyhalofop-butyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyhalothrin, Total	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cypermethrin, Total	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dacthal	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	DDD(p,p')	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	DDE(p,p')	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	DDT(p,p')	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Deltamethrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dithiopyr	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Esfenvalerate	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Ethalfluralin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Ethofenprox	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fenpropathrin	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Methoprene	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Nitrapyrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pentachloroanisole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pentachloronitrobenzene	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Permethrin, Total	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Phenothrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tefluthrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tetramethrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	T-Fluvalinate	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Trifluralin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Acetamiprid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Atrazine	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Azoxystrobin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	PR 70-130	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Benzobicyclon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Benzovindiflupyr	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Boscalid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Boscalid-5-hydroxy	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Broflanilide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Bromuconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Butralin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Carbaryl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Carbendazim	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Carbofuran	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Chlorantraniliprole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl)acetamide, 2-	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Chlorpyrifos	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Chlorpyrifos oxon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Clomazone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Clothianidin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Clothianidin-Desmethyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Coumaphos	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyantraniliprole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyazofamid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyclaniliprole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cycloate	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cymoxanil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyproconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyprodinil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Desethyl-Atrazine	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Desisopropyl-Atrazine	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Desnitro-imidacloprid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Desthio-prothioconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Diazinon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Diazoxon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dichloroaniline, 3,5-	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dichlorobenzenamine, 3,4-	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dichlorophenyl Urea, 3,4-	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dichlorophenyl-3-methyl Urea, 3,4-	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dichlorvos	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Difenoconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dimethomorph	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dinotefuran	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Diuron	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	EPTC	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Ethaboxam	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Etoxazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Famoxadone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fenamidone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fenbuconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fenhexamid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fenpyroximate	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fipronil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fipronil Desulfinyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fipronil Desulfinyl Amide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fipronil Sulfide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fipronil Sulfone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Flonicamid	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Florpyrauxifen-Benzyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluazinam	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fludioxonil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Flufenacet	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluindapyr	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Flumetralin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluopicolide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluopyram	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluoxastrobin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Flupyradifurone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluridone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Flutolanil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Flutriafol	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluxapyroxad	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Halauxifen-methyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Hexazinone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Hydroxy-Imidacloprid, 5-	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Imazalil	PR 70-130	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Imidacloprid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Imidacloprid olefin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Imidacloprid urea	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Indaziflam	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Indoxacarb	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Ipconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Iprodione	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Isofetamid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Kresoxim-methyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Malaoxon	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Malathion	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Mandestrobin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Mandipropamid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Metalaxyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Metalaxyl-hydroxymethyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Metconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Methoxyfenozide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Metolachlor	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Myclobutanil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Naled	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Napropamide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Novaluron	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Oryzalin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Oxadiazon	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Oxathiapiprolin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Oxyfluorfen	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Paclobutrazol	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pendimethalin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	PR 70-130	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Penthiopyrad	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Phosmet	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Picarbutrazox	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Picoxystrobin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Piperonyl Butoxide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Prodiamine	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Prometon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Prometryn	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Propanil	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Propargite	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Propiconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Propyzamide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pydiflumetofen	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pyraclostrobin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pyridaben	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pyrimethanil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pyriproxyfen	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Quinoxyfen	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Sedaxane	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Simazine	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Sulfoxaflor	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tebuconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	PR 70-130	6	6	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tebufenozide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tebupirimfos	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tebupirimfos oxon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tetraconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Thiabendazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Thiacloprid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Thiamethoxam	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Thiamethoxam Degradate (CGA-355190)	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	PR 70-130	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Thiobencarb	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tolfenpyrad	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Triadimefon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Triadimenol	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total LCS Samples	LCS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Triallate	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tributyl Phosphorotrithioate, S,S,S-	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Trifloxystrobin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Triflumizole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Triticonazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Valifenalate	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Zoxamide	PR 70-130	12	12	100.0
Total						**2180**	**2176**	**99.8**

Table I.7. Matrix spike (MS) sample acceptability for CUP samples collected during FY 23-24.
Sample counts include Events 5 and 6 of CUP WY 2023 and Events 1 through 4 of CUP WY 2024. A complete assessment of WY 2023 data was provided in the DRMP CUP WY 2023 Data Report. Similarly, a complete assessment of WY 2024 data will be provided in the DRMP CUP WY 2024 Data Report.

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
EPA 200.7	Babcock	Water	Dissolved	Calcium	PR 70-130	16	16	100.0
EPA 200.7	Babcock	Water	Dissolved	Magnesium	PR 70-130	16	16	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	PR 75-125	16	16	100.0
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	PR 80-120	40	35	87.5
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	PR 90-110	43	43	100.0
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	PR 80-120	18	18	100.0
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	PR 80-120	14	14	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Acibenzolar-S-methyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Allethrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Benfluralin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Bifenthrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorfenapyr	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorothalonil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyfluthrin, Total	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalofop-butyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalothrin, Total	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cypermethrin, Total	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dacthal	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDD(p,p')	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDE(p,p')	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDT(p,p')	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Deltamethrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dithiopyr	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Esfenvalerate	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethalfluralin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethofenprox	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpropathrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoprene	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Nitrapyrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloroanisole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloronitrobenzene	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin, Total	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Phenothrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tefluthrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetramethrin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	T-Fluvalinate	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Acetamiprid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Azoxystrobin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	PR 70-130	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzobicyclon	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzovindiflupyr	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid-5-hydroxy	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Broflanilide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Bromuconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Butralin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbaryl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbendazim	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbofuran	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorantraniliprole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl)acetamide, 2-	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos oxon	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clomazone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin-Desmethyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Coumaphos	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyantraniliprole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyazofamid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyclaniliprole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cycloate	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cymoxanil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyproconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyprodinil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desethyl-Atrazine	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desisopropyl-Atrazine	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desnitro-imidacloprid	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desthio-prothioconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazinon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazoxon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichloroaniline, 3,5-	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorobenzenamine, 3,4-	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl Urea, 3,4-	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl-3-methyl Urea, 3,4-	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorvos	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Difenoconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dimethomorph	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dinotefuran	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diuron	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	EPTC	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethaboxam	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Etoxazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Famoxadone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenamidone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenbuconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenhexamid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpyroximate	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl Amide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flonicamid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Florpyrauxifen-Benzyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluazinam	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fludioxonil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flufenacet	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluindapyr	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flumetralin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopicolide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopyram	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluoxastrobin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flupyradifurone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluridone	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutolanil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutriafol	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluxapyroxad	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Halauxifen-methyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hexazinone	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hydroxy-Imidacloprid, 5-	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Imazalil	PR 70-130	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid olefin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid urea	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indaziflam	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indoxacarb	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ipconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Iprodione	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Isofetamid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Kresoxim-methyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malaoxon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malathion	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandestrobin	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandipropamid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl-hydroxymethyl	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoxyfenozide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Myclobutanil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Naled	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Napropamide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Novaluron	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oryzalin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxadiazon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxathiapiprolin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxyfluorfen	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Paclobutrazol	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pendimethalin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	PR 70-130	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Penthiopyrad	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Phosmet	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picarbutrazox	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picoxystrobin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Piperonyl Butoxide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prodiamine	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometryn	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propanil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propargite	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propiconazole	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propyzamide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pydiflumetofen	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyraclostrobin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyridaben	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyrimethanil	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyriproxyfen	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Quinoxyfen	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sedaxane	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Simazine	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sulfoxaflor	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	PR 70-130	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebufenozide	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos oxon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetraconazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiabendazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiacloprid	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam Degradate (CGA-355190)	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	PR 70-130	6	6	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiobencarb	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tolfenpyrad	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimefon	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimenol	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triallate	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tributyl Phosphorotrithioate, S,S,S-	PR 70-130	12	12	100.0

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total MS Samples	MS Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifloxystrobin	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triflumizole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triticonazole	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Valifenalate	PR 70-130	12	12	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Zoxamide	PR 70-130	12	12	100.0
Total						**2269**	**2264**	**99.8**

Table I.8. Surrogate sample acceptability for CUP samples collected during FY 23-24.
Sample counts include Events 5 and 6 of CUP WY 2023 and Events 1 through 4 of CUP WY 2024. A complete assessment of WY 2023 data was provided in the DRMP CUP WY 2023 Data Report. Similarly, a complete assessment of WY 2024 data will be provided in the DRMP CUP WY 2024 Data Report.

Method	Lab	Matrix	Fractions	Analyte	Criteria	Total Surrogate Samples	Surrogate Samples in Limits	Criteria Met (%)
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDE-$^{13}C_{12}$(p,p') (Surrogate)	PR 70-130	160	160	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin-$^{13}C_6$, cis- (Surrogate)	PR 70-130	160	160	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin-d_{14} (Surrogate)	PR 70-130	160	160	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine-$^{13}C_3$ (Surrogate)	PR 70-130	160	160	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil-$^{13}C_4$ $^{15}N_2$ (Surrogate)	PR 70-130	160	160	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid-d_4 (Surrogate)	PR 70-130	160	160	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor-$^{13}C_6$ (Surrogate)	PR 70-130	160	160	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole-$^{13}C_3$ (Surrogate)	PR 70-130	160	160	100.0
Total						**1280**	**1280**	**100.0**

Table I.9. Toxicity control sample acceptability for CUP samples collected during FY 23-24.
Sample counts include Events 5 and 6 of CUP WY 2023 and Events 1 through 4 of CUP WY 2024. A complete assessment of WY 2023 data was provided in the DRMP CUP WY 2023 Data Report. Similarly, a complete assessment of WY 2024 data will be provided in the DRMP CUP WY 2024 Data Report.

Method	Lab	Control	Matrix	Organism	Endpoint	Total Control Samples	Control Samples in Limits	Criteria Met (%)
EPA 600/R-99-064M	PER	Negative Control	Water	*Chironomus dilutus*	Growth, Survival	24	24	100.0
EPA 821/R-02-012	PER	Negative Control	Water	*Hyalella azteca*	Survival	13	13	100.0
EPA 821/R-02-013	PER	Negative Control	Water	*Ceriodaphnia dubia*	Reproduction, Survival	24	24	100.0
EPA 821/R-02-013	PER	Salinity Control	Water	*Ceriodaphnia dubia*	Reproduction, Survival	2	2	100.0
EPA 821/R-02-013	PER	Negative Control	Water	*Pimephales promelas*	Growth, Survival	24	24	100.0
EPA 821/R-02-013	PER	Negative Control	Water	*Selenastrum capricornutum*	Growth	13	13	100.0
Total						**100**	**100**	**100.0**