February 1, 2024

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 22-23 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) 2022-2023 Annual Report, as required by Resolution R5-2021-0054, Item 5 of Attachment A.

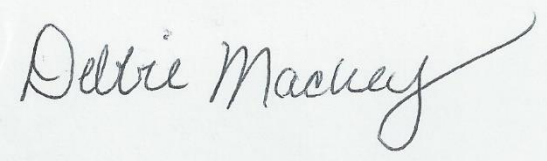
As required by the Resolution, the 2022-2023 Annual Report summarizes all monitoring projects or studies conducted during fiscal year 2022-2023 (FY 22-23). The report includes a list of all publicly available datasets (including data and metadata), explanations for why any aspect of the Monitoring Workplan 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 Delta RMP 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 22-23 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 Mercury Electronic Data Deliverables for FY 22-23 Data
Attachment B Current Use Pesticides and Toxicity Data for Fiscal Year 22-23

cc: via email
Adam Laputz - CVRWQCB
Meredith Howard – CVRWQCB
Selina Cole - CVRWQCB
Melissa Turner – DRMP Program Director
Jennifer Glenn – DRMP Program Administrator
DRMP Board of Directors

Delta RMP Annual Report

Fiscal Year July 1, 2022 – June 30, 2023

Submitted to the Central Valley Regional Water Quality Control Board on February 1, 2024

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
COC	Chain of Custody
CRM	Certified Reference Material
CUP	Current Use Pesticides
CV RDC	Central Valley Regional Data Center
CVRWQCB	Central Valley Regional Water Quality Control Board
Delta RMP	Delta Regional Monitoring Program
DOC	Dissolved Organic Carbon
DM	Data Manager
DMT	Data Management Team
DWR	Department of Water Resources
EC	Executive Committee
EDD	Electronic Data Deliverable
ELISA	Enzyme-linked Immunoassay
EPA	Environmental Protection Agency
EVR	Effluent Valve Replacement
FY 21-22	Fiscal Year 2021-2022
FY 22-23	Fiscal Year 2022-2023
IDA	Isotope Dilution Analogues
HAB	Harmful Algal Bloom
LC/MS/MS	Liquid Chromatography Tandem Mass Spectrometry
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
NFM	National Field Manual
NWIS	National Water Information System
OCRL	Organic Chemistry Research Laboratory
PBDE	Polybrominated Diphenyl Ethers
PER	Pacific EcoRisk
PFAS	Per- and Polyfluoroalkyl Substances
PPCP	Pharmaceuticals and Personal Care Product
QA	Quality Assurance
QAO	Quality Assurance Officer
QAPP	Quality Assurance Project Plan
QC	Quality Control
qPCR	Quantitative Polymerase Chain Reaction
RL	Reporting Limit
RMA	Resource Management Associates
SC	Steering Committee
SEP	Supplemental Environmental Project
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
TAF	Test organisms exceed the maximum weight requirement at test initiation
TIE	Toxicity Identification Evaluation
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TSS	Total Suspended Solids
USGS	United States Geological Survey
VSS	Volatile Suspended Solids
WY	Water Year
YSI	Yellow Springs Instrument

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 (Delta RMP) during the 2022-2023 Fiscal Year (FY 22-23), spanning from July 1, 2022, through June 30, 2023. Work conducted during this period was based on the Monitoring Workplan for Fiscal Year 2022-2023 recommended by the Delta RMP Steering Committee (SC) and approved by the Board of Directors (BOD) on April 11, 2022.

Monitoring during FY 22-23 occurred across four monitoring sectors and is described in the Monitoring Workplan for FY 2022-2023:

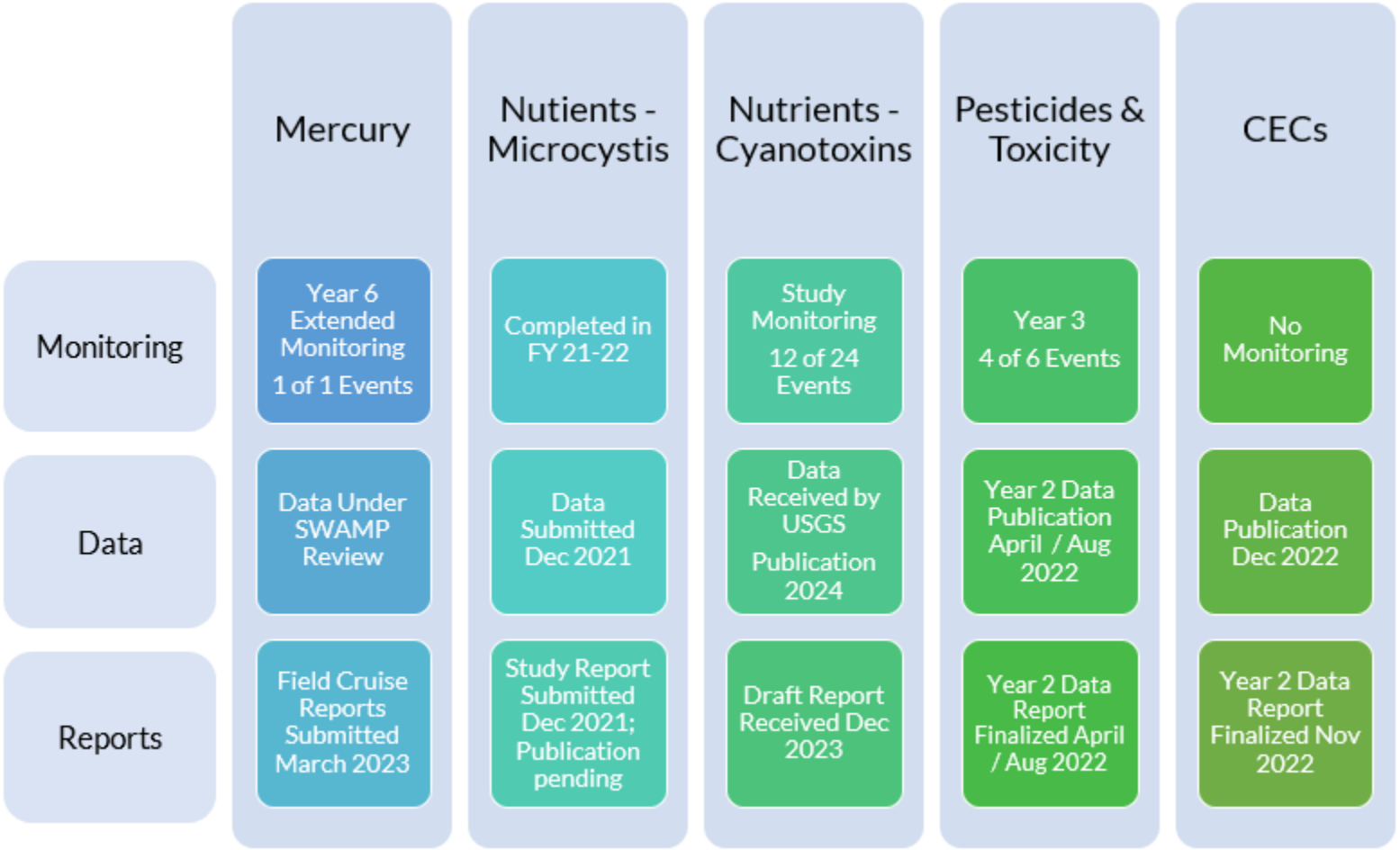
- Current Use Pesticides (CUP)
- Constituents of Emerging Concern (CEC)
- Nutrients
- Mercury

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 **Delta RMP Monitoring** is provided below in **Progress of FY 22-23 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 Delta RMP projects and studies during FY 22-23 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**	**Delta RMP Monitoring**
Explanation for why any aspect of the Monitoring Workplan was not completed.	**2.2**	**Delta RMP 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**	**Delta RMP Monitoring, Deviations and Corrective Actions**
Quality Assurance Section	**3**	**Quality Assurance – Data Managed by the Delta RMP**
	4	**Quality Assurance – Data Not Managed by the Delta RMP**
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 Delta RMP 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
List of monitoring data (and associated metadata) that do not meet predetermined quality control measures and measurement quality objectives.	Attachments A and B	NA

Figure 1. Overview of progress of Delta RMP projects and studies during FY 22-23.
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 22-23 MONITORING PROJECTS

2.1 SUMMARY OF PUBLIC DATASETS

A summary of datasets collected for the Delta RMP 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 22-23, three of the five monitoring sectors had datasets transferred to CEDEN:

- Mercury
- Current Use Pesticides
- Constituents of Emerging Concern

Mercury data were submitted to the State Water Resources Control Board (State Board) Surface Water Ambient Monitoring Program (SWAMP) staff by Moss Landing Marine Laboratories (MLML) as CEDEN comparable Electronic Data Deliverable (EDD). Mercury results for monitoring that occurred in FY 22-23 and discussed later in this report were submitted to the State Board between August 2022 through February 2023. All results associated with FY 22-23 mercury monitoring were finalized and transferred to CEDEN by SWAMP staff in October 2023. For this Annual Report, results that are associated with monitoring events that occurred during FY 22-23 and are publicly available on CEDEN are included as Attachment A.

In August 2022, the remaining data from the National Water Quality Laboratory (NWQL) collected as part of the CUP project were transferred to CEDEN. The transfer of these data to CEDEN coincided with a data report which evaluates the water year (WY) 2021 dataset (April 2021- September 2022) in its entirety. These data were provided in the previous FY 21-22 Annual Report as Attachment A.

The CEC Year 2 data set were successfully transferred from the CV RDC to CEDEN in December 2022. These data were provided in the previous FY 21-22 Annual Report as Attachment B.

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	Data expected to be transferred to CEDEN by March 6, 2024
		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	2021 Delta RMP Constituents of Emerging Concern	21DRMP5CEC	MLJ	7/1/2021-06/30/2022	Available on CEDEN [1].
		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 Delta RMP website only (https://deltarmp.org/Water%20Quality%20Monitoring/Pesticides/AttachmentB_DRMP_CEC_Monitoring_Results_Yr2_Final_120522.xlsx).

The results of the cyanotoxin study conducted by the United States Geological Survey (USGS) and California Department of Water Resources (DWR) is 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 ScienceBase; data are expected to be publicly available in FY 23-24.

Continuous data collected are available through NWIS for the stations managed by USGS (LIB and MDM). Continuous data collected at stations managed by DWR (P8, RRI, and C10A) are available through the California Data Exchange Center (CDEC). There were delays in deploying the fluoroprobe at MDM which is described in a memo addressed to the DRMP BOD (included in the FY 21-22 Annual Report). The fluoroprobe was deployed at MDM from October 18, 2022 to April 11, 2023. During that period, several modifications were made to address light inference that was biasing the instrument response during daylight hours. In April 2023, the instrument failed. The USGS has been working to deploy fluoroprobes at four other Delta stations; unfortunately, all have failed after several months of deployment. It was unclear if these failures were due to hardware, firmware, or other issues. The USGS staff have been working with the staff at bbe Moldaenke, to address the issues and to develop field standards to verify instrument performance in situ. Due to concerns with light interference, data transmission, and instrument verification, the fluoroprobe data is not publicly available. Raw data from the instrument can be provided upon request.

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 23-24
			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 23-24

[1] NWIS Web Interface is located: https://nwis.waterdata.usgs.gov/usa/nwis/qwdata
[2] USGS ScienceBase is located: https://www.sciencebase.gov/catalog/

2.2 DELTA RMP MONITORING

During FY 22-23, 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 22-23 relative to the monitoring design study period. Below is a description of the monitoring studies and associated activities that occurred during FY 22-23.

2.2.1 Pesticides and Toxicity Multi-Year Study

Water year 2023 (October 1, 2022 – September 30, 2023; WY 2023) represented Year 3 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. The CUP project data are processed and evaluated on a WY basis.

This report includes CUP data collected during the first four of six monitoring events of WY 2023. These events include Event 1 (November 2022), Event 2 (February 2023), Event 3 (April 2023), and Event 4 (June 2023). All results associated with WY 2023 will be summarized in the WY 2023 CUP Data Report, which will be finalized in coordination with the publication of the WY 2023 data to CEDEN by March 6, 2024. The results

associated with the four WY 2023 CUP events that occurred during FY 22-23 are provided as Attachment B to this report.

Samples were analyzed for a suite of 178 pesticides by the United States Geological Survey (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, Babcock Laboratories analyzed samples for copper and ancillary parameters (total nitrogen, 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 analyzed the toxicity of water samples for a suite of test organisms based on Environmental Protection Agency (EPA) and 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 dilutes*, 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 with a TIE performed during FY 22-23 on a sample collected on February 27, 2023.

Water Year 2023 data will be summarized in the CUP WY 2023 Data Report and available for the CUP Technical Advisory Committee (TAC) review and Board of Director approval during FY 23-24.

2.2.2 Constituents of Emerging Concern

During FY 22-23, there was no monitoring for CECs. The Delta RMP focused on planning for Year 3 of the July 2018 Central Valley Pilot Study for Monitoring Constituents of Emerging Concern Work Plan (CEC Stakeholder Workplan). During FY 22-23, the Year 3 CEC study design and QAPP were developed and submitted on May 1, 2023. Year 3 monitoring began in FY 23-24.

All four CEC Year 2 events occurred during FY 21-22 (**Figure 2**). The data from CEC Year 2 were reviewed and assessed by MLJ Environmental and MLML; all results have been shared with the CVRWQCB and were uploaded into the Central Valley Regional Data Center (CV RDC) database throughout FY 21-22. Data were finalized and ambient water

data were transferred to CEDEN in November 2022. All data collected in Year 2 are available on the Delta RMP website including the source monitoring location data not loaded to CEDEN.

The CEC Year 2 Data Report was recommended by the CEC TAC, then reviewed and recommended for approval by the Steering Committee. The CEC Year 2 Data Report was approved by the BOD in November 2022.

2.2.3 Nutrient Studies

2.2.3.1 Sacramento River Nutrient Change Study (SRiNCS) Report

Sampling for the Sacramento River Nutrient Change Study Phase 1: Effluent Valve Replacement Hold was conducted in September 2019. This study was a collaborative effort between Regional San, 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 Regional 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 should 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) (standalone deliverable for the SRiNCS project) was previously approved and is available on the website (https://deltarmp.org/Documents/RMA2020.zip). A draft report of the SRiNCS project was provided to the Nutrient TAC on March 28, 2022. After 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 to the SC for approval. The SC voted by email to recommend the SRiNCS report (voting ended

July 21, 2023) and the report was approved by the DRMP Executive Committee (EC) on July 27, 2023.

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

2.2.3.2 Microcystis Study

The Source Tracking of Cyanobacteria Blooms in the Sacramento-San Joaquin Delta study (also referred to as the Microcystis Study) was focused on the knowledge gap of understanding where blooms of the common Cyanobacteria Harmful Algal Bloom (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). This project was approved by the Delta RMP in August 2020 and is funded using Supplemental Environmental Project (SEP) funds obtained by the CVRWQCB as a result of enforcement actions.

The project began in November 2020 with a combination of water and sediment samples collected over the course of six total events. Water samples were collected during six events from June through August 2021 at 8 sites; sediment samples were collected during four events from November 2020 through June 2021 at 7-8 sites.

Dr. Ellen Preece, project lead, presented the results from the study at the September 22, 2021, Delta RMP TAC meeting. The Phase I final report was submitted to the CVRWQCB and the Delta RMP on December 31, 2021. The report was reviewed by the Nutrient TAC on February 25, 2022. The Nutrient TAC preferred to wait until Phase II is complete before recommending the final report to be made available on the website. It is anticipated that the final publication including findings from Phase II will be available by the end of FY 23-24.

2.2.3.3 USGS/DWR Cyanobacteria Study

The Delta RMP agreed to contribute funds to the 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 funds for the deployment of an additional instrument that monitors phytoplankton taxonomy continuously (bbe luoroprobe) 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 Delta RMP agreed to continue contributing funds in 2022 for an additional 12 months of monitoring from March 2022 through February 2023 (**Figure 2**) for monitoring at the Middle River location (MDM), as 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.

The monitoring at MDM 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 Yellow Springs Instrument (YSI) EXOs (water temperature, specific conductance, turbidity, pH, dissolved oxygen, chlorophyll-a/BGA), a SUNA nitrate analyzer, and a bbe Fluoroprobe. The USGS provided a memo (dated July 26, 2022) to the DRMP BOD regarding delays in deploying the bbe Fluoroprobe at MDM. The fluoroprobe was deployed at MDM from October 18, 2022 to April 11, 2023, when the instrument failed. As described in **Summary of Public Datasets**, the fluoroprobe data is not publicly available.

The data collected in this study 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 project will include online access to data and visualizations of spatial and temporal trends in cyanotoxins and associated data for use by managers and scientists. Findings will be presented at local conferences (e.g., Bay Delta, Interagency Ecological Program) and presented to the Delta RMP upon request. The USGS is developing a status and trend report that describes the approach and methods, summarizes any issues or lessons learned that occurred during data collection, provides tabular and/or graphical summaries of the spatial and temporal patterns in the data, evaluates the data quality, and relates study findings to the Delta RMP management questions. The report will also include comparison between the whole water and SPATT data and between the Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS) and Enzyme-linked Immunoassay (ELISA) data. The report is expected for Nutrient TAC review in FY 23-24.

2.2.3.4 USGS High Frequency Mapping Survey Comparison

The USGS conducted high frequency mapping surveys with the objective to document the variability of nutrients and related water quality parameters at high spatial resolution in the Sacramento-San Joaquin Delta. The data collected documented the spatial and temporal variability of parameters including nitrate, ammonium, phosphate, dissolved organic carbon, temperature, conductivity, dissolved oxygen, chlorophyll, and information about phytoplankton community composition. Data was collected in 2018, 2020, 2021,

and 2022. Data from 2022 are still under review but the surveys are publicly available (Assessing spatial variability of nutrients, phytoplankton and related water-quality constituents in the California Sacramento-San Joaquin Delta at the landscape scale: High-resolution mapping surveys - ScienceBase-Catalog).

2.2.4 Mercury Study

The information collected as part of the Delta RMP 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 2020 Delta Mercury Control program including Phase 2 potential modifications and options.

Annual sport fish sampling started in August 2016 and continued through 2022. The indicator of primary interest is 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 represent different subareas of the Delta and are co-located with the water monitoring sites. Sport fish monitoring occurred in August 2021 at seven core locations and five restoration locations. Water sampling was conducted during four events (August 2021, March 2022, April 2022, and August 2022) at seven sites that align with sport fish monitoring sites. Indicators of primary interest are concentrations of methylmercury and total mercury in water. Important ancillary parameters include chlorophyll-a, DOC, suspended sediment concentrations (SSCs), total suspended solids (TSS), and volatile suspended solids (VSS).

Additional mercury monitoring of fish and water took place in August and September 2022 (**Figure 2**). This monitoring was added as an amendment to the Delta RMP QAPP (v7.1) on July 7, 2022, based on a recommendation from the Steering Committee on March 21, 2022, to include one additional fish and water monitoring event prior to pausing monitoring as part of the long-term planning process.

It was agreed during the December 14, 2021 Delta RMP Steering Committee meeting that mercury monitoring should go into a long-term planning stage after fiscal year 2021-2022 (FY 21-22). Though the mercury monitoring was previously conducted on a fiscal year basis to coincide with the budget cycle, the overarching study design was done in a way to connect the spring water collections to a fall fish monitoring event. Therefore, it

was suggested that a single additional fish and water monitoring event be conducted in the fall of 2022 as part of the FY 21-22 monitoring. At the March 21, 2022 meeting, the Steering Committee recommended an additional fall monitoring event be added to the FY 21-22 version of Delta RMP QAPP (version 7.0) as part of year seven of the mercury monitoring project evaluating mercury cycling in Delta water and update of methylmercury (MeHg) into fish.

The rationale for the additional fall event included:

1. Completing the water dataset for 2022 (able to compare spring to fall mercury concentrations)
2. Completing the paired water: fish data set for 2022 (able to compare spring mercury concentrations to the fall fish mercury concentrations)
3. Evaluating the effect of this unusual water year
4. Value in annual sampling for evaluation drivers of interannual trends, especially with the potential for a lagged response
5. Further establishing bass baselines at restoration stations.

The monitoring occurred under a contract between MLML and the State Board using SWAMP funds which were allocated to the CVRWQCB.

Mercury Monitoring Summary

1. Subregional trends in bass – Annual monitoring of methylmercury in black bass ("black bass" includes largemouth, smallmouth, and spotted bass) continued at seven stations (distributed among the TMDL subregions). The black bass fish monitoring will firmly establish baseline concentrations and interannual variation in support of monitoring of long-term trends as a critical performance measure for the TMDL. Fish collection for FY 22-23 occurred in September 2022. During the September 2022 event, fish tissue was collected at four of the seven sites. No fish were collected at Cache Slough at Liberty Island Mouth or Sacramento River at Mallard Island/Sherman Island because of restrictions to the fish collection permit where electrofishing was not allowed. Hook and line fishing at this site in the previous year was not productive and the decision was made to drop the sites for fish collection. Fish were not collected at San Joaquin River at Vernalis/Airport because the low water made it impossible to launch an electrofishing boat and unsafe for field crew to use a smaller jon boat with portable electrofishing unit.

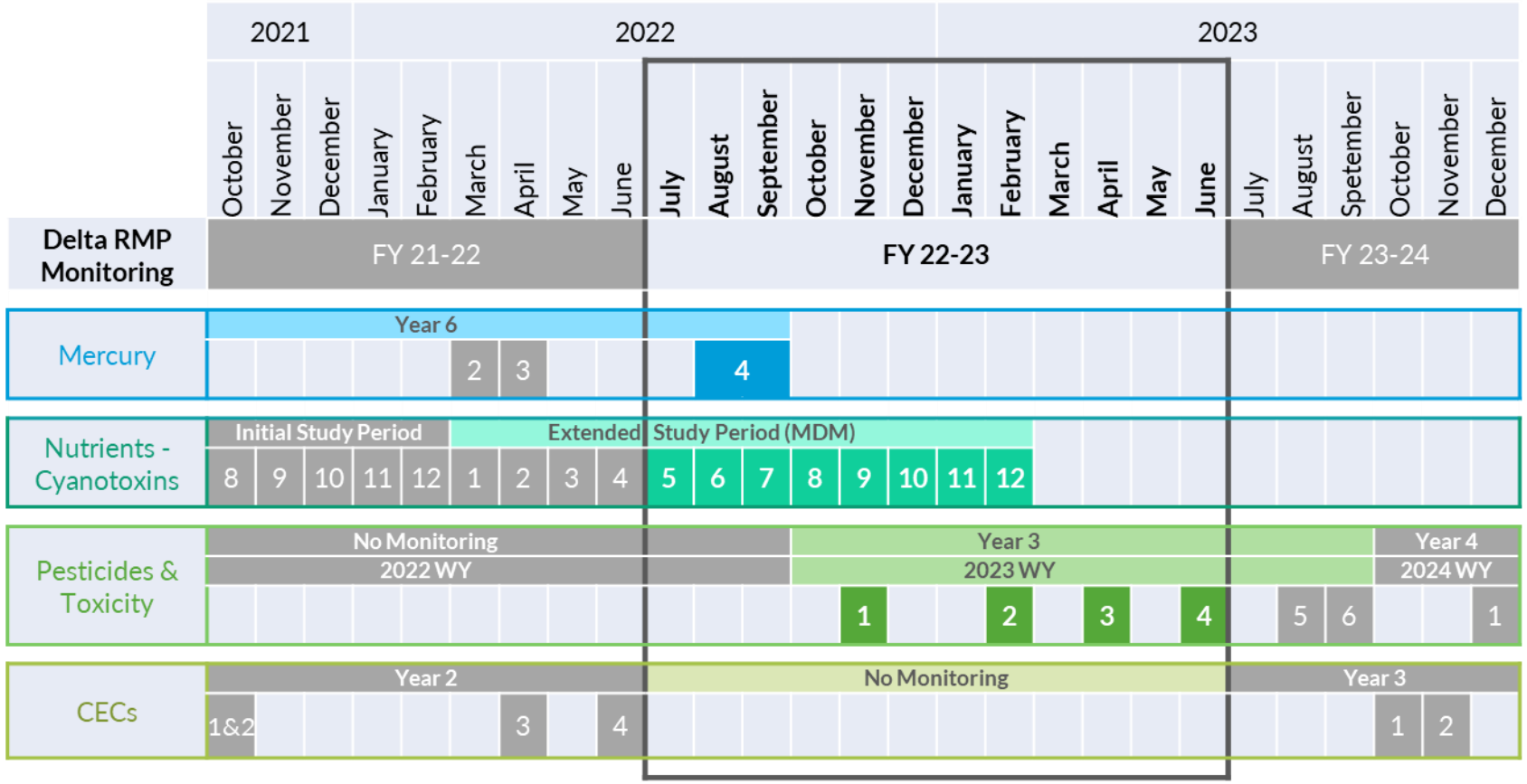
2. Subregional trends in water – Monitoring of MeHg in water at seven stations occurred during one sampling event in August 2022. These data will extend the time series information with a low-cost approach for time periods that are representative of conditions in high-flow (March and April) and low-flow (August) regimes and that link to

concentrations in prey fish and black bass. These data may also be valuable in verifying trends and patterns predicted by numerical models of methylmercury transport and cycling being developed for the Delta and Yolo Bypass by DWR. These models may allow testing of various land and water management scenarios.

3. Restoration monitoring – Annual monitoring of methylmercury in black bass was scheduled to occur at four stations located near habitat restoration projects. This element was added in FY 19-20. The original details of the design for the restoration monitoring (five station locations, mix of black bass and prey fish stations) had been determined with input from restoration managers and Delta RMP Technical Advisory Committee members. However, prey fish monitoring was not included in FY 21-22 mercury monitoring due to Delta smelt concerns and sensitive habitat permit restrictions. For FY 22-23, samplers were again required to do hook and line sampling for one of the black bass restoration monitoring sites (Yolo Flyway). There was a second site (Lookout Slough) where electrofishing was not permitted. Hook and line fishing was not successful at this site the previous year. As a result, it was decided to not sample for bass at Lookout Slough. Electrofishing was conducted at Grizzly Slough, McCormack-Williamson Tract, and Lindsey Slough during September 2022 sampling.

Fish and water monitoring for mercury is on pause while the Delta RMP focuses on long-term planning.

Figure 2. Summary of monitoring events in relation to study periods occurring during FY 22-23 for all monitoring sectors.



2.3 DEVIATIONS AND CORRECTIVE ACTIONS

The process to track deviations using the Delta RMP deviation forms was first implemented in 2019 by the Aquatic Science Center (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 Delta RMP must notify the CVRWQCB Quality Assurance (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 22-23, the associated corrective actions, and any resolutions are summarized below in **Table 4**.

Table 4. Summary of QAPP deviation forms submitted during FY 22-23.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2021-08	Final	07/21/2022	Delta RMP CEC QAPP 2021 v2	Weck Laboratories Late Reporting of Pharmaceuticals and Personal Care Products (PPCPs) Preliminary Data for Event 3	Weck reported Event 3 results on 7/21/2022 which was 51 days past the resolution deadline 6/6/2022 (preliminary results are due within 60 calendar days of analysis). Results were delayed due to Weck refining their reports and EDDs to include percent recoveries of isotope dilution analogues (IDAs).	Amend the CEC QAPP (v2.0) include language requiring the percent recovery reporting for methods with IDAs.	QAPP Amendment form was signed (6/22/22). Event 4 results were reported on time with IDA recoveries.
2021-09	Final	09/02/2022	Delta RMP CEC QAPP 2021 v2	CEC Year 2 Tissue Reporting Limits (RLs), Missing Lipids and Moisture Results	RLs were generated from wet weight and do not match the QAPP units of dry weight; missing required duplicates in (polybrominated diphenyl ethers) PBDE lipid batch and missing lipids for clams.	1) Future QAPPs will include language to clarify the reporting limits for wet weight vs dry weight. 2) SGS-AXYS ran additional analyses for lipids on the two clam samples with enough remaining tissue; a duplicate was run on one of the two samples. 3) MLJ reviewed the QAPP requirements for clam tissue analyses with the project manager.	1) Non – addressed in future QAPPs. 2) SGS-AXYS analyzed and reported the clam tissues results on 10/14/2022. 3) MLJ reviewed the relevant QAPP requirements with the project manager prior to 09/09/2022.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2021-10	Final	09/07/2022	Delta RMP CEC QAPP 2021 v2	CEC Year 2 Clam Laboratory Measurements	Clam widths reported by SGS-AXYS were consistently larger than the lengths, which was inconsistent with the measurements recorded for Year 1.	The CV RDC database was updated to the correct shell length; shell height was added to the comments field.	The clam lengths recorded in the CV RDC were corrected (10/17/2022). The width is unknown because it was not measured.
2022-01	Final	11/10/2022	Delta RMP CUP QAPP 2022 v1.3	CUP Event 1 Chironomus Larvae Delayed Shipment	*Chironomus* larvae (expected 11/9/2022) were delayed by UPS and did not arrive until the morning of 11/10/2022. Per direction from the TIE Advisory Committee, Pacific EcoRisk (PER) initiated the tests prior to the 48-hour waiting period to avoid hold time violations.	The deviation was due to uncontrollable circumstances; there are no corrective actions. The same procedures of notifying the TIE Advisory Committee to receive guidance will be followed in the future if needed.	NA
2022-02	Final	11/20/2022	Delta RMP CUP QAPP 2022 v1.3	CUP Event 1 Chironomus Larvae Missed Growth Endpoints	On 11/21/2022, PER reported to the TIE Advisory Committee that an analysts failed to collect organism weights for the 10-day *C. dilutus* test that was initiated on 11/10/2022 and completed on 11/20/2022.	The staff member responsible for the deviation was issued a performance evaluation by PER and additional training/review of the DRMP requirements.	The error has not occurred in subsequent toxicity tests.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2022-03	Final	11/19/2022	Delta RMP CUP QAPP 2022 v1.3	CUP Event 1 Chironomus larvae initial weights greater than 0.012 mg/individual AFDW	Initial weights of the *C. dilutus* larvae were greater than the SWAMP measurement quality objective (MQO) of less than or equal to 0.12 mg/individual AFDW.	Toxicity Test level QA Code of TAF (Test organisms exceed the maximum weight requirement at test initiation) will be applied to the samples in each test batch.	Data submitted with TAF flags.
2022-04	Out for Signa-tures	3/4/2023	Delta RMP CUP QAPP 2022 v1.3	CUP Event 2 *Ceriodaphnia* Batch Failed Test Acceptability Criteria in One Batch	PER technicians observed on 3/4/2023 that the control associated with the *C. dubia* chronic toxicity test had 78% survival and would therefore not meet TAC of ≥ 80% average survival in the control. The invalid test was terminated on 3/5/2023 for five environmental samples collected on 2/27/2023 (Event 2).	1) The PER Quality Manager reviewed procedures with the technician responsible for the error. 2) Tox Test Level QA Code of H (Holding Time violation as occurred) applied to the samples the test batch. 3) Lab batch comment applied: "Test initiated 3/28/23 failed to meet test acceptability criteria with <80% survival in the LABQA. All samples retested on 3/6/23; 6 days outside of hold time limit."	1) Procedures reviewed on 3/4/2023. The error has not occurred in subsequent toxicity tests. 2) Data submitted with H flag 3) Data submitted with batch comment.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2022-05	Final	2/14/2023	Delta RMP CUP QAPP 2022 v1.3	CUP Event 1 Missed Resolution Reporting Timeline for TSS	USGS reported Event 1 results for TSS on 1/11/2022 which was 3 days past the resolution deadline of 1/8/2022 (preliminary results due within 60 calendar days of analysis).	Reporting timelines are being tracked in a more specific manner when multiple analysis methods are presented in a single file to ensure preliminary data are reported within the 60- day limit.	USGS Events 2-4 preliminary data submission to the DRMP were all submitted within Resolution time frames.
2022-06	Final	3/16/2023	Delta RMP QAPP v7.1	Resolution Timeline for Preliminary Data Reporting of HG EDD Missed by CV RDC	The Delta RMP DM tracked only four of five mercury files that were submitted 12/22-12/23/2022; only four EDDs were included in the data notification sent to the CVRWQCB 12/23/2022. The missing file was submitted on 3/16/2023 once the oversight was realized.	The Delta RMP DM will add a monthly cross check of files submitted directly to State Water Resource Control Board (SWRCB) and tracked in the IQ Data Management Tracking file compared to what the Delta RMP has submitted as preliminary data to the CVRWQCB.	Additional checks of submitted files started in April 2023.
2022-07	Final	5/12/2023	Delta RMP CUP QAPP 2022 v1.3	CUP Event 3 Chironomus larvae initial weights greater than 0.012 mg/ individual AFDW	PER technicians noted the mean t(0) weights of the *C. dilutus* were greater than the SWAMP MQO of ≤0.12 mg/individual AFDW for the second control batch.	Toxicity Test level QA Code of TAF (Test organisms exceed the maximum weight requirement at test initiation) will be applied to the samples in each test batch.	Data submitted with TAF flags

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2022-08	Final	6/12/2023	Delta RMP CUP QAPP 2022 v1.3	CUP Events 1 and 3 Chironomus Test Temperature at 20 C	*C. dilutus* tests were performed at different temperatures (Events 1 and 3 at 20°C and Event 2 at 23°C). Per consultation with the CVRWQCB QA Representative, Events 1 and 3 results deviate from the recommended SWAMP test temperature of 23°C.	1) PER will run future *C. dilutus* test at 23 °. 2) PER will note in their Event 4 Lab Report the deviation that occurred for Events 1 and 3. 3) Update the DRMP Data Management Standard Operating Procedure (SOP) to reflect the test temperature of 23 °C for *C. dilutus* testing.	1) Event 4 *C. dilutus* test was run at 23 ° C 2) Event 4 report received 10/2/2023 with requested notes. 3) DRMP Data Management procedures specify the correct temperature range.

Deviation Number	Status	Deviation Date	QAPP	Title	Description	Corrective Actions	Resolution
2022-09	Final	5/26/2023	Delta RMP CUP QAPP 2022 v1.3	CUP Event 3 DOC Field Blank Contamination and Field Filtering Update	Babcock notified USGS, MLJ, and CVRWQCB staff of a detection of DOC (6.9 mg/L) in the field blank on 5/26/2023. In reviewing sample handling procedures, it was determined that DOC preparation/preservation codes should be updated based on the USGS filtering procedures.	1) USGS sent additional DOC and TOC blanks for analysis to determine if contamination was consistent. 2) USGS to review the National Field Manual for any additional procedures to avoid contamination. 3) USGS to review filtration procedures to minimize contamination with staff. 4) USGS to revise COCs to indicate lab filtered. 5) Revise CUP data received to date to indicate lab filtered for DOC.	1) Analysis of blank water performed June 2023. 2) USGS Manuals reviewed; no additional procedures identified. 3) Filtration procedures were reviewed with staff. 4) COCs were revised for subsequent events. 5) Prep/preservation codes were revised in the CV RDC.

2.3.1 Summary of Deviations from Delta RMP CUP QAPP v1.3

2.3.1.1 Current Use Pesticides and Aquatic Toxicity

There were eight deviations to the Delta RMP CUP QAPP v1.3 which occurred during FY 22-23 and were associated with current use pesticides and aquatic toxicity (**Table 4**). Deviation 2022-01 (CUP Event-1) was related to a shipping delay by UPS which did not allow the *Chironomus dilutus* organisms to arrive a day prior to test initiation as planned. The normal protocol is for the laboratory to order the larvae to arrive a day before needed to allow any attrition to occur in holding, rather than in the testing. PER informed the TIE Advisory Committee of the larvae situation and asked for guidance on next steps. The TIE Advisory Committee recommended initiating the midge toxicity tests on November 10, 2022, for samples collected on November 9, 2022, despite organisms arriving less than 48 hours prior to test initiation. Since the deviation was due to uncontrollable circumstances, there are no corrective actions. If this happens again, PER will continue to follow the same procedures of notifying the TIE Advisory Committee to receive guidance on next steps.

Deviation 2022-02 (CUP Event-1) occurred on November 22, 2022 when organism weights were not collected upon termination of a 10-day water exposure for a *Chironomus dilutus* control test initiated on November 10, 2022. It was agreed by the TIE Advisory Committee to report the survival results (which were recorded) and not retest the water outside of hold-time. The PER staff member responsible for the deviation was issued a performance evaluation by PER and additional training/review of the DRMP requirements.

Deviation 2022-03 (CUP Event-1) was related to the initial weights of the *Chironomus* larvae, which were greater than the SWAMP MQO of less than or equal to 0.12 mg/individual ash free dry weight (AFDW). Upon completion of drying process, PER reported the initial weights as AFDW on November 19, 2022, and November 23, 2022, for two batches of *Chironomus* larvae that had samples collected on November 9 and 10, 2022. PER processed the toxicity data in preparation of submitting the data report and found that the mean AFDW was greater than 0.12 mg/individual. PER informed the TIE Advisory Committee of the non-conformance of T0 (initial) weights on December 22,2022. The lower weight is presumably targeted to reduce pupation/hatching during the 10-day test; no pupation or hatching occurred in these specific toxicity tests and therefore initial weights were assessed to have no detrimental impacts on testing. The organisms were received as larvae and were of the correct age for testing. Corrective action involved assigning a Tox Test Level QA Code of TAF [Test organisms exceed the

maximum weight requirement at test initiation] to the samples in each test batch, and data was submitted with TAF flags.

Deviation 2022-04 (CUP Event-2) occurred on March 4, 2023, when PER observed that a *C. dubia* chronic toxicity test did not meet test acceptability criteria (TAC) of ≥ 80% average survival in the control. It was noted that organism quality and a technical mistake by PER staff are likely the cause of the TAC failure in this test. PER provided an email to alert TIE TAC members of the incident and request a retest due to TAC failure. A retest was initiated on March 6, 2023 per recommendation from the TIE Advisory Committee which includes the CVRWQCB QA Officer, and the five environmental samples associated with original failed test were re-analyzed six days out of the 48-hour hold time. Corrective actions included: 1) the PER Quality Manager discussed solution renewal and organism transfer process with technician associated with the technical error, 2) a Tox Test Level QA Code of H [Holding Time violation as occurred] was applied to the samples the test batch, and 3) the following lab batch comment was applied "Original analysis performed within hold time but did not meet test acceptability criteria (TAC)(≥ 80% average survival in control). Initial test performed on February 28, 2023. Reported reanalysis initiated 6 days out of hold time."

Deviation 2022-05 (CUP Event-1) was related to a missed Resolution reporting deadline (60 days from analysis) for TSS. During the review of the CEDEN EDD, the Data Management Team (DMT) noticed that although the November USGS results were received within 60 days of pesticide analysis (reported within 43 days of analysis), the TSS results (which were reported in the same file) were analyzed earlier and were reported 3 days past the 60-day deadline. The deviation was not noticed until the EDD was received and reviewed since the preliminary results do not include the analysis date. This deviation only affects the timing for when preliminary results were received for TSS; there were no hold time violations associated with these results. Corrective action involved more specific tracking of Resolution reporting deadlines when multiple analysis methods are presented in a single file, and the re-iteration of the requirement for reporting of preliminary results for both TSS and Pesticides within the 60-day limit.

Deviation 2022-07 (CUP Event-3) occurred on May 12, 2023 and was related to the initial weights of *Chironomus* larvae, which were greater than the SWAMP MQO of ≤0.12 mg/individual AFDW and affected two control batches. The SWAMP MQO of ≤0.12 mg/individual is presumably targeted to reduce the likelihood of pupation/hatching during the 10-day test. No impact on the test results was expected given that no pupation or hatching occurred during testing, and the age of the organisms was confirmed at 9 days old. A corrective action involved assigning a Tox Test Level QA Code of TAF [Test

organisms exceed the maximum weight requirement at test initiation] to the samples in each test batch, and data was submitted with TAF flags.

Deviation 2022-08 (CUP Events 1 and 3) occurred on June 12, 2023, when *Chironomus dilutus* tests were performed at two different temperatures (Events 1 and 3 were at 20 °C and Event 2 was at 23 °C). It was determined, in consultation with the CVRWQCB QA representative, that a deviation occurred in Events 1 and 3 from the recommended SWAMP test temperature of 23 °C. An interim project manager at PER was overseeing the first three test events and two of them were conducted at 20 °C to reflect the freshwater sediment manual requirements, whereas one was conducted at 23 °C which matches SWAMP guidance. The impact of the two different test temperatures on *C. dilutus* toxicity test performance is expected to be minimal. The SWAMP MQO for *C. dilutus* temperature requires that the temperature not vary more than 3 degrees. No flagging for temperature variation was necessary. Corrective actions included: 1) PER will run the Event 4 *Chironomus* test at 23 °C, 2) PER will note in their Event 4 Lab Report the deviation that occurred for Events 1 and 3 testing, and 3) Update to the DRMP Data Management SOP to reflect the test temperature of 23 °C for *C. dilutus* testing under EPA 600/R-99-064.

Finally, Deviation 2022-09 (CUP Event 3) occurred on May 26, 2023, and was related to a detection in a field blank for DOC (6.9 mg/L). This detection prompted a conversation about sample handling and potential for contamination between Babcock, MLJ, USGS, MLML, and the State Board Quality Assurance Officer (QAO). It was determined that field blanks are filtered in the USGS laboratory prior to being sent to Babcock for analysis; therefore, the preparation/preservation code should indicate “LabFiltered” and not “FieldFiltered”. USGS agreed to review sample preparation protocols included in the USGS National Field Manual (NFM) to ensure that adequate language is included regarding potential sources of contamination during the filtration process. Corrective actions included: 1) A second set of DOC and TOC blanks were taken at USGS and sent for analysis to determine if contamination was consistent, 2) Review of USGS NFM sampling protocols to determine if the issue of organic solvent contamination is discussed including steps to be taken to avoid contamination and determine if SOPs need to be revised, 3) USGS will review filtration SOPs with staff doing filtration specifically addressing concerns about organic carbon contamination, 4) USGS will revise Chain of Custody (COC) forms to indicate lab filtered, and 5) Revise CUP Babcock data received to date.

2.3.2 Summary of Deviations from Delta RMP QAPP v7.1

2.3.2.1 Mercury Monitoring

There was one deviation to the Delta RMP QAPP (v7.1) which occurred during FY 22-23 (**Table 4**). Deviation 2022-06 was associated with the timeline for preliminary data reporting of mercury EDDs. The Delta RMP Data Manager (DM) sent a Preliminary Data Notification on December 23, 2022, to the CVRWQCB which included only four of the five EDDs for mercury. During a subsequent cross-check of files between the SWAMP data tracker and Delta RMP receipt of files, it was determined that one file was missed during the Delta RMP tracking and CVRWQCB notification process. The missing file was submitted on March 16, 2023, once the oversight was realized. There was minimal impact since the results were submitted to the State Board within the required time frame of the QAPP allowing for review and processing within a timely manner. To prevent such occurrences in the future, the Delta RMP DM will add a monthly cross check of files submitted directly to SWRCB and tracked in the IQ_DataManagement_MasterTracking file compared to what the Delta RMP has submitted as preliminary data to the CVRWQCB.

2.3.3 Summary of Deviations from Delta RMP CEC QAPP v2

2.3.3.1 Constituents of Emerging Concern

There were three deviations to the Delta RMP CUP QAPP v2 which occurred during FY 22-23 and were associated with constituents of emerging concern (**Table 4**). Deviation 2021-08 (CEC Event-3) occurred on July 21, 2022, and was related to late reporting of PPCPs preliminary data for Event 3 by Weck Laboratories. Based on the CVRWQCB Resolution R5-2021-0054, preliminary results are expected to be reported 60 calendar days from sample analysis which would have been June 6, 2022, June 6, 2022. Weck reported Event 3 results on July 21, 2022, which was 51 days past the resolution deadline. The delay in reporting of preliminary results is due to extra time that Weck spent to refine their laboratory report and EDD to include percent recoveries of IDAs in the extraction standards. Moving forward, Weck agreed to provide these percent recoveries with each analysis performed with EPA 1694M even though this requirement was not listed in the QAPP. Event 4 data were reported within the 60-day timeframe and included the percent recoveries as requested. A corrective action involved the amendment of CEC QAPP (v2.0) to include language requiring the percent recovery reporting for methods with IDAs.

Deviation 2021-09 (CEC Year-2) involved multiple deviations related to tissue PBDE and per- and polyfluoroalkyl substances (PFAS) batches submitted by SGS-AXYS including: 1) deviation from the QAPP reporting limits, 2) missing required batch Quality Control

samples, and 3) missing analysis of lipids in clam tissues. The SGS-AXYS tissue results for PDBE and PFAS were reported on August 19, 2022 for the October 2021 sample event (clams were sampled on October 20 -21, 2021 and fish were sampled October 18-20, 2021). During the data review by the CV RDC, it was determined that the RLs in the EDD were higher than what is listed in the QAPP. Additionally, during data reviews by the CV RDC, it was determined (September 2, 2023) that in the PFAS batch analyzed on fish, there were no lipids, moisture, or lipid duplicates reported. For the PBDE batch that was analyzed on fish and clams, there was no duplicate reported for lipids. Subsequent confirmation with SGS-AXYS confirmed that required batch quality control (QC) samples were missing from the analysis. Finally, the project schedule required a lipid to be analyzed on each of the tissue samples. In the PBDE batch, lipids were reported for all four fish composites and one clam composite tissue sample. Five clam composites did not have lipids reported. Corrective actions to address the deviations included: 1) revise future QAPPs to include language to clarify the reporting limits for wet weight vs dry weight units with respect to method RLs, 2) there were two clam samples (544SJRNBC & 519SUT108) that had enough tissue to run lipids and one (544SJRNBC) of the two samples had enough to report a duplicate. SGS-AXYS analyzed and reported on the clam tissues results on October 14, 2022, and 3) MLJ Environmental reviewed the relevant QAPP requirements for clam tissue analyses with the SGS-AXYS project manager to prevent missing results due to lab oversight going forward.

Deviation 2021-10 (CEC Year-2) occurred on September 7, 2022, when the CV RDC used the lab report to populate the bivalve composite EDD for clams dissected in the lab at SGS-AXYS. The clam widths were identified as a potential deviation. The CV RDC received email confirmation on 10/14/2022 from SGS-AXYS that the clams were incorrectly measured. Ultimately it was determined that shell height was measured instead of width). The reason for the deviation was due to the laboratory technician not understanding how to measure the clam dimensions. The clam lengths, which were originally recorded as shell width, have been corrected (October 17, 2022). The width is unknown because it was not measured, and this might affect a full understanding of the size of the clam shell. However, both width and height were measured in Year 1 and that information could be used to understand a relationship of width and height that could be inferred to the Year 2 data. There are no future tissue analyses from SGS-AXYS planned for this project.

2.4 QAPP AMENDMENTS

When appropriate, an amendment to the approved QAPP is required. Amendments that were created during the FY 22-23 reporting period are summarized in **Table 5**.

Table 5. Summary of QAPP Amendments submitted during FY 22-23.

QAPP Name	Amendment	Monitoring Sector	Title	Description	Approval Status
Delta RMP CUP QAPP 2022 v1.3	Version 1.4	CUP	Amendment to update pesticide method detection limits (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 Standard Operating Procedure (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.	Submitted for review 5/3/2023; resubmitted 9/28/23. Approved 10/25/2023

3 QUALITY ASSURANCE – DATA MANAGED BY THE DELTA RMP

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 22-23 were for Year 3 of the four-year monitoring design. Samples collected for pesticide analysis and toxicity testing during FY 22-23 included Events 1 through 4 of WY 2023:

- Event 1, occurring on November 9 and 10, 2022
- Event 2, occurring on February 27 and 28, 2023
- Event 3, occurring on April 26 and 27, 2023
- Event 4, occurring on June 12 and 13, 2023

All WY 2023 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 will provide a complete assessment of the data generated from all six events that occurred during WY 2023; the CUP Data Report will be finalized in coordination with the publication of the WY 2023 data to CEDEN by March 6, 2024. Assessments of completeness, precision, and accuracy for sampling Events 1 through 4 that occurred during FY22-23 are provided in **Appendix I** and are briefly summarized here.

3.1.1 FY22-23 Monitoring Results for Pesticides and Aquatic Toxicity

3.1.1.1 Quality Control Sample Completeness

Of the samples planned for CUP monitoring during FY22-23, all samples were successfully collected and delivered to the laboratories for analysis for 100% (32 of 32) of monitoring locations; 99.96% (11,867 of 11,872) of the expected analysis results were reported by USGS OCRL, Babcock, and PER. The results that were not reported were for the sublethal endpoint of the November 2022 *C. dilutus* tests, which were not recorded due to laboratory technician error (see **Deviations and Corrective Actions**, number 2022-02).

The Delta RMP CUP QAPP (v1.3) requires that field duplicates and field blanks be collected with associated chemistry analyses at an annual rate of 5%, if applicable. For Events 1 through 4 of WY 2023, field blanks comprised 6.3% (737 of 11,616) and field duplicates comprised 6.2% (729 of 11,840) of results received.

Laboratory QC sample requirements for chemistry analyses are a combination of method blanks, laboratory duplicates, matrix spikes (MS), and laboratory control spikes 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 Events 1 through 4 of WY 2023, laboratory QC completeness was met by each laboratory at the following rates:

- 60.0% (12 of 20) of batches analyzed for pesticides by the OCRL,
- 100% (42 of 42) of batches analyzed by the Babcock, and
- 100% (63 of 63) of the toxicity batches analyzed by PER.

During Events 1 through 4 of WY 2023, overall batch completeness was 93.6% (117 of 125). A comprehensive assessment of the QC completeness for the WY 2023 will be addressed in the CUP WY 2023 Data Report.

3.1.1.2 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 Events 1 through 4 of WY 2023, precision acceptability criteria were met at the following rates for all chemistry and toxicity results:

- 99.9% (728 of 729) of field duplicate samples,
- 94.0% (47 of 50) of laboratory duplicate samples,
- 99.7% (747 of 749) of MSD samples.

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

3.1.1.3 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 laboratory control spike (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 Events 1 through 4 of WY 2023, accuracy acceptance criteria were met at the following rates:

- 99.9% (736 of 737) of field blank samples,
- 99.7% (1,462 of 1,467) of laboratory blank samples,
- 99.9% (1,628 of 1,629) of LCS samples,
- 99.2% (1,494 of 1,506) of MS samples,
- 100% (768 of 768) of surrogate samples, and
- 100% (71 of 71) of toxicity negative control samples.

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

3.1.1.4 Invalid Data

All results analyzed by USGS OCRL, Babcock Laboratories, and PER for Events 1 through 4 of WY 2023 are considered valid and flagged according to the Delta RMP CUP QAPP (v1.3) criteria.

3.2 CONSTITUENTS OF EMERGING CONCERN

No monitoring for CECs occurred during FY 22-23. Year 2 of the three-year monitoring design was complete in FY 21-22; the results were summarized in the CEC Year 2 Data Report which includes a QA Report evaluating the acceptability of the data collected during Year 2. Year 3 sampling began in FY 23-24. A QA Report evaluating the Year 3 results will be included in the DRMP CEC Year 3 Data Report, which will be finalized in coordination with the publication of the Year 3 data to CEDEN by May 1, 2024.

4 QUALITY ASSURANCE – DATA NOT MANAGED BY THE DELTA RMP

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 February 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.

Data generated by this study have been received by USGS. A draft report will be reviewed by the Nutrient TAC in FY 23-24. Once complete, whole water sample results will be made available on NWIS. Both whole water and SPATT results will be made available via the USGS ScienceBase once finalized.

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 Microcystic study with funding by the Delta RMP. The Phase 1 final report, *Mapping benthic overwintering Microcystis sp. within the Sacramento-San Joaquin Delta*, was submitted to CVRWQCB and the Delta RMP on December 31, 2021. The report was reviewed by the Nutrient TAC on February 25, 2022. Additional (non-Delta RMP) funding was secured to do Phase II of the project. Sampling was conducted in November 2021 and April 2022 for Phase II. It is anticipated the final publication including findings from Phase II will be ready by the end of FY 23-24.

Data are not yet published to CEDEN and are pending SWRCB guidance on storing Quantitative Polymerase Chain Reaction (qPCR) results.

4.2 MERCURY MONITORING

Mercury monitoring of fish and water for FY 22-23 involved a single event which took place in August and September 2022 at core monitoring stations and wetland restoration sites. This final monitoring event was added as an amendment to the Delta RMP QAPP (v7.1) on July 7, 2022, based on a recommendation from the Steering Committee on March 21, 2022, to include one additional fish and water monitoring event prior to pausing monitoring as part of the long-term planning process.

Prey fish monitoring at wetland restoration sites was not performed in FY22-23 due to permitting constraints related Delta smelt concerns and sensitive habitat permit restrictions. Core site fish tissue collection and water monitoring occurred at four and seven core monitoring stations respectively in FY22-23, while fish tissue collection for wetland restoration monitoring occurred at a total of four sites. Cruise reports were provided to the Delta RMP on March 13, 2023, and are included as **Appendix II**.

The data generated during the single sampling event conducted during FY 22-23 were processed and submitted to SWAMP for final data review and upload to CEDEN. These data are currently available to the public via the CEDEN Advanced Query Tool (AQT) and are included as Attachment A to this report.

Mercury monitoring includes the collection of samples to be analyzed for total mercury in fish tissue and for mercury, methylmercury, and additional parameters in water. Field QC sample requirements are outlined in the Delta RMP QAPP (v7.0):

- Mercury and methylmercury in water require field duplicates, field blanks, and equipment blanks,
- Additional parameters in water require field duplicates and field blanks, and
- Tissue samples require neither field duplicates nor field blanks.

Where required, field QC samples must be collected at a frequency of 5% of annual environmental samples. A complete assessment of the field QC frequency will be conducted when data are finalized and available to the public.

Lab QC samples required by the QAPP are a combination of laboratory blanks, duplicates, matrix spikes, control spikes, and CRMs (certified reference materials). A complete assessment of the precision, accuracy, and completeness given the acceptability criteria for each of these samples will be conducted once the data are finalized and available to the public.

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

Appendix I Contents:

Table I.1. Field duplicate (FD) sample acceptability for CUP samples collected during FY22-23.
Sample counts include Events 1 through 4 of CUP WY 2023. A complete assessment of WY 2023 data will be provided in the DRMP CUP WY2023 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]	2	2	100.0
EPA 200.7	Babcock	Water	Dissolved	Calcium	RPD ≤ 25 [1]	1	1	100.0
EPA 200.7	Babcock	Water	Dissolved	Magnesium	RPD ≤ 25 [1]	1	1	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	RPD ≤ 25 [1]	1	1	100.0
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	RPD ≤ 25 [1]	2	1	50.0
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	RPD ≤ 25 [1]	1	1	100.0
SM 2340 B	Babcock	Water	Dissolved	Hardness as CaCO3	RPD ≤ 25 [1]	1	1	100.0
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	RPD ≤ 25 [1]	1	1	100.0
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	RPD ≤ 25 [1]	1	1	100.0
EPA 600/R-99-064M	PER	Water	Survival, Growth	Chironomus dilutus	RPD ≤ 25	4	4	100.0
EPA 821/R-02-012	PER	Water	Survival	Hyalella azteca	RPD ≤ 25	2	2	100.0
EPA 821/R-02-013	PER	Water	Reproduction, Survival	Ceriodaphnia dubia	RPD ≤ 25	4	4	100.0
EPA 821/R-02-013	PER	Water	Survival, Growth	Pimephales promelas	RPD ≤ 25	4	4	100.0
EPA 821/R-02-013	PER	Water	Growth	Selenastrum capricornutum	RPD ≤ 25	2	2	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Acibenzolar-S-methyl	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Allethrin	RPD ≤ 25 [1]	4	4	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	Benfluralin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Bifenthrin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorfenapyr	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorothalonil	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyfluthrin, Total	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalofop-butyl	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalothrin, Total	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cypermethrin, Total	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dacthal	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDD(p,p')	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDE(p,p')	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDT(p,p')	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Deltamethrin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dithiopyr	RPD ≤ 25 [1]	4	4	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	Esfenvalerate	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethalfluralin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethofenprox	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpropathrin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoprene	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Nitrapyrin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloroanisole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloronitrobenzene	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin, Total	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Phenothrin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tefluthrin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetramethrin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	T-Fluvalinate	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin	RPD ≤ 25 [1]	4	4	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	Acetamiprid	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Azoxystrobin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	RPD ≤ 25 [1]	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzobicyclon	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzovindiflupyr	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid-5-hydroxy	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Broflanilide	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Bromuconazole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Butralin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbaryl	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbendazim	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbofuran	RPD ≤ 25 [1]	4	4	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	Chlorantraniliprole	RPD ≤ 25 [1]	4	4	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]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos oxon	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clomazone	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin-Desmethyl	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Coumaphos	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyantraniliprole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyazofamid	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyclaniliprole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cycloate	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cymoxanil	RPD ≤ 25 [1]	4	4	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	Cyproconazole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyprodinil	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desethyl-Atrazine	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desisopropyl-Atrazine	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desnitro-imidacloprid	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desthio-prothioconazole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazinon	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazoxon	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichloroaniline, 3,5-	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorobenzenamine, 3,4-	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl Urea, 3,4-	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl-3-methyl Urea, 3,4-	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorvos	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Difenoconazole	RPD ≤ 25 [1]	4	4	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	Dimethomorph	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dinotefuran	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diuron	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	EPTC	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethaboxam	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Etoxazole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Famoxadone	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenamidone	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenbuconazole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenhexamid	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpyroximate	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl Amide	RPD ≤ 25 [1]	4	4	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 Sulfide	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfone	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flonicamid	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Florpyrauxifen-Benzyl	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluazinam	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fludioxonil	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flufenacet	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluindapyr	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flumetralin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopicolide	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopyram	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluoxastrobin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flupyradifurone	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluridone	RPD ≤ 25 [1]	4	4	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	Flutolanil	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutriafol	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluxapyroxad	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Halauxifen-methyl	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hexazinone	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hydroxy-Imidacloprid, 5-	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Imazalil	RPD ≤ 25 [1]	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid olefin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid urea	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indaziflam	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indoxacarb	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ipconazole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Iprodione	RPD ≤ 25 [1]	4	4	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	Isofetamid	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Kresoxim-methyl	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malaoxon	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malathion	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandestrobin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandipropamid	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl-hydroxymethyl	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metconazole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoxyfenozide	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Myclobutanil	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Naled	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Napropamide	RPD ≤ 25 [1]	4	4	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	Novaluron	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oryzalin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxadiazon	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxathiapiprolin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxyfluorfen	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Paclobutrazol	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pendimethalin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	RPD ≤ 25 [1]	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Penthiopyrad	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Phosmet	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picarbutrazox	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picoxystrobin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Piperonyl Butoxide	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prodiamine	RPD ≤ 25 [1]	4	4	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	Prometon	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometryn	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propanil	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propargite	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propiconazole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propyzamide	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pydiflumetofen	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyraclostrobin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyridaben	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyrimethanil	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyriproxyfen	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Quinoxyfen	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sedaxane	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Simazine	RPD ≤ 25 [1]	4	4	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	Sulfoxaflor	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	RPD ≤ 25 [1]	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebufenozide	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos oxon	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetraconazole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiabendazole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiacloprid	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam Degradate (CGA-355190)	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	RPD ≤ 25 [1]	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiobencarb	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tolfenpyrad	RPD ≤ 25 [1]	4	4	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	Triadimefon	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimenol	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triallate	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tributyl Phosphorotrithioate, S,S,S-	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifloxystrobin	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triflumizole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triticonazole	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Valifenalate	RPD ≤ 25 [1]	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Zoxamide	RPD ≤ 25 [1]	4	4	100.0
Total						**729**	**728**	**99.9**

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

Table I.2. Laboratory duplicate (LD) sample acceptability for CUP samples collected during FY22-23.
Sample counts include Events 1 through 4 of CUP WY 2023. A complete assessment of WY 2023 data will be provided in the DRMP CUP WY2023 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	4	4	100.0
EPA 200.7	Babcock	Water	Dissolved	Magnesium	RPD ≤ 20	4	4	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	RPD ≤ 25	4	3	75.0
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	RPD ≤ 25	10	9	90.0
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	RPD ≤ 20	9	9	100.0
SM 2340 B	Babcock	Water	Dissolved	Hardness as CaCO3	RPD ≤ 25	3	3	100.0
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	RPD ≤ 25	6	6	100.0
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	RPD ≤ 25	6	6	100.0
EPA 160.2	OCRL	Water	Particulate	Total Suspended Solids	RPD ≤ 25	4	3	75.0
Total						**50**	**47**	**94.0**

Table I.3. Matrix spike duplicate (MSD) acceptability for CUP samples collected during FY22-23.
Sample counts include Events 1 through 4 of CUP WY 2023. A complete assessment of WY 2023 data will be provided in the DRMP CUP WY2023 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	5	5	100.0
EPA 200.7	Babcock	Water	Dissolved	Magnesium	RPD ≤ 20	5	5	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	RPD ≤ 25	5	5	100.0
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	RPD ≤ 25	11	10	90.9
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	RPD ≤ 20	9	9	100.0
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	RPD ≤ 25	6	6	100.0
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	RPD ≤ 25	6	5	83.3
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Acibenzolar-S-methyl	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Allethrin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Benfluralin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Bifenthrin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorfenapyr	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorothalonil	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyfluthrin, Total	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalothrin, Total	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cypermethrin, Total	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dacthal	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDD(p,p')	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDE(p,p')	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDT(p,p')	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Deltamethrin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dithiopyr	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Esfenvalerate	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethalfluralin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethofenprox	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpropathrin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoprene	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloroanisole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloronitrobenzene	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin, Total	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Phenothrin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tefluthrin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetramethrin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	T-Fluvalinate	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Acetamiprid	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Azoxystrobin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	RPD ≤ 25	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzobicyclon	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid-5-hydroxy	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Broflanilide	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Bromuconazole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Butralin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbaryl	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbendazim	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbofuran	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorantraniliprole	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clomazone	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin-Desmethyl	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Coumaphos	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyantraniliprole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyazofamid	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyclaniliprole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cycloate	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cymoxanil	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyproconazole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyprodinil	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desethyl-Atrazine	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desisopropyl-Atrazine	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desthio-prothioconazole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazinon	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazoxon	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichloroaniline, 3,5-	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorobenzenamine, 3,4-	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl Urea, 3,4-	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl-3-methyl Urea, 3,4-	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorvos	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Difenoconazole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dimethomorph	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dinotefuran	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diuron	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	EPTC	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Etoxazole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Famoxadone	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenamidone	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenbuconazole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenhexamid	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpyroximate	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl Amide	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfide	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfone	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flonicamid	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Florpyrauxifen-Benzyl	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fludioxonil	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flufenacet	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluindapyr	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flumetralin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopicolide	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopyram	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluoxastrobin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flupyradifurone	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluridone	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutolanil	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutriafol	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluxapyroxad	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Halauxifen-methyl	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hydroxy-Imidacloprid, 5-	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Imazalil	RPD ≤ 25	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid olefin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid urea	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indaziflam	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indoxacarb	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ipconazole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Iprodione	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Isofetamid	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Kresoxim-methyl	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malaoxon	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malathion	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandipropamid	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl-hydroxymethyl	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metconazole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoxyfenozide	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Myclobutanil	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Naled	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Napropamide	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Novaluron	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oryzalin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxadiazon	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxathiapiprolin	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Paclobutrazol	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pendimethalin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	RPD ≤ 25	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Penthiopyrad	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Phosmet	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picarbutrazox	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picoxystrobin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Piperonyl Butoxide	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prodiamine	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometon	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometryn	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propanil	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propargite	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propyzamide	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pydiflumetofen	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyraclostrobin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyridaben	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyrimethanil	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyriproxyfen	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Quinoxyfen	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sedaxane	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Simazine	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sulfoxaflor	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	RPD ≤ 25	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebufenozide	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos oxon	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetraconazole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiabendazole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiacloprid	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam Degradate (CGA-355190)	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	RPD ≤ 25	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiobencarb	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tolfenpyrad	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimefon	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimenol	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triallate	RPD ≤ 25	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifloxystrobin	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triflumizole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triticonazole	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Valifenalate	RPD ≤ 25	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Zoxamide	RPD ≤ 25	4	4	100.0
Total						**749**	**747**	**99.7**

Table I.4. Field blank (FB) sample acceptability for CUP samples collected during FY22-23.
Sample counts include Events 1 through 4 of CUP WY 2023. A complete assessment of WY 2023 data will be provided in the DRMP CUP WY2023 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	2	66.7
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	< RL	3	3	100.0
EPA 160.2	OCRL	Water	Particulate	Total Suspended Solids	< RL	2	2	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Acibenzolar-S-methyl	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Allethrin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Benfluralin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Bifenthrin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorfenapyr	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorothalonil	< RL	4	4	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	Cyfluthrin, Total	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalofop-butyl	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalothrin, Total	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cypermethrin, Total	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dacthal	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDD(p,p')	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDE(p,p')	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDT(p,p')	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Deltamethrin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dithiopyr	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Esfenvalerate	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethalfluralin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethofenprox	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpropathrin	< RL	4	4	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	Methoprene	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Nitrapyrin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloroanisole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloronitrobenzene	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin, Total	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Phenothrin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tefluthrin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetramethrin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	T-Fluvalinate	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Acetamiprid	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Azoxystrobin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	< RL	2	2	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	Benzobicyclon	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzovindiflupyr	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid-5-hydroxy	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Broflanilide	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Bromuconazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Butralin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbaryl	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbendazim	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbofuran	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorantraniliprole	< RL	4	4	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	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos	< RL	4	4	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 oxon	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clomazone	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin-Desmethyl	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Coumaphos	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyantraniliprole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyazofamid	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyclaniliprole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cycloate	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cymoxanil	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyproconazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyprodinil	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desethyl-Atrazine	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desisopropyl-Atrazine	< RL	4	4	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	Desnitro-imidacloprid	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desthio-prothioconazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazinon	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazoxon	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichloroaniline, 3,5-	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorobenzenamine, 3,4-	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl Urea, 3,4-	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl-3-methyl Urea, 3,4-	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorvos	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Difenoconazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dimethomorph	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dinotefuran	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diuron	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	EPTC	< RL	4	4	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	Ethaboxam	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Etoxazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Famoxadone	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenamidone	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenbuconazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenhexamid	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpyroximate	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl Amide	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfide	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfone	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flonicamid	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Florpyrauxifen-Benzyl	< RL	4	4	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	Fluazinam	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fludioxonil	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flufenacet	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluindapyr	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flumetralin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopicolide	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopyram	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluoxastrobin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flupyradifurone	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluridone	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutolanil	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutriafol	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluxapyroxad	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Halauxifen-methyl	< RL	4	4	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	Hexazinone	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hydroxy-Imidacloprid, 5-	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Imazalil	< RL	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid olefin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid urea	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indaziflam	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indoxacarb	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ipconazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Iprodione	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Isofetamid	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Kresoxim-methyl	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malaoxon	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malathion	< RL	4	4	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	Mandestrobin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandipropamid	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl-hydroxymethyl	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metconazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoxyfenozide	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Myclobutanil	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Naled	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Napropamide	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Novaluron	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oryzalin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxadiazon	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxathiapiprolin	< RL	4	4	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	Oxyfluorfen	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Paclobutrazol	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pendimethalin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	< RL	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Penthiopyrad	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Phosmet	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picarbutrazox	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picoxystrobin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Piperonyl Butoxide	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prodiamine	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometon	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometryn	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propanil	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propargite	< RL	4	4	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	Propiconazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propyzamide	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pydiflumetofen	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyraclostrobin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyridaben	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyrimethanil	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyriproxyfen	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Quinoxyfen	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sedaxane	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Simazine	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sulfoxaflor	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	< RL	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebufenozide	< RL	4	4	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	Tebupirimfos	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos oxon	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetraconazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiabendazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiacloprid	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam Degradate (CGA-355190)	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	< RL	2	2	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiobencarb	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tolfenpyrad	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimefon	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimenol	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triallate	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tributyl Phosphorotrithioate, S,S,S-	< RL	4	4	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	Trifloxystrobin	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triflumizole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triticonazole	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Valifenalate	< RL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Zoxamide	< RL	4	4	100.0
Total						**737**	**736**	**99.9**

Table I.5. Laboratory blank (LB) sample acceptability for CUP samples collected during FY22-23.
Sample counts include Events 1 through 4 of CUP WY 2023. A complete assessment of WY 2023 data will be provided in the DRMP CUP WY2023 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	7	6	85.7
EPA 200.7	Babcock	Water	Dissolved	Magnesium	< MDL	7	7	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	< MDL	7	7	100.0
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	< MDL	14	13	92.9
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	< MDL	10	10	100.0
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	< MDL	7	6	85.7
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	< MDL	7	5	71.4
EPA 160.2	OCRL	Water	Particulate	Total Suspended Solids	< MDL	4	4	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Acibenzolar-S-methyl	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Allethrin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Benfluralin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Bifenthrin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorfenapyr	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorothalonil	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyfluthrin, Total	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalothrin, Total	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cypermethrin, Total	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dacthal	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDD(p,p')	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDE(p,p')	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDT(p,p')	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Deltamethrin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dithiopyr	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Esfenvalerate	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethalfluralin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethofenprox	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpropathrin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoprene	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloroanisole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloronitrobenzene	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin, Total	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Phenothrin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tefluthrin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetramethrin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	T-Fluvalinate	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Acetamiprid	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Azoxystrobin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	< MDL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzobicyclon	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid-5-hydroxy	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Broflanilide	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Bromuconazole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Butralin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbaryl	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbendazim	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbofuran	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorantraniliprole	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos oxon	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin-Desmethyl	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Coumaphos	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyantraniliprole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyazofamid	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyclaniliprole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cycloate	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cymoxanil	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyproconazole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyprodinil	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desethyl-Atrazine	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desisopropyl-Atrazine	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desnitro-imidacloprid	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazinon	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazoxon	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichloroaniline, 3,5-	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorobenzenamine, 3,4-	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl Urea, 3,4-	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl-3-methyl Urea, 3,4-	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorvos	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Difenoconazole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dimethomorph	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dinotefuran	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diuron	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	EPTC	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethaboxam	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Famoxadone	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenamidone	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenbuconazole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenhexamid	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpyroximate	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl Amide	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfide	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfone	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flonicamid	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Florpyrauxifen-Benzyl	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluazinam	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flufenacet	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluindapyr	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flumetralin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopicolide	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopyram	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluoxastrobin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flupyradifurone	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluridone	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutolanil	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutriafol	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluxapyroxad	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Halauxifen-methyl	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hexazinone	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Imazalil	< MDL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid olefin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid urea	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indaziflam	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indoxacarb	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ipconazole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Iprodione	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Isofetamid	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Kresoxim-methyl	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malaoxon	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malathion	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandestrobin	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl-hydroxymethyl	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metconazole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoxyfenozide	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Myclobutanil	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Naled	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Napropamide	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Novaluron	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oryzalin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxadiazon	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxathiapiprolin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxyfluorfen	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pendimethalin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	< MDL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Penthiopyrad	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Phosmet	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picarbutrazox	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picoxystrobin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Piperonyl Butoxide	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prodiamine	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometon	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometryn	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propanil	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propargite	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propiconazole	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pydiflumetofen	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyraclostrobin	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyridaben	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyrimethanil	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyriproxyfen	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Quinoxyfen	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sedaxane	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Simazine	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sulfoxaflor	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	< MDL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebufenozide	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetraconazole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiabendazole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiacloprid	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam Degradate (CGA-355190)	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	< MDL	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiobencarb	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tolfenpyrad	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimefon	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimenol	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triallate	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tributyl Phosphorotrithioate, S,S,S-	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifloxystrobin	< MDL	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triticonazole	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Valifenalate	< MDL	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Zoxamide	< MDL	8	8	100.0
Total						**1467**	**1462**	**99.7**

Table I.6. Laboratory control spike (LCS) sample acceptability for CUP samples collected during FY22-23.
Sample counts include Events 1 through 4 of CUP WY 2023. A complete assessment of WY 2023 data will be provided in the DRMP CUP WY2023 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	5	5	100.0
EPA 200.7	Babcock	Water	Dissolved	Magnesium	PR 70-130	5	5	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	PR 85-115	5	5	100.0
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	PR 90-110	11	10	90.9
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	PR 90-110	9	9	100.0
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	PR 80-120	6	6	100.0
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	PR 80-120	6	6	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Acibenzolar-S-methyl	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Allethrin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Benfluralin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Bifenthrin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Chlorfenapyr	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Chlorothalonil	PR 70-130	9	9	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyhalofop-butyl	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyhalothrin, Total	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cypermethrin, Total	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dacthal	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	DDD(p,p')	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	DDE(p,p')	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	DDT(p,p')	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Deltamethrin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dithiopyr	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Esfenvalerate	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Ethalfluralin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Ethofenprox	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fenpropathrin	PR 70-130	9	9	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Nitrapyrin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pentachloroanisole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pentachloronitrobenzene	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Permethrin, Total	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Phenothrin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tefluthrin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tetramethrin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	T-Fluvalinate	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Trifluralin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Acetamiprid	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Atrazine	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Azoxystrobin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	PR 70-130	5	5	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Benzovindiflupyr	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Boscalid	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Boscalid-5-hydroxy	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Broflanilide	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Bromuconazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Butralin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Carbaryl	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Carbendazim	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Carbofuran	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Chlorantraniliprole	PR 70-130	9	9	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	9	9	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Chlorpyrifos oxon	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Clomazone	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Clothianidin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Clothianidin-Desmethyl	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Coumaphos	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyantraniliprole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyazofamid	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyclaniliprole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cycloate	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cymoxanil	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyproconazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Cyprodinil	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Desethyl-Atrazine	PR 70-130	9	9	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Desnitro-imidacloprid	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Desthio-prothioconazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Diazinon	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Diazoxon	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dichloroaniline, 3,5-	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dichlorobenzenamine, 3,4-	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dichlorophenyl Urea, 3,4-	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dichlorophenyl-3-methyl Urea, 3,4-	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dichlorvos	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Difenoconazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dimethomorph	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Dinotefuran	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Diuron	PR 70-130	9	9	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Ethaboxam	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Etoxazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Famoxadone	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fenamidone	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fenbuconazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fenhexamid	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fenpyroximate	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fipronil	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fipronil Desulfinyl	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fipronil Desulfinyl Amide	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fipronil Sulfide	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fipronil Sulfone	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Flonicamid	PR 70-130	9	9	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluazinam	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fludioxonil	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Flufenacet	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluindapyr	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Flumetralin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluopicolide	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluopyram	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluoxastrobin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Flupyradifurone	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluridone	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Flutolanil	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Flutriafol	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Fluxapyroxad	PR 70-130	9	9	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Hexazinone	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Hydroxy-Imidacloprid, 5-	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Imazalil	PR 70-130	5	5	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Imidacloprid	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Imidacloprid olefin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Imidacloprid urea	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Indaziflam	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Indoxacarb	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Ipconazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Iprodione	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Isofetamid	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Kresoxim-methyl	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Malaoxon	PR 70-130	9	9	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Mandestrobin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Mandipropamid	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Metalaxyl	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Metalaxyl-hydroxymethyl	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Metconazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Methoxyfenozide	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Metolachlor	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Myclobutanil	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Naled	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Napropamide	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Novaluron	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Oryzalin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Oxadiazon	PR 70-130	9	9	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Oxyfluorfen	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Paclobutrazol	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pendimethalin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	PR 70-130	5	5	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Penthiopyrad	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Phosmet	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Picarbutrazox	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Picoxystrobin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Piperonyl Butoxide	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Prodiamine	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Prometon	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Prometryn	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Propanil	PR 70-130	9	9	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Propiconazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Propyzamide	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pydiflumetofen	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pyraclostrobin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pyridaben	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pyrimethanil	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Pyriproxyfen	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Quinoxyfen	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Sedaxane	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Simazine	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Sulfoxaflor	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tebuconazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	PR 70-130	5	5	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tebupirimfos	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tebupirimfos oxon	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tetraconazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Thiabendazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Thiacloprid	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Thiamethoxam	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Thiamethoxam Degradate (CGA-355190)	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	PR 70-130	5	5	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Thiobencarb	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tolfenpyrad	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Triadimefon	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Triadimenol	PR 70-130	9	9	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	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Tributyl Phosphorotrithioate, S,S,S-	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Trifloxystrobin	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Triflumizole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Triticonazole	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Valifenalate	PR 70-130	9	9	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved, Total	Zoxamide	PR 70-130	9	9	100.0
Total						**1629**	**1628**	**99.9**

Table I.7. Matrix spike (MS) sample acceptability for CUP samples collected during FY22-23.
Sample counts include Events 1 through 4 of CUP WY 2023. A complete assessment of WY 2023 data will be provided in the DRMP CUP WY2023 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	10	10	100.0
EPA 200.7	Babcock	Water	Dissolved	Magnesium	PR 85-115	10	10	100.0
EPA 200.8	Babcock	Water	Dissolved	Copper	PR 75-125	10	10	100.0
EPA 351.2	Babcock	Water	Dissolved, Total	Nitrogen, Total Kjeldahl	PR 80-120	22	14	63.6
EPA 353.2	Babcock	Water	Total	Nitrate + Nitrite as N	PR 90-110	26	24	92.3
SM 5310 B	Babcock	Water	Dissolved	Dissolved Organic Carbon	PR 80-120	12	12	100.0
SM 5310 B	Babcock	Water	Total	Total Organic Carbon	PR 80-120	12	10	83.3
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Acibenzolar-S-methyl	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Allethrin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Benfluralin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Bifenthrin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorfenapyr	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorothalonil	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyfluthrin, Total	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyhalofop-butyl	PR 70-130	8	8	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	Cyhalothrin, Total	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Cypermethrin, Total	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dacthal	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDD(p,p')	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDE(p,p')	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	DDT(p,p')	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Deltamethrin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Dithiopyr	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Esfenvalerate	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethalfluralin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethofenprox	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpropathrin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoprene	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Nitrapyrin	PR 70-130	8	8	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	Pentachloroanisole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Pentachloronitrobenzene	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin, Total	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Phenothrin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tefluthrin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Tetramethrin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	T-Fluvalinate	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Acetamiprid	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Azoxystrobin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Bentazon	PR 70-130	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzobicyclon	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Benzovindiflupyr	PR 70-130	8	8	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	Boscalid	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Boscalid-5-hydroxy	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Broflanilide	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Bromuconazole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Butralin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbaryl	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbendazim	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Carbofuran	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorantraniliprole	PR 70-130	8	8	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	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Chlorpyrifos oxon	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clomazone	PR 70-130	8	8	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	Clothianidin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Clothianidin-Desmethyl	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Coumaphos	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyantraniliprole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyazofamid	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyclaniliprole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cycloate	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cymoxanil	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyproconazole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Cyprodinil	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desethyl-Atrazine	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desisopropyl-Atrazine	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desnitro-imidacloprid	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Desthio-prothioconazole	PR 70-130	8	8	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	Diazinon	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diazoxon	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichloroaniline, 3,5-	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorobenzenamine, 3,4-	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl Urea, 3,4-	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorophenyl-3-methyl Urea, 3,4-	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dichlorvos	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Difenoconazole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dimethomorph	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Dinotefuran	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Diuron	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	EPTC	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ethaboxam	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Etoxazole	PR 70-130	8	8	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	Famoxadone	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenamidone	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenbuconazole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenhexamid	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fenpyroximate	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Desulfinyl Amide	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfide	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fipronil Sulfone	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flonicamid	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Florpyrauxifen-Benzyl	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluazinam	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fludioxonil	PR 70-130	8	8	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	Flufenacet	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluindapyr	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flumetralin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopicolide	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluopyram	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluoxastrobin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flupyradifurone	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluridone	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutolanil	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Flutriafol	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Fluxapyroxad	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Halauxifen-methyl	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hexazinone	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Hydroxy-Imidacloprid, 5-	PR 70-130	8	8	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	Dissolved	Imazalil	PR 70-130	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid olefin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid urea	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indaziflam	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Indoxacarb	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Ipconazole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Iprodione	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Isofetamid	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Kresoxim-methyl	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malaoxon	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Malathion	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandestrobin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Mandipropamid	PR 70-130	8	8	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	Metalaxyl	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metalaxyl-hydroxymethyl	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metconazole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Methoxyfenozide	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Myclobutanil	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Naled	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Napropamide	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Novaluron	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oryzalin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxadiazon	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxathiapiprolin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Oxyfluorfen	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Paclobutrazol	PR 70-130	8	8	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	Pendimethalin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Penoxsulam	PR 70-130	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Penthiopyrad	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Phosmet	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picarbutrazox	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Picoxystrobin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Piperonyl Butoxide	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prodiamine	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometon	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Prometryn	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propanil	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propargite	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propiconazole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Propyzamide	PR 70-130	8	8	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	Pydiflumetofen	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyraclostrobin	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyridaben	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyrimethanil	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Pyriproxyfen	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Quinoxyfen	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sedaxane	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Simazine	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Sulfoxaflor	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Tebuconazole-tert-Butylhydroxy	PR 70-130	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebufenozide	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebupirimfos oxon	PR 70-130	8	8	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	Tetraconazole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiabendazole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiacloprid	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiamethoxam Degradate (CGA-355190)	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Dissolved	Thiamethoxam Degradate (NOA-407475)	PR 70-130	4	4	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Thiobencarb	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tolfenpyrad	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimefon	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triadimenol	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triallate	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tributyl Phosphorotrithioate, S,S,S-	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifloxystrobin	PR 70-130	8	8	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	Triflumizole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Triticonazole	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Valifenalate	PR 70-130	8	8	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Zoxamide	PR 70-130	8	8	100.0
Total						**1506**	**1494**	**99.2**

Table I.8. Surrogate sample acceptability for CUP samples collected during FY22-23.
Sample counts include Events 1 through 4 of CUP WY 2023. A complete assessment of WY 2023 data will be provided in the DRMP CUP WY2023 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	96	96	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Permethrin-$^{13}C_6$, cis- (Surrogate)	PR 70-130	96	96	100.0
USGS-OCRL_WATER-PEST_06_GC/MS/MS	OCRL	Water	Particulate, Dissolved	Trifluralin-d_{14} (Surrogate)	PR 70-130	96	96	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Atrazine-$^{13}C_3$ (Surrogate)	PR 70-130	96	96	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	96	96	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Imidacloprid-d_4 (Surrogate)	PR 70-130	96	96	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Metolachlor-$^{13}C_6$ (Surrogate)	PR 70-130	96	96	100.0
USGS-OCRL_WATER-PEST_06_LC/MS/MS	OCRL	Water	Particulate, Dissolved	Tebuconazole-$^{13}C_3$ (Surrogate)	PR 70-130	96	96	100.0
Total						**768**	**768**	**100.0**

Table I.9. Toxicity control sample acceptability for CUP samples collected during FY22-23. Sample counts include Events 1 through 4 of CUP WY 2023. A complete assessment of WY 2023 data will be provided in the DRMP CUP WY2023 Data Report.

Method	Lab	Control	Matrix	Organism	Endpoint	Total Control Samples
EPA 600/R-99-064M	PER	Negative Control	Water	*Chironomus dilutus*	Growth, Survival	15
EPA 821/R-02-012	PER	Negative Control	Water	*Hyalella azteca*	Survival	8
EPA 821/R-02-013	PER	Negative Control	Water	*Ceriodaphnia dubia*	Reproduction, Survival	16
EPA 821/R-02-013	PER	Salinity Control	Water	*Ceriodaphnia dubia*	Reproduction, Survival	8
EPA 821/R-02-013	PER	Negative Control	Water	*Pimephales promelas*	Growth, Survival	16
EPA 821/R-02-013	PER	Negative Control	Water	*Selenastrum capricornutum*	Growth	8
Total						**71**

APPENDIX II –MERCURY MONITORING CRUISE REPORTS

Appendix 1: Cruise Report

Appendix 1

Cruise Report for the
Delta Regional Monitoring Program (Delta RMP)
Mercury Monitoring for Subregional Trends in Black Bass and Water

Sampling Dates: August 08, 2022 – September 28, 2022

Prepared by Marine Pollution Studies Laboratory Staff (MPSL-DFW)

at Moss Landing Marine Laboratories; San Jose State University

Introduction

This report describes mercury sampling activities of the Delta Regional Monitoring Program (DRMP) in subareas of the Delta region of California. Sampling activities included the collection of fish tissue (black bass), and water samples with basic field parameters. Samples were collected by Marine Pollution Studies Laboratory (MPSL-DFW) at Moss Landing Marine Laboratories (MLML) staff.

1.0 Cruise Report

1.1 Objectives

The objectives were to collect fish and water samples that would provide spatial and temporal data to answer DRMP management and assessment questions. Black bass were sampled annually at four (4) fixed stations selected for long-term monitoring. The annual fish collection was paired with water collection at those four stations.

Fish were collected under California Department of Fish and Wildlife (CDFW) specific use permit S-183470004-20339-002; Title: State Water Board Anadromous Monitoring. Sample sites were reached by boating and fish were collected by electro-shocking in accordance with the permit**.**

Depth-integrated water samples were collected in the thalweg at seven (7) stations. These stations are strategically located to correlate with the fish monitoring and Delta water import and export locations. Chemical analyte groups for the water collection include: total Hg, dissolved Hg, total MeHg and dissolved MeHg. The following ancillary water parameters were collected to aid in interpretation of the MeHg data: chlorophyll *a*, dissolved organic carbon (DOC), total suspended solids (TSS), and volatile suspended solids (VSS).

1.2 MPSL Sampling personnel

Wesley Heim	Project Director
William Jakl	Project Associate, Crew Lead
Gary Ichikawa	Project Assistant
April Sjoboen Guimarães	Research Technician, Crew Lead
Scot Lucas	Research Technician, Crew Lead
Stacey Swenson	Research Technician

1.3 Authorization to collect samples

All sampling personnel are MPSL-DFW staff (San Jose State University Research Foundation) contracted through the State of California Water Board SWAMP Program to conduct the sample collection activities listed herein.

1.4 Station selection

Based upon the recommendations of the Delta RMP Steering Committee and Technical Advisory Committee with representatives from the Central Valley Regional Water Quality Control Board, USEPA, California Department of Water Resources, the State and Federal Contractors Water Agency, and various discharger groups, stations were selected to represent key subareas of the Delta.

1.5 Summary of types of samples authorized to be collected

Up to sixteen (16) black bass individuals of the same species were collected using an electrofisher boat for each of the four (4) stations. The sixteen individuals spanned a broad size range to support assessment of the length:mercury relationship and ANCOVA analysis. Upon collection, each fish collected was tagged with a unique ID that corresponded to the latitude/longitude where it was collected. Physical parameters were collected for each individual fish, which included: weight, total length, fork length, and presence of any abnormalities. Fish samples were stored on ice until returned to the laboratory. Large fish were partially dissected in the field using the following protocol: fish were placed on a cutting board covered with a clean plastic bag where the head, tail, and guts were removed using a clean (laboratory detergent, DI) cleaver. The sex of the fish was noted. The fish were then wrapped in tin foil, with the dull side inward, and double-bagged in zipper-closure bags with other fish from the same location. All equipment was re-cleaned between stations.

At the laboratory, samples were stored in a freezer until they were processed for authorized dissection and analysis.

A depth-integrated water sample was collected at seven (7) stations following MPSL-DFW SOP MPSL-111 Revision 3 using a bucket sampler (SWAMP Clean Water Team SOP 2.1.1.4) modified to accommodate a trace metal cleaned 4L glass bottle (I-Chem Part # 145-4000) (MPSL-101). A new

trace metal cleaned 4L glass bottle, tubing (MPSL-101) and filter (Pall Laboratory Part # 12180) were used for each station. In the thalweg, the bucket sampler with the 4L was lowered to 0.5m from the bottom to a maximum depth of 15m and raised through the water column at a sufficient rate so that the bottle was not completely filled upon retrieval, achieving a depth-integrated sample. Total samples were aliquoted into analyte-specific bottles by pouring. The 4L bottle was agitated between samples to maintain consistency. Filtered samples were collected by attaching a 0.45µm ground water filter to trace metal clean tubing and a peristaltic pump, and aliquoted into the analyte-specific bottle. At each water station, four analytes were collected: total Hg, filtered Hg, total MeHg and filtered MeHg. Ancillary water samples were collected to help interpretation of mercury data at each station: chlorophyll *a*, DOC and TSS/VSS. DOC samples were acidified upon collection. All samples were stored on wet ice until returned to the laboratory.

In the field, Hg and MeHg samples collected August 8 and 9 were field acidified to 0.5% HCl. At the laboratory, Hg and MeHg samples collected August 10 were acidified (MPSL-119), and Hg samples collected August 8 and 9 were acidified to 0.5% BrCl. MeHg, DOC and TSS/VSS samples were stored in a refrigerator and chlorophyll *a* samples were stored in a freezer until they were analyzed.

Basic field parameters (temperature, pH, specific conductance, salinity, dissolved oxygen concentration, dissolved oxygen saturation, and turbidity) along with station information (station depth, location, weather, hydromodifications and habitat) were also noted. All collections and sample processing for water and fish followed the Delta RMP QAPP.

1.6 Results

A detailed fish catch, fish total length, descriptions and maps of sample collection for all stations can be found below. Also included are the dates of the depth-integrated water sampling events. Table 1 indicates on which page collection details for each station can be found.

Table 1. Delta RMP Collection Stations for Year 7 (FY22/23) Trend Work.

Sacramento River at Freeport (510ST1317)

Latitude: 38.45556
Longitude: -121.50189
Collection Method: Electroshock, depth-integrated grab
Date(s) of Fish Collection: 09/15/2022
Date(s) of Water Collection: 08/08/2022
Samplers: April Sjoboen Guimarães, Gary Ichikawa, William Jakl, Stacey Swenson

Largemouth Bass						
200	208	220	250	251	280	306
321	351	361	369	450	492	515

Comments: The sampling vessel was launched from Garcia Bend Park in Sacramento, CA. Fourteen (14) Largemouth bass were sampled along the transect adjacent to the target station. All water collection was done in close proximity of the target station where the channel discharge was greatest.

Back to Table 1

Cache Slough at Liberty Island Mouth (510ADVLIM)

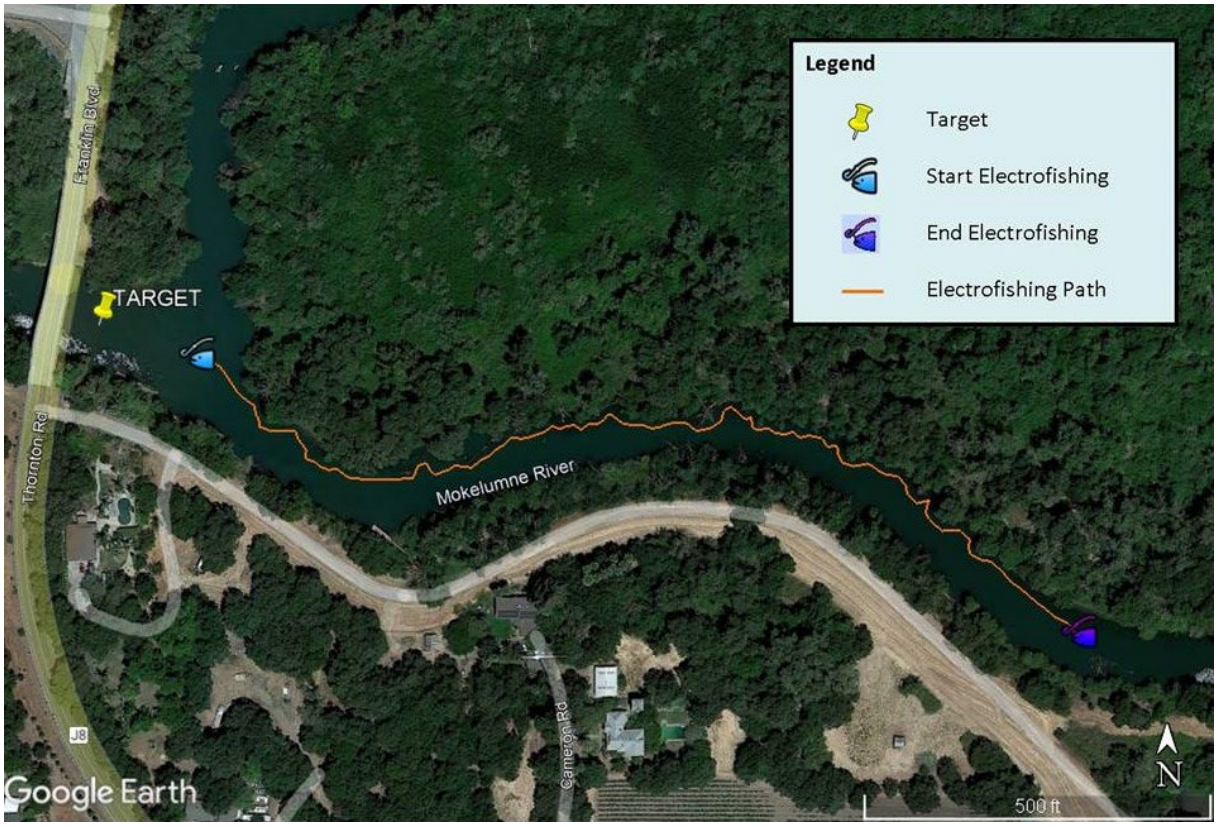
Latitude: 38.24213
Longitude: -121.68539
Collection Method: Depth-integrated grab
Date(s) of Water Collection: 08/09/2022
Samplers: April Sjoboen Guimarães, Gary Ichikawa

Comments: The sampling vessel was launched from Arrowhead Marina in Clarksburg, CA. There was no corresponding fish collection. All water collection was done in close proximity of the target station where the channel discharge was greatest.

Back to Table 1

Lower Mokelumne River 6 (544ADVLM6)

Latitude: 38.25542
Longitude: -121.44006
Collection Method: Electroshock, depth-integrated grab
Date(s) of Fish Collection: 09/27/2022
Date(s) of Water Collection: 08/08/2022
Samplers: April Sjoboen Guimarães, Gary Ichikawa, Scot Lucas, Wesley Heim



Largemouth Bass							
223	249	249	267	270	276	280	305
322	336	351	351	390	420	424	453

Comments: The sampling vessel was launched from New Hope Landing in Walnut Grove, CA. Sixteen (16) Largemouth bass were sampled along the transect adjacent to the target station. All water collection was done in close proximity of the target station where the channel discharge was greatest.

Back to Table 1

Little Potato Slough (544LILPSL)

Latitude: 38.09627
Longitude: -121.49602
Collection Method: Electroshock, depth-integrated grab
Date(s) of Fish Collection: 09/26/2022
Date(s) of Water Collection: 08/08/2022
Samplers: April Sjoboen Guimarães, Gary Ichikawa, Scot Lucas, Wesley Heim

Largemouth Bass, TL (mm)							
212	225	241	282	290	293	316	319
320	333	345	360	395	421	433	435

Comments: The sampling vessel was launched from Tower Park Marina in Lodi, CA. Sixteen (16) Largemouth bass were sampled along the transect adjacent to the target station. All water collection was done in close proximity of the target station where the channel discharge was greatest.

Back to Table 1

Sacramento River at Mallard Island (207SRD10A)

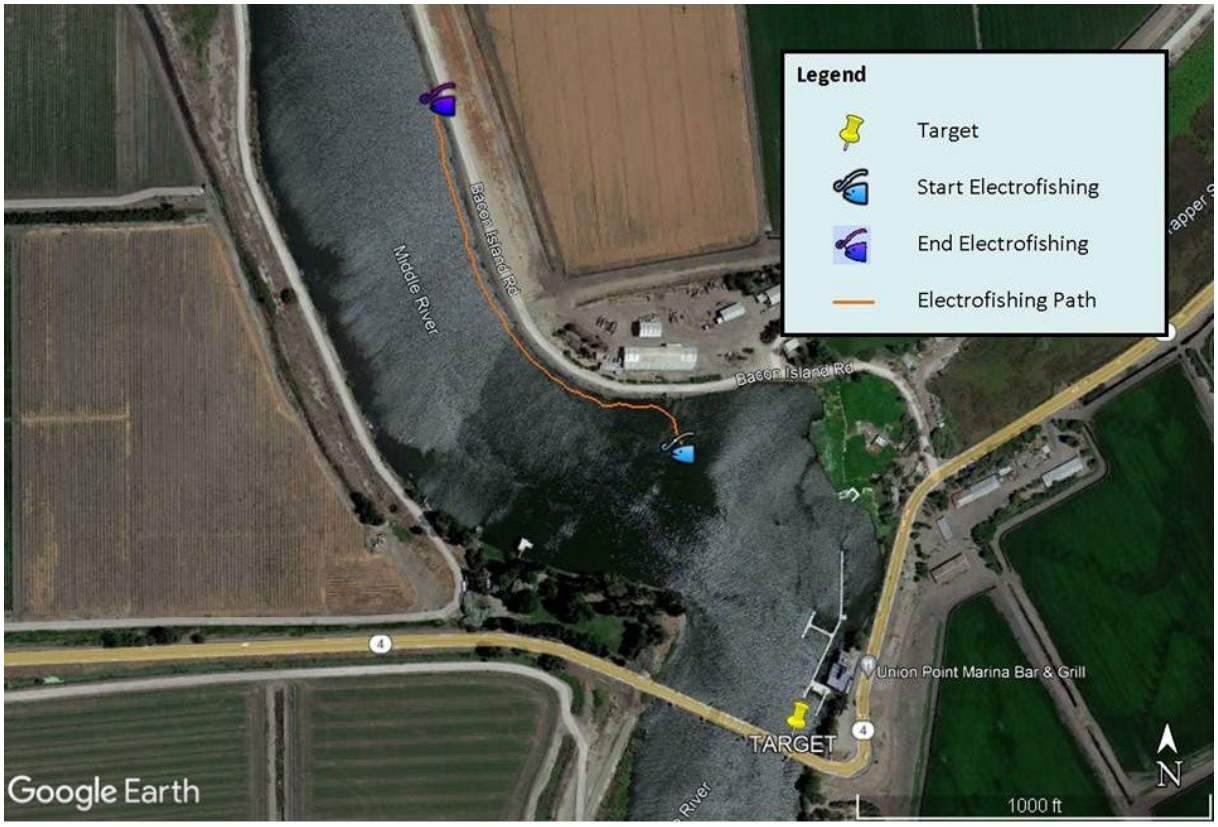
Latitude: 38.04288
Longitude: -121.92011
Collection Method: Depth-integrated grab
Date(s) of Water Collection: 08/10/2022
Samplers: April Sjoboen Guimarães, Gary Ichikawa

Comments: The sampling vessel was launched from Pittsburg Yacht Club in Pittsburg, CA. There was no corresponding fish collection. All water collection was done in close proximity of the target station where the channel discharge was greatest.

Back to Table 1

Middle River at Borden Hwy (544MDRBH4)

Latitude: 37.89083
Longitude: -121.48833
Collection Method: Electroshock, depth-integrated grab
Date(s) of Fish Collection: 09/28/2022
Date(s) of Water Collection: 08/09/2022
Samplers: April Sjoboen Guimarães, Gary Ichikawa, Scot Lucas, Wesley Heim



Largemouth Bass, TL (mm)							
200	215	236	267	284	285	308	311
333	350	385	390	398	410	422	443

Comments: The sampling vessel was launched from Discovery Bay Yacht Harbor in Discovery Bay, CA. Sixteen (16) Largemouth bass were sampled along the transect adjacent to the target station. All water collection was done in close proximity of the target station where the channel discharge was greatest.

Back to Table 1

San Joaquin River at Vernalis/Airport (541SJC501)

Latitude: 37.67556
Longitude: -121.26417
Collection Method: Depth-integrated grab
Date(s) of Water Collection: 08/10/2022
Samplers: April Sjoboen Guimarães, Gary Ichikawa

Comments: There was no corresponding fish collection. All water collection was done under the bridge as an integrated bucket grab in close proximity of the target station.

Back to Table 1

1.7 Discussion

A total of four (4) stations were successfully sampled for fish tissue using an electrofishing vessel.

Seven (7) stations were successfully sampled for depth-integrated water samples and basic water parameters.

Sampling Station 541SJC501 (San Joaquin River at Vernalis/Airport) for bass was part of the Year 7 FY22/23 Mercury Subregional Trends sampling plan. However, the site was not sampled for bass due to low water stage making it impossible to launch electrofishing boat and unsafe for field crew to use smaller Jon boat with portable electrofishing unit. Future fish sampling for this site should have an option for an alternate downstream site free of launching and operating concerns during low river stage conditions. The alternate site would need to be included in the CA Fish and Wildlife Scientific Collection permit and should be established soon as possible.

Sampling Station 510ADVLIM (Cache Slough at Liberty Island Mouth) for bass was not part of the Year 7 FY22/23 Mercury Subregional Trends sampling plan. Hook and line fishing at this site the previous year was not productive and for this reason a decision was made to drop the site for fish collection. Electrofishing at Cache Slough was restricted by CA Fish and Wildlife Scientific Collection Permit due to Delta Smelt concerns.

Appendix 2: Cruise Report

Appendix 2
Cruise Report for the
Delta Regional Monitoring Program (Delta RMP)
Mercury Restoration Monitoring for Black Bass
Year 7 FY22/23 Restoration Work

Sampling Dates: August 9, 2022 – September 27, 2022

Prepared by Marine Pollution Studies Laboratory Staff (MPSL-DFW)
at Moss Landing Marine Laboratories; San Jose State University

Introduction

This report describes the sampling activities in the Delta region of California as part of the Delta Regional Monitoring Program (DRMP). This sampling effort focuses on monitoring the impacts of wetland restoration projects on accumulation of mercury in black bass, specifically largemouth bass, in the Delta. Sampling activities included the collection of fish tissue (black bass) and basic field parameters. Samples were collected by Marine Pollution Studies Laboratory (MPSL) at Moss Landing Marine Laboratories (MLML).

1.0 Cruise Report

1.1 Objectives

The objectives were to collect fish samples from restoration or planned restoration wetlands in the Delta and analyze the samples for mercury concentration. The generated dataset will be used to support answers to DRMP management and assessment questions related to wetland restorations and mercury.

Fish were collected under California Department of Fish and Wildlife (CDFW) specific use permit S-183470004-20339-002; Title: State Water Board Anadromous Monitoring. Sample sites were reached by boating and fish were collected by hook and line or electro-shocking boats in accordance with the permit**.**

1.2 MPSL Sampling personnel

Wesley Heim	Project Director
Gary Ichikawa	Project Assistant, Crew Lead
Scot Lucas	Research Technician, Crew Lead
April Sjoboen Guimarães	Research Technician

1.3 Authorization to collect samples

All sampling personnel are MPSL-DFW staff (San Jose State University Research Foundation) contracted through the State of California Water Board SWAMP Program to conduct the sample collection activities listed herein.

1.4 Station selection

Based upon the recommendations of the Delta RMP Steering Committee and Technical Advisory Committee with representatives from the Central Valley Regional Water Quality Control Board, USEPA, California Department of Water Resources, the State and Federal Contractors Water Agency, and various discharger groups, stations were selected near restoration zones in the Delta.

1.5 Summary of types of samples authorized to be collected

Up to sixteen (16) black bass individuals of the same species were collected using an electrofisher boat or hook and line for each of the four (4) stations. The sixteen individuals spanned a broad size range to support assessment of the length:mercury relationship and ANCOVA analysis. Upon collection, each fish collected was tagged with a unique ID that corresponded to the latitude/longitude where it was collected. Physical parameters were collected for each individual fish, which included: weight, total length, fork length, and presence of any abnormalities. Fish samples were stored on ice until returned to the laboratory. Large fish were partially dissected in the field using the following protocol: fish were placed on a cutting board covered with a clean plastic bag where the head, tail, and guts were removed using a clean (laboratory detergent, DI) cleaver. The sex of the fish was noted. The fish were then wrapped in tin foil, with the dull side inward, and double-bagged in zipper-closure bags with other fish from the same location. All equipment was re-cleaned between stations.

At the laboratory, samples were stored in a freezer until they were processed for authorized dissection and analysis.

Basic station information (station depth, location, weather, hydromodifications and habitat) were noted. All collections and sample processing for fish followed the Delta RMP QAPP.

1.6 Results

A detailed fish catch, fish total length, descriptions and maps of sample collection for all stations can be found below. Table 1 indicates on which page collection details for each station can be found.

Table 1. Delta RMP Collection Sites for Year 7 (FY22/23) Restoration Work.

Grizzly Slough - Westervelt - Cougar (544GZSLWC)

Latitude: 38.25343
Longitude: -121.4069
Collection Method: Electroshock
Date(s) of Fish Collection: 09/27/2022
Samplers: Scot Lucas, Wesley Heim

Largemouth Bass, TL (mm)							
221	229	242	250	262	312	325	325
328	330	360	362	370	385	491	

Comments: The sampling vessel was launched from New Hope Landing in Walnut Grove, CA. Fifteen (15) Largemouth bass were sampled along the transect adjacent to the target station.

Back to Table 1

McCormack-Williamson Tract (544MCWILT)

Latitude: 38.2264
Longitude: -121.49144
Collection Method: Electroshock
Date(s) of Fish Collection: 09/27/2022
Samplers: Scot Lucas, Wesley Heim

Largemouth Bass, TL (mm)							
210	211	246	267	270	276	319	325
325	341	351	354	361	409	434	550

Comments: The sampling vessel was launched from New Hope Landing in Walnut Grove, CA. Sixteen (16) Largemouth bass were sampled along the transect adjacent to the target station.

Back to Table 1

Lindsey Slough (510ST0787)

Latitude: 38.25843
Longitude: -121.75801
Collection Method: Electroshock
Date(s) of Fish Collection: 09/26/2022
Samplers: Scot Lucas, Wesley Heim

Largemouth Bass, TL (mm)							
200	216	230	254	290	300	304	321
336	345	347	363	376	421	440	522

Comments: The sampling vessel was launched from Arrowhead Marina in Clarksburg, CA. Sixteen (16) Largemouth bass were sampled along the transect adjacent to the target station.

Back to Table 1

Yolo Flyway Farms (510TDNLHT)

Latitude: 38.33842
Longitude: -121.64953
Collection Method: Hook and line
Date(s) of Fish Collection: 08/09/2022
Samplers: Gary Ichikawa, April Sjoboen Guimarães

Largemouth Bass, TL (mm)
330

Comments: The sampling vessel was launched from Arrowhead Marina in Clarksburg, CA. One (1) Largemouth bass was sampled along the transect adjacent to the target station.

Back to Table 1

1.7 Discussion

A total of four (4) stations were sampled for fish tissue. Three (3) stations were sampled using a dedicated electrofishing vessel and one (1) using hook and line. Collection method restrictions of hook and line only, listed in the scientific collection permit for Yolo Flyway Farms, reduced fishing success per unit effort at this site.

Sampling Station 511XSSLIB (Lookout Slough) for bass was not part of the Year 7 FY22/23 Mercury Restoration sampling plan. Hook and line fishing at this site the previous year was not productive and for this reason a decision was made to drop the site. Electrofishing at Lookout Slough was restricted by CA Fish and Wildlife Scientific Collection Permit due to Delta Smelt concerns.