

QAPP Amendment Form

PROGRAM:	Delta Regional Monitoring Program (DRMP)
PROJECT:	Current Use Pesticide (CUP)
PREVIOUS QAPP VERSION:	Version 1.3
AMENDED QAPP VERSION:	Version 1.4
PREPARED BY:	MLJ Environmental
DATE SUBMITTED:	Originally submitted on May 3, 2023; resubmitted on September 28, 2023

Title: Amendment to update pesticide MDLs and RLs, analyte names, and SOP reference.

Section of QAPP affected:

This amendment applies to **Table 3** (Constituents and parameters.), **Table 6** (Measurement quality objectives for laboratory accuracy, precision, and completeness measurements), **Table 7** (Surrogate sample requirements for OCRL pesticide constituents analyzed in water), **Table 13** (Sampling Handling and Custody), **Table 14** (Field and laboratory analytical methods. All samples are surface water), **Table 17** (Testing, inspection, maintenance of field and analytical instruments), and **Table 18** (Calibration of field and analytical equipment).

Reason for Changes:

The analytical method reference for the OCRL pesticide suite has been updated to reflect the most recent Standard Operating Procedure (SOP) used by USGS. The method reference name has been updated from “OCRL-WATER-PEST_05” to “OCRL-WATER-PEST_06” to reflect the final version of the approved SOP in **Table 3**, **Table 7**, **Table 14**, **Table 17**, and **Table 18**. Forty pesticides analyzed with method OCRL-WATER-PEST_06 have been updated to reflect the current MDL and/or RL values. Changes to the MDLs, and RLs are reflected in **Table 14**; there are no changes to the list of analytes between OCRL-WATER-PEST_05 and OCRL-WATER-PEST_06”. **Table 14** has also been updated to include the Water Quality Metrics provided by the Central Valley Regional Water Quality Control Board (CVRWQCB) to the Delta Regional Monitoring Program (DRMP) on June 12, 2023.

Two analyte names have been updated to reflect current CEDEN analyte names. Diazinon oxon has been updated to diazoxon and PCNB has been updated to pentachloronitrobenzene. Both of the updated analyte names are reflected in **Table 14**.

Moving forward, USGS will include the CAS registration numbers for analytes in their preliminary data reports.

Table 6 has been updated to clarify the requirements for a TSS laboratory duplicate that are outlined Element 14 of the QAPP. The QC requirements in **Table 6** have been updated to be consistent with Table 16 (not included in this amendment) in the approved document.

Table 13 has been updated to include Total Suspended Solids (TSS) which was inadvertently omitted from the sample handling requirements. The information for TSS has been added to correct the oversight.

Detail of Changes:

Updated tables and text are included below. Yellow highlighted values indicate an update has been made. Strike out text indicates a deletion of a constituent or value.

Table 3. Constituents and parameters.

CONSTITUENT	PARAMETER TYPE	AGENCY	MATRIX	METHOD	FRACTIONS/ENDPOINTS	REPORTING UNITS
Dissolved Oxygen	Field Measure	CSWC	Water	--	--	mg/L
Oxygen Saturation	Field Measure	CSWC	Water	--	--	% saturation
pH	Field Measure	CSWC	Water	--	--	pH units
Salinity	Field Measure	CSWC	Water	--	--	ppt
Specific Conductivity	Field Measure	CSWC	Water	--	--	μS/cm
Temperature	Field Measure	CSWC	Water	--	--	°C
Temperature	Field Measure	CSWC	Air	--	--	°C
Turbidity	Field Measure	CSWC	Water	--	--	NTU
Dissolved Organic Carbon ¹	Ancillary Parameters	Babcock	Water	SM 5310 B	Dissolved	mg/L
Total Organic Carbon ¹	Ancillary Parameters	Babcock	Water	SM 5310 B	Total	mg/L
Nitrate + Nitrite as N ²	Ancillary Parameters	Babcock	Water	EPA 353.2	Total	mg/L
Total Kjeldahl Nitrogen (TKN) ²	Ancillary Parameters	Babcock	Water	EPA 351.2	Total	mg/L

CONSTITUENT	PARAMETER TYPE	AGENCY	MATRIX	METHOD	FRACTIONS/ENDPOINTS	REPORTING UNITS
Total Kjeldahl Nitrogen (TKN) ²	Ancillary Parameters	Babcock	Water	EPA 351.2	Dissolved	mg/L
Total Suspended Solids	Ancillary Parameters	OCRL	Water	EPA 160.2	Particulate	mg/L
Hardness ³	Ancillary Parameters	Babcock	Water	SM 2340 B	Dissolved	mg/L
Calcium ³	Ancillary Parameters	Babcock	Water	EPA 200.7	Dissolved	mg/L
Magnesium ³	Ancillary Parameters	Babcock	Water	EPA 200.7	Dissolved	mg/L
Copper	Trace Metals	Babcock	Water	EPA 200.8	Dissolved	µg/L
<i>Ceriodaphnia dubia</i>	Aquatic Toxicity	PER	Water	EPA 821/R-02-013	Reproduction, Survival	Num/Rep, %
<i>Chironomus dilutus</i>	Aquatic Toxicity	PER	Water	EPA 600/R-99-064M	Growth, Survival	mg/ind, %
<i>Hyalella azteca</i>	Aquatic Toxicity	PER	Water	EPA 821/R-02-012	Survival	%
<i>Pimephales promelas</i>	Aquatic Toxicity	PER	Water	EPA 821/R-02-013	Growth, Survival	mg/ind, %
<i>Selenastrum capricornutum</i>	Aquatic Toxicity	PER	Water	EPA 821/R-02-013	Growth	cells/mL
OCRL Pesticide Suite ⁴	Current Use Pesticides	OCRL	Water	OCRL-WATER-PEST_056	Dissolved, Particulate	ng/L

Table 6. Measurement quality objectives for laboratory accuracy, precision, and completeness measurements.

CONSTITUENT	MATRIX SPIKE FREQUENCY	LAB CONTROL SPIKE FREQUENCY ¹	MATRIX SPIKE ACCURACY/RECOVERY	LAB CONTROL SPIKE ACCURACY/RECOVERY	LAB DUPLICATE FREQUENCY ²	PRECISION ³	COMPLETE NESS
Ancillary Parameters							
Dissolved Organic Carbon	1 per batch	1 per batch	80-120%	80-120%	1 per batch	RPD ≤ 25	90%
Total Organic Carbon	1 per batch	1 per batch	80-120%	80-120%	1 per batch	RPD ≤ 25	90%
Nitrate + Nitrite as N	1 per batch	1 per batch	90-110%	90-110%	1 per batch	RPD ≤ 20	90%
Total Kjeldahl Nitrogen	1 per batch	1 per batch	80-120%	90-110%	1 per batch	RPD ≤ 25	90%
Total Suspended Solids	NA	NA	NA	NA	NA 1 per batch	NA RPD ≤ 25	90%
Hardness	NA	NA	NA	NA	NA	NA	90%
Calcium	1 per batch	1 per batch	70-130%	85-115%	1 per batch	RPD ≤ 20	90%
Magnesium	1 per batch	1 per batch	70-130%	85-115%	1 per batch	RPD ≤ 20	90%
Trace Metals							
Copper	1 per batch	1 per batch	75-125%	85-115%	1 per batch	RPD ≤ 25	90%
Aquatic Toxicity							
Aquatic Toxicity	NA	NA	NA	NA	NA	NA	90%
Pesticides							
OCRL Pesticide Suite	1 per 20 samples	1 per batch	70-130%	70-130%	1 per batch	RPD ≤ 25	90%

¹ A certified reference material (CRM) may be used in place of a laboratory control spike.

² A matrix spike duplicate or a laboratory control spike duplicate may function as the laboratory duplicate in any batch.

³ RPD is not calculated if the native concentration of either sample is <RL.

Table 7. Surrogate sample requirements for OCRL pesticide constituents analyzed in water.

SURROGATE CONSTITUENT	METHOD	INSTRUMENT	FRACTION	FREQUENCY	SURROGATE ACCURACY/RECOVERY
p,p'-DDE- ¹³ C ₁₂	OCRL-WATER-PEST_056	GC-MS/MS	Dissolved, Particulate	Every sample	70-130%
cis-Permethrin- ¹³ C ₆	OCRL-WATER-PEST_056	GC-MS/MS	Dissolved, Particulate	Every sample	70-130%
Trifluralin-d ₁₄	OCRL-WATER-PEST_056	GC-MS/MS	Dissolved, Particulate	Every sample	70-130%
Atrazine- ¹³ C ₃	OCRL-WATER-PEST_056	LC-MS/MS	Dissolved, Particulate	Every sample	70-130%
Fipronil- ¹³ C ₄ , ¹⁵ N ₂	OCRL-WATER-PEST_056	LC-MS/MS	Dissolved, Particulate	Every sample	70-130%
Imidacloprid-d ₄	OCRL-WATER-PEST_056	LC-MS/MS	Dissolved, Particulate	Every sample	70-130%
Metolachlor- ¹³ C ₆	OCRL-WATER-PEST_056	LC-MS/MS	Dissolved, Particulate	Every sample	70-130%
Tebuconazole- ¹³ C ₃	OCRL-WATER-PEST_056	LC-MS/MS	Dissolved, Particulate	Every sample	70-130%

Table 13. Sampling handling and custody.

ANALYTICAL PARAMETER	FRACTION	SAMPLE CONTAINER MATERIAL AND VOLUME	INITIAL PRESERVATION/HOLDING REQUIREMENTS	EXTRACTION/PREPARATION HOLDING TIME	ANALYSIS HOLDING TIME
Pesticides	Particulate, Dissolved	1 Liter Amber Glass	Store at ≤ 6°C; filter within 48 hours of collection	48 hours	30 days
Copper	Dissolved	500 mL Polyethylene	Store at ≤ 6°C; filter and preserve to pH <2 with HNO ₃ within 24 hours of collection	--	6 months
Hardness	Dissolved			--	6 months
Calcium	Dissolved			--	6 months
Magnesium	Dissolved			--	6 months
Dissolved Organic Carbon	Dissolved	3 X 40 mL VOA vial	Store at ≤ 6°C; filter and preserve to pH <2 with H ₂ SO ₄ within 24 hours of collection	--	28 days
Total Organic Carbon	Total	3 X 40 mL VOA vial	Store at ≤ 6°C; preserve to pH <2 with H ₂ SO ₄ within 24 hours of collection	--	28 days

ANALYTICAL PARAMETER	FRACTION	SAMPLE CONTAINER MATERIAL AND VOLUME	INITIAL PRESERVATION/HOLDING REQUIREMENTS	EXTRACTION/PREPARATION HOLDING TIME	ANALYSIS HOLDING TIME
Nitrate + Nitrite as N	Total	500 mL Polyethylene	Store at $\leq 6^{\circ}\text{C}$; preserve to pH <2 with H_2SO_4 within 24 hours of collection	--	28 days
TKN				--	28 days
TKN	Dissolved	500 mL Polyethylene	Store at $\leq 6^{\circ}\text{C}$; filter and preserve to pH <2 with H_2SO_4 within 24 hours of collection	--	28 days
Total Suspended Solids	Particulate	1 Liter Glass	Store at $\leq 6^{\circ}\text{C}$	--	7 days
Aquatic Toxicity	--	10 x 4 Liter Amber Glass	Store at $\leq 6^{\circ}\text{C}$	--	48 hours

Table 14. Field and laboratory analytical methods. All samples are surface water.

CONSTITUENT (CEDEN ANALYTE NAME)	AGENCY	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Pesticides									
Acetamiprid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.2	4.4	2,100	Appendix III - SOP - OCRL- WATER- PEST_ 0506
Acetamiprid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.1 1.0	2.1	2,100	
Acibenzolar-S-methyl	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	5.6	11.1	26,000	
Acibenzolar-S-methyl	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	5.3	10.7	26,000	
Allethrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	3.1	6.2	1,050	
Allethrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	2.5 1.9	5-3.8	1,050	
Atrazine	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.4	2.7	1,000	
Atrazine	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.9	1.7	1,000	
Azoxystrobin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.2	4.3	44,000	
Azoxystrobin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.8	1.6	44,000	
Benfluralin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	3.4	6.8	1,900	
Benfluralin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.8	3.6	1,900	
Bentazon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3	2.5	4,500,000	
Benzobicyclon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.8	3.5	1,475	
Benzobicyclon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.3	1,475	
Benzovindiflupyr	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.8	3.6	950	
Benzovindiflupyr	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.3	950	
Bifenthrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	0.8	1.5	0.05	
Bifenthrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	0.6	1.1	0.05	
Boscalid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.5	116,000	
Boscalid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1	2	116,000	
Broflanilide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.1	4.2	5,930	
Broflanilide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.9	3.9	5,930	
Bromuconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.8	20,000	
Bromuconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.5 1.0	3-1.9	20,000	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Butralin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.8	3.6	600,000	
Butralin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.5	600,000	
Carbaryl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.5	500	
Carbaryl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.8	1.7	500	
Carbendazim	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.5	4.9	830,000	
Carbendazim	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.5	830,000	
Carbofuran	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.5	3.1	750	
Carbofuran	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.6	1.3	750	
Chlorantraniliprole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.8	3.7	3,020	
Chlorantraniliprole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.5	3,020	
Chlorfenapyr	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	2.5	5	2,915	
Chlorfenapyr	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	2.5 1.8	5 3.6	2,915	
Chloro-N- (ethoxymethyl)-N-(2- ethyl-6- methylphenyl)acetamid e, 2-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.4	1,430	
Chloro-N- (ethoxymethyl)-N-(2- ethyl-6- methylphenyl)acetamid e, 2-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.6 1.5	3.1	1,430	
Chlorothalonil	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	9	18	600	
Chlorothalonil	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	5.7 1.9	11.5 3.9	600	
Chlorpyrifos	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.9	15	
Chlorpyrifos	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4	15	
Chlorpyrifos Oxon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2	3.9	--	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Chlorpyrifos Oxon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1	2	--	
Clomazone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.8	3.6	167,000	
Clomazone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4	167,000	
Clothianidin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.8	5.7	50	
Clothianidin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1	2	50	
Clothianidin- Desmethyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.8	5.6	--	
Clothianidin- Desmethyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.8	3.7	--	
Coumaphos	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.8	3.7	33.7	
Coumaphos	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2 1.1	2.3	33.7	
Cyantraniliprole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2	3.9	6,560	
Cyantraniliprole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.1	2.2	6,560	
Cyazofamid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.8	3.6	8,700	
Cyazofamid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.8	1.7	8,700	
Cyclaniliprole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.4	2.9	9,600	
Cyclaniliprole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.4	2.7	9,600	
Cycloate	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.4	30,000	
Cycloate	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.5 0.9	3 1.8	30,000	
Cyfluthrin, total	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1	2.1	0.12	
Cyfluthrin, total	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	0.8	1.7	0.12	
Cyhalofop-butyl	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	2.2	4.4	47,400	
Cyhalofop-butyl	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.5	3	47,400	
Cyhalothrin, Total	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1	1.9	6,200	
Cyhalothrin, Total	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	0.6	1.2	6,200	
Cymoxanil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.2	4.3	980	
Cymoxanil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	2.3	4.6	980	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Cypermethrin, Total	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.1	2.2	0.05	
Cypermethrin, Total	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	0.9	1.8	0.05	
Cyproconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.8	60,000	
Cyproconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.4	2.8	60,000	
Cyprodinil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.6	3.2	8,200	
Cyprodinil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	2.1	4.3	8,200	
Dacthal	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.2	2.5	11,000,000	
Dacthal	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.2	2.3	11,000,000	
DDD(p,p')	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.1	2.3	--	
DDD(p,p')	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.4 1.3	2.7	--	
DDE(p,p')	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.2	2.5	--	
DDE(p,p')	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.5	3	--	
DDT(p,p')	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.8	3.6	1	
DDT(p,p')	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.4 1.3	2.7	1	
Deltamethrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.4	2.8	0.026	
Deltamethrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.1 0.7	2.2 1.4	0.026	
Desethyl-Atrazine	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.3	4.5	--	
Desethyl-Atrazine	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.6	3.2	--	
Desisopropyl-Atrazine	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.8	5.6	--	
Desisopropyl-Atrazine	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.8	3.7	--	
Desnitro-imidacloprid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	5.4	10.8	--	
Desnitro-imidacloprid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	3.7	7.4	--	
Desthio- prothioconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.4	2.8	4,800	
Desthio- prothioconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.3	4,800	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Diazinon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.6	3.3	100	
Diazinon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.1	2.3	100	
Diazinon oxon Diazoxon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.1	4.1	--	
Diazinon oxon Diazoxon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.5	--	
Dichloroaniline, 3,5-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	3	5.9	--	
Dichloroaniline, 3,5-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	2.8	5.6	--	
Dichlorobenzeneamine, 3,4-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.2	2.5	-- 10,000	
Dichlorobenzeneamine, 3,4-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4 2.3	-- 10,000	
Dichlorophenyl Urea, 3,4-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.5	--	
Dichlorophenyl Urea, 3,4-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.1	2.3 2.1	--	
Dichlorophenyl-3- methyl Urea, 3,4-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.3	2.6	7,100	
Dichlorophenyl-3- methyl Urea, 3,4-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.5 0.7	3 1.5	7,100	
Dichlorvos	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	0.9	1.8	5.8	
Dichlorvos	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4	5.8	
Difenoconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.4	2.8	860	
Difenoconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3	2.7	860	
Dimethomorph	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.8	5.5	107,000	
Dimethomorph	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.4	107,000	
Dinotefuran	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	3.6	7.3	6,000,000	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Dinotefuran	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.8	3.6	6,000,000	
Dithiopyr	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.3	2.5	20,000 6,110	
Dithiopyr	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.1	2.3	20,000 6,110	
Diuron	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.8	130	
Diuron	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.4	130	
EPTC	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.4	2.8	40,000	
EPTC	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	2.5 1.3	5 2.6	40,000	
Esfenvalerate	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.2	2.4	0.0309	
Esfenvalerate	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	0.7	1.5	0.0309	
Ethaboxam	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.5	50,000	
Ethaboxam	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.5	3	50,000	
Ethalfuralin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	3.1	6.2	400	
Ethalfuralin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	2.7	5.4	400	
Ethofenprox	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.7	3.4	170	
Ethofenprox	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.2 1.9	2.3 3.8	170	
Etoxazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.7	130	
Etoxazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4	130	
Famoxadone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	9	18	85	
Famoxadone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	6.9	13.9	85	
Fenamidone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1	1.9	4,700	
Fenamidone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1 0.9	1.9 1.7	4,700	
Fenbuconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.5	2.9	27,000	
Fenbuconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.9	1.8	27,000	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Fenhexamid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	10.4	20.8	101,000	
Fenhexamid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	10.3 8.9	20.51 7.8	101,000	
Fenpropathrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.7	3.3	1.5	
Fenpropathrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.1 0.8	12.2 1.6	1.5	
Fenpyroximate	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.2	4.3	16 110	
Fenpyroximate	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.5 1.4	3-2.8	16 110	
Fipronil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.2	2.4	11	
Fipronil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.9	1.8	11	
Fipronil Desulfanyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1	2.1	530	
Fipronil Desulfanyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1	2 1.9	530	
Fipronil Desulfanyl Amide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.2	2.4	--	
Fipronil Desulfanyl Amide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2 1	2.4 2.1	--	
Fipronil Sulfide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1	1.9	830	
Fipronil Sulfide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.8 0.7	1.5	830	
Fipronil Sulfone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.2	2.4	220	
Fipronil Sulfone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.9	1.7	220	
Flonicamid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.5	5	200,000	
Flonicamid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2 0.8	2.4 1.5	200,000	
Florpyrauxifen-Benzyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.3	16.2	
Florpyrauxifen-Benzyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.5	3.1	16.2	
Fluazinam	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.4	2.8	690	
Fluazinam	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4	690	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Fludioxonil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.3	2.7	14,000	
Fludioxonil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	1.5 2.4	14,000	
Flufenacet	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.8	2,450	
Flufenacet	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.8	3.7	2,450	
Fluindapyr	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.6	3.2	31,000	
Fluindapyr	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.4	1.3	31,000	
Flumetralin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.8	10,000,000 770	
Flumetralin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.7	3.4	10,000,000 770	
Fluopicolide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.8	151,000	
Fluopicolide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.8	1.6	151,000	
Fluopyram	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.8	3.6	71,000	
Fluopyram	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.8	1.5	71,000	
Fluoxastrobin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.8	45,000	
Fluoxastrobin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.4	2.8	45,000	
Flupyradifurone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.3	460,000	
Flupyradifurone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.4	460,000	
Fluridone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.1	4.2	480,000	
Fluridone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.5	2.9	480,000	
Flutolanil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.7	220,000	
Flutolanil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3	2.6	220,000	
Flutriafol	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.8	300,000	
Flutriafol	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.4	2.7	300,000	
Fluxapyroxad	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.4	120,000	
Fluxapyroxad	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.4	120,000	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Halauxifen-methyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.1	2.2	135	
Halauxifen-methyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.4	135	
Hexazinone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.3	7,000	
Hexazinone	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.6	1.2	7,000	
Hydroxy-Boscalid, 5-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.3	--	
Hydroxy-Boscalid, 5-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.8	1.6	--	
Hydroxy-Imidacloprid, 5-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.2	4.4	--	
Hydroxy-Imidacloprid, 5-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	2	4.1	--	
Imazalil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.5	3	639,000	
Imidacloprid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1	2.1	10	
Imidacloprid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1	2	10	
Imidacloprid olefin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	5.5	11	--	
Imidacloprid olefin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	3.3	6.6	--	
Imidacloprid urea	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2	4	47,400,000	
Imidacloprid urea	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.4	2.8	47,400,000	
Indaziflam	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2	4	100,000	
Indaziflam	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.8 1.3	1.7 2.5	100,000	
Indoxacarb	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.5	75,000	
Indoxacarb	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.6	3.2	75,000	
Ipconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.1	4.1	180	
Ipconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4	180	
Iprodione	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.8	120,000	
Iprodione	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4	120,000	
Isofetamid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.5	3	86,000	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Isofetamid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.7	3.3	86,000	
Kresoxim-methyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.6	3.1	30,300	
Kresoxim-methyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.1	2.2	30,300	
Malaoxon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.8	--	
Malaoxon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.4	--	
Malathion	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2	4	49	
Malathion	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.1	2.2	49	
Mandestrobin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.3	5,400,000	
Mandestrobin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.6	3.2	5,400,000	
Mandipropamid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.3	4.6	220,000 76,000	
Mandipropamid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3	2.6	220,000 76,000	
Metalaxyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.2	4.4	1,200,000	
Metalaxyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.6	1.1	1,200,000	
Metalaxyl- hydroxymethyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2	4	--	
Metalaxyl- hydroxymethyl	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3	2.5	--	
Metconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.1	4.1	2,900	
Metconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1	2.1	2,900	
Methoprene	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	6.8	13.5	48,000	
Methoprene	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	5.8	11.6 11.5	48,000	
Methoxyfenozide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.5	3.1	3,100	
Methoxyfenozide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1	1.9	3,100	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Metolachlor	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.5	3	1,000 8,000	
Metolachlor	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.5	3.1	1,000 8,000	
Myclobutanil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.1	4.2	150,000 122,000	
Myclobutanil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.6	1.1	150,000 122,000	
Naled	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	11.8	23.7	10	
Naled	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	10.6	21.1	10	
Napropamide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.5	3	350,000	
Napropamide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1	2	350,000	
Nitrapyrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.6	3.3	103,000	
Nitrapyrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.1	2.1	103,000	
Novaluron	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.2	4.4	30	
Novaluron	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	2.2	4.5	30	
Oryzalin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.6	3.2	13,000	
Oryzalin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	2.1 1.9	4.2 3.8	13,000	
Oxadiazon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.9	880	
Oxadiazon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2 0.9	2.4 1.7	880	
Oxathiapiprolin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.5	3	140,000	
Oxathiapiprolin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.4	2.7	140,000	
Oxyfluorfen	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.3	2.5	290 330	
Oxyfluorfen	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.4	2.7	290 330	
Paclobutrazol	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.3	4.5	8,000	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENCY	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Paclobutrazol	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.1	2.2	8,000	
Pentachloronitrobenzene	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	3	6	6,000	
Pentachloronitrobenzene	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.4	2.9	6,000	
Pendimethalin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2	3.9	5,200	
Pendimethalin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.5 1.0	3 2.0	5,200	
Penoxsulam	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	2.2	4.4	3,000	
Pentachloroanisole	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	2.3	4.7	--	
Pentachloroanisole	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.2 1.1	2.3	--	
Penthiopyrad	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.9	100,000	
Penthiopyrad	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.1	2.2	100,000	
Permethrin, Total	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	0.7	1.5	3.3	
Permethrin, Total	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.1 0.7	2.2 1.4	3.3	
Phenothrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.3	2.6	470	
Phenothrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	2.1 1.1	4.2 2.2	470	
Phosmet	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.6	3.3	750	
Phosmet	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.4	750	
Picarbutrazox	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.6	3.2	76,000	
Picarbutrazox	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3	2.7	76,000	
Picoxystrobin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2	4.1	1,000	
Picoxystrobin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3	2.6	1,000	
Piperonyl Butoxide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.1	4.3	30,000 7,800	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Piperonyl Butoxide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1	2.1	30,000 7,800	
Prodiamine	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.1	4.1	1,500	
Prodiamine	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	2.2 1.1	4.4 2.2	1,500	
Prometon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.4	2.8	98,000	
Prometon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.5 1.4	2.9	98,000	
Prometryn	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.3	1,040	
Prometryn	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.4	1,040	
Propanil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.8	9,100 2,400	
Propanil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.5	9,100 2,400	
Propargite	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.4	7,000	
Propargite	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4	7,000	
Propiconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.3	2.6	15,000	
Propiconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.5	15,000	
Propyzamide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.7	77,000	
Propyzamide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1	2.1	77,000	
Pydiflumetofen	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2	4.1	540,000	
Pydiflumetofen	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1	2.1	540,000	
Pyraclostrobin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.8	3.6	1,500	
Pyraclostrobin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.5	2.9	1,500	
Pyridaben	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.3	2.6	44	
Pyridaben	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.4	2.7	44	
Pyrimethanil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.1	2.2	20,000	
Pyrimethanil	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3	2.6	20,000	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Pyriproxyfen	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.3	15	
Pyriproxyfen	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.1	2.3	15	
Quinoxifen	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.4	13,000	
Quinoxifen	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.1	2.3	13,000	
Sedaxane	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.5	3	650,000	
Sedaxane	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.9	1.8	650,000	
Simazine	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.4	2.7	4,000	
Simazine	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2 0.9	2.4 1.7	4,000	
Sulfoxaflor	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.4	4.8	300,000	
Sulfoxaflor	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4	300,000	
Tebuconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.3	4.6	11,000	
Tebuconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.6	1.3	11,000	
Tebuconazole-tert- Butylhydroxy	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.7	1.3	--	
Tebufenozide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.5	3	29,000	
Tebufenozide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4	29,000	
Tebupirimfos	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.3	4.6	11	
Tebupirimfos	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3	2.5	11	
Tebupirimfos oxon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.4	2.8	--	
Tebupirimfos oxon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.8	1.5	--	
Tefluthrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.2	2.4	4	
Tefluthrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	0.7	1.3	4	
Tetraconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.3	4.6	43,000	
Tetraconazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.6	1.2	43,000	
Tetramethrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.4	2.7	1,850	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Tetramethrin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.1 0.9	2.2 1.9	1,850	
T-Fluvalinate	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	1.1	2.1	64	
T-Fluvalinate	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	0.9 0.8	1.9 1.6	64	
Thiabendazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.2	4.5	42,000	
Thiabendazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.7	3.4	42,000	
Thiacloprid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.2	4.3	970	
Thiacloprid	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.5	970	
Thiamethoxam	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.5	740	
Thiamethoxam	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	0.6 0.5	1.1	740	
Thiamethoxam Degradate (CGA- 355190)	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.6	5.2	--	
Thiamethoxam Degradate (CGA- 355190)	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.4	2.9	--	
Thiamethoxam Degradate (NOA- 407475)	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	2.7	5.4	--	
Thiobencarb	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2	4	1,000	
Thiobencarb	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4	1,000	
Tolfenpyrad	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.5	81.5	
Tolfenpyrad	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.6	3.3	81.5	
Triadimefon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.7	3.4	52,000	
Triadimefon	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3 0.8	2.6 1.5	52,000	
Triadimenol	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.1	2.2	20,000	

CONSTITUENT (CEDEN ANALYTE NAME)	AGENC Y	METHOD	ANALYSIS	FRACTION	UNITS	MDL	RL	WATER QUALITY METRIC	SOP
Triadimenol	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2	2.4	20,000	
Triallate	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	4.8	9.6	14,000	
Triallate	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	4.7	9.4	14,000	
Tributyl Phosphorotrithioate, S,S,S-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.1	2.2	1,000	
Tributyl Phosphorotrithioate, S,S,S-	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.4	2.8	1,000	
Trifloxystrobin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2	4	2,760	
Trifloxystrobin	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3	2.6	2,760	
Triflumizole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.6	3.1	33,000	
Triflumizole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3	2.6 2.5	33,000	
Trifluralin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Particulate	ng/L	2.2	4.3	1,900	
Trifluralin	OCRL	OCRL-WATER-PEST_0506	GC-MS/MS	Dissolved	ng/L	1.3	2.6	1,900	
Triticonazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.7	1,000,000 12,000	
Triticonazole	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.3	2.6	1,000,000 12,000	
Valifenalate	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	2.4	4.8	500,000	
Valifenalate	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1	2	500,000	
Zoxamide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Particulate	ng/L	1.9	3.8	3,480	
Zoxamide	OCRL	OCRL-WATER-PEST_0506	LC-MS/MS	Dissolved	ng/L	1.2 0.8	2.4 1.7	3,480	

Table 17. Testing, inspection, maintenance of field and analytical instruments.

ANALYTE TYPE	EQUIPMENT / INSTRUMENT	MAINTENANCE, TESTING, OR INSPECTION ACTIVITY	FREQUENCY	RESPONSIBLE INDIVIDUAL	SOP
Field Measures	YSI Multiparameter Meter - DO probe	Visually inspect; clean probe according to manufacturer recommended procedures	Prior to sampling or when drifting/inaccurate readings or slow stabilization are observed	Field Lead	Appendix I
	YSI Multiparameter Meter - pH probe	Visually inspect; clean glass bulb according to manufacturer recommended procedures	Prior to sampling or when drifting/inaccurate readings or slow stabilization are observed	Field Lead	
	YSI Multiparameter Meter - Conductivity and Temperature probe	Visually inspect; clean probe according to manufacturer recommended procedures	Prior to sampling or when drifting/inaccurate readings or slow stabilization are observed	Field Lead	
	YSI Multiparameter Meter - Turbidity probe	Visually inspect; clean probe according to manufacturer recommended procedures	Prior to sampling or when drifting/inaccurate readings or slow stabilization are observed	Field Lead	

ANALYTE TYPE	EQUIPMENT / INSTRUMENT	MAINTENANCE, TESTING, OR INSPECTION ACTIVITY	FREQUENCY	RESPONSIBLE INDIVIDUAL	SOP
Pesticides	Agilent 1260 High Performance Liquid Chromatograph / 6430 tandem Mass Spectrometer	<p>Check mobile phase and needle wash solvent levels. Purge solvent lines. Rinse ESI spray chamber with isopropanol (IPA). Wipe interior surfaces of spray chamber with Kimwipe and IPA Wipe off spray shield with Kimwipe and IPA. Open ballast on rough pump if oil is present in oil mist filter. Equilibrate LC-MS/MS system for 15 min. Check solvent waste bottles.</p>	Prior to running samples	Analyst	Appendix III - OCRL-WATER-PEST_0506
	Trace 1310 Gas Chromatograph / TSQ 9000 tandem Mass Spectrometer	<p>Check for sufficient carrier gas. Perform inlet maintenance by changing liner, septum, ferrule, or injector as needed. Fill wash solvent vials for autosampler; empty wash solvent waste vial. Check GC autosampler syringe for clogged needle or seized plunger. Change if necessary</p>	Prior to running samples	Analyst	Appendix III - OCRL-WATER-PEST_0506

ANALYTE TYPE	EQUIPMENT / INSTRUMENT	MAINTENANCE, TESTING, OR INSPECTION ACTIVITY	FREQUENCY	RESPONSIBLE INDIVIDUAL	SOP
Organic Carbon	Shimadzu TOC-VCSH Organic Carbon Analyzer	Inspections: check dilution water levels, drain vessel and humidifier water.	Inspections daily. Maintenance according to manufacturer specifications.	Lab QA Officer	Appendix III - Organic Carbon by SM 5310 B
Nitrogen Measures by Colorimetry	Block Digester- Environmental Express Hot block SC100	Visually inspect and wipe down	As needed	Lab QA Officer	Appendix III - TKN by EPA 351.2
	SEAL Discrete Automated Colorimetry Analyzer	Visually inspect and wipe down.	Inspections daily. Maintenance according to manufacturer specifications.	Lab QA Officer	Appendix III - TKN by EPA 351.2
Trace Metals	Perkin Elmer ELAN 9000, Perkin Elmer NexION 2000, and ThermoFisher Scientific iCAP Q ICP-MS	Visually inspect and replace specific parts.	According to manufacturer specifications.	Lab QA Officer	Appendix III - Trace Elements by EPA 200.8
Cations	PerkinElmer Optima 5300 DV inductively coupled plasma optical emission spectrometer and Avio 500 ICP Optical Emission Spectrometer.	Inspect and clean sample introduction system(nebulizer, torch, injector tube, uptake tubing).	Daily or as needed.	Lab QA Officer	Appendix III - Cations by EPA 200.7

Table 18. Calibration of field and analytical equipment.

ANALYTE TYPE	EQUIPMENT / INSTRUMENT	CALIBRATION DESCRIPTION AND CRITERIA	FREQUENCY OF CALIBRATION	RESPONSIBLE INDIVIDUAL	SOP
Field Measures	YSI Multiparameter Meter - DO probe	Calibration in oxygen saturated water	Daily within 24 hours prior to sampling	Field Lead	Appendix I
	YSI Multiparameter Meter - pH probe	Calibration at 4,7, 10; post-sampling check at 7	Daily within 24 hours prior to/following sampling	Field Lead	
	YSI Multiparameter Meter - Conductivity and Temperature probe	Conductivity calibration at a value closest to the native water; temperature calibration at 6, 20, and 40 °C	Conductivity daily within 24 hours prior to sampling; temperature annually.	Field Lead	
	YSI Multiparameter Meter - Turbidity probe	Calibration at 0, 20, 200, 800 NTUs	Quarterly	Field Lead	
Pesticides	Agilent 1260 High Performance Liquid Chromatograph / 6430 tandem Mass Spectrometer	Regression analysis $R^2 \geq 0.99$ using a 9-point calibration curve (of which at least 5 points must be used) ranging from 0.0025 to 1 ng/ μ L	With each batch. Additionally, calibrations are completed following major disruptions or when routine calibration check (CCVs) fall out of specific control limits.	Analyst	Appendix III - OCRL-WATER-PEST_0506
	Trace 1310 Gas Chromatograph / TSQ 9000 tandem Mass Spectrometer	Regression analysis $R^2 \geq 0.99$ using a 9-point calibration curve (of which at least 5 points must be used) ranging from 0.0025 to 1 ng/ μ L	With each batch. Additionally, calibrations are completed following major disruptions or when routine calibration check (CCVs) fall out of specific control limits.	Analyst	
Organic Carbon	Shimadzu TOC-VCSH Organic Carbon Analyzer	9-point curve, $r^2 \geq 0.99$	When CCVs out of acceptance criteria. ICV following calibration, CCV and CCB every 15 samples and at the end of the run.	Lab QA Officer	Appendix III - Organic Carbon by SM 5310 B

ANALYTE TYPE	EQUIPMENT / INSTRUMENT	CALIBRATION DESCRIPTION AND CRITERIA	FREQUENCY OF CALIBRATION	RESPONSIBLE INDIVIDUAL	SOP
Nitrogen Measures by Colorimetry	Block Digester- Environmental Express Hot block SC100	Not Applicable	Not Applicable	Lab QA Officer	Appendix III - TKN by EPA 351.2
	SEAL Discrete Automated Colorimetry Analyzer	6-point curve, $r^2 \geq 0.995$	Every run or when CCVs out of acceptance criteria. ICV following calibration, CCV and CCB every 10 samples and at the end of the run.	Lab QA Officer	Appendix III - TKN by EPA 351.2
Trace Metals	Perkin Elmer ELAN 9000, Perkin Elmer NexION 2000, and ThermoFisher Scientific iCAP Q ICP-MS	High end linear calibration standards.	At the beginning of each run or when continuing calibration check exceed 10% of calibration.	Lab QA Officer	Appendix III - Trace Elements by EPA 200.8
Cations	PerkinElmer Optima 5300 DV inductively coupled plasma optical emission spectrometer and Avio 500 ICP Optical Emission Spectrometer.	Calibration against specific wavelengths or as corrected for spectral interferences.	Daily or when instrument performance checks exceed 10% of calibration.	Lab QA Officer	Appendix III - Cations by EPA 200.7

Approval:

The amendment(s) detailed within this document has been conditionally approved by the Water Board signatories. By signing this amendment, all parties listed below acknowledge and accept these changes as well as the conditions to this approval listed below. A copy of this document shall be distributed to all parties within the QAPP distribution list and shall be included and/or attached to all distributed copies of the original QAPP.

Requirements for Final Approval

At the time of the review of this QAPP, the United States Geological Survey Organic Chemistry Research Laboratory (USGS-OCRL) conducting pesticide analyses for the Current Use Pesticide project, was in the process of completing the annual method performance studies for the analytical methods referenced in this document. Detailed method performance studies are needed to ensure that methods meet the data quality needs of the program and the quality assurance guidance and requirements from the Water Boards and U.S. EPA as directed by the CVRWQCB in Board Resolution R5-2021-0054. In an effort to prevent the delayed onset of monitoring, the CVRWQCB and SWRCB staff are providing a time-limited conditional approval of this QAPP Amendment.

The time-limited conditional approval is predicated upon Delta RMP meeting the following conditions:

1. The deliverables for the USGS Method Detection Limit (MDL) determination and Reporting Limit (RL) verification studies are provided to the State Water Resources Control Board Quality Assurance Officer (SWRCB QAO) for review no later than 17 November 2023 per the schedule provided in Table 1 below.
2. A revised CUP QAPP Amendment is developed that includes any updated values from the USGS MDL determination and RL verification studies. The revised CUP QAPP Amendment is to be provided to the SWRCB QAO and the CVWRQCB QAR no later than 8 December 2023 for review and approval.
3. All signatories review and approve the revised CUP QAPP Amendment 31 December 2023.

Table A. Schedule of Deliverables for USGS Verification Data.

DELIVERABLE	DUE DATE
USGS Method Detection Limit (MDL) determination and Reporting Limit (RL) verification studies completed and submitted to the SWRCB QAO.	17 November 2023
A revised CUP QAPP Amendment is developed that includes any updated values from the USGS MDL determination and RL verification studies and submitted to the SWRCB QAO and the CVWRQCB QAR.	8 December 2023
All signatories review, approve, and sign the revised CUP QAPP Amendment.	31 December 2023

DRMP Program Manager:

Melissa Turner

Date:

DRMP Quality Assurance Officer:

Will Hagan

Date:

Project Manager, USGS:

Jim Orlando

Date:

Quality Assurance Representative, CVRWQCB:

Selina Cole

Date:

Quality Assurance Officer, SWRCB:

Andrew Hamilton

Date: