Department of Pesticide Regulation
Environmental Monitoring Branch
1001 I Street
Sacramento, CA 95812

Study 310: Surface Water Monitoring for Pesticides in Agricultural Areas of Northern California, 2026-2027

Mason Zoerner
June 2026

1. INTRODUCTION

The California Department of Pesticide Regulation (DPR) has conducted annual monitoring of agricultural pesticides in surface waters throughout California since 2008 (Deng, 2017; Main, 2019; Wagner, 2020; Zoerner, 2021). The Surface Water Protection Program (SWPP) established the long-term monitoring of agricultural regions of the California Central Coast and Imperial Valley in 2008 (Main, 2019). Agricultural monitoring expanded in 2017 to include surface waters in the Sacramento Valley (Wagner, 2017) and in 2019 to include the San Joaquin Valley (Wagner, 2019). Study 310 is a continuation of those efforts and contributes to long-term monitoring efforts as a part of the continuous process of evaluating pesticides in agricultural surface waters of the Central Valley.

The San Joaquin Valley (SJV) is the most agriculturally productive region in California. Crops grown in the region include almonds, pistachios, grapes, oranges, tomatoes, corn, cotton, and a multitude of other fruits and vegetables (CDFA, 2024). In 2023, of the ten counties that contributed most to California's agricultural economy, six were within the SJV (CDFA, 2024). As a region of intensive agricultural production, pesticide use is high compared to other parts of the state. In 2023, over 125 million pounds of agricultural pesticides were applied in the SJV (CDPR, 2024). The region is relatively dry, and therefore intensive irrigation is required to enable its high crop output. Between 2001 and 2020, approximately 7.5 to 9 million acre-feet of water has been applied to agriculture in the San Joaquin River Basin, annually (CDWR, 2023). With large volumes of pesticides and water applied, there is greater potential for pesticide transport into surface waters via agricultural runoff, making the SJV region a priority for surface water monitoring.

The Sacramento Valley (SV) is another major agricultural region for California. Like the SJV, it is also a dry region accompanied by high pesticide use and heavy irrigation. In 2023, over 41 million pounds of pesticides were applied for agricultural use in the Sacramento River basin (CDPR, 2024). Additionally, between 2001 and 2020, approximately 7.5 to 10 million acre-feet of water has been applied to agriculture in the Sacramento River Basin, annually (CDWR, 2023). The region's main crop output includes rice, nuts, grapes, peaches, plums, and tomatoes (CDFA, 2024). Rice production in the SV accounts for 97% of the 5 billion pounds yielded in California, annually (Wagner et al., 2019).

Rice cultivation is a complex process which requires flood irrigation. The most common water management system in rice production is the flow-through system, where water is continuously applied through a series of basins. The movement of water between basins is regulated by weirs or rice boxes, and excess water is allowed to spill over into a drain. Consequently, tailwater containing pesticides applied to rice fields may potentially discharge into adjacent waterways (UCANR, 2023). Seepage and drift also have the potential to influence transport of some rice pesticides (Firoved et al., 2019). In contrast, other top commodities in the region, such as nuts and grapes, often utilize drip irrigation to apply water directly to roots, which leads to significant reduction in runoff potential (Hanak *et al*., 2019; Hedley, 2014). Thus, monitoring for rice applied pesticides has been a focus for DPR since the inception of agricultural surface water monitoring in the SV (Wagner, 2017). In addition to irrigation, stormwater runoff is a source of pesticide transport from agricultural fields into adjacent waterways (Chen et al., 2019). Study 310 will continue monitoring storm events in the Sacramento and San Joaquin valleys to characterize pesticide concentrations during storms.

The SWPP will continue to monitor for pesticides in surface waters in the Sacramento and San Joaquin valleys in the 2026 and 2027 monitoring years. The monitoring schedule and site locations were established in previous years of the study (Zoerner, 2021; Zoerner, 2024). Sample collection from long-term sites and adherence to the established annual monitoring schedule allows for collection of data that is spatially and temporally consistent over the years. Long-term monitoring data collected in this study will be used to assess potential impacts to aquatic environments and analyze patterns or trends in overall Central Valley pesticide detections.

2. OBJECTIVES

The objectives of the study are to:

- Determine the presence and concentrations of selected pesticides in surface waters and sediments collected from selected sites;
- Assess potential impacts to aquatic organisms by comparing measured pesticide concentrations to relevant aquatic life benchmarks;
- Determine the toxicity of a subset of collected water samples using toxicity tests conducted on representative test organisms, *Hyalella azteca* and *Chironomus dilutus*;
- Evaluate spatial correlations between observed pesticide concentrations/detection frequencies and reported pesticide use and land use data;
- Evaluate the differences in observed pesticide concentrations and toxicity test results between storm and nonstorm events;
- Analyze patterns and trends in pesticide concentrations;
- Publish annual monitoring results in a summary report to be posted on the Reports Directory of DPR's external website, as well as raw data sets to the Surface Water Monitoring Database (SURF).

3. PERSONNEL

The study will be conducted by Surface Water Protection Program staff under the general direction of Anson Main, Ph.D., Environmental Program Manager. Key personnel are listed below:

- Project Leader: Mason Zoerner
- Field Coordinator: KayLynn Newhart
- Reviewing Scientist: Robert Budd, Ph.D.
- Statistician: Xuyang Zhang, Ph.D.
- Laboratory Liaison: Joshua Alvarado
- Analytical Chemistry: Center for Analytical Chemistry, California Department of Food and Agriculture (CDFA)

Please direct questions regarding this study to Mason Zoerner, Environmental Scientist, at 916-324-4087 or Mason.Zoerner@cdpr.ca.gov.

4. STUDY PLAN

4.1. Selection of monitoring sites

SWPP staff use the Surface Water Monitoring Prioritization (SWMP) model to identify priority watersheds for monitoring. Using Pesticide Use Reports (PUR) and toxicity data, the model first identifies pesticides of interest (POI) within a user-defined 4-digit hydrologic unit (HU4) (*e.g*., the San Joaquin River Basin). Using spatially continuous mapping, the model then ranks 8-digit and 12-digit hydrologic units (HU8 and HU12) according to the use and toxicity of selected POIs (Luo *et al*., 2017). SWMP was used to identify priority watersheds for monitoring in the Sacramento River Basin, the San Joaquin River Basin, and the Tulare Basin, both at the HU8 and HU12 levels. All Study 310 monitoring sites are contained in the priority HU8 watersheds identified by SWMP. Furthermore, the sampling site, IC_INC, is located at the main stem of Ingram Creek, which was ranked as the highest priority HU12 for monitoring within the Lower San Joaquin River Basin. The exploratory sites, SJ_Duck and SJ_LoneTree, were introduced based on the results of the SWMP model. These sites are located at the main stems of Duck Creek and Lone Tree Creek, respectively, which were identified as watersheds of great priority for monitoring in the San Joaquin Valley over multiple years. The results of the model-based watershed prioritization efforts are included in Tables 3. Maps displaying priority watersheds and their intersections with sampling locations in the Sacramento and San Joaquin valleys are included in Figures 3 and 4, respectively.

Monitoring will occur at three sites in the SJV and at six sites in the SV (Tables 1 and 2, figures 1 and 2). Study sites were defined in the previous years of the study (Wagner, 2017; Zoerner, 2023). Site selection incorporated multiple waterbody types, including main stems, tributary streams, and agricultural ditches. The sampling site, Hilmar Drain at Mitchell Rd, introduced during the 2024 monitoring period (Zoerner, 2024), will continue to be monitored. Three additional exploratory sites, which may be incorporated as long-term monitoring locations, will also be monitored in the 2026 and 2027 monitoring years. These exploratory sites include Duck Creek at Jack Tone Rd, Lone Tree Creek at Jack Tone Rd, and the San Joaquin River at Laird Regional Park. The selection of all monitoring sites considered hydrography, seasonal flows, and crop irrigation type in the selection of sites (Wagner, 2020). Site visits were conducted prior to sampling to verify site suitability and accessibility. Sampling sites are listed in Tables 1 and 2. Site maps are included in Figures 1 and 2.

4.2. Selection of pesticides

Pesticides to be screened in water were also determined using the SWMP model. This model uses toxicity and reported pesticide use to identify active ingredients (AIs) of highest monitoring priority in a given watershed (Luo and Deng, 2015). Monitoring priority was ranked based on the total amount of pesticide use of all the monitored watersheds combined, closely following methods used by Wagner (2019). The model identified 30 high-priority AIs to be included in monitoring. Model outputs are listed in Table 4.

The AIs to be screened for the selected watersheds were designated based on the following criteria:

1. Pesticides with a use score ≥ 2 and a final score ≥ 9 are of high priority and were considered for monitoring. Those with a final score < 9 are considered low priority due to low use score (use score < 2) or low toxicity (toxicity score < 3).
2. Low-priority pesticides are not included in the final monitoring list (Table 4) but may be monitored as part of a larger analytical screen.
3. Historical monitoring data or availability of current analytical methods were additional factors to help arrive at a final list for monitoring.

4.3. Sampling schedule

Sampling will occur four times in the SJV between June and September, and five times in the SV between May and September. The monitoring period is intended to coincide with the peak pesticide application and irrigation period. At least one additional sampling event in each region will occur during a storm large enough to generate sufficient runoff after the irrigation sampling has concluded. Storm samples are intended to check for pesticide concentrations associated with storm runoff. The sampling schedule for both study areas is included in Tables 11 and 12.

4.4. Sample collection

Surface water samples for chemical analysis will be collected during each sampling event. Samples will be collected using 1 L amber glass bottles, by hand or by sampling pole. Bottles will be submerged into waterways at a depth of approximately 10 cm below the surface and sealed once full (Bennett, 1997; Deng and Ensminger, 2021). Glyphosate samples will be collected using 100 ml high-density polyethylene (HDPE) bottles. Field matrix spike and field matrix spike duplicates will also be collected during each sampling event for quality assurance.

Sediment samples will be collected in September, at three sites in the SJV and at two sites in the SV, where sediments are accessible. Composite sediment samples will be collected from waterway banks using a stainless-steel scoop, sieved with a 2 mm sieve, and sealed in half-pint glass Mason jars (Deng and Ensminger, 2021; Mamola, 2005). All sample containers will be rinsed prior to placement in an ice chest, maintaining samples in a 4°C environment for the duration of transport (Deng and Ensminger, 2021; Jones, 1999).

4.5. Field measurements

Field measurements will be taken concurrently with sample collection at each site. Staff will use a multiparameter sonde, the In-Situ AquaTroll 400 (In-Situ Incorporated, Fort Collins, CO, USA) to measure temperature, specific conductivity, total dissolved solids, salinity, dissolved oxygen, and pH. All field measurements will follow the standard operating procedures for the multiparameter sonde (Mecredy, 2024).

4.6. Modifications from Previous Monitoring Year

The 2024 protocol is a continuation of DPR's long-term efforts to monitor agricultural surface waters in the California Central Valley (Wagner, 2017; Wagner, 2019; Zoerner, 2022), with a few notable changes. The toxicity sampling events will include sets of duplicate samples to be filtered using glass microfiber filters prior to testing. An additional filtered sample for these events will also be submitted to the CDFA laboratory for pyrethroid analysis. Chemical and toxicological analyses will be conducted concurrently for the filtered and unfiltered samples, allowing for the evaluation of the differences in pyrethroid concentrations and toxicity to *Hyallela azteca*. The updated sampling plan is included in Tables 11 and 12. Additionally, three new exploratory sites will be incorporated into the 2026-2027 monitoring years: SJ_Duck, SJ_Laird, and SJ_LoneTree. A description of these sites is included in Table 2.

5. LABORATORY ANALYSES

5.1. Chemical Analysis

Chemical analysis for this study will be conducted by the Center for Analytical Chemistry at the CDFA. The laboratory will use multi-residue liquid chromatography tandem mass spectrometry (LC-MS/MS) to screen pesticide AIs in collected water samples. Additional screens will be used to measure concentrations of pyrethroids, dinitroanilines, and glyphosate. Sediment samples will be screened for pyrethroids. Pesticides to be analyzed, as well as their respective reporting limits and method detection limits, are listed in Tables 5 through 10. Extractions will include laboratory blanks and matrix spikes, as per DPR QA/QC guidelines (Peoples, 2019; Segawa, 1995).

5.2. Organic Carbon and Suspended Solid Analyses

The SWPP staff will analyze total organic carbon (TOC) of water and sediment samples, as well as dissolved organic carbon (DOC) of water samples, using a Vario TOC Cube TOC/TNb Analyzer (Elementar Analysensysteme GmbH, Langenselbold, Germany). TOC and DOC analyses will follow methods outlined by Zoerner, 2025. Staff will also measure total suspended solids (TSS) of water samples using a vacuum pump and glass microfiber filters (Ensminger, 2016). Laboratory blanks and calibration standards will be run prior to each sample set to ensure high data quality.

5.3. Toxicity.

Samples for toxicity testing will be collected in each region in June and September, as well as during the first storm sampling event. Toxicity samples will be collected for each site during these events. More toxicity events may be incorporated into the study, depending on funding availability. The samples will then be transported to the University of California, Davis (UCD), Aquatic Health Program Laboratory, where UCD laboratory will test for mortality of *Hyalella azteca* and/or *Chironomus dilutus* on a 96-hour acute exposure basis. The toxicity sampling events will also include sets of duplicate samples to be filtered using glass microfiber filters prior to testing. The differences between the filtered and nonfiltered toxicity samples will be analyzed to evaluate the effect of the particle bound fraction of pyrethroids on the toxic response of *Hyallela azteca*. The toxicity sampling schedule is included in Tables 11 and 12.

6. DATA ANALYSIS

Data from this study will be entered into a Microsoft Office Access database which contains field measurements and laboratory results for all DPR agricultural surface water monitoring studies. Data collected in the study will also be uploaded to the publicly-available SURF. Spatial analysis may be conducted using ArcGIS and R to identify correlations between reported pesticide use and observed detections. In addition to toxicity tests with subsets of samples, observed pesticide concentrations in all collected water samples will be compared to USEPA aquatic life benchmarks (USEPA, 2025) to determine potential toxicity. Additionally, concentrations of some rice pesticides will be compared to water quality performance goals established by the Central Valley Regional Water Quality Control Board (CCVRWQCB, 2010).

7. TIMETABLE

Field Sampling: May 2026 – December 2027
Chemical Analysis: May 2026 – February 2028
Summary Report: May 2027 and May 2028
SURF Data Upload: May 2027 and May 2028

8. REFERENCES

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9. TABLES

Table 1. Description of Study 310 Sacramento Valley sampling sites for the 2026-2027 monitoring years.

Site ID	Site Location	County	HU-12 Watershed	Latitude	Longitude	Waterbody Type
BS1	Butte Slough at Pass Rd	Sutter	Gilsizer Slough-Snake River	39.1873	-121.908955	Tributary Stream
CD_CBD	Colusa Basin Drain at County Line Rd	Yolo	Clarks Ditch-Colusa Basin Drain	38.924458	-121.913986	Main Stem
SV_ColusaDrain	Colusa Drain at Norman Rd	Colusa	Colusa Drain	39.406297	-122.055885	Main Stem
LA12	Lateral A12C-0379 at Biggs-Princeton Rd	Butte	Drumheller Slough-Butte Creek	39.421061	-121.772073	Ag Ditch
LLC_SSC	Stone Corral Creek near Maxwell Rd	Colusa	Stone Corral Creek	39.2751	-122.1043	Main Stem
WC_Willow	Willow Creek at Norman Rd	Colusa	Willow Creek	39.406432	-122.080504	Main Stem

Table 2. Description of Study 310 San Joaquin Valley sampling sites for the 2026-2027 monitoring years.

Site ID	**Site Location**	**County**	**HU-12 Watershed**	**Latitude**	**Longitude**	**Waterbody Type**
IC_INC	Ingram Creek at River Road	Stanislaus	Ingram Creek	37.60022	-121.22506	Main Stem
SJ_Duck	Duck Creek at Jack Tone Rd	San Joaquin	Lower Duck Creek	37.955117	-121.148352	Main Stem
SJ_Hilmar	Hilmar Drain at Central Ave	Merced	Town of Hilmar-San Joaquin River	37.390450	-120.941090	Ag Ditch
SJ_Laird	San Joaquin River at Laird Regional Park	Stanislaus	Kern Canyon-San Joaquin River	37.561542	-121.152133	Main Stem
SJ_LoneTree	Lone Tree Creek at Jack Tone Rd	San Joaquin	Middle Lone Tree Creek	37.837563	-121.144794	Main Stem
SS_DMC	Deadman Creek at Gurr Road	Merced	South Slough-Deadman Creek	37.19514	-120.56147	Tributary Stream

Table 3. Selected priority watersheds for the 2026-2027 monitoring years, identified by the SWMP. The modeling results were generated using PUR data from 2022 to 2024.

Region	HU8 Name	HUC8	DPR Monitoring Sites
Sacramento River Valley	Sacramento-Stone Corral	18020104	CD_Bounde, CD_CBD, LLC_SCC, WC_Willow
Sacramento River Valley	Butte Creek	18020158	LA12
Sacramento River Valley	Honcut Headwaters-Lower Feather	18020159	BS1
Sacramento River Valley	Lower Sacramento	18020163	
Sacramento River Valley	Upper Coon-Upper Auburn	18020161	
San Joaquin River Valley	Rock Creek-French Camp Slough	18040051	SJ_Duck, SJ_LoneTree
San Joaquin River Valley	Fresno River	18040007	
San Joaquin River Valley	Middle San Joaquin River-Lower Chowchilla	18040001	SS_DMC
San Joaquin River Valley	San Joaquin Delta	18040003	
San Joaquin River Valley	Lower San Joaquin River	18040002	IC_Ingram, SJ_Hilmar, SJ_Laird
Tulare-Buena Vista Lakes	Upper Dry	18030009	
Tulare-Buena Vista Lakes	Tulare Lakebed	18030012	
Tulare-Buena Vista Lakes	Upper Deer-Upper White	18030005	
Tulare-Buena Vista Lakes	Upper Poso	18030004	
Tulare-Buena Vista Lakes	Upper Kaweah	18030007	

Table 4. Highest scoring pesticides recommended for monitoring using the SWMP model, based on 2021–2023 PUR for combined watersheds identified in Table 1.

Chemical Name	Use Score	Toxicity Score	Final Score	Monitoring Inclusion
BIFENTHRIN	3	8	24	Yes
LAMBDA-CYHALOTHRIN	3	8	24	Yes
CHLOROTHALONIL	5	4	20	No[2]
OXYFLUORFEN	4	5	20	Yes
PENDIMETHALIN	4	4	16	Yes
S-METOLACHLOR	4	4	16	Yes
BENZOBICYCLON	4	4	16	Yes
ESFENVALERATE	2	8	16	Yes
PROPANIL	5	3	15	Yes
THIOBENCARB	5	3	15	Yes
GLUFOSINATE-AMMONIUM	5	3	15	Yes
PARAQUAT DICHLORIDE	3	5	15	No[1]
DIAZINON	3	5	15	Yes
PERMETHRIN	2	7	14	Yes
DIFLUBENZURON	2	7	14	Yes
MANCOZEB	4	3	12	No[2]
AZOXYSTROBIN	4	3	12	Yes
METHOXYFENOZIDE	4	3	12	Yes
ZIRAM	4	3	12	No[2]
PROPARGITE	3	4	12	Yes
CHLORANTRANILIPROLE	3	4	12	Yes
TRIFLURALIN	3	4	12	Yes
FENAZAQUIN	3	4	12	No[1]
PYRACLOSTROBIN	3	4	12	Yes
ETOXAZOLE	3	4	12	No[1]
HALOSULFURON-METHYL	2	6	12	No[2]
MALATHION	2	6	12	Yes
FLUMIOXAZIN	2	5	10	No[2]
IMIDACLOPRID	2	5	10	Yes
ABAMECTIN	2	5	10	Yes
CARBARYL	2	5	10	Yes
PROPICONAZOLE	3	3	9	Yes
CYPRODINIL	3	3	9	Yes
CYANTRANILIPROLE	3	3	9	Yes
DIFENOCONAZOLE	3	3	9	No[1]

[1] Pesticide not included for monitoring due to unavailability of an analytical method. [2] Pesticide not included for monitoring due to low potential for surface water runoff or toxicity according to their physicochemical properties.

Table 5. Reporting limits and method detection limits for pesticides in whole water using the LC* screen.

Analyte	Method Detection Limit (ng/L)	Reporting Limit (ng/L)
2,4-D	4	20
Abamectin	4	20
Acetamiprid	4	20
Atrazine	4	20
Azoxystrobin	4	20
Bensulide	4	20
Bromacil	4	20
Carbaryl	4	20
Chlorantraniliprole	4	20
Chlorpyrifos	4	20
Cyprodinil	4	20
Diazinon	4	20
Diflubenzuron	4	20
Dimethoate	4	20
Diuron	4	20
Ethoprop	4	20
Etofenprox	4	20
Hexazinone	4	20
Imidacloprid	4	10
Indoxacarb	4	20
Isoxaben	4	20
Kresoxim-methyl	4	20
Malathion	4	20
Methidathion	4	20
Methomyl	4	20
Methoxyfenozide	4	20
Metribuzin	4	20
Norflurazon	4	20
Oryzalin	4	20
Oxadiazon	4	20
Prometon	4	20
Prometryn	4	20
Propanil	4	20
Propargite	4	20
Propiconazole	4	20
Pyraclostrobin	4	20
Pyriproxyfen	4	15
Quinoxyfen	4	20
Simazine	4	20
S-Metolachlor	4	20
Tebufenozide	4	20

Thiacloprid	4	20
Thiamethoxam	4	20
Thiobencarb	4	20
Trifloxystrobin	4	20
Fipronil	4	10
Fipronil Amide	4	10
Fipronil Sulfide	4	10
Fipronil Sulfone	4	10
Desulfinyl Fipronil	4	10
Desulfinyl Fipronil Amide	4	10

*LC = Liquid chromatograph multi-analyte screen (51 AIs).

Table 6. Reporting limits and method detection limits for pesticides in whole water using the pyrethroid screen.

Analyte	**Method Detection Limit (ng/L)**	**Reporting Limit (ng/L)**
Bifenthrin	0.91	1
Cyfluthrin	1.46	2
Cypermethrin	1.54	5
Deltamethrin	1.77	5
Esfenvalerate	1.66	5
Fenpropathrin	1.32	5
Lambda-cyhalothrin	1.74	2
Permethrin	1.05	2

Table 7. Reporting limits and method detection limits for pesticides in whole water using the dinitroaniline screen.

Analyte	**Method Detection Limit (ng/L)**	**Reporting Limit (ng/L)**
Benfluralin	14	50
Ethalfluralin	15	50
Oxyfluorfen	10	50
Pendimethalin	12	50
Prodiamine	12	50
Trifluralin	14	50

Table 8. Reporting limits and method detection limits for pesticides in whole water using the neonicotinoid screen.

Analyte	**Method Detection Limit (ng/L)**	**Reporting Limit (ng/L)**
Clothianidin	4	20
Dinotefuran	4	20
Sulfoxaflor	4	20

Table 9. Reporting limits and method detection limits for pesticides in whole water using the glyphosate screen.

Analyte	**Method Detection Limit (ng/L)**	**Reporting Limit (ng/L)**
Glyphosate	0.00495	70
Glufosinate-ammonium	0.01154	70
Aminomethylphosphonic Acid (AMPA)	0.02786	200

Table 10. Reporting limits and method detection limits for pesticides in sediment using the pyrethroid screen.

Analyte	**Method Detection Limit (ng/g dry weight)**	**Reporting Limit (ng/g dry weight)**
Bifenthrin	0.1083	1
Cyfluthrin	0.1830	1
Cypermethrin	0.107	1
Esfenvalerate/fenvalerate	0.143	1
Lambda-cyhalothrin	0.1154	1
Permethrin cis	0.1159	1
Permethrin trans	0.1352	1

Table 11. Monitoring schedule for sites in the Sacramento Valley, in the 2026 and 2027 monitoring years. Numbers listed indicate the number of samples collected for each screen.

	May (Event 1)	May (Event 2)	June	July	August	September	First Storm Event	Second Storm Event
LC screen	8	8	8	8	0	8	8	8
Pyrethroid screen	6	6	6	6	0	6	6	6
Neonicotinoid screen	8	8	8	8	0	8	8	8
Glyphosate screen	6	6	6	6	0	6	6	6
Sediment pyrethroid screen	0	0	0	0	0	3	0	0
Toxicity testing (Hyalella)	0	6	6	0	0	6	6	6
Toxicity testing (Hyalella) (filtered)	0	1	1	0	0	1	1	1
Toxicity testing (Chironomus)	0	6	6	0	0	6	6	6

Table 12. Monitoring schedule for sites in the San Joaquin Valley, 2026 and 2027 monitoring years. Numbers listed indicate the amount of each type of sample collected.

	June	July	August	September	First Storm Event	Second Storm Event
LC screen	6	6	8	6	6	6
Pyrethroid screen	6	6	6	6	6	6
Neonicotinoid screen	6	6	8	6	6	6
Dinitroaniline screen	6	6	6	6	6	6
Sediment pyrethroid screen	0	0	0	2	0	0
Toxicity testing (Hyalella)	6	0	0	6	6	6
Toxicity testing (Hyalella)	6	0	0	6	6	6
Toxicity testing (Chironomus)	6	0	0	6	6	6

10. FIGURES

Figure 1: Map of the Sacramento Valley (SV) monitoring sites.

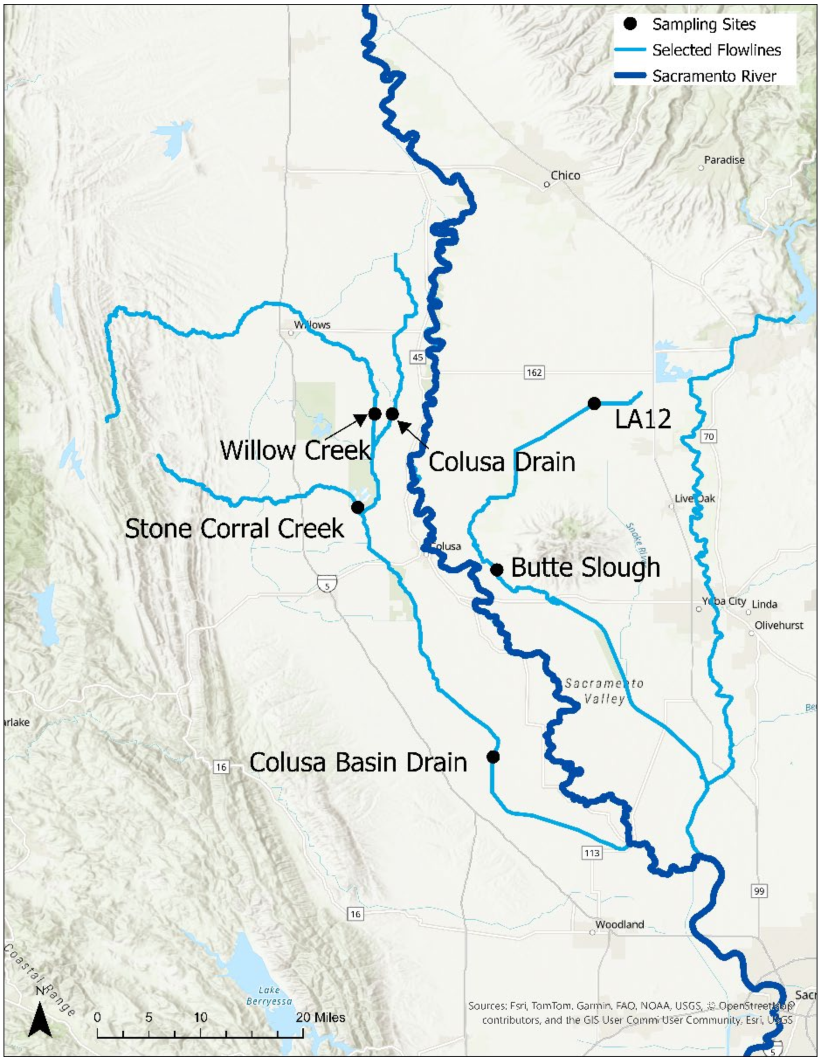

Figure 2: Map of the San Joaquin Valley (SJV) monitoring sites.

Figure 3: Map of priority watersheds for monitoring in the Sacramento Valley, identified by using the SWMP, for the 2026 and 2027 monitoring years.

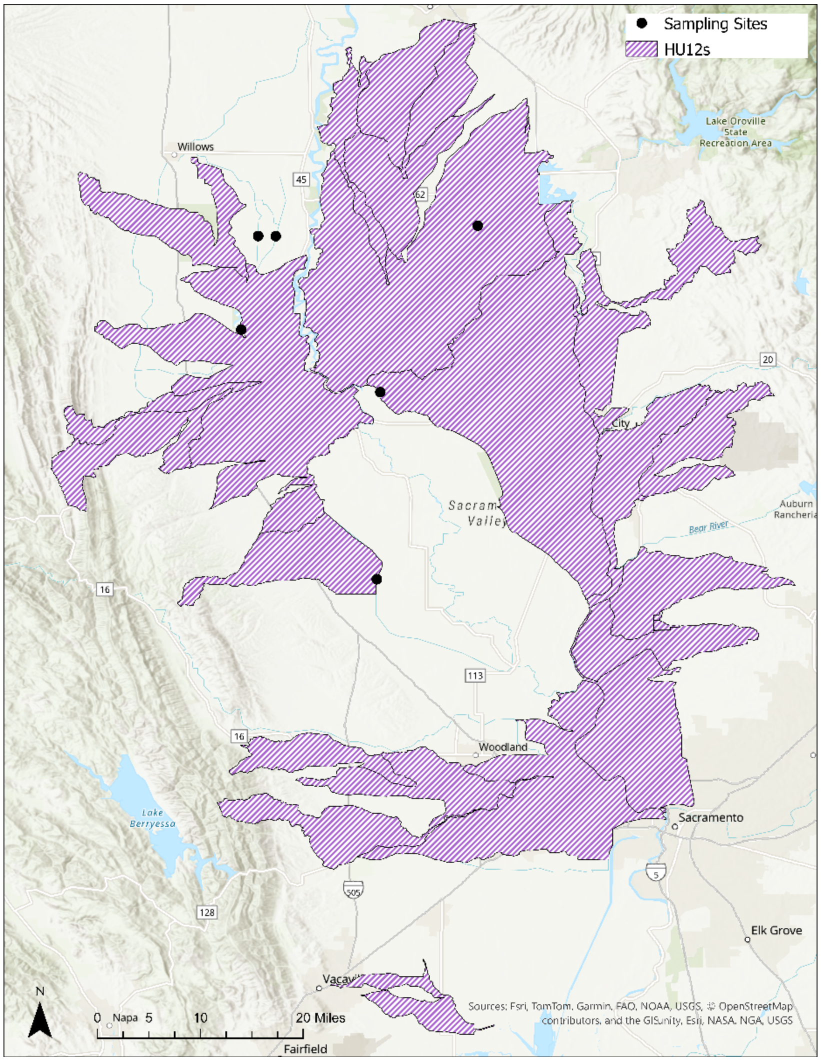

Figure 4: Map of priority watersheds for monitoring in the San Joaquin Valley, identified by using the SWMP, for the 2026 and 2027 monitoring years.