MEMO

To:	Central Coast Regional Water Quality Control Board
From:	Sarah Lopez, Executive Director, Central Coast Water Quality Preservation, Inc.
Date:	June 30, 2023
Subject:	CENTRAL COAST COOPERATIVE MONITORING PROGRAM SUPPLEMENTAL MONITORING REPORT, 2021 AND 2022 AQUATIC TOXICITY & POTENTIAL TOXICANTS

1.0 INTRODUCTION

The Central Coast Cooperative Monitoring Program (CMP) was initiated to assist Central Coast farms perform water quality monitoring pursuant to the requirements of the Central Coast Water Board's *General Waste Discharge Requirements for Discharges from Irrigated Lands* (Order No. R3-2021-0040; referred to hereafter as the "Ag Order 4.0"). Ag Order 4.0, which stems from California's Porter-Cologne Act, requires irrigated agriculture operations to enroll in it with the Central Coast Water Board, or be excluded and regulated under other discharge requirements. Cooperative monitoring of waterbodies in agricultural watersheds has been a feature of the Central Coast's Ag Order since its inception in 2004. Though the overall goals of monitoring have not changed, adoption of Ag Order 4.0 marked a significant change relative to prior Orders. Ag Order 4.0 included, for the first time, Total Maximum Daily Loads (TMDL). A TMDL is the maximum amount of a pollutant a waterbody can assimilate and still attain water quality standards. The Central Coast Water Board adopts TMDLs and an associated implementation plan that identifies actions, regulatory (e.g., waste discharge requirements, conditional waivers, etc.) and/or non-regulatory (e.g., voluntary actions and grant funded restoration and treatment projects), that should be taken to attain water quality standards within a reasonable time schedule. TMDL Limits applicable to CMP sites are summarized in Appendix A.

The CMP began monthly surface water monitoring at 25 sites in the Lower Salinas and Santa Maria watersheds in January 2005. In January of 2006, monthly monitoring at an additional 25 sites began in the following areas: the Pajaro River and tributaries, creeks in San Luis Obispo County (tributaries to Estero Bay and the Pacific Ocean), the lower Santa Ynez River, and South Coast creeks (near Santa Barbara, tributaries to the Pacific Ocean). In 2012, the CMP was modified to add seven additional sites (five in the northern monitoring area and two in the southern monitoring area) and remove two sites (one in the north and one in the south). These sites were added to the CMP to provide information about additional impaired waterbodies in watersheds with agricultural land use. The removed sites either did not convey sufficient amounts of water and/or did not reflect sufficient agricultural land use to merit continued monitoring efforts by the program.

Water quality issues in the Central Coast region of California include impairment of drinking water sources, contact recreation, and aquatic life beneficial uses based on a comparison of water quality conditions to water quality objectives (WQOs) established by the Central Coast Water Board. Pesticides are generally not found in water at levels harmful to humans; however, impacts to aquatic life include possible threats to endangered and threatened species found in the region, or threats to their food sources. These include the red-legged frog (*Rana aurora draytonii*) and steelhead trout (*Onchorhynchus mykiss*). All mainstem rivers and several creeks within the CMP monitoring area have documented populations of steelhead trout (*Onchorhynchus mykiss*; Moyle et al. 2008). Pesticides have been shown to not only affect the survival, growth, and reproductive health of individual species, but also to affect the community structure, abundance, and diversity of macroinvertebrates in stream systems (Anderson et al. 2003a). Reduction of macroinvertebrate populations, a food source for higher species such as fish and frogs, affects multiple parts of the food web. Furthermore, the rivers of the Central Coast flow into the Pacific Ocean and estuaries, where marine life can be affected by and/or bioaccumulate pesticides and other toxicants (Anderson et al. 2007).

Most watersheds in the CMP monitoring area incorporate mixed land uses, with agricultural land use present to varying degrees and intensity. Synthetic pesticides and herbicides are applied to crops grown in CMP monitoring areas and are also used in urban areas for pest control, landscape maintenance, and pet grooming. Monitoring both water and sediment is important for detecting toxicants in waterways because some materials remain dissolved in the water column while others adhere to particles, and many partition to some extent in both sediment *and* water. Sorbed toxicants can either remain suspended in the water column (as particles) or settle out in bed sediment. In general, synthetic pyrethroids tend to be more prevalent in sediments because of their hydrophobic properties and tendency to adsorb to particles, whereas organophosphate and neonicotinoid pesticides are more water soluble and therefore likely to be found in the water column (Hunt et al. 2006; Raby, et al., 2018). The organophosphate pesticide, chlorpyrifos, tends to be an exception to this, with a higher tendency to sorb to sediments than most other organophosphates. Herbicides and phenols are of primary concern in the water column.

In addition to the routine water and sediment chemistry parameters summarized in the *Central Coast Cooperative Monitoring Program 2022 Annual Water Quality Report* (CCWQP 2023), CCWQP also collected water and sediment samples for several classes of potential toxicants. Measured toxicant concentrations were compared with observed toxicity to the invertebrates *Ceriodaphnia dubia* and *Chironomus dilutus,* and the green algae *Selenastrum capricornutum,* in concurrently collected water samples (i.e., split samples were collected from the same grab sample), and to the invertebrate *Hyalella azteca* in concurrently collected sediment samples. Alternative test species with higher tolerance for salts were used to test samples that showed higher specific conductivity and salinity levels. *Chironomus* was not tested in cases where the sample log-in conductivity was greater than 3000 microsiemens per centimeter (µS/cm); leading to a difference of sample counts between toxicants and *chironomid* bioassays. Data were analyzed to examine relationships between toxicant concentrations, known lethal effect thresholds (LC50), and survival rates for these organisms in standardized toxicity tests. Sub-lethal endpoints (reproduction or growth, per Environmental Protection Agency [EPA] test protocols) were also evaluated for test invertebrates in the bioassays, but for discussion purposes, the toxicant concentrations were generally not compared to sub-lethal effects thresholds (EC_{50}) due to the much broader scope of analysis and literature review that would entail (e.g., multiple types of effects per species, multiple lengths of exposure for each effect, etc).

This Supplemental Monitoring Report presents the analytical results of water and sediment samples for toxic effects to sensitive aquatic invertebrates (via bioassay), as well as several classes of potential toxicants (via chemical analysis). Readers should note that the study described in this report was correlative in nature and evaluated only the co-occurrence of toxicants and toxic effects. This study was not designed to rule out the presence of additional untested toxicants and was also not designed to confirm causal linkages between measured toxicants and observed toxic effects. To those ends, Toxicity Identification Evaluations (TIE) have been used by researchers to affirmatively identify causes of toxicity when multiple toxicants are present, including distinguishing between the effects of pyrethroids, organophosphates, and metals (Phillips et al. 2007). Since co-occurrence of the measured toxicants and observed toxic effects has been so common at CMP sites in recent years (e.g., Central Coast Water Quality Preservation, Inc. [CCWQP] 2010), the small additional information value of the TIE method is typically deemed outweighed by the increased cost and effort incurred by that approach.

2.0 METHODS

2.1 MONITORING APPROACH AND SITES

The purpose of the monitoring reported herein was to characterize concentrations of synthetic pesticides and other potential toxicants in the water column and bed sediments of CMP monitoring sites within the Pajaro River, Salinas, Estero Bay, Santa Maria, San Antonio Creek, Santa Ynez River, and South Coast HUs. Selection of waterbodies for the CMP was originally conducted in 2004 for compliance with the Ag Order (termed “Conditional Waiver” at the time) and was based on several criteria, including:

- Waterbodies that are on the Clean Water Act 303(d) list of impaired waterbodies for pollutants associated with irrigated agriculture;
- Waterbodies that have evidence of serious nitrate groundwater contamination in areas associated with intensive agricultural activity; and
- Waterbodies with documented beneficial use impairment(s) from pollutants associated with irrigated agriculture and that are proposed for future placement on the 303(d) list.

Monitoring sites in these waterbodies were selected for public access and to best characterize agricultural inputs, and are generally located along the mainstem and at the lower ends of tributaries in areas associated with agricultural activity. In a few cases, sites were also located to aid in distinguishing agricultural inputs from other sources (e.g., industrial, urban, etc.). Most sites were selected from the suite of existing monitoring sites from the CCRWQB's Central Coast Ambient Monitoring Program (CCAMP), for which at least one year of monitoring data were already available. For this study, all the CMP's core monitoring sites were included in the monitoring plan, because the presence of pesticides at sites both with and without a history of aquatic toxicity was of interest.

Names and locations for all CMP sites are given in **Table 2-1** and depicted in figures within Appendix B.

Table 2-1. Monitoring Site Locations, 2021

Region	Site ID[1]	Site Description	Longitude	Latitude
Lower Pajaro	305COR	Salsipuedes Creek downstream of Corralitos Creek upstream from Highway 129	121.73183	36.92028
Lower Pajaro	305PJP	Pajaro River at Main St.	-121.75105	36.90533
Lower Pajaro	305WSA	Watsonville Slough at San Andreas Rd.	-121.80430	36.88793
Lower Pajaro	305BRS	Beach Road Ditch at Shell Rd.	-121.81516	36.86978
Lower Pajaro	305WCS	Watsonville Creek at Salinas Road/Hudson Landing	-121.74521	36.87385
Upper Pajaro	305CAN	Carnadero Creek upstream of Pajaro River	-121.53444	36.96002
Upper Pajaro	305CHI	Pajaro River at Chittenden	-121.59770	36.90033
Upper Pajaro	305FRA	Millers Canal at Frazier Lake Rd.	-121.49207	36.96344
Upper Pajaro	305LCS	Llagas Creek at Southside	-121.53213	36.99053
Upper Pajaro	305SJA	San Juan Creek at Anzar Rd.	-121.56144	36.87548
Upper Pajaro	305TSR	Tequisquita Slough u/s Pajaro River at Shore Rd.	-121.44437	36.94279
Upper Pajaro	305FUF	Furlong Creek at Frazier Lake Rd.	-121.50800	36.97900
Castroville & Blanco	309ASB	Alisal Slough at White Barn	-121.72968	36.72482
Castroville & Blanco	309BLA	Blanco Drain below Pump	-121.74393	36.71060
Castroville & Blanco	309ESP	Espinosa Slough upstream of Alisal Slough	-121.73372	36.73675
Castroville & Blanco	309GAB	Gabilan Creek at Boronda Rd.	-121.61641	36.71548

Region	Site ID[1]	Site Description	Longitude	Latitude
Castroville & Blanco	309JON	Salinas Reclamation Canal at San Jon Rd.	-121.70496	36.70493
Castroville & Blanco	309MER	Merritt Ditch upstream from Highway 183	-121.74208	36.75184
Castroville & Blanco	309MOR	Moro Cojo Slough at Highway 1	-121.78328	36.79646
Castroville & Blanco	309NAD	Natividad Creek u/s from Salinas Reclamation Canal	-121.60197	36.70254
Castroville & Blanco	309OLD	Old Salinas River at Monterey Dunes Wy.	-121.79008	36.77166
Castroville & Blanco	309TEH	Tembladero Slough at Haro St.	-121.75445	36.75952
Lower Salinas	309ALG	Salinas Reclamation Canal at La Guardia St.	-121.61297	36.65697
Lower Salinas	309CRR	Chualar Creek North Branch East of Highway 1	-121.50995	36.56142
Lower Salinas	309CCD	Chualar Creek West of Highway 1 on River Rd.	-121.51116	36.56130
Lower Salinas	309GRN	Salinas River at Elm Rd. in Greenfield	-121.20429	36.33797
Lower Salinas	309QUI	Quail Creek at Highway 101	-121.56211	36.60943
Lower Salinas	309RTA	Santa Rita Creek at Santa Rita Creek Park	-121.64800	36.72600
Lower Salinas	309SAC	Salinas River at Chualar Bridge on River Rd.	-121.54951	36.55598
Lower Salinas	309SAG	Salinas River at Gonzales River Rd. Bridge	-121.46854	36.48815
Lower Salinas	309SSP	Salinas River at Spreckels Gage	-121.67339	36.62967
Arroyo Grande	310LBC	Los Berros Creek at Century	-120.57837	35.10287
Arroyo Grande	310USG	Arroyo Grande Creek at old USGS Gage	-120.56907	35.12442
San Luis Obispo	310CCC	Chorro Creek upstream from Chorro Flats	-120.8124	35.35767
San Luis Obispo	310PRE	Prefumo Creek at Calle Joaquin	-120.68168	35.24732
San Luis Obispo	310SLD	Davenport Creek at Broad Street	-120.61824	35.21874
San Luis Obispo	310WRP	Warden Creek at Wetlands Restoration Preserve	-120.80647	35.32067
Santa Maria	312BCC	Bradley Canyon Creek	-120.35594	34.93526
Santa Maria	312BCJ	Bradley Channel at Jones Street	-120.41711	34.94561
Santa Maria	312GVS	Green Valley at Simas	-120.556457	34.942280
Santa Maria	312MSD	Main St. Canal u/s from Ray Road at Highway 166	-120.486578	34.955227
Santa Maria	312OFC	Oso Flaco Creek at Oso Flaco Lake Rd.	-120.586259	35.016388
Santa Maria	312OFN	Little Oso Flaco Creek	-120.586157	35.022795
Santa Maria	312ORC	Orcutt Solomon Creek u/s of Santa Maria River	-120.631454	34.957554
Santa Maria	312ORI	Orcutt Solomon Creek at Highway 1	-120.572882	34.941374

Region	Site ID[1]	Site Description	Longitude	Latitude
Santa Maria	312SMI	Santa Maria River at Highway 1	-120.569832	34.977207
Santa Maria	312SMA	Santa Maria River at Estuary	-120.641796	34.963774
San Antonio	313SAE	San Antonio Creek at San Antonio Road East	-120.43200	34.76700
Lompoc	314SYF	Santa Ynez River at Floradale Ave.	-120.49266	34.67192
Lompoc	314SYL	Santa Ynez River at River Park	-120.43698	34.65180
Lompoc	314SYN	Santa Ynez River at 13th St.	-120.55442	34.67677
Santa Barbara	315APF	Arroyo Paredon at Foothill Rd.	-119.54445	34.41676
Santa Barbara	315BEF	Bell Creek at Winchester Canyon Park	-119.90579	34.43926
Santa Barbara	315FMV	Franklin Creek at Mountain View Ln.	-119.51766	34.40678
Santa Barbara	315GAN	Glen Annie Creek upstream Cathedral Oaks	-119.87635	34.44772
Santa Barbara	315LCC	Los Carneros Creek at Calle Real	-119.85358	34.43949

Notes: 1 The first three digits of the Site ID correspond to the Hydrologic Unit Code (HUC) for each region.
HUC Key: 305=Pajaro; 309=Salinas; 310=Estero Bay; 312=Santa Maria; 313= San Antonio; 314=Santa Ynez; 315=South Coast
u/s upstream

Samples for water column toxicity analyses are collected from CMP sites four times per year as follows:

- once during the first quarter of the year (ideally timed with a rain event generating significant runoff, but no later than March 31 if significant rain does not occur);
- once during the second quarter of the year concurrent with sediment toxicity monitoring (typically in April or May);
- once in either August or September to indicate fully “dry season” conditions; and
- once in the fourth quarter of the year (ideally timed with the first significant rain event of the season, but no later than December 31 if significant rain does not occur).

Samples for sediment toxicity analyses are collected from CMP sites during the spring of each year, most commonly in April, as well as the fall of each year, most commonly in September. Logistics (e.g., access to site[s]) and environmental conditions affect the actual number of toxicity analyses performed during the year.

Actual toxicity monitoring months during 2021 and 2022 can be found in **Table 2-2** along with events where concurrent toxicant sampling (e.g., pesticides, metals, etc) was also performed.

Table 2-2. Toxicity Monitoring Months for the 2021 and 2022 Monitoring Years

	2021	2022
Water Samples	• January • April[1] • **September[1]** • **December**	• **March** • **April** • September • November
Sediment Samples	• April • **September[1]**	• **April[1]**

Notes:
Bold Indicates monitoring events where toxicant samples (e.g., pesticides) were collected concurrent with toxicity samples.
1 resampling was performed at a sub-set of sites the following month.

This report discusses only the results from monitoring events where toxicity samples were collected concurrent with samples for toxicants, which was September and December 2021, and March and April 2022.

Samples for this study were collected from all sites in each CMP HU, except at sites that were completely dry or disconnected from downstream areas. The plan for monitoring included the following locations:

- 31 sites in the Northern Monitoring Unit;
  - 12 sites in the Pajaro River HU; and
  - 19 sites in the Salinas River HU.
- 25 sites in the Southern Monitoring Unit;
  - 6 sites in the Estero Bay HU;
  - 10 sites in the Santa Maria River HU (including Oso Flaco);
  - 1 site in the San Antonio Creek HU;
  - 3 sites in the Santa Ynez HU; and
  - 5 sites in the South Coast HU.

Site latitude and longitude coordinates are provided in **Table 1-1** and sites are described in greater detail in the CMP Quality Assurance Project Plan (QAPP; CCWQP 2013) and routine annual monitoring report (CCWQP 2023).

To fulfill CMP supplemental monitoring requirements, additional water and sediment samples from each CMP site were collected and analyzed for the following toxicant classes (specific compounds measured in water and sediment are presented in Section 2.2):

- Water column toxicant classes
  - Organophosphate pesticides;
  - Herbicides;
  - Metals;
  - Phenolic compounds; and
  - Neonicotinoid pesticides.
- Sediment toxicant classes
  - Pyrethroid pesticides; and
  - Chlorpyrifos (an organophosphate insecticide).

Auxiliary parameters to aid in interpreting results were also monitored as follows:

- Hardness was measured in water column samples since it can affect the toxicity of metals;
- Total organic carbon (TOC) was measured in water and sediment since it can affect the bioavailability of sorbed pesticides; and
- Samples were collected for sediment grain size and percent solids analyses to characterize the physical properties of the sediments (e.g., sediments dominated by sand typically have lower concentrations of hydrophobic pesticides).

2.2 SAMPLE COLLECTION AND ANALYTICAL METHODS

Ambient water and sediment samples were collected and analyzed as described in detail in the CMP QAPP (CCWQP 2013). A brief description follows.

Water samples were collected by hand from below the surface (typically 1 to 6 inches, depending on overall water column depth) into a stainless-steel bucket. The “bucket grab” was then proportionally split into polyethylene or glass containers as specified by the QAPP for each analyte or class. This process was repeated until each sample container was adequately filled. Samples were not filtered in the field. Samples were immediately placed on ice to begin chilling without freezing at 0-6 degrees Celsius (ºC). Sample container materials, volumes, and storage and holding time specifications are given in Table B-1 of the QAPP (CCWQP 2013).

For sediment samples, depositional (i.e., fine-grain) sediments were collected from the upper 2 centimeters (cm) of the streambed using a pre-cleaned stainless-steel scoop and placed into a pre-cleaned stainless-steel bowl. Once approximately 4 liters (L) of sediment had been collected and placed in the bowl, the sediment was thoroughly homogenized by manual stirring with a large stainless-steel spoon, after which the homogenized sediment was partitioned into containers as described in Table B-1 of the QAPP (CCWQP 2013).

Sample transportation and handling followed the QAPP guidelines, including maintenance of cold and dark storage conditions, observance of holding time limits, etc. Pacific EcoRisk (Cordelia, CA) performed all water and sediment toxicity bioassays. Water sample analyses of herbicide compounds were performed by North Coast Laboratories in Arcata, CA. Organophosphate, metals, phenolic, neonicotinoid and hardness analyses were performed by Physis Environmental Lab in Anaheim, CA. All sediment analyses were performed by Physis Environmental Lab.

Analytical methods including liquid or gas chromatography and/or mass spectrometry were used to measure each compound of interest according to EPA or other standardized testing methods, as specified in **Table 2-1** and **Table 2-2**. Reporting limits for each analyte were selected to be substantially lower than the toxic effect thresholds of interest, on the order of "parts per billion" or "parts per trillion" summarized in Section 2.3 and **Table 2-3**, **Table 2-4**, and **Table 2-5**. Laboratory standard operating procedures for each analytical method are provided in Attachments 8 through 21 of Appendix B of the CMP QAPP for chemistries, and in Appendix C of the QAPP for toxicity bioassays (CCWQP 2013).

Table 2-3. List of Supplemental Constituent Targeted in Water

Constituent Class	Constituent	Method #	RL
Organophosphate Insecticide	Azinphos-methyl	EPA 625M	0.01 µg/L
Organophosphate Insecticide	Chlorpyrifos	EPA 625M	0.001 µg/L
Organophosphate Insecticide	Diazinon	EPA 625M	0.001 µg/L
Organophosphate Insecticide	Dichlorvos	EPA 625M	0.006 µg/L
Organophosphate Insecticide	Dimethoate	EPA 625M	0.01 µg/L
Organophosphate Insecticide	Demeton-S	EPA 625M	0.002 µg/L
Organophosphate Insecticide	Disulfoton (Disyton)	EPA 625M	0.002 µg/L
Organophosphate Insecticide	Malathion	EPA 625M	0.005 µg/L
Organophosphate Insecticide	Methamidophos	EPA 625M	0.01 µg/L
Organophosphate Insecticide	Methidathion	EPA 625M	0.01 µg/L
Organophosphate Insecticide	Parathion-methyl	EPA 625M	0.002 µg/L
Organophosphate Insecticide	Phorate	EPA 625M	0.01 µg/L
Organophosphate Insecticide	Phosmet	EPA 625M	0.01 µg/L
Herbicide	Atrazine	EPA 8321A	0.02 µg/L
Herbicide	Cyanazine	EPA 8321A	0.02 µg/L
Herbicide	Diuron	EPA 8321A	0.02 µg/L
Herbicide	Glyphosate	EPA 547M	5 µg/L
Herbicide	Linuron	EPA 8321A	0.02 µg/L
Herbicide	Paraquat dichloride	EPA 549.2M	0.4 µg/L
Herbicide	Simazine	EPA 8321A	0.02 µg/L
Herbicide	Trifluralin	EPA 8321A	0.05 µg/L
Metal	Arsenic (total)	EPA 200.8	0.159 µg/L

Constituent Class	Constituent	Method #	RL
Metal	Boron (total)	EPA 200.8	2.379 µg/L
Metal	Cadmium (total & dissolved)	EPA 200.8	0.023 µg/L
Metal	Copper (total & dissolved)	EPA 200.8	0.022 µg/L
Metal	Lead (total & dissolved)	EPA 200.8	0.021 µg/L
Metal	Molybdenum (total)	EPA 200.8	0.022 µg/L
Metal	Nickel (total & dissolved)	EPA 200.8	0.042 µg/L
Metal	Selenium (total)	EPA 200.8	0.068 µg/L
Metal	Zinc (total & dissolved)	EPA 200.8	0.069 µg/L
Phenolic Compounds	Phenols	EPA 625M	0.2 µg/L
Neonicotinoid Insecticide	Acetamiprid	EPA 625M	0.02 µg/L
Neonicotinoid Insecticide	Clothianidin	EPA 625M	0.02 µg/L
Neonicotinoid Insecticide	Dinotefuran	EPA 625M	0.012 µg/L
Neonicotinoid Insecticide	Imidacloprid	EPA 625M	0.004 µg/L
Neonicotinoid Insecticide	Thiacloprid	EPA 625M	0.004 µg/L
Neonicotinoid Insecticide	Thiamethoxam	EPA 625M	0.004 µg/L
Interpretive Parameter	Total Hardness	SM 2340B	0.5 mg/L

Table 2-4. List of Supplemental Parameters Targeted in Sediment

Constituent Class	Constituent	Method #	RL
Pyrethroid Insecticide	Cyhalothrin, gamma-	EPA 8720M NCI	1.25 ng/g
Pyrethroid Insecticide	Cyhalothrin, lambda-	EPA 8720M NCI	0.74 ng/g
Pyrethroid Insecticide	Bifenthrin	EPA 8720M NCI	0.71 ng/g
Pyrethroid Insecticide	Beta-cyfluthrin	EPA 8720M NCI	1.25 ng/g
Pyrethroid Insecticide	Cyfluthrin	EPA 8720M NCI	0.8 ng/g
Pyrethroid Insecticide	Esfenvalerate	EPA 8720M NCI	0.9 ng/g
Pyrethroid Insecticide	Permethrin, cis-	EPA 8720M NCI	0.55 ng/g
Pyrethroid Insecticide	Permethrin, trans-	EPA 8720M NCI	0.7 ng/g
Pyrethroid Insecticide	Cypermethrin	EPA 8720M NCI	0.9 ng/g
Pyrethroid Insecticide	Danitol	EPA 8720M NCI	0.66 ng/g
Pyrethroid Insecticide	Fenvalerate	EPA 8720M NCI	0.8 ng/g
Pyrethroid Insecticide	Fluvinate	EPA 8720M NCI	0.74 ng/g
Organophosphate Insecticide	Chlorpyrifos	EPA 8270C	2 ng/g
Interpretive Parameter	Particle Size Distribution	SM 2560D v20,21	0.05%
Interpretive Parameter	Percent Solids	SM 2540B	0.10%
Interpretive Parameter	Total Organic Carbon	SM 5310B	0.10%

Survival and growth or reproduction data from toxicity bioassays were analyzed relative to control performance to evaluate any statistically significant toxic effects due to the sample water or sediments. All statistical analyses were performed using the CETIS® statistical software. In concept, performance rates (survival and reproduction or growth) for test organisms were compared to rates from the control samples, and samples showing a significant negative difference between test and control performance were deemed toxic. In addition to determination of "significant toxic effect," results were also expressed in terms of the test samples' performance as a "percent (%) of control" samples' performance, where "% of control" is conceptually equal to:

$$\frac{\text{Test sample survival or growth rate}}{\text{Control sample survival or growth rate}} \text{ x } 100$$

with some additional calculations relative to replicate samples. This study then undertook to determine co-occurrence of significant toxic effects (to test organisms) with detections (at biologically significant concentrations) of the various toxicant compounds as measured in laboratory analysis.

2.3 CO-OCCURRENCE OF TOXICANTS AND TOXIC EFFECTS

To determine co-occurrence of significant toxic effects (to test organisms) with detections (at biologically significant concentrations) of the various toxicant compounds, toxic units (TUs) were calculated. Toxic units provide a means to compare the relative toxicities of different measured pesticides with one another and to express pesticide concentrations in terms of their expected toxic effects to aquatic organisms. Toxic units for each toxicant class in water or sediment were calculated by dividing the pesticide concentration by the LC50 (median lethal concentration) value specific to the test duration. A TU is the pesticide concentration in water or sediment, divided by the LC50, which is specific to both the test organism and test duration. A TU of 1 represents an expected survival rate of 50% of the test organism over the test duration.

Toxicants with a strong affinity for organic carbon are less bioavailable, so they are generally less toxic to aquatic organisms when sediments have high TOC content (Nebeker et al. 1989). Therefore, TU calculations for sediment parameters were normalized by the measured TOC at each site. Toxic units of pesticides in water and sediments were based on IC50, LC50, or criterion maximum concentration (CMC) values identified via a literature review (shown in **Table 2-3**, **Table 2-4**, and **Table 2-5**) and calculated using the following equation:

$$TU = \frac{C}{LC_{50} * S}$$

where TU is dimensionless, C is the concentration of parameter in water or sediment (nanograms per gram [ng/g]), S is the concentration of TOC in sediment (ng/g) (not used for water samples), and IC50 or LC50 are the median lethal concentration (ng/g).

Similarly, the toxicity of metals in water is affected by water hardness, or calcium carbonate ($CaCO_3$) content, so effect thresholds for each metal were adjusted according to the measured hardness in each water sample for this study. The equation used for calculation of sediment TUs was also used for water column TUs, except that water column LC50s or CMCs were not normalized for TOC. The LC50s or effect thresholds used for metals were adjusted for hardness prior to calculating TUs (i.e., prior to use of the equation).

Table 2-5. Contaminant Effect Thresholds for Pesticides (LC_{50}) and Metals (CMC) Analyzed in Water (µg/L)

#	Constituent Analyzed	Constituent Class	CMC[2]	Ceriodaphnia LC50[3]	Chironomus LC50[3]	Source
1	Azinphos methyl	Organophosphate Pesticide	Not Applicable	None	None	None
2	Chlorpyrifos[1]	Organophosphate Pesticide	Not Applicable	0.023	0.29	Deanovic et al. 2013
3	Dementon, s	Organophosphate Pesticide	Not Applicable	None	None	None
4	Demeton, Total	Organophosphate Pesticide	Not Applicable	None	None	None
5	Diazinon[1]	Organophosphate Pesticide	Not Applicable	0.164	10.7	Deanovic et al. 2013
6	Dichlorvos[1]	Organophosphate Pesticide	Not Applicable	0.149	None	Brooke 1991
7	Dimethoate	Organophosphate Pesticide	Not Applicable	None	1.29	LeBlanc et al. 2012
8	Disulfoton	Organophosphate Pesticide	Not Applicable	None	None	None
9	Malathion[1]	Organophosphate Pesticide	Not Applicable	1.9979	613.8	Qin et al. 2011
10	Methamidophos	Organophosphate Pesticide	Not Applicable	None	None	None
11	Methidathion	Organophosphate Pesticide	Not Applicable	None	None	None
12	Parathion, Methyl	Organophosphate Pesticide	Not Applicable	2.6	None	Anderson and M.J. Lydy 2002
13	Phorate	Organophosphate Pesticide	Not Applicable	None	None	None
14	Phosmet	Organophosphate Pesticide	Not Applicable	None	None	None
15	Acetamiprid[1]	Neonicotinoid Insecticide	Not Applicable	33,500	2.8	Raby et al. 2018
16	Clothianidin[1]	Neonicotinoid Insecticide	Not Applicable	100,000	11.6	Raby et al. 2018
17	Dinotefuran[1]	Neonicotinoid Insecticide	Not Applicable	87,000	23.5	Raby et al. 2018
18	Imidacloprid[1]	Neonicotinoid Insecticide	Not Applicable	72,124.9	2.65	LeBlanc et al. 2012
19	Thiacloprid[1]	Neonicotinoid Insecticide	Not Applicable	3,390	1.6	Raby et al. 2018
20	Thiamethoxam[1]	Neonicotinoid Insecticide	Not Applicable	80,000	61.9	Raby et al. 2018
21	Arsenic (Total) [1]	Metal	340	Not Applicable	Not Applicable	Federal Register 2000
22	Boron (Total) [1]	Metal	none	Not Applicable	Not Applicable	None
23	Cadmium (Dissolved) [1]	Metal	4.3	Not Applicable	Not Applicable	Federal Register 2000
24	Cadmium (Total) [1]	Metal	4.3	Not Applicable	Not Applicable	Federal Register 2000
25	Copper (Dissolved) [1]	Metal	13	Not Applicable	Not Applicable	Federal Register 2000
26	Copper (Total) [1]	Metal	13	Not Applicable	Not Applicable	Federal Register 2000

#	Constituent Analyzed	Constituent Class	CMC[2]	Ceriodaphnia LC50[3]	Chironomus LC50[3]	Source
27	Lead (Dissolved) [1]	Metal	65	Not Applicable	Not Applicable	Federal Register 2000
28	Lead (Total) [1]	Metal	65	Not Applicable	Not Applicable	Federal Register 2000
29	Molybdenum (Total) [1]	Metal	none	Not Applicable	Not Applicable	None
30	Nickel (Dissolved) [1]	Metal	470	Not Applicable	Not Applicable	Federal Register 2000
31	Nickel (Total) [1]	Metal	470	Not Applicable	Not Applicable	Federal Register 2000
32	Selenium (Total) [1]	Metal	none	Not Applicable	Not Applicable	None
33	Zinc (Dissolved) [1]	Metal	120	Not Applicable	Not Applicable	Federal Register 2000
34	Zinc (Total) [1]	Metal	120	Not Applicable	Not Applicable	Federal Register 2000

Notes:

1 Analyte was detected at one or more sites monitored in this study.

2 CMC (Criterion Maximum Concentration, given in µg/L) values for metals are hardness-dependent for cadmium, copper, lead, nickel and zinc. The CMCs for waters with hardness of 100 mg/L are displayed in this table, but sample-specific CMCs were calculated for each sample depending on the concurrently measured hardness values. These vary substantially from the numbers in this table.

3 LC50 (median lethal concentration, given in µg/L). In several cases the "effects concentration" that is listed for *C. dubia* or *Chironomus* is based on a shorter test duration than the CMP standard. In these cases, the alternative threshold is typically expected to be lower than a 96-hour *C. dubia* or *Chironomus* lethal effect.

Table 2-6. Contaminant Effect Thresholds (TOC-normalized LC_{50}) for Pesticides Analyzed in Sediments (µg/g OC)

#	Pesticides Analyzed	TOC-Normalized LC50	Source
1	Bifenthrin[1]	0.52	Amweg et al. 2005
2	Chlorpyrifos[1]	1.77	Amweg and Weston 2007
3	Cyfluthrin, Total[1]	1.08	Amweg et al. 2005
4	Cyhalothrin, gamma-[1]	0.45	Amweg et al. 2005
5	Cyhalothrin, Total lambda-[1]	0.45	Amweg et al. 2005
6	Cypermethrin, Total[1]	0.38	Weston et al. 2004
7	Esfenvalerate[1]	1.54	Amweg et al. 2005
8	Fenpropathrin[1]	1.1	Ding et al. 2009
9	Fenvalerate[1]	1.54	Amweg et al. 2005
10	Permethrin (cis + trans) [1]	10.8	Amweg et al. 2005
11	T-Fluvalinate[1]	None	Not Applicable

Notes:
1 Analyte was detected at one or more sites monitored in this study.

Table 2-7. Inhibitory Concentrations (IC50) for Herbicides in Water

#	Herbicides Analyzed[1]	IC_{50}	Source
1	Atrazine	235	Fairchild et al. 1995
2	Cyanazine[1]	27	Fairchild et al. 1995
3	Diuron[1]	2.4	Belden et al. 2007
4	Glyphosate[1]	1400	Currie et al. 2015
5	Linuron[1]	67	Belden et al. 2007
6	Paraquat dichloride	559	Fairchild et al. 1995
7	Simazine[1]	1240	Fairchild et al. 1995
8	Trifluralin	673	Fairchild et al. 1995

Notes:
1 Analyte was detected at one or more sites monitored in this study.

2.4 TOTAL MAXIMUM DAILY LOAD NUMERIC TARGETS

Surface waterbodies within the Central Coast Region are assessed regularly by the Central Coast Water Board and identified as “impaired” if they do not meet water quality standards. To address these impairments, the Central Coast Water Board has adopted TMDLs with associated implementation plans for many of these waterbodies. TMDLs that specify irrigated agriculture as a source have associated numeric limits included in Ag Order 4.0. Tables C.3-2 and C.3-4 of Ag Order 4.0 present the TMDL numeric limits and compliance schedules for parameters monitored by the CMP (i.e., nutrients, pesticides, and toxicity). In addition to TMDL numeric limits, Ag Order 4.0 also includes numeric limits for waterbodies in non-TMDL areas. The Order also includes compliance dates for nutrients, pesticides and toxicity, and turbidity in non-TMDL areas, located in Tables C.3-3, C.3-5, and C.3-7 of Ag

Order 4.0, respectively. For the purposes of this report, discussion is focused on TMDL and non-TMDL area numeric limits from Ag Order 4.0 that directly correspond to the supplement CMP parameters sampled in 2021 and 2022. Refer to **Table 2-6** for a summary of hydrologic units monitored by the CMP and associated TMDL area limits, as well as Appendix A, which presents the specific TMDL and non-TMDL area limits applicable to each CMP site.

Table 2-6. Summary of Applicable TMDL and Non-TMDL Area Water Quality Limits

Hydrologic Unit	Applicable TMDL and Non-TMDL Area Water Quality Limits
305	• Pajaro River Watershed Nutrient TMDL[1] • Pajaro River Watershed Chlorpyrifos and Diazinon TMDL • Pajaro River Watershed Sediment TMDL[2] • Non-TMDL Area Turbidity Limits[1] • Non-TMDL Area Nutrient Limits[1] • Non-TMDL Area Pesticide and Toxicity Limits
309	• Lower Salinas River Watershed Nutrient TMDL[1] • Lower Salinas River Watershed Sediment Toxicity and Pyrethroids in Sediment TMDL • Lower Salinas River Watershed Chlorpyrifos and Diazinon TMDL • Non-TMDL Area Turbidity Limits[1] • Non-TMDL Area Nutrient Limits[1] • Non-TMDL Area Pesticide and Toxicity Limits
310	• Los Berros Creek Nitrate TMDL[1] • Los Osos Creek, Warden Creek, and Warden Lake Wetland Nutrient TMDL[1] • San Luis Obispo Creek Nitrate TMDL[1] • Morro Bay Sediment TMDL[2] • Non-TMDL Area Turbidity Limits[1] • Non-TMDL Area Nutrient Limits[1] • Non-TMDL Area Pesticide and Toxicity Limits
312	• Santa Maria River Watershed Nutrients TMDL[1] • Santa Maria River Watershed Toxicity and Pesticide TMDL • Non-TMDL Area Turbidity Limits[1] • Non-TMDL Area Pesticide and Toxicity Limits
313 and 314	• Non-TMDL Area Turbidity Limits[1] • Non-TMDL Area Nutrient Limits[1] • Non-TMDL Area Pesticide and Toxicity Limits
315	• Arroyo Paredon Nitrate TMDL[1] • Bell Creek Nitrate TMDL[1] • Franklin Creek Nutrients TMDL[1] • Glen Annie Canyon, Tecolotito Creek, and Carneros Creek Nitrate TMDL[1] • Non-TMDL Area Turbidity Limits[1] • Arroyo Paredon Diazinon TMDL • Non-TMDL Area Pesticide and Toxicity Limits

Notes:

1 Nutrient and turbidity related TMDL criteria are evaluated and summarized for 2022 in the *Central Coast Cooperative Monitoring Program 2022 Annual Water Quality Report* (CCWQP 2023).

2 The limits and units identified in Table C.3-6 of Ag Order 4.0 are not applicable to the parameters monitored for the CMP and are not assessed in this annual report.

2.5 QUALITY ASSURANCE AND QUALITY CONTROL

Water and sediment quality data collected by this monitoring program are compatible with State of California Surface Water Ambient Monitoring Program (SWAMP) data quality objectives. The CMP also generally follows guidance provided by the US EPA regarding data verification and validation (US EPA 2008, 2010a). Quality assurance protocols are described in detail in the CMP QAPP (CCWQP 2013). Briefly, field blank and duplicate samples were collected regularly to identify any contamination and to demonstrate the precision of sampling procedures. Laboratory control samples, method blanks, duplicates, and matrix spikes were also analyzed to identify contamination and to demonstrate precision and accuracy of analytical procedures. The number and frequency of quality control samples required for the CMP, as well as measurement quality objectives, are given in Tables A-8 through A-12 of the CMP QAPP. Additional details regarding quality control for toxicity bioassays are given in QAPP Appendix B (CCWQP 2013). Both field and laboratory instruments were calibrated according to a regular schedule and user manuals where applicable. Data generated by analytical laboratories were flagged as necessary by laboratory personnel and validated by the CMP quality assurance (QA) officer.

3.0 RESULTS

3.1 NORTHERN MONITORING UNIT

The Northern Monitoring Unit is comprised of two hydrologic units, Pajaro River HU (HU 305) and Salinas HU (HU 309). There are 31 sites total in the Northern Monitoring Unit, 12 in the Pajaro River and 19 in the Salinas HU. This section summarizes the results of pesticide, herbicide, metals and toxicity monitoring conducted in the Northern Monitoring Unit in 2021 and 2022. Complete analytical results for all analytes measured in water and sediment in the Northern Monitoring Unit during the 2021 and 2022 monitoring events can be found in Appendix B (Tables 1-22). In addition, this section summarizes a comparison of results to applicable TMDL and non-TMDL area limits associated with the Pajaro River HU and Salinas HU. The co-occurrence of the measured toxicants and toxicity are evaluated in Section 4.0 of this report.

3.1.1 Water

3.1.1.1 Pesticides

Appendix B, Tables 1 and 3, provide the measured concentrations of organophosphate and pyrethroid pesticides detected in water, and neonicotinoid pesticides detected in water, respectively, at NMU sites. These same tables also summarizes TMDL and non-TMDL area limit exceedances.

- Organophosphates were detected in water at 11 of the 31 monitoring sites in the Northern Monitoring Unit. Of the 14 organophosphates analyzed, only chlorpyrifos, dichlorvos, and malathion were detected in water. Of the three organophosphates detected, malathion was the most prevalent, and was found at all 11 monitoring sites with detections. The majority of detections (91%) were in the Salinas River HU.
- All six of the neonicotinoid pesticides analyzed in water were detected in the Northern Monitoring Unit. Out of 31 monitoring sites in the Northern Monitoring Unit, acetamiprid was detected at 21 sites, clothianidin was detected at 14 sites, dinotefuran was detected at seven sites, imidacloprid was detected at 19 sites, thiacloprid was detected at eight sites, and thiamethoxam was detected at 22 sites.
- Sixteen sites in the Salinas River HU have TMDL limits defined in the Lower Salinas River Watershed Chlorpyrifos and Diazinon TMDL. Only one site exceeded its respective TMDL Limits (Natividad Creek [309NAD]. 309NAD exceeded TMDL Limits for additive toxicity for chlorpyrifos and diazinon (based on calculations referencing both the criteria continuous concentration [CCC] and criteria maximum concentration [CMC] for chlorpyrifos and diazinon) and for chlorpyrifos (both the CCC and CMC).

- Three sites in the Pajaro River HU have TMDL limits defined in the Pajaro River Watershed Chlorpyrifos and Diazinon TMDL. No site exceeded its respective TMDL Limits.
- Six sites in the Northern Monitoring Unit exceeded at least one of its respective organophosphate non-TMDL area limits. All six sites exceeded the malathion non-TMDL area limit. Two of those six sites exceeded the non-TMDL area limit for dichlorvos in addition to malathion. All six sites were in the Salinas River HU.
- All 31 sites in the Northern Monitoring Unit have a neonicotinoid pesticide non-TMDL area limit. Nineteen sites exceeded at least one of its respective neonicotinoid pesticide non-TMDL area limits. Of the 19 sites with non-TMDL area limit exceedances, the imidacloprid limit was exceeded at all 19 sites, the clothianidin limit was exceeded at 14 sites, and the thiamethoxam limit was exceeded at 15 sites. The majority of exceedances (88%) were in the Salinas River HU.

3.1.1.2 Metals

Appendix B, Table 5 provides the measured concentrations of metals detected in water at NMU sites. All 14 metals that were analyzed in water were detected in the Northern Monitoring Unit. Metals are ubiquitous in the environment, and except for dissolved cadmium, total cadmium, and dissolved lead, each analyzed metal was detected at all sites that were sampled in the Northern Monitoring Unit.

3.1.1.3 Herbicides

Appendix B, Table 7 provides the measured concentrations of herbicides detected in water at NMU sites. This same table also summarizes any TMDL and non-TMDL area limit exceedances.

- Five of the eight herbicides analyzed were detected in water samples in the Northern Monitoring Unit. Of the 31 monitoring sites in the Northern Monitoring Unit, glyphosate was detected at 20 sites, cyanazine was detected at one site, diuron was detected at 21 sites, linuron was detected at seven sites, and simazine was detected at five sites. Atrazine, paraquat dichloride, and trifluralin were not detected at any sites in the NMU.
- All sites (31) in the Northern Monitoring Unit have non-TMDL area limits for herbicides. Of these sites, only Chualar Creek (309CCD) exceeded any non-TMDL area limit. Chualar Creek (309CCD) exceeded the herbicide non-TMDL area limit for linuron. No sites in the Pajaro River HU exceeded any of the herbicide non-TMDL limits.

3.1.2 Sediment

Appendix B, Tables 9 and 21, provide the measured concentrations and calculated TUs, respectively, for organophosphate and pyrethroid pesticides detected in sediment at NMU sites. These same tables also summarize TMDL and non-TMDL area limit exceedances.

3.1.2.1 Pesticides

- All 11 pesticides that were analyzed in sediment were detected in the Northern Monitoring Unit. Of the 31 monitoring sites in the Northern Monitoring Unit, bifenthrin was detected at 16 sites, chlorpyrifos was detected at two sites, total cyfluthrin was detected at two sites, gamma-cyhalothrin was detected at nine sites, total lamda-cyhalothrin was detected at nine sites, total cypermethrin was detected at five sites (all in Salinas River HU), esfenvalerate was detected at eight sites, fenpropathrin was detected at seven sites, fenvalerate was detected at seven sites, permethrin (cis + trans) was detected at 11 sites, and t-fluvalinate was detected at two sites.

- Sixteen sites in the Salinas River HU have TMDL limits, based on calculated TUs, defined in the Lower Salinas River Watershed Sediment Toxicity and Pyrethroids in Sediment TMDL. Eight sites exceeded one or more TMDL limits (309ALG, 309ASB, 309CCD, 309ESP, 309JON, 309NAD, 309OLD, 309TEH). Specifically, four of the six individual pyrethroid pesticide TU Limits (i.e., bifenthrin, cyhalothrin-lambda, cypermethrin, and permethrin) were exceeded. Additionally, the sum total of TUs for six target pyrethroids (i.e., bifenthrin, cyfluthrin, lambda-cyhalothrin, cypermethrin, esfenvalerate, and permethrin) exceeded the respective TMDL Limit.
- Thirty-one sites in the Northern Monitoring Unit have a concentration-based non-TMDL area limit for pesticides in sediment. Of these sites, only Natividad Creek (309NAD) exceeded any non-TMDL area limit. Natividad Creek (309NAD) exceeded the non-TMDL area limit for fenpropathrin. No sites in the Pajaro River HU exceeded any of the non-TMDL area limits for pesticides in sediment.
- Fifteen sites in the Northern Monitoring Unit have non-TMDL area limits, based on calculated TUs, for organophosphates and pyrethroid pesticides in sediment. Only one site exceeded any of the non-TMDL limits (Llagas Creek [305LCS]). While Llagas Creek (305LCS) did not exceed any non-TMDL area limit for individual pesticides, the sum total of TUs for six target pyrethroids (i.e., bifenthrin, cyfluthrin, lambda-cyhalothrin, cypermethrin, esfenvalerate, and permethrin) exceeded the respective non-TMDL area Limit.

3.2 SOUTHERN MONITORING UNIT

The Southern Monitoring Unit is comprised of five hydrologic units: Estero Bay HU (HU 310), Santa Maria River HU (HU 312), San Antonio Creek HU (HU 313), Santa Ynez HU (HU 314), and South Coast HU (HU 315). There are 25 sites total in the Southern Monitoring Unit, six in the Estero Bay HU, 10 in the Santa Maria River HU, one in the San Antonio Creek HU, three in the Santa Ynez HU, and six in the South Coast HU. This section summarizes the results of pesticide, herbicide, metals, and toxicity monitoring conducted in the Southern Monitoring Unit in 2021 and 2022. Complete analytical results for all analytes measured in water and sediment in the Southern Monitoring Unit during the 2021 and 2022 monitoring events can be found in **Appendix B** (Tables 1-22). In addition, this section compares results to applicable TMDL and non-TMDL area limits associated with the Estero Bay HU, Santa Maria River HU, San Antonio Creek HU, Santa Ynez HU, and South Coast HU. The co-occurrence of the measured toxicants are evaluated in Section 4.0 of this report.

3.2.1 Water

3.2.1.1 Pesticides

Appendix B, Tables 2 and 4, provide the measured concentrations of organophosphate and pyrethroid pesticides detected in water, and neonicotinoids pesticides detected in water, respectively, at SMU sites. These same tables also summarize TMDL and non-TMDL area limit exceedances.

- Organophosphate pesticides were detected in water at 10 of the 25 monitoring sites in the Southern Monitoring Unit. Of the 14 organophosphate and pyrethroid pesticides analyzed, only chlorpyrifos, diazinon, dichlorvos, and malathion were detected in water. Of the four organophosphate pesticides detected, malathion was the most prevalent, and was found in all 10 monitoring sites with detections. All detections were in the Santa Maria River HU except for one in the Estero Bay HU.
- Five of the six neonicotinoid pesticides analyzed in water were detected in the Southern Monitoring Unit. Of the 25 monitoring sites in the Southern Monitoring Unit, acetamiprid was detected at 11 sites; clothianidin was detected at seven sites, dinotefuran was detected at six sites, imidacloprid was detected at 18 sites, and thiamethoxam was detected at 17 sites. Thiacloprid was not detected in the Southern Monitoring Unit.
- Ten sites in the Santa Maria River HU have TMDL limits defined in the Santa Maria River Watershed Toxicity and Pesticide TMDL. Four sites exceeded their respective TMDL Limits (Bradley Canyon Creek [312BCC], Main Street Canal [312MSD], Oso Flaco Creek [312OFC], Little Oso Flaco Creek [312OFRN]). All four sites exceeded the TMDL limit for malathion. There were no exceedances of the remaining organophosphate TMDL limits.

- One site in the South Coast HU has a TMDL limit defined in the Arroyo Paredon Diazinon TMDL (Arroyo Paredon [315APF]). 315APF did not exceed its respective TMDL Limits.
- Twenty-five sites in the Southern Monitoring Unit have non-TMDL area limits for organophosphate pesticides. Three sites exceeded at least one of its respective organophosphate non-TMDL area limits (Arroyo Grande Creek [310USG], Oso Flaco Creek [312OFC], Orcutt Solomon Creek [312ORI]). Arroyo Grande Creek (310USG), in the Estero Bay HU, exceeded the non-TMDL area limit or malathion. The remaining two sites, located in the Santa Maria River HU, exceeded the non-TMDL area limit for dichlorvos.
- Twenty-five sites in the Southern Monitoring Unit have a non-TMDL area limit for neonicotinoid pesticides. Eighteen sites exceeded at least one of its respective non-TMDL area limits. Of the 18 sites with non-TMDL area limit exceedances, the acetamiprid limit was exceeded at three sites, the clothianidin limit was exceeded at six sites, the imidacloprid limit was exceeded at all 18 sites, and the thiamethoxam limit was exceeded at seven sites. The acetamiprid and thiamethoxam limits were exceeded only in the Santa Maria River HU.

3.2.1.2 Metals

Appendix B, Table 6, provides the measured concentrations of metals detected in water at SMU sites. This same table also summarizes TMDL and non-TMDL area limit exceedances. All 14 metals that were analyzed in water were detected in the Southern Monitoring Unit. Metals are ubiquitous in the environment, and except for dissolved cadmium, total cadmium, dissolved lead, dissolved zinc, each analyzed metal was detected at all sites that were sampled in the Southern Monitoring Unit.

3.2.1.3 Herbicides

Appendix B, Table 8, provides the measured concentrations of herbicides detected in water at SMU sites. This same tables also summarize TMDL and non-TMDL area limit exceedances.

- Five of the eight herbicides analyzed in water were detected in the Southern Monitoring Unit. Of the 25 monitoring sites in the Southern Monitoring Unit, glyphosate was detected at 13 sites, diuron was detected at 15 sites, linuron was detected at 13 sites, simazine was detected at five sites, and trifluralin was detected at three sites. Atrazine, cyanazine, and paraquat dichloride were not detected at any sites in the Southern Monitoring Unit.
- No exceedances of the non-TMDL area limits for herbicides in water were observed in the Southern Monitoring Unit.
- All sites (25) in the Southern Monitoring Unit have a non-TMDL area limit for herbicides in water. Seven sites exceeded at least one of its respective non-TMDL area limits. Of the seven sites with non-TMDL area limit exceedances, six were in the Santa Maria River HU and one was in the Estero Bay HU. All seven exceedances were for linuron.

3.2.2 Sediment

3.2.2.1 Pesticides

Appendix B, Tables 10 and 22, provide the measured concentrations and calculated TUs, respectively, for organophosphate and pyrethroid pesticides detected in sediment at SMU sites. These same tables also summarize TMDL and non-TMDL area limit exceedances.

- All 11 pesticides analyzed in sediment were detected in the Southern Monitoring Unit. Of the 25 monitoring sites in the Southern Monitoring Unit, bifenthrin was detected at 13 sites, chlorpyrifos was detected at two sites, total cyfluthrin was detected at four sites, gamma-cyhalothrin was detected at seven sites, total lamda-cyhalothrin was detected at seven sites, total cypermethrin was detected at one site (San Antonio Creek HU), esfenvalerate was detected at six sites, fenpropathrin was detected at nine sites, fenvalerate was detected at three sites, permethrin (cis + trans) was detected at eight sites, and t-fluvalinate was detected at one site (South Coast HU).

- Ten sites in the Santa Maria River HU have TMDL limits, based on calculated TUs, defined in the Santa Maria River Watershed Toxicity and Pesticide TMDL. Five sites exceeded one or more TMDL limits (312BCJ, 312MSD, 312OFC, 312OFN, 312ORI). Specifically, two of the six individual pyrethroid pesticide TU Limits (i.e., bifenthrin and cyhalothrin-lambda) were exceeded. Additionally, the sum total of TUs for six target pyrethroids (i.e., bifenthrin, cyfluthrin, lambda-cyhalothrin, cypermethrin, esfenvalerate, and permethrin) exceeded the respective TMDL Limit.
- All sites (25) in the Southern Monitoring Unit have a concentration-based non-TMDL area limit for pesticides in sediment. Five sites exceeded one or more non-TMDL area limits. In the Estero Bay HU, Arroyo Grande Creek (310USG) exceeded the non-TMDL area limit for lambda-cyhalothrin. In the Santa Maria River HU, Bradley Channel (312BCJ) and Oso Flaco Creek (312OFC) exceeded the non-TMDL area limit for fenpropathrin. In the Santa Ynez HU, Santa Ynez River at 13th Street (314SYN) exceeded the non-TMDL area limit for bifenthrin. In the South Coast HU, Los Carneros Creek (315LCC) exceeded the non-TMDL area limit for fenpropathrin.
- Fifteen sites in the Southern Monitoring Unit have non-TMDL area limits, based on calculated TUs, for organophosphate and pyrethroid pesticides in sediment. Two sites exceeded one or more non-TMDL area limits (Arroyo Grande Creek [310USG] and Santa Ynez River [314SYN]). Specifically, two of the six individual pyrethroid pesticide TU limits (i.e., bifenthrin and cyhalothrin-lambda) were exceeded. Additionally, the sum total of TUs for the six target pyrethroids (i.e., bifenthrin, cyfluthrin, lambda-cyhalothrin, cypermethrin, esfenvalerate, and permethrin) exceeded the respective non-TMDL area limit.

4.0 DISCUSSION OF TOXICANTS AND TOXIC EFFECTS

4.1 NORTHERN MONITORING UNIT

4.1.1 Water

Very little toxicity to algae was observed in the Northern Monitoring Unit during this study, and of the eight samples that did show toxic effects, including duplicates (i.e., significantly reduced growth rates), none had sufficient herbicide concentrations in corresponding water samples to explain the observed toxicity (Appendix B, Figure 10). These samples were collected from the Pajaro River at Chittenden (305CHI), San Juan Creek (305SJA), Tequisquita Slough (305TSR), Salinas Reclamation Canal above Salinas (309ALG), Espinosa Slough (309ESP), Moro Cojo Slough (309MOR), and Natividad Creek (309NAD), and had growth rates reduced to 0-79% of control rates; however, less than 0.1 TU of herbicides were detected in all of these samples. One sample collected in December 2021 at Millers Canal at Frazier Lake Rd. had 0.64 TUs of measured herbicides, but did not show reduced algal growth in the corresponding bioassay. All other samples had herbicide TUs that were well below 0.1 TU.

Toxic units were not calculated for metals in water; however, the concentrations detected were compared with regulatory thresholds for protection of sensitive aquatic invertebrates. Though metals were present in every sample at some level, there did not appear to be a general relationship between metal detections and toxicity to invertebrates in bioassays, with metal concentrations being generally one to two (or more) orders-of-magnitude *less* than their corresponding CMC.

Thirty-five and 26% of the study samples (including duplicates) were significantly toxic to *Ceriodaphnia* and *Chironomus,* respectively. In only 15 of the 76 *Chironomus* tests (20%) were pesticides detected in concentrations that summed to ≥0.5 TUs, all of which were from the Salinas River HU. All 15 samples that summed to ≥0.5 TUs were from the neonicotinoid class. None of the 96 *C. dubia* tests had pesticides detected in concentrations that summed to ≥0.5 TUs.

Thirteen samples (including one duplicate) showed significant mortality to *C. dubia*, and 23 samples (including two duplicates) showed significant mortality to *Chironomus* (Appendix B, Figures 8 and 9). No samples with significant mortality to *C. dubia* and 12 samples with significant mortality to *Chironomus* had ≤ 0.5 TUs of organophosphate and neonicotinoid pesticides.

The relationship between survival rates for test organisms in water and added TUs across pesticide classes is less intuitive than the relationship observed in sediment samples. A more intuitive feature was that measured pesticides *were* linked to significant mortality where detected at concentrations known to be toxic. However, a substantial portion of the observed mortality could not be readily explained by the pesticides measured in this study (i.e., the measured pesticides were not detected, or were below toxic thresholds). One possible explanation is interactive pesticide toxicity (i.e., synergistic toxicity beyond additive effects), and another would be the presence of additional pesticides (or other kinds of toxicants) not analyzed for this study.

4.1.2 Sediment

Comparison of survival rates to added TUs in sediment across both measured pesticide classes (i.e., pyrethroids and the organophosphate, chlorpyrifos) indicates that there is generally lower survival at higher TUs (Appendix B, Figure 1). In 14 of the 17 samples (82%) (including duplicates) where one or more pesticides were detected in concentrations that summed to 0.5 TUs or more, significant mortality was observed in concurrent toxicity tests. Statistically significant mortality was also observed in 1 sample with less than 0.5 TUs, which could be due to interactive pesticide toxicity (i.e., synergistic toxicity beyond additive effects) or other factors such as pesticides (or other kinds of toxicants) not analyzed for this study. Due to the non-homogenous nature of sediments and the large sample volumes required for this study it is also possible that despite efforts to homogenize samples, two sediment aliquots split from the same grab did not share identical chemistries, such that different pesticide concentrations could be present in sediment aliquots analyzed for toxicity (i.e., the bioassays) versus those analyzed for pesticide concentrations. A final consideration is the accuracy of the laboratory pesticide analyses. Based on the program's QA/QC and data validation outcomes, there is no reason to doubt the analyses, however this is always a consideration to bear in mind when bioassay results are inconsistent with chemistry results.

The only organophosphate analyzed in sediment – chlorpyrifos – was not present at concentrations with TUs ≥0.5. Chlorpyrifos was found at concentrations amounting to 0.04-0.19 TU at six sites.

Pyrethroids, specifically bifenthrin, were the class of pesticides most associated with sediment toxicity, with total (added) pyrethroid TUs ≥0.5 in 15 samples (including duplicates) collected from 15 sites. Individual pyrethroids detected at concentrations at or above the 0.5 TU threshold included bifenthrin (one site in the Pajaro River HU and ten sites in the Salinas River HU), gamma-cyhalothrin (four sites in the Salinas River HU), lambda-cyhalothrin (four sites in the Salinas River HU), cypermethrin (three sites in the Salinas River HU), fenpropathrin (one site in the Salinas River HU), and permethrin (cis+trans) (one site in the Salinas River HU). In some cases, pyrethroids were detected in tandem with chlorpyrifos, but individual pyrethroid TUs always far outweighed contributions from chlorpyrifos. There were only two sites that did not show toxicity despite the presence of ≥ 0.5 pyrethroid TUs (Pajaro River at Main St. [305PJP] and Watsonville Creek at Salinas Road [305WCS]). At all other sites having pyrethroid TUs ≥ 0.5, there was toxicity to *H. azteca*.

A series of maps depicting monitoring sites and showing added pesticide TUs for *H. azteca* in sediment are displayed in the Appendix B, Figures 2-7. It is important to note that while summed toxic units are a useful indicator metric, not all toxicants have the same mode of action and so toxicity of individual compounds is not likely to be fully additive in every case, and in some cases, may be greater than additive.

Despite the general relationship described above between the presence of pyrethroid and/or chlorpyrifos TUs and observed toxicity to *H. azteca*, 1 of 25 samples (Watsonville Slough at San Andreas Rd. [305WSA]), including duplicates, showed lethal toxicity even though less than 0.5 TUs of measured pesticides were present.

4.2 SOUTHERN MONITORING UNIT

4.2.1 Water

Very little toxicity to algae was observed during this study (4 of 73 tests, or 5%), and of the four samples that did show toxic effects (i.e., significantly reduced growth rates), none had sufficient herbicide concentrations in corresponding water samples to explain the observed toxicity (Appendix B, Figure 10). These samples were collected from the Main St. Canal (312MSD), Oso Flaco Creek (312OFC), Arroyo Paredon Creek (315APF), and Bell Creek (315BEF), and had growth rates reduced to 11-78% of control rates; however, less than 0.1 TU of herbicides were detected in any of these samples. No samples collected from the Southern Monitoring Unit had ≥0.5 TUs of measured herbicides. All samples had herbicide TUs that were below 0.2 TU.

Toxic units were not calculated for metals in water; however, the concentrations detected were compared with regulatory thresholds for protection of sensitive aquatic invertebrates. Though metals were present in every sample at some level, there did not appear to be a general relationship between metal detections and toxicity to invertebrates in bioassays, with metal concentrations being generally one to two (or more) orders-of-magnitude *less* than their corresponding CMC.

Forty-five and 34% of the study samples (including duplicates) were significantly toxic to *Ceriodaphnia* and *Chironomus,* respectively. In 17 of the 65 *Chironomus* tests (26%) were pesticides detected in concentrations that summed to ≥0.5 TUs, most of which were from the Santa Maria River HU. All 17 samples that summed to ≥0.5 TUs were from the neonicotinoid class. In two of the 73 *C. dubia* tests (3%) were pesticides detected in concentrations that summed to ≥0.5 TUs.

Thirteen of the samples (including duplicates) showed significant mortality to *C. dubia*, and 22 of the samples (including duplicates) showed significant mortality to *Chironomus* (Appendix B, Figures 8 and 9). Eleven of 13 samples (85%) with significant mortality to *C. dubia* had ≤ 0.5 TUs of organophosphate and neonicotinoid pesticides. Seven of 22 (32%) samples that showed significant mortality to *Chironomus* had ≤ 0.5 TUs of organophosphate and neonicotinoid pesticides.

The relationship between survival rates for test organisms in water and added TUs across pesticide classes is less intuitive than the relationship observed in sediment samples. A more intuitive feature was that measured pesticides *were* linked to significant mortality where detected at concentrations known to be toxic. However, a substantial portion of the observed mortality could not be readily explained by the pesticides measured in this study (i.e., the measured pesticides were not detected, or were below toxic thresholds). One possible explanation is interactive pesticide toxicity (i.e., synergistic toxicity beyond additive effects), and another would be the presence of additional pesticides (or other kinds of toxicants) not analyzed for this study.

4.2.2 Sediment

Comparison of survival rates to added TUs in sediment across both measured pesticide classes (i.e., pyrethroids and the organophosphate, chlorpyrifos) indicates that there is generally lower survival at higher TUs (Appendix B, Figure 1). In 11 of the 16 samples where one or more pesticides were detected in concentrations that summed to 0.5 TUs or more, significant mortality was observed in concurrent toxicity tests. Statistically significant mortality was also observed in eight samples with less than 0.5 TUs, which could be due to interactive pesticide toxicity (i.e., synergistic toxicity beyond additive effects) or other factors such as pesticides (or other kinds of toxicants) not analyzed for this study. Due to the non-homogenous nature of sediments and the large sample volumes required for this study it is also possible that despite efforts to homogenize samples, two sediment aliquots split from the same grab did not share identical chemistries, such that different pesticide concentrations could be present in sediment aliquots analyzed for toxicity (i.e., the bioassays) versus those analyzed for pesticide concentrations. A final consideration is the accuracy of the laboratory pesticide analyses. Based on the program's QA/QC and data

validation outcomes, there is no reason to doubt the analyses, however this is always a consideration to bear in mind when bioassay results are inconsistent with chemistry results.

The only organophosphate analyzed in sediment – chlorpyrifos – was not present at concentrations with TUs ≥0.5. Chlorpyrifos was found at concentrations amounting to 0.11-0.22 TU at six sites.

Pyrethroids, specifically bifenthrin, were the class of pesticides most associated with sediment toxicity, with total (added) pyrethroid TUs ≥0.5 in 16 samples (including duplicates) collected from 11 sites. Individual pyrethroids detected at concentrations at or above the 0.5 TU threshold included bifenthrin (four sites in the Santa Maria River HU, one site in the Lompoc HU, and two sites in the Santa Barbara HU), gamma-cyhalothrin (one site in the Estero Bay HU, two sites in the Santa Maria River HU, and one site in the San Antonio HU), lambda-cyhalothrin (one site in the Estero Bay HU, two sites in the Santa Maria River HU, and one site in the San Antonio HU), fenpropathrin (two sites in the Santa Maria River HU and one site in the Santa Barbara HU), and permethrin (cis+trans) (two sites in the Santa Maria River HU). In some cases, pyrethroids were detected in tandem with chlorpyrifos, but pyrethroid TUs always far outweighed contributions from chlorpyrifos. There were only three sites that did not show toxicity despite the presence of ≥ 0.5 pyrethroid TUs (Arroyo Grande Creek [310USG], Santa Ynez River at 13th St [314SYN], and Glen Annie Creek [315GAN]). At all other sites having pyrethroid TUs ≥ 0.5, there was toxicity to *H. azteca*.

A series of maps depicting monitoring sites and showing added pesticide TUs for *H. azteca* in sediment are displayed in Appendix B, Figures 2-7). It is important to note that while summed toxic units are a useful indicator metric, not all toxicants have the same mode of action and so toxicity of individual compounds is not likely to be fully additive in every case, and in some cases, may be greater than additive.

Despite the general relationship described above between the presence of pyrethroid and/or chlorpyrifos TUs and observed toxicity to *H. azteca*, 8 of 19 samples, including duplicates, showed lethal toxicity even though less than 0.5 TUs of measured pesticides were present.

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APPENDIX A – TMDL AND NON-TMDL AREA LIMITS

Table 1. Summary of Water TMDL Limits and Non-TMDL Area Limits for Sites in Hydrologic Unit 305 (HU 305)

CMP Site ID	CMP Site Description	Pajaro River Watershed Chlorpyrifos and Diazinon TMDL							Organophosphate Pesticides Non-TMDL Area Limits													Neonicotinoid Non-TMDL Area Limits						Herbicides Non-TMDL Area Limits								Toxicity Non-TMDL Area Limits
		Water column toxicity[1]	Additive Toxicity[2], Chlorpyrifos + Diazinon (CCC)	Additive Toxicity[3], Chlorpyrifos + Diazinon (CMC)	Chlorpyrifos CCC[4], 0.015 ug/L	Chlorpyrifos CMC[5], 0.025 ug/L	Diazinon CCC[4], 0.10 µg/L	Diazinon CMC[5], 0.16 µg/L	Chlorpyrifos, 0.023 ug/L	Demeton-S, 46.0 ug/L	Diazinon, 0.105 ug/L	Dichlorvos, 0.0058 ug/L	Dimethoate, 0.50 ug/L	Disulfoton, 0.01 ug/L	Malathion, 0.045 ug/L	Methamidophos, 4.50 ug/L	Methidathion, 0.66 ug/L	Parathion-methyl, 0.25 ug/L	Phorate, 0.21 ug/L	Phosmet, 0.80 ug/L	Additive Toxicity, Chlorpyrifos + Diazinon CCC[1]	Additive Toxicity, Chlorpyrifos + Diazinon CMC[2]	Acetamiprid, 2.10 ug/L	Clothianidin, 0.05 ug/L	Dinotefuran, 23.5 ug/L	Imidacloprid, 0.01 ug/L	Thiacloprid, 0.97 ug/L	Thiamethoxam, 0.74 ug/L	Atrazine, 60.0 ug/L	Cyanazine, 27.0 ug/L	Diuron, 80.0 ug/L	Glyphosate, 26,600 ug/L	Linuron, 0.09 ug/L	Paraquat dichloride, 36.9 ug/L	Simazine, 40.0 ug/L	Trifluralin, 2.40 ug/L	Toxicity[5]
305BRS	Beach Road Ditch	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305CAN	Carnadero Creek	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305CHI	Pajaro River at Chittenden	X	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	-
305COR	Salsipuedes Creek	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305FRA	Millers Canal	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305FUF	Furlong Creek	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305LCS	Llagas Creek	X	X	X	X	X	-	-	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	-
305PJP	Pajaro River at Main St.	X	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	-
305SJA	San Juan Creek	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305TSR	Tequisquita Slough	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305WCS	Watsonville Creek	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305WSA	Watsonville Slough	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes:

CCC	Criterion Continuous Concentration
CMC	Criterion Maximum Concentration
TMDL	total maximum daily load
ug/L	micrograms per liter
1	No significant effect based on chronic or acute toxicity to applicable test organism.
2	Additive Toxicity, Chlorpyrifos + Diazinon, CCC: (concentration of diazinon/0.10 ug/L numeric target for diazinon) + (concentration of chlorpyrifos/0.015 ug/L numeric target for chlorpyrifos) ≤ 1.0.
3	Additive Toxicity, Chlorpyrifos + Diazinon, CMC: (concentration of diazinon/0.16 ug/L numeric target for diazinon) + (concentration of chlorpyrifos/0.025 ug/L numeric target for chlorpyrifos) ≤ 1.0.
4	CCC is exceeded when more than one sample result at a site exceeds the criterion in a 3-year period.
5	CMC is exceeded when more than one sample result at a site exceeds the criterion in a 3-year period.

Table 2. Summary of Sediment TMDL Limits and Non-TMDL Area Limits for Sites in Hydrologic Unit 305 (HU 305)

CMP Site ID	CMP Site Description	Pajaro River Watershed Chlorpyrifos and Diazinon TMDL	Organophosphate Pesticide Non-TMDL Area Limits	Pyrethroid Non-TMDL Area Limits								Toxicity Non-TMDL Area Limits	Toxic Units for Organophosphate and Pyrethroid Pesticides Non-TMDL Area Limits						
		Sediment toxicity[1]	Chlorpyrifos, 1.77 µg/g o.c.	Bifenthrin, 0.52 µg/g o.c.	Cyfluthrin, Total, 1.08 µg/g o.c.	Cyhalothrin, Total lambda-, 0.45 µg/g o.c.	Cypermethrin, Total, 0.38 µg/g o.c.	Esfenvalerate, 1.54 µg/g o.c.	Fenpropathrin, 1.10 µg/g o.c.	Fenvalerate, 1.54 µg/g o.c.	Permethrin (cis + trans), 10.83 µg/g o.c.	Toxicity[1]	Bifenthrin TU < 1.0[2]	Cyfluthrin TU < 1.0[3]	Cypermethrin TU < 1.0[4]	Esfenvalerate TU< 1.0[5]	Lambda-Cyhalothrin TU < 1.0[6]	Permethrin TU < 1.0[7]	Pyrethroids TU < 1.0[8]
305BRS	Beach Road Ditch	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305CAN	Carnadero Creek	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305CHI	Pajaro River at Chittenden	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X
305COR	Salsipuedes Creek	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305FRA	Millers Canal	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305FUF	Furlong Creek	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305LCS	Llagas Creek	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X
305PJP	Pajaro River at Main St.	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X
305SJA	San Juan Creek	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305TSR	Tequisquita Slough	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305WCS	Watsonville Creek	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
305WSA	Watsonville Slough	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes:

TMDL total maximum daily load
µg/g o.c. micrograms per gram, normalized to the organic carbon content of the sediment.
1 No significant effect based on chronic or acute toxicity to applicable test organism.
2 Pyrethroid TU (1) = sample concentration (oc) / 0.52 µg/g (TMDL bifenthrin LC50 oc concentration) < 1.0.
3 Pyrethroid TU (2) = sample concentration (oc) / 1.08 µg/g (TMDL cyfluthrin LC50 oc concentration) < 1.0.
4 Pyrethroid TU (3) = sample concentration (oc) / 0.38 µg/g (TMDL cypermethrin LC50 oc concentration) < 1.0.
5 Pyrethroid TU (4) = sample concentration (oc) / 1.54 µg/g (TMDL esfenvalerate LC50 oc concentration) < 1.0.
6 Pyrethroid TU (5) = sample concentration (oc) / 0.45 µg/g (TMDL lambda-cyhalothrin LC50 oc concentration) < 1.0.
7 Pyrethroid TU (6) = sample concentration (oc) / 10.83 µg/g (TMDL permethrin LC50 oc concentration) < 1.0.
8 Sum total of Pyrethroid TUs (1+2+3+4+5+6) < 1.0.

Table 3. Summary of Water TMDL Limits and Non-TMDL Area Limits for Sites in Hydrologic Unit 309 (HU 309)

CMP Site ID	CMP Site Description	Lower Salinas River Watershed Chlorpyrifos and Diazinon TMDL						Organophosphate Pesticides Non-TMDL Area Limits													Neonicotinoid Non-TMDL Area Limits						Herbicides Non-TMDL Area Limits								Toxicity Non-TMDL Area Limits
		Additive Toxicity[1], Chlorpyrifos + Diazinon (CCC)	Additive Toxicity[2], Chlorpyrifos + Diazinon (CMC)	Chlorpyrifos CCC[3], 0.015 ug/L	Chlorpyrifos CMC[4], 0.025 ug/L	Diazinon CCC[3], 0.10 µg/L	Diazinon CMC[4], 0.16 µg/L	Chlorpyrifos, 0.023 ug/L	Demeton-S, 46.0 ug/L	Diazinon, 0.105 ug/L	Dichlorvos, 0.0058 ug/L	Dimethoate, 0.50 ug/L	Disulfoton, 0.01 ug/L	Malathion, 0.045 ug/L	Methamidophos, 4.50 ug/L	Methidathion, 0.66 ug/L	Parathion-methyl, 0.25 ug/L	Phorate, 0.21 ug/L	Phosmet, 0.80 ug/L	Additive Toxicity[1], Chlorpyrifos + Diazinon (CCC)	Additive Toxicity[2], Chlorpyrifos + Diazinon (CMC)	Acetamiprid, 2.10 ug/L	Clothianidin, 0.05 ug/L	Dinotefuran, 23.5 ug/L	Imidacloprid, 0.01 ug/L	Thiacloprid, 0.97 ug/L	Thiamethoxam, 0.74 ug/L	Atrazine, 60.0 ug/L	Cyanazine, 27.0 ug/L	Diuron, 80.0 ug/L	Glyphosate, 26,600 ug/L	Linuron, 0.09 ug/L	Paraquat dichloride, 36.9 ug/L	Simazine, 40.0 ug/L	Trifluralin, 2.40 ug/L	Toxicity[5]
309ALG	Salinas Reclamation Canal	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309ASB	Alisal Slough	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309BLA	Blanco Drain	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309CCD	Blanco Drain	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309CRR	Chualar Creek West	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309ESP	Espinosa Slough	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309GAB	Gabilan Creek	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309GRN	Salinas River at Elm Rd.	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
309JON	Salinas Reclamation Canal	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309MER	Merritt Ditch	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309MOR	Moro Cojo Slough	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
309NAD	Natividad Creek	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309OLD	Old Salinas River	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309QUI	Quail Creek	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309RTA	Santa Rita Creek	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
309SAC	Salinas River at Chualar Bridge	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309SAG	Salinas River at Gonzales River Rd. Bridge	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309SSP	Salinas River at Spreckels Gage	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
309TEH	Tembladero Slough	X	X	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes:

CCC	Criterion Continuous Concentration
CMC	Criterion Maximum Concentration
TMDL	total maximum daily load
ug/L	micrograms per liter
1	Additive Toxicity, Chlorpyrifos + Diazinon, CCC: (concentration of diazinon/0.10 ug/L numeric target for diazinon) + (concentration of chlorpyrifos/0.015 ug/L numeric target for chlorpyrifos) ≤ 1.0.
2	Additive Toxicity, Chlorpyrifos + Diazinon, CMC: (concentration of diazinon/0.16 ug/L numeric target for diazinon) + (concentration of chlorpyrifos/0.025 ug/L numeric target for chlorpyrifos) ≤ 1.0.
3	CCC is exceeded when more than one sample result at a site exceeds the criterion in a 3-year period.
4	CMC is exceeded when more than one sample result at a site exceeds the criterion in a 3-year period.
5	No significant effect based on chronic or acute toxicity to applicable test organism.

Table 4. Summary of Sediment TMDL Limits and Non-TMDL Area Limits for Sites in Hydrologic Unit 309 (HU 309)

CMP Site ID	CMP Site Description	Lower Salinas River Watershed Sediment Toxicity and and Pyrethroids in Sediment TMDL								Organophosphate Pesticide Non-TMDL Area Limits	Pyrethroid Pesticide Non-TMDL Area Limits								Toxicity Non-TMDL Area Limits	Toxic Units for Organophosphate and Pyrethroid Pesticides Non-TMDL Area Limits						
		Sediment toxicity[1]	Bifenthrin TU < 1.0[2]	Cyfluthrin TU < 1.0[3]	Cypermethrin TU < 1.0[4]	Esfenvalerate TU < 1.0[5]	Lambda-Cyhalothrin TU < 1.0[6]	Permethrin TU < 1.0[7]	Pyrethroids TU < 1.0[8]	Chlorpyrifos, 1.77 µg/g o.c.	Bifenthrin, 0.52 µg/g o.c.	Cyfluthrin, Total, 1.08 µg/g o.c.	Cyhalothrin, Total lambda-, 0.45 µg/g o.c.	Cypermethrin, Total, 0.38 µg/g o.c.	Esfenvalerate, 1.54 µg/g o.c.	Fenpropathrin, 1.10 µg/g o.c.	Fenvalerate, 1.54 µg/g o.c.	Permethrin (cis + trans), 10.83 µg/g o.c.	Toxicity[1]	Bifenthrin TU < 1.0[2]	Cyfluthrin TU < 1.0[2]	Cypermethrin TU < 1.0[4]	Esfenvalerate TU < 1.0[5]	Lambda-Cyhalothrin TU < 1.0[6]	Permethrin TU < 1.0[7]	Pyrethroids TU < 1.0[8]
309ALG	Salinas Reclamation Canal	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309ASB	Alisal Slough	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309BLA	Blanco Drain	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309CCD	Blanco Drain	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309CRR	Chualar Creek West	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309ESP	Espinosa Slough	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309GAB	Gabilan Creek	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309GRN	Salinas River at Elm Rd.	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
309JON	Salinas Reclamation Canal	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309MER	Merritt Ditch	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309MOR	Moro Cojo Slough	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
309NAD	Natividad Creek	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309OLD	Old Salinas River	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309QUI	Quail Creek	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309RTA	Santa Rita Creek	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
309SAC	Salinas River at Chualar Bridge	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309SAG	Salinas River at Gonzales River Rd. Bridge	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309SSP	Salinas River at Spreckels Gage	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-
309TEH	Tembladero Slough	X	X	X	X	X	X	X	X	X	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-

Notes:

TMDL total maximum daily load
µg/g o.c. micrograms per gram, normalized to the organic carbon content of the sediment.
1 No significant effect based on chronic or acute toxicity to applicable test organism.
2 Pyrethroid TU (1) = sample concentration (oc) / 0.52 µg/g (TMDL bifenthrin LC50 oc concentration) < 1.0.
3 Pyrethroid TU (2) = sample concentration (oc) / 1.08 µg/g (TMDL cyfluthrin LC50 oc concentration) < 1.0.
4 Pyrethroid TU (3) = sample concentration (oc) / 0.38 µg/g (TMDL cypermethrin LC50 oc concentration) < 1.0.
5 Pyrethroid TU (4) = sample concentration (oc) / 1.54 µg/g (TMDL esfenvalerate LC50 oc concentration) < 1.0.
6 Pyrethroid TU (5) = sample concentration (oc) / 0.45 µg/g (TMDL lambda-cyhalothrin LC50 oc concentration) < 1.0.
7 Pyrethroid TU (6) = sample concentration (oc) / 10.83 µg/g (TMDL permethrin LC50 oc concentration) < 1.0.
8 Sum total of Pyrethroid TUs (1+2+3+4+5+6) < 1.0.

Table 5. Summary of Water TMDL Limits and Non-TMDL Area Limits for Sites in Hydrologic Unit 310 (HU 310)

CMP Site ID	CMP Site Description	Organophosphate Pesticides Non-TMDL Area Limits														Neonicotinoid Non-TMDL Area Limits						Herbicides Non-TMDL Area Limits								Toxicity Non-TMDL Area Limits
		Chlorpyrifos, 0.023 ug/L	Demeton-S, 46.0 ug/L	Diazinon, 0.105 ug/L	Dichlorvos, 0.0058 ug/L	Dimethoate, 0.50 ug/L	Disulfoton, 0.01 ug/L	Malathion, 0.045 ug/L	Methamidophos, 4.50 ug/L	Methidathion, 0.66 ug/L	Parathion-methyl, 0.25 ug/L	Phorate, 0.21 ug/L	Phosmet, 0.80 ug/L	Additive Toxicity, Chlorpyrifos + Diazinon CCC[1]	Additive Toxicity, Chlorpyrifos + Diazinon CMC[2]	Acetamiprid, 2.10 ug/L	Clothianidin, 0.05 ug/L	Dinotefuran, 23.5 ug/L	Imidacloprid, 0.01 ug/L	Thiacloprid, 0.97 ug/L	Thiamethoxam, 0.74 ug/L	Atrazine, 60.0 ug/L	Cyanazine, 27.0 ug/L	Diuron, 80.0 ug/L	Glyphosate, 26,600 ug/L	Linuron, 0.09 ug/L	Paraquat dichloride, 36.9 ug/L	Simazine, 40.0 ug/L	Trifluralin, 2.40 ug/L	Toxicity[3]
310CCC	Chorro Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
310LBC	Los Berros Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
310PRE	Prefumo Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
310SLD	Davenport Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
310USG	Arroyo Grande Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
310WRP	Warden Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes:

CCC	Criterion Continuous Concentration
CMC	Criterion Maximum Concentration
TMDL	total maximum daily load
ug/L	micrograms per liter
1	Additive Toxicity, Chlorpyrifos + Diazinon, CCC: (concentration of diazinon/0.10 ug/L numeric target for diazinon) + (concentration of chlorpyrifos/0.015 ug/L numeric target for chlorpyrifos) ≤ 1.0.
2	Additive Toxicity, Chlorpyrifos + Diazinon, CMC: (concentration of diazinon/0.16 ug/L numeric target for diazinon) + (concentration of chlorpyrifos/0.025 ug/L numeric target for chlorpyrifos) ≤ 1.0.
3	No significant effect based on chronic or acute toxicity to applicable test organism.

Table 6. Summary of Sediment TMDL Limits and Non-TMDL Area Limits for Sites in Hydrologic Unit 310 (HU 310)

CMP Site ID	CMP Site Description	Organophosphate Pesticide Non-TMDL Area Limits	Pyrethroid Pesticide Non-TMDL Area Limits								Toxicity Non-TMDL Area Limits	Toxic Units for Organophosphate and Pyrethroid Pesticides Non-TMDL Area Limits						
		Chlorpyrifos, 1.77 µg/g o.c.	Bifenthrin, 0.52 µg/g o.c.	Cyfluthrin, Total, 1.08 µg/g o.c.	Cyhalothrin, Total lambda-, 0.45 µg/g o.c.	Cypermethrin, Total, 0.38 µg/g o.c.	Esfenvalerate, 1.54 µg/g o.c.	Fenpropathrin, 1.10 µg/g o.c.	Fenvalerate, 1.54 µg/g o.c.	Permethrin (cis + trans), 10.83 µg/g o.c.	Toxicity[1]	Bifenthrin TU[2]	Cyfluthrin TU[3]	Cypermethrin TU[4]	Esfenvalerate TU[5]	Lambda-Cyhalothrin TU[6]	Permethrin TU[7]	Pyrethroids TU[8]
310CCC	Chorro Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
310LBC	Los Berros Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
310PRE	Prefumo Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
310SLD	Davenport Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
310USG	Arroyo Grande Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
310WRP	Warden Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes:

TMDL total maximum daily load
µg/g o.c. micrograms per gram, normalized to the organic carbon content of the sediment.
1 No significant effect based on chronic or acute toxicity to applicable test organism.
2 Pyrethroid TU (1) = sample concentration (oc) / 0.52 µg/g (TMDL bifenthrin LC50 oc concentration) < 1.0.
3 Pyrethroid TU (2) = sample concentration (oc) / 1.08 µg/g (TMDL cyfluthrin LC50 oc concentration) < 1.0.
4 Pyrethroid TU (3) = sample concentration (oc) / 0.38 µg/g (TMDL cypermethrin LC50 oc concentration) < 1.0.
5 Pyrethroid TU (4) = sample concentration (oc) / 1.54 µg/g (TMDL esfenvalerate LC50 oc concentration) < 1.0.
6 Pyrethroid TU (5) = sample concentration (oc) / 0.45 µg/g (TMDL lambda-cyhalothrin LC50 oc concentration) < 1.0.
7 Pyrethroid TU (6) = sample concentration (oc) / 10.83 µg/g (TMDL permethrin LC50 oc concentration) < 1.0.
8 Sum total of Pyrethroid TUs (1+2+3+4+5+6) < 1.0.

Table 7. Summary of Water TMDL Limits and Non-TMDL Area Limits for Sites in Hydrologic Unit 312 (HU 312)

CMP Site ID	CMP Site Description	Santa Maria River Watershed Toxicity and Pesticide TMDL									Organophosphate Pesticides Non-TMDL Area Limits											Neonicotinoid Non-TMDL Area Limits						Herbicides Non-TMDL Area Limits							
		Toxicity[1]	Additive Toxicity[2], Chlorpyrifos + Diazinon (CCC)	Additive Toxicity[3], Chlorpyrifos + Diazinon (CMC)	Chlorpyrifos CCC[4], 0.015 ug/L	Chlorpyrifos CMC[5], 0.025 ug/L	Diazinon CCC[4], 0.10 µg/L	Diazinon CMC[5], 0.16 µg/L	Malathion CCC[4], 0.028 ug/L	Malathion CMC[5], 0.17 ug/L	Chlorpyrifos, 0.023 ug/L	Demeton-S, 46.0 ug/L	Diazinon, 0.105 ug/L	Dichlorvos, 0.0058 ug/L	Dimethoate, 0.50 ug/L	Disulfoton, 0.01 ug/L	Malathion, 0.045 ug/L	Methamidophos, 4.50 ug/L	Methidathion, 0.66 ug/L	Parathion methyl, 0.25 ug/L	Phorate, 0.21 ug/L	Phosmet, 0.80 ug/L	Acetamiprid, 2.10 ug/L	Clothianidin, 0.05 ug/L	Dinotefuran, 23.5 ug/L	Imidacloprid, 0.01 ug/L	Thiacloprid, 0.97 ug/L	Thiamethoxam, 0.74 ug/L	Atrazine, 60.0 ug/L	Cyanazine, 27.0 ug/L	Diuron, 80.0 ug/L	Glyphosate, 26,600 ug/L	Linuron, 0.09 ug/L	Paraquat dichloride, 36.9 ug/L	Simazine, 40.0 ug/L	Trifluralin, 2.40 ug/L
312BCC	Bradley Canyon Creek	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
312BCJ	Bradley Channel	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
312GVS	Greene Valley at Simas	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
312MSD	Main St. Canal	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
312OFC	Oso Flaco Creek	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
312OFN	Little Oso Flaco Creek	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
312ORC	Orcutt Solomon Creek u/s of SMR	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
312ORI	Orcutt Solomon Creek at Hwy 1	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
312SMA	Santa Maria River at Estuary	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
312SMI	Santa Maria River at Hwy 1	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes:

CCC	Criterion Continuous Concentration
CMC	Criterion Maximum Concentration
TMDL	total maximum daily load
ug/L	micrograms per liter
1	No significant effect based on chronic or acute toxicity to applicable test organism.
2	Additive Toxicity, Chlorpyrifos + Diazinon, CCC: (concentration of diazinon/0.10 ug/L numeric target for diazinon) + (concentration of chlorpyrifos/0.015 ug/L numeric target for chlorpyrifos) ≤ 1.0.
3	Additive Toxicity, Chlorpyrifos + Diazinon, CMC: (concentration of diazinon/0.16 ug/L numeric target for diazinon) + (concentration of chlorpyrifos/0.025 ug/L numeric target for chlorpyrifos) ≤ 1.0.
4	CCC is exceeded when more than one sample result at a site exceeds the criterion in a 3-year period.
5	CMC is exceeded when more than one sample result at a site exceeds the criterion in a 3-year period.

Table 8. Summary of Sediment TMDL Limits and Non-TMDL Area Limits for Sites in Hydrologic Unit 312 (HU 312)

CMP Site ID	CMP Site Description	Santa Maria River Watershed Toxicity and Pesticide TMDL								Organophosphate Pesticide Non-TMDL Area Limits	Pyrethroid Pesticide Non-TMDL Area Limits		
		Toxicity[1]	Bifenthrin TU[2]	Cyfluthrin TU[3]	Cypermethrin TU[4]	Esfenvalerate TU[5]	Lambda-Cyhalothrin TU[6]	Permethrin TU[7]	Pyrethroids TU[8]	Chlorpyrifos, 1.77 µg/g o.c.	Fenpropathrin, 1.10 µg/g o.c.	Fenvalerate, 1.54 µg/g o.c.	Permethrin (cis + trans), 10.83 µg/g o.c.
312BCC	Bradley Canyon Creek	X	X	X	X	X	X	X	X	X	X	X	-
312BCJ	Bradley Channel	X	X	X	X	X	X	X	X	X	X	X	-
312GVS	Greene Valley at Simas	X	X	X	X	X	X	X	X	X	X	X	-
312MSD	Main St. Canal	X	X	X	X	X	X	X	X	X	X	X	-
312OFC	Oso Flaco Creek	X	X	X	X	X	X	X	X	X	X	X	-
312OFN	Little Oso Flaco Creek	X	X	X	X	X	X	X	X	X	X	X	-
312ORC	Orcutt Solomon Creek u/s of SMR	X	X	X	X	X	X	X	X	X	X	X	-
312ORI	Orcutt Solomon Creek at Hwy 1	X	X	X	X	X	X	X	X	X	X	X	-
312SMA	Santa Maria River at Estuary	X	X	X	X	X	X	X	X	X	X	X	-
312SMI	Santa Maria River at Hwy 1	X	X	X	X	X	X	X	X	X	X	X	-

Notes:

TMDL total maximum daily load
µg/g o.c. micrograms per gram, normalized to the organic carbon content of the sediment.
1 No significant effect based on chronic or acute toxicity to applicable test organism.
2 Pyrethroid TU (1) = sample concentration (oc) / 0.52 µg/g (TMDL bifenthrin LC50 oc concentration) < 1.0
3 Pyrethroid TU (2) = sample concentration (oc) / 1.08 µg/g (TMDL cyfluthrin LC50 oc concentration) < 1.0
4 Pyrethroid TU (3) = sample concentration (oc) / 0.38 µg/g (TMDL cypermethrin LC50 oc concentration) < 1.0
5 Pyrethroid TU (4) = sample concentration (oc) / 1.54 µg/g (TMDL esfenvalerate LC50 oc concentration) < 1.0
6 Pyrethroid TU (5) = sample concentration (oc) / 0.45 µg/g (TMDL lambda-cyhalothrin LC50 oc concentration) < 1.0
7 Pyrethroid TU (6) = sample concentration (oc) / 10.83 µg/g (TMDL permethrin LC50 oc concentration) < 1.0
8 Sum total of Pyrethroid TUs (1+2+3+4+5+6) < 1.0

Table 9. Summary of Water TMDL Limits and Non-TMDL Area Limits for Sites in Hydrologic Unit 313 & 314 (HU 313 & HU 314)

CMP Site ID	CMP Site Description	Organophosphate Pesticides Non-TMDL Area Limits														Neonicotinoid Non-TMDL Area Limits						Herbicides Non-TMDL Area Limits								Toxicity Non-TMDL Area Limits
		Chlorpyrifos, 0.023 ug/L	Demeton-S, 46.0 ug/L	Diazinon, 0.105 ug/L	Dichlorvos, 0.0058 ug/L	Dimethoate, 0.50 ug/L	Disulfoton, 0.01 ug/L	Malathion, 0.045 ug/L	Methamidophos, 4.50 ug/L	Methidathion, 0.66 ug/L	Parathion-methyl, 0.25 ug/L	Phorate, 0.21 ug/L	Phosmet, 0.80 ug/L	Additive Toxicity, Chlorpyrifos + Diazinon CCC[1]	Additive Toxicity, Chlorpyrifos + Diazinon CMC[2]	Acetamiprid, 2.10 ug/L	Clothianidin, 0.05 ug/L	Dinotefuran, 23.5 ug/L	Imidacloprid, 0.01 ug/L	Thiacloprid, 0.97 ug/L	Thiamethoxam, 0.74 ug/L	Atrazine, 60.0 ug/L	Cyanazine, 27.0 ug/L	Diuron, 80.0 ug/L	Glyphosate, 26,600 ug/L	Linuron, 0.09 ug/L	Paraquat dichloride, 36.9 ug/L	Simazine, 40.0 ug/L	Trifluralin, 2.40 ug/L	Toxicity[3]
313SAE	San Antonio Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
314SYF	Santa Ynez River at Flordale	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
314SYL	Santa Ynez River at River Park	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
314SYN	Santa Ynez River at 13th St.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes:

CCC	Criterion Continuous Concentration
CMC	Criterion Maximum Concentration
TMDL	total maximum daily load
ug/L	micrograms per liter
1	Additive Toxicity, Chlorpyrifos + Diazinon, CCC: (concentration of diazinon/0.10 ug/L numeric target for diazinon) + (concentration of chlorpyrifos/0.015 ug/L numeric target for chlorpyrifos) ≤ 1.0.
2	Additive Toxicity, Chlorpyrifos + Diazinon, CMC: (concentration of diazinon/0.16 ug/L numeric target for diazinon) + (concentration of chlorpyrifos/0.025 ug/L numeric target for chlorpyrifos) ≤ 1.0.
3	No significant effect based on chronic or acute toxicity to applicable test organism.

Table 10. Summary of Sediment TMDL Limits and Non-TMDL Area Limits for Sites in Hydrologic Unit 313 & 314 (HU 313 & HU 314)

CMP Site ID	CMP Site Description	Organophosphate Pesticide Non-TMDL Area Limits	Pyrethroid Pesticide Non-TMDL Area Limits								Toxicity n - TMDL Limits	Toxic Units for Organophosphate and Pyrethroid Pesticides Non-TMDL Area Limits						
		Chlorpyrifos, 1.77 µg/g o.c.	Bifenthrin, 0.52 µg/g o.c.	Cyfluthrin, Total, 1.08 µg/g o.c.	Cyhalothrin, Total lambda-, 0.45 µg/g o.c.	Cypermethrin, Total, 0.38 µg/g o.c.	Esfenvalerate, 1.54 µg/g o.c.	Fenpropathrin, 1.10 µg/g o.c.	Fenvalerate, 1.54 µg/g o.c.	Permethrin (cis + trans), 10.83 µg/g o.c.	Toxicity[1]	Bifenthrin TU[2]	Cyfluthrin TU[3]	Cypermethrin TU[4]	Esfenvalerate TU[5]	Lambda-Cyhalothrin TU[6]	Permethrin TU[7]	Pyrethroids TU[8]
313SAE	San Antonio Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
314SYF	Santa Ynez River at Flordale	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
314SYL	Santa Ynez River at River Park	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
314SYN	Santa Ynez River at 13th St.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes:

TMDL	total maximum daily load
µg/g o.c.	micrograms per gram, normalized to the organic carbon content of the sediment.
1	No significant effect based on chronic or acute toxicity to applicable test organism.
2	Pyrethroid TU (1) = sample concentration (oc) / 0.52 µg/g (TMDL bifenthrin LC50 oc concentration) < 1.0.
3	Pyrethroid TU (2) = sample concentration (oc) / 1.08 µg/g (TMDL cyfluthrin LC50 oc concentration) < 1.0.
4	Pyrethroid TU (3) = sample concentration (oc) / 0.38 µg/g (TMDL cypermethrin LC50 oc concentration) < 1.0.
5	Pyrethroid TU (4) = sample concentration (oc) / 1.54 µg/g (TMDL esfenvalerate LC50 oc concentration) < 1.0.
6	Pyrethroid TU (5) = sample concentration (oc) / 0.45 µg/g (TMDL lambda-cyhalothrin LC50 oc concentration) < 1.0.
7	Pyrethroid TU (6) = sample concentration (oc) / 10.83 µg/g (TMDL permethrin LC50 oc concentration) < 1.0.
8	Sum total of Pyrethroid TUs (1+2+3+4+5+6) < 1.0.

Table 11. Summary of Water TMDL Limits and Non-TMDL Area Limits for Sites in Hydrologic Unit 315 (HU 315)

CMP Site ID	CMP Site Description	Arroyo Paredon Diazinon TMDL				Organophosphate Pesticides Non-TMDL Area Limits														Neonicotinoid Non-TMDL Area Limits						Herbicides Non-TMDL Area Limits								Toxicity Non-TMDL Area Limits
		Additive Toxicity[1], Chlorpyrifos + Diazinon (CCC)	Additive Toxicity[2], Chlorpyrifos + Diazinon (CMC)	Diazinon CCC[3], 0.10 µg/L	Diazinon CMC[4], 0.16 µg/L	Chlorpyrifos, 0.023 ug/L	Demeton-S, 46.0 ug/L	Diazinon, 0.105 ug/L	Dichlorvos, 0.0058 ug/L	Dimethoate, 0.50 ug/L	Disulfoton, 0.01 ug/L	Malathion, 0.045 ug/L	Methamidophos, 4.50 ug/L	Methidathion, 0.66 ug/L	Parathion-methyl, 0.25 ug/L	Phorate, 0.21 ug/L	Phosmet, 0.80 ug/L	Additive Toxicity[1], Chlorpyrifos + Diazinon (CCC)	Additive Toxicity[2], Chlorpyrifos + Diazinon (CMC)	Acetamiprid, 2.10 ug/L	Clothianidin, 0.05 ug/L	Dinotefuran, 23.5 ug/L	Imidacloprid, 0.01 ug/L	Thiacloprid, 0.97 ug/L	Thiamethoxam, 0.74 ug/L	Atrazine, 60.0 ug/L	Cyanazine, 27.0 ug/L	Diuron, 80.0 ug/L	Glyphosate, 26,600 ug/L	Linuron, 0.09 ug/L	Paraquat dichloride, 36.9 ug/L	Simazine, 40.0 ug/L	Trifluralin, 2.40 ug/L	Toxicity[5]
315APF	Arroyo Paredon	X	X	X	X	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
315BEF	Bell Creek	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
315FMV	Franklin Creek	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
315GAN	Glen Annie Creek	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
315LCC	Los Carneros Creek	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes:

CCC Criterion Continuous Concentration
CMC Criterion Maximum Concentration
TMDL total maximum daily load
ug/L micrograms per liter
1 Additive Toxicity, Chlorpyrifos + Diazinon, CCC: (concentration of diazinon/0.10 ug/L numeric target for diazinon) + (concentration of chlorpyrifos/0.015 ug/L numeric target for chlorpyrifos) ≤ 1.0.
2 Additive Toxicity, Chlorpyrifos + Diazinon, CMC: (concentration of diazinon/0.16 ug/L numeric target for diazinon) + (concentration of chlorpyrifos/0.025 ug/L numeric target for chlorpyrifos) ≤ 1.0.
3 CCC is exceeded when more than one sample result at a site exceeds the criterion in a 3-year period.
4 CMC is exceeded when more than one sample result at a site exceeds the criterion in a 3-year period.
5 No significant effect based on chronic or acute toxicity to applicable test organism.

Table 12. Summary of Sediment TMDL Limits and Non-TMDL Area Limits for Sites in Hydrologic Unit 315 (HU 315)

CMP Site ID	CMP Site Description	Organophosphate Pesticide Non-TMDL Area Limits	Pyrethroid Pesticide Non-TMDL Area Limits								Toxicity Non-TMDL Area Limits	Toxic Units for Organophosphate and Pyrethroid Pesticides Non-TMDL Area Limits						
		Chlorpyrifos, 1.77 µg/g o.c.	Bifenthrin, 0.52 µg/g o.c.	Cyfluthrin, Total, 1.08 µg/g o.c.	Cyhalothrin, Total lambda-, 0.45 µg/g o.c.	Cypermethrin, Total, 0.38 µg/g o.c.	Esfenvalerate, 1.54 µg/g o.c.	Fenpropathrin, 1.10 µg/g o.c.	Fenvalerate, 1.54 µg/g o.c.	Permethrin (cis + trans), 10.83 µg/g o.c.	Toxicity[1]	Bifenthrin TU[2]	Cyfluthrin TU[3]	Cypermethrin TU[4]	Esfenvalerate TU[5]	Lambda Cyhalothrin TU[6]	Permethrin TU[7]	Pyrethroids TU[8]
315APF	Arroyo Paredon	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
315BEF	Bell Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
315FMV	Franklin Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
315GAN	Glen Annie Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
315LCC	Los Carneros Creek	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes:

TMDL total maximum daily load
µg/g o.c. micrograms per gram, normalized to the organic carbon content of the sediment.
1 No significant effect based on chronic or acute toxicity to applicable test organism.
2 Pyrethroid TU (1) = sample concentration (oc) / 0.52 µg/g (TMDL bifenthrin LC50 oc concentration) < 1.0.
3 Pyrethroid TU (2) = sample concentration (oc) / 1.08 µg/g (TMDL cyfluthrin LC50 oc concentration) < 1.0.
4 Pyrethroid TU (3) = sample concentration (oc) / 0.38 µg/g (TMDL cypermethrin LC50 oc concentration) < 1.0.
5 Pyrethroid TU (4) = sample concentration (oc) / 1.54 µg/g (TMDL esfenvalerate LC50 oc concentration) < 1.0.
6 Pyrethroid TU (5) = sample concentration (oc) / 0.45 µg/g (TMDL lambda-cyhalothrin LC50 oc concentration) < 1.0.
7 Pyrethroid TU (6) = sample concentration (oc) / 10.83 µg/g (TMDL permethrin LC50 oc concentration) < 1.0.
8 Sum total of Pyrethroid TUs (1+2+3+4+5+6) < 1.0.

APPENDIX B – AQUATIC AND SEDIMENT TOXICITY, AND POTENTIAL TOXICANTS

Table 1. Organophosphate Pesticides Detected in Water at NMU Sites, 2021 and 2022 (µg/L).

Site ID	Site Description	Year	Month	Chlorpyrifos	Dichlorvos	Malathion
305BRS	Beach Road Ditch	2021	September	ND	ND	ND
305BRS	Beach Road Ditch	2021	December	ND	ND	ND
305BRS	Beach Road Ditch	2022	March	ND	ND	ND
305BRS	Beach Road Ditch	2022	April	ND	ND	ND
305CAN	Carnadero Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
305CAN	Carnadero Creek	2021	December	ND	ND	ND
305CAN	Carnadero Creek	2022	March	ND	ND	ND
305CAN	Carnadero Creek	2022	April	ND	ND	ND
305CHI	Pajaro River at Chittenden	2021	September	ND	ND	ND
305CHI	Pajaro River at Chittenden	2021	December	ND	ND	ND
305CHI	Pajaro River at Chittenden	2022	March	ND	ND	ND
305CHI	Pajaro River at Chittenden	2022	April	ND	ND	ND
305COR	Salsipuedes Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
305COR	Salsipuedes Creek	2021	December	ND	ND	ND
305COR	Salsipuedes Creek	2022	March	ND	ND	ND
305COR	Salsipuedes Creek	2022	April	ND	ND	ND
305FRA	Millers Canal	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
305FRA	Millers Canal	2021	December	ND	ND	ND
305FRA	Millers Canal	2022	March	ND	ND	ND
305FRA	Millers Canal	2022	April	ND	ND	ND
305FUF	Furlong Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
305FUF	Furlong Creek	2021	December	ND	ND	ND
305FUF	Furlong Creek	2022	March	ND	ND	ND
305FUF	Furlong Creek	2022	April	ND	ND	ND
305LCS	Llagas Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
305LCS	Llagas Creek	2021	December	ND	ND	ND
305LCS	Llagas Creek	2022	March	ND	ND	ND
305LCS	Llagas Creek	2022	April	ND	ND	ND
305PJP	Pajaro River at Main St.	2021	September	ND	ND	ND
305PJP	Pajaro River at Main St.	2021	December	ND	ND	ND
305PJP	Pajaro River at Main St.	2022	March	ND	ND	ND
305PJP	Pajaro River at Main St.	2022	April	ND	ND	ND
305SJA	San Juan Creek	2021	September	ND	ND	ND
305SJA	San Juan Creek	2021	December	ND	ND	ND
305SJA	San Juan Creek	2022	March	ND	ND	ND

Site ID	Site Description	Year	Month	Chlorpyrifos	Dichlorvos	Malathion
305SJA	San Juan Creek	2022	April	ND	ND	ND
305TSR	Tequisquita Slough	2021	September	ND	ND	0.003
305TSR	Tequisquita Slough	2021	December	ND	ND	ND
305TSR	Tequisquita Slough	2022	March	ND	ND	ND
305TSR	Tequisquita Slough	2022	April	ND	ND	ND
305WCS	Watsonville Creek	2021	September	ND	ND	ND
305WCS	Watsonville Creek	2021	December	ND	ND	ND
305WCS	Watsonville Creek	2022	March	ND	ND	ND
305WCS	Watsonville Creek	2022	April	ND	ND	ND
305WSA	Watsonville Slough	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
305WSA	Watsonville Slough	2021	December	ND	ND	ND
305WSA	Watsonville Slough	2022	March	ND	ND	ND
305WSA	Watsonville Slough	2022	April	ND	ND	ND
309ALG	Salinas Reclamation Canal	2021	September	ND	ND	ND
309ALG	Salinas Reclamation Canal	2021	December	ND	ND	0.013
309ALG	Salinas Reclamation Canal	2022	March	ND	ND	ND
309ALG	Salinas Reclamation Canal	2022	April	ND	ND	ND
309ASB	Alisal Slough	2021	September	ND	ND	**0.243**[3]
309ASB	Alisal Slough	2021	December	ND	ND	**0.159**[3]
309ASB	Alisal Slough	2022	March	ND	ND	ND
309ASB	Alisal Slough	2022	April	ND	ND	ND
309BLA	Blanco Drain	2021	September	ND	ND	ND
309BLA	Blanco Drain	2021	December	ND	ND	ND
309BLA	Blanco Drain	2022	March	ND	ND	ND
309BLA	Blanco Drain	2022	April	ND	ND	ND
309CCD	Chualar Creek West	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
309CCD	Chualar Creek West	2021	December	ND	ND	ND
309CCD	Chualar Creek West	2022	March	dry/disconnected	dry/disconnected	dry/disconnected
309CCD	Chualar Creek West	2022	April	ND	ND	**0.102**[3]
309CRR	Chualar Creek East	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
309CRR	Chualar Creek East	2022	March	dry/disconnected	dry/disconnected	dry/disconnected
309ESP	Espinosa Slough	2021	September	ND	ND	ND
309ESP	Espinosa Slough	2021	December	ND	ND	0.014
309ESP	Espinosa Slough	2022	March	ND	ND	ND
309ESP	Espinosa Slough	2022	April	ND	ND	ND
309GAB	Gabilan Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected

Site ID	Site Description	Year	Month	Chlorpyrifos	Dichlorvos	Malathion
309GAB	Gabilan Creek	2021	December	ND	ND	ND
309GAB	Gabilan Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected
309GAB	Gabilan Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	2021	December	dry/disconnected	dry/disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	2022	March	dry/disconnected	dry/disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	2022	April	dry/disconnected	dry/disconnected	dry/disconnected
309JON	Salinas Reclamation Canal	2021	September	ND	ND	0.004
309JON	Salinas Reclamation Canal	2021	December	ND	**0.016**[4]	**0.256**[3]
309JON	Salinas Reclamation Canal	2022	March	ND	ND	ND
309JON	Salinas Reclamation Canal	2022	April	ND	ND	ND
309MER	Merritt Ditch	2021	September	ND	ND	ND
309MER	Merritt Ditch	2021	December	ND	ND	0.01
309MER	Merritt Ditch	2022	March	ND	ND	ND
309MER	Merritt Ditch	2022	April	ND	ND	ND
309MOR	Moro Cojo Slough	2021	September	ND	ND	ND
309MOR	Moro Cojo Slough	2021	December	ND	ND	ND
309MOR	Moro Cojo Slough	2022	March	ND	ND	ND
309MOR	Moro Cojo Slough	2022	April	ND	ND	ND
309NAD[1,2]	Natividad Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
309NAD[1,2]	Natividad Creek	2021	December	0.072	ND	**0.152**[3]
309NAD	Natividad Creek	2022	March	ND	ND	ND
309NAD	Natividad Creek	2022	April	ND	ND	ND
309OLD	Old Salinas River	2021	September	ND	ND	0.004
309OLD	Old Salinas River	2021	December	ND	ND	0.021
309OLD	Old Salinas River	2022	March	ND	ND	ND
309OLD	Old Salinas River	2022	April	ND	ND	ND
309QUI	Quail Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
309QUI	Quail Creek	2021	December	ND	ND	ND
309QUI	Quail Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected
309QUI	Quail Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected
309RTA	Santa Rita Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
309RTA	Santa Rita Creek	2021	December	ND	ND	**0.066**[3]
309RTA	Santa Rita Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected
309RTA	Santa Rita Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected
309SAC	Salinas River at Chualar Bridge	2021	September	dry/disconnected	dry/disconnected	dry/disconnected

Site ID	Site Description	Year	Month	Chlorpyrifos	Dichlorvos	Malathion
309SAC	Salinas River at Chualar Bridge	2022	March	dry/disconnected	dry/disconnected	dry/disconnected
309SAC	Salinas River at Chualar Bridge	2022	April	dry/disconnected	dry/disconnected	dry/disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2022	March	dry/disconnected	dry/disconnected	dry/disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2022	April	dry/disconnected	dry/disconnected	dry/disconnected
309SSP	Salinas River at Spreckels Gage	2021	September	dry/disconnected	dry/disconnected	dry/disconnected
309SSP	Salinas River at Spreckels Gage	2021	December	ND	ND	ND
309SSP	Salinas River at Spreckels Gage	2022	March	dry/disconnected	dry/disconnected	dry/disconnected
309SSP	Salinas River at Spreckels Gage	2022	April	dry/disconnected	dry/disconnected	dry/disconnected
309TEH	Tembladero Slough	2021	September	ND	ND	ND
309TEH	Tembladero Slough	2021	December	ND	**0.019[4]**	**0.142[3]**
309TEH	Tembladero Slough	2022	March	ND	ND	ND
309TEH	Tembladero Slough	2022	April	ND	ND	ND

Notes:

ND Analyte was not detected above the Method Detection Limit.

Red Indicates result exceeded one or more TMDL or non-TMDL area limits.

1 Additive toxicity of Chlorpyrifos + Diazinon based upon California Toxics Rule Criterion Continuous Concentrations (CCC) (i.e., [concentration of diazinon/0.10 µg/L numeric target for diazinon] + [concentration of chlorpyrifos/0.015 µg/L numeric target for chlorpyrifos]) exceeds the TMDL Limit of 1.0.

2 Additive toxicity of Chlorpyrifos + Diazinon based upon California Toxics Rule Criterion Maximum Concentrations (CMC) (i.e., [concentration of diazinon/0.16 µg/L numeric target for diazinon] + [concentration of chlorpyrifos/0.025 µg/L numeric target for chlorpyrifos]) exceeds the TMDL Limit of 1.0.

3 Site exceeded the non-TMDL area limit for malathion, 0.045 µg/L.

4 Site exceeded the non-TMDL area limit for dichlorvos, 0.0058 µg/L.

Table 2. Organophosphate Pesticides Detected in Water at SMU Sites, 2021 and 2022 (µg/L).

Site ID	Site Description	Year	Month	Chlorpyrifos	Diazinon	Dichlorvos	Malathion
310CCC	Chorro Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310CCC	Chorro Creek	2021	December	ND	ND	ND	ND
310CCC	Chorro Creek	2022	March	ND	ND	ND	ND
310CCC	Chorro Creek	2022	April	ND	ND	ND	ND
310LBC	Los Berros Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310LBC	Los Berros Creek	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310LBC	Los Berros Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310LBC	Los Berros Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310PRE	Prefumo Creek	2021	September	ND	ND	ND	ND
310PRE	Prefumo Creek	2021	December	ND	ND	ND	ND
310PRE	Prefumo Creek	2022	March	ND	ND	ND	ND
310PRE	Prefumo Creek	2022	April	ND	ND	ND	ND
310SLD	Davenport Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310SLD	Davenport Creek	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310SLD	Davenport Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310SLD	Davenport Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310USG	Arroyo Grande Creek	2021	September	ND	ND	ND	ND
310USG	Arroyo Grande Creek	2021	December	ND	ND	ND	**0.604**[3]
310USG	Arroyo Grande Creek	2022	March	ND	ND	ND	ND
310USG	Arroyo Grande Creek	2022	April	ND	ND	ND	ND
310WRP	Warden Creek	2021	September	ND	ND	ND	ND
310WRP	Warden Creek	2021	December	ND	ND	ND	ND
310WRP	Warden Creek	2022	March	ND	ND	ND	ND
310WRP	Warden Creek	2022	April	ND	ND	ND	ND
312BCC	Bradley Canyon Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312BCC	Bradley Canyon Creek	2021	December	ND	ND	ND	0.713
312BCC	Bradley Canyon Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312BCC	Bradley Canyon Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312BCJ	Bradley Channel	2021	September	ND	ND	ND	ND
312BCJ	Bradley Channel	2021	December	ND	ND	ND	0.078
312BCJ	Bradley Channel	2022	March	ND	ND	ND	ND
312BCJ	Bradley Channel	2022	April	ND	ND	ND	ND
312GVS	Green Valley at Simas	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312GVS	Green Valley at Simas	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312GVS	Green Valley at Simas	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected

Site ID	Site Description	Year	Month	Chlorpyrifos	Diazinon	Dichlorvos	Malathion
312MSD[1,2]	Main St. Canal	2021	October	ND	ND	ND	0.283
312MSD[1,2]	Main St. Canal	2021	December	ND	0.053	ND	0.482
312MSD[1,2]	Main St. Canal	2022	March	ND	ND	ND	0.068
312MSD[1,2]	Main St. Canal	2022	April	ND	ND	ND	ND
312OFC[1,2]	Oso Flaco Creek	2021	October	ND	ND	0.012[4]	0.005
312OFC[1,2]	Oso Flaco Creek	2021	December	ND	ND	0.011[4]	1.47
312OFC[1,2]	Oso Flaco Creek	2022	March	ND	ND	ND	0.565
312OFC[1,2]	Oso Flaco Creek	2022	April	ND	ND	ND	ND
312OFN	Little Oso Flaco Creek	2021	October	ND	ND	ND	0.031
312OFN	Little Oso Flaco Creek	2021	December	ND	ND	ND	1.22
312OFN	Little Oso Flaco Creek	2022	March	ND	ND	ND	0.105
312OFN	Little Oso Flaco Creek	2022	April	ND	ND	ND	0.038
312ORC	Orcutt Solomon Creek u/s of SMR	2021	October	ND	ND	ND	0.007
312ORC	Orcutt Solomon Creek u/s of SMR	2021	December	ND	0.092	ND	0.17
312ORC	Orcutt Solomon Creek u/s of SMR	2022	March	ND	ND	ND	ND
312ORC	Orcutt Solomon Creek u/s of SMR	2022	April	ND	ND	ND	ND
312ORI	Orcutt Solomon Creek at Hwy 1	2021	October	ND	ND	0.019[4]	0.098
312ORI	Orcutt Solomon Creek at Hwy 1	2021	December	ND	ND	ND	0.06
312ORI	Orcutt Solomon Creek at Hwy 1	2022	March	ND	ND	ND	0.111
312ORI	Orcutt Solomon Creek at Hwy 1	2022	April	ND	ND	ND	ND
312SMA	Santa Maria River at Estuary	2021	October	ND	ND	ND	ND
312SMA	Santa Maria River at Estuary	2021	December	ND	0.065	ND	0.107
312SMA	Santa Maria River at Estuary	2022	March	ND	ND	ND	ND
312SMA	Santa Maria River at Estuary	2022	April	ND	ND	ND	0.012
312SMI	Santa Maria River at Hwy 1	2021	December	0.011	ND	ND	0.053
312SMI	Santa Maria River at Hwy 1	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312SMI	Santa Maria River at Hwy 1	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
313SAE	San Antonio Creek	2021	September	ND	ND	ND	ND
313SAE	San Antonio Creek	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
313SAE	San Antonio Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
313SAE	San Antonio Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYF	Santa Ynez River at Floradale	2021	September	ND	ND	ND	ND
314SYF	Santa Ynez River at Floradale	2022	March	ND	ND	ND	ND
314SYF	Santa Ynez River at Floradale	2022	April	ND	ND	ND	ND
314SYL	Santa Ynez River at River Park	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYL	Santa Ynez River at River Park	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected

Site ID	Site Description	Year	Month	Chlorpyrifos	Diazinon	Dichlorvos	Malathion
314SYL	Santa Ynez River at River Park	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYL	Santa Ynez River at River Park	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYN	Santa Ynez River at 13th St.	2021	September	ND	ND	ND	ND
314SYN	Santa Ynez River at 13th St.	2021	December	ND	ND	ND	ND
314SYN	Santa Ynez River at 13th St.	2022	March	ND	ND	ND	ND
314SYN	Santa Ynez River at 13th St.	2022	April	ND	ND	ND	ND
315APF	Arroyo Paredon	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
315APF	Arroyo Paredon	2021	December	ND	ND	ND	ND
315APF	Arroyo Paredon	2022	March	ND	ND	ND	ND
315APF	Arroyo Paredon	2022	April	ND	ND	ND	ND
315BEF	Bell Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
315BEF	Bell Creek	2021	December	ND	ND	ND	ND
315BEF	Bell Creek	2022	March	ND	ND	ND	ND
315BEF	Bell Creek	2022	April	ND	ND	ND	ND
315FMV	Franklin Creek	2021	September	ND	ND	ND	ND
315FMV	Franklin Creek	2021	December	ND	ND	ND	ND
315FMV	Franklin Creek	2022	March	ND	ND	ND	ND
315FMV	Franklin Creek	2022	April	ND	ND	ND	ND
315GAN	Glen Annie Creek	2021	September	ND	ND	ND	ND
315GAN	Glen Annie Creek	2021	December	ND	ND	ND	ND
315GAN	Glen Annie Creek	2022	March	ND	ND	ND	ND
315GAN	Glen Annie Creek	2022	April	ND	ND	ND	ND
315LCC	Los Carneros Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
315LCC	Los Carneros Creek	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
315LCC	Los Carneros Creek	2022	March	ND	ND	ND	ND
315LCC	Los Carneros Creek	2022	April	ND	ND	ND	ND

Notes:

ND Analyte was not detected above the Method Detection Limit.

Red Indicates results exceeded one or more TMDL or non-TMDL area limits.

1 Site exceeded the malathion TMDL limit of 0.028 µg/L (CCC) more than once during the two-year study period.

2 Site exceeded the malathion TMDL limit of 0.17 µg/L (CMC) more than once during the two-year study period.

3 Site exceeded the non-TMDL area limit for malathion, 0.045 µg/L.

4 Site exceeded the non-TMDL area limit for dichlorvos, 0.0058 µg/L.

Table 3. Neonicotinoids Detected in Water at NMU Sites, 2021 and 2022 (µg/L).

Site ID	Site Description	Year	Month	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam
305BRS	Beach Road Ditch	2021	September	ND	ND	ND	ND	ND	0.046
305BRS	Beach Road Ditch	2021	December	0.121	ND	ND	**0.163**[2]	ND	0.706
305BRS	Beach Road Ditch	2022	March	ND	ND	ND	ND	ND	0.078
305BRS	Beach Road Ditch	2022	April	0.013	ND	ND	ND	ND	0.033
305CAN	Carnadero Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
305CAN	Carnadero Creek	2021	December	ND	ND	ND	**0.043**[2]	ND	0.003
305CAN	Carnadero Creek	2022	March	ND	ND	ND	ND	ND	ND
305CAN	Carnadero Creek	2022	April	ND	ND	ND	ND	ND	ND
305CHI	Pajaro River at Chittenden	2021	September	ND	ND	ND	ND	ND	0.038
305CHI	Pajaro River at Chittenden	2021	December	ND	ND	ND	**0.039**[2]	ND	0.046
305CHI	Pajaro River at Chittenden	2022	March	ND	ND	ND	ND	ND	0.004
305CHI	Pajaro River at Chittenden	2022	April	ND	ND	ND	ND	ND	ND
305COR	Salsipuedes Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
305COR	Salsipuedes Creek	2021	December	ND	ND	ND	ND	ND	0.002
305COR	Salsipuedes Creek	2022	March	ND	ND	ND	ND	ND	ND
305COR	Salsipuedes Creek	2022	April	0.012	ND	ND	ND	ND	ND
305FRA	Millers Canal	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
305FRA	Millers Canal	2021	December	ND	ND	ND	ND	ND	0.007
305FRA	Millers Canal	2022	March	ND	ND	ND	ND	ND	ND
305FRA	Millers Canal	2022	April	ND	ND	ND	ND	0.003	ND
305FUF	Furlong Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
305FUF	Furlong Creek	2021	December	0.349	ND	ND	**0.182**[2]	ND	**0.949**[3]
305FUF	Furlong Creek	2022	March	ND	ND	ND	ND	ND	0.004
305FUF	Furlong Creek	2022	April	ND	ND	ND	ND	0.006	0.005
305LCS	Llagas Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
305LCS	Llagas Creek	2021	December	ND	ND	ND	**0.12**[2]	ND	0.025
305LCS	Llagas Creek	2022	March	ND	ND	ND	ND	ND	ND
305LCS	Llagas Creek	2022	April	ND	ND	ND	ND	0.002	ND
305PJP	Pajaro River at Main St.	2021	September	ND	ND	ND	ND	ND	ND
305PJP	Pajaro River at Main St.	2021	December	0.044	ND	ND	ND	ND	0.01
305PJP	Pajaro River at Main St.	2022	March	ND	ND	ND	ND	ND	ND
305PJP	Pajaro River at Main St.	2022	April	ND	ND	ND	ND	ND	ND
305SJA	San Juan Creek	2021	September	ND	ND	ND	ND	ND	0.005
305SJA	San Juan Creek	2021	December	0.211	ND	ND	ND	ND	0.018
305SJA	San Juan Creek	2022	March	ND	ND	ND	ND	ND	0.005
305SJA	San Juan Creek	2022	April	ND	ND	ND	ND	ND	ND
305TSR	Tequisquita Slough	2021	September	ND	ND	ND	ND	ND	ND
305TSR	Tequisquita Slough	2021	December	ND	ND	ND	ND	ND	0.032
305TSR	Tequisquita Slough	2022	March	ND	ND	ND	ND	ND	ND
305TSR	Tequisquita Slough	2022	April	ND	ND	ND	ND	0.003	0.004
305WCS	Watsonville Creek	2021	September	ND	ND	ND	ND	ND	ND
305WCS	Watsonville Creek	2021	December	0.046	ND	0.032	ND	ND	0.029
305WCS	Watsonville Creek	2022	March	ND	ND	0.063	ND	ND	0.091
305WCS	Watsonville Creek	2022	April	ND	ND	0.022	ND	ND	0.003
305WSA	Watsonville Slough	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
305WSA	Watsonville Slough	2021	December	0.153	**0.054**[1]	ND	**0.166**[2]	ND	**1.2**[3]
305WSA	Watsonville Slough	2022	March	ND	ND	ND	ND	ND	0.007
305WSA	Watsonville Slough	2022	April	ND	ND	ND	ND	ND	0.005
309ALG	Salinas Reclamation Canal	2021	September	ND	**0.407**[1]	ND	**2.4**[2]	ND	**1.73**[3]
309ALG	Salinas Reclamation Canal	2021	December	1.03	**1.44**[1]	ND	**0.578**[2]	ND	**1.53**[3]

Site ID	Site Description	Year	Month	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam
309ALG	Salinas Reclamation Canal	2022	March	0.059	**1.39[1]**	ND	**0.688[2]**	ND	**6.39[3]**
309ALG	Salinas Reclamation Canal	2022	April	0.018	ND	ND	ND	ND	0.098
309ASB	Alisal Slough	2021	September	ND	ND	ND	ND	ND	ND
309ASB	Alisal Slough	2021	December	0.139	**1.65[1]**	0.097	**0.796[2]**	ND	**2.28[3]**
309ASB	Alisal Slough	2022	March	ND	**2.7**	ND	**0.081[2]**	ND	**1.96[3]**
309ASB	Alisal Slough	2022	April	ND	**0.135[1]**	ND	ND	ND	0.027
309BLA	Blanco Drain	2021	September	ND	**0.064[1]**	0.098	**0.082[2]**	ND	0.588
309BLA	Blanco Drain	2021	December	0.792	**0.73[1]**	0.606	**0.795[2]**	ND	**3.45[3]**
309BLA	Blanco Drain	2022	March	ND	ND	0.039	**0.045[2]**	ND	**0.884[3]**
309BLA	Blanco Drain	2022	April	ND	ND	0.054	ND	ND	0.131
309CCD	Chualar Creek West	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309CCD	Chualar Creek West	2021	December	0.23	**1.39[1]**	ND	**1.13[2]**	ND	**1.37[3]**
309CCD	Chualar Creek West	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309CCD	Chualar Creek West	2022	April	ND	**0.086[1]**	ND	ND	ND	0.178
309CRR	Chualar Creek East	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309CRR	Chualar Creek East	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309ESP	Espinosa Slough	2021	September	0.082	ND	ND	ND	ND	0.424
309ESP	Espinosa Slough	2021	December	1.93	**0.362[1]**	0.016	**0.553[2]**	0.004	**1.09[3]**
309ESP	Espinosa Slough	2022	March	0.57	ND	ND	**0.078[2]**	ND	**1.48[3]**
309ESP	Espinosa Slough	2022	April	0.012	ND	ND	ND	0.003	0.013
309GAB	Gabilan Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309GAB	Gabilan Creek	2021	December	0.024	ND	ND	ND	0.004	0.016
309GAB	Gabilan Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309GAB	Gabilan Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309JON	Salinas Reclamation Canal	2021	September	1.33	**0.307[1]**	ND	**1.25[2]**	ND	0.257
309JON	Salinas Reclamation Canal	2021	December	1.29	**0.451[1]**	0.008	**0.325[2]**	ND	**0.79[3]**
309JON	Salinas Reclamation Canal	2022	March	0.03	ND	ND	**0.104[2]**	ND	**1.55[3]**
309JON	Salinas Reclamation Canal	2022	April	0.055	ND	ND	ND	ND	0.053
309MER	Merritt Ditch	2021	September	ND	ND	ND	ND	ND	0.396
309MER	Merritt Ditch	2021	December	0.822	**0.398[1]**	ND	**0.552[2]**	ND	**0.794[3]**
309MER	Merritt Ditch	2022	March	0.569	ND	ND	ND	ND	**6.18[3]**
309MER	Merritt Ditch	2022	April	0.116	ND	ND	ND	ND	0.065
309MOR	Moro Cojo Slough	2021	September	ND	ND	ND	ND	ND	ND
309MOR	Moro Cojo Slough	2021	December	0.243	**0.605[1]**	ND	**0.521[2]**	ND	**1.61[3]**
309MOR	Moro Cojo Slough	2022	March	ND	ND	ND	ND	ND	0.25
309MOR	Moro Cojo Slough	2022	April	ND	ND	ND	ND	ND	0.007
309NAD	Natividad Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309NAD	Natividad Creek	2021	December	0.445	**0.34[1]**	ND	**0.149[2]**	0.003	0.647
309NAD	Natividad Creek	2022	March	0.045	ND	ND	ND	ND	**2.73[3]**
309NAD	Natividad Creek	2022	April	0.081	ND	ND	ND	0.004	0.034
309OLD	Old Salinas River	2021	September	ND	ND	ND	ND	ND	0.075
309OLD	Old Salinas River	2021	December	0.833	**0.609[1]**	0.028	**0.489[2]**	0.005	**0.913[3]**
309OLD	Old Salinas River	2022	March	0.257	ND	ND	**0.102[2]**	ND	**2.88[3]**
309OLD	Old Salinas River	2022	April	ND	ND	ND	ND	ND	0.011
309QUI	Quail Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309QUI	Quail Creek	2021	December	0.037	**0.735[1]**	ND	**1.36[2]**	ND	**1.12[3]**
309QUI	Quail Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected

Site ID	Site Description	Year	Month	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam
309QUI	Quail Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309RTA	Santa Rita Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309RTA	Santa Rita Creek	2021	December	1.77	**0.345**[1]	ND	**0.288**[2]	ND	**1.07**[3]
309RTA	Santa Rita Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309RTA	Santa Rita Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309SAC	Salinas River at Chualar Bridge	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309SAC	Salinas River at Chualar Bridge	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309SAC	Salinas River at Chualar Bridge	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309SSP	Salinas River at Spreckels Gage	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309SSP	Salinas River at Spreckels Gage	2021	December	ND	ND	ND	ND	ND	0.012
309SSP	Salinas River at Spreckels Gage	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309SSP	Salinas River at Spreckels Gage	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
309TEH	Tembladero Slough	2021	September	0.052	ND	ND	**0.343**[2]	ND	0.329
309TEH	Tembladero Slough	2021	December	1.6	**0.533**[1]	0.019	**0.329**[2]	ND	**0.82**[3]
309TEH	Tembladero Slough	2022	March	0.18	ND	ND	ND	ND	**4.34**[3]
309TEH	Tembladero Slough	2022	April	0.072	**0.092**[1]	ND	ND	ND	0.084

Notes:

ND	Analyte was not detected above the Method Detection Limit.
Red	Indicates result exceeded one or more non-TMDL area limit.
1	Site exceeded the non-TMDL area limit for clothianidin, 0.05 µg/L.
2	Site exceeded the non-TMDL area limit for imidacloprid, 0.01 µg/L.
3	Site exceeded the non-TMDL area limit for thiamethoxam, 0.74 µg/L.

Table 4. Neonicotinoids Detected in Water at SMU Sites, 2021 and 2022 (µg/L).

Site ID	Site Description	Year	Month	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam
310CCC	Chorro Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310CCC	Chorro Creek	2021	December	ND	ND	ND	ND	ND	ND
310CCC	Chorro Creek	2022	March	ND	ND	ND	ND	ND	ND
310CCC	Chorro Creek	2022	April	ND	ND	ND	ND	ND	ND
310LBC	Los Berros Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310LBC	Los Berros Creek	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310LBC	Los Berros Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310LBC	Los Berros Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310PRE	Prefumo Creek	2021	September	ND	ND	ND	ND	ND	ND
310PRE	Prefumo Creek	2021	December	ND	ND	ND	**0.145**[3]	ND	0.005
310PRE	Prefumo Creek	2022	March	ND	ND	ND	ND	ND	ND
310PRE	Prefumo Creek	2022	April	ND	ND	ND	ND	ND	ND
310SLD	Davenport Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310SLD	Davenport Creek	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310SLD	Davenport Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310SLD	Davenport Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310USG	Arroyo Grande Creek	2021	September	ND	ND	ND	ND	ND	ND
310USG	Arroyo Grande Creek	2021	December	0.816	**0.605**[2]	0.043	**0.744**[3]	ND	0.245
310USG	Arroyo Grande Creek	2022	March	ND	ND	ND	ND	ND	ND
310USG	Arroyo Grande Creek	2022	April	ND	ND	ND	ND	ND	ND
310WRP	Warden Creek	2021	September	ND	ND	ND	ND	ND	ND
310WRP	Warden Creek	2021	December	ND	ND	ND	**0.184**[3]	ND	0.247
310WRP	Warden Creek	2022	March	ND	ND	ND	ND	ND	0.015
310WRP	Warden Creek	2022	April	ND	ND	ND	ND	ND	ND
312BCC	Bradley Canyon Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312BCC	Bradley Canyon Creek	2021	December	1.91	ND	ND	**5.62**[3]	ND	**1.55**[4]
312BCC	Bradley Canyon Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312BCC	Bradley Canyon Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312BCJ	Bradley Channel	2021	September	ND	ND	0.048	**0.497**[3]	ND	0.042
312BCJ	Bradley Channel	2021	December	0.843	ND	0.018	**1.58**	ND	0.094
312BCJ	Bradley Channel	2022	March	2.02	ND	ND	**1.81**[3]	ND	**1.67**[4]
312BCJ	Bradley Channel	2022	April	ND	ND	ND	ND	ND	0.004
312GVS	Green Valley at Simas	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312GVS	Green Valley at Simas	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312GVS	Green Valley at Simas	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312MSD	Main St. Canal	2021	October	ND	**0.072**[2]	ND	**0.15**[3]	ND	0.02
312MSD	Main St. Canal	2021	December	0.5	**1.82**[2]	ND	**1.08**[3]	ND	0.643
312MSD	Main St. Canal	2022	March	0.028	ND	ND	ND	ND	0.214
312MSD	Main St. Canal	2022	April	ND	ND	ND	ND	ND	ND
312OFC	Oso Flaco Creek	2021	October	ND	ND	ND	**0.033**[3]	ND	0.003
312OFC	Oso Flaco Creek	2021	December	**6.85**[1]	ND	0.048	**4.18**[3]	ND	**4.65**[4]
312OFC	Oso Flaco Creek	2022	March	1.33	ND	ND	ND	ND	**7.15**[4]
312OFC	Oso Flaco Creek	2022	April	0.033	ND	ND	ND	ND	0.014
312OFN	Little Oso Flaco Creek	2021	October	0.371	ND	ND	**0.023**[3]	ND	**0.913**[4]
312OFN	Little Oso Flaco Creek	2021	December	**2.65**[1]	ND	0.018	**0.23**[3]	ND	**1.79**[4]
312OFN	Little Oso Flaco Creek	2022	March	**3.09**[1]	ND	0.059	ND	ND	**4.04**[4]
312OFN	Little Oso Flaco Creek	2022	April	0.496	ND	ND	ND	ND	0.081
312ORC	Orcutt Solomon Creek u/s of SMR	2021	October	ND	**0.125**[2]	ND	**1.14**[3]	ND	**1.25**[4]

Site ID	Site Description	Year	Month	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam
312ORC	Orcutt Solomon Creek u/s of SMR	2021	December	1.48	**0.704**[2]	ND	**2**[3]	ND	0.574
312ORC	Orcutt Solomon Creek u/s of SMR	2022	March	0.764	ND	ND	ND	ND	**1.96**[4]
312ORC	Orcutt Solomon Creek u/s of SMR	2022	April	ND	ND	ND	ND	ND	0.045
312ORI	Orcutt Solomon Creek at Hwy 1	2021	October	0.149	ND	ND	**0.627**[3]	ND	0.012
312ORI	Orcutt Solomon Creek at Hwy 1	2021	December	1.55	**0.623**[2]	ND	**1.99**[3]	ND	0.279
312ORI	Orcutt Solomon Creek at Hwy 1	2022	March	0.048	ND	ND	**1.32**[3]	ND	**1.38**[4]
312ORI	Orcutt Solomon Creek at Hwy 1	2022	April	ND	ND	ND	ND	ND	0.011
312SMA	Santa Maria River at Estuary	2021	October	ND	**0.062**[2]	ND	**0.678**[3]	ND	0.333
312SMA	Santa Maria River at Estuary	2021	December	1.17	**0.548**[2]	0.007	**2.12**[3]	ND	0.395
312SMA	Santa Maria River at Estuary	2022	March	**2.98**[1]	ND	ND	ND	ND	**2.52**[4]
312SMA	Santa Maria River at Estuary	2022	April	ND	ND	ND	**1.25**[3]	ND	0.015
312SMI	Santa Maria River at Hwy 1	2021	December	0.277	**0.149**[2]	ND	**1.25**[3]	ND	0.68
312SMI	Santa Maria River at Hwy 1	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312SMI	Santa Maria River at Hwy 1	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
313SAE	San Antonio Creek	2021	September	ND	ND	ND	ND	ND	ND
313SAE	San Antonio Creek	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
313SAE	San Antonio Creek	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
313SAE	San Antonio Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYF	Santa Ynez River at Floradale	2021	September	ND	ND	ND	ND	ND	ND
314SYF	Santa Ynez River at Floradale	2022	March	ND	ND	ND	**0.083**[3]	ND	ND
314SYF	Santa Ynez River at Floradale	2022	April	ND	0.041	ND	ND	ND	ND
314SYL	Santa Ynez River at River Park	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYL	Santa Ynez River at River Park	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYL	Santa Ynez River at River Park	2022	March	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYL	Santa Ynez River at River Park	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYN	Santa Ynez River at 13th St.	2021	September	ND	ND	ND	ND	ND	ND
314SYN	Santa Ynez River at 13th St.	2021	December	ND	ND	ND	**0.451**[3]	ND	0.004
314SYN	Santa Ynez River at 13th St.	2022	March	0.151	ND	ND	**0.121**[3]	ND	ND
314SYN	Santa Ynez River at 13th St.	2022	April	0.024	ND	ND	ND	ND	ND
315APF	Arroyo Paredon	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
315APF	Arroyo Paredon	2021	December	ND	ND	ND	ND	ND	ND
315APF	Arroyo Paredon	2022	March	ND	ND	ND	ND	ND	ND
315APF	Arroyo Paredon	2022	April	ND	ND	ND	ND	ND	ND
315BEF	Bell Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
315BEF	Bell Creek	2021	December	ND	ND	ND	**0.176**[3]	ND	0.081
315BEF	Bell Creek	2022	March	ND	ND	ND	**0.133**[3]	ND	0.019
315BEF	Bell Creek	2022	April	ND	ND	ND	ND	ND	ND
315FMV	Franklin Creek	2021	September	ND	ND	0.024	**0.119**[3]	ND	ND
315FMV	Franklin Creek	2021	December	ND	ND	0.077	**0.1**[3]	ND	ND
315FMV	Franklin Creek	2022	March	ND	ND	0.019	**0.033**[3]	ND	0.006
315FMV	Franklin Creek	2022	April	ND	ND	ND	ND	ND	ND
315GAN	Glen Annie Creek	2021	September	ND	ND	ND	ND	ND	ND
315GAN	Glen Annie Creek	2021	December	ND	ND	ND	**0.819**[3]	ND	0.03
315GAN	Glen Annie Creek	2022	March	ND	ND	ND	**0.159**[3]	ND	0.032
315GAN	Glen Annie Creek	2022	April	ND	ND	ND	ND	ND	ND
315LCC	Los Carneros Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
315LCC	Los Carneros Creek	2021	December	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
315LCC	Los Carneros Creek	2022	March	ND	ND	ND	**0.021**[3]	ND	0.033

Site ID	Site Description	Year	Month	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam
315LCC	Los Carneros Creek	2022	April	ND	ND	ND	ND	ND	ND

Notes:

ND	Analyte was not detected above the Method Detection Limit.
Red	Indicates result exceeded one or more non-TMDL area limit.
1	Site exceeded the non-TMDL area limit for acetamiprid, 2.10 µg/L.
2	Site exceeded the non-TMDL area limit for clothianidin is 0.05 µg/L.
3	Site exceeded the non-TMDL area limit for imidacloprid is 0.01 µg/L.
4	Site exceeded the non-TMDL area limit for thiamethoxam is 0.74 µg/L.

Table 5. Metals Detected in water at NMU Sites, 2021 and 2022 (µg/L).

Site ID	Site Description	Month	Year	Total Arsenic	Total Boron	Dissolved Cadmium	Total Cadmium	Dissolved Copper	Total Copper	Dissolved Lead	Total Lead	Total Molybdenum	Dissolved Nickel	Total Nickel	Total Selenium	Dissolved Zinc	Total Zinc
305BRS	Beach Road Ditch	September	2021	2.51	632	0.012	0.024	3.92	4.54	0.019	0.208	2.86	34.5	33.5	0.727	1.39	2.96
305BRS	Beach Road Ditch	December	2021	4.51	295	0.023	0.088	5.28	9.12	0.016	1.39	3.07	35.3	44.9	0.426	2.04	11.9
305BRS	Beach Road Ditch	March	2022	1.91	1130	0.018	0.038	4.32	5.59	0.014	0.245	5.25	39.4	41.3	1.09	0.445	2.16
305BRS	Beach Road Ditch	April	2022	3.02	512	0.032	0.061	4.83	5.72	0.039	0.484	6.99	50.2	52.9	0.793	2.44	5.16
305CAN	Carnadero Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305CAN	Carnadero Creek	December	2021	0.827	76.7	ND	0.045	4.2	7.2	0.053	1.75	0.25	5.04	18.1	0.272	2.95	12.4
305CAN	Carnadero Creek	March	2022	0.298	125	ND	0.017	1.66	1.35	ND	0.078	0.461	2.94	3.24	0.761	3.1	1.26
305CAN	Carnadero Creek	April	2022	0.37	63.4	ND	ND	1.11	1.24	0.009	0.079	0.385	1.59	1.96	0.163	0.897	0.88
305CHI	Pajaro River at Chittenden	September	2021	5.95	694	0.011	0.015	1.87	1.86	ND	0.13	5.33	5.97	6.86	2.32	0.565	1.21
305CHI	Pajaro River at Chittenden	December	2021	3.46	1200	ND	ND	1.63	1.71	ND	0.117	4.73	5.07	5.63	0.636	1.36	1.72
305CHI	Pajaro River at Chittenden	March	2022	1.88	907	ND	0.009	1.64	1.61	0.013	0.104	2.88	6.5	7.03	1.43	2.95	1.63
305CHI	Pajaro River at Chittenden	April	2022	1.41	272	ND	0.018	1.62	1.8	ND	0.186	1.65	3.97	5.15	0.726	1.81	1.43
305COR	Salsipuedes Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305COR	Salsipuedes Creek	December	2021	6.01	56.2	ND	0.234	4.27	16.9	0.018	12.5	0.811	5.55	21.6	0.333	2.87	53.2
305COR	Salsipuedes Creek	March	2022	4.79	139	0.017	0.028	2.15	1.91	0.03	0.562	2.76	9.98	10.7	0.377	1.55	2.91
305COR	Salsipuedes Creek	April	2022	3.64	105	0.014	0.015	1.93	2.12	0.026	0.388	3.49	19.1	19.3	0.639	3.98	3.96
305FRA	Millers Canal	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FRA	Millers Canal	December	2021	13.4	5280	0.038	0.054	11	11.3	0.172	0.205	18.9	7.37	9.56	4.24	1.09	2.59
305FRA	Millers Canal	March	2022	16.4	5780	0.017	0.021	2.31	2.99	0.036	0.275	10.4	7.17	8.38	2.44	0.31	1.91
305FRA	Millers Canal	April	2022	26.4	5560	ND	0.015	1.06	1.8	0.041	0.337	12.4	7.48	10.5	2.75	0.642	2.44
305FUF	Furlong Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FUF	Furlong Creek	December	2021	5.48	202	0.02	0.462	9.45	43.7	0.06	32.3	0.778	9.44	48.7	0.829	5.23	90.3
305FUF	Furlong Creek	March	2022	1.32	314	ND	0.015	1.81	3.1	0.081	1.01	1.18	2.73	4.55	4.28	0.436	3.61
305FUF	Furlong Creek	April	2022	3.06	234	ND	0.157	1.62	18	ND	11	0.436	2.16	28.4	2.8	1.06	43.3
305LCS	Llagas Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305LCS	Llagas Creek	December	2021	1.15	45.3	ND	0.078	4.53	13.3	0.017	2.76	0.188	4.8	26.6	0.046	4.3	28.5
305LCS	Llagas Creek	March	2022	0.412	200	0.024	ND	0.85	0.858	ND	0.018	0.68	6.97	6.94	1.45	1.66	1.39
305LCS	Llagas Creek	April	2022	0.482	143	0.017	0.017	0.754	0.803	ND	0.009	0.801	6.01	6.24	1.67	1.41	1.66
305PJP	Pajaro River at Main St.	September	2021	4.24	369	0.007	0.014	0.907	0.56	ND	0.057	6.71	22.7	23.4	0.329	1.33	2.12
305PJP	Pajaro River at Main St.	December	2021	2.24	31.8	ND	0.177	3.74	16.8	0.055	12.4	0.302	1.93	12.5	0.024	8.17	112
305PJP	Pajaro River at Main St.	March	2022	4.16	338	0.014	0.031	2.06	1.92	0.023	0.293	3.17	9.39	9.78	0.752	2.22	2.97
305PJP	Pajaro River at Main St.	April	2022	2.61	232	0.016	0.025	1.76	1.96	0.011	0.462	2.32	7.47	8.51	0.807	1.55	2.71
305SJA	San Juan Creek	September	2021	6.91	1050	0.026	0.034	2.94	2.94	0.053	0.258	12.4	7.78	8.41	1.06	1.38	2.2
305SJA	San Juan Creek	December	2021	4.83	551	ND	0.074	2.32	7.44	0.198	2.59	5.49	4.39	11.1	1.18	21.4	56
305SJA	San Juan Creek	March	2022	2.05	1760	0.01	0.031	2.94	4.57	0.037	0.776	13.3	6.96	9.7	1.59	1.85	4.8
305SJA	San Juan Creek	April	2022	6.83	993	0.028	0.049	3.86	4.4	0.047	0.425	14.6	6.87	8.85	1.18	3.16	4.69

Site ID	Site Description	Month	Year	Total Arsenic	Total Boron	Dissolved Cadmium	Total Cadmium	Dissolved Copper	Total Copper	Dissolved Lead	Total Lead	Total Molybdenum	Dissolved Nickel	Total Nickel	Total Selenium	Dissolved Zinc	Total Zinc
305TSR	Tequisquita Slough	September	2021	12.6	3440	ND	0.025	0.711	5.11	ND	1.14	18.4	9.68	14.2	3.97	0.481	7.27
305TSR	Tequisquita Slough	December	2021	12.1	2150	ND	0.027	8.2	11.2	0.013	1.12	8.23	8.82	17.2	5.66	1.87	8.9
305TSR	Tequisquita Slough	March	2022	6.06	3340	0.013	ND	2.07	2.15	0.011	0.176	12.1	5.53	6.51	6	0.358	1.32
305TSR	Tequisquita Slough	April	2022	11.6	2430	0.008	0.023	2.2	3.52	ND	0.574	13.1	6.46	10.4	6.76	1.15	5.04
305WCS	Watsonville Creek	September	2021	8.65	635	0.102	0.109	2.9	3.26	0.534	1.21	13.1	24.8	26.4	0.879	16.1	20.7
305WCS	Watsonville Creek	December	2021	3.1	71.6	ND	0.184	5.01	18.1	0.072	9.64	1.1	4.97	17.6	0.328	6.55	89.1
305WCS	Watsonville Creek	March	2022	2.05	494	0.014	0.024	3.98	4.33	0.043	0.119	8.96	14.3	14.4	1.21	3.8	4.69
305WCS	Watsonville Creek	April	2022	2.69	350	0.068	0.073	5.09	5.39	0.086	0.135	11.9	18.4	18.7	2.31	13.2	12.9
305WSA	Watsonville Slough	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305WSA	Watsonville Slough	December	2021	3.64	111	ND	0.041	4.32	6.52	ND	1.56	1.16	14.1	21.2	0.419	1.57	9.85
305WSA	Watsonville Slough	March	2022	2.88	284	ND	0.01	1.18	1.93	0.023	0.565	5.33	43.8	45.5	1.63	0.46	3.13
305WSA	Watsonville Slough	April	2022	5.06	113	ND	0.015	1.35	1.42	0.033	0.33	2.75	18.1	18.9	0.861	1.17	2.1
309ALG	Salinas Reclamation Canal	September	2021	7.09	87.6	0.552	0.532	10	10.4	0.2	0.341	6.17	3.77	4.13	1.04	9.09	14
309ALG	Salinas Reclamation Canal	December	2021	19.1	37.9	0.054	1.8	3.3	49.4	ND	25	1.99	7.37	44.3	0.913	3.92	145
309ALG	Salinas Reclamation Canal	March	2022	8.41	68.7	0.201	0.706	6.22	18.9	0.017	5.67	1.39	2.34	11.6	0.994	7.52	66.1
309ALG	Salinas Reclamation Canal	April	2022	9.04	104	0.067	0.148	6.48	8.07	ND	0.801	7.51	5.5	7.31	1.01	3.4	12.4
309ASB	Alisal Slough	September	2021	9.23	289	0.058	0.268	2.12	5.18	0.01	1.08	31.7	20.1	28	3.95	0.309	10.7
309ASB	Alisal Slough	December	2021	8.28	301	0.103	0.254	5.77	7.78	ND	1.05	18.1	24.3	29.2	3.06	2.23	8.23
309ASB	Alisal Slough	March	2022	11.6	451	0.171	0.22	4.53	5.66	0.014	0.367	43.6	29.7	33.6	6.09	3.62	5.96
309ASB	Alisal Slough	April	2022	8.1	268	0.081	0.099	3.47	4.12	0.016	0.246	37.2	17.3	19	4.53	1.78	3.15
309BLA	Blanco Drain	September	2021	8.26	604	0.117	0.091	3.77	4.02	0.009	0.114	124	22.4	23.7	8.1	2.08	2.87
309BLA	Blanco Drain	December	2021	8.54	417	0.21	0.506	6.34	10.6	ND	1.91	45.2	31.2	44.4	3.79	2.49	14.7
309BLA	Blanco Drain	March	2022	7.98	596	0.085	0.137	3.47	4.09	0.012	0.32	112	21.2	24	9.26	0.708	4.37
309BLA	Blanco Drain	April	2022	8.77	363	0.124	0.33	5.17	7.99	0.018	1.34	86.6	31.1	40.9	7	1.45	13.9
309CCD	Chualar Creek West	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	December	2021	16.9	69	ND	5.19	5.61	220	ND	69	1.09	1.3	85	1.93	3.48	378
309CCD	Chualar Creek West	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	April	2022	5.71	136	0.027	0.764	3.38	24.1	ND	9.25	1.75	1.03	9.94	4.27	1.22	55.1
309CRR	Chualar Creek East	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CRR	Chualar Creek East	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309ESP	Espinosa Slough	September	2021	4.56	138	0.042	0.106	3.05	4.14	0.012	0.643	7.22	20.4	23.2	1.16	0.932	5.96
309ESP	Espinosa Slough	December	2021	3.84	68.8	0.046	0.413	3.22	13	ND	8.44	1.79	6.51	16.4	2.27	6.04	37.1
309ESP	Espinosa Slough	March	2022	4.26	210	0.205	0.334	4.48	6.44	0.038	1.1	15.6	30.7	34.4	6.82	4.78	10.3
309ESP	Espinosa Slough	April	2022	4.86	224	0.252	0.316	6.82	8.52	0.032	0.625	35.6	41.5	45	14.6	2.2	5.04
309GAB	Gabilan Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	December	2021	3.31	33.1	ND	0.094	2.8	10.6	ND	4.19	1.29	1.61	4.26	0.971	3.04	19.3
309GAB	Gabilan Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Total Arsenic	Total Boron	Dissolved Cadmium	Total Cadmium	Dissolved Copper	Total Copper	Dissolved Lead	Total Lead	Total Molybdenum	Dissolved Nickel	Total Nickel	Total Selenium	Dissolved Zinc	Total Zinc
309GRN	Salinas River at Elm Rd.	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309JON	Salinas Reclamation Canal	September	2021	9.93	218	0.082	0.103	1.65	1.84	0.127	0.376	121	5.51	6.33	1.79	2.2	4.61
309JON	Salinas Reclamation Canal	December	2021	6.22	28.4	0.021	0.736	4.12	22.8	0.03	11	0.413	1.95	19.9	0.255	6.1	94.5
309JON	Salinas Reclamation Canal	March	2022	4.93	69.9	0.047	0.134	3.53	5.57	0.043	1.72	10.3	5.35	8.14	0.801	12.9	27.9
309JON	Salinas Reclamation Canal	April	2022	6.98	107	0.06	0.147	4.64	6.64	0.054	1.91	79.2	4.88	8.74	3.27	3.48	19.4
309MER	Merritt Ditch	September	2021	8.92	389	0.046	0.297	4.46	7.76	0.021	1.98	15.4	15.9	24.5	1.87	1.82	20.6
309MER	Merritt Ditch	December	2021	5.62	83.6	0.021	0.12	4.39	6.24	ND	2.72	7.05	9.18	12.9	0.967	2.87	10.4
309MER	Merritt Ditch	March	2022	5.26	186	0.132	0.227	5.94	7.21	0.032	1.23	9.51	14.5	17.8	1.93	3.81	9.11
309MER	Merritt Ditch	April	2022	6.6	164	0.05	0.166	5.74	7.71	0.027	1.74	15.6	12.2	16.9	2.33	1.93	14.7
309MOR	Moro Cojo Slough	September	2021	3	3140	0.022	0.052	1.87	1.74	0.013	0.102	12.3	1.51	1.59	21.8	2.07	4.35
309MOR	Moro Cojo Slough	December	2021	7.03	363	0.047	0.148	4.73	7.28	0.077	0.96	14.9	15.6	18.7	0.92	5.51	22.7
309MOR	Moro Cojo Slough	March	2022	46.2	24500	0.299	1.34	3.92	22.5	0.084	3.08	187	6.75	68.2	83.8	5.37	60.6
309MOR	Moro Cojo Slough	April	2022	4.37	2220	0.1	0.112	11.3	9.94	0.075	0.351	14.4	3.06	4.21	42.8	2.96	6.05
309NAD	Natividad Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309NAD	Natividad Creek	December	2021	3.95	58.2	0.012	0.047	4.74	6.38	ND	1.31	1.75	4.87	6.46	0.466	7.82	12.7
309NAD	Natividad Creek	March	2022	9.35	79.4	0.301	0.364	3.26	4.43	0.11	1.35	2.54	7.03	8.47	0.61	36.5	51.1
309NAD	Natividad Creek	April	2022	21	81.4	0.101	0.203	2.12	5.73	ND	2.97	2.41	5.49	10.7	0.517	5.42	21.1
309OLD	Old Salinas River	September	2021	10.8	836	0.039	0.165	2.98	4.71	0.016	0.899	27.9	9.84	16.3	2.43	0.867	7.83
309OLD	Old Salinas River	December	2021	6.15	149	0.037	0.183	3.88	7.52	ND	2.64	6.94	9.23	13.3	1.19	4.27	20.4
309OLD	Old Salinas River	March	2022	6.76	384	0.156	0.268	4.88	7.63	0.057	2.12	10.5	13.3	19.7	1.88	6.55	18.2
309OLD	Old Salinas River	April	2022	9.24	1030	0.156	0.324	6.67	9.59	0.037	1.67	37.3	12.8	23.3	81.5	1.63	11.2
309QUI	Quail Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	December	2021	16.7	22.9	0.124	1.9	2.08	48	ND	34	0.902	0.954	29.1	1.02	4.21	210
309QUI	Quail Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	December	2021	2.77	82.9	0.015	0.145	4.18	8.23	ND	4.14	1.16	3.93	6.48	0.475	5.03	24.7
309RTA	Santa Rita Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Total Arsenic	Total Boron	Dissolved Cadmium	Total Cadmium	Dissolved Copper	Total Copper	Dissolved Lead	Total Lead	Total Molybdenum	Dissolved Nickel	Total Nickel	Total Selenium	Dissolved Zinc	Total Zinc
309SAC	Salinas River at Chualar Bridge	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	December	2021	1.27	4.34	ND	0.669	1.23	7.32	ND	3.61	0.221	0.906	10.8	0.414	2.21	19
309SSP	Salinas River at Spreckels Gage	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309TEH	Tembladero Slough	September	2021	11.9	335	0.081	0.183	4.29	6.7	0.037	1.79	50.6	17	23.8	2.92	0.901	13.3
309TEH	Tembladero Slough	December	2021	6.91	74.2	0.031	1.06	4.17	30.7	0.02	13.2	0.789	4.96	29.9	0.905	4.27	116
309TEH	Tembladero Slough	March	2022	6.62	172	0.102	0.24	3.65	5.91	0.047	2.29	8.99	12.9	18.3	1.34	7.1	20
309TEH	Tembladero Slough	April	2022	10.1	180	0.08	0.347	5	9.5	0.019	3.45	21.2	14.5	25.7	3.36	1.55	21.2

Notes:

ND Analyte was not detected above the Method Detection Limit.

Table 6. Metals Detected in Water at SMU Sites, 2021 and 2022 (µg/L).

Site ID	Site Description	Month	Year	Total Arsenic	Total Boron	Dissolved Cadmium	Total Cadmium	Dissolved Copper	Total Copper	Dissolved Lead	Total Lead	Total Molybdenum	Dissolved Nickel	Total Nickel	Total Selenium	Dissolved Zinc	Total Zinc
310CCC	Chorro Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310CCC	Chorro Creek	December	2021	1.37	51.2	ND	0.162	4.36	13.4	0.034	4.74	0.521	18.3	140	1.18	1.96	25.5
310CCC	Chorro Creek	March	2022	1.92	111	0.044	0.049	2.56	2.1	0.203	0.222	1.34	12.6	16.8	1.55	3.09	2.87
310CCC	Chorro Creek	April	2022	1.71	118	ND	ND	1.07	1.07	ND	0.037	2.23	5.08	6.56	2.02	0.867	0.866
310LBC	Los Berros Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310PRE	Prefumo Creek	September	2021	1.68	90.8	0.009	0.069	0.971	1.26	ND	0.177	4.07	2.75	6.42	4.71	0.773	7.2
310PRE	Prefumo Creek	December	2021	1.29	46.7	0.018	0.078	4.89	6.84	0.039	1.06	2.82	5.45	14.4	2.66	7.52	18.1
310PRE	Prefumo Creek	March	2022	1.86	62.9	0.082	0.154	5.51	6.43	0.032	0.555	4.67	5.89	8.66	2.2	10.7	16
310PRE	Prefumo Creek	April	2022	1.54	104	0.016	0.054	0.601	0.922	ND	0.118	4.08	3.53	5.9	4.63	1.48	1.69
310SLD	Davenport Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310USG	Arroyo Grande Creek	September	2021	5.96	71.7	0.127	0.296	1.04	0.887	ND	0.074	27.2	3.54	4.16	5	0.349	1.41
310USG	Arroyo Grande Creek	December	2021	5.67	49.7	0.43	7.9	4.67	25.3	0.011	4.52	2.96	4.8	37.1	3.72	4.11	111
310USG	Arroyo Grande Creek	March	2022	3.32	102	0.198	0.461	1.56	1.82	0.008	0.18	21.7	4.23	5.31	9.78	2.15	5.03
310USG	Arroyo Grande Creek	April	2022	3.33	128	0.102	0.357	0.621	0.929	ND	0.262	28	3.57	4.85	14.9	1.02	3.59
310WRP	Warden Creek	September	2021	4.71	198	ND	0.008	2.04	1.56	ND	0.008	10.3	6.33	6.53	6.69	0.056	10.1
310WRP	Warden Creek	December	2021	4.85	79.7	ND	0.277	8.81	19.7	0.014	3.14	1.12	15.1	90	0.528	2.27	30.5
310WRP	Warden Creek	March	2022	3.51	147	0.034	0.043	2.12	2.46	0.008	0.074	4.57	7.55	9.99	5.67	0.887	1.77
310WRP	Warden Creek	April	2022	2.64	173	0.008	ND	1.7	1.46	ND	0.01	6.88	6.03	6.26	7.74	0.427	0.444
312BCC	Bradley Canyon Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	December	2021	4.73	89.8	0.089	1.77	4.85	29.7	ND	13.8	1.9	2.23	22	0.832	2.89	121
312BCC	Bradley Canyon Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCJ	Bradley Channel	September	2021	3.98	277	0.049	0.18	7.93	9.57	0.009	0.923	9.25	3.47	5	2.37	0.12	9.71
312BCJ	Bradley Channel	December	2021	1.32	169	0.017	0.106	1.41	2.43	ND	0.804	5.01	1.81	2.89	1.51	1.72	7.31
312BCJ	Bradley Channel	March	2022	8.23	222	0.681	1.17	4.95	8.99	0.051	2.91	58.8	9.89	15.4	2.04	13.2	39.9
312BCJ	Bradley Channel	April	2022	1.84	240	0.035	0.152	3.59	4.76	ND	0.547	7.81	2.05	2.75	2.22	8.69	8.1
312GVS	Green Valley at Simas	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Total Arsenic	Total Boron	Dissolved Cadmium	Total Cadmium	Dissolved Copper	Total Copper	Dissolved Lead	Total Lead	Total Molybdenum	Dissolved Nickel	Total Nickel	Total Selenium	Dissolved Zinc	Total Zinc
312GVS	Green Valley at Simas	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312MSD	Main St. Canal	October	2021	1.39	139	0.104	0.137	2.83	3.14	0.039	0.361	8.08	1.54	1.86	1.81	11.1	15
312MSD	Main St. Canal	December	2021	2.25	48	0.046	0.413	4.41	12.8	0.035	5.4	1.47	1.85	6.29	0.348	10.6	71.8
312MSD	Main St. Canal	March	2022	2.58	53.3	0.097	0.187	5.17	8.18	0.114	2.13	4.17	3.3	5.02	0.487	23.2	50.1
312MSD	Main St. Canal	April	2022	1.74	220	0.063	0.25	2.95	4.67	0.015	0.813	3.1	1.2	2.93	2.03	0.705	18.8
312OFC	Oso Flaco Creek	October	2021	1.43	187	0.029	0.13	1.09	1.98	0.008	0.738	6.43	1.41	2.31	4.11	ND	4.82
312OFC	Oso Flaco Creek	December	2021	3.28	86.2	0.259	0.779	3.29	7.87	0.033	3.55	2.04	3.02	8.14	1.06	4.68	34.8
312OFC	Oso Flaco Creek	March	2022	3.89	105	0.561	1.25	4.33	10.2	0.035	3.88	2.19	4.35	12.5	1.58	8.85	48.3
312OFC	Oso Flaco Creek	April	2022	2.76	310	0.078	0.316	1.33	4.04	ND	2.08	4.23	2.5	6	3.09	3.5	16.5
312OFN	Little Oso Flaco Creek	October	2021	3.92	117	0.046	0.089	3.28	3.51	0.01	0.377	11.7	2.74	3.13	2.18	2.97	6.69
312OFN	Little Oso Flaco Creek	December	2021	2.62	73.8	0.024	0.277	2.5	5.85	0.013	1.93	3.28	1.99	5.04	1.71	4.04	32.7
312OFN	Little Oso Flaco Creek	March	2022	2.76	50.9	0.07	0.269	2.87	4.66	0.035	1.28	4.17	1.85	4.29	1.42	8.24	27.1
312OFN	Little Oso Flaco Creek	April	2022	2.98	173	0.032	0.115	5.44	5.75	0.008	0.302	14.7	1.53	2.02	4.36	19.6	67.1
312ORC	Orcutt Solomon Creek u/s of SMR	October	2021	3.26	376	0.042	0.275	2.28	4.78	ND	1.01	7.65	2.98	5.16	13.3	1.98	16.9
312ORC	Orcutt Solomon Creek u/s of SMR	December	2021	4.37	245	0.077	0.309	4.1	6.55	0.009	1.43	5.66	4.73	7.69	7.65	2.75	12.5
312ORC	Orcutt Solomon Creek u/s of SMR	March	2022	6.11	189	0.292	0.636	4.81	7.94	0.022	2.08	6.63	6.97	12.4	4.06	26.3	60.7
312ORC	Orcutt Solomon Creek u/s of SMR	April	2022	4.22	316	0.028	0.149	3	2.95	0.01	0.745	2.69	2.24	3.88	6.78	2.63	5.88
312ORI	Orcutt Solomon Creek at Hwy 1	October	2021	6.27	359	0.107	0.175	3.6	4.04	ND	0.545	68.5	4.72	5.53	41.8	0.871	3.78
312ORI	Orcutt Solomon Creek at Hwy 1	December	2021	4.19	78.8	0.048	0.912	2.83	11.8	0.013	3.93	1.94	4.07	13.1	1.63	4.06	37.7
312ORI	Orcutt Solomon Creek at Hwy 1	March	2022	6.8	181	0.428	0.621	3.69	4.89	0.03	0.983	10.4	6.13	8.31	6.23	6.27	11
312ORI	Orcutt Solomon Creek at Hwy 1	April	2022	4.07	332	0.133	0.291	2.96	4	ND	0.436	16.6	4.95	8.13	21.9	1.43	6.16
312SMA	Santa Maria River at Estuary	October	2021	2.98	330	0.013	0.037	1.42	1.5	0.01	0.118	7.28	2.26	2.54	6.28	0.1	0.919
312SMA	Santa Maria River at Estuary	December	2021	3.36	252	0.064	0.098	2.81	3.26	0.007	0.326	8.15	4.37	4.97	5.19	2	3.26
312SMA	Santa Maria River at Estuary	March	2022	5.73	167	0.239	0.488	4.23	6.99	0.023	1.41	8.25	6.36	10.4	4.84	5.27	14.5
312SMA	Santa Maria River at Estuary	April	2022	3.17	320	0.023	0.061	1.33	1.7	ND	0.219	4.34	2.33	2.8	8.1	2.05	1.93
312SMI	Santa Maria River at Hwy 1	December	2021	7.07	78.4	0.119	5.46	2.98	56	ND	22	0.887	2.17	60.7	1.68	1.4	208
312SMI	Santa Maria River at Hwy 1	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312SMI	Santa Maria River at Hwy 1	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	September	2021	8.12	241	0.037	2.15	0.689	8.25	ND	2.37	26.6	0.619	9.82	14.7	ND	28
313SAE	San Antonio Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Total Arsenic	Total Boron	Dissolved Cadmium	Total Cadmium	Dissolved Copper	Total Copper	Dissolved Lead	Total Lead	Total Molybdenum	Dissolved Nickel	Total Nickel	Total Selenium	Dissolved Zinc	Total Zinc
313SAE	San Antonio Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYF	Santa Ynez River at Floradale	September	2021	1.13	433	0.031	0.038	2.45	2.79	0.026	0.12	9.75	2.66	2.99	0.129	54.9	57.2
314SYF	Santa Ynez River at Floradale	March	2022	2.21	443	0.089	0.09	2.64	3.51	0.044	0.267	14.5	3.52	4.05	0.319	49.5	55.4
314SYF	Santa Ynez River at Floradale	April	2022	1.5	391	0.054	0.122	3.59	6.02	0.074	0.678	11.1	3.58	5.68	0.263	67.5	82.2
314SYL	Santa Ynez River at River Park	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYN	Santa Ynez River at 13th St.	September	2021	7.38	792	0.013	0.556	3.14	8.64	0.013	3.08	7.66	8.33	25.1	0.597	0.281	25.8
314SYN	Santa Ynez River at 13th St.	December	2021	2.3	151	0.092	0.127	3.18	3.24	0.03	0.357	6.66	3.1	4.17	0.499	6.61	9.83
314SYN	Santa Ynez River at 13th St.	March	2022	2.98	207	0.165	0.195	2.84	3.3	0.043	0.35	7.89	4.51	5.24	0.347	8.61	11.6
314SYN	Santa Ynez River at 13th St.	April	2022	3.68	406	0.106	0.142	2.02	2.65	0.02	0.179	10.6	8.34	9.23	0.314	11.9	12.9
315APF	Arroyo Paredon	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315APF	Arroyo Paredon	December	2021	1.53	2370	ND	ND	1.61	1.17	ND	0.042	1.19	1.02	1.16	0.62	1.63	0.822
315APF	Arroyo Paredon	March	2022	1.82	2750	0.021	0.018	1.96	1.96	ND	0.028	0.775	0.809	0.92	0.293	0.715	0.964
315APF	Arroyo Paredon	April	2022	1.7	3030	ND	ND	0.783	0.646	0.008	0.073	0.592	0.645	0.797	0.094	1.11	1.28
315BEF	Bell Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315BEF	Bell Creek	December	2021	1.24	695	0.009	0.036	2.79	3.2	0.01	0.176	8.79	11.1	12.3	21.6	2.4	2.82
315BEF	Bell Creek	March	2022	1.65	911	0.042	0.034	2.5	2.54	ND	0.06	10.3	11.8	12.6	12.2	0.794	1.28
315BEF	Bell Creek	April	2022	1.12	1250	0.011	0.021	1.27	1.46	0.009	0.15	10.8	6.01	7.01	20.2	2.48	2.43
315FMV	Franklin Creek	September	2021	1.14	380	0.085	0.092	7.08	9.69	0.818	1.02	2.07	26.6	27.8	0.477	86.7	90.7
315FMV	Franklin Creek	December	2021	0.886	403	0.055	0.064	3.66	3.73	0.051	0.153	3.63	26.1	26.2	0.858	16.7	16.8
315FMV	Franklin Creek	March	2022	1.43	368	0.067	0.074	2.85	3.13	0.032	0.088	3.63	20.3	20.5	1.03	11.5	12.2
315FMV	Franklin Creek	April	2022	1.27	356	0.076	0.08	2.2	2.5	0.052	0.161	4.65	28.6	28.5	0.665	14.3	14.5
315GAN	Glen Annie Creek	September	2021	1.47	528	0.016	0.017	1.11	1.21	ND	0.11	7.9	6.53	7.42	17.8	2.19	3.88
315GAN	Glen Annie Creek	December	2021	1.62	375	ND	0.016	3.5	3.39	0.015	0.32	6.07	7.55	8.64	6.17	3.49	4.9
315GAN	Glen Annie Creek	March	2022	2.1	481	0.036	0.141	2.34	3.98	0.02	0.279	4.74	7.52	8.3	6.46	2.09	3.6
315GAN	Glen Annie Creek	April	2022	1.91	474	0.011	0.037	1.05	1.63	ND	0.196	6.62	6.3	7.3	10.1	2.17	4.61
315LCC	Los Carneros Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	March	2022	3.08	629	0.033	0.05	2.74	2.52	0.018	0.086	9.75	3.12	3.46	3.57	1.52	1.78
315LCC	Los Carneros Creek	April	2022	6.78	610	ND	0.115	0.673	3.78	ND	1.11	7.58	5.32	9.83	4.22	2.69	9.22

Notes:

ND Analyte was not detected above the Method Detection Limit.

Table 7. Herbicides Detected in Water at NMU Sites, 2021 and 2022 (µg/L).

Site ID	Site Description	Year	Month	Glyphosate	Cyanazine	Diuron	Linuron	Simazine
305BRS	Beach Road Ditch	2021	September	ND	ND	ND	ND	ND
305BRS	Beach Road Ditch	2021	December	4.2	ND	ND	ND	ND
305BRS	Beach Road Ditch	2022	March	ND	ND	ND	ND	ND
305BRS	Beach Road Ditch	2022	April	ND	ND	ND	ND	ND
305CAN	Carnadero Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305CAN	Carnadero Creek	2021	December	ND	ND	0.007	ND	ND
305CAN	Carnadero Creek	2022	March	ND	ND	ND	ND	ND
305CAN	Carnadero Creek	2022	April	ND	ND	ND	ND	ND
305CHI	Pajaro River at Chittenden	2021	September	ND	ND	ND	ND	ND
305CHI	Pajaro River at Chittenden	2021	December	ND	ND	0.074	ND	ND
305CHI	Pajaro River at Chittenden	2022	March	ND	ND	0.021	ND	ND
305CHI	Pajaro River at Chittenden	2022	April	ND	ND	0.005	ND	ND
305COR	Salsipuedes Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305COR	Salsipuedes Creek	2021	December	2.8	ND	0.025	ND	ND
305COR	Salsipuedes Creek	2022	March	ND	ND	ND	ND	ND
305COR	Salsipuedes Creek	2022	April	ND	ND	ND	ND	ND
305FRA	Millers Canal	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FRA	Millers Canal	2021	December	140	ND	1.3	0.004	ND
305FRA	Millers Canal	2022	March	ND	ND	0.005	ND	ND
305FRA	Millers Canal	2022	April	ND	ND	0.013	ND	ND
305FUF	Furlong Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FUF	Furlong Creek	2021	December	14	0.004	0.064	ND	0.042
305FUF	Furlong Creek	2022	March	ND	ND	ND	ND	ND
305FUF	Furlong Creek	2022	April	ND	ND	ND	ND	ND
305LCS	Llagas Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305LCS	Llagas Creek	2021	December	6.2	ND	0.11	ND	ND
305LCS	Llagas Creek	2022	March	ND	ND	0.01	ND	ND
305LCS	Llagas Creek	2022	April	ND	ND	0.005	ND	ND
305PJP	Pajaro River at Main St.	2021	September	ND	ND	0.015	ND	ND
305PJP	Pajaro River at Main St.	2021	December	5.3	ND	0.11	ND	ND
305PJP	Pajaro River at Main St.	2022	March	ND	ND	ND	ND	ND

Site ID	Site Description	Year	Month	Glyphosate	Cyanazine	Diuron	Linuron	Simazine
305PJP	Pajaro River at Main St.	2022	April	ND	ND	0.005	ND	ND
305SJA	San Juan Creek	2021	September	ND	ND	0.012	ND	ND
305SJA	San Juan Creek	2021	December	9.8	ND	0.2	ND	ND
305SJA	San Juan Creek	2022	March	2.7	ND	0.16	ND	ND
305SJA	San Juan Creek	2022	April	ND	ND	0.09	ND	ND
305TSR	Tequisquita Slough	2021	September	ND	ND	ND	ND	ND
305TSR	Tequisquita Slough	2021	December	ND	ND	ND	ND	ND
305TSR	Tequisquita Slough	2022	March	ND	ND	ND	ND	ND
305TSR	Tequisquita Slough	2022	April	ND	ND	0.006	ND	ND
305WCS	Watsonville Creek	2021	September	ND	ND	ND	ND	ND
305WCS	Watsonville Creek	2021	December	ND	ND	0.05	ND	ND
305WCS	Watsonville Creek	2022	March	ND	ND	ND	ND	ND
305WCS	Watsonville Creek	2022	April	ND	ND	0.007	ND	ND
305WSA	Watsonville Slough	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305WSA	Watsonville Slough	2021	December	5.2	ND	ND	0.005	ND
305WSA	Watsonville Slough	2022	March	ND	ND	ND	ND	ND
305WSA	Watsonville Slough	2022	April	ND	ND	ND	ND	ND
309ALG	Salinas Reclamation Canal	2021	September	7.1	ND	0.007	ND	ND
309ALG	Salinas Reclamation Canal	2021	December	4.6	ND	0.033	0.003	0.003
309ALG	Salinas Reclamation Canal	2022	March	27	ND	0.29	ND	ND
309ALG	Salinas Reclamation Canal	2022	April	15	ND	0.052	ND	ND
309ASB	Alisal Slough	2021	September	4.3	ND	ND	ND	ND
309ASB	Alisal Slough	2021	December	26	ND	0.007	ND	ND
309ASB	Alisal Slough	2022	March	ND	ND	0.005	ND	ND
309ASB	Alisal Slough	2022	April	9.5	ND	0.006	ND	ND
309BLA	Blanco Drain	2021	September	47	ND	ND	0.004	ND
309BLA	Blanco Drain	2021	December	11	ND	ND	ND	ND
309BLA	Blanco Drain	2022	March	3.3	ND	ND	ND	ND
309BLA	Blanco Drain	2022	April	4.7	ND	0.005	ND	ND
309CCD	Chualar Creek West	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	2021	December	7.8	ND	0.033	ND	ND
309CCD	Chualar Creek West	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	2022	April	5	ND	0.006	**1.2**[1]	ND

Site ID	Site Description	Year	Month	Glyphosate	Cyanazine	Diuron	Linuron	Simazine
309CRR	Chualar Creek East	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CRR	Chualar Creek East	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309ESP	Espinosa Slough	2021	September	12	ND	ND	ND	ND
309ESP	Espinosa Slough	2021	December	ND	ND	0.012	ND	ND
309ESP	Espinosa Slough	2022	March	ND	ND	0.007	ND	ND
309ESP	Espinosa Slough	2022	April	ND	ND	0.006	ND	ND
309GAB	Gabilan Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	2021	December	ND	ND	ND	ND	ND
309GAB	Gabilan Creek	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	2021	December	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309JON	Salinas Reclamation Canal	2021	September	5.7	ND	0.008	ND	ND
309JON	Salinas Reclamation Canal	2021	December	24	ND	0.099	0.004	ND
309JON	Salinas Reclamation Canal	2022	March	3.5	ND	0.11	ND	0.011
309JON	Salinas Reclamation Canal	2022	April	5.5	ND	0.094	ND	0.007
309MER	Merritt Ditch	2021	September	67	ND	0.007	ND	ND
309MER	Merritt Ditch	2021	December	ND	ND	0.005	ND	ND
309MER	Merritt Ditch	2022	March	4.1	ND	0.008	ND	ND
309MER	Merritt Ditch	2022	April	8.3	ND	0.012	ND	ND
309MOR	Moro Cojo Slough	2021	September	ND	ND	ND	ND	ND
309MOR	Moro Cojo Slough	2021	December	2.8	ND	0.022	ND	ND
309MOR	Moro Cojo Slough	2022	March	ND	ND	0.007	ND	ND
309MOR	Moro Cojo Slough	2022	April	ND	ND	0.008	ND	ND
309NAD	Natividad Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Year	Month	Glyphosate	Cyanazine	Diuron	Linuron	Simazine
309NAD	Natividad Creek	2021	December	ND	ND	ND	ND	ND
309NAD	Natividad Creek	2022	March	13	ND	ND	ND	ND
309NAD	Natividad Creek	2022	April	9.6	ND	ND	ND	ND
309OLD	Old Salinas River	2021	September	4.237	ND	0.005	ND	ND
309OLD	Old Salinas River	2021	December	4.3	ND	0.031	ND	ND
309OLD	Old Salinas River	2022	March	4.5	ND	0.079	ND	0.016
309OLD	Old Salinas River	2022	April	ND	ND	ND	ND	ND
309QUI	Quail Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	2021	December	4.6	ND	ND	ND	ND
309QUI	Quail Creek	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2021	December	ND	ND	0.006	ND	ND
309RTA	Santa Rita Creek	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	2021	December	ND	ND	ND	ND	ND

Site ID	Site Description	Year	Month	Glyphosate	Cyanazine	Diuron	Linuron	Simazine
309SSP	Salinas River at Spreckels Gage	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309TEH	Tembladero Slough	2021	September	7.3	ND	0.008	ND	ND
309TEH	Tembladero Slough	2021	September	31	ND	0.006	ND	ND
309TEH	Tembladero Slough	2021	December	31	ND	0.073	0.005	ND
309TEH	Tembladero Slough	2022	March	4.6	ND	0.089	ND	0.011
309TEH	Tembladero Slough	2022	April	8.1	ND	0.027	ND	0.003

Notes:

ND Analyte was not detected above the Method Detection Limit.

Red Indicates result exceeded a non-TMDL area limit.

1 Site exceeded the non-TMDL area limit for linuron, 0.09 µg/L.

Table 8. Herbicides Detected in Water at SMU Sites, 2021 and 2022 (µg/L).

Site ID	Site Description	Year	Month	Glyphosate	Diuron	Linuron	Simazine	Trifluralin
310CCC	Chorro Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310CCC	Chorro Creek	2021	December	ND	ND	ND	ND	ND
310CCC	Chorro Creek	2022	March	ND	ND	ND	0.004	ND
310CCC	Chorro Creek	2022	April	ND	ND	ND	0.005	ND
310LBC	Los Berros Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	2021	December	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310PRE	Prefumo Creek	2021	September	ND	ND	ND	ND	ND
310PRE	Prefumo Creek	2021	December	ND	0.027	ND	ND	ND
310PRE	Prefumo Creek	2022	March	ND	0.008	ND	ND	ND
310PRE	Prefumo Creek	2022	April	ND	ND	ND	ND	ND
310SLD	Davenport Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	2021	December	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310USG	Arroyo Grande Creek	2021	September	ND	ND	0.004	ND	ND
310USG	Arroyo Grande Creek	2021	December	15	0.016	**1.2**[1]	0.027	ND
310USG	Arroyo Grande Creek	2022	March	4.9	0.008	0.007	0.006	ND
310USG	Arroyo Grande Creek	2022	April	ND	ND	0.005	ND	ND
310WRP	Warden Creek	2021	September	ND	ND	ND	ND	ND
310WRP	Warden Creek	2021	December	ND	ND	ND	ND	ND
310WRP	Warden Creek	2022	March	ND	ND	ND	ND	ND
310WRP	Warden Creek	2022	April	ND	ND	ND	ND	ND
312BCC	Bradley Canyon Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	2021	December	55	ND	0.064	ND	0.026

Site ID	Site Description	Year	Month	Glyphosate	Diuron	Linuron	Simazine	Trifluralin
312BCC	Bradley Canyon Creek	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCJ	Bradley Channel	2021	September	210	0.007	**0.4**[1]	ND	ND
312BCJ	Bradley Channel	2021	December	3.7	ND	0.021	ND	ND
312BCJ	Bradley Channel	2022	March	31	ND	**0.16**[1]	ND	ND
312BCJ	Bradley Channel	2022	April	20	0.04	**0.13**[1]	ND	ND
312GVS	Green Valley at Simas	2021	December	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312MSD	Main St. Canal	2021	October	7.3	ND	0.049	ND	ND
312MSD	Main St. Canal	2021	December	6.822	0.077	0.014	ND	ND
312MSD	Main St. Canal	2022	March	12	0.049	**0.14**[1]	ND	ND
312MSD	Main St. Canal	2022	April	6.3	0.01	0.007	ND	ND
312OFC	Oso Flaco Creek	2021	October	3.2	ND	ND	ND	ND
312OFC	Oso Flaco Creek	2021	December	7.3	0.005	0.032	ND	ND
312OFC	Oso Flaco Creek	2022	March	15	ND	**0.26**[1]	0.44	ND
312OFC	Oso Flaco Creek	2022	April	2.115	0.005	0.02	0.07	ND
312OFN	Little Oso Flaco Creek	2021	October	5.691	ND	ND	ND	ND
312OFN	Little Oso Flaco Creek	2021	December	49	ND	ND	ND	ND
312OFN	Little Oso Flaco Creek	2022	March	49	0.009	0.006	ND	ND
312OFN	Little Oso Flaco Creek	2022	April	2.1	ND	ND	ND	ND
312ORC	Orcutt Solomon Creek u/s of SMR	2021	October	ND	ND	0.043	ND	ND
312ORC	Orcutt Solomon Creek u/s of SMR	2021	December	7.8	0.15	0.044	ND	0.01
312ORC	Orcutt Solomon Creek u/s of SMR	2022	March	12	0.032	**0.16**[1]	ND	ND
312ORC	Orcutt Solomon Creek u/s of SMR	2022	April	ND	ND	0.04	ND	ND
312ORI	Orcutt Solomon Creek at Hwy 1	2021	October	54	ND	**0.1**[1]	ND	ND
312ORI	Orcutt Solomon Creek at Hwy 1	2021	December	6.2	0.11	0.013	ND	ND
312ORI	Orcutt Solomon Creek at Hwy 1	2022	March	6.4	0.061	**0.17**[1]	0.004	ND

Site ID	Site Description	Year	Month	Glyphosate	Diuron	Linuron	Simazine	Trifluralin
312ORI	Orcutt Solomon Creek at Hwy 1	2022	April	ND	0.027	**0.24**[1]	ND	ND
312SMA	Santa Maria River at Estuary	2021	October	ND	ND	0.04	ND	ND
312SMA	Santa Maria River at Estuary	2021	December	6.4	0.088	0.033	ND	ND
312SMA	Santa Maria River at Estuary	2022	March	18	0.038	**0.29**[1]	ND	0.025
312SMA	Santa Maria River at Estuary	2022	April	ND	0.005	0.02	ND	ND
312SMI	Santa Maria River at Hwy 1	2021	December	13	0.029	0.061	ND	ND
312SMI	Santa Maria River at Hwy 1	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312SMI	Santa Maria River at Hwy 1	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	2021	September	ND	ND	0.02	ND	ND
313SAE	San Antonio Creek	2021	December	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYF	Santa Ynez River at Floradale	2021	September	ND	0.017	ND	ND	ND
314SYF	Santa Ynez River at Floradale	2022	March	ND	0.028	ND	ND	ND
314SYF	Santa Ynez River at Floradale	2022	April	ND	0.028	ND	ND	ND
314SYL	Santa Ynez River at River Park	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	2021	December	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	2022	March	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYN	Santa Ynez River at 13th St.	2021	September	ND	0.41	0.003	ND	ND
314SYN	Santa Ynez River at 13th St.	2021	December	3.1	0.36	0.012	ND	ND
314SYN	Santa Ynez River at 13th St.	2022	March	7.6	0.11	0.005	ND	ND
314SYN	Santa Ynez River at 13th St.	2022	April	ND	0.16	0.007	ND	ND
315APF	Arroyo Paredon	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315APF	Arroyo Paredon	2021	December	ND	ND	ND	ND	ND
315APF	Arroyo Paredon	2022	March	ND	ND	ND	ND	ND
315APF	Arroyo Paredon	2022	April	ND	ND	ND	ND	ND

Site ID	Site Description	Year	Month	Glyphosate	Diuron	Linuron	Simazine	Trifluralin
315BEF	Bell Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315BEF	Bell Creek	2021	December	5.4	ND	ND	0.009	ND
315BEF	Bell Creek	2022	March	3.4	ND	ND	0.006	ND
315BEF	Bell Creek	2022	April	ND	ND	ND	0.004	ND
315FMV	Franklin Creek	2021	September	ND	0.007	ND	ND	ND
315FMV	Franklin Creek	2021	December	ND	0.01	0.003	ND	ND
315FMV	Franklin Creek	2022	March	ND	ND	ND	ND	ND
315FMV	Franklin Creek	2022	April	ND	ND	ND	ND	ND
315GAN	Glen Annie Creek	2021	September	ND	ND	ND	ND	ND
315GAN	Glen Annie Creek	2021	December	3.2	0.005	ND	ND	ND
315GAN	Glen Annie Creek	2022	March	5.4	ND	ND	ND	ND
315GAN	Glen Annie Creek	2022	April	ND	ND	ND	ND	ND
315LCC	Los Carneros Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	2021	December	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	2022	March	ND	ND	ND	ND	ND
315LCC	Los Carneros Creek	2022	April	ND	0.005	ND	ND	ND

Notes:

ND Analyte was not detected above the Method Detection Limit.

Red Indicates result exceeded a non-TMDL area limit.

1 Site exceeded the non-TMDL area limit for linuron, 0.09 µg/.

Table 9a. Pesticides Detected in Sediment at NMU Sites, 2021 and 2022 (ng/g or ppb).

Site ID	Site Description	Year	Month	Bifenthrin	Cyfluthrin, Total	Cyfluthrin, beta-	Cyhalothrin, gamma-	Cyhalothrin, lambda-	Cypermethrin, Total	Esfenvalerate	Fenpropathrin	Fenvalerate	Permethrin (cis + trans)	T-Fluvalinate	Chlorpyrifos
305BRS	Beach Road Ditch	2021	September	2.63	ND	ND	ND	ND	ND	0.322	ND	0.515	ND	ND	ND
305BRS	Beach Road Ditch	2022	April	ND	ND	ND	ND	ND	ND	0.855	ND	0.531	ND	ND	ND
305CAN	Carnadero Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305CAN	Carnadero Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
305CHI	Pajaro River at Chittenden	2021	September	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
305CHI	Pajaro River at Chittenden	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
305COR	Salsipuedes Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305COR	Salsipuedes Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	0.448	ND	1.06	ND	ND
305FRA	Millers Canal	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FRA	Millers Canal	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
305FUF	Furlong Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FUF	Furlong Creek	2022	April	ND	ND	ND	0.579	0.599	ND	0.565	ND	0.372	ND	ND	ND
305LCS	Llagas Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305LCS	Llagas Creek	2022	April	7.08	ND	ND	3.09	3.07	ND	ND	0.489	ND	ND	ND	ND
305PJP	Pajaro River at Main St.	2021	September	0.61	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
305PJP	Pajaro River at Main St.	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
305SJA	San Juan Creek	2021	September	0.244	ND	ND	ND	ND	ND	ND	ND	ND	0.59	ND	ND
305SJA	San Juan Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
305TSR	Tequisquita Slough	2021	September	2.44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
305TSR	Tequisquita Slough	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
305WCS	Watsonville Creek	2021	September	5.34	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.35	8.81
305WCS	Watsonville Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
305WSA	Watsonville Slough	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305WSA	Watsonville Slough	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
309ALG	Salinas Reclamation Canal	2021	September	10.9	0.442	ND	32.6	36.7	0.51	0.284	0.536	0.503	10.96	ND	ND
309ALG	Salinas Reclamation Canal	2022	April	14.4	ND	ND	9.28	9.39	ND	0.505	0.903	0.556	18.29	ND	ND
309ASB	Alisal Slough	2021	September	9.91	ND	ND	66.1	75.4	1.31	0.323	ND	ND	21.74	ND	ND
309ASB	Alisal Slough	2022	April	37.7	ND	ND	34.5	34.7	11.2	8.87	ND	6.88	278	ND	ND
309BLA	Blanco Drain	2021	September	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.784	ND	ND
309BLA	Blanco Drain	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.11	ND	ND
309CCD	Chualar Creek West	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	2021	April	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	2022	April	6.06	1.76	1.76	21.1	21.1	9.84	2.72	ND	1.67	20.93	ND	ND
309CRR	Chualar Creek East	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CRR	Chualar Creek East	2021	April	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309ESP	Espinosa Slough	2021	September	9.99	ND	ND	1.25	1.42	ND	ND	0.339	ND	1.17	ND	1.19
309ESP	Espinosa Slough	2022	April	8.06	ND	ND	11.2	11.3	4.86	ND	0.311	ND	3.175	ND	ND
309GAB	Gabilan Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Year	Month	Bifenthrin	Cyfluthrin, Total	Cyfluthrin, beta-	Cyhalothrin, gamma-	Cyhalothrin, lambda-	Cypermethrin, Total	Esfenvalerate	Fenpropathrin	Fenvalerate	Permethrin (cis + trans)	T-Fluvalinate	Chlorpyrifos
309GAB	Gabilan Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	2022	April	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309JON	Salinas Reclamation Canal	2021	September	2.045	ND	ND	0.571	0.619	0.337	ND	ND	ND	1.891	0.302	ND
309JON	Salinas Reclamation Canal	2022	May	12.4	ND	ND	4.26	4.26	ND	ND	ND	ND	8.23	1.16	ND
309MER	Merritt Ditch	2021	September	2.67	ND	ND	ND	ND	ND	0.403	ND	0.521	ND	ND	ND
309MER	Merritt Ditch	2022	April	ND	ND	ND	ND	ND	ND	0.628	ND	0.587	5.82	ND	ND
309MOR	Moro Cojo Slough	2021	September	1.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
309MOR	Moro Cojo Slough	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
309NAD	Natividad Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309NAD	Natividad Creek	2022	April	5.065	ND	ND	ND	ND	ND	ND	27.85	ND	ND	ND	ND
309OLD	Old Salinas River	2021	September	3.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
309OLD	Old Salinas River	2022	April	21.5	ND	ND	2.11	2.24	ND	4.43	1.1	3.15	13.64	ND	ND
309QUI	Quail Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	2022	April	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2022	April	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	2021	September	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	2022	April	dry/ disconnected	dry/ disconnected	dry/disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309TEH	Tembladero Slough	2021	September	2.79	ND	ND	ND	0.453	ND	ND	ND	ND	ND	ND	ND
309TEH	Tembladero Slough	2022	April	23.6	ND	ND	4.87	4.96	ND	0.34	1.48	ND	8.54	ND	ND

Notes:

ND Analyte was not detected above the Method Detection Limit.

Table 9b. Pesticides Detected in Sediment at NMU Sites, Organic Carbon (OC) Normalized, 2021 and 2022 (µg/g or ppm).

Site ID	Site Description	Year	Month	Bifenthrin OC Convert	Cyfluthrin, Total OC Convert	Cyhalothrin, lambda- OC Convert	Cypermethrin, Total OC Convert	Esfenvalerate OC Convert	Fenpropathrin OC Convert	Fenvalerate OC Convert	Permethrin (cis + trans) OC Convert	Chlorpyrifos OC Convert
305BRS	Beach Road Ditch	2021	September	0.14	ND	ND	ND	0.02	ND	0.03	ND	ND
305BRS	Beach Road Ditch	2022	April	ND	ND	ND	ND	0.07	ND	0.04	ND	ND
305CAN	Carnadero Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305CAN	Carnadero Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
305CHI	Pajaro River at Chittenden	2021	September	ND	ND	ND	ND	ND	ND	ND	ND	ND
305CHI	Pajaro River at Chittenden	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
305COR	Salsipuedes Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305COR	Salsipuedes Creek	2022	April	ND	ND	ND	ND	ND	0.04	ND	0.09	ND
305FRA	Millers Canal	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FRA	Millers Canal	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
305FUF	Furlong Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FUF	Furlong Creek	2022	April	ND	ND	0.02	ND	0.01	ND	0.01	ND	ND
305LCS	Llagas Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305LCS	Llagas Creek	2022	April	0.51	ND	0.22	ND	ND	0.03	ND	ND	ND
305PJP	Pajaro River at Main St.	2021	September	0.31	ND	ND	ND	ND	ND	ND	ND	ND
305PJP	Pajaro River at Main St.	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
305SJA	San Juan Creek	2021	September	0.02	ND	ND	ND	ND	ND	ND	0.06	ND
305SJA	San Juan Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
305TSR	Tequisquita Slough	2021	September	0.07	ND	ND	ND	ND	ND	ND	ND	ND
305TSR	Tequisquita Slough	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
305WCS	Watsonville Creek	2021	September	0.20	ND	ND	ND	ND	ND	ND	ND	0.33
305WCS	Watsonville Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
305WSA	Watsonville Slough	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305WSA	Watsonville Slough	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
309ALG	Salinas Reclamation Canal	2021	September	0.83	0.03	2.78	0.038636364	0.02	0.04	0.04	0.83	ND
309ALG	Salinas Reclamation Canal	2022	April	0.85	ND	0.56	ND	0.03	0.05	0.03	1.08	ND
309ASB	Alisal Slough	2021	September	0.35	ND	2.69	0.05	0.01	ND	ND	0.78	ND
309ASB	Alisal Slough	2022	April	1.49	ND	1.37	0.44	0.35	ND	0.27	10.99	ND
309BLA	Blanco Drain	2021	September	ND	ND	ND	ND	ND	ND	ND	0.06	ND
309BLA	Blanco Drain	2022	April	ND	ND	ND	ND	ND	ND	ND	0.18	ND
309CCD	Chualar Creek West	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	2022	April	0.42	0.12	1.45	0.67	0.19	ND	0.11	1.43	ND
309CRR	Chualar Creek East	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CRR	Chualar Creek East	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309ESP	Espinosa Slough	2021	September	0.57	ND	0.08	ND	ND	0.02	ND	0.07	0.07
309ESP	Espinosa Slough	2022	April	0.49	ND	0.69	0.30	ND	0.02	ND	0.19	ND
309GAB	Gabilan Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Year	Month	Bifenthrin OC Convert	Cyfluthrin, Total OC Convert	Cyhalothrin, lambda- OC Convert	Cypermethrin, Total OC Convert	Esfenvalerate OC Convert	Fenpropathrin OC Convert	Fenvalerate OC Convert	Permethrin (cis + trans) OC Convert	Chlorpyrifos OC Convert
309GRN	Salinas River at Elm Rd.	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309JON	Salinas Reclamation Canal	2021	September	0.43	ND	0.13	0.070208333	ND	ND	ND	0.39	ND
309JON	Salinas Reclamation Canal	2022	May	0.44	ND	0.15	ND	ND	ND	ND	0.29	ND
309MER	Merritt Ditch	2021	September	0.14	ND	ND	ND	0.02	ND	0.03	ND	ND
309MER	Merritt Ditch	2022	April	ND	ND	ND	ND	0.02	ND	0.02	0.21	ND
309MOR	Moro Cojo Slough	2021	September	0.16	ND	ND	ND	ND	ND	ND	ND	ND
309MOR	Moro Cojo Slough	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
309NAD	Natividad Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309NAD	Natividad Creek	2022	April	0.61	ND	ND	ND	ND	**3.38**[1]	ND	ND	ND
309OLD	Old Salinas River	2021	September	0.46	ND	ND	ND	ND	ND	ND	ND	ND
309OLD	Old Salinas River	2022	April	1.14	ND	0.12	ND	0.24	0.06	0.17	0.73	ND
309QUI	Quail Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309TEH	Tembladero Slough	2021	September	0.06	ND	0.01	ND	ND	ND	ND	ND	ND
309TEH	Tembladero Slough	2022	April	0.96	ND	0.20	ND	0.01	0.06	ND	0.35	ND

Notes:

ND Analyte was not detected above the Method Detection Limit.
Red Indicates result exceeded a non-TMDL area limits.
1 Site exceeded the non-TMDL area limit for fenpropathrin, 1.10 ug/g o.c.

Table 10a. Pesticides Detected in Sediment at SMU Sites, 2021 and 2022 (ng/g or ppb).

Site ID	Site Description	Year	Month	Bifenthrin	Cyfluthrin, Total	Cyfluthrin, beta-	Cyhalothrin, gamma-	Cyhalothrin, lambda-	Cypermethrin, Total	Esfenvalerate	Fenpropathrin	Fenvalerate	Permethrin (cis + trans)	T-Fluvalinate	Chlorpyrifos
310CCC	Chorro Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310CCC	Chorro Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
310LBC	Los Berros Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310PRE	Prefumo Creek	2021	September	0.985	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
310PRE	Prefumo Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
310SLD	Davenport Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310USG	Arroyo Grande Creek	2021	September	0.235	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
310USG	Arroyo Grande Creek	2022	April	ND	ND	ND	1.06	1.18	ND	ND	ND	ND	ND	ND	ND
310WRP	Warden Creek	2021	September	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
310WRP	Warden Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
312BCC	Bradley Canyon Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCJ	Bradley Channel	2021	September	12.2	0.521	ND	0.839	0.954	ND	ND	7.5	ND	5.493	ND	ND
312BCJ	Bradley Channel	2022	April	17.3	ND	ND	6.2	6.24	ND	1.68	6.37	1.22	15	ND	ND
312GVS	Green Valley at Simas	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312MSD	Main St. Canal	2021	October	9.07	6.62	3.47	1.12	1.3	ND	0.382	1.45	ND	24.23	ND	ND
312MSD	Main St. Canal	2022	April	34	ND	ND	ND	ND	ND	ND	ND	ND	25	ND	ND
312OFC	Oso Flaco Creek	2021	October	0.701	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3
312OFC	Oso Flaco Creek	2022	April	18.25	ND	ND	3.41	3.42	ND	1.715	39.1	1.22	16.35	ND	ND
312OFN	Little Oso Flaco Creek	2021	October	3.74	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
312OFN	Little Oso Flaco Creek	2022	May	9.08	ND	ND	ND	ND	ND	ND	0.994	ND	ND	ND	ND
312OFN	Little Oso Flaco Creek	2022	April	62.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
312ORC	Orcutt Solomon Creek u/s of SMR	2021	October	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
312ORC	Orcutt Solomon Creek u/s of SMR	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.455	ND	ND
312ORI	Orcutt Solomon Creek at Hwy 1	2021	October	0.941	1.47	0.798	ND	ND	ND	ND	0.361	ND	11.62	ND	1.19
312ORI	Orcutt Solomon Creek at Hwy 1	2022	April	ND	ND	ND	ND	ND	ND	0.84	1.3	0.566	13.1	ND	ND
312SMA	Santa Maria River at Estuary	2021	October	4.33	ND	ND	0.575	0.614	ND	ND	0.771	ND	4.187	ND	ND

Site ID	Site Description	Year	Month	Bifenthrin	Cyfluthrin, Total	Cyfluthrin, beta-	Cyhalothrin, gamma-	Cyhalothrin, lambda-	Cypermethrin, Total	Esfenvalerate	Fenpropathrin	Fenvalerate	Permethrin (cis + trans)	T-Fluvalinate	Chlorpyrifos
312SMA	Santa Maria River at Estuary	2022	April	ND	ND	ND	ND	ND	ND	ND	0.573	ND	6.47	ND	ND
312SMI	Santa Maria River at Hwy 1	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312SMI	Santa Maria River at Hwy 1	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	2021	September	3.68	ND	ND	5.81	6.23	0.355	0.338	0.296	ND	7.99	ND	ND
313SAE	San Antonio Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYF	Santa Ynez River at Floradale	2021	September	1.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
314SYF	Santa Ynez River at Floradale	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
314SYL	Santa Ynez River at River Park	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYN	Santa Ynez River at 13th St.	2021	September	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
314SYN	Santa Ynez River at 13th St.	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
315APF	Arroyo Paredon	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315APF	Arroyo Paredon	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
315BEF	Bell Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315BEF	Bell Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
315FMV	Franklin Creek	2021	September	20.1	0.868	0.55	0.663	0.914	ND	0.73	1.15	ND	12.66	1.57	ND
315FMV	Franklin Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
315GAN	Glen Annie Creek	2021	September	6.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
315GAN	Glen Annie Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
315LCC	Los Carneros Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	1.75	ND	ND	ND	ND

Notes:

ND Analyte was not detected above the Method Detection Limit.

Table 10b. Pesticides Detected in Sediment at SMU Sites, Organic Carbon (OC) Normalized, 2021 and 2022 (µg/g or ppm).

Site ID	Site Description	Year	Month	Bifenthrin OC Convert	Cyfluthrin, Total OC Convert	Cyhalothrin, lambda- OC Convert	Cypermethrin, Total OC Convert	Esfenvalerate OC Convert	Fenpropathrin OC Convert	Fenvalerate OC Convert	Permethrin (cis + trans) OC Convert	Chlorpyrifos OC Convert
310CCC	Chorro Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310CCC	Chorro Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
310LBC	Los Berros Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310LBC	Los Berros Creek	2021	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310LBC	Los Berros Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310PRE	Prefumo Creek	2021	September	0.11	ND	ND	ND	ND	ND	ND	ND	ND
310PRE	Prefumo Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
310SLD	Davenport Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310SLD	Davenport Creek	2021	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310SLD	Davenport Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
310USG	Arroyo Grande Creek	2021	September	0.04	ND	ND	ND	ND	ND	ND	ND	ND
310USG	Arroyo Grande Creek	2022	April	ND	ND	**0.91**[2]	ND	ND	ND	ND	ND	ND
310WRP	Warden Creek	2021	September	ND	ND	ND	ND	ND	ND	ND	ND	ND
310WRP	Warden Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
312BCC	Bradley Canyon Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312BCC	Bradley Canyon Creek	2021	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312BCC	Bradley Canyon Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312BCJ	Bradley Channel	2021	September	0.59	0.03	0.05	ND	ND	0.36	ND	0.26	ND
312BCJ	Bradley Channel	2022	April	7.21	ND	2.60	ND	0.70	**2.65**[3]	0.51	6.25	ND
312GVS	Green Valley at Simas	2021	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312GVS	Green Valley at Simas	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312MSD	Main St. Canal	2021	October	0.39	0.29	0.06	ND	0.02	0.06	ND	1.05	ND
312MSD	Main St. Canal	2022	April	10.00	ND	ND	ND	ND	ND	ND	7.35	ND
312OFC	Oso Flaco Creek	2021	October	0.11	ND	ND	ND	ND	ND	ND	ND	0.20
312OFC	Oso Flaco Creek	2022	April	2.19	ND	0.41	ND	0.21	**4.69**[3]	0.15	1.96	ND
312OFN	Little Oso Flaco Creek	2021	October	0.12	ND	ND	ND	ND	ND	ND	ND	ND
312OFN	Little Oso Flaco Creek	2022	May	0.22	ND	ND	ND	ND	0.02	ND	ND	ND
312OFN	Little Oso Flaco Creek	2022	April	2.80	ND	ND	ND	ND	ND	ND	ND	ND
312ORC	Orcutt Solomon Creek u/s of SMR	2021	October	ND	ND	ND	ND	ND	ND	ND	ND	ND
312ORC	Orcutt Solomon Creek u/s of SMR	2022	April	ND	ND	ND	ND	ND	ND	ND	2.08	ND
312ORI	Orcutt Solomon Creek at Hwy 1	2021	October	0.30	0.47	ND	ND	ND	0.12	ND	3.75	0.38
312ORI	Orcutt Solomon Creek at Hwy 1	2022	April	ND	ND	ND	ND	0.12	0.18	0.08	1.82	ND
312SMA	Santa Maria River at Estuary	2021	October	0.36	ND	0.05	ND	ND	0.06	ND	0.35	ND
312SMA	Santa Maria River at Estuary	2022	April	ND	ND	ND	ND	ND	0.32	ND	3.59	ND
312SMI	Santa Maria River at Hwy 1	2021	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
312SMI	Santa Maria River at Hwy 1	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
313SAE	San Antonio Creek	2021	September	0.16	ND	0.28	0.02	0.01	0.01	ND	0.35	ND
313SAE	San Antonio Creek	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYF	Santa Ynez River at Floradale	2021	September	0.16	ND	ND	ND	ND	ND	ND	ND	ND
314SYF	Santa Ynez River at Floradale	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
314SYL	Santa Ynez River at River Park	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYL	Santa Ynez River at River Park	2022	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYL	Santa Ynez River at River Park	2021	April	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
314SYN	Santa Ynez River at 13th St.	2021	September	**0.67**[1]	ND	ND	ND	ND	ND	ND	ND	ND
314SYN	Santa Ynez River at 13th St.	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND

Site ID	Site Description	Year	Month	Bifenthrin OC Convert	Cyfluthrin, Total OC Convert	Cyhalothrin, lambda- OC Convert	Cypermethrin, Total OC Convert	Esfenvalerate OC Convert	Fenpropathrin OC Convert	Fenvalerate OC Convert	Permethrin (cis + trans) OC Convert	Chlorpyrifos OC Convert
315APF	Arroyo Paredon	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
315APF	Arroyo Paredon	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
315BEF	Bell Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
315BEF	Bell Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
315FMV	Franklin Creek	2021	September	0.33	0.01	0.01	ND	0.01	0.02	ND	0.21	ND
315FMV	Franklin Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
315GAN	Glen Annie Creek	2021	September	0.36	ND	ND	ND	ND	ND	ND	ND	ND
315GAN	Glen Annie Creek	2022	April	ND	ND	ND	ND	ND	ND	ND	ND	ND
315LCC	Los Carneros Creek	2021	September	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected	dry/disconnected
315LCC	Los Carneros Creek	2022	April	ND	ND	ND	ND	ND	**3.50**[3]	ND	ND	ND

Notes:

ND Analyte was not detected above the Method Detection Limit.

Red Indicates result exceeded a non-TMDL area limit.

1 Site exceeded the non-TMDL area limit for bifenthrin, 0.52 ug/g o.c.

2 Site exceeded the non-TMDL area limit for cyhalothrin, lambda-, 0.45 ug/g o.c.

3 Site exceeded the non-TMDL area limit for fenpropathrin, 1.10 ug/g o.c.

Table 11. Toxicity to Invertebrates and Toxicants Detected in Water at NMU Sites, 2021 and 2022.

Site ID	Site Description	Month	Year	Chironomus %Survival	Chironomus Organophosphate toxic units	Chironomus Neonicotinoid toxic units	Ceriodaphnia %Survival	Invertebrate %Growth	Invertebrate %Repro	Ceriodaphnia Organophosphate toxic units	Ceriodaphnia Neonicotinoid toxic units	Pesticides, Neonicotinoids, & Metals Detected in Water[1]
305BRS	Beach Road Ditch	September[5]	2021		0.00	0.00	102[3]			0.00	0.00	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
305BRS	Beach Road Ditch	December	2021	95	0	0.11	100		107	0	0	15,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
305BRS	Beach Road Ditch	December[2]	2021	103	0	0.11	100		110	0	0	15,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
305BRS	Beach Road Ditch	March[5]	2022		0	0	102[3]			0	0	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
305BRS	Beach Road Ditch	April[5]	2022		0	0.01	92[3]			0	0	15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
305CAN	Carnadero Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
305CAN	Carnadero Creek	December	2021	103	0	0.02	100		141	0	0	18,20,21,22,24,25,26,27,28,29,30,31,32,33,34
305CAN	Carnadero Creek	March	2022	95	0	0	100		112	0	0	21,22,24,25,26,28,29,30,31,32,33,34
305CAN	Carnadero Creek	April	2022	100	0	0	100		87	0	0	21,22,25,26,27,28,29,30,31,32,33,34
305CHI	Pajaro River at Chittenden	September	2021	100	0.00	0.00	90		76	0.00	0.00	20,21,22,23,24,25,26,28,29,30,31,32,33,34
305CHI	Pajaro River at Chittenden	December	2021	103	0	0.02	100		121	0	0	18,20,21,22,25,26,28,29,30,31,32,33,34
305CHI	Pajaro River at Chittenden	March	2022	95	0	0	100		64	0	0	20,21,22,24,25,26,27,28,29,30,31,32,33,34
305CHI	Pajaro River at Chittenden	April	2022	103	0	0	100		112	0	0	21,22,24,25,26,28,29,30,31,32,33,34
305COR	Salsipuedes Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
305COR	Salsipuedes Creek	December	2021	97	0	0	100		126	0	0	20,21,22,24,25,26,27,28,29,30,31,32,33,34
305COR	Salsipuedes Creek	March	2022	92	0	0	100		100	0	0	21,22,23,24,25,26,27,28,29,30,31,32,33,34
305COR	Salsipuedes Creek	April	2022	97	0	0	100		87	0	0	15,21,22,23,24,25,26,27,28,29,30,31,32,33,34
305FRA	Millers Canal	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
305FRA	Millers Canal	December[5]	2021		0	0	94[3]			0	0	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
305FRA	Millers Canal	March[5]	2022		0	0	100[3]			0	0	21,22,23,24,25,26,27,28,29,30,31,32,33,34
305FRA	Millers Canal	April[5]	2022		0	0	86[3]			0	0	19,21,22,24,25,26,27,28,29,30,31,32,33,34
305FUF	Furlong Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
305FUF	Furlong Creek	December	2021	0	0	0.21	111		88	0	0	15,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
305FUF	Furlong Creek	March	2022	98	0	0	100		103	0	0	20,21,22,24,25,26,27,28,29,30,31,32,33,34
305FUF	Furlong Creek	April	2022	100	0	0	100		85	0	0	19,20,21,22,24,25,26,28,29,30,31,32,33,34
305FUF	Furlong Creek	April[2]	2022	98	0	0	100		84	0	0	19,20,21,22,24,25,26,28,29,30,31,32,33,34
305LCS	Llagas Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
305LCS	Llagas Creek	December	2021	100	0	0.05	100		138	0	0	18,20,21,22,24,25,26,27,28,29,30,31,32,33,34
305LCS	Llagas Creek	March	2022	98	0	0	90		36	0	0	21,22,23,25,26,28,29,30,31,32,33,34
305LCS	Llagas Creek	April	2022	96	0	0	90		79	0	0	19,21,22,23,24,25,26,28,29,30,31,32,33,34
305PJP	Pajaro River at Main St.	September	2021	100	0.00	0.00	100		83	0.00	0.00	21,22,23,24,25,26,28,29,30,31,32,33,34
305PJP	Pajaro River at Main St.	December	2021	100	0	0.02	100		117	0	0	15,20,21,22,24,25,26,27,28,29,30,31,32,33,34
305PJP	Pajaro River at Main St.	March	2022	75	0	0	90		68	0	0	21,22,23,24,25,26,27,28,29,30,31,32,33,34
305PJP	Pajaro River at Main St.	March[2]	2022	80	0	0	100		92	0	0	21,22,23,24,25,26,27,28,29,30,31,32,33,34
305PJP	Pajaro River at Main St.	April	2022	103	0	0	100		90	0	0	21,22,23,24,25,26,27,28,29,30,31,32,33,34
305SJA	San Juan Creek	September	2021	100	0.00	0.00	100		47	0.00	0.00	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
305SJA	San Juan Creek	September[2]	2021	100	0.00	0.00	90		45	0.00	0.00	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
305SJA	San Juan Creek	December	2021	21	0	0.08	89		69	0	0	15,20,21,22,24,25,26,27,28,29,30,31,32,33,34
305SJA	San Juan Creek	March[5]	2022		0	0	102[3]			0	0	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
305SJA	San Juan Creek	April	2022	105	0	0	80		60	0	0	21,22,23,24,25,26,27,28,29,30,31,32,33,34
305TSR	Tequisquita Slough	September[5]	2021		0.00	0.00	82[3]			0.00	0.00	9,21,22,24,25,26,28,29,30,31,32,33,34
305TSR	Tequisquita Slough	December	2021	103	0	0	100		120	0	0	20,21,22,24,25,26,27,28,29,30,31,32,33,34
305TSR	Tequisquita Slough	March[5]	2022		0	0	100[3]			0	0	21,22,23,25,26,27,28,29,30,31,32,33,34
305TSR	Tequisquita Slough	April[5]	2022		0	0	99[3]			0	0	19,20,21,22,23,24,25,26,28,29,30,31,32,33,34
305WCS	Watsonville Creek	September	2021	100	0.00	0.00	100		85	0.00	0.00	21,22,23,24,25,26,27,28,29,30,31,32,33,34
305WCS	Watsonville Creek	December	2021	98	0	0.02	100		114	0	0	15,17,20,21,22,24,25,26,27,28,29,30,31,32,33,34
305WCS	Watsonville Creek	March	2022	98	0	0	78		83	0	0	17,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
305WCS	Watsonville Creek	April	2022	97	0	0	100		87	0	0	17,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34

Site ID	Site Description	Month	Year	Chironomus %Survival	Chironomus Organophosphate toxic units	Chironomus Neonicotinoid toxic units	Ceriodaphnia %Survival	Invertebrate %Growth	Invertebrate %Repro	Ceriodaphnia Organophosphate toxic units	Ceriodaphnia Neonicotinoid toxic units	Pesticides, Neonicotinoids, & Metals Detected in Water[1]
305WSA	Watsonville Slough	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
305WSA	Watsonville Slough	December	2021	**58**	0	0.14	89		78	0	0	15,16,18,20,21,22,24,25,26,28,29,30,31,32,33,34
305WSA	Watsonville Slough	March	2022	**72**	0	0	90		80	0	0	20,21,22,24,25,26,27,28,29,30,31,32,33,34
305WSA	Watsonville Slough	April	2022	99	0	0	100		91	0	0	20,21,22,24,25,26,27,28,29,30,31,32,33,34
309ALG	Salinas Reclamation Canal	September	2021	**68**	0.00	0.97	90		**16**	0.00	0.00	16,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309ALG	Salinas Reclamation Canal	December	2021	**0**	0	0.73	**0**		**2**	0.01	0	9,15,16,18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309ALG	Salinas Reclamation Canal	March	2022	**19**	0	0.5	**0**		**0**	0	0	15,16,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309ALG	Salinas Reclamation Canal	April	2022	95	0	0.01	100		108	0	0	15,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309ASB	Alisal Slough	September	2021	97	0.00	0.00	70		**47**	0.12	0.00	9,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309ASB	Alisal Slough	December	2021	**80**	0	0.53	100		**31**	0.08	0	9,15,16,17,18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309ASB	Alisal Slough	March[5]	2022		0	0.3	**0**[3]			0	0	16,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309ASB	Alisal Slough	April[5]	2022		0	0.01	**73**[3]			0	0	16,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309BLA	Blanco Drain	September	2021	103	0.00	0.05	80		**46**	0.00	0.00	16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309BLA	Blanco Drain	December	2021	92	0	0.73	100		**65**	0	0	15,16,17,18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309BLA	Blanco Drain	March	2022	85	0	0.03	100		**74**	0	0	17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309BLA	Blanco Drain	April	2022	97	0	0	100		**71**	0	0	17,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309CCD	Chualar Creek West	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309CCD	Chualar Creek West	December	2021	**13**	0	0.65	90		**48**	0	0	15,16,18,20,21,22,24,25,26,28,29,30,31,32,33,34
309CCD	Chualar Creek West	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309CCD	Chualar Creek West	April	2022	**8**	0	0.01	**0**		**0**	0.05	0	9,16,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309CRR	Chualar Creek East	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309CRR	Chualar Creek East	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309ESP	Espinosa Slough	September	2021	92	0.00	0.04	100		**76**	0.00	0.00	15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309ESP	Espinosa Slough	December	2021	**30**	0	0.95	100		115	0.01	0	9,15,16,17,18,19,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309ESP	Espinosa Slough	March	2022	95	0	0.26	90		**67**	0	0	15,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309ESP	Espinosa Slough	April[5]	2022		0	0.01	87[3]			0	0	15,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309GAB	Gabilan Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309GAB	Gabilan Creek	December	2021	100	0	0.01	100		100	0	0	15,19,20,21,22,24,25,26,28,29,30,31,32,33,34
309GAB	Gabilan Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309GAB	Gabilan Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309JON	Salinas Reclamation Canal	September	2021	100	0.00	0.98	100		111	0.00	0.00	9,15,16,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309JON	Salinas Reclamation Canal	December	2021	**0**	0	0.64	100		105	0.13	0	6,9,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309JON	Salinas Reclamation Canal	March	2022	98	0	0.07	100		98	0	0	15,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309JON	Salinas Reclamation Canal	April	2022	90	0	0.02	100		**81**	0	0	15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309MER	Merritt Ditch	September	2021	100	0.00	0.01	90		**67**	0.00	0.00	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34

Site ID	Site Description	Month	Year	Chironomus %Survival	Chironomus Organophosphate toxic units	Chironomus Neonicotinoid toxic units	Ceriodaphnia %Survival	Invertebrate %Growth	Invertebrate %Repro	Ceriodaphnia Organophosphate toxic units	Ceriodaphnia Neonicotinoid toxic units	Pesticides, Neonicotinoids, & Metals Detected in Water[1]
309MER	Merritt Ditch	September[2]	2021	100	0.00	0.01	89		**63**	0.00	0.00	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309MER	Merritt Ditch	December	2021	**70**	0	0.55	100		130	0.01	0	9,15,16,18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309MER	Merritt Ditch	March	2022	**72**	0	0.3	100		**86**	0	0	15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309MER	Merritt Ditch	April	2022	92	0	0.04	100		87	0	0	15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309MOR	Moro Cojo Slough	September[5]	2021		0.00	0.00	92[4]	88[4]		0.00	0.00	21,22,23,24,25,26,27,28,29,30,31,32,33,34
309MOR	Moro Cojo Slough	December[5]	2021		0	0.36	**0**[3]			0	0	15,16,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309MOR	Moro Cojo Slough	March[5]	2022		0	0	100[4]	143[4]		0	0	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309MOR	Moro Cojo Slough	April[5]	2022		0	0	95[4]	89[4]		0	0	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309NAD	Natividad Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309NAD	Natividad Creek	December	2021	90	0	0.26	80		124	0.08	0	2,9,15,16,18,19,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309NAD	Natividad Creek	March	2022	**0**	0	0.06	100		**46**	0	0	15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309NAD	Natividad Creek	April	2022	**68**	0	0.02	**0**		**0**	0	0	15,19,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309NAD	Natividad Creek	April[2]	2022	**58**	0	0.02	**0**		**0**	0	0	15,19,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309OLD	Old Salinas River	September[5]	2021		0.00	0.00	**40**[3]			0.00	0.00	9,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309OLD	Old Salinas River	December	2021	**72**	0	0.54	100		129	0.01	0	9,15,16,17,18,19,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309OLD	Old Salinas River	December[2]	2021	92	0	0.54	100		126	0.01	0	9,15,16,17,18,19,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309OLD	Old Salinas River	March[5]	2022		0	0.18	**0**[3]			0	0	15,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309OLD	Old Salinas River	April[5]	2022		0	0	**68**[3]			0	0	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309QUI	Quail Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309QUI	Quail Creek	December	2021	**0**	0	0.61	**60**		**31**	0	0	15,16,18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309QUI	Quail Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309QUI	Quail Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309RTA	Santa Rita Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309RTA	Santa Rita Creek	December	2021	90	0	0.79	90		**85**	0.03	0	9,15,16,18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
309RTA	Santa Rita Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309RTA	Santa Rita Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309SAC	Salinas River at Chualar Bridge	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309SAC	Salinas River at Chualar Bridge	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309SAC	Salinas River at Chualar Bridge	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309SSP	Salinas River at Spreckels Gage	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309SSP	Salinas River at Spreckels Gage	December	2021	97	0	0	100		**83**	0	0	20,21,22,24,25,26,28,29,30,31,32,33,34
309SSP	Salinas River at Spreckels Gage	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected
309SSP	Salinas River at Spreckels Gage	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/disconnected

Site ID	Site Description	Month	Year	Chironomus %Survival	Chironomus Organophosphate toxic units	Chironomus Neonicotinoid toxic units	Ceriodaphnia %Survival	Invertebrate %Growth	Invertebrate %Repro	Ceriodaphnia Organophosphate toxic units	Ceriodaphnia Neonicotinoid toxic units	Pesticides, Neonicotinoids, & Metals Detected in Water[1]
309TEH	Tembladero Slough	September	2021	100			100		105			
309TEH	Tembladero Slough	September[2]	2021	100	0.00	0.15	100		89	0.00	0.00	15,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309TEH	Tembladero Slough	December	2021	**0**	0	0.76	90		100	0.07	0	6,9,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309TEH	Tembladero Slough	March	2022	**82**	0	0.13	90		74	0	0	15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309TEH	Tembladero Slough	March[2]	2022	90	0	0.13	100		102	0	0	15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
309TEH	Tembladero Slough	April	2022	103	0	0.03	90		81	0	0	15,16,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34

Notes:

Red Indicates result is significantly different from the control.
1 Numbers in this column correspond to toxicants named in Table 2-3.
2 Duplicate sample result.
3 Due to elevated salinity, the alternative species *Hyalella azteca* was used.
4 Due to elevated salinity, the alternative species *Americamysis bahia* was used.
5 No *Chironomus* testing was performed on this sample due to the sample conductivity exceeding 3,000 µS/cm.

Table 12. Toxicity to Invertebrates and Toxicants Detected in Water at SMU Sites, 2021 and 2022.

Site ID	Site Description	Month	Year	Chironomus %Survival	Chironomus Organophosphate toxic units	Chironomus Neonicotinoid toxic units	Ceriodaphnia %Survival	Invertebrate %Repro	Ceriodaphnia Organophosphate toxic units	Ceriodaphnia Neonicotinoid toxic units	Pesticides, Neonicotinoids, & Metals Detected in Water[1]
310CCC	Chorro Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310CCC	Chorro Creek	December	2021	98	0.00	0.00	100	111	0.00	0.00	21,22,24,25,26,27,28,29,30,31,32,33,34
310CCC	Chorro Creek	March	2022	98	0.00	0.00	125	**67**	0.00	0.00	21,22,23,24,25,26,27,28,29,30,31,32,33,34
310CCC	Chorro Creek	April	2022	97	0.00	0.00	112	**62**	0.00	0.00	21,22,25,26,28,29,30,31,32,33,34
310LBC	Los Berros	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310PRE	Prefumo Creek	September	2021	98	0.00	0.00	100	110	0.00	0.00	21,22,23,24,25,26,28,29,30,31,32,33,34
310PRE	Prefumo Creek	December	2021	92	0.00	0.05	100	123	0.00	0.00	18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
310PRE	Prefumo Creek	March	2022	100	0.00	0.00	125	119	0.00	0.00	21,22,23,24,25,26,27,28,29,30,31,32,33,34
310PRE	Prefumo Creek	April	2022	90	0.00	0.00	112	93	0.00	0.00	21,22,23,24,25,26,28,29,30,31,32,33,34
310SLD	Davenport Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310USG	Arroyo Grande Creek	September	2021	92	0.00	0.00	100	87	0.00	0.00	21,22,23,24,25,26,28,29,30,31,32,33,34
310USG	Arroyo Grande Creek	December	2021	**0**	0.00	0.63	**20**	**7**	0.30	0.00	9,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
310USG	Arroyo Grande Creek	March	2022	100	0.00	0.00	125	104	0.00	0.00	21,22,23,24,25,26,27,28,29,30,31,32,33,34
310USG	Arroyo Grande Creek	April	2022	90	0.00	0.00	112	93	0.00	0.00	21,22,23,24,25,26,28,29,30,31,32,33,34
310WRP	Warden Creek	September	2021	88	0.00	0.00	100	99	0.00	0.00	21,22,24,25,26,28,29,30,31,32,33,34
310WRP	Warden Creek	December	2021	**0**	0.00	0.07	100	103	0.00	0.00	18,20,21,22,24,25,26,27,28,29,30,31,32,33,34
310WRP	Warden Creek	March	2022	100	0.00	0.00	125	92	0.00	0.00	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
310WRP	Warden Creek	April	2022	97	0.00	0.00	112	101	0.00	0.00	21,22,23,25,26,28,29,30,31,32,33,34
312BCC	Bradley Canyon Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	December	2021	**0**	0.00	2.83	**30**	**60**	0.36	0.00	9,15,18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
312BCC	Bradley Canyon Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCJ	Bradley Channel	September	2021	**5**	0.00	0.14	111	105	0.00	0.00	17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312BCJ	Bradley Channel	September[2]	2021	**2**	0.00	0.14	111	103	0.00	0.00	17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312BCJ	Bradley Channel	December	2021	92	0.00	0.90	100	105	0.04	0.00	9,15,17,18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
312BCJ	Bradley Channel	March	2022	**5**	0.00	1.43	**0**	**0**	0.00	0.00	15,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312BCJ	Bradley Channel	April	2022	**60**	0.00	0.00	11	109	0.00	0.00	20,21,22,23,24,25,26,28,29,30,31,32,33,34
312GVS	Green Valley at Simas	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312MSD	Main St. Canal	October	2021	**0**	0.00	0.06	**0**	**0**	0.14	0.00	9,16,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312MSD	Main St. Canal	December	2021	**11**	0.00	0.60	100	98	0.49	0.00	5,9,15,16,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312MSD	Main St. Canal	December[2]	2021	**8**	0.00	0.60	111	116	0.49	0.00	5,9,15,16,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312MSD	Main St. Canal	March	2022	98	0.00	0.01	100	**59**	0.03	0.00	9,15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312MSD	Main St. Canal	April	2022	95	0.00	0.00	111	117	0.00	0.00	21,22,23,24,25,26,27,28,29,30,31,32,33,34
312OFC	Oso Flaco Creek	October	2021	98	0.01	0.01	100	89	0.08	0.00	6,9,18,20,21,22,23,24,25,26,27,28,29,30,31,32,34
312OFC	Oso Flaco Creek	December	2021	**0**	0.01	4.10	**0**	**0**	0.81	0.00	6,9,15,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312OFC	Oso Flaco Creek	March	2022	**3**	0.00	0.59	**0**	**21**	0.28	0.00	9,15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312OFC	Oso Flaco Creek	April	2022	103	0.00	0.01	99	**69**	0.00	0.00	15,20,21,22,23,24,25,26,28,29,30,31,32,33,34
312OFC	Oso Flaco Creek	April	2022	100	0.00	0.01	100	**72**	0.00	0.00	15,20,21,22,23,24,25,26,28,29,30,31,32,33,34
312OFN	Little Oso Flaco Creek	October	2021	100	0.00	0.16	100	116	0.02	0.00	9,15,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312OFN	Little Oso Flaco Creek	December	2021	**0**	0.00	1.06	**0**	**17**	0.61	0.00	9,15,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34

312OFN	Little Oso Flaco Creek	March	2022	**0**	0.00	1.11	**0**	**0**	0.05	0.00	9,15,17,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312OFN	Little Oso Flaco Creek	March[2]	2022	**0**	0.00	1.11	**0**	**0**	0.05	0.00	9,15,17,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312OFN	Little Oso Flaco Creek	April	2022	95	0.00	0.18	112	71	0.02	0.00	9,15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312ORC	Orcutt Solomon Creek u/s of SMR	October[4]	2021		0.00	0.46	100[3]		0.00	0.00	9,16,18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
312ORC	Orcutt Solomon Creek u/s of SMR	December	2021	**5**	0.01	1.35	100	93	0.65	0.00	5,9,15,16,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312ORC	Orcutt Solomon Creek u/s of SMR	March	2022	**0**	0.00	0.30	**0**	**0**	0.00	0.00	15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312ORC	Orcutt Solomon Creek u/s of SMR	April	2022	103	0.00	0.00	111	**75**	0.00	0.00	20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312ORI	Orcutt Solomon Creek at Hwy 1	October[4]	2021		0.02	0.29	**0**[3]		0.18	0.00	6,9,15,18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
312ORI	Orcutt Solomon Creek at Hwy 1	December	2021	**0**	0.00	1.36	100	**3**	0.03	0.00	9,15,16,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312ORI	Orcutt Solomon Creek at Hwy 1	March	2022	95	0.00	0.54	100	**65**	0.06	0.00	9,15,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312ORI	Orcutt Solomon Creek at Hwy 1	April[4]	2022		0.00	0.00	98[3]		0.00	0.00	20,21,22,23,24,25,26,28,29,30,31,32,33,34
312SMA	Santa Maria River at Estuary	October[4]	2021		0.00	0.27	100[3]		0.00	0.00	16,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312SMA	Santa Maria River at Estuary	December	2021	**15**	0.01	1.27	100	89	0.45	0.00	5,9,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312SMA	Santa Maria River at Estuary	March	2022	**0**	0.00	1.10	**0**	**0**	0.00	0.00	15,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
312SMA	Santa Maria River at Estuary	April	2022	**77**	0.00	0.47	86	**58**	0.01	0.00	9,18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
312SMI	Santa Maria River at Highway 1	December	2021	**0**	0.04	0.59	100	**72**	0.49	0.00	2,9,15,16,18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
312SMI	Santa Maria River at Highway 1	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312SMI	Santa Maria River at Highway 1	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	September	2021	87	0.00	0.00	90	**70**	0.00	0.00	21,22,23,24,25,26,28,29,30,31,32,34
313SAE	San Antonio Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYF	Santa Ynez River at Floradale Ave.	September	2021	105	0.00	0.00	100	92	0.00	0.00	21,22,23,24,25,26,27,28,29,30,31,32,33,34
314SYF	Santa Ynez River at Floradale Ave.	March	2022	98	0.00	0.03	100	**73**	0.00	0.00	18,21,22,23,24,25,26,27,28,29,30,31,32,33,34
314SYF	Santa Ynez River at Floradale Ave.	April	2022	103	0.00	0.00	99	96	0.00	0.00	16,21,22,23,24,25,26,27,28,29,30,31,32,33,34
314SYL	Santa Ynez River at River Park	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYN	Santa Ynez River at 13th St.	September[4]	2021		0.00	0.00	102[3]		0.00	0.00	21,22,23,24,25,26,27,28,29,30,31,32,33,34

314SYN	Santa Ynez River at 13th St.	December	2021	95	0.00	0.17	100	127	0.00	0.00	18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
314SYN	Santa Ynez River at 13th St.	March	2022	98	0.00	0.10	100	**78**	0.00	0.00	15,18,21,22,23,24,25,26,27,28,29,30,31,32,33,34
314SYN	Santa Ynez River at 13th St.	April	2022	105	0.00	0.01	111	94	0.00	0.00	15,21,22,23,24,25,26,27,28,29,30,31,32,33,34
315APF	Arroyo Paredon	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315APF	Arroyo Paredon	December	2021	100	0.00	0.00	100	95	0.00	0.00	21,22,25,26,28,29,30,31,32,33,34
315APF	Arroyo Paredon	March	2022	87	0.00	0.00	80	**40**	0.00	0.00	21,22,23,24,25,26,28,29,30,31,32,33,34
315APF	Arroyo Paredon	April	2022	100	0.00	0.00	90	**79**	0.00	0.00	21,22,25,26,27,28,29,30,31,32,33,34
315BEF	Bell Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315BEF	Bell Creek	December[4]	2021		0.00	0.07	100[3]		0.00	0.00	18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
315BEF	Bell Creek	March[4]	2022		0.00	0.05	94[3]		0.00	0.00	18,20,21,22,23,24,25,26,28,29,30,31,32,33,34
315BEF	Bell Creek	April[4]	2022		0.00	0.00	98[3]		0.00	0.00	21,22,23,24,25,26,27,28,29,30,31,32,33,34
315FMV	Franklin Creek	September	2021	94	0.00	0.05	100	**46**	0.00	0.00	17,18,21,22,23,24,25,26,27,28,29,30,31,32,33,34
315FMV	Franklin Creek	December	2021	92	0.00	0.04	89	**80**	0.00	0.00	17,18,21,22,23,24,25,26,27,28,29,30,31,32,33,34
315FMV	Franklin Creek	March	2022	77	0.00	0.01	70	**33**	0.00	0.00	17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
315FMV	Franklin Creek	April	2022	98	0.00	0.00	100	97	0.00	0.00	21,22,23,24,25,26,27,28,29,30,31,32,33,34
315GAN	Glen Annie Creek	September	2021	87	0.00	0.00	90	**75**	0.00	0.00	21,22,23,24,25,26,28,29,30,31,32,33,34
315GAN	Glen Annie Creek	December	2021	87	0.00	0.31	100	107	0.00	0.00	18,20,21,22,24,25,26,27,28,29,30,31,32,33,34
315GAN	Glen Annie Creek	March	2022	85	0.00	0.06	**60**	**4**	0.00	0.00	18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
315GAN	Glen Annie Creek	April	2022	88	0.00	0.00	90	**69**	0.00	0.00	21,22,23,24,25,26,28,29,30,31,32,33,34
315LCC	Los Carneros Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	March	2022	87	0.00	0.01	100	81	0.00	0.00	18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
315LCC	Los Carneros Creek	April	2022	98	0.00	0.00	80	84	0.00	0.00	21,22,24,25,26,28,29,30,31,32,33,34

Notes:

Red Indicates result is significantly different from the control.

1 Numbers in this column correspond to toxicants named in Table 2-3.

2 Duplicate sample result.

3 Due to elevated salinity, the alternative species *Hyalella azteca* was used.

4 No *Chironomus* testing was performed on this sample due to the sample conductivity exceeding 3,000 µs/cm.

Table 13. Toxicity to Algae and Herbicides Detected in Water at NMU Sites, 2021 and 2022.

Site ID	Site Description	Month	Year	Algae Toxicity %Growth	Herbicides Detected in Water[1]	Herbicides toxic units
305BRS	Beach Road Ditch	September	2021	379[3]		0.00
305BRS	Beach Road Ditch	December	2021	180	4	0.00
305BRS	Beach Road Ditch	December[2]	2021	178	4	0.00
305BRS	Beach Road Ditch	March	2022	206[3]		0.00
305BRS	Beach Road Ditch	April	2022	196[3]		0.00
305CAN	Carnadero Creek	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
305CAN	Carnadero Creek	December	2021	104	3	0.00
305CAN	Carnadero Creek	March	2022	170		0.00
305CAN	Carnadero Creek	April	2022	197		0.00
305CHI	Pajaro River at Chittenden	September	2021	**27**		0.00
305CHI	Pajaro River at Chittenden	December	2021	175	3	0.03
305CHI	Pajaro River at Chittenden	March	2022	169	3	0.01
305CHI	Pajaro River at Chittenden	April	2022	372	3	0.00
305COR	Salsipuedes Creek	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
305COR	Salsipuedes Creek	December	2021	171	3,4	0.01
305COR	Salsipuedes Creek	March	2022	237		0.00
305COR	Salsipuedes Creek	April	2022	393		0.00
305FRA	Millers Canal	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
305FRA	Millers Canal	December	2021	139[3]	3,4,5	0.64
305FRA	Millers Canal	March	2022	118[3]	3	0.00
305FRA	Millers Canal	April	2022	182[3]	3	0.01
305FUF	Furlong Creek	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
305FUF	Furlong Creek	December	2021	325	2,3,4,7	0.04
305FUF	Furlong Creek	March	2022	130		0.00
305FUF	Furlong Creek	April	2022	273		0.00
305FUF	Furlong Creek	April[2]	2022	252		0.00
305LCS	Llagas Creek	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
305LCS	Llagas Creek	December	2021	120	3,4	0.05
305LCS	Llagas Creek	March	2022	149	3	0.00
305LCS	Llagas Creek	April	2022	248	3	0.00
305PJP	Pajaro River at Main St.	September	2021	268	3	0.01
305PJP	Pajaro River at Main St.	December	2021	130	3,4	0.05
305PJP	Pajaro River at Main St.	March	2022	227		0.00
305PJP	Pajaro River at Main St.	April	2022	245		0.00
305PJP	Pajaro River at Main St.	April[2]	2022	386	3	0.00
305SJA	San Juan Creek	September	2021	238	3	0.00
305SJA	San Juan Creek	September[2]	2021	200	3	0.00
305SJA	San Juan Creek	December	2021	**0**	3,4	0.09
305SJA	San Juan Creek	March	2022	227[3]	3,4	0.07
305SJA	San Juan Creek	April	2022	213	3	0.04
305TSR	Tequisquita Slough	September	2021	178[3]		0.00
305TSR	Tequisquita Slough	December	2021	**71**		0.00
305TSR	Tequisquita Slough	March	2022	237[3]		0.00
305TSR	Tequisquita Slough	April	2022	233[3]	3	0.00
305WCS	Watsonville Creek	September	2021	255		0.00
305WCS	Watsonville Creek	December	2021	171	3	0.02
305WCS	Watsonville Creek	March	2022	225		0.00

Site ID	Site Description	Month	Year	Algae Toxicity %Growth	Herbicides Detected in Water[1]	Herbicides toxic units
305WCS	Watsonville Creek	April	2022	358	3	0.00
305WSA	Watsonville Slough	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
305WSA	Watsonville Slough	December	2021	170	4,5	0.00
305WSA	Watsonville Slough	March	2022	210		0.00
305WSA	Watsonville Slough	April	2022	408		0.00
309ALG	Salinas Reclamation Canal	September	2021	**24**	3,4	0.01
309ALG	Salinas Reclamation Canal	December	2021	241	3,4,5,7	0.02
309ALG	Salinas Reclamation Canal	March	2022	187	3,4	0.14
309ALG	Salinas Reclamation Canal	April	2022	151	3,4	0.03
309ASB	Alisal Slough	September	2021	216	4	0.00
309ASB	Alisal Slough	December	2021	141	3,4	0.02
309ASB	Alisal Slough	March	2022	186[3]	3	0.00
309ASB	Alisal Slough	April	2022	93[3]	3,4	0.01
309BLA	Blanco Drain	September	2021	197	4,5	0.03
309BLA	Blanco Drain	December	2021	150	4	0.01
309BLA	Blanco Drain	March	2022	103	4	0.00
309BLA	Blanco Drain	April	2022	238	3,4	0.01
309CCD	Chualar Creek West	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
309CCD	Chualar Creek West	December	2021	201	3,4	0.02
309CCD	Chualar Creek West	March	2022	dry/disconnected	dry/disconnected	dry/disconnected
309CCD	Chualar Creek West	April	2022	181	3,4,5	0.02
309CRR	Chualar Creek East	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
309CRR	Chualar Creek East	March	2022	dry/disconnected	dry/disconnected	dry/disconnected
309ESP	Espinosa Slough	September	2021	260	4	0.01
309ESP	Espinosa Slough	December	2021	176	3	0.00
309ESP	Espinosa Slough	March	2022	**54**	3	0.00
309ESP	Espinosa Slough	April	2022	187[3]	3	0.00
309GAB	Gabilan Creek	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
309GAB	Gabilan Creek	December	2021	366		0.00
309GAB	Gabilan Creek	March	2022	dry/disconnected	dry/disconnected	dry/disconnected
309GAB	Gabilan Creek	April	2022	dry/disconnected	dry/disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	December	2021	dry/disconnected	dry/disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	March	2022	dry/disconnected	dry/disconnected	dry/disconnected
309GRN	Salinas River at Elm Rd.	April	2022	dry/disconnected	dry/disconnected	dry/disconnected
309JON	Salinas Reclamation Canal	September	2021	238	3,4	0.01
309JON	Salinas Reclamation Canal	December	2021	121	3,4,5	0.06
309JON	Salinas Reclamation Canal	March	2022	145	3,4,7	0.05
309JON	Salinas Reclamation Canal	April	2022	360	3,4,7	0.04
309MER	Merritt Ditch	September	2021	257	3,4	0.05
309MER	Merritt Ditch	September[2]	2021	246	3,4	0.05
309MER	Merritt Ditch	December	2021	174	3	0.00
309MER	Merritt Ditch	March	2022	128	3,4	0.01
309MER	Merritt Ditch	April	2022	217	3,4	0.01
309MOR	Moro Cojo Slough	September	2021	**79[3]**		0.00
309MOR	Moro Cojo Slough	December	2021	98[3]	3,4	0.01
309MOR	Moro Cojo Slough	March	2022	100[3]	3	0.00
309MOR	Moro Cojo Slough	April	2022	87[3]	3	0.00
309NAD	Natividad Creek	September	2021	dry/disconnected	dry/disconnected	dry/disconnected

Site ID	Site Description	Month	Year	Algae Toxicity %Growth	Herbicides Detected in Water[1]	Herbicides toxic units
309NAD	Natividad Creek	December	2021	374		0.00
309NAD	Natividad Creek	March	2022	196	4	0.01
309NAD	Natividad Creek	April	2022	**56**	4	0.01
309NAD	Natividad Creek	April[2]	2022	**57**	4	0.01
309OLD	Old Salinas River	September	2021	189[3]	3,4	0.00
309OLD	Old Salinas River	December	2021	155	3,4	0.02
309OLD	Old Salinas River	December[2]	2021	173	3,4	0.02
309OLD	Old Salinas River	March	2022	187[3]	3,4,7	0.04
309OLD	Old Salinas River	April	2022	146[3]		0.00
309QUI	Quail Creek	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
309QUI	Quail Creek	December	2021	294	4	0.00
309QUI	Quail Creek	March	2022	dry/disconnected	dry/disconnected	dry/disconnected
309QUI	Quail Creek	April	2022	dry/disconnected	dry/disconnected	dry/disconnected
309RTA	Santa Rita Creek	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
309RTA	Santa Rita Creek	December	2021	407	3	0.00
309RTA	Santa Rita Creek	March	2022	dry/disconnected	dry/disconnected	dry/disconnected
309RTA	Santa Rita Creek	April	2022	dry/disconnected	dry/disconnected	dry/disconnected
309SAC	Salinas River at Chualar Bridge	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
309SAC	Salinas River at Chualar Bridge	March	2022	dry/disconnected	dry/disconnected	dry/disconnected
309SAC	Salinas River at Chualar Bridge	April	2022	dry/disconnected	dry/disconnected	dry/disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	March	2022	dry/disconnected	dry/disconnected	dry/disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	April	2022	dry/disconnected	dry/disconnected	dry/disconnected
309SSP	Salinas River at Spreckels Gage	September	2021	dry/disconnected	dry/disconnected	dry/disconnected
309SSP	Salinas River at Spreckels Gage	December	2021	279		0.00
309SSP	Salinas River at Spreckels Gage	March	2022	dry/disconnected	dry/disconnected	dry/disconnected
309SSP	Salinas River at Spreckels Gage	April	2022	dry/disconnected	dry/disconnected	dry/disconnected
309TEH	Tembladero Slough	September	2021	203	3,4	0.01
309TEH	Tembladero Slough	September[2]	2021	167	3,4	0.02
309TEH	Tembladero Slough	December	2021	121	3,4,5	0.05
309TEH	Tembladero Slough	March	2022	204	3,4,7	0.04
309TEH	Tembladero Slough	March[2]	2022	200	3,4,7	0.04
309TEH	Tembladero Slough	April	2022	279	3,4,7	0.02

Notes:

Red Indicates result is significantly different from the control.

1 Numbers in this column correspond to toxicants named in Table 2-5.

2 Duplicate sample result.

3 Due to elevated salinity, the alternative species *Thalassiosira pseudonana* was used.

Table 14. Toxicity to Algae and Herbicides Detected in Water at SMU sites, 2021 and 2022.

Site ID	Site Description	Month	Year	Algae Toxicity %Growth	Herbicides Detected in Water[1]	Herbicides toxic units
310CCC	Chorro Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
310CCC	Chorro Creek	December	2021	120		0.00
310CCC	Chorro Creek	March	2022	243	7	0.00
310CCC	Chorro Creek	April	2022	250	7	0.00
310LBC	Los Berros Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
310PRE	Prefumo Creek	September	2021	184		0.00
310PRE	Prefumo Creek	December	2021	122	3	0.01
310PRE	Prefumo Creek	March	2022	259	3	0.00
310PRE	Prefumo Creek	April	2022	251		0.00
310SLD	Davenport Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
310USG	Arroyo Grande Creek	September	2021	241	5	0.00
310USG	Arroyo Grande Creek	December	2021	98	3,4,5,7	0.04
310USG	Arroyo Grande Creek	March	2022	257	3,4,5,7	0.01
310USG	Arroyo Grande Creek	April	2022	239	5	0.00
310WRP	Warden Creek	September	2021	195		0.00
310WRP	Warden Creek	December	2021	109		0.00
310WRP	Warden Creek	March	2022	243		0.00
310WRP	Warden Creek	April	2022	202		0.00
312BCC	Bradley Canyon Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	December	2021	103	4,5,8	0.04
312BCC	Bradley Canyon Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCJ	Bradley Channel	September	2021	165	3,4,5	0.16
312BCJ	Bradley Channel	September[2]	2021	151	3,4,5	0.16
312BCJ	Bradley Channel	December	2021	138	4,5	0.00
312BCJ	Bradley Channel	March	2022	147	4,5	0.02
312BCJ	Bradley Channel	April	2022	165	3,4,5	0.03
312GVS	Green Valley at Simas	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
312MSD	Main St. Canal	October	2021	11	4,5	0.01
312MSD	Main St. Canal	December	2021	98	3,4,5	0.04
312MSD	Main St. Canal	December[2]	2021	103	3,4,5	0.04
312MSD	Main St. Canal	March	2022	177	3,4,5	0.03
312MSD	Main St. Canal	April	2022	141	3,4,5	0.01
312OFC	Oso Flaco Creek	October	2021	283	4	0.00
312OFC	Oso Flaco Creek	December	2021	116	3,4,5	0.01
312OFC	Oso Flaco Creek	March	2022	164	4,5,7	0.01
312OFC	Oso Flaco Creek	April	2022	81	3,4,5,7	0.00
312OFC	Oso Flaco Creek	April	2022	75	3,4,5,7	0.00
312OFN	Little Oso Flaco Creek	October	2021	117	4	0.00
312OFN	Little Oso Flaco Creek	December	2021	101	4	0.04

Site ID	Site Description	Month	Year	Algae Toxicity %Growth	Herbicides Detected in Water[1]	Herbicides toxic units
312OFN	Little Oso Flaco Creek	March	2022	140	3,4,5	0.04
312OFN	Little Oso Flaco Creek	March[2]	2022	134	3,4,5	0.04
312OFN	Little Oso Flaco Creek	April	2022	98	4	0.00
312ORC	Orcutt Solomon Creek u/s of SMR	October	2021	122[3]	5	0.00
312ORC	Orcutt Solomon Creek u/s of SMR	December	2021	126	3,4,5,8	0.07
312ORC	Orcutt Solomon Creek u/s of SMR	March	2022	171	3,4,5	0.02
312ORC	Orcutt Solomon Creek u/s of SMR	April	2022	177	5	0.00
312ORI	Orcutt Solomon Creek at Hwy 1	October	2021	176[3]	4,5	0.04
312ORI	Orcutt Solomon Creek at Hwy 1	December	2021	107	3,4,5	0.05
312ORI	Orcutt Solomon Creek at Hwy 1	March	2022	226	3,4,5,7	0.02
312ORI	Orcutt Solomon Creek at Hwy 1	April	2022	211[3]	3,5	0.01
312SMA	Santa Maria River at Estuary	October	2021	87[3]	5	0.00
312SMA	Santa Maria River at Estuary	December	2021	126	3,4,5	0.04
312SMA	Santa Maria River at Estuary	March	2022	168	3,4,5,8	0.03
312SMA	Santa Maria River at Estuary	April	2022	229	3,5	0.00
312SMI	Santa Maria River at Hwy 1	December	2021	99	3,4,5	0.02
312SMI	Santa Maria River at Hwy 1	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
312SMI	Santa Maria River at Hwy 1	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	September	2021	241	5	0.00
313SAE	San Antonio Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYF	Santa Ynez River at Floradale	September	2021	122	3	0.01
314SYF	Santa Ynez River at Floradale	March	2022	103	3	0.01
314SYF	Santa Ynez River at Floradale	April	2022	81	3	0.01
314SYL	Santa Ynez River at River Park	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Algae Toxicity %Growth	Herbicides Detected in Water[1]	Herbicides toxic units
314SYL	Santa Ynez River at River Park	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYN	Santa Ynez River at 13th St.	September	2021	245[3]	3,5	0.17
314SYN	Santa Ynez River at 13th St.	December	2021	122	3,4,5	0.15
314SYN	Santa Ynez River at 13th St.	March	2022	164	3,4,5	0.05
314SYN	Santa Ynez River at 13th St.	April	2022	115	3,5	0.07
315APF	Arroyo Paredon	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
315APF	Arroyo Paredon	December	2021	105		0.00
315APF	Arroyo Paredon	March	2022	**78**		0.00
315APF	Arroyo Paredon	April	2022	188		0.00
315BEF	Bell Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
315BEF	Bell Creek	December	2021	224[3]	4,7	0.00
315BEF	Bell Creek	March	2022	168[3]	4,7	0.00
315BEF	Bell Creek	April	2022	**77**[3]	7	0.00
315FMV	Franklin Creek	September	2021	88	3	0.00
315FMV	Franklin Creek	December	2021	104	3,5	0.00
315FMV	Franklin Creek	March	2022	109		0.00
315FMV	Franklin Creek	April	2022	156		0.00
315GAN	Glen Annie Creek	September	2021	229		0.00
315GAN	Glen Annie Creek	December	2021	94	3,4	0.00
315GAN	Glen Annie Creek	March	2022	84	4	0.00
315GAN	Glen Annie Creek	April	2022	98		0.00
315LCC	Los Carneros Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	March	2022	137		0.00
315LCC	Los Carneros Creek	April	2022	215	3	0.00

Notes:

Red Indicates result is significantly different from the control.
1 Numbers in this column correspond to toxicants named in Table 2-5.
2 Duplicate sample result.
3 Due to elevated salinity, the alternative species *Thalassiosira pseudonana* was used.

Table 15. Toxicity and Pesticides Detected in Sediment at NMU Sites, 2021 and 2022.

Site ID	Site Description	Year	Month	H.azteca %Survival	H.azteca %Growth	TOC %Dry Wgt.	Pesticides Detected in Sediment[1]	Pyrethroid Toxic Units	Chlorpyrifos Toxic Units	Total Toxic Units
305BRS	Beach Road Ditch	2021	September	86	90	1.87	1,6,8	0.30	0.00	0.30
305BRS	Beach Road Ditch	2022	April	84	**78**	1.19	6,8	0.08	0.00	0.08
305CAN	Carnadero Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305CAN	Carnadero Creek	2022	April	90	124	1.57		0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	2021	September	100	115	0.28		0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	2022	April	96	115	0.16		0.00	0.00	0.00
305COR	Salsipuedes Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305COR	Salsipuedes Creek	2022	April	93	103	1.14	7,9	0.04	0.00	0.04
305FRA	Millers Canal	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FRA	Millers Canal	2022	April	88	108	0.57		0.00	0.00	0.00
305FUF	Furlong Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FUF	Furlong Creek	2022	April	94	102	3.8	3,4,6,8	0.08	0.00	0.08
305FUF	Furlong Creek	2022	April[2]	93	103	3.8	3,4,6,8	0.08	0.00	0.08
305LCS	Llagas Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305LCS	Llagas Creek	2022	April	99	**77**	1.4	1,3,4,7	1.98	0.00	1.98
305PJP	Pajaro River at Main St.	2021	September	99	104	0.2	1	0.59	0.00	0.59
305PJP	Pajaro River at Main St.	2022	April	97	86	0.15		0.00	0.00	0.00
305SJA	San Juan Creek	2021	September	91	100	1.02	1,9	0.05	0.00	0.05
305SJA	San Juan Creek	2021	September	97	113	1.02	1,9	0.05	0.00	0.05
305SJA	San Juan Creek	2022	April	99	93	0.38		0.00	0.00	0.00
305TSR	Tequisquita Slough	2021	September	87	**79**	3.39	1	0.14	0.00	0.14
305TSR	Tequisquita Slough	2022	April	104	103	2.64		0.00	0.00	0.00
305WCS	Watsonville Creek	2021	September	92	113	2.65	1,10,11	0.39	0.19	0.58
305WCS	Watsonville Creek	2022	April	85	**78**	1.1		0.00	0.00	0.00
305WSA	Watsonville Slough	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305WSA	Watsonville Slough	2022	April	**26**	84	0.05		0.00	0.00	0.00
309ALG	Salinas Reclamation Canal	2021	September	**10**	**10**	1.32	1,2,3,4,5,6,7,8,9	13.54	0.00	13.54
309ALG	Salinas Reclamation Canal	2022	April	**0**	**0**	1.69	1,3,4,6,7,8,9	4.28	0.00	4.28
309ASB	Alisal Slough	2021	September	**5**	**74**	2.8	1,3,4,5,6,9	12.11	0.00	12.11
309ASB	Alisal Slough	2022	April	**3**	**9**	2.53	1,3,4,5,6,8,9	11.53	0.00	11.53
309BLA	Blanco Drain	2021	September	100	**59**	1.28	9	0.01	0.00	0.01
309BLA	Blanco Drain	2022	April	81	84	1.15	9	0.02	0.00	0.02
309CCD	Chualar Creek West	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	2022	April	**0**	**0**	1.46	1,2,3,4,5,6,8,9	9.43	0.00	9.43
309CRR	Chualar Creek East	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CRR	Chualar Creek East	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309ESP	Espinosa Slough	2021	September	**58**	**69**	1.74	1,3,4,7,9,11	1.47	0.04	1.51
309ESP	Espinosa Slough	2022	April	**0**	**0**	1.64	1,3,4,5,7,9	4.81	0.00	4.81
309GAB	Gabilan Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309JON	Salinas Reclamation Canal	2021	September	**67**	**77**	0.48	1,3,4,5,9,10	1.59	0.00	1.59
309JON	Salinas Reclamation Canal	2022	May	**39**	**32**	2.83	1,3,4,9,10	1.54	0.00	1.54
309MER	Merritt Ditch	2021	September	95	88	1.87	1,6,8	0.31	0.00	0.31
309MER	Merritt Ditch	2021	September[2]	94	**72**	1.87	1,6,8	0.31	0.00	0.31
309MER	Merritt Ditch	2022	April	89	87	2.71	6,8,9	0.05	0.00	0.05

Site ID	Site Description	Year	Month	H.azteca %Survival	H.azteca %Growth	TOC %Dry Wgt.	Pesticides Detected in Sediment[1]	Pyrethroid Toxic Units	Chlorpyrifos Toxic Units	Total Toxic Units
309MOR	Moro Cojo Slough	2021	September	98[3]		0.81	1	0.31	0.00	0.31
309MOR	Moro Cojo Slough	2022	April	100[3]		0.56		0.00	0.00	0.00
309NAD	Natividad Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309NAD	Natividad Creek	2022	April	**0**	**0**	0.82	1,7	4.25	0.00	4.25
309NAD	Natividad Creek	2022	April	**0**	**0**	0.82	1,7	4.25	0.00	4.25
309OLD	Old Salinas River	2021	September	**64**	**48**	0.69	1	0.89	0.00	0.89
309OLD	Old Salinas River	2022	April	**64**	**60**	1.88	1,3,4,6,7,8,9	3.10	0.00	3.10
309QUI	Quail Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309TEH	Tembladero Slough	2021	September	92	**68**	4.76	1,4	0.13	0.00	0.13
309TEH	Tembladero Slough	2022	April	**3**	**11**	2.45	1,3,4,6,7,9	2.84	0.00	2.84

Notes:

Red Indicates result is significantly different from the control.
1 Numbers in this column correspond to toxicants named in Table 2-4.
2 Duplicate sample result.
3 Due to elevated salinity, the alternative spieces Eohaustorius estuarius was used.
4 Survival statistically toxic due to low variability of test results.

Table 16. Toxicity and Pesticides Detected in Sediment at SMU Sites, 2021 and 2022.

Site ID	Site Description	Year	Month	H.azteca %Survival	H.azteca %Growth	TOC %Dry Wgt.	Pesticides Detected in Sediment[1]	Pyrethroid Toxic Units	Chlorpyrifos Toxic Units	Total Toxic Units
310CCC	Chorro Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310CCC	Chorro Creek	2022	April	105	168	0.17		0.00	0.00	0.00
310LBC	Los Berros Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310PRE	Prefumo Creek	2021	September	99	166	0.87	1	0.22	0.00	0.22
310PRE	Prefumo Creek	2022	April	103	123	0.65		0.00	0.00	0.00
310SLD	Davenport Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310USG	Arroyo Grande Creek	2021	September	94	142	0.64	1	0.07	0.00	0.07
310USG	Arroyo Grande Creek	2022	April	100	117	0.13	3,4	3.83	0.00	3.83
310WRP	Warden Creek	2021	September	91	174	3.48		0.00	0.00	0.00
310WRP	Warden Creek	2022	April	104	89	7.45		0.00	0.00	0.00
312BCC	Bradley Canyon Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCJ	Bradley Channel	2021	September	**4**	94	2.08	1,2,3,4,7,9	1.69	0.00	1.69
312BCJ	Bradley Channel	2021	September[2]	**24**	87	2.08	1,2,3,4,7,9	1.69	0.00	1.69
312BCJ	Bradley Channel	2022	April	**0**	**0**	0.24	1,3,4,6,7,8,9	29.16	0.00	29.16
312GVS	Green Valley at Simas	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312MSD	Main St. Canal	2021	October	**1**	**17**	2.3	1,2,3,4,6,7,9	1.42	0.00	1.42
312MSD	Main St. Canal	2022	April	**0**	**0**	0.34	1,9	19.91	0.00	19.91
312OFC	Oso Flaco Creek	2021	October	**34**	170	0.64	1,11	0.21	0.11	0.33
312OFC	Oso Flaco Creek	2022	April	**0**	**0**	0.83	1,3,4,6,7,8,9	10.71	0.00	10.71
312OFC	Oso Flaco Creek	2022	April[2]	**0**	**0**	0.83	1,3,4,6,7,8,9	10.71	0.00	10.71
312OFN	Little Oso Flaco Creek	2021	October	98	104	3.19	1	0.23	0.00	0.23
312OFN	Little Oso Flaco Creek	2022	May	**67**	**76**	4.12	1,7	0.45	0.00	0.45
312ORC	Orcutt Solomon Creek u/s of SMR	2021	October	95	142	0.04		0.00	0.00	0.00
312ORC	Orcutt Solomon Creek u/s of SMR	2022	April	103	**76**	0.07	9	0.19	0.00	0.19
312ORI	Orcutt Solomon Creek at Hwy 1	2021	October	**0**	**0**	0.31	1,2,7,9,11	1.48	0.22	1.69
312ORI	Orcutt Solomon Creek at Hwy 1	2022	April	**73**	79	0.72	6,7,8,9	0.46	0.00	0.46
312SMA	Santa Maria River at Estuary	2021	October	**61**	109	1.19	1,3,4,7,9	1.01	0.00	1.01
312SMA	Santa Maria River at Estuary	2022	April	94	**57**	0.18	7,9	0.62	0.00	0.62
312SMI	Santa Maria River at Hwy 1	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312SMI	Santa Maria River at Hwy 1	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	2021	September	95	**43**	2.26	1,3,4,5,6,7,9	1.59	0.00	1.59
313SAE	San Antonio Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYF	Santa Ynez River at Floradale	2021	September	97	159	0.76	1	0.31	0.00	0.31
314SYF	Santa Ynez River at Floradale	2022	April	**71**	**53**	0.28		0.00	0.00	0.00
314SYL	Santa Ynez River at River Park	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYN	Santa Ynez River at 13th St.	2021	September	108	167	0.49	1	1.30	0.00	1.30
314SYN	Santa Ynez River at 13th St.	2022	April	**54**	175	0.44		0.00	0.00	0.00
315APF	Arroyo Paredon	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315APF	Arroyo Paredon	2022	April	**73**	102	0.14		0.00	0.00	0.00

Site ID	Site Description	Year	Month	H.azteca %Survival	H.azteca %Growth	TOC %Dry Wgt.	Pesticides Detected in Sediment[1]	Pyrethroid Toxic Units	Chlorpyrifos Toxic Units	Total Toxic Units
315BEF	Bell Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315BEF	Bell Creek	2022	April	**75**	102	2.06		0.00	0.00	0.00
315FMV	Franklin Creek	2021	September	**35**	96	6.1	1,2,3,4,6,7,9,10	0.75	0.00	0.75
315FMV	Franklin Creek	2022	April	**77**	148	0.14		0.00	0.00	0.00
315GAN	Glen Annie Creek	2021	September	101	92	1.75	1	0.68	0.00	0.68
315GAN	Glen Annie Creek	2022	April	86	105	1.98		0.00	0.00	0.00
315LCC	Los Carneros Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	2022	April	**48**	138	0.05	7	3.18	0.00	3.18

Notes:

Red Indicates result is significantly different from the control.
1 Numbers in this column correspond to toxicants named in Table 2-2.
2 Duplicate sample result.
3 Growth statistically toxic due to low variability of test results.

Table 17a. Toxic Units for Organophosphate Pesticides and Neonicotinoids in Water using LC50s for Chironomus at NMU Sites, 2021 and 2022.

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
305BRS	Beach Road Ditch	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305BRS	Beach Road Ditch	December	2021	0.00	0.00	no LC50 available	0.00	0.04	0.00	0.00	0.06	0.00	0.01	0.00	0.11
305BRS	Beach Road Ditch	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305BRS	Beach Road Ditch	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
305CAN	Carnadero Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305CAN	Carnadero Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02
305CAN	Carnadero Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CAN	Carnadero Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.02
305CHI	Pajaro River at Chittenden	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305COR	Salsipuedes Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305COR	Salsipuedes Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305COR	Salsipuedes Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305COR	Salsipuedes Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FRA	Millers Canal	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FRA	Millers Canal	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FRA	Millers Canal	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FRA	Millers Canal	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FUF	Furlong Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FUF	Furlong Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.12	0.00	0.00	0.07	0.00	0.02	0.00	0.21
305FUF	Furlong Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FUF	Furlong Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305LCS	Llagas Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305LCS	Llagas Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05
305LCS	Llagas Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305LCS	Llagas Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305PJP	Pajaro River at Main St.	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305PJP	Pajaro River at Main St.	December	2021	0.00	0.00	no LC50 available	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02
305PJP	Pajaro River at Main St.	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305PJP	Pajaro River at Main St.	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305SJA	San Juan Creek	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305SJA	San Juan Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.08
305SJA	San Juan Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305SJA	San Juan Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305TSR	Tequisquita Slough	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305TSR	Tequisquita Slough	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305TSR	Tequisquita Slough	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305TSR	Tequisquita Slough	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
305WCS	Watsonville Creek	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WCS	Watsonville Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02
305WCS	Watsonville Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WCS	Watsonville Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WSA	Watsonville Slough	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305WSA	Watsonville Slough	December	2021	0.00	0.00	no LC50 available	0.00	0.05	0.00	0.00	0.06	0.00	0.02	0.00	0.14
305WSA	Watsonville Slough	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WSA	Watsonville Slough	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ALG	Salinas Reclamation Canal	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.04	0.00	0.91	0.00	0.03	0.00	0.97
309ALG	Salinas Reclamation Canal	December	2021	0.00	0.00	no LC50 available	0.00	0.37	0.12	0.00	0.22	0.00	0.02	0.00	0.73
309ALG	Salinas Reclamation Canal	March	2022	0.00	0.00	no LC50 available	0.00	0.02	0.12	0.00	0.26	0.00	0.10	0.00	0.50
309ALG	Salinas Reclamation Canal	April	2022	0.00	0.00	no LC50 available	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
309ASB	Alisal Slough	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ASB	Alisal Slough	December	2021	0.00	0.00	no LC50 available	0.00	0.05	0.14	0.00	0.30	0.00	0.04	0.00	0.53
309ASB	Alisal Slough	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.23	0.00	0.03	0.00	0.03	0.00	0.30
309ASB	Alisal Slough	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
309BLA	Blanco Drain	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.01	0.00	0.03	0.00	0.01	0.00	0.05
309BLA	Blanco Drain	December	2021	0.00	0.00	no LC50 available	0.00	0.28	0.06	0.03	0.30	0.00	0.06	0.00	0.73
309BLA	Blanco Drain	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.03
309BLA	Blanco Drain	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309CCD	Chualar Creek West	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	December	2021	0.00	0.00	no LC50 available	0.00	0.08	0.12	0.00	0.43	0.00	0.02	0.00	0.65
309CCD	Chualar Creek West	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
309CRR	Chualar Creek East	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CRR	Chualar Creek East	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309ESP	Espinosa Slough	September	2021	0.00	0.00	no LC50 available	0.00	0.03	0.00	0.00	0.00	0.00	0.01	0.00	0.04
309ESP	Espinosa Slough	December	2021	0.00	0.00	no LC50 available	0.00	0.69	0.03	0.00	0.21	0.00	0.02	0.00	0.95
309ESP	Espinosa Slough	March	2022	0.00	0.00	no LC50 available	0.00	0.20	0.00	0.00	0.03	0.00	0.02	0.00	0.26
309ESP	Espinosa Slough	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
309GAB	Gabilan Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
309GAB	Gabilan Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
309GRN	Salinas River at Elm Rd.	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309JON	Salinas Reclamation Canal	September	2021	0.00	0.00	no LC50 available	0.00	0.48	0.03	0.00	0.47	0.00	0.00	0.00	0.98
309JON	Salinas Reclamation Canal	December	2021	0.00	0.00	no LC50 available	0.00	0.46	0.04	0.00	0.12	0.00	0.01	0.02	0.64
309JON	Salinas Reclamation Canal	March	2022	0.00	0.00	no LC50 available	0.00	0.01	0.00	0.00	0.04	0.00	0.03	0.00	0.07
309JON	Salinas Reclamation Canal	April	2022	0.00	0.00	no LC50 available	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02
309MER	Merritt Ditch	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
309MER	Merritt Ditch	December	2021	0.00	0.00	no LC50 available	0.00	0.29	0.03	0.00	0.21	0.00	0.01	0.00	0.55
309MER	Merritt Ditch	March	2022	0.00	0.00	no LC50 available	0.00	0.20	0.00	0.00	0.00	0.00	0.10	0.00	0.30
309MER	Merritt Ditch	April	2022	0.00	0.00	no LC50 available	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04
309MOR	Moro Cojo Slough	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309MOR	Moro Cojo Slough	December	2021	0.00	0.00	no LC50 available	0.00	0.09	0.05	0.00	0.20	0.00	0.03	0.00	0.36
309MOR	Moro Cojo Slough	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309MOR	Moro Cojo Slough	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309NAD	Natividad Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309NAD	Natividad Creek	December	2021	0.25	0.00	no LC50 available	0.00	0.16	0.03	0.00	0.06	0.00	0.01	0.25	0.26
309NAD	Natividad Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.02	0.00	0.00	0.00	0.00	0.04	0.00	0.06
309NAD	Natividad Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02
309OLD	Old Salinas River	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309OLD	Old Salinas River	December	2021	0.00	0.00	no LC50 available	0.00	0.30	0.05	0.00	0.17	0.00	0.01	0.00	0.54
309OLD	Old Salinas River	March	2022	0.00	0.00	no LC50 available	0.00	0.09	0.00	0.00	0.04	0.00	0.05	0.00	0.18
309OLD	Old Salinas River	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309QUI	Quail Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.01	0.06	0.00	0.51	0.00	0.02	0.00	0.61
309QUI	Quail Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.63	0.03	0.00	0.11	0.00	0.02	0.00	0.79
309RTA	Santa Rita Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
309SAG	Salinas River at Gonzales River Rd. Bridge	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309SSP	Salinas River at Spreckels Gage	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309TEH	Tembladero Slough	September	2021	0.00	0.00	no LC50 available	0.00	0.02	0.00	0.00	0.13	0.00	0.01	0.00	0.15
309TEH	Tembladero Slough	December	2021	0.00	0.00	no LC50 available	0.00	0.57	0.05	0.00	0.12	0.00	0.01	0.02	0.76
309TEH	Tembladero Slough	March	2022	0.00	0.00	no LC50 available	0.00	0.06	0.00	0.00	0.00	0.00	0.07	0.00	0.13
309TEH	Tembladero Slough	April	2022	0.00	0.00	no LC50 available	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.03

Table 17b. Toxic Units for Organophosphate Pesticides and Neonicotinoids in Water using LC50s for Ceriodaphnia at NMU Sites, 2021 and 2022.

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
305BRS	Beach Road Ditch	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305BRS	Beach Road Ditch	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305BRS	Beach Road Ditch	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305BRS	Beach Road Ditch	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CAN	Carnadero Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305CAN	Carnadero Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CAN	Carnadero Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CAN	Carnadero Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305COR	Salsipuedes Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305COR	Salsipuedes Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305COR	Salsipuedes Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305COR	Salsipuedes Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FRA	Millers Canal	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FRA	Millers Canal	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FRA	Millers Canal	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FRA	Millers Canal	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FUF	Furlong Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FUF	Furlong Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FUF	Furlong Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FUF	Furlong Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305LCS	Llagas Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305LCS	Llagas Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305LCS	Llagas Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305LCS	Llagas Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305PJP	Pajaro River at Main St.	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305PJP	Pajaro River at Main St.	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305PJP	Pajaro River at Main St.	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305PJP	Pajaro River at Main St.	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305SJA	San Juan Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305SJA	San Juan Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305SJA	San Juan Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305SJA	San Juan Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305TSR	Tequisquita Slough	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305TSR	Tequisquita Slough	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305TSR	Tequisquita Slough	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305TSR	Tequisquita Slough	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WCS	Watsonville Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WCS	Watsonville Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WCS	Watsonville Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WCS	Watsonville Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
305WSA	Watsonville Slough	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305WSA	Watsonville Slough	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WSA	Watsonville Slough	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WSA	Watsonville Slough	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ALG	Salinas Reclamation Canal	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ALG	Salinas Reclamation Canal	December	2021	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
309ALG	Salinas Reclamation Canal	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ALG	Salinas Reclamation Canal	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ASB	Alisal Slough	September	2021	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
309ASB	Alisal Slough	December	2021	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
309ASB	Alisal Slough	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ASB	Alisal Slough	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309BLA	Blanco Drain	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309BLA	Blanco Drain	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309BLA	Blanco Drain	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309BLA	Blanco Drain	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309CCD	Chualar Creek West	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309CCD	Chualar Creek West	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	April	2022	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
309CRR	Chualar Creek East	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CRR	Chualar Creek East	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309ESP	Espinosa Slough	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ESP	Espinosa Slough	December	2021	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
309ESP	Espinosa Slough	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ESP	Espinosa Slough	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309GAB	Gabilan Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309GAB	Gabilan Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309JON	Salinas Reclamation Canal	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309JON	Salinas Reclamation Canal	December	2021	0.00	0.00	0.11	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
309JON	Salinas Reclamation Canal	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309JON	Salinas Reclamation Canal	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
309MER	Merritt Ditch	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309MER	Merritt Ditch	December	2021	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
309MER	Merritt Ditch	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309MER	Merritt Ditch	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309MOR	Moro Cojo Slough	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309MOR	Moro Cojo Slough	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309MOR	Moro Cojo Slough	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309MOR	Moro Cojo Slough	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309NAD	Natividad Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309NAD	Natividad Creek	December	2021	3.13	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	3.20	0.00
309NAD	Natividad Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309NAD	Natividad Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309OLD	Old Salinas River	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309OLD	Old Salinas River	December	2021	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
309OLD	Old Salinas River	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309OLD	Old Salinas River	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309QUI	Quail Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309QUI	Quail Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	December	2021	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
309RTA	Santa Rita Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309SSP	Salinas River at Spreckels Gage	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
309SSP	Salinas River at Spreckels Gage	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309TEH	Tembladero Slough	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309TEH	Tembladero Slough	December	2021	0.00	0.00	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
309TEH	Tembladero Slough	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309TEH	Tembladero Slough	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 18a. Toxic Units for Organophosphate Pesticides and Neonicotinoids in Water using LC50s for Chironomus at SMU Sites, 2021 and 2022.

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
310CCC	Chorro Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310CCC	Chorro Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310CCC	Chorro Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310CCC	Chorro Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310LBC	Los Berros Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310PRE	Prefumo Creek	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310PRE	Prefumo Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05
310PRE	Prefumo Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310PRE	Prefumo Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310SLD	Davenport Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310USG	Arroyo Grande Creek	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310USG	Arroyo Grande Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.29	0.05	0.00	0.28	0.00	0.00	0.00	0.63
310USG	Arroyo Grande Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310USG	Arroyo Grande Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310WRP	Warden Creek	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310WRP	Warden Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.07
310WRP	Warden Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310WRP	Warden Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312BCC	Bradley Canyon Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.68	0.00	0.00	2.12	0.00	0.03	0.00	2.83
312BCC	Bradley Canyon Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCJ	Bradley Channel	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.14
312BCJ	Bradley Channel	December	2021	0.00	0.00	no LC50 available	0.00	0.30	0.00	0.00	0.60	0.00	0.00	0.00	0.90
312BCJ	Bradley Channel	March	2022	0.00	0.00	no LC50 available	0.00	0.72	0.00	0.00	0.68	0.00	0.03	0.00	1.43
312BCJ	Bradley Channel	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312GVS	Green Valley at Simas	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
312GVS	Green Valley at Simas	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312MSD	Main St. Canal	October	2021	0.00	0.00	no LC50 available	0.00	0.00	0.01	0.00	0.06	0.00	0.00	0.00	0.06
312MSD	Main St. Canal	December	2021	0.00	0.00	no LC50 available	0.00	0.18	0.16	0.00	0.25	0.00	0.01	0.00	0.60
312MSD	Main St. Canal	March	2022	0.00	0.00	no LC50 available	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
312MSD	Main St. Canal	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312OFC	Oso Flaco Creek	October	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01
312OFC	Oso Flaco Creek	December	2021	0.00	0.00	no LC50 available	0.00	2.45	0.00	0.00	1.58	0.00	0.08	0.01	4.10
312OFC	Oso Flaco Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.48	0.00	0.00	0.00	0.00	0.12	0.00	0.59
312OFC	Oso Flaco Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
312OFN	Little Oso Flaco Creek	October	2021	0.00	0.00	no LC50 available	0.00	0.13	0.00	0.00	0.01	0.00	0.01	0.00	0.16
312OFN	Little Oso Flaco Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.95	0.00	0.00	0.09	0.00	0.03	0.00	1.06
312OFN	Little Oso Flaco Creek	March	2022	0.00	0.00	no LC50 available	0.00	1.04	0.00	0.00	0.00	0.00	0.06	0.00	1.11
312OFN	Little Oso Flaco Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.18
312ORC	Orcutt Solomon Creek u/s of SMR	October	2021	0.00	0.00	no LC50 available	0.00	0.00	0.01	0.00	0.43	0.00	0.02	0.00	0.46
312ORC	Orcutt Solomon Creek u/s of SMR	December	2021	0.00	0.01	no LC50 available	0.00	0.53	0.06	0.00	0.75	0.00	0.01	0.01	1.35
312ORC	Orcutt Solomon Creek u/s of SMR	March	2022	0.00	0.00	no LC50 available	0.00	0.27	0.00	0.00	0.00	0.00	0.03	0.00	0.30
312ORC	Orcutt Solomon Creek u/s of SMR	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312ORI	Orcutt Solomon Creek at Hwy 1	October	2021	0.00	0.00	no LC50 available	0.00	0.05	0.00	0.00	0.24	0.00	0.00	0.02	0.29
312ORI	Orcutt Solomon Creek at Hwy 1	December	2021	0.00	0.00	no LC50 available	0.00	0.55	0.05	0.00	0.75	0.00	0.00	0.00	1.36
312ORI	Orcutt Solomon Creek at Hwy 1	March	2022	0.00	0.00	no LC50 available	0.00	0.02	0.00	0.00	0.50	0.00	0.02	0.00	0.54
312ORI	Orcutt Solomon Creek at Hwy 1	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312SMA	Santa Maria River at Estuary	October	2021	0.00	0.00	no LC50 available	0.00	0.00	0.01	0.00	0.26	0.00	0.01	0.00	0.27
312SMA	Santa Maria River at Estuary	December	2021	0.00	0.01	no LC50 available	0.00	0.42	0.05	0.00	0.80	0.00	0.01	0.01	1.27
312SMA	Santa Maria River at Estuary	March	2022	0.00	0.00	no LC50 available	0.00	1.06	0.00	0.00	0.00	0.00	0.04	0.00	1.10
312SMA	Santa Maria River at Estuary	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.47
312SMI	Santa Maria River at Hwy 1	December	2021	0.04	0.00	no LC50 available	0.00	0.10	0.01	0.00	0.47	0.00	0.01	0.04	0.59
312SMI	Santa Maria River at Hwy 1	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312SMI	Santa Maria River at Hwy 1	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
313SAE	San Antonio Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYF	Santa Ynez River at Floradale	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
314SYF	Santa Ynez River at Floradale	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.03
314SYF	Santa Ynez River at Floradale	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
314SYL	Santa Ynez River at River Park	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYN	Santa Ynez River at 13th St.	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
314SYN	Santa Ynez River at 13th St.	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.17
314SYN	Santa Ynez River at 13th St.	March	2022	0.00	0.00	no LC50 available	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.10
314SYN	Santa Ynez River at 13th St.	April	2022	0.00	0.00	no LC50 available	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
315APF	Arroyo Paredon	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315APF	Arroyo Paredon	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315APF	Arroyo Paredon	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315APF	Arroyo Paredon	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315BEF	Bell Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315BEF	Bell Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.07
315BEF	Bell Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05
315BEF	Bell Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315FMV	Franklin Creek	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.05
315FMV	Franklin Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04
315FMV	Franklin Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01
315FMV	Franklin Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315GAN	Glen Annie Creek	September	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315GAN	Glen Annie Creek	December	2021	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.31
315GAN	Glen Annie Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.06
315GAN	Glen Annie Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315LCC	Los Carneros Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	March	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01
315LCC	Los Carneros Creek	April	2022	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 18b. Toxic Units for Organophosphate Pesticides and Neonicotinoids in Water using LC50s for Ceriodaphnia at SMU Sites, 2021 and 2022.

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
310CCC	Chorro Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310CCC	Chorro Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310CCC	Chorro Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310CCC	Chorro Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310LBC	Los Berros Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310PRE	Prefumo Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310PRE	Prefumo Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310PRE	Prefumo Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310PRE	Prefumo Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310SLD	Davenport Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310USG	Arroyo Grande Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310USG	Arroyo Grande Creek	December	2021	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
310USG	Arroyo Grande Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310USG	Arroyo Grande Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310WRP	Warden Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310WRP	Warden Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310WRP	Warden Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310WRP	Warden Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312BCC	Bradley Canyon Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	December	2021	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
312BCC	Bradley Canyon Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCJ	Bradley Channel	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312BCJ	Bradley Channel	December	2021	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
312BCJ	Bradley Channel	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312BCJ	Bradley Channel	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312GVS	Green Valley at Simas	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
312GVS	Green Valley at Simas	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312MSD	Main St. Canal	October	2021	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00
312MSD	Main St. Canal	December	2021	0.00	0.28	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00
312MSD	Main St. Canal	March	2022	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
312MSD	Main St. Canal	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312OFC	Oso Flaco Creek	October	2021	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
312OFC	Oso Flaco Creek	December	2021	0.00	0.00	0.08	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00
312OFC	Oso Flaco Creek	March	2022	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00
312OFC	Oso Flaco Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312OFN	Little Oso Flaco Creek	October	2021	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
312OFN	Little Oso Flaco Creek	December	2021	0.00	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00
312OFN	Little Oso Flaco Creek	March	2022	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
312OFN	Little Oso Flaco Creek	April	2022	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
312ORC	Orcutt Solomon Creek u/s of SMR	October	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312ORC	Orcutt Solomon Creek u/s of SMR	December	2021	0.00	0.56	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00
312ORC	Orcutt Solomon Creek u/s of SMR	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312ORC	Orcutt Solomon Creek u/s of SMR	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312ORI	Orcutt Solomon Creek at Hwy 1	October	2021	0.00	0.00	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
312ORI	Orcutt Solomon Creek at Hwy 1	December	2021	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
312ORI	Orcutt Solomon Creek at Hwy 1	March	2022	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00
312ORI	Orcutt Solomon Creek at Hwy 1	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312SMA	Santa Maria River at Estuary	October	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312SMA	Santa Maria River at Estuary	December	2021	0.00	0.40	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00
312SMA	Santa Maria River at Estuary	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312SMA	Santa Maria River at Estuary	April	2022	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
312SMI	Santa Maria River at Hwy 1	December	2021	0.46	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00
312SMI	Santa Maria River at Hwy 1	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312SMI	Santa Maria River at Hwy 1	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
313SAE	San Antonio Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Acetamiprid	Clothianidin	Dinotefuran	Imidacloprid	Thiacloprid	Thiamethoxam	Organophosphate toxic units	Neonicotinoid toxic units
313SAE	San Antonio Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYF	Santa Ynez River at Floradale	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
314SYF	Santa Ynez River at Floradale	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
314SYF	Santa Ynez River at Floradale	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
314SYL	Santa Ynez River at River Park	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYN	Santa Ynez River at 13th St.	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
314SYN	Santa Ynez River at 13th St.	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
314SYN	Santa Ynez River at 13th St.	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
314SYN	Santa Ynez River at 13th St.	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315APF	Arroyo Paredon	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315APF	Arroyo Paredon	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315APF	Arroyo Paredon	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315APF	Arroyo Paredon	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315BEF	Bell Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315BEF	Bell Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315BEF	Bell Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315BEF	Bell Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315FMV	Franklin Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315FMV	Franklin Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315FMV	Franklin Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315FMV	Franklin Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315GAN	Glen Annie Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315GAN	Glen Annie Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315GAN	Glen Annie Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315GAN	Glen Annie Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315LCC	Los Carneros Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315LCC	Los Carneros Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 19. Toxic Units for Herbicides in Water at NMU Sites, 2021 and 2022.

Site ID	Site Description	Month	Year	Glyphosate	Cyanazine	Diuron	Linuron	Simazine	Trifluralin	Herbicide toxic units
305BRS	Beach Road Ditch	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305BRS	Beach Road Ditch	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305BRS	Beach Road Ditch	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305BRS	Beach Road Ditch	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CAN	Carnadero Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305CAN	Carnadero Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CAN	Carnadero Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CAN	Carnadero Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	December	2021	0.00	0.00	0.03	0.00	0.00	0.00	0.03
305CHI	Pajaro River at Chittenden	March	2022	0.00	0.00	0.01	0.00	0.00	0.00	0.01
305CHI	Pajaro River at Chittenden	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305COR	Salsipuedes Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305COR	Salsipuedes Creek	December	2021	0.00	0.00	0.01	0.00	0.00	0.00	0.01
305COR	Salsipuedes Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305COR	Salsipuedes Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FRA	Millers Canal	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FRA	Millers Canal	December	2021	0.10	0.00	0.54	0.00	0.00	0.00	0.64
305FRA	Millers Canal	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FRA	Millers Canal	April	2022	0.00	0.00	0.01	0.00	0.00	0.00	0.01
305FUF	Furlong Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FUF	Furlong Creek	December	2021	0.01	0.00	0.03	0.00	0.00	0.00	0.04
305FUF	Furlong Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305FUF	Furlong Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305LCS	Llagas Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305LCS	Llagas Creek	December	2021	0.00	0.00	0.05	0.00	0.00	0.00	0.05
305LCS	Llagas Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305LCS	Llagas Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305PJP	Pajaro River at Main St.	September	2021	0.00	0.00	0.01	0.00	0.00	0.00	0.01
305PJP	Pajaro River at Main St.	December	2021	0.00	0.00	0.05	0.00	0.00	0.00	0.05

Site ID	Site Description	Month	Year	Glyphosate	Cyanazine	Diuron	Linuron	Simazine	Trifluralin	Herbicide toxic units
305PJP	Pajaro River at Main St.	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305PJP	Pajaro River at Main St.	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305SJA	San Juan Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305SJA	San Juan Creek	December	2021	0.01	0.00	0.08	0.00	0.00	0.00	0.09
305SJA	San Juan Creek	March	2022	0.00	0.00	0.07	0.00	0.00	0.00	0.07
305SJA	San Juan Creek	April	2022	0.00	0.00	0.04	0.00	0.00	0.00	0.04
305TSR	Tequisquita Slough	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305TSR	Tequisquita Slough	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305TSR	Tequisquita Slough	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305TSR	Tequisquita Slough	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WCS	Watsonville Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WCS	Watsonville Creek	December	2021	0.00	0.00	0.02	0.00	0.00	0.00	0.02
305WCS	Watsonville Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WCS	Watsonville Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WSA	Watsonville Slough	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305WSA	Watsonville Slough	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WSA	Watsonville Slough	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
305WSA	Watsonville Slough	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ALG	Salinas Reclamation Canal	September	2021	0.01	0.00	0.00	0.00	0.00	0.00	0.01
309ALG	Salinas Reclamation Canal	December	2021	0.00	0.00	0.01	0.00	0.00	0.00	0.02
309ALG	Salinas Reclamation Canal	March	2022	0.02	0.00	0.12	0.00	0.00	0.00	0.14
309ALG	Salinas Reclamation Canal	April	2022	0.01	0.00	0.02	0.00	0.00	0.00	0.03
309ASB	Alisal Slough	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ASB	Alisal Slough	December	2021	0.02	0.00	0.00	0.00	0.00	0.00	0.02
309ASB	Alisal Slough	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ASB	Alisal Slough	April	2022	0.01	0.00	0.00	0.00	0.00	0.00	0.01
309BLA	Blanco Drain	September	2021	0.03	0.00	0.00	0.00	0.00	0.00	0.03
309BLA	Blanco Drain	December	2021	0.01	0.00	0.00	0.00	0.00	0.00	0.01
309BLA	Blanco Drain	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309BLA	Blanco Drain	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.01
309CCD	Chualar Creek West	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	December	2021	0.01	0.00	0.01	0.00	0.00	0.00	0.02
309CCD	Chualar Creek West	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Glyphosate	Cyanazine	Diuron	Linuron	Simazine	Trifluralin	Herbicide toxic units
309CCD	Chualar Creek West	April	2022	0.00	0.00	0.00	0.02	0.00	0.00	0.02
309CRR	Chualar Creek East	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CRR	Chualar Creek East	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309ESP	Espinosa Slough	September	2021	0.01	0.00	0.00	0.00	0.00	0.00	0.01
309ESP	Espinosa Slough	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ESP	Espinosa Slough	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309ESP	Espinosa Slough	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309GAB	Gabilan Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309GAB	Gabilan Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309JON	Salinas Reclamation Canal	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.01
309JON	Salinas Reclamation Canal	December	2021	0.02	0.00	0.04	0.00	0.00	0.00	0.06
309JON	Salinas Reclamation Canal	March	2022	0.00	0.00	0.05	0.00	0.00	0.00	0.05
309JON	Salinas Reclamation Canal	April	2022	0.00	0.00	0.04	0.00	0.00	0.00	0.04
309MER	Merritt Ditch	September	2021	0.05	0.00	0.00	0.00	0.00	0.00	0.05
309MER	Merritt Ditch	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309MER	Merritt Ditch	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.01
309MER	Merritt Ditch	April	2022	0.01	0.00	0.00	0.00	0.00	0.00	0.01
309MOR	Moro Cojo Slough	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309MOR	Moro Cojo Slough	December	2021	0.00	0.00	0.01	0.00	0.00	0.00	0.01
309MOR	Moro Cojo Slough	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309MOR	Moro Cojo Slough	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Site ID	Site Description	Month	Year	Glyphosate	Cyanazine	Diuron	Linuron	Simazine	Trifluralin	Herbicide toxic units
309NAD	Natividad Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309NAD	Natividad Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309NAD	Natividad Creek	March	2022	0.01	0.00	0.00	0.00	0.00	0.00	0.01
309NAD	Natividad Creek	April	2022	0.01	0.00	0.00	0.00	0.00	0.00	0.01
309OLD	Old Salinas River	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309OLD	Old Salinas River	December	2021	0.00	0.00	0.01	0.00	0.00	0.00	0.02
309OLD	Old Salinas River	March	2022	0.00	0.00	0.03	0.00	0.00	0.00	0.04
309OLD	Old Salinas River	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309QUI	Quail Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309QUI	Quail Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309RTA	Santa Rita Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected

Site ID	Site Description	Month	Year	Glyphosate	Cyanazine	Diuron	Linuron	Simazine	Trifluralin	Herbicide toxic units
309SSP	Salinas River at Spreckels Gage	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309SSP	Salinas River at Spreckels Gage	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309TEH	Tembladero Slough	September	2021	0.01	0.00	0.00	0.00	0.00	0.00	0.01
309TEH	Tembladero Slough	September	2021	0.02	0.00	0.00	0.00	0.00	0.00	0.02
309TEH	Tembladero Slough	December	2021	0.02	0.00	0.03	0.00	0.00	0.00	0.05
309TEH	Tembladero Slough	March	2022	0.00	0.00	0.04	0.00	0.00	0.00	0.04
309TEH	Tembladero Slough	April	2022	0.01	0.00	0.01	0.00	0.00	0.00	0.02

Table 20. Toxic Units for Herbicides in Water at SMU Sites, 2021 and 2022.

Site ID	Site Description	Month	Year	Glyphosate	Cyanazine	Diuron	Linuron	Simazine	Trifluralin	Herbicide toxic units
310CCC	Chorro Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310CCC	Chorro Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310CCC	Chorro Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310CCC	Chorro Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310LBC	Los Berros Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310PRE	Prefumo Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310PRE	Prefumo Creek	December	2021	0.00	0.00	0.01	0.00	0.00	0.00	0.01
310PRE	Prefumo Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310PRE	Prefumo Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310SLD	Davenport Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310USG	Arroyo Grande Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310USG	Arroyo Grande Creek	December	2021	0.01	0.00	0.01	0.02	0.00	0.00	0.04
310USG	Arroyo Grande Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.01
310USG	Arroyo Grande Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310WRP	Warden Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310WRP	Warden Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310WRP	Warden Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
310WRP	Warden Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312BCC	Bradley Canyon Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	December	2021	0.04	0.00	0.00	0.00	0.00	0.00	0.04
312BCC	Bradley Canyon Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCJ	Bradley Channel	September	2021	0.15	0.00	0.00	0.01	0.00	0.00	0.16
312BCJ	Bradley Channel	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312BCJ	Bradley Channel	March	2022	0.02	0.00	0.00	0.00	0.00	0.00	0.02
312BCJ	Bradley Channel	April	2022	0.01	0.00	0.02	0.00	0.00	0.00	0.03
312GVS	Green Valley at Simas	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312MSD	Main St. Canal	October	2021	0.01	0.00	0.00	0.00	0.00	0.00	0.01
312MSD	Main St. Canal	December	2021	0.00	0.00	0.03	0.00	0.00	0.00	0.04
312MSD	Main St. Canal	March	2022	0.01	0.00	0.02	0.00	0.00	0.00	0.03
312MSD	Main St. Canal	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.01
312OFC	Oso Flaco Creek	October	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312OFC	Oso Flaco Creek	December	2021	0.01	0.00	0.00	0.00	0.00	0.00	0.01
312OFC	Oso Flaco Creek	March	2022	0.01	0.00	0.00	0.00	0.00	0.00	0.01
312OFC	Oso Flaco Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312OFN	Little Oso Flaco Creek	October	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312OFN	Little Oso Flaco Creek	December	2021	0.04	0.00	0.00	0.00	0.00	0.00	0.04
312OFN	Little Oso Flaco Creek	March	2022	0.03	0.00	0.00	0.00	0.00	0.00	0.04
312OFN	Little Oso Flaco Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312ORC	Orcutt Solomon Creek u/s of SMR	October	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312ORC	Orcutt Solomon Creek u/s of SMR	December	2021	0.01	0.00	0.06	0.00	0.00	0.00	0.07

Site ID	Site Description	Month	Year	Glyphosate	Cyanazine	Diuron	Linuron	Simazine	Trifluralin	Herbicide toxic units
312ORC	Orcutt Solomon Creek u/s of SMR	March	2022	0.01	0.00	0.01	0.00	0.00	0.00	0.02
312ORC	Orcutt Solomon Creek u/s of SMR	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312ORI	Orcutt Solomon Creek at Hwy 1	October	2021	0.04	0.00	0.00	0.00	0.00	0.00	0.04
312ORI	Orcutt Solomon Creek at Hwy 1	December	2021	0.00	0.00	0.05	0.00	0.00	0.00	0.05
312ORI	Orcutt Solomon Creek at Hwy 1	March	2022	0.00	0.00	0.02	0.00	0.00	0.00	0.02
312ORI	Orcutt Solomon Creek at Hwy 1	April	2022	0.00	0.00	0.01	0.00	0.00	0.00	0.01
312SMA	Santa Maria River at Estuary	October	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312SMA	Santa Maria River at Estuary	December	2021	0.00	0.00	0.04	0.00	0.00	0.00	0.04
312SMA	Santa Maria River at Estuary	March	2022	0.01	0.00	0.02	0.00	0.00	0.00	0.03
312SMA	Santa Maria River at Estuary	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
312SMI	Santa Maria River at Hwy 1	December	2021	0.01	0.00	0.01	0.00	0.00	0.00	0.02
312SMI	Santa Maria River at Hwy 1	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312SMI	Santa Maria River at Hwy 1	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
313SAE	San Antonio Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYF	Santa Ynez River at Floradale	September	2021	0.00	0.00	0.01	0.00	0.00	0.00	0.01
314SYF	Santa Ynez River at Floradale	March	2022	0.00	0.00	0.01	0.00	0.00	0.00	0.01
314SYF	Santa Ynez River at Floradale	April	2022	0.00	0.00	0.01	0.00	0.00	0.00	0.01
314SYL	Santa Ynez River at River Park	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	March	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	April	2022	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYN	Santa Ynez River at 13th St.	September	2021	0.00	0.00	0.17	0.00	0.00	0.00	0.17
314SYN	Santa Ynez River at 13th St.	December	2021	0.00	0.00	0.15	0.00	0.00	0.00	0.15
314SYN	Santa Ynez River at 13th St.	March	2022	0.01	0.00	0.05	0.00	0.00	0.00	0.05
314SYN	Santa Ynez River at 13th St.	April	2022	0.00	0.00	0.07	0.00	0.00	0.00	0.07
315APF	Arroyo Paredon	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315APF	Arroyo Paredon	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315APF	Arroyo Paredon	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315APF	Arroyo Paredon	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315BEF	Bell Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315BEF	Bell Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315BEF	Bell Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315BEF	Bell Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315FMV	Franklin Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315FMV	Franklin Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315FMV	Franklin Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315FMV	Franklin Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315GAN	Glen Annie Creek	September	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315GAN	Glen Annie Creek	December	2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315GAN	Glen Annie Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315GAN	Glen Annie Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315LCC	Los Carneros Creek	September	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	December	2021	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	March	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315LCC	Los Carneros Creek	April	2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 21. Toxic Units for Organophosphate and Pyrethroid Pesticides in Sediment at NMU Sites, 2021 and 2022.

Site ID	Site Description	Year	Month	Bifenthrin	Cyfluthrin Total	Cyhalothrin lambda	Cyhalothrin, gamma-	Cypermethrin Total	Esfenvalerate	Fenpropathrin	Fenvalerate	Permethrin (cis + trans)	T-Fluvalinate	Chlorpyrifos	Pyrethroid_TU	Chlorpyrifos TU	Total TU
305BRS	Beach Road Ditch	2021	September	0.27	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.00	no LC50 available	0.00	0.30	0.00	0.30
305BRS	Beach Road Ditch	2022	April	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.03	0.00	no LC50 available	0.00	0.08	0.00	0.08
305CAN	Carnadero Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305CAN	Carnadero Creek	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	2021	September	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
305CHI	Pajaro River at Chittenden	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
305COR	Salsipuedes Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305COR	Salsipuedes Creek	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.01	no LC50 available	0.00	0.04	0.00	0.04
305FRA	Millers Canal	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FRA	Millers Canal	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
305FUF	Furlong Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305FUF	Furlong Creek	2022	April	0.00	0.00	0.04	0.03	0.00	0.01	0.00	0.01	0.00	no LC50 available	0.00	0.08	0.00	0.08
305LCS	Llagas Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305LCS[6]	Llagas Creek	2022	April	0.97	0.00	0.49	0.49	0.00	0.00	0.03	0.00	0.00	no LC50 available	0.00	1.98	0.00	1.98
305PJP	Pajaro River at Main St.	2021	September	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.59	0.00	0.59
305PJP	Pajaro River at Main St.	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
305SJA	San Juan Creek	2021	September	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	no LC50 available	0.00	0.05	0.00	0.05
305SJA	San Juan Creek	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
305TSR	Tequisquita Slough	2021	September	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.14	0.00	0.14
305TSR	Tequisquita Slough	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
305WCS	Watsonville Creek	2021	September	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.19	0.39	0.19	0.58
305WCS	Watsonville Creek	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
305WSA	Watsonville Slough	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
305WSA	Watsonville Slough	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
309ALG[5]	Salinas Reclamation Canal	2021	September	**1.59**[1]	0.03	**6.18**[2]	5.49	0.10	0.01	0.04	0.02	0.08	no LC50 available	0.00	13.54	0.00	13.54

Site ID	Site Description	Year	Month	Bifenthrin	Cyfluthrin Total	Cyhalothrin lambda	Cyhalothrin, gamma-	Cypermethrin Total	Esfenvalerate	Fenpropathrin	Fenvalerate	Permethrin (cis + trans)	T-Fluvalinate	Chlorpyrifos	Pyrethroid_TU	Chlorpyrifos TU	Total TU
309ALG[5]	Salinas Reclamation Canal	2022	April	1.64[1]	0.00	1.23[2]	1.22	0.00	0.02	0.05	0.02	0.10	no LC50 available	0.00	4.28	0.00	4.28
309ASB[5]	Alisal Slough	2021	September	0.68	0.00	5.98[2]	5.25	0.12	0.01	0.00	0.00	0.07	no LC50 available	0.00	12.11	0.00	12.11
309ASB[5]	Alisal Slough	2022	April	2.87[1]	0.00	3.05[2]	3.03	1.16[3]	0.23	0.00	0.18	1.02[4]	no LC50 available	0.00	11.53	0.00	11.53
309BLA	Blanco Drain	2021	September	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	no LC50 available	0.00	0.01	0.00	0.01
309BLA	Blanco Drain	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	no LC50 available	0.00	0.02	0.00	0.02
309CCD	Chualar Creek West	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD	Chualar Creek West	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CCD[5]	Chualar Creek West	2022	April	0.80	0.11	3.21[2]	3.21	1.77[3]	0.12	0.00	0.07	0.13	no LC50 available	0.00	9.43	0.00	9.43
309CRR	Chualar Creek East	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309CRR	Chualar Creek East	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309ESP[5]	Espinosa Slough	2021	September	1.10[1]	0.00	0.18	0.16	0.00	0.00	0.02	0.00	0.01	no LC50 available	0.04	1.47	0.04	1.51
309ESP[5]	Espinosa Slough	2022	April	0.95	0.00	1.53[2]	1.52	0.78	0.00	0.02	0.00	0.02	no LC50 available	0.00	4.81	0.00	4.81
309GAB	Gabilan Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GAB	Gabilan Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309GRN	Salinas River at Elm Rd.	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309JON	Salinas Reclamation Canal	2021	September	0.82	0.00	0.29	0.26	0.18	0.00	0.00	0.00	0.04	no LC50 available	0.00	1.59	0.00	1.59
309JON	Salinas Reclamation Canal	2022	May	0.84	0.00	0.33	0.33	0.00	0.00	0.00	0.00	0.03	no LC50 available	0.00	1.54	0.00	1.54
309MER	Merritt Ditch	2021	September	0.27	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.00	no LC50 available	0.00	0.31	0.00	0.31
309MER	Merritt Ditch	2022	April	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.02	no LC50 available	0.00	0.05	0.00	0.05
309MOR	Moro Cojo Slough	2021	September	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.31	0.00	0.31
309MOR	Moro Cojo Slough	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
309NAD	Natividad Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309NAD[5]	Natividad Creek	2022	April	1.18[1]	0.00	0.00	0.00	0.00	0.00	3.07	0.00	0.00	no LC50 available	0.00	4.25	0.00	4.25

Site ID	Site Description	Year	Month	Bifenthrin	Cyfluthrin Total	Cyhalothrin lambda	Cyhalothrin, gamma-	Cypermethrin Total	Esfenvalerate	Fenpropathrin	Fenvalerate	Permethrin (cis + trans)	T-Fluvalinate	Chlorpyrifos	Pyrethroid_TU	Chlorpyrifos TU	Total TU
309OLD	Old Salinas River	2021	September	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.89	0.00	0.89
309OLD[5]	Old Salinas River	2022	April	**2.20**[1]	0.00	0.26	0.25	0.00	0.15	0.05	0.11	0.07	no LC50 available	0.00	3.10	0.00	3.10
309QUI	Quail Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309QUI	Quail Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309RTA	Santa Rita Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAC	Salinas River at Chualar Bridge	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SAG	Salinas River at Gonzales River Rd. Bridge	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309SSP	Salinas River at Spreckels Gage	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
309TEH	Tembladero Slough	2021	September	0.11	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.13	0.00	0.13
309TEH[5]	Tembladero Slough	2022	April	**1.85**[1]	0.00	0.45	0.44	0.00	0.01	0.05	0.00	0.03	no LC50 available	0.00	2.84	0.00	2.84

Notes:

Red Indicates result exceeded a TMDL or non-TMDL area limit.

1 Bifenthrin TUs exceeded the TMDL Limit of 1.0.

2 Lambda-cyhalothrin TUs exceeded the TMDL Limit of 1.0.

3 Total cypermethrin TUs exceeded the TMDL Limit of 1.0.

4 Permethrin (cis + trans) TUs exceeded the TMDL Limit of 1.0.

5 The sum total of TUs for six pyrethroids (i.e, Bifenthrin TU+Cyfluthrin TU+Cypermethrin TU+Esfenvalerate TU+Lambda-Cyhalothrin TU+Permethrin TU) exceeded the TMDL Limit of 1.0.

6 The sum total of TUs for six pyrethroids (i.e., Bifenthrin TU+Cyfluthrin TU+Cypermethrin TU+Esfenvalerate TU+Lambda-Cyhalothrin TU+Permethrin TU) exceeded the TMDL Limit of 1.0.

Table 22. Toxic Units for Organophosphate and Pyrethroid Pesticides in Sediment at SMU Sites, 2021 and 2022.

Site ID	Site Description	Year	Month	Bifenthrin	Cyfluthrin Total	Cyhalothrin lambda	Cyhalothrin, gamma-	Cypermethrin Total	Esfenvalerate	Fenpropathrin	Fenvalerate	Permethrin (cis + trans)	T-Fluvalinate	Chlorpyrifos	Pyrethroid_TU	Chlorpyrifos TU	Total TU
310CCC	Chorro Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310CCC	Chorro Creek	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
310LBC	Los Berros Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310LBC	Los Berros Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310PRE	Prefumo Creek	2021	September	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.22	0.00	0.22
310PRE	Prefumo Creek	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
310SLD	Davenport Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310SLD	Davenport Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
310USG	Arroyo Grande Creek	2021	September	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.07	0.00	0.07
310USG[4]	Arroyo Grande Creek	2022	April	0.00	0.00	2.02	1.81	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	3.83	0.00	3.83
310WRP	Warden Creek	2021	September	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
310WRP	Warden Creek	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
312BCC	Bradley Canyon Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCC	Bradley Canyon Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312BCJ[3]	Bradley Channel	2021	September	**1.13**[1]	0.02	0.10	0.09	0.00	0.00	0.33	0.00	0.02	no LC50 available	0.00	1.69	0.00	1.69
312BCJ[3]	Bradley Channel	2022	April	**13.86**[1]	0.00	**5.78**[2]	5.74	0.00	0.45	2.41	0.33	0.58	no LC50 available	0.00	29.16	0.00	29.16
312GVS	Green Valley at Simas	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312GVS	Green Valley at Simas	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312MSD	Main St. Canal	2021	October	0.76	0.27	0.13	0.11	0.00	0.01	0.06	0.00	0.10	no LC50 available	0.00	1.42	0.00	1.42
312MSD[3]	Main St. Canal	2022	April	**19.23**[1]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	no LC50 available	0.00	19.91	0.00	19.91
312OFC	Oso Flaco Creek	2021	October	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.11	0.21	0.11	0.33
312OFC[3]	Oso Flaco Creek	2022	April	**4.21**[1]	0.00	0.91	0.91	0.00	0.13	4.27	0.10	0.18	no LC50 available	0.00	10.71	0.00	10.71

Site ID	Site Description	Year	Month	Bifenthrin	Cyfluthrin Total	Cyhalothrin lambda	Cyhalothrin, gamma-	Cypermethrin Total	Esfenvalerate	Fenpropathrin	Fenvalerate	Permethrin (cis + trans)	T-Fluvalinate	Chlorpyrifos	Pyrethroid_TU	Chlorpyrifos TU	Total TU
312OFN	Little Oso Flaco Creek	2021	October	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.23	0.00	0.23
312OFN	Little Oso Flaco Creek	2022	May	0.42	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	no LC50 available	0.00	0.45	0.00	0.45
312OFN[3]	Little Oso Flaco Creek	2022	April	**5.38**[1]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	5.38	0.00	5.38
312ORC	Orcutt Solomon Creek u/s of SMR	2021	October	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
312ORC	Orcutt Solomon Creek u/s of SMR	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	no LC50 available	0.00	0.19	0.00	0.19
312ORI	Orcutt Solomon Creek at Hwy 1	2021	October	0.58	0.44	0.00	0.00	0.00	0.00	0.11	0.00	0.35	no LC50 available	0.22	1.48	0.22	1.69
312ORI	Orcutt Solomon Creek at Hwy 1	2022	April	0.00	0.00	0.00	0.00	0.00	0.08	0.16	0.05	0.17	no LC50 available	0.00	0.46	0.00	0.46
312SMA	Santa Maria River at Estuary	2021	October	0.70	0.00	0.11	0.11	0.00	0.00	0.06	0.00	0.03	no LC50 available	0.00	1.01	0.00	1.01
312SMA	Santa Maria River at Estuary	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.33	no LC50 available	0.00	0.62	0.00	0.62
312SMI	Santa Maria River at Hwy 1	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
312SMI	Santa Maria River at Hwy 1	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
313SAE	San Antonio Creek	2021	September	0.31	0.00	0.61	0.57	0.04	0.01	0.01	0.00	0.03	no LC50 available	0.00	1.59	0.00	1.59
313SAE	San Antonio Creek	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYF	Santa Ynez River at Floradale	2021	September	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.31	0.00	0.31
314SYF	Santa Ynez River at Floradale	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
314SYL	Santa Ynez River at River Park	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	2022	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYL	Santa Ynez River at River Park	2021	April	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
314SYN[4]	Santa Ynez River at 13th St.	2021	September	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	1.30	0.00	1.30
314SYN	Santa Ynez River at 13th St.	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
315APF	Arroyo Paredon	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315APF	Arroyo Paredon	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
315BEF	Bell Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315BEF	Bell Creek	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
315FMV	Franklin Creek	2021	September	0.63	0.01	0.03	0.02	0.00	0.01	0.02	0.00	0.02	no LC50 available	0.00	0.75	0.00	0.75

Site ID	Site Description	Year	Month	Bifenthrin	Cyfluthrin Total	Cyhalothrin lambda	Cyhalothrin, gamma-	Cypermethrin Total	Esfenvalerate	Fenpropathrin	Fenvalerate	Permethrin (cis + trans)	T-Fluvalinate	Chlorpyrifos	Pyrethroid_TU	Chlorpyrifos TU	Total TU
315FMV	Franklin Creek	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
315GAN	Glen Annie Creek	2021	September	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.68	0.00	0.68
315GAN	Glen Annie Creek	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	no LC50 available	0.00	0.00	0.00	0.00
315LCC	Los Carneros Creek	2021	September	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected	dry/ disconnected
315LCC	Los Carneros Creek	2022	April	0.00	0.00	0.00	0.00	0.00	0.00	3.18	0.00	0.00	no LC50 available	0.00	3.18	0.00	3.18

Notes:

Red Indicates result exceeded a TMDL or non-TMDL area limit.

1 Bifenthrin TUs exceeded the TMDL Limit of 1.0

2 Lambda-cyhalothrin TUs exceeded the TMDL Limit of 1.0

3 The sum total of TUs for six pyrethroids (i.e, Bifenthrin TU+Cyfluthrin TU+Cypermethrin TU+Esfenvalerate TU+Lambda-Cyhalothrin TU+Permethrin TU) exceeded the TMDL Limit of 1.0.

4 The sum total of TUs for six pyrethroids (i.e., Bifenthrin TU+Cyfluthrin TU+Cypermethrin TU+Esfenvalerate TU+Lambda-Cyhalothrin TU+Permethrin TU) exceeded the TMDL Limit of 1.0.

Figure 1. Survival and Total Toxicity Units of Pesticide Classes Analyzed in Sediment

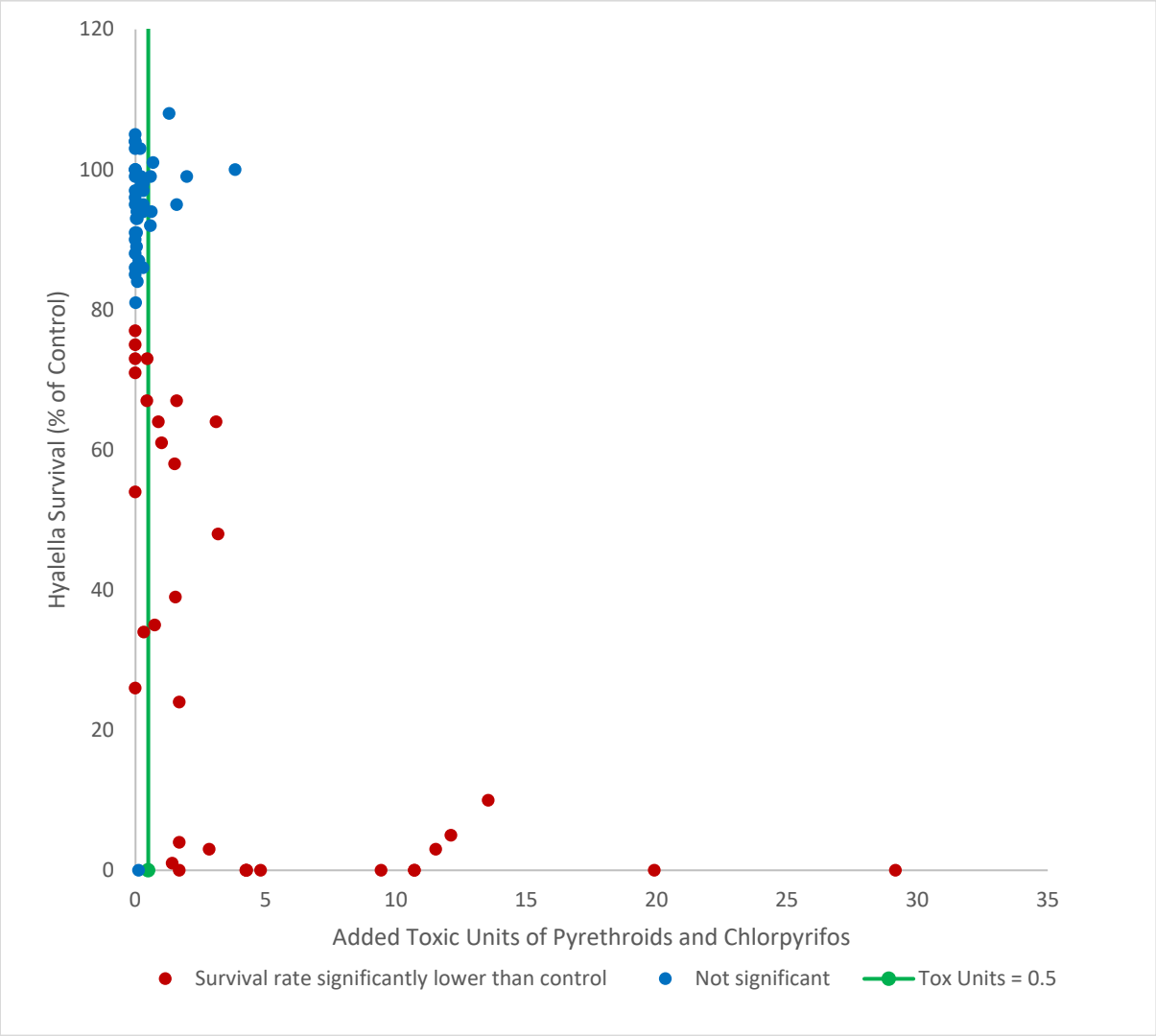
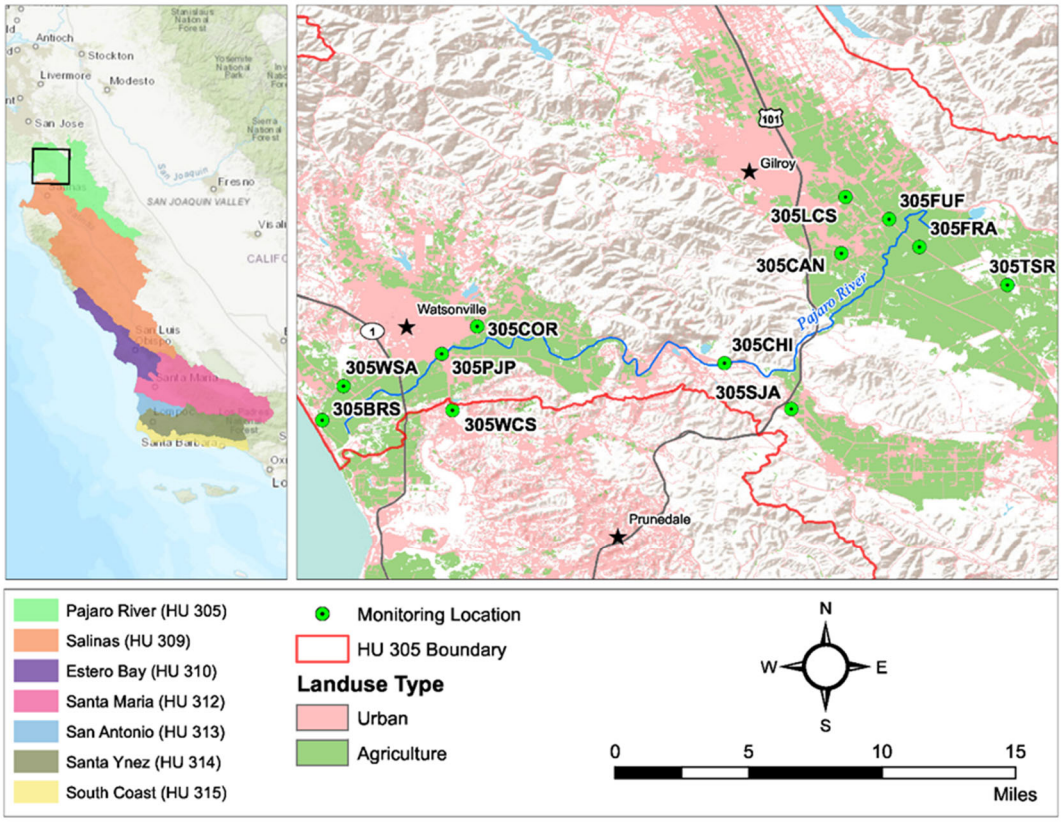


Figure 1. Survival of *H. azteca* (compared with control) exposed to sediment collected from Central Coast waterbodies in comparison with the added toxic units (TUs) of pyrethroids and chlorpyrifos. The vertical line at 0.5 TUs represents a toxic threshold, which in some studies has been strongly associated with significant mortality.

Figure 2. Toxic Units in Sediment by Site for the Pajaro Watershed



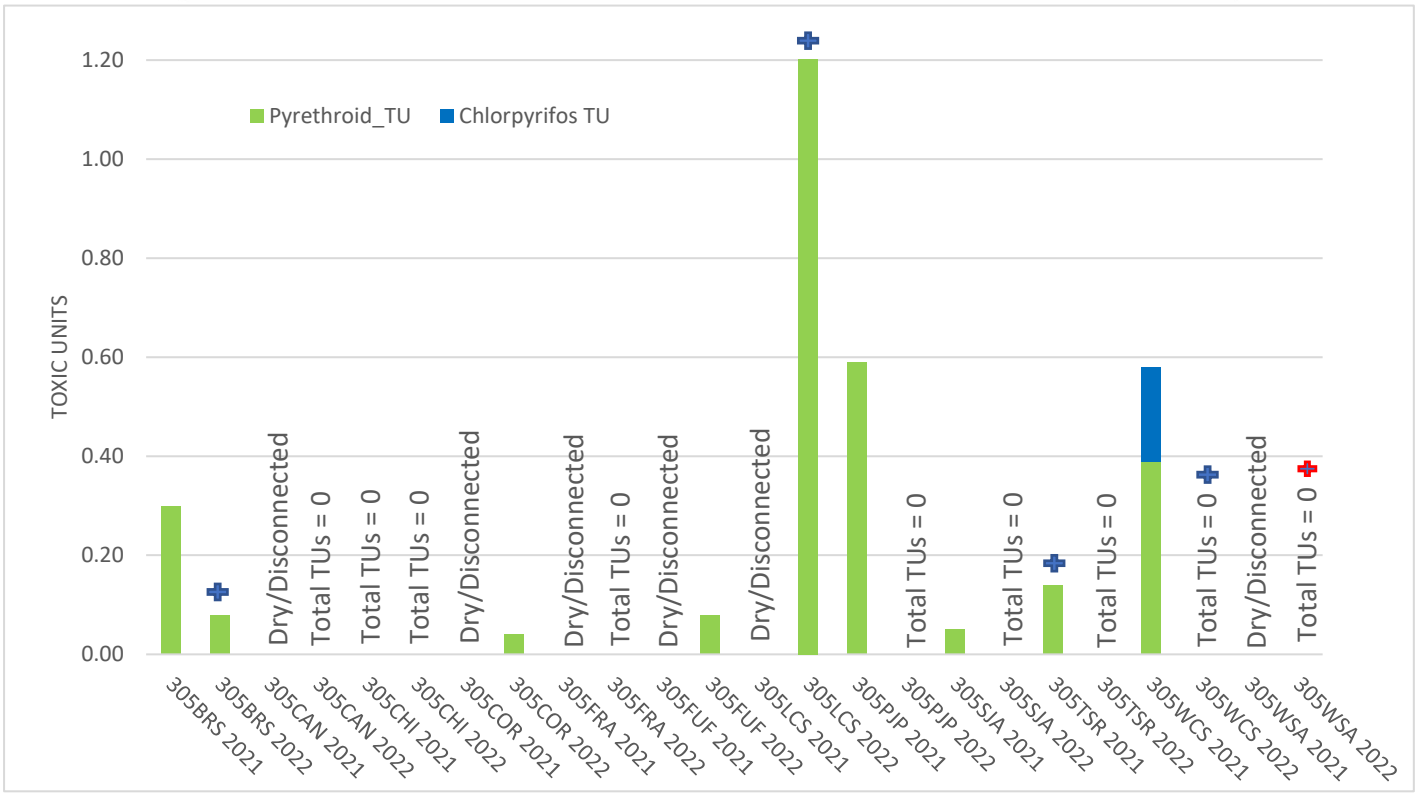
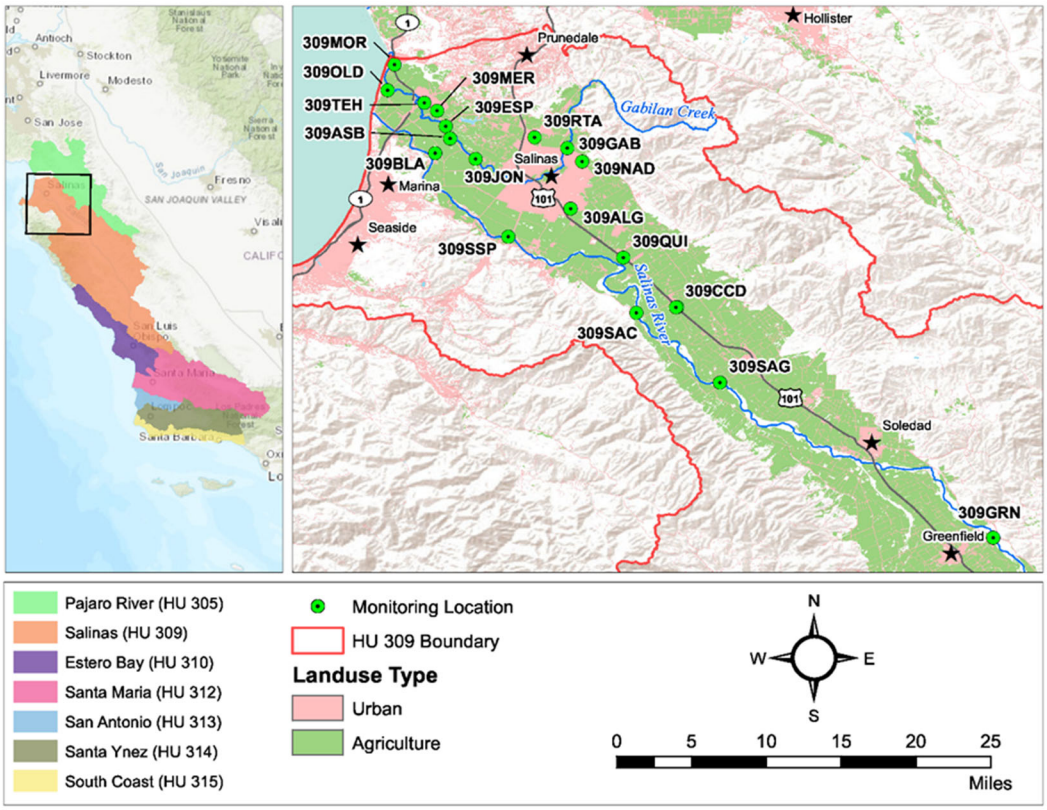


Figure 2. Of the two pesticide classes analyzed, pyrethroids were the greatest contributor of toxic units in sediment in the Pajaro River Hydrologic Unit. Sites showing concurrent toxicity to invertebrate survival and growth in sediment are denoted with a "✚" and "✚", respectively.

Figure 3. Toxic Units in Sediment by Site for the Salinas Watershed



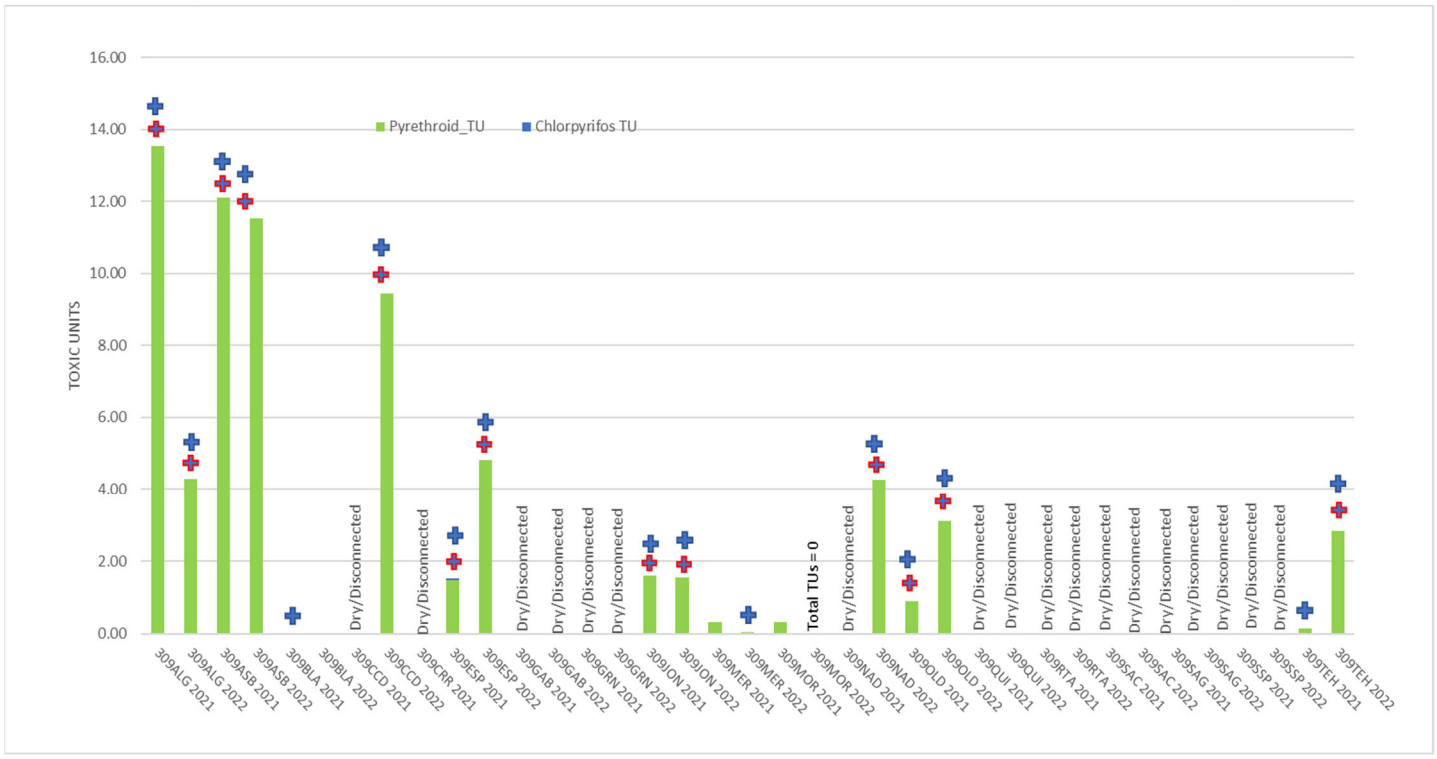
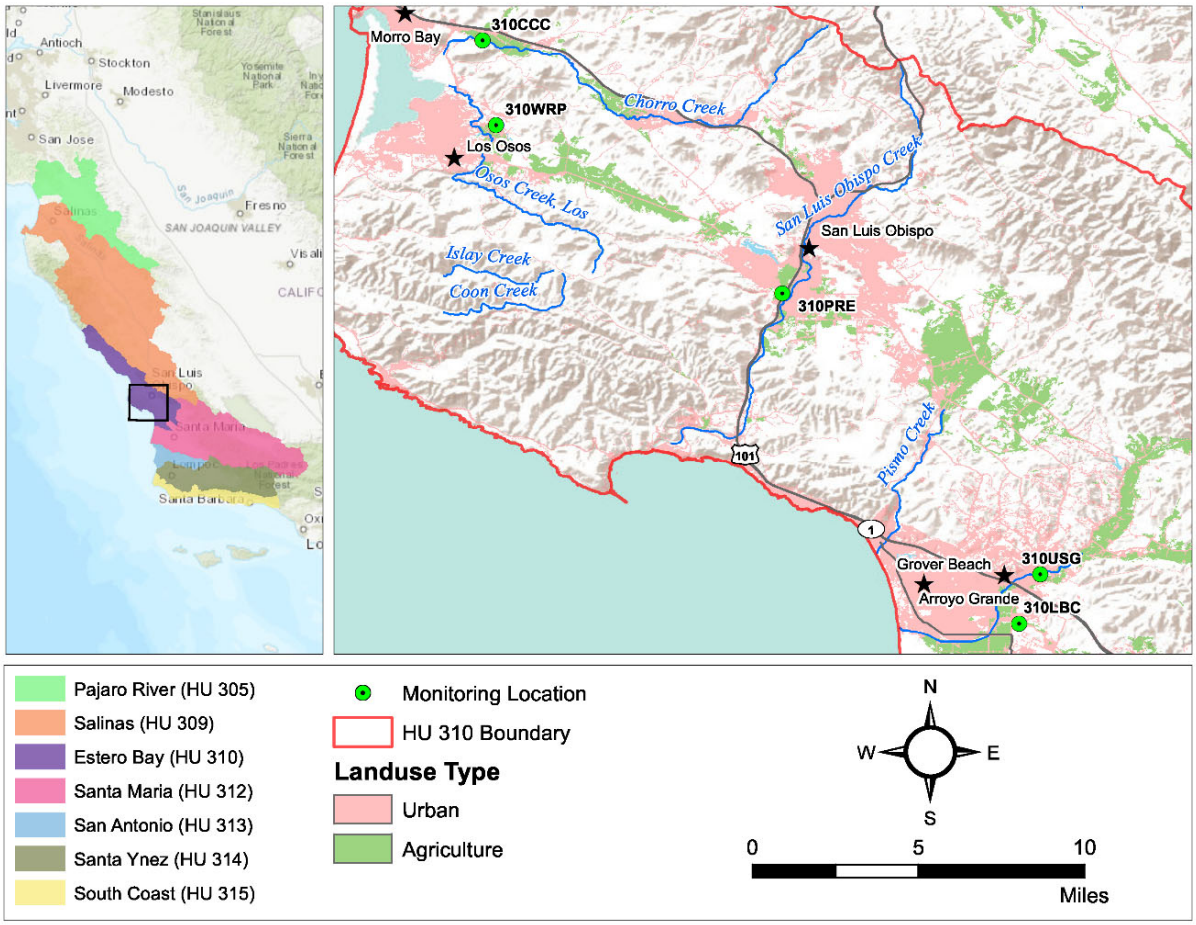


Figure 3. Of the two pesticide classes analyzed, pyrethroids were the greatest contributor of toxic units in sediment in the Salinas Hydrologic Unit. Sites showing concurrent toxicity to invertebrate survival and growth in sediment are denoted with a "✚" and "✚", respectively.

Figure 4. Toxic Units in Sediment by Site for the Estero Bay Watershed



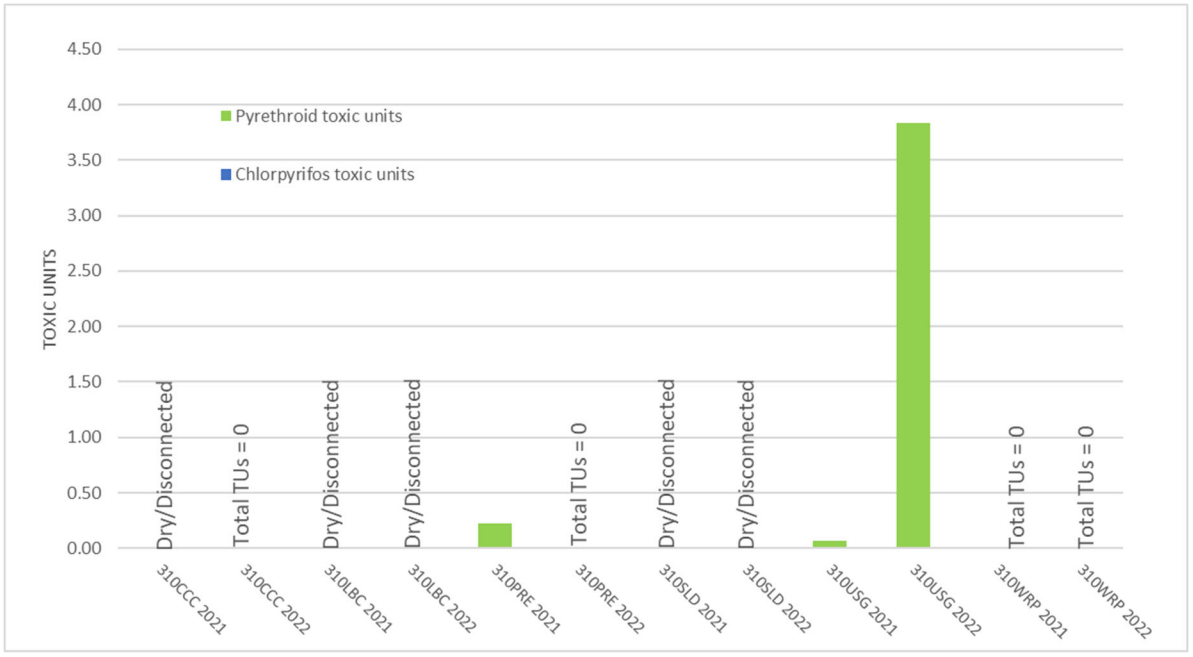
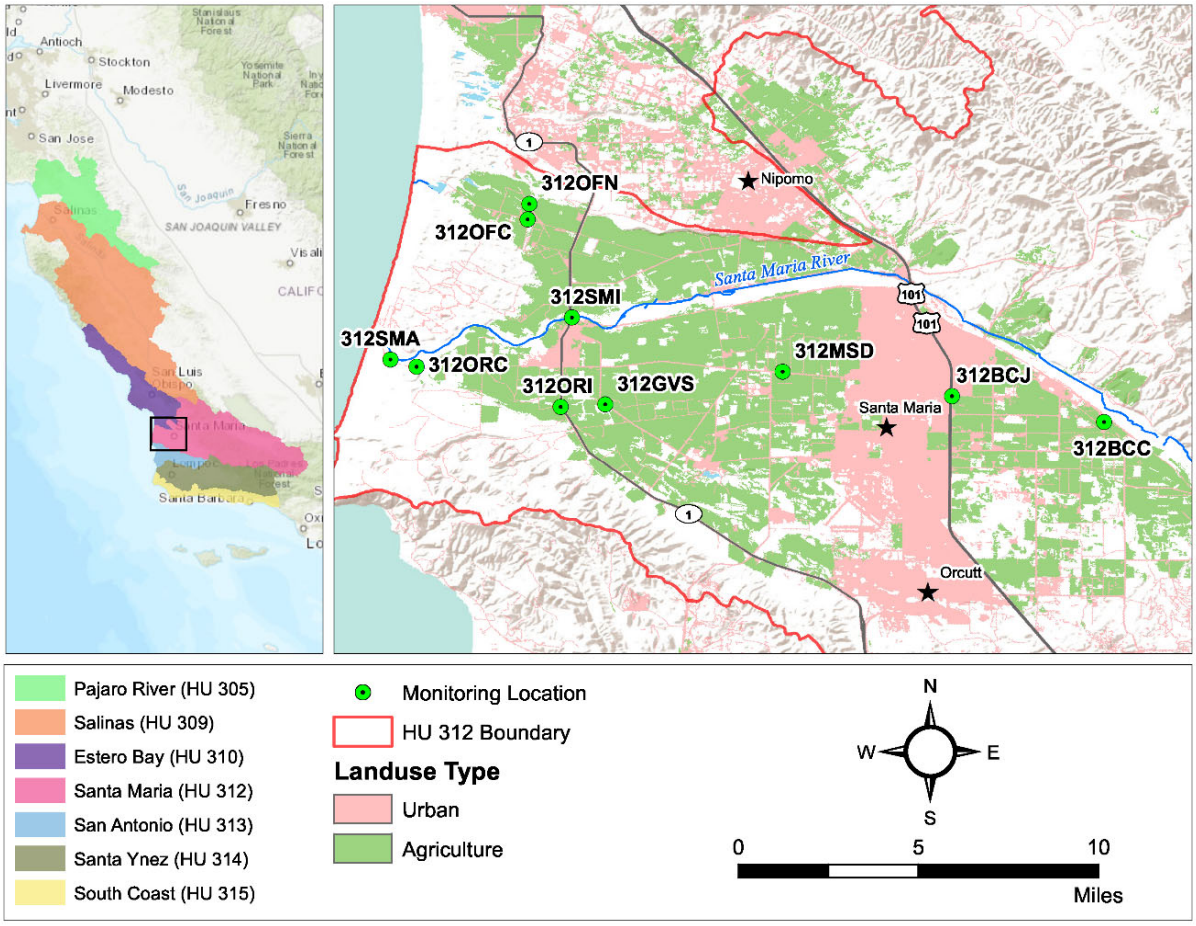


Figure 4. Of the two pesticide classes analyzed, pyrethroids were the only contributor of toxic units in sediment in the Estero Bay Hydrologic Unit.

Figure 5. Toxic Units in Sediment by Site for the Santa Maria Watershed



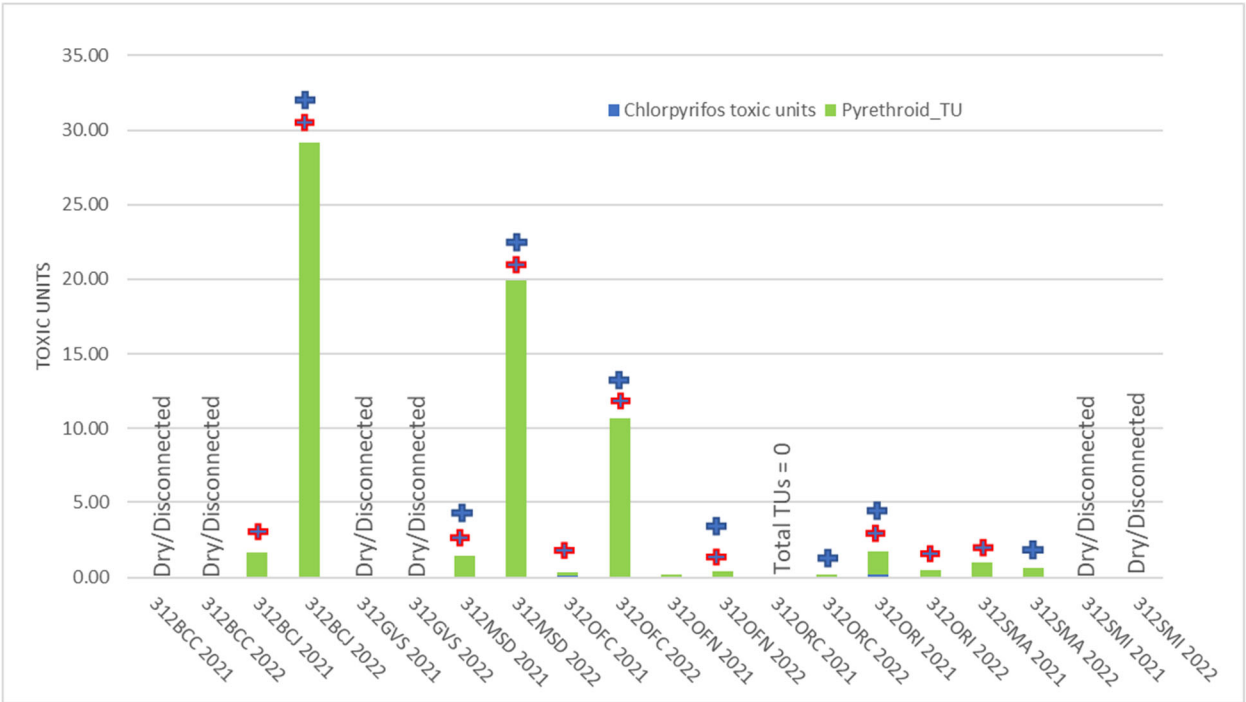
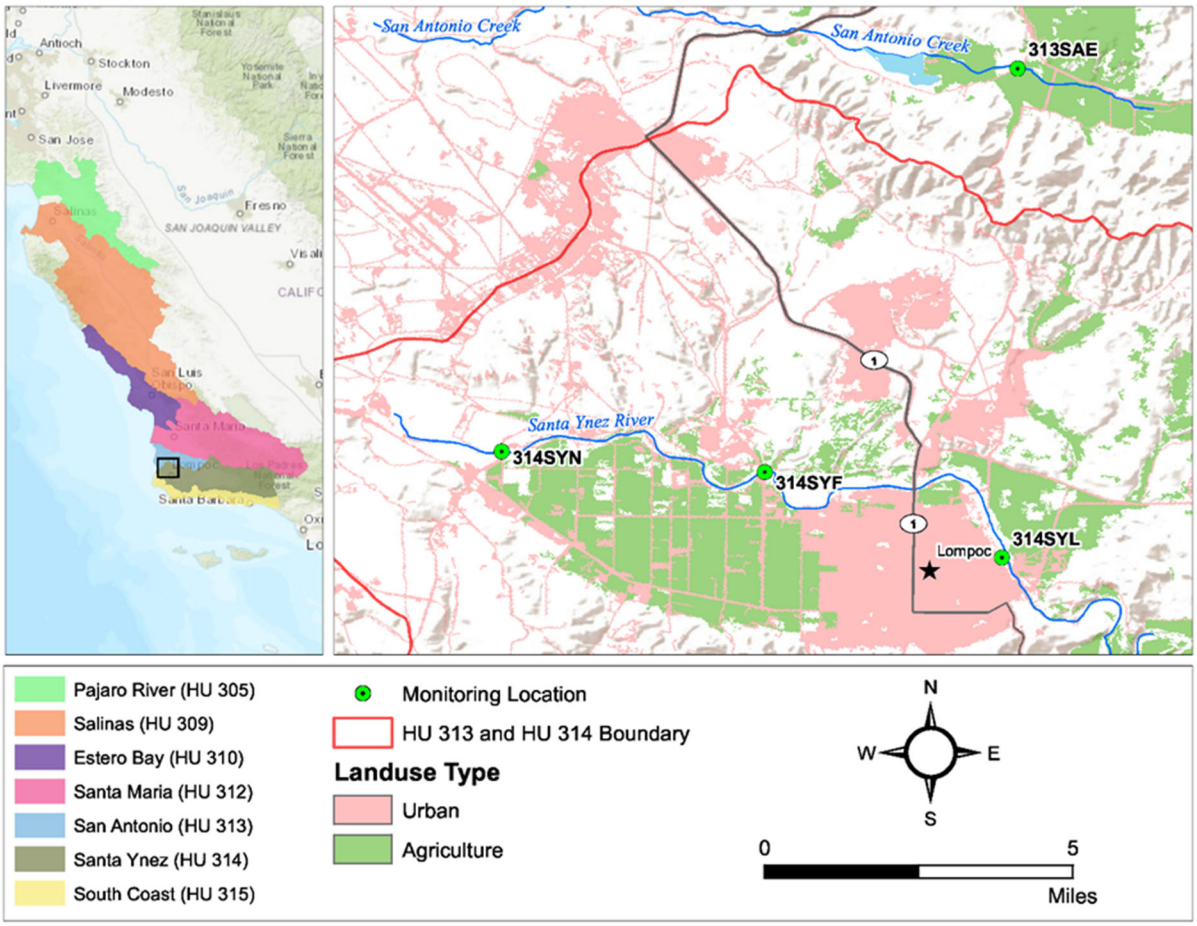


Figure 5. Of the two pesticide classes analyzed, pyrethroids were the greatest contributor of toxic units in sediment in the Santa Maria Hydrologic Unit. Sites showing concurrent toxicity to invertebrate survival and/or growth in sediment are denoted with a "✚" and "✚", respectively.

Figure 6. Toxic Units in Sediment by Site for the Santa Ynez Watershed



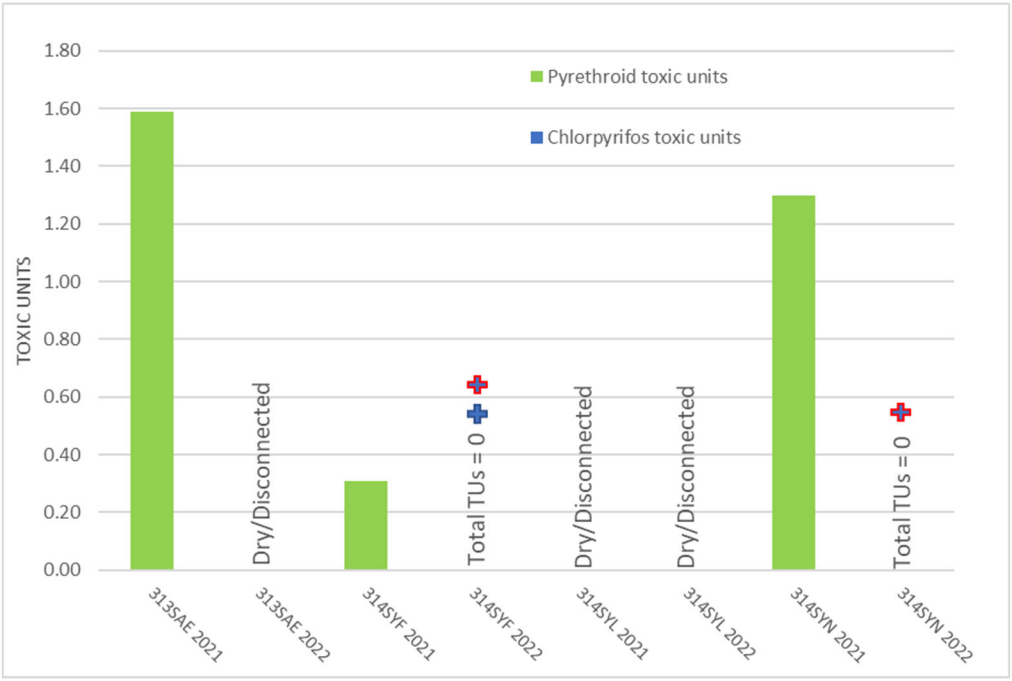


Figure 6. Of the two pesticide classes analyzed, pyrethroids were the only contributor of toxic units in sediment in the Santa Ynez Hydrologic Unit. Sites showing concurrent toxicity to invertebrate survival and/or growth in sediment are denoted with a " ✚ " and " ✚ ", respectively.

Figure 7. Toxic Units in Sediment by Site for the South Coast Watershed

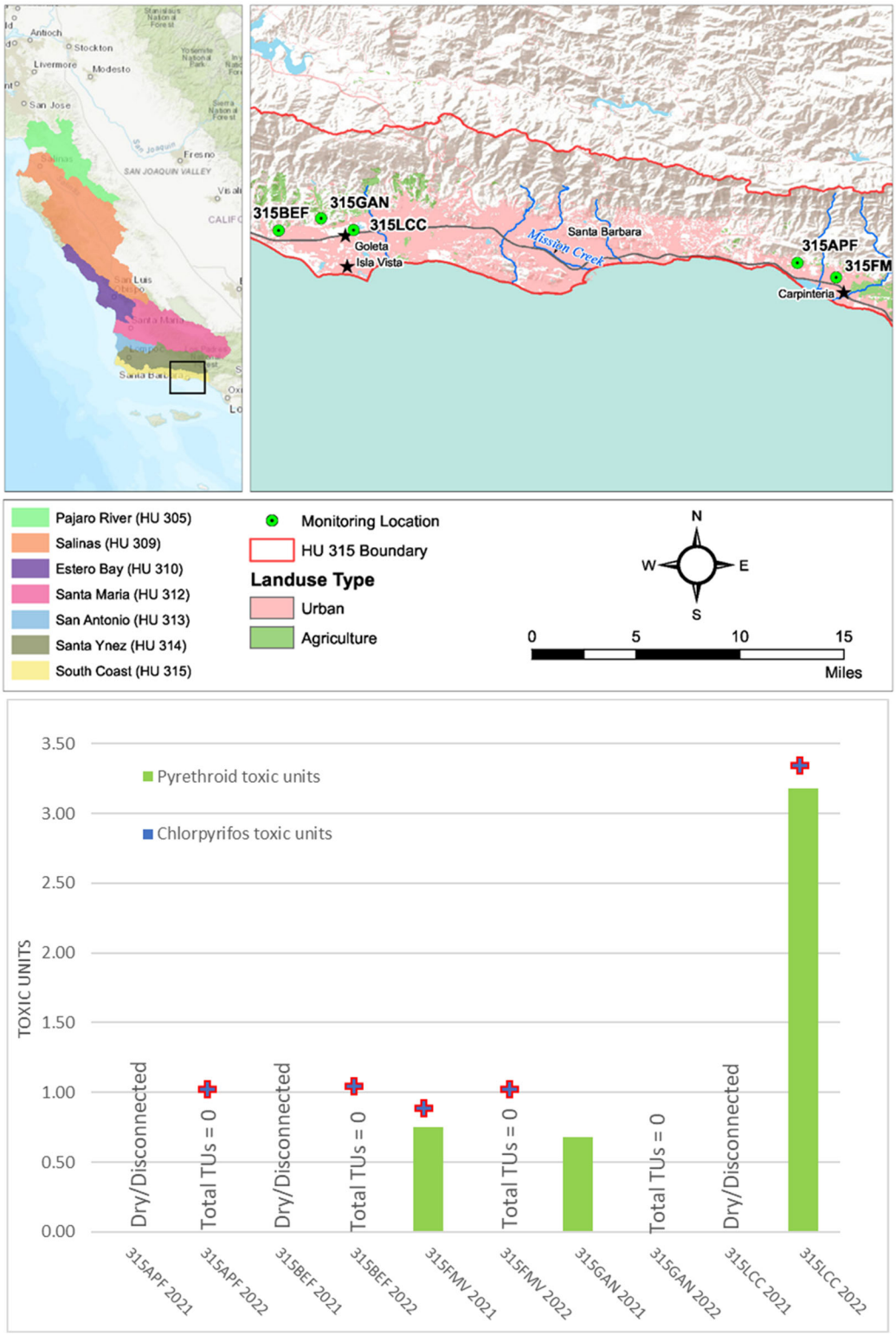


Figure 7. Of the two pesticide classes analyzed, pyrethroids were the only contributor of toxic units in sediment in the South Coast Hydrologic Unit. Sites showing concurrent toxicity to invertebrate survival in sediment are denoted with a "✚".

Figure 8. *Ceriodaphnia* Survival and Total Toxicity Units of Organophosphate and Neonicotinoid Pesticides in Water

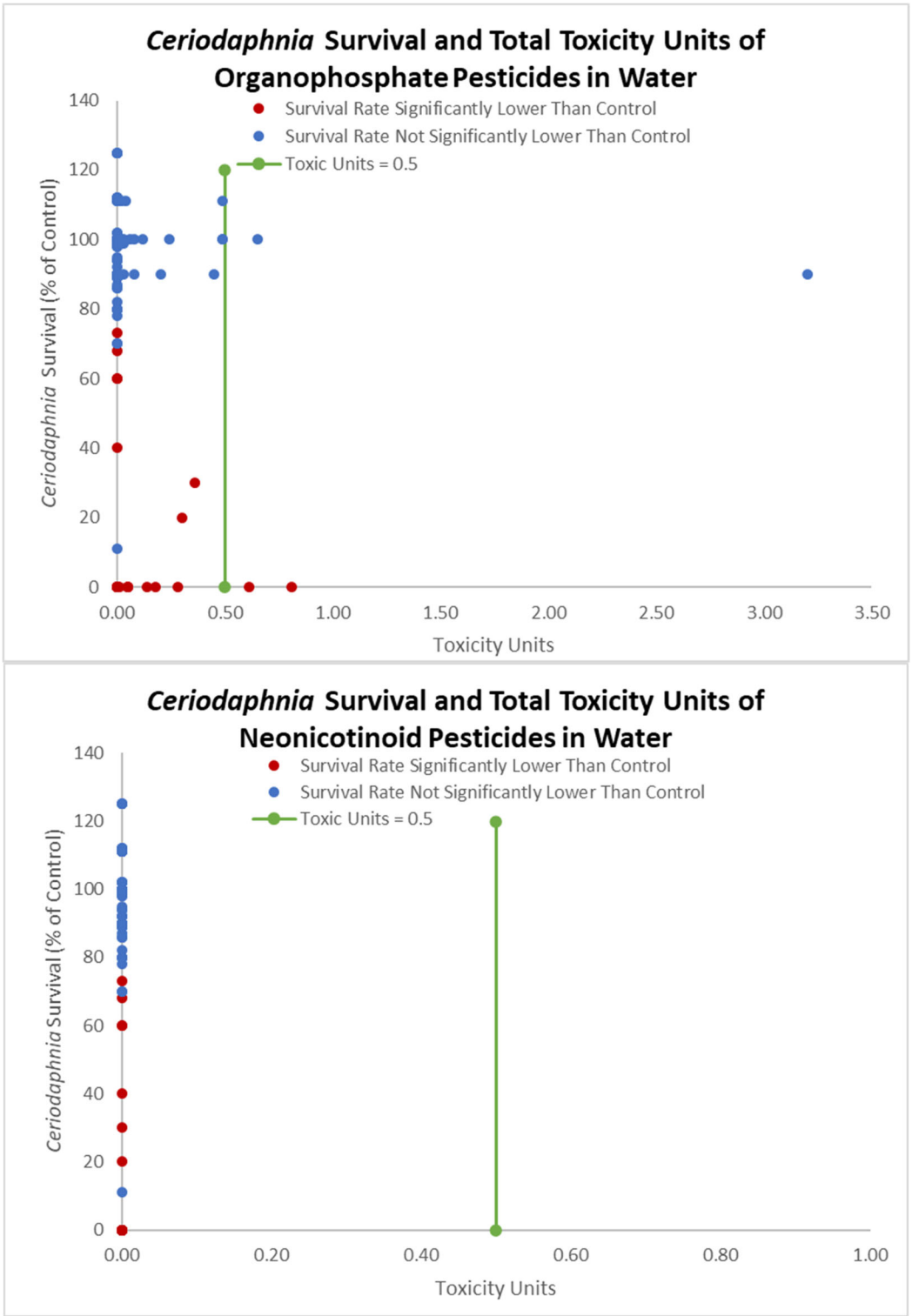


Figure 8. Survival of *C. dubia* (compared to laboratory control) exposed to water collected from Central Coast waterbodies in comparison with the total toxic units for organophosphates and neonicotinoids. The vertical line at 0.5 TUs represents a toxic threshold, which in some studies has been strongly associated with significant mortality.

Figure 9. *Chironomus* Survival and Total Toxicity Units of Organophosphate and Neonicotinoid Pesticides in Water

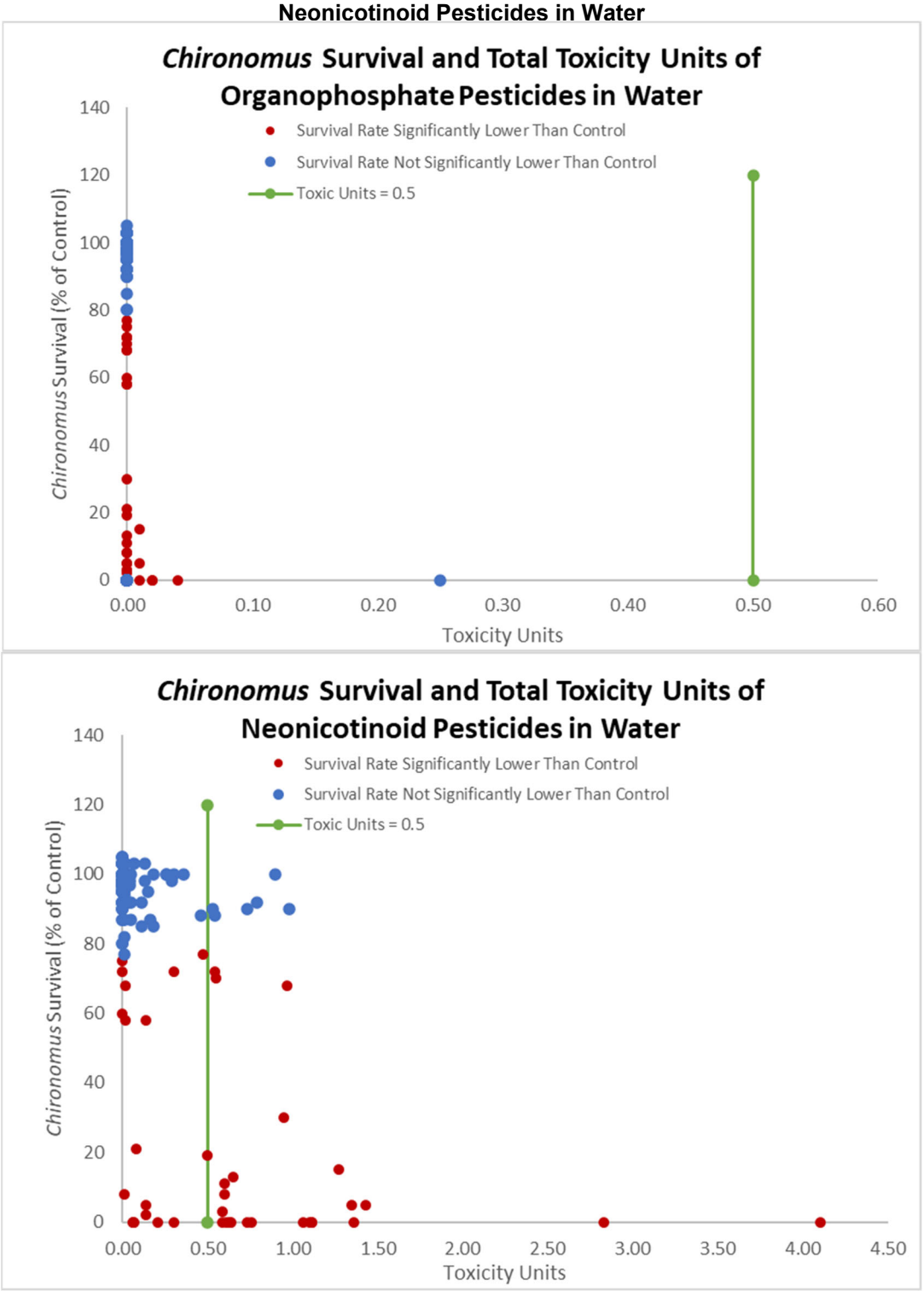


Figure 9. Survival of *Chironomus* (compared with control) exposed to water collected from Central Coast waterbodies in comparison with the total toxic units for organophosphate and neonicotinoid pesticides. The vertical line at 0.5 TUs represents a toxic threshold, which in some studies has been strongly associated with significant mortality.

Figure 10. Algal Survival and Total Toxicity Units of Herbicides in Water

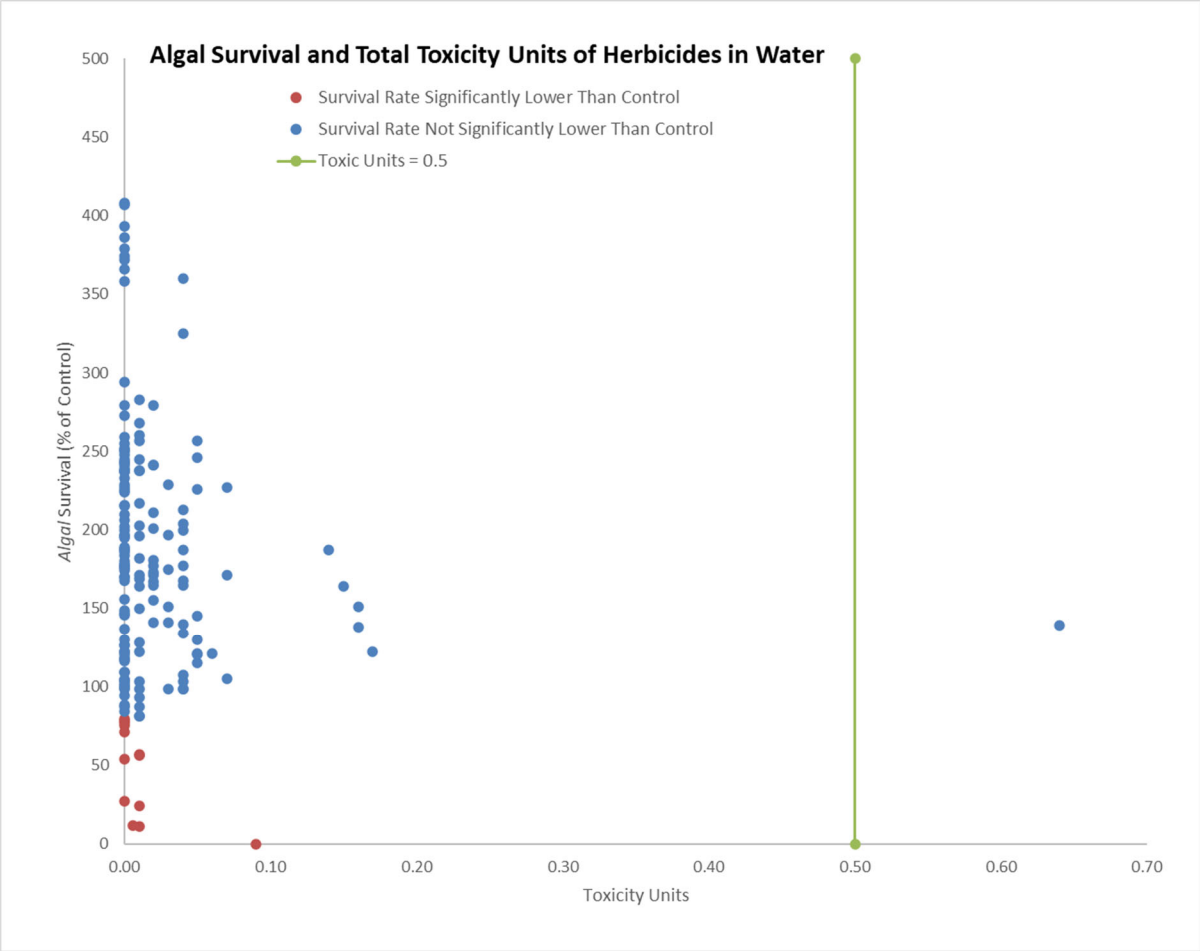


Figure 10. Survival of algae (compared with control) exposed to water collected from Central Coast waterbodies in comparison with the total toxic units of detected herbicide. The vertical line at 0.5 TUs represents a toxic threshold, which in some studies has been strongly associated with significant mortality.