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VENTURA COUNTY AGRICULTURAL IRRIGATED LANDS GROUP (VCAILG)

2025 Annual Monitoring Report

Prepared by:

lwa

Submitted by:

VENTURA COUNTY
Agricultural Irrigated Lands Group

Submitted to:

Los Angeles Regional Water Quality Control Board

Contents

List of Tables

List of Figures

List of Appendices

ACRONYMS

AMR	Annual Monitoring Report
BMP	Best Management Practice
CC	Calleguas Creek
CCW	Calleguas Creek Watershed
CCWTMP	Calleguas Creek Watershed TMDL Monitoring Program
CEU	Continuing Education Unit
DNQ	Detected Not Quantified
EST	Estuarine Habitat
LA	Load Allocation
LARWQCB	Los Angeles Regional Water Quality Control Board (Regional Board)
MDL	Method Detection Limit
MRP	Monitoring and Reporting Plan
NA	Not Applicable
ND	Not Detected
NM	Not Measured
NOA	Notice of Applicability
NOI	Notice of Intent
NR	Not Required
NS	Not Sampled
NV	Not Visited
OC	Organochlorine
OP	Organophosphorus
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RL	Reporting Limit
SCR	Santa Clara River
SCRW	Santa Clara River Watershed
TDS	Total Dissolved Solids
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
VCAILG	Ventura County Agricultural Irrigated Lands Group
VR	Ventura River
VRW	Ventura River Watershed
WQMP	Water Quality Management Plan

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INTRODUCTION

On September 28, 2023, the Los Angeles Regional Water Quality Control Board (Regional Board) adopted the *Waste Discharge Requirements for Discharges from Irrigated Lands within the Los Angeles Region* (Order No. R4-2023-0353), referred to as the *Ag Order* herein. The *Ag Order* replaced the *Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands within the Los Angeles Region* (Order No. R4-2021-0045), referred to as *Conditional Waiver* herein, and subsequent extensions, most recently Order No. R4-2021-0045-A02, which extended the *Conditional Waiver* through September 30, 2023. In compliance with the *Ag Order's* monitoring provisions, VCAILG submitted a Monitoring and Reporting Plan (MRP) and accompanying Quality Assurance Project Plan (QAPP) on May 13, 2024, which were approved by the Regional Board on April 29, 2025. Therefore, the first three events of the 2024-2025 monitoring year occurred prior to official approval of the 2024 VCAILG MRP and QAPP submitted per requirements of the *Ag Order*. However, in advance of the start of the 2024-2025 monitoring year, VCAILG received approval from Regional Board staff[1] to proceed in sampling the monitoring sites proposed in the 2024 VCAILG MRP and QAPP. All other components of the monitoring were performed using the existing approved MRP and QAPP under the *Conditional Waiver* until official approval was received in April 2025. This Annual Monitoring Report (AMR) serves as the first report where all sampled sites are those that have been approved to meet *Ag Order* requirements.

The purpose of the *Ag Order* is to assess the effects of, and control discharges from, irrigated agricultural lands in Los Angeles and Ventura Counties to surface and groundwater. These discharges can affect water quality by transporting nutrients, pesticides, sediment, salts, and other pollutants from cultivated fields into surface waters, potentially impairing designated beneficial uses. Owners and operators of agricultural lands in Ventura and Los Angeles Counties must comply with provisions contained in the *Ag Order* or be regulated under other Regional Board programs.

The *Ag Order* allows individual landowners and growers to comply with its provisions by working collectively as a Discharger Group, or as an individual. A Discharger Group is defined by the *Ag Order* as "any group of dischargers and/or organizations that forms to comply with this Order. Discharger Groups can be, but are not limited to, organizations formed on a geographic basis or formed with other factors in common such as commodities." The primary purpose of allowing Discharger Groups is to encourage collaboration on monitoring and reporting and to increase the effectiveness of management practices throughout a watershed to attain water quality standards. Those landowners and growers choosing to comply with the *Ag Order* as a Discharger Group must signify by submitting a Group Notice of Intent and by developing a Discharger Group monitoring program.

To assist agricultural landowners and growers that farm within the boundaries of Ventura County, various agricultural organizations, water districts and individual farmers joined together in 2006 to form the Ventura County Agricultural Irrigated Lands Group (VCAILG), which is intended to act as one unified "Discharger Group" for those agricultural landowners and growers that wish to participate. A Notice of Intent (NOI) to comply with the *Ag Order* was submitted to the Regional Board by the VCAILG on March 28, 2024. The NOI included the VCAILG participant list. The QAPP and MRP, which detail the water quality monitoring and reporting procedures being conducted in compliance with the new terms of the *Ag Order*, were submitted to the Regional Board on May 13, 2024. Comments from Regional Board staff were received November 14, 2024 and VCAILG submitted revised documents on December 13, 2024. Approval of the revised MRP and QAPP was received on April 29, 2025.

As previously stated, this report covers the period from July 2024 through June 2025 during which monitoring was conducted at the sites specified in the approved 2024 VCAILG MRP and QAPP. For the first three monitoring events of the year, the sampling constituents and procedures followed the 2017

[1] New MRP and QAPP monitoring site approval provided via email on September 12, 2024.

VCAILG MRP and QAPP approved under the *Conditional Waiver.* The final event of the monitoring year occurred after approval of the 2024 VCAILG MRP and QAPP. The 2024 MRP and QAPP were followed for the June 2025 monitoring event and will be the guiding plans for all subsequent events. Per direction provided by Regional Board staff[2], the trend analysis requirement in the *Ag Order* was to be included in the VCAILG Water Quality Management Plan (WQMP) submitted May 1, 2025, and will be included in future WQMPs.

CONCLUSIONS

Submittal of this report fulfills the Annual Monitoring Report requirements specified in Appendix 3 of the *Ag Order*. All required elements are included in this narrative report and in the accompanying appendices, unless otherwise noted as being completed in other submittals.

This report presents monitoring data for evaluating agricultural discharges as compared to standard water quality benchmarks and load allocations (LAs) for irrigated agriculture in effective total maximum daily loads (TMDLs) that were incorporated in the *Ag Order*, Appendix 5. Monitoring during this reporting period was conducted at monitoring sites in the 2024 VCAILG MRP, which was approved under the *Ag Order*. Aside from the monitoring locations, the 2017 VCAILG MRP and QAPP were followed during the first three monitoring events until the 2024 MRP and QAPP were approved, prior to the final dry event. Water quality results were compared to appropriate *Ag Order* water quality objectives where data was available.

GROUP MEMBERSHIP AND SETTING

VCAILG was formed in 2006 to act as one unified "Discharger Group" in Ventura County for the purpose of compliance with the *Conditional Waiver*. VCAILG oversight is provided by a Steering Committee. Steering Committee membership consists of agricultural organization representatives, agricultural water district representatives, and landowners and growers from the three primary watersheds in Ventura County (Calleguas Creek, Santa Clara River, and Ventura River). Steering Committee membership also represents producers of the major commodities grown in Ventura County (rotational vegetables, berries, nursery stock, citrus, vegetables, and avocados). The Steering Committee roster is presented in **Table 1**.

Because VCAILG is an unincorporated organization, the Farm Bureau of Ventura County acts as the responsible entity for the collection of funds, contracting with consultants, and other fiscal and/or business matters that require an organization with some form of tax status; the Farm Bureau is a non-profit 501(c)(5) organization.

A VCAILG parcel enrollment summary listing all enrolled, non-enrolled, and exempt parcels, along with respective landowners, is included as Appendix A. This summary list includes the following information:

- Assessor Parcel Number
- Parcel Owner Name(s) and mailing address
- Parcel Assessed Acres
- Parcel Irrigated Acres (for enrolled parcels only)
- Parcel watershed and Responsibility Area designation
- Parcel enrollment status
- Parcel Farm Evaluation Survey completion status

[2] Per discussions with Regional Board staff on November 26, 2024.

- Continuing Education Unit hours completed by parcel landowner and/or grower

The summary list provided in Appendix A fulfills the requirements to provide an updated membership list and a list of enrolled and non-enrolled parcels. This list is current as of December 3, 2025. Information on Parcel Watershed and Responsibility Areas associated with enrolled and non-enrolled parcels can be found in Appendix A.

Table 2 contains a summary of VCAILG membership statistics, including the number of landowners and parcels enrolled, as well as irrigated acreage enrolled in each watershed. All membership statistics in the text of this report represent group status on December 3, 2025. Per the December 2025 membership rolls, VCAILG represents 1,251 Ventura County agricultural landowners and 80,616 irrigated acres. According to the Ventura County Assessor's records, there are an estimated 367 landowners in the county with irrigated agricultural acreage not enrolled in VCAILG. Therefore, the current VCAILG membership represents 77.32 percent of agricultural landowners in Ventura County, accounting for approximately 90.1 percent of the estimated irrigated acreage.

Table 1. VCAILG Steering Committee Membership

Member, Organization [1]	Crop(s) Represented	Watershed(s) Represented
Jesse Gomez, FivePoint (Committee Chair)	Citrus, Hay, Nursery, Vegetables, Sod	Santa Clara River
Jared Bouchard, Pleasant Valley Co. Water District	N/A	N/A
Alden Broome, Broome Ranches	Row crops, Orchard, Strawberries, Raspberries, Cut flowers	Calleguas Creek
Jason Cole, Cole Ranch	Orchard	Santa Clara River
Paul DeBusschere, DeBusschere Ranch	Strawberries, Avocados	Calleguas Creek
Mike Friel, Laguna Grove Service	Citrus	Calleguas Creek
Edgar Gutiérrez, Limoneira Company	Avocado, Citrus	Santa Clara River
Craig Held, Rancho Gemelos/Held Ranches	Avocado, Citrus	Santa Clara River
Scott Klittich, Otto and Sons Nursery	Orchard, Nursery	Santa Clara River
Maureen McGuire, Farm Bureau of Ventura County	N/A	N/A
Doug O'Hara, Buena Farms	Orchard	Calleguas Creek, Santa Clara River
Kelle Pistone, Assoc. of Water Agencies of Ventura County	N/A	N/A
Rob Roy, Ventura County Agricultural Association	N/A	N/A
Mike Sullivan, Essick Farm Management	Avocado, Citrus	Ventura River
William Terry, Terry Farms, Inc.	Strawberries, Vegetables	Calleguas Creek, Santa Clara River
Craig Underwood, Underwood Ranches	Avocado, Citrus, Vegetables	Calleguas Creek, Santa Clara River
Larry Yee, Former Director, UC Cooperative Extension – Ventura	N/A	N/A

N/A = Not Applicable

Table 2. VCAILG Membership Statistics as of December 3, 2025[1]

Watershed	Landowner Count[2]	Parcel Count	Irrigated Acres
Calleguas Creek	618	1,336	44,013
Santa Clara River	479	1,160	29,352
Oxnard Coastal	56	119	3,610
Ventura River	119	211	2,629
Ventura Coastal	20	30	994
Malibu	2	3	19
Total	***1,294***	***2,859***	***80,616***

1. Values in table only include parcels marked as 'Enrolled'
2. There are 1,251 unique landowners enrolled, a number of whom own property in more than one watershed.

Irrigated Agriculture in Ventura County

Ventura County covers 1,843 square miles (approximately 1.2 million acres) with 43 miles of coastline (**Figure 1**). The Pacific Ocean forms its southwestern boundary, with Los Angeles County to the southeast, Kern County to the north and Santa Barbara County to the west. The Los Padres National Forest accounts for the northern half of the county, with residential, agricultural and business uses in the southern portion. Of the estimated 150,416 acres of agricultural land in the county, there are approximately 89,436 acres of irrigated cropland. The Calleguas Creek Watershed contains the highest number of irrigated acres (approximately 48,036), followed by the Santa Clara River Watershed (approximately 31,081), Ventura River Watershed (approximately 5,495), Oxnard Plain and Coastal Watersheds (approximately 3,753), Ventura Coastal Watershed (approximately 1,039), and Malibu Watershed (approximately 31).[3]

Agriculture is a major industry in Ventura County, generating over $2.3 billion in gross sales for 2024, placing the county 10th in a statewide ranking of California's 58 counties.[4] This gross value is a 7% increase over 2023.[5] Strawberries remain the number one crop, while avocados replaced nursery stock as the second highest crop, dropping nursery stock down to the third highest value crop in Ventura County in 2024. **Table 3** lists the ten leading crops in the county by gross value for 2024. Characteristics of each of the three main watersheds in Ventura County are discussed in more detail in the following sections.

[3] Estimates of irrigated agricultural acreage by watershed are based on the VCAILG membership database and include estimated irrigated acreage for parcels not enrolled in VCAILG.

[4] California Department of Food and Agriculture. *California Agricultural Statistics Review 2023-2024.* Agricultural Statistics Overview.

[5] Ventura County Agricultural Commissioner. *Ventura County's Crop and Livestock Report 2024 (*June 24, 2025)

Table 3. Ventura County's Leading Agricultural Commodities–2024

Commodity	Gross Value ($)
1. Strawberries	$708,690,000
2. Avocados	$338,968,000
3. Nursery Stock	$186,669,000
4. Celery	$163,436,000
5. Raspberries	$162,284,000
6. Lemons	$117,851,000
7. Peppers	$111,044,000
8. Blackberries	$71,558,000
9. Blueberries	$46,858,000
10. Tomatoes	$41,820,000

Source: Ventura County Agricultural Commissioner. *Ventura County's Crop and Livestock Report 2024* (June 24, 2025)

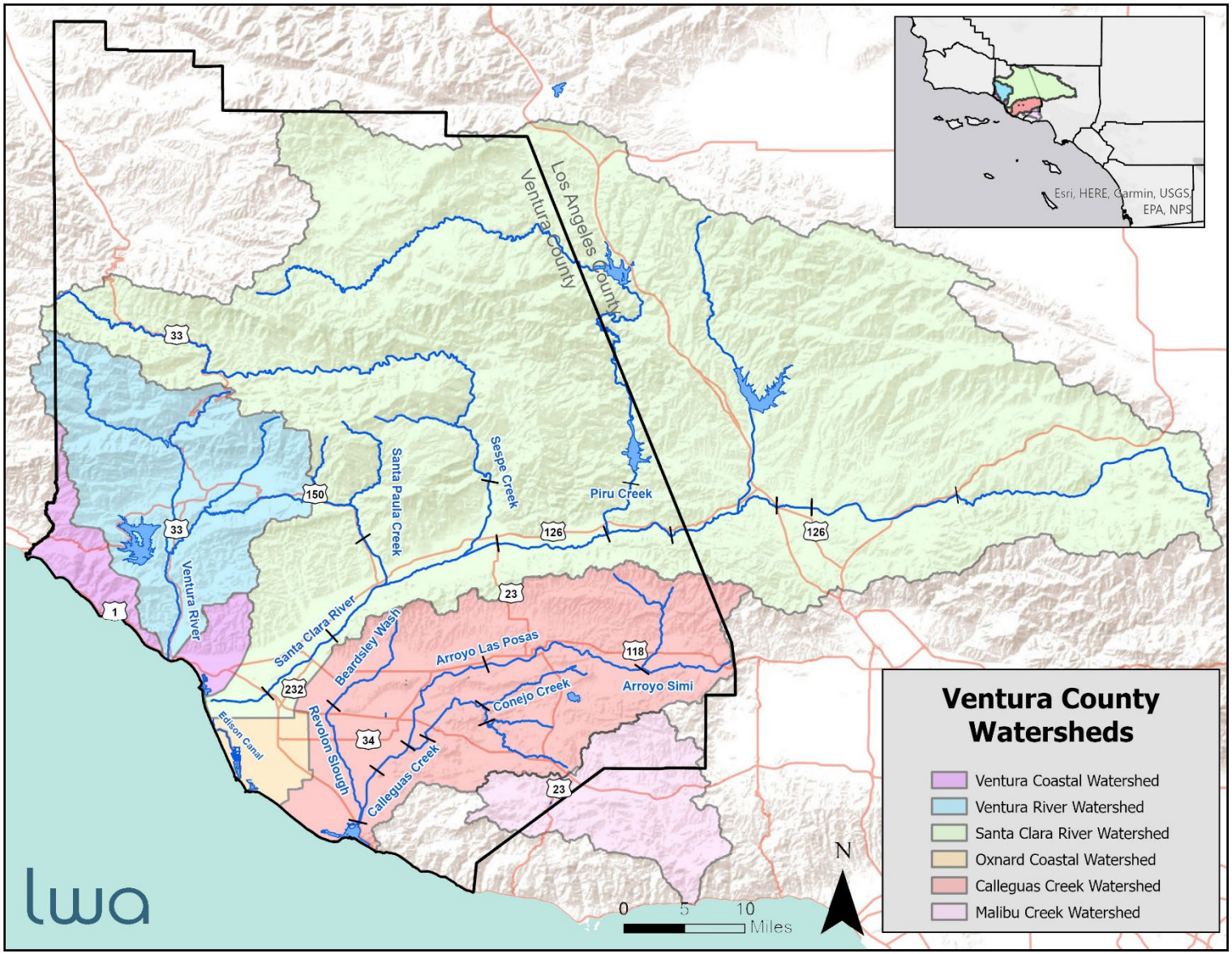


Figure 1. Ventura County Watersheds

Calleguas Creek Watershed and Oxnard Plain

The Calleguas Creek Watershed (CCW; see Figure 2) is approximately 30 miles long, 14 miles wide, and drains an area of approximately 343 square miles or 219,520 acres. Cities within the watershed include Camarillo, Thousand Oaks, Moorpark, and Simi Valley. The main surface water system drains from the mountains in the northeast part of the watershed toward the southwest, where it flows through the Oxnard Plain before emptying into the Pacific Ocean through Mugu Lagoon. The main waterbodies in the watershed include Calleguas Creek, Revolon Slough, Beardsley Channel, Conejo Creek, Arroyo Santa Rosa, Arroyo Las Posas and Arroyo Simi.

Avocados and citrus crops such as lemons and oranges are typically grown in flat or gently sloping foothill areas in the watershed. Agricultural land located on the Oxnard Plain is planted predominantly in a wide variety of row crops, including strawberries, raspberries, peppers, celery, and onions, as well as sod farms and nurseries. Many farms located in the watershed grow multiple crops during a single calendar year. This multi-cropping technique is most common in the lower parts of the watershed, adjacent to Revolon Slough and Lower Calleguas Creek**. Figure 2** shows the distribution of crop types throughout the Calleguas Creek and Oxnard Coastal Watersheds.

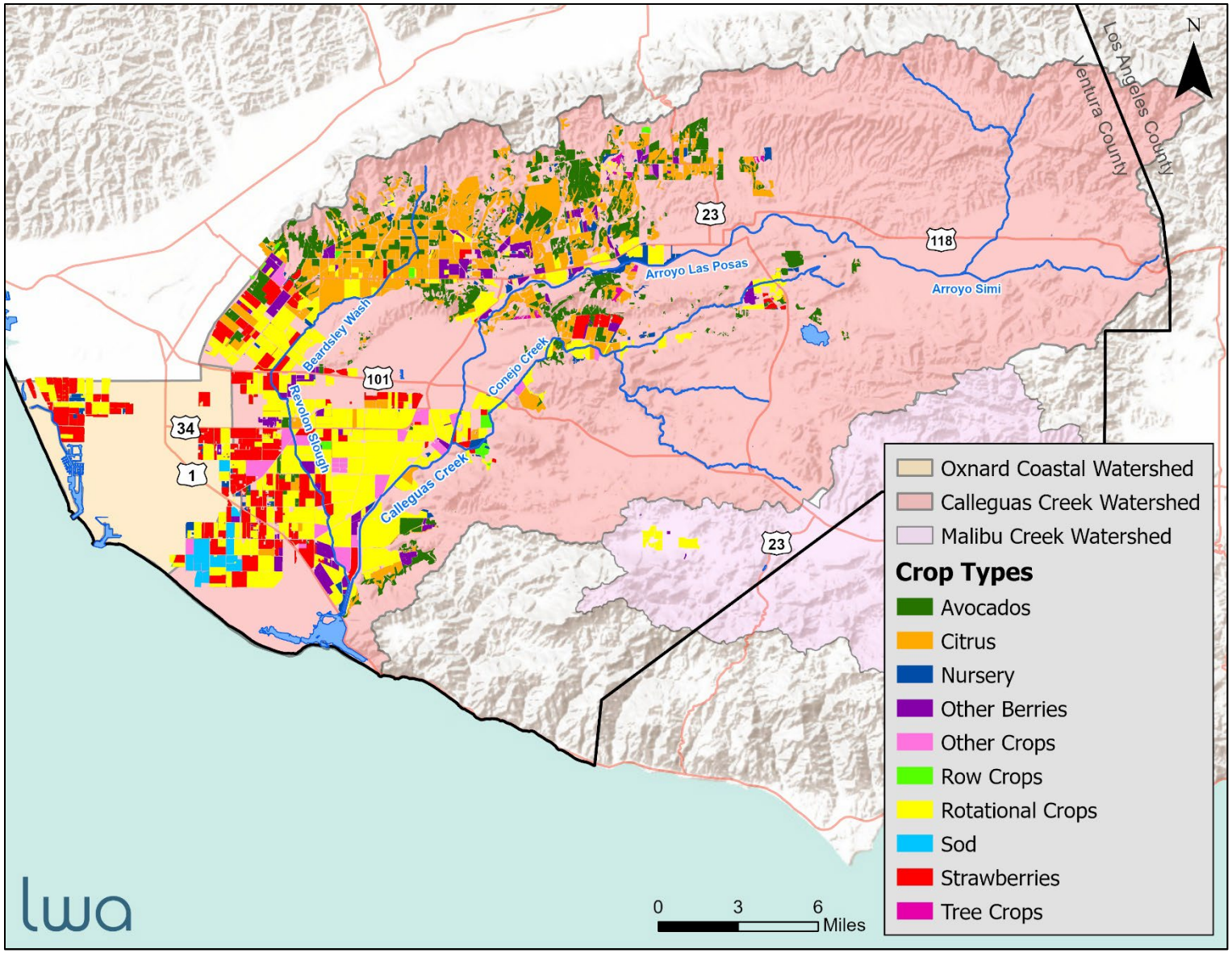


Figure 2. Calleguas Creek, Oxnard Coastal, and Malibu Creek Watersheds Agricultural Land Use

Santa Clara River Watershed

The Santa Clara River is the largest river system in southern California remaining in a relatively natural state. The river originates in the northern slope of the San Gabriel Mountains in Los Angeles County, traverses Ventura County, and flows into the Pacific Ocean halfway between the cities of San Buenaventura and Oxnard. The Santa Clara River and tributary system has a watershed area of about 1,634 square miles (**Figure 3**). Cities within the watershed include Ventura, Santa Paula, Fillmore, Piru, Santa Clarita, and Newhall. Within Ventura County, major tributaries include the Sespe, Piru, and Santa Paula Creeks. Approximately 60 percent of the watershed is in Ventura County. The most prevalent land use in the 500-year flood plain of the Santa Clara River is agriculture (62 percent), followed by industry (22 percent). Row crops and orchards are planted across the valley floor primarily in Ventura County and extend up adjacent slopes.

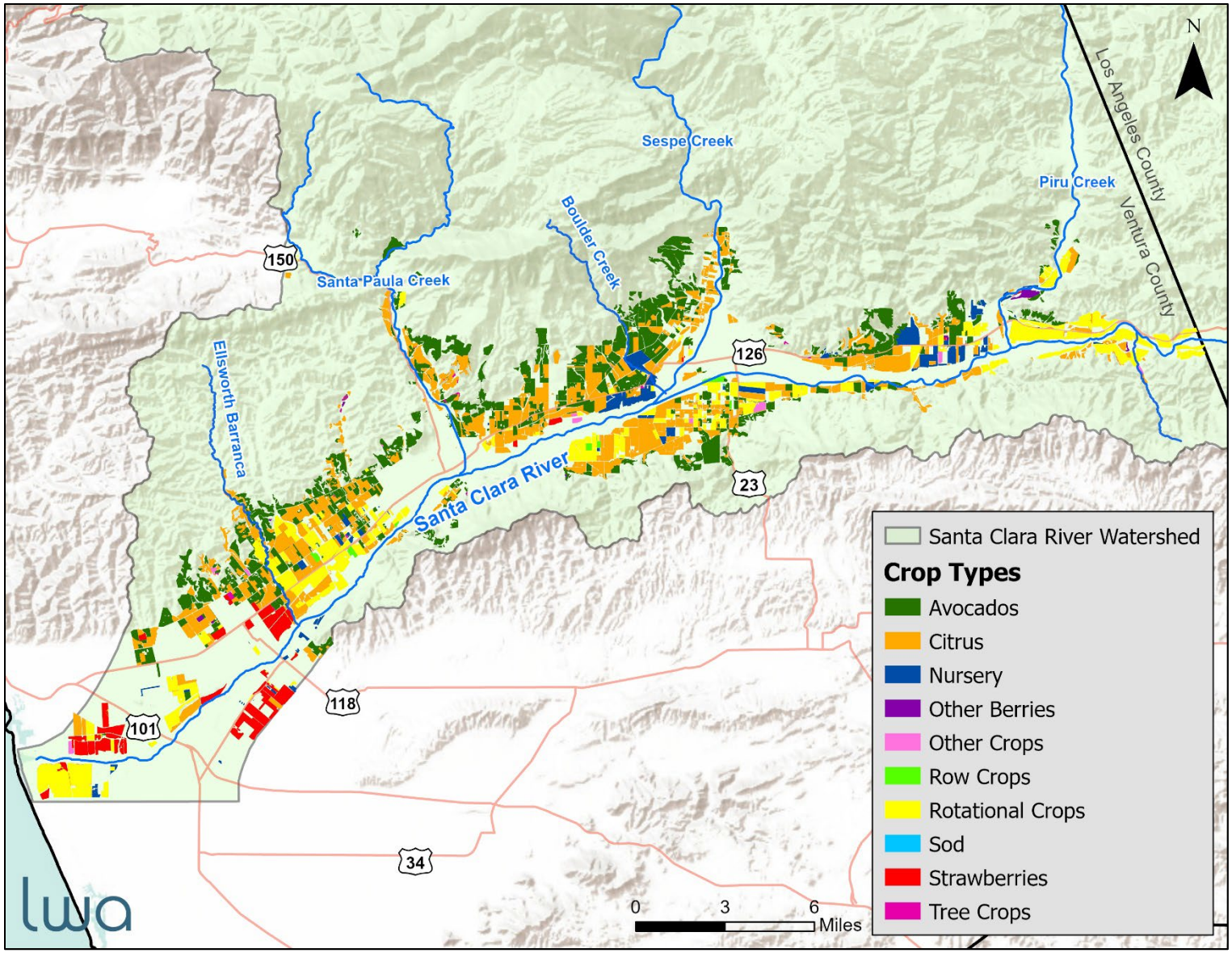


Figure 3. Santa Clara River Watershed Agricultural Land Use

Ventura River Watershed

The Ventura River and its tributaries drain a coastal watershed in western Ventura County. The watershed covers a fan-shaped area of 235 square miles, which is located within the western Transverse Ranges and is 31 miles long from upper Matilija Canyon to the Pacific Ocean (**Figure 4**). From the upper slopes of the Transverse Ranges, the surface water system in the Ventura River Watershed generally flows in a southerly direction to the estuary, located at the mouth of the Ventura River. Major tributaries in the watershed include Matilija Creek, Coyote Creek and San Antonio Creek. The City of Ojai and the communities of Meiners Oaks, Oak View and Casitas Springs are in the watershed, with the surrounding suburban and agricultural areas comprising the Ventura River, Santa Ana, and Upper Ojai Valleys. Portions of the City of San Buenaventura border the lower reaches of the Ventura River. Irrigated agriculture constitutes approximately five percent of land uses in the watershed, with avocado and citrus being the predominant crops grown.

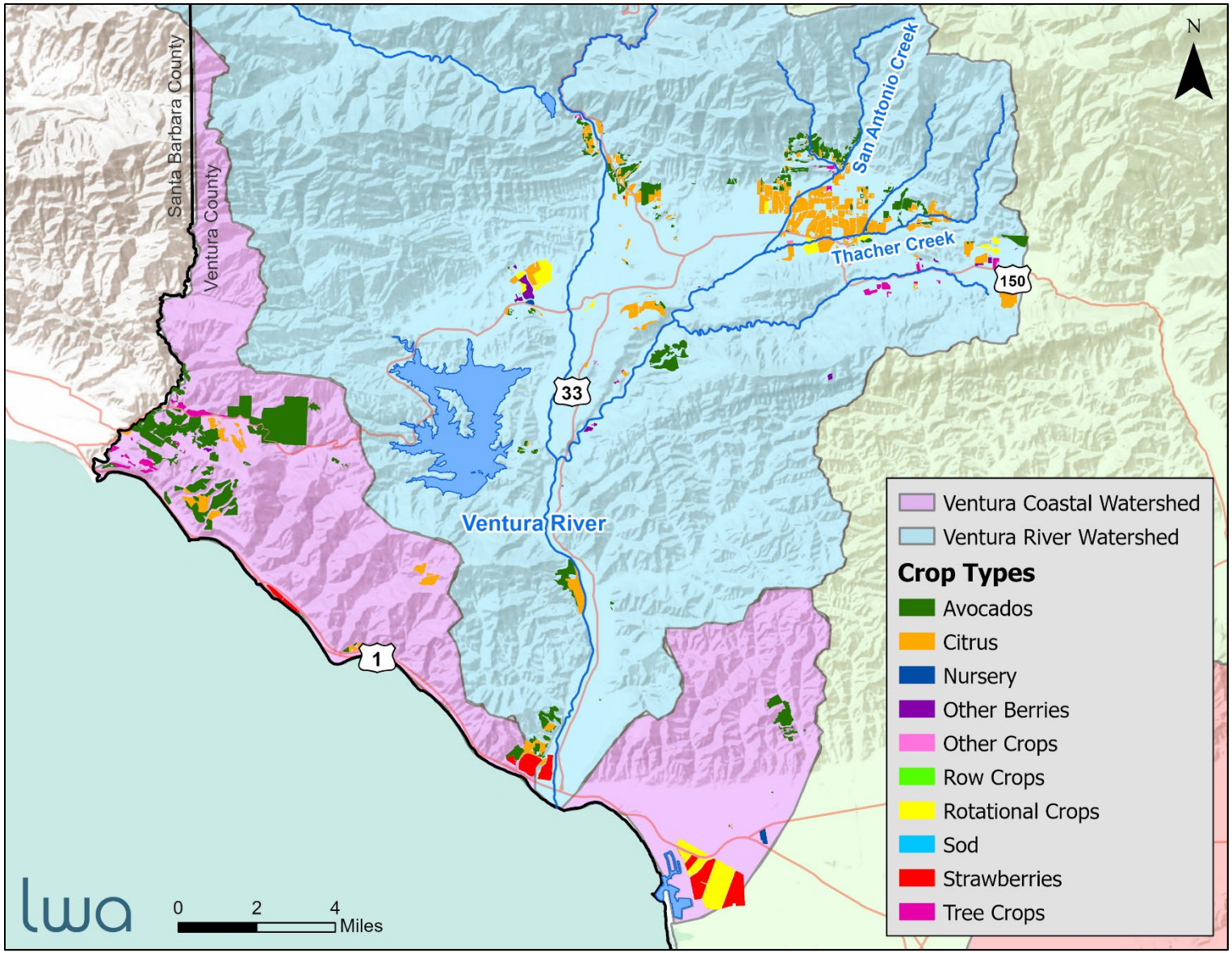


Figure 4. Ventura River Watershed Agricultural Land Use

VCAILG Participation in TMDLs

Within Ventura County, VCAILG plays an active role in facilitating the participation of agriculture in TMDL development and implementation processes. Acting on behalf of its members, VCAILG representatives participate in stakeholder meetings, provide comments, and contribute to cooperative agreements. For example, VCAILG is a participant and funding partner of the Calleguas Creek Watershed TMDL implementation effort and collaborates with the other responsible parties in implementing the two effective trash TMDLs within the county.

Effective TMDL monitoring requirements have been incorporated into the 2010 *Conditional Waiver*, and all subsequent Orders (Order No. R4-2010-0186, R4-2016-0143, R4-2021-0045, R4-2021-0045-A01, R4-2021-0045-A02, and R4-2023-0353, respectively). VCAILG coordinates with stakeholder group TMDL monitoring programs or conducts additional monitoring where necessary in order to meet TMDL requirements for agriculture. Where coordinated efforts to meet TMDL requirements are not in place, this annual report includes information regarding agriculture's monitoring and compliance. Separate annual monitoring reports are produced for some TMDL monitoring programs; rather than duplicate these efforts, those reports are incorporated herein by reference, where appropriate. Monitoring approaches to meet *Ag Order* Appendix 5 TMDL load allocation evaluations are included, or referenced appropriately, in the approved 2024 VCAILG MRP and QAPP.

WATER QUALITY MONITORING

Monitoring Objectives

The objectives of the VCAILG Monitoring Program (VCAILGMP) required under the *Ag Order* include the following:

- Assess the impacts of waste discharges from irrigated agricultural lands on waters of the state,
- Evaluate the effectiveness of management practices to control waste discharges,
- Track progress in reducing the amount of waste discharged to waters of the state to improve water quality and protect beneficial uses, and
- Assess compliance with discharge limitations, where applicable.

Monitoring Site Selection

The first step toward fulfilling monitoring program objectives was selecting appropriate monitoring sites. Because the focus of the program is on impacts to surface waterbodies from discharges from irrigated agricultural lands, monitoring sites were selected to best characterize agricultural inputs and are generally located at the lower ends of mainstem tributaries or agricultural drainages in areas associated primarily with agricultural activity. Sites selected for the VCAILGMP in the CCW streamline ag monitoring and ensure there is an irrigated agricultural discharge site within each subwatershed and/or reach, as necessary, to evaluate compliance with the applicable TMDLs and maintain site consistency, where feasible. Monitoring sites in the Santa Clara River and Ventura River Watersheds were selected to continue building on existing data previously collected by VCAILG and meet applicable TMDL requirements, including monitoring specifications included in the *Ag Order*.

The specific criteria for selection of monitoring sites are as follows:

- Land use (primarily agricultural drainages);
- Waterbodies for which TMDLs have been developed;
- Size and complexity of watershed;

- Watershed hydrology;
- Size and flow of waterbodies;
- Proximity to agricultural operations;
- Subwatershed/reach representation;
- Acres and crop types of agricultural irrigated lands represented;
- Previous or existing monitoring locations under the *Conditional Waiver* or TMDL monitoring programs; and,
- Safe access during dry and wet weather.

Table 4 lists the Responsibility Area ID numbers and corresponding names.

Table 5 lists monitoring sites selected in each watershed and associated global positioning system (GPS) coordinates for sampling *Ag Order* Appendix 3, Table 1 constituents. **Table 6** lists monitoring sites and GPS coordinates for effective TMDL monitoring locations.

Figure 5 through **Figure 7** show site locations for all monitoring sites within each watershed and include drainage areas and HUC-12 boundaries.[6] This 2025 Annual Monitoring Report outlines monitoring locations sampled under the currently approved 2024 VCAILG MRP, which was developed to meet the requirements of the *Ag Order*.

The format for the monitoring site ID/code is XXXA_YYYY_ZZZZ, where:

- "XXX" is a 2- or 3-character code that identifies the mainstem receiving water reach (where applicable) into which the monitored waterbody drains;
- "A" identifies the monitored waterbody as an agricultural drain (D) or a tributary (T) to the receiving water;
- "YYYY" is a 3-, 4-, or 5-character abbreviation for the site location;
- "ZZZZ" is an optional 3-, 4-, or 5-character abbreviation that provides additional site location information (*e.g.*, "BKGD" indicates a background site).

Examples:

S03D_BARDS signifies that the monitoring site is an agricultural drain that discharges to Santa Clara River Reach 3. The site is located along Bardsdale Avenue.

S04T_TAPO signifies that the monitoring site is located on Tapo Creek, which is a tributary to the Santa Clara River, Reach 4.

[6] In Figure 5, the drainage area for site OXD_CENTR is based on the Regional Board developed boundary for the McGrath Lake OC Pesticides and PCBs TMDL. However, it is VCAILG's understanding that some landowners in the area have provided additional drainage information to Regional Board staff as part of their discharge limitation compliance.

Table 4. Responsibility Area Names and IDs

RA ID	RA Name	RA ID	RA Name
1	Arroyo Simi	17	Santa Clara Reach 5
2	Upper Conejo	18	Tapo Canyon
3	Lower Conejo	19	Santa Paula-Fillmore
4	Calleguas-Howard	20	Bardsdale
5	Lower Pas Posas	21	Saticoy
6	Calleguas-CSUCI	22	Lower Santa Clara River
7	Upper Las Posas	23	McGrath Lake Central Ditch
8	East Camarillo Hills	24	McGrath Lake Adjacent
9	Lower Revolon	25	Santa Clara River – Victoria and Gonzales
10	Beardsley Wash	26	Lower Ventura River
11	Lower Calleguas Creek	27	Ventura River Inland
12	Mugu Lagoon	28	Ventura Coastal
13	Oxnard Drain #3	29	San Antonio Creek
14	Oxnard Coastal - Oxnard Drain #3	30	Milling Rd. Ventura River
15	Malibu	31	Oxnard Coastal
16	Malibu-Las Virgenes		

Table 5. VCAILGMP Monitoring Sites for Constituents Specified in *Ag Order* (*Ag Order*, Appendix 3, Table 1 Constituents)

Watershed / Subwatershed	Station ID	Reach	Waterbody Type [1]	Station Location	GPS Coordinates [2]	
					Latitude	Longitude
Oxnard Drain #3/ Mugu Lagoon	01T_ODD3_EDI	1	T	Rio de Santa Clara/Oxnard Drain #3 downstream of Edison Dr.	34.1326	-119.1607
Calleguas Creek/ Mugu Lagoon	01T_ODD2_DCH	1	T	Duck Pond/ Oxnard Drain #2/ Mugu Drain S. of Hueneme Rd.	34.1395	-119.1185
Calleguas Creek/ Calleguas Creek	02D_DEER	2	D	Agricultural drain at Deer Path Rd. just upstream of Pacific Coast Hwy	34.1132	-119.0799
	9AD_HOWARD	9A	D	Agricultural drain on N. side of Howard Rd. at Conejo Creek	34.1926	-119.0040
Calleguas Creek/ Revolon Slough	04D_WOOD	4	D	Agricultural drain on E. side of Wood Rd. N. of Revolon Slough	34.1708	-119.0963
Calleguas Creek/ Beardsley Channel	05D_LAVD	5	D	La Vista Drain at La Vista Ave.	34.2659	-119.0935
Calleguas Creek/ Arroyo Las Posas	06T_FC_BR	6	T	Fox Canyon at Bradley Rd.	34.2646	-119.0111
Calleguas Creek/ Arroyo Simi	07D_HITCH_LEVEE_2	7	D	2nd corrugated pipe discharging on N. side of Arroyo Simi flood control levee off of Hitch Blvd.	34.2716	-118.9219
Calleguas Creek/ Conejo Creek	9BD_GERRY	9B	D	Agricultural, drain crossing Santa Rosa Rd. at Gerry Rd.	34.2358	-118.9446
Santa Clara River	S02T_ELLS	2	T	Ellsworth Barranca at Telegraph Rd.	34.3068	-119.1412
	S03T_BOULD	3	T	Boulder Creek at Hwy 126	34.3895	-119.9587
	S03D_BARDS	3	D	Discharge along Bardsdale Ave. upstream of confluence with Santa Clara River	34.3715	-118.9644
	S04T_TAPO	4	T	Tapo Canyon Creek S. of Camino del Rio	34.4017	-118.7237
Oxnard Coastal/ Channel Islands Harbor	CIHD_DORIS	--	D	Doris Drain at corner before discharging to Edison Canal	34.2084	-119.238
	CIHD_DORIS_BKGD	--	B	Urban discharge to Doris Drain on Patterson Rd.	34.2116	-119.2079

Watershed / Subwatershed	Station ID	Reach	Waterbody Type [1]	Station Location	GPS Coordinates [2]	
					Latitude	Longitude
Ventura River	VRT_THACH	--	T	Thacher Creek at Ojai Ave.	34.4467	-119.2108
	VRT_SANTO	--	T	San Antonio Creek at Grand Ave.	34.2659	-119.221723
Proxy for Malibu Creek	05D_LAVD	5	D	La Vista Drain at La Vista Ave.	34.2659	-119.0935

1. T = Tributary to receiving water; D = agricultural drain; B = background site.
2. All GPS coordinates presented in decimal degrees latitude and longitude in North American Datum 1983 (NAD83).

Table 6. Monitoring Locations for TMDL Constituents Addressed in the *Ag Order* VCAILG MRP

Watershed/ Subwatershed	Site Id	Reach	Waterbody Type [1]	Site Location	GPS Coordinates [2]	
					Latitude	Longitude
Oxnard Drain #3/ Mugu Lagoon	01T_ODD3_EDI [3]	1	T	Rio de Santa Clara/Oxnard Drain #3 downstream of Edison Dr.	34.1326	-119.1607
Calleguas Creek/ Mugu Lagoon	01T_ODD2_DCH	1	T	Duck Pond/Oxnard Drain #2/Mugu Drain S. of Hueneme Rd.	34.1395	-119.1185
Calleguas Creek/ Calleguas Creek	02D_DEER	2	D	Agricultural drain at Deer Path Rd. just upstream of Pacific Coast Hwy	34.1132	-119.0799
	9AD_HOWARD	9A	D	Agricultural drain on N. side of Howard Rd. at Conejo Creek	34.1926	-119.0040
Calleguas Creek/ Revolon Slough	04D_WOOD	4	D	Agricultural drain on E. side of Wood Rd. N of Revolon Slough	34.1708	-119.0963
Calleguas Creek/ Beardsley Channel	05D_LAVD	5	D	La Vista Drain at La Vista Ave.	34.2659	-119.0935
Calleguas Creek/ Arroyo Las Posas	06T-FC_BR	6	T	Fox Canyon at Bradley Rd.	34.2646	-119.0111
Calleguas Creek/ Arroyo Simi	07D_HITCH_LEVEE_2	7	D	2nd corrugated pipe discharging on N. side of Arroyo Simi flood control levee off of Hitch Rd.	34.2716	-118.9219
Calleguas Creek/ Conejo Creek	9BD_GERRY	9B	D	Agricultural drain crossing Santa Rosa Rd. at Gerry Rd.	34.2358	-118.9446
Santa Clara River	S02T_ELLS	2	T	Ellsworth Barranca at Telegraph Rd.	34.3068	-119.1412
	S03T_BOULD	3	T	Boulder Creek at Hwy 126	34.3895	-119.9587
	S03D_BARDS	3	D	Discharge along Bardsdale Ave. upstream of confluence with Santa Clara River	34.3715	-118.9644
	S04T_TAPO	4	T	Tapo Canyon Creek S. of Camino del Rio	34.4017	-118.7237

Watershed/ Subwatershed	Site Id	Reach	Waterbody Type [1]	Site Location	GPS Coordinates [2]	
					Latitude	Longitude
	S04T_TAPO_BKGD	4	B	Tapo Canyon Creek upstream of all irrigated agriculture. Upper Santa Clara River Chloride TMDL background site for S04T_TAPO.	34.3854	-118.7182
Oxnard Coastal/ McGrath Lake/ Channel Islands Harbor	OXD_CENTR	--	D	Central Ditch at east side of Harbor Blvd.	34.2209	-119.2549
	CIHD_DORIS	--	D	Doris Drain at corner before discharging to Edison Canal	34.2084	-119.238
	CIHD_DORIS_BKGD	--	B	Urban discharge to Doris Drain at Patterson Rd. Background site to CIHD_DORIS.	34.2116	-119.2079
Ventura River	V02D_SPM	2	D	Drainage channel to Ventura River downstream of Milling Rd. crossing.	34.2891	-119.3088
	VRT_THACH	--	T	Thacher Creek at Ojai Ave.	34.446719	-119.210893
	VRT_SANTO	--	T	San Antonio Creek at Grand Ave.	34.2659	-119.221723
Malibu Proxy Site	05D_LAVD	5	D	La Vista Drain at La Vista Ave.	34.2659	-119.0935

1. T = Tributary; D = Agricultural Drain; B = Background Site.
2. All GPS coordinates presented in decimal degrees latitude and longitude in North American Datum 1983 (NAD83).
3. This site is also included in the CCWTMP QAPP to monitor for Oxnard Drain #3 TMDL constituents for multiple Stakeholders, including VCAILG.

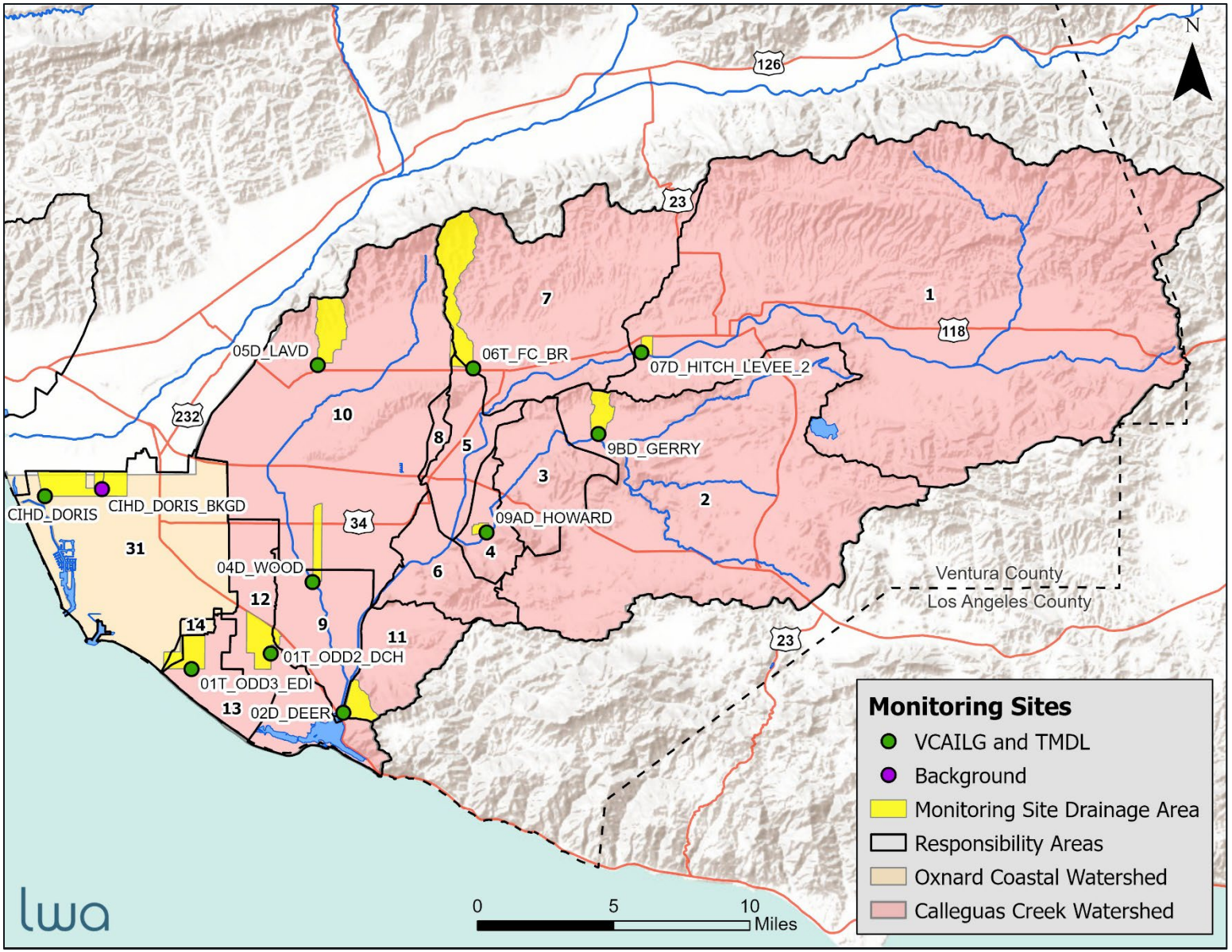


Figure 5. VCAILG Monitoring Sites in the Calleguas Creek/Oxnard Coastal Watersheds

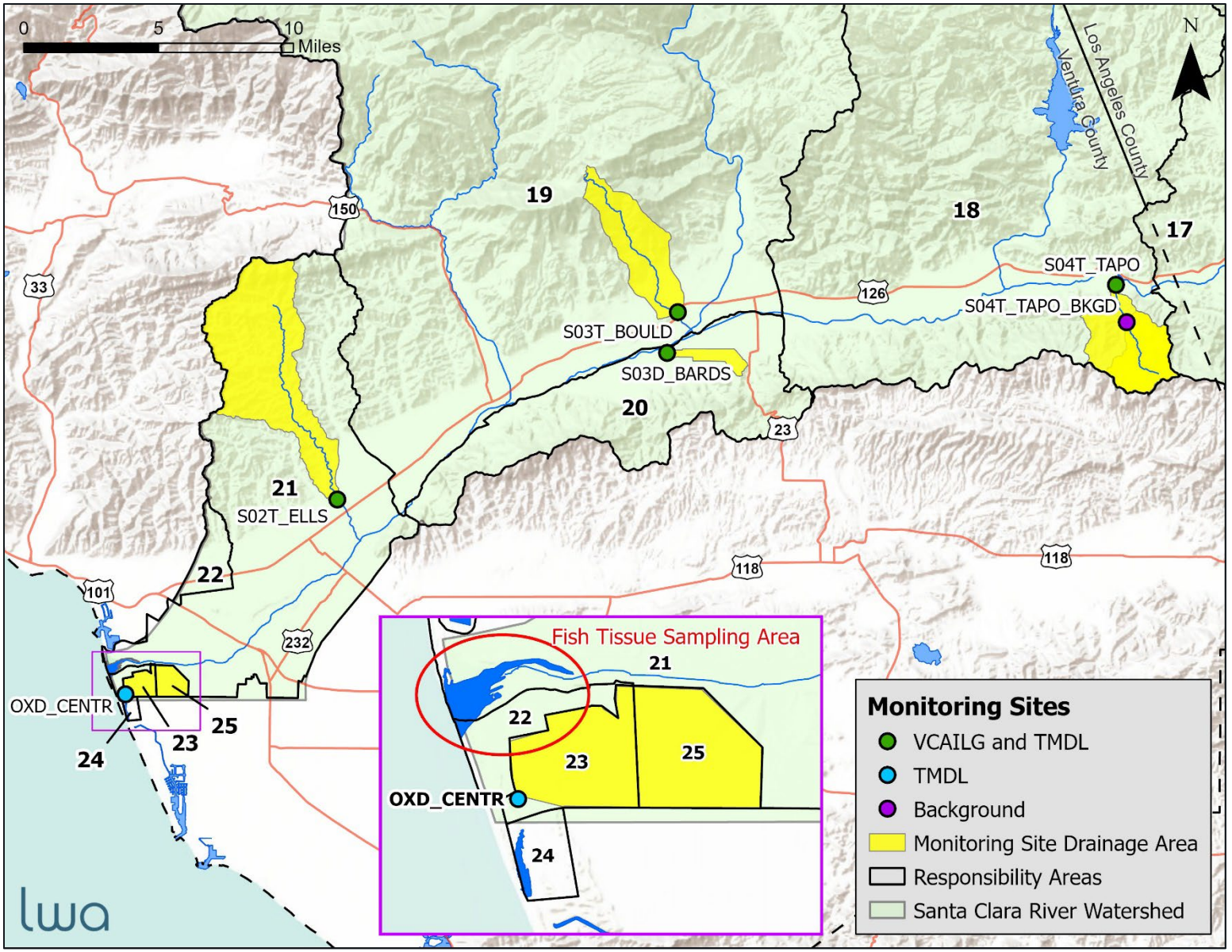


Figure 6. VCAILG Monitoring Sites Located in the Santa Clara River Watershed

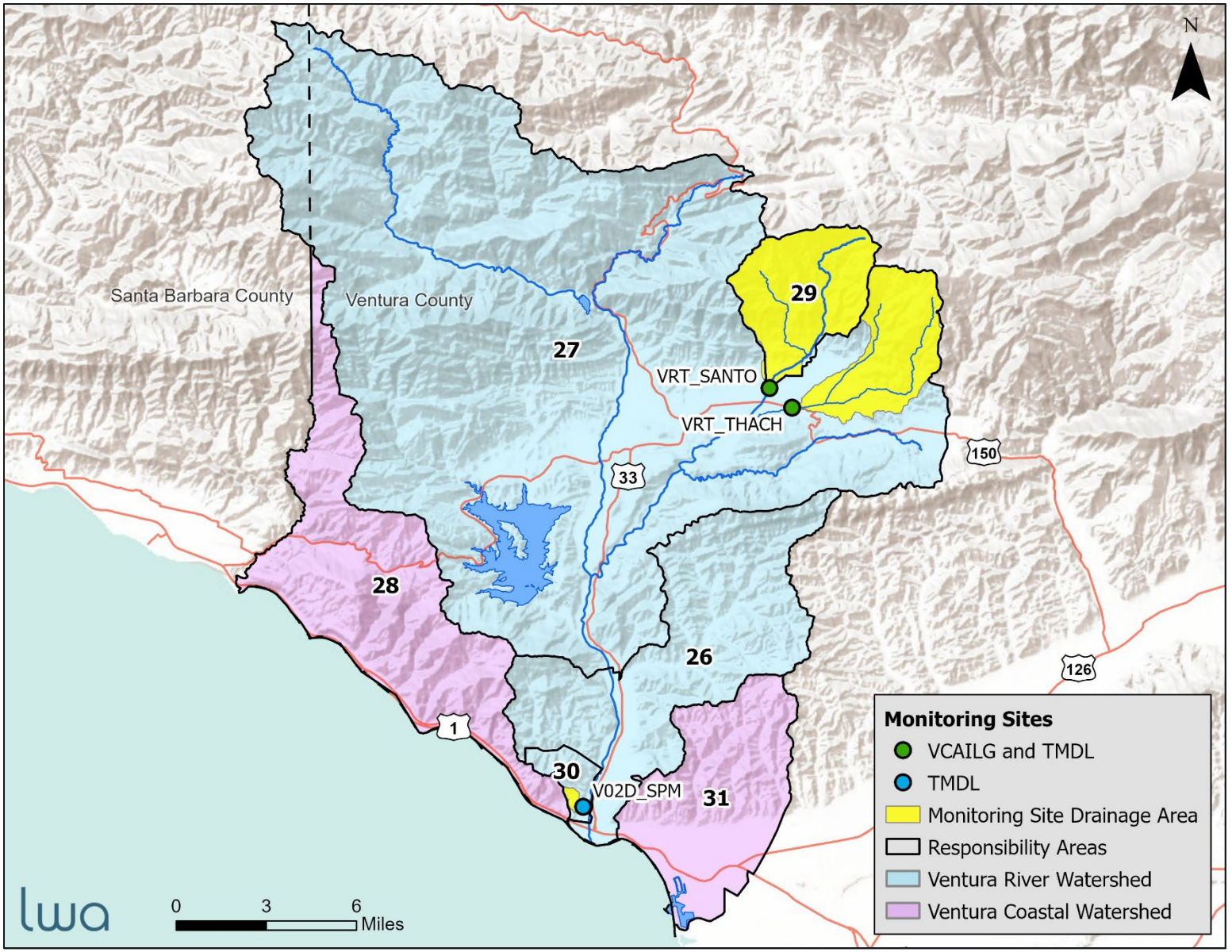


Figure 7. VCAILG Monitoring Sites Located in the Ventura River Watershed

Table 7. Estimated Irrigated Acreage Represented at *Ag Order* and TMDL VCAILG MRP Monitoring Sites

Station ID	Irrigated Agricultural Acreage [1, 2]										Drainage Area Acres
	Row Crops	Rotational Crops	Citrus	Avocados	Tree Crops	Strawberries	Other Berries	Sod	Nursery	Other Crops	
01T_ODD2_DCH	1,248	545	65		67				152	3	741
01T_ODD3_EDI	716	266				467	448		96		643
02D_DEER	100		42	32	103						485
04D_WOOD	348	159	62		74	19		7	73		385
05D_LAVD	149		241	362	214				21		952
06T_FC_BR	76	51	407	63	302			60		5	2,106
07D_HITCH_LEVEE_2	39							74			117
9AD_HOWARD	117		41	1					47		92
9BD_GERRY	6	124	73	212	107						467
CIHD_DORIS	1,170	1,680						65			829
OXD_CENTR	2,001	892						36			985
S02T_ELLS	276		445	616	3	61				0.5	9,027
S03D_BARDS	168	12	343	80		10		20			585
S03T_BOULD	8		296	863				171			3,754
S04T_TAPO	65		36		1	64					3,654
V02D_SPM		35	45	25							138
VRT_SANTO		17	239	279						18	7,185
VRT_THACH	17	0.1	404	131	1			2		1	5,829

1. Data Source: Ventura County Agricultural Commissioner's Office, August 2025.
2. Some acreage is double- or triple counted due to multi-cropping practices.

Parameters Monitored and Monitoring Frequency

Ag Order Monitoring Constituents and Frequency

The *Ag Order* specifies the constituents to be monitored during each monitoring event (**Table 8**) as well as the monitoring frequency. Monitoring is required twice during the wet season and twice during the dry season. In addition, toxicity monitoring is required during one wet event and once during the dry season each year. The wet season is defined as October 15th through May 15th, and the dry season is from May 16th through October 14th. Per the *Ag Order*, wet season samples are collected within 24 hours of a storm occurring with precipitation totals greater than 0.5 inch. The initial dry weather monitoring event is conducted after the application of pesticides or fertilizers during the period when irrigation is required.

In 2024-2025, storm monitoring occurred on January 27, 2025, and February 5, 2025. Dry weather monitoring occurred on September 24 & 25, 2024, and June 3, 2025. Wet weather toxicity samples were collected during Event 63 on January 27, 2025. Dry weather toxicity samples were collected during the second dry weather event on June 3, 2025.

Table 9 provides a summary of monitoring sites and constituents that were monitored during the wet and dry weather monitoring events in 2024 and 2025. Field measurements were conducted at the sites where samples were collected. During this reporting period, monitoring constituents were conducted in accordance with the 2017 VCAILG MRP and QAPP for the first three events. For the final event of the monitoring year (June 2025), the 2024 VCAILG MRP and QAPP had been approved, as of April 29, 2025, and the sampled constituents followed the new approved plan.

Table 8. *Ag* Order, Appendix 3, Table 1 Constituents and Monitoring Frequency

Constituent	Frequency [1]
Field Measurements	2 dry events; 2 wet events
Flow, pH, Temperature, Dissolved Oxygen, Conductivity, Turbidity	
General Water Quality Constituents (GWQC)	
Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Hardness, Chloride, Sulfate, Turbidity [2]	
Nutrients	
Total Ammonia-N, Nitrate-N, Total Nitrogen, Orthophosphate, Total Phosphorus	
Pesticides	
Organochlorine Pesticides [3,4], Organophosphorus Pesticides [5], Pyrethroid Pesticides [6], Neonicotinoid Pesticides [7]	
Metals	
Total and Dissolved Copper	
Trash	
Trash observations	
Bacteria	
E. coli or Enterococci [8]	
Aquatic Chronic Toxicity	First wet event; second dry event
Ceriodaphnia dubia [9]	

1. The "wet" season is defined as October 15th through May 15th; the "dry" season is defined as May 16th through October 14th each year.
2. Turbidity was lab analyzed at some sites because the field meter range was exceeded during Events 64.
3. Organochlorine pesticides include: 2,4'-DDD, 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, aldrin, BHC-alpha, BHC-beta, BHC-delta, BHC-gamma, chlordane-cis, chlordane-trans, dieldrin, endosulfan sulfate, endosulfan I, endosulfan II, endrin, endrin aldehyde, endrin ketone, and toxaphene.
4. Total Chlordane is calculated as the sum of chlordane-cis and chlordane-trans
5. Organophosphorus pesticides include: bolstar, chlorpyrifos, demeton, diazinon, dichlorvos, dimethoate, disulfoton, ethoprop, fenchlorphos, fensulfothion, fenthion, malathion, methyl parathion, mevinphos, phorate, tetrachlorvinphos, tokuthion, and trichloronate.
6. Pyrethroid pesticides include: allethrin, bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, fenpropathrin, fenvalerate, fluvalinate, lambda-cyhalothrin, permethrin, cis-, permethrin, trans-, prallethrin, and resmethrin.
7. Neonicotinoid pesticides include: acetamiprid, clothianidin, dinotefuran, imidacloprid, nitenpyram, nithiazine, thiacloprid, and thiamethoxam.
8. *E. coil* or *Enterococci* will be tested according to site conditions.
9. If sample conductivity exceeded 3,000 µS/cm, *Hyalella azteca* was used for toxicity testing.

Table 9. VCAILG Sites Monitored and Constituents Sampled per *Ag Order,* Appendix 3, Table 1 in 2024-2025

Watershed / Subwatershed	Site ID	Reach	Monitoring Events[1]			
			Dry (Event 62)	Wet (Event 63)	Wet (Event 64)	Dry (Event 65)
			09/24 & 25/2024	01/27/2025	02/05/2025	06/03/2025
Calleguas Creek / Mugu Lagoon	01T_ODD3_EDI	1	WQ,TOX	WQ,TOX	WQ,TOX	WQ,TOX
	01T_ODD2_DCH	1	WQ,TOX	WQ,TOX	WQ,TOX	WQ,TOX
Calleguas Creek / Revolon Slough	02D_DEER	2	Dry	Dry	Dry	Dry
	04D_WOOD	4	Dry	Dry	Dry	Dry
Calleguas Creek / Beardsley Channel	05D_LAVD	5	Dry	Dry	Dry	Dry
Calleguas Creek / Arroyo Las Posas	06T_FC_BR	7	WQ,TOX	Dry	Dry	Dry
Calleguas Creek / Arroyo Simi	07D_HITCH_LEVEE_2	7	Dry	Dry	WQ,TOX	Dry
Calleguas Creek / Conejo Creek	9AD_HOWARD	9A	Dry	Dry	Dry	Dry
	9BD_GERRY	9B	Dry	Dry	WQ,TOX	Dry
Oxnard Coastal / McGrath Lake / Channel Islands Harbor	CIHD_DORIS	--	WQ	WQ,TOX	WQ	WQ,TOX
	CIHD_DORIS_BKGD	--	WQ	WQ,TOX	WQ	WQ,TOX
Santa Clara River	S02_ELLS	2	Dry	WQ,TOX	WQ	WQ,TOX
	S03T_BOULD	3	Dry	Dry	WQ	Dry
	S03D_BARDS	3	Dry	Dry	Dry	Dry
	S04T_TAPO	4	WQ	WQ,TOX	WQ	Dry
Ventura River	VRT_THACH	--	Dry	Dry	Dry	Dry
	VRT_SANTO	--	Dry	Dry	Dry	Dry

TOX = Toxicity

WQ = All water quality constituents listed in Table 8, excluding toxicity, which is noted separately

1. Toxicity testing was performed during the first wet event and the second dry event, except at all the CCW sites to coordinate with the CCW TMDL program, which has toxicity collected during all events.

TMDL Monitoring Constituents and Frequency

Monitoring for TMDL compliance is either prescribed in the adopted Basin Plan Amendment, or performed according to a TMDL Monitoring Plan, approved by the Regional Board Executive Officer (**Table 10**). **Table 11** summarizes the TMDL monitoring that was performed under the VCAILGMP. Whenever feasible, TMDL monitoring events were conducted at the same time as *Ag Order* monitoring. As previously stated, TMDL monitoring for the current reporting period was conducted under the 2024 VCAILG MRP and QAPP, which was approved in accordance with requirements of the *Ag Order*.

Calleguas Creek Watershed TMDL monitoring was completed per the 2024 revised CCWTMP QAPP. CCWTMP monitoring is required twice during the wet season and twice during the dry season. The Calleguas Creek Watershed TMDL Compliance Monitoring Program Annual Monitoring Report describes the TMDL monitoring program and results in detail for the 2024-2025 monitoring year.[7]

Table 10. Constituents and Frequency for TMDL Monitoring Performed Under the *Ag Order* VCAILGMP

TMDL [1, 8]	Site ID	Constituent [2]	Frequency
Calleguas Creek Nitrogen TMDL	01T_ODD3_EDI 01T_ODD2_DCH 02D_DEER 04D_WOOD 05D_LAVD 06T_FC_BR 07D_HITCH_LEVEE_2 9AD_HOWARD 9BD_GERRY	Nitrate-N, Nitrite-N, Ammonia-N	2 dry events, 2 wet events
Calleguas Creek Toxicity, Chlorpyrifos, and Diazinon TMDL	01T_ODD3_EDI 01T_ODD2_DCH 02D_DEER 04D_WOOD 05D_LAVD 06T_FC_BR 07D_HITCH_LEVEE_2 9AD_HOWARD 9BD_GERRY	Toxicity, Chlorpyrifos, Diazinon	2 dry events, 2 wet events
Calleguas Creek Metals and Selenium TMDL	01T_ODD3_EDI 01T_ODD2_DCH 02D_DEER 04D_WOOD 05D_LAVD 06T_FC_BR 07D_HITCH_LEVEE_2 9AD_HOWARD 9BD_GERRY	Copper, Nickel, Selenium, Mercury (total and dissolved forms for each)	2 dry events, 2 wet events
Calleguas Creek Salts TMDL	05D_LAVD 06T_FC_BR 07D_HITCH_LEVEE_2 9AD_HOWARD 9BD_GERRY	Chloride, TDS, Sulfate, Boron	2 dry events, 2 wet events
Calleguas Creek OC Pesticides and PCBs TMDL	01T_ODD2_DCH 02D_DEER 04D_WOOD 05D_LAVD 06T_FC_BR 07D_HITCH_LEVEE_2 9AD_HOWARD 9BD_GERRY	Organochlorine Pesticides, PCBs	2 dry events, 2 wet events

[7] Larry Walker Associates. 2024. Calleguas Creek Watershed TMDL Compliance Monitoring Program – Annual Monitoring Report – Year 17: July 2024 to June 2025. December 15, 2025

TMDL [1, 8]	Site ID	Constituent [2]	Frequency
Oxnard Drain #3 Pesticides, PCBs, and Sediment Toxicity TMDL	01T_ODD3_EDI	Bifenthrin, Total Chlordane, Chlorpyrifos, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, Dieldrin, Total PCBs, Toxaphene (water)	2 dry events; 2 wet events
		TOC, Total Chlordane, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, Dieldrin, Total PCBs, Toxaphene, Sediment Toxicity (sediment) [3]	Once a year
McGrath Lake OC Pesticides and PCBs TMDL	OXD_CENTR	Total Organic Carbon (TOC), TSS, Total PCBs, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, Dieldrin, Total Chlordane (water)	2 dry events; 2 wet events
		TOC, Total PCBs, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, Dieldrin, Total Chlordane (suspended sediment)	2 wet events
Channel Islands Harbor Bacteria TMDL	CIHD_DORIS CIHD_DORIS_BKGD	*E. coli*, *Enterococcus*, Total Coliform, Fecal Coliform	2 dry events; 2 wet events
Santa Clara River Estuary Toxaphene TMDL	S02T_ELLS	TSS, Toxaphene, Chlordane, Dieldrin (water)	2 dry events; 2 wet events
		Toxaphene, Chlordane, Dieldrin (filtered sediment)	2 wet events
	Santa Clara River Estuary	Toxaphene, Chlordane, Dieldrin (fish tissue)	Every 3 years [4]
Santa Clara River Nitrogen TMDL	S02T_ELLS S03T_BOULD S03D_BARDS S04T_TAPO	Ammonia-N, Nitrate-N, Nitrite-N	2 dry events; 2 wet events
Santa Clara River Bacteria TMDL [5]	S03T_BOULD S03D_BARDS S04T_TAPO	E. coli	2 dry events; 2 wet events
Upper Santa Clara River Chloride TMDL [6]	S04T_TAPO	Chloride	2 dry events; 2 wet events
	S04T_TAPO_BKGD	Chloride	2 dry events during years when natural source determination confirmation is needed
Ventura River Algae TMDL	VRT_THACH VRT_SANTO V02D_SPM	Total Nitrogen, Total Phosphorus	2 dry events
		Nitrate-N, Nitrite-N	2 wet events
Malibu Creek Watershed Nutrients TMDL	05D_LAVD [7]	Total Nitrogen, Total Phosphorus	2 dry events
		Nitrate-N, Nitrite-N	2 wet events

TMDL [1, 8]	Site ID	Constituent [2]	Frequency
Malibu Creek Watershed Sedimentation and Nutrients TMDL	05D_LAVD [7]	Total Nitrogen, Total Phosphorus	2 wet events; 2 dry events

1. The Ventura River Estuary Trash TMDL and Revolon Slough and Beardsley Wash Trash TMDLs are not listed in this table as their monitoring, reporting, and compliance are completed through implementation of a Minimum Frequency Assessment and Collection (MFAC) Program and the Stakeholders submit a separate Annual Monitoring Report for these TMDLs.
2. Constituents listed in this table are necessary for data comparison with TMDL load allocations, many of which area also *Ag Order* constituents (Ag Order, Appendix 3, Table 1, or Table 10 of the VCAILG MRP).
3. Bulk sediment toxicity testing will be performed on either *Hyalella azteca* or urchin (fertilization or development test), depending on sample conditions. Toxicity tests using *Hyalella azteca* are appropriate when pore water salinity is < 15 ppt. Urchin fertilization or development tests would be appropriate for pore water salinities ≥ 15 ppt.
4. Continuing the current fish tissue sampling schedule, the next collection will be in summer 2027.
5. If more frequent sampling occurs, those results will be reported and used to evaluate TMDL compliance.
6. The Regional Board has accepted the natural source determination provided by VCAILG for chlorides in the Upper Santa Clara River. However, to demonstrate that the conclusion of the natural source demonstration is still reflective of current environmental conditions, additional sampling will be performed in the first year of approval of this MRP and then three years later. If demonstration shows that it is still a natural source after the 3-year sampling, then the demonstration will only need to be made every 5 years. This sampling will be performed at site S04T_TAPO_BKGD, which is an upstream background site to S04T_TAPO in Tapo Canyon Creek just upstream of where agricultural operations begin.
7. Proxy site selected to assess compliance with the two Malibu Watershed TMDLs.
8. Monitoring data from other programs may be used to evaluate progress towards attaining or compliance with TMDL load allocations.

Table 11. TMDL Sites Monitored and Constituents Sampled in 2024-2025

TMDL	Site ID	Monitoring Events in 2024-2025			
		Dry (Event 62) 09/24 & 25/2024	Wet (Event 63) 01/27/2025	Wet (Event 64) 02/05/2025	Dry (Event 65) 06/03/2025
Calleguas Creek Nitrogen TMDL	01T_ODD3_EDI	NO_3-N, NO_2-N	NO_3-N, NO_2-N	NO_3-N, NO_2-N	NO_3-N, NO_2-N
	01T_ODD2_DCH	NO_3-N, NO_2-N	NO_3-N, NO_2-N	NO_3-N, NO_2-N	NO_3-N, NO_2-N
	02D_DEER	Dry	Dry	Dry	Dry
	04D_WOOD	Dry	Dry	Dry	Dry
	05D_LAVD	Dry	Dry	Dry	Dry
	06T_FC_BR	NO_3-N, NO_2-N	Dry	Dry	Dry
	07D_HITCH_LEVEE_2	Dry	Dry	NO_3-N, NO_2-N	Dry
	9AD_HOWARD	Dry	Dry	Dry	Dry
	9BD_GERRY	Dry	Dry	NO_3-N, NO_2-N	Dry
Calleguas Creek Toxicity, Chlorpyrifos, and Diazinon TMDL	01T_ODD3_EDI	OC-W	OC-W	OC-W	OC-W
	01T_ODD2_DCH	OC-W	OC-W	OC-W	OC-W
	02D_DEER	Dry	Dry	Dry	Dry
	04D_WOOD	Dry	Dry	Dry	Dry
	05D_LAVD	Dry	Dry	Dry	Dry
	06T_FC_BR	OC-W	Dry	Dry	Dry
	07D_HITCH_LEVEE_2	Dry	Dry	OC-W	Dry
	9AD_HOWARD	Dry	Dry	Dry	Dry
	9BD_GERRY	Dry	Dry	OC-W	Dry
Calleguas Creek Metals and Selenium TMDL	01T_ODD3_EDI	Metals	Metals	Metals	Metals
	01T_ODD2_DCH	Metals	Metals	Metals	Metals
	02D_DEER	Dry	Dry	Dry	Dry
	04D_WOOD	Dry	Dry	Dry	Dry
	05D_LAVD	Dry	Dry	Dry	Dry
	06T_FC_BR	Metals	Dry	Dry	Dry
	07D_HITCH_LEVEE_2	Dry	Dry	Metals	Dry
	9AD_HOWARD	Dry	Dry	Dry	Dry
	9BD_GERRY	Dry	Dry	Metals	Dry
Calleguas Creek Salts TMDL	05D_LAVD	Dry	Dry	Dry	Dry
	06T_FC_BR	Salts	Dry	Dry	Dry
	07D_HITCH_LEVEE_2	Dry	Dry	Salts	Dry
	9AD_HOWARD	Dry	Dry	Dry	Dry
	9BD_GERRY	Dry	Dry	Salts	Dry

TMDL	Site ID	Monitoring Events in 2024-2025			
		Dry (Event 62) 09/24 & 25/2024	Wet (Event 63) 01/27/2025	Wet (Event 64) 02/05/2025	Dry (Event 65) 06/03/2025
Calleguas Creek OC Pesticides and PCBs TMDL	01T_ODD2_DCH	OC-PCB-W	OC-PCB-W	OC-PCB-W	OC-PCB-W
	02D_DEER	Dry	Dry	Dry	Dry
	04D_WOOD	Dry	Dry	Dry	Dry
	05D_LAVD	Dry	Dry	Dry	Dry
	06T_FC_BR	OC-PCB-W	Dry	Dry	Dry
	07D_HITCH_LEVEE_2	Dry	Dry	OC-PCB-W	Dry
	9AD_HOWARD	Dry	Dry	Dry	Dry
	9BD_GERRY	Dry	Dry	OC-PCB-W	Dry
Oxnard Drain #3 Pesticides, PCBs, and Sediment Toxicity TMDL	01T_ODD3_EDI	PP-W, PP-S	PP-W	PP-W	PP-W
McGrath Lake OC Pesticides and PCBs TMDL	OXD_CENTR	PP-W, TSS, TOC	PP-W, OC-PCB-S, TSS, TOC	PP-W, OC-PCB-S, TSS, TOC	PP-W, TSS, TOC
Channel Islands Harbor Bacteria TMDL	CIHD_DORIS	Bacti	Bacti	Bacti	Bacti
	CIHD_DORIS_BKGD	Bacti	Bacti	Bacti	Bacti
Santa Clara River Estuary Toxaphene TMDL	S02T_ELLS	Dry	TSS, OC-W, OC-S	TSS, OC-W, OC-S	TSS, OC-W
	Santa Clara River Estuary	OC-T	NR	NR	NR
Santa Clara River Nitrogen TMDL	S02T_ELLS	Dry	NO_3-N, NO_2-N, NH_3	NO_3-N, NO_2-N, NH_3	NO_3-N, NO_2-N, NH_3
	S03T_BOULD	Dry	Dry	NO_3-N, NO_2-N, NH_3	Dry
	S04T_TAPO	NO_3-N, NO_2-N, NH_3	NO_3-N, NO_2-N, NH_3	NO_3-N, NO_2-N, NH_3	Dry
Santa Clara River Bacteria TMDL	S03T_BOULD	Dry	Dry	*E. coli*	Dry
Upper Santa Clara River Chloride TMDL	S04T_TAPO	Chloride	Chloride	Chloride	Dry
	S04T_TAPO_BKGD	Chloride	NR	NR	Chloride
Ventura River Algae TMDL	VRT_THACH	Dry	Dry	Dry	Dry
	VRT_SANTO	Dry	Dry	Dry	Dry
	V02D_SPM	Dry	Dry	Dry	Dry
Malibu Creek Watershed Nutrients TMDL	05D_LAVD	Dry	Dry	Dry	Dry

TMDL	Site ID	Monitoring Events in 2024-2025			
		Dry (Event 62)	Wet (Event 63)	Wet (Event 64)	Dry (Event 65)
		09/24 & 25/2024	01/27/2025	02/05/2025	06/03/2025
Malibu Creek Watershed Sedimentation and Nutrients TMDL	05D_LAVD	Dry	Dry	Dry	Dry

NR = Sampling not required
NO_3-N, NO_2-N, NH_3 = Nitrate-N, Nitrite-N, Ammonia
NO_3-N, NO_2-N = Nitrate-N, Nitrite-N
OC-W = OC pesticides toxaphene, chlordane, and dieldrin in water
Metals = Copper, Nickel, Selenium, and Mercury (total and dissolved)
Salts = Chloride, Sulfate, Boron, TDS
OC-PCB-W = OC pesticides, total PCBs in water
PP-W = Pesticides and PCBs bifenthrin, total chlordane, chlorpyrifos, DDT and derivatives, dieldrin, total PCBs, toxaphene in water
PP-S = Pesticides and PCBs TOC, total chlordane, DDT and derivatives, dieldrin, total PCBs, toxaphene, sediment toxicity in sediment
OC-PCB-S = OC pesticides and PCBs in filtered sediment
Bacti = *E. coli*, enterococcus, total coliform, and fecal coliform
OC-S = Toxaphene, chlordane, and dieldrin in filtered sediment
OC-T = Toxaphene, chlordane, and dieldrin in fish tissue
TOC = Total Organic Carbon
TSS = Total Suspended Solids

Sampling Methods

The 2024 VCAILG QAPP contains requirements for sampling procedures that are designed to ensure that high-quality data are generated through the VCAILGMP. Field crews are trained to adhere strictly to standard operating procedures for all aspects of monitoring, including use of sample containers that are appropriate for each constituent or constituent group analyzed, avoiding potential sources of contamination, and accurately completing field log sheets and chain-of-custody forms, among other procedures.

Samples were collected either by the direct immersion technique or by using a secondary container; filled sample containers were immediately put on ice in an ice chest. Notes regarding sample bottle fill method and sample collection depth for specific samples can be found in the field log sheets (Appendix B).

Flow measurements were performed according to the standard operating procedure included in Appendix B Attachment-1 of the QAPP using either current-meter, float measurements, or bucket fill techniques. During wet events, the float method of measuring flow is most practical and safe. At some sites, channel depth was estimated using a reference photo, painted gauge, or other appropriate tool. Estimated flows are qualified as such in the field data (Appendix C) and site summary tables. *Flow estimates made during wet events should be regarded as rough estimates and used with discretion.*

During all monitoring events, an In-Situ SmarTROLL MP Data Sonde, In-Situ SmarTROLL 400 Data Sonde, or YSI ProDSS meter was used to measure *in situ* field parameters, including temperature, pH, dissolved oxygen, and conductivity. A Hach Turbidimeter 2100Q was used to measure turbidity in the field. In cases where turbidity exceeded the meter's range (1,000 NTUs), turbidity is reported as '>1,000' NTU. Field data and information collected at each monitoring site were recorded on a field log sheet. The completed field log sheets for each event are included with this Annual Report as Appendix B. Information recorded on the field log sheet at each monitoring site includes the following:

- Field crew initials;
- Date and time samples were collected;
- Water quality results for constituents measured using field probes (pH, temperature, conductivity, etc.).
- Measurements supporting flow calculations (channel width, depth, water velocity);
- Observations regarding the weather, watercolor, and odor, contact and non-contact recreation, instream activity, the presence of foreign matter, trash counts and types, wildlife, connection to downstream flow, etc.; and
- Vegetation and channel substrate (*i.e.*, concrete, cobble, sand, etc.) observations.

Information entered on field log sheets is ultimately entered into the VCAILGMP database for reporting. Field data are included with this Annual Report in Appendix C. Photo documentation of each monitoring site for all four events is included as Appendix D.

Samples were transported to FGL Environmental Laboratory in Santa Paula, where chain-of-custody (COC) documentation was completed and toxicity samples were prepared for overnight delivery to the toxicity testing laboratory, Pacific EcoRisk (PER). A courier picked up samples to be analyzed by Physis Environmental Laboratories and delivered them according to the requirements of the QAPP. The completed COC forms are included in this Annual Report as Appendix E.

Analytical Methods

Table 12 provides a summary of analytical methods used by contract laboratories for analyzing samples collected for constituents analyzed during the 2024-2025 monitoring year. **Table 13** lists analytical methods for TMDL constituents monitored as part of the VCAILGMP. Refer to the CCWTMP QAPP for methods used on samples collected for that monitoring program.

Table 12. Analytical Methods

Constituent	Analytical Method
Aquatic Chronic Toxicity[1]	
Ceriodaphnia dubia (water flea)[2]	EPA-821-R-02-013
General Water Quality Constituents (WQ)	
Flow, pH, Temperature, Dissolved Oxygen, Conductivity, Turbidity[3]	Field Measurement
TDS	SM 2540 C
TSS	SM 2540 D
Chloride	EPA 300.0
Sulfate	EPA 300.0
Hardness	SM 2340 B
Nutrients	
Total Ammonia-N	SM 4500-NH_3 D
Nitrate-N	EPA 300.0
Total Nitrogen	SM 5310 B-N Module
Phosphate (Total Orthophosphate as P)	SM 4500-P E
Total Phosphorus	SM 4500-P E
Metals	
Total and Dissolved Copper	EPA 200.8
Organic Constituents[3]	
Organochlorine Pesticides[4]	EPA 625.1
Organophosphorus Pesticides	EPA 625.1
Pyrethroid Pesticides	EPA 625.1-MRM
PCB Congeners/Aroclors	EPA 625.1
Neonicotinoids	EPA 625.1-MRM
Bacteria	
E. coli	SM 9223 B

1. The 2017 MRP/QAPP calls for use of *Ceriodaphnia dubia* for chronic toxicity testing at all sites.
2. If sample conductivity exceeded 3000 µS/cm, *Hyalella azteca (EPA 821-R-02-012)* was used for toxicity testing.
3. If sample exceeds the field meter upper limit of 1,000 uS/cm, then lab method SM 2130 B is used to measure turbidity.
4. See Table 8 for the list of constituents in each pesticide group.
5. Toxaphene is analyzed using EPA 625.1-NCI.

Table 13. Analytical Methods for Additional TMDL Constituents

Constituent[1]	Analytical Method
General Water Quality Constituents	
Total organic carbon (TOC) (water)	SM 5310 C
Total organic carbon (TOC) (sediment)	EPA 9060
Nutrients	
Nitrite-N	EPA 300.0
Total Kjeldahl Nitrogen	EPA 351.2
PCB Aroclors and Organochlorine Pesticides	
PCBs (water)	EPA 625.1
PCBs (sediment)	EPA 8270 E
OC Pesticides (filtered sediment) [2]	EPA 8270 E
OC Pesticides (sediment)	EPA 8270 E
OC Pesticides (fish tissue) [2]	EPA 8270 E
Bacteria	
Enterococcus	SM 9230 D
Total coliform	SM 9223 B
Fecal coliform	SM 9221 B

1. Listed constituents are those that are required by a TMDL and not already listed in the previous table.
2. Toxaphene is analyzed using EPA 8270 E-NCI

Data Quality

The VCAILG QAPP specifies monitoring program requirements and procedures designed to ensure that the quality of data generated through the VCAILGMP are such that data can be used to 1) accurately assess environmental conditions and 2) make environmentally-sound decisions. Appendix H provides a summary of the data quality evaluation performed on the data collected during the 2024-2025 monitoring year. An evaluation of the data quality for the CCWTMP is included as Appendix D as part of the seventeenth-year annual monitoring report for that program.[8]

Water Quality Benchmarks and Other Objectives

This section presents the standard water quality benchmarks as specified in the *Ag Order*, Appendix 4 used to evaluate monitoring data collected at VCAILG monitoring sites during the 2024-2025 monitoring year. Water quality results were compared to appropriate *Ag Order* water quality objectives where data was available.

"Standard water quality benchmarks" in the *Ag Order* include numeric and narrative water quality objectives and include several narrative and numeric Basin Plan objectives and water quality standards from the California Toxics Rule (CTR). In cases where the *Ag Order* references the Basin Plan or CTR, without specifying a benchmark number, the lowest applicable standard was selected for each watershed. In addition to standard water quality benchmarks, *Ag Order,* Appendix 5 includes water quality benchmarks based upon TMDL load allocations. Due to the complexity of appropriately comparing TMDL LAs to data obtained from the proper locations, site types, sample media, and sampling conditions,

[8] Larry Walker Associates. 2025. Calleguas Creek Watershed TMDL Compliance Monitoring Program - Annual Monitoring Report - Year 17: July 2024 to June 2025. December 15, 2025

TMDL-related benchmarks and the applicable monitoring results are presented and discussed separately in the report section titled “TMDL Load Allocations and Monitoring Results”.

Several of the narrative water quality objectives contained in the Basin Plan specify that discharges of wastes to receiving waters cannot alter “natural” or “ambient” conditions above or below a stated level. Many of the VCAILG monitoring sites are located on agricultural drains that discharge to receiving waters. Because “natural” and “ambient” conditions have not been established in receiving waters, or are non-existent in agricultural drains and ephemeral streams, monitoring data from sites located in agricultural drains are evaluated based on the assumption that if benchmarks are not exceeded in the agricultural drain, it is unlikely that the discharge from that drain will cause benchmark exceedances in the receiving water.

Table 14. *Ag Order* Standard Water Quality Benchmarks Derived from Narrative Objectives

Constituent	Watershed[1]	Narrative Objective[2]	Applicable Benchmark
pH	CC, OXD, SCR, VR	The pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed by more than 0.5 pH units from natural conditions as a result of waste discharges.	6.5 ≤ pH ≤ 8.5 Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established
Temperature	CC, OXD, SCR, VR	For waters designated WARM, water temperature shall not be altered by more than 5°F above the natural temperature. At no time shall WARM-designated waters be raised above 80°F as a result of waste discharges.	WARM: ≤ 80°F Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established
	SCR, VR	For waters designated COLD, water temperature shall not be altered by more than 5°F above the natural temperature.	COLD: No numeric benchmark. Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established
Dissolved Oxygen	OXD	No single dissolved oxygen determination shall be less than 5 mg/L, except when natural conditions cause lesser concentrations.	≥ 5 mg/L
	CC, SCR, VR	The dissolved oxygen content of all surface waters designated as WARM shall not be depressed below 5 mg/L as a result of waste discharges.	WARM: ≥ 5 mg/L
	SCR, VR	The dissolved oxygen content of all surface waters designated as COLD and SPWN shall not be depressed below 7 mg/L as a result of waste discharges.	COLD, SPWN: ≥ 7 mg/L
Turbidity	CC, OXD, SCR, VR	Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in natural turbidity attributable to controllable water quality factors shall not exceed the following limits: Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%; and Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.	No numeric benchmarks. Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established
Total Suspended Solids (TSS)	CC, OXD, SCR, VR	Wastes shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.	No numeric benchmarks.
Toxicity	CC, OXD, SCR, VR	All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal or aquatic life. There shall be no chronic toxicity in ambient waters outside mixing zones.	Pass, based on the percent effect at the Instream Waste Concentration (IWC) for each endpoint.[3]

1. CC = Calleguas Creek Watershed OXD = Oxnard Coastal Watershed SCR = Santa Clara River Watershed VR = Ventura River Watershed
2. Source: Water Quality Control Plan, Los Angeles Region (Basin Plan), 1994.
3. Source: *Waste Discharge Requirements for Discharges from Irrigated Lands within the Los Angeles Region* (Order No. R4-2023-0353), Los Angeles Regional Water Quality Control Board, adopted September 28, 2023. Benchmarks for specific potentially toxic constituents are listed in Table 16 through Table 20.

Table 15. *Ag Order* Standard Water Quality Benchmarks for Salts and Nutrients (Basin Plan Table 3-8 Numeric Water Quality Objectives)

Watershed / Reach	Reach Description	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Nitrogen (mg/L)	Ammonia [1] (mg/L)
CC below Potrero Rd.	-----	-----	-----	-----	10 [2]	pH, temperature dependent
CC above Potrero Rd.	-----	150	250	850	10 [3]	pH, temperature dependent
OXD	-----	-----	-----	-----	10 [2]	pH, temperature dependent
SCR Reach 1	Tidally influenced mouth of Santa Clara River upstream to 101 Bridge	-----	-----	-----	10 [2]	pH, temperature dependent
SCR Reach 2	Upstream of Hwy 101 Bridge to Freeman Diversion	150	600	1200	10 [2]	pH, temperature dependent
SCR Reach 3	Upstream of Freeman Diversion to A Street Bridge in Fillmore	100 [3]	650	1300	5 [4]	pH, temperature dependent
SCR Reach 4	Upstream of A Street Bridge in Fillmore to Blue Cut Gaging Station	100	600	1300	5 [4]	pH, temperature dependent
VR Reach 4	Between Camino Cielo Rd. and Casitas Vista Rd.	60	300	800	5 [4]	pH, temperature dependent

Watersheds: CC = Calleguas Creek OXD = Oxnard Coastal SCR = Santa Clara River VR = Ventura River

1. Ammonia benchmarks are based on 1) freshwater ammonia objectives as calculated according to LARWQCB Resolutions 2002-011 and 2005-014, and 2) saltwater ammonia objectives as calculated according to LARWQCB Resolution 2004-022. Ammonia objectives are calculated based on the pH and temperature of the receiving water measured at the time of sample collection for ammonia analysis. Ammonia objectives used as benchmarks are chronic, 30-day averages.
2. There is no site-specific nitrogen objective in the Basin Plan (Table 3-8) applicable to this reach. The Basin Plan objective of 10 mg/L Nitrate-N was used for comparison with VCAILG data collected at monitoring sites in this reach.
3. The 100 mg/L benchmark for chloride is the revised water quality objective adopted by the Regional Board in Resolution 2003-015.
4. The Nitrogen benchmark listed is for Nitrate-N plus Nitrite-N.

Table 16. *Ag Order* Standard Water Quality Benchmarks for Copper

Constituent	Freshwater [1, 2]		Brackish or Saltwater [1]	
	Benchmark (µg/L)	Benchmark Source	Benchmark (µg/L)	Benchmark Source
Copper	$= 0.96e^{[0.8545(\ln hardness)+(-1.702)]}$	CTR CCC	3.1	CTR CCC

1. Freshwater benchmark applies to discharges to waters with salinities <1 ppt at least 95% of the time. Saltwater benchmark applies when salinities are >10 ppt at least 95% of the time. For discharges between these categories, or tidally influenced freshwater that supports EST beneficial uses, the lower criterion of the two shall be used, which is the saltwater benchmark.
2. As per footnote "m" to the Table in Paragraph (b)(1) of the CTR; "The freshwater criteria for metals are expressed in terms of the dissolved fraction of the metal in the water column." In instances where the measured hardness is >400 mg/L as CaCO3, a hardness of 400 is used to calculate the benchmark. This was done in accordance with CTR §31692, f. Hardness.

CTR = California Toxics Rule (USEPA, May 18, 2000).
CCC = Criterion Continuous Concentration

Table 17. *Ag Order* Standard Water Quality Benchmarks for Organophosphorus Pesticides, Applicable to all Sites

Constituent	Benchmark (µg/L)
Chlorpyrifos	0.025
Diazinon	0.10

Table 18. *Ag Order* Water Quality Benchmarks for Organochlorine Pesticides, Applicable to all Sites

Constituent	Benchmark (µg/L)	Benchmark Source
Chlordane, sum	0.00059	CTR HHO
4,4'-DDD	0.00084	CTR HHO
4,4'-DDE	0.00059	CTR HHO [1]
4,4'-DDT	0.00059	CTR HHO [1]
Dieldrin	0.00014	CTR HHO [1]
Toxaphene	0.00075	CTR HHO

CTR = California Toxics Rule (USEPA, May 18, 2000).
HHO = Human Health for Consumption of Organisms Only (30-day average)

1. For the Ventura River Watershed, the benchmark source is Human Health for Consumption of Water and Organisms (HHWO), MUN-designation, 30-day average.

Table 19. *Ag Order* Water Quality Benchmark for Bifenthrin, Applicable to all Sites

Constituent	Benchmark (µg/L)
Bifenthrin	0.0006

Table 20. Water Quality Benchmarks for *E. coli* and *Enterococci*

Constituent	Unit	Benchmark
E. coli	cfu/100mL	320 (STV)
Enterococci	cfu/100mL	110 (STV)

Water Quality Monitoring Results

This section contains a summary of water quality monitoring data collected at VCAILG sites where flow was present during the four monitoring events conducted in 2024-2025. Information presented for each VCAILG monitoring site includes the reach or subwatershed where the site is located or discharges to, a site location map, a site photo, and a narrative summary describing which events were monitored. The predominant crop types potentially contributing to the flow at each monitoring site, previously listed in **Table 7**, are also described. Exceedances of *Ag* Order, Appendix 4 standard water quality benchmarks and unusual occurrences, if observed, are noted.

Following the narrative description, results are presented in a tabular format for all constituents listed in Appendix 4 of the *Ag Order*. Constituents not listed in Appendix 4 of the *Ag Order* are listed only if they have been detected at a particular site. Non-detect results are included with all of the water quality monitoring data for 2024-2025 as Appendix F – Monitoring Data. All hard copy laboratory reports are also provided. Water quality results presented in this section are compared with the water quality benchmarks from Appendix 4 of the *Ag Order*, which were previously described in **Table 14** through **Table 20**. Water quality results exceeding benchmarks are indicated with **bold type**. Water quality results were compared to appropriate *Ag Order* water quality objectives where data was available.

Results reported by the laboratory in units of ng/L were converted to µg/L for comparison with benchmarks expressed in units of µg/L. Results reported by the laboratory as “Total Orthophosphate as P” were converted to “Total Orthophosphate” by multiplying the result by the molecular weight of phosphate (95 g/mol) and dividing the product by the molecular weight of phosphorus (31 g/mol). The converted result is reported as “Total Orthophosphate” on data tables presented in this section. The electronic data file remains unconverted and is labeled “Total Orthophosphate-P.”

Results of toxicity tests conducted during the 2024-2025 monitoring year are discussed separately in a subsequent section of the report.

All analyses included in this report were conducted at a laboratory certified for such analyses by the California Department of Health Services – Environmental Laboratory Accreditation Program (ELAP) or the National Environmental Laboratory Accreditation Program (NELAP), and in accordance with current USEPA guidance procedures and/or the provisions of the VCAILG QAPP.

Calleguas Creek Watershed

The Calleguas Creek Watershed contains nine VCAILG monitoring sites. Monitoring sites are discussed below in order of the Calleguas Creek reach into which they drain.

01T_ODD3_EDI

This monitoring site is located on Oxnard Drain No. 3. The 01T_ODD3_EDI site is located on an agricultural drain just downstream of Edison Drive. Flow from this drain eventually discharges into the western arm of Mugu Lagoon (Calleguas Creek Reach 1).

Site Map **View toward S looking downstream**

Flow was observed and samples were collected at 01T_ODD3_EDI during all 2024-2025 monitoring events**. Table 21** summarizes the water quality benchmark exceedances at this site. **Table 22** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 23** summarizes the trash observations for each event.

Sod and row crops followed by strawberries and other berries are the most common crops grown within this site drainage area.

Table 21. 2024-2025 Benchmark Exceedances at 01T_ODD3_EDI

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	Ammonia-N Nitrate-N Total Chlordane 4,4'-DDD 4,4'-DDE 4,4'-DDT Bifenthrin *E. coli*	Nitrate-N Dissolved Copper Total Chlordane 4,4'-DDE Bifenthrin *E. coli*	Nitrate-N Dissolved Copper Total Chlordane 4,4'-DDE Bifenthrin *E. coli*	Nitrate-N 4,4'-DDD 4,4'-DDE *Enterococcus* [1]

1. The bacteria indicator used for testing was revised according to site conditions with the implementation of the 2024 MRP.

Table 22. 2024-2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: 01T_ODD3_EDI

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs		0.9	1.5	28.3	0.7
pH	pH	6.5 ≤ pH ≤ 8.5	7.4	7.3	7.6	7.4
Temperature	ºC		21.2	14.8	13.6	18.2
Dissolved Oxygen	mg/L	≥ 5	10.1	9.7	9.9	7.9
Turbidity	NTU		38.2	41	55	33.7
Conductivity	uS/cm		4348.7	3300.4	1411	4501.6
General Water Quality						
TDS	mg/L		3360	2950	1070	3960
TSS	mg/L		94	50	188	24
Total Hardness as CaCO3	mg/L		1560	1460	485	1810
Chloride	mg/L		320	258	83	337
Sulfate	mg/L		1800	1320	493	1650
Nutrients						
Ammonia-N	mg/L	2.85/5.11/ 3.07/3.25 [1]	**15**	1.01	0.57	0.36
Nitrate-N	mg/L	10 [2]	**60.7**	**47.2**	**17.1**	**57.2**
Nitrite-N	mg/L		0.11	0.29	0.16	0.08
Total Nitrogen	mg/L		70.8	60	23.9	125
Total Orthophosphate	mg/L		1.31	2.41	3.05	3.25

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Total Phosphorus	mg/L		0.74	1.25	1.96	ND
Metals						
Dissolved Copper	ug/L	3.1 [3]	3.01	**3.75**	**4.24**	2.61
Total Copper	ug/L		3.93	7.66	14.1	3.88
Organochlorine Pesticides						
BHC-beta	ug/L		ND	0.019	ND	ND
cis-Nonachlor	ug/L		DNQ	ND	ND	ND
trans-Nonachlor	ug/L		DNQ	DNQ	ND	ND
Chlordane-alpha	ug/L		0.00285	0.00203	ND	ND
Chlordane-gamma	ug/L		DNQ	DNQ	0.00485	ND
Total Chlordane	ug/L	0.00059	**0.00285**	**0.00203**	**0.00485**	ND
2,4'-DDD	ug/L		0.00498	0.00616	0.0116	ND
2,4'-DDE	ug/L		DNQ	ND	ND	ND
2,4'-DDT	ug/L		DNQ	ND	ND	ND
4,4'-DDD	ug/L	0.00084	**0.0159**	ND	ND	**0.00372**
4,4'-DDE	ug/L	0.00059	**0.0332**	**0.0217**	**0.0936**	**0.0189**
4,4'-DDT	ug/L	0.00059	**0.00677**	ND	ND	ND
Dieldrin	ug/L	0.00014	ND	ND	ND	ND
Toxaphene	ug/L	0.00075	ND	ND	ND	ND
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025	ND	ND	ND	ND
Diazinon	ug/L	0.1	ND	ND	ND	ND
Pyrethroid Pesticides						
Cyhalothrin, Total Lambda-	ug/L		ND	0.0231	0.0098	ND
Bifenthrin	ug/L	0.0006	**0.0025**	**0.0045**	**0.0032**	DNQ
Neonicotinoid Pesticides						
Acetamiprid	ug/L		0.0798	NS	NS	ND
Dinotefuran	ug/L		0.0199	NS	NS	ND
Imidacloprid	ug/L		1.46	NS	NS	ND
Thiacloprid	ug/L		0.0661	NS	NS	ND
Thiamethoxam	ug/L		0.0159	NS	NS	0.0103

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Bacteria [4]						
E. coli	cfu/100 mL	320 (STV)	**1550**	**520**	**2350**	NS
Enterococcus	cfu/100 mL	110 (STV)	NS	NS	NS	**520**

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.
DNQ = Detected, not qualified.
ND = Not detected at the applicable reporting limit.
NS = Not sampled

1. The benchmarks for Ammonia-N are listed in order of monitoring event and were calculated based on the Basin Plan Amendment to Update Saltwater Ammonia Objectives (LARWQCB Resolution No. 2004-022). The benchmarks are based on the chronic saltwater equation and are dependent upon the pH, temperature, and salinity of the water at the time of sample collection.
2. There is no site-specific nitrogen objective in the Basin Plan (Table 3-8) applicable to this reach. The Basin Plan objective of 10 mg/L nitrate-N was used for comparison with VCAILG data for this site.
3. The copper benchmark for saltwater (shown in Table 16) applies at this site.
4. The bacteria indicator used for testing was revised according to site conditions with the implementation of the 2024 MRP.

Table 23. 2024-2025 Trash Observations for 01T_ODD3_EDI

Event	Count	Types
62	0-5	Plastic bags
63	10	Glass bottle, plastic bottle, box
64	3	Bottles, cans
65	5	Plastic cup, water bottle, metal spring, plastic

01T_ODD2_DCH

This monitoring site is located on Oxnard Drain #2 south of Hueneme Road. Flow from this drain eventually discharges into the central arm of Mugu Lagoon (Calleguas Creek Reach 1) through the Mugu Drain.

Site Map

View toward W looking upstream

Flow was present and samples were collected at 01T_ODD2_DCH during all four 2024-2025 monitoring events. **Table 24** summarizes the water quality benchmark exceedances at this site. **Table 25** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 26** summarizes the trash observations for each event.

Row and rotational crops are the most common crops grown within this site drainage area.

Table 24. 2024-2025 Benchmark Exceedances at 01T_ODD2_DCH

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	Nitrate-N 4,4'-DDD 4,4'-DDE Bifenthrin	Nitrate-N 4,4'-DDD Bifenthrin *E. coli*	Nitrate-N 4,4'-DDE Bifenthrin *E. coli*	Nitrate-N Bifenthrin *Enterococcus* [1]

1. The bacteria indicator used for testing was revised according to site conditions with the implementation of the 2024 MRP.

Table 25. 2024-2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: 01T_ODD2_DCH

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs		1	9.8	30.2	2.5
pH	pH	6.5 ≤ pH ≤ 8.5	8	7.5	7.5	8
Temperature	ºC	≤ 26.67 [1]	23.5	12.4	14.3	18.3
Dissolved Oxygen	mg/L	≥ 5	16.9	8.5	8.3	13
Turbidity	NTU		6.2	21.5	220	5.4
Conductivity	uS/cm		3919.4	3347.8	1858.3	3993.1
General Water Quality						
TDS	mg/L		3520	3430	1480	3610
TSS	mg/L		5	20	483	14
Total Hardness as CaCO3	mg/L		1870	1810	708	2020
Chloride	mg/L		170	182	90	286
Sulfate	mg/L		1650	1780	683	1960
Nutrients						
Ammonia-N	mg/L	0.6/4.14/ 3.59/0.87 [2]	DNQ	0.18	0.27	0.1
Nitrate-N	mg/L	10 [3]	**57.3**	**64.7**	**29**	**65.8**
Nitrite-N	mg/L		0.18	0.21	0.35	0.49
Total Nitrogen	mg/L		66	81.9	38.9	142
Total Orthophosphate	mg/L		0.44	1.11	2.45	0.2
Total Phosphorus	mg/L		0.27	0.6	2.66	0.19
Metals						
Dissolved Copper	ug/L	3.1 [4]	2.81	1.73	2.11	2.74
Total Copper	ug/L		2.84	3.67	35.1	3.05
Organochlorine Pesticides						
BHC-gamma	ug/L		ND	0.057	ND	ND
Chlordane-alpha	ug/L		ND	DNQ	ND	ND
Total Chlordane	ug/L	0.00059	ND	DNQ	ND	ND
2,4'-DDT	ug/L		DNQ	ND	ND	ND
4,4'-DDD	ug/L	0.00084	**0.00261**	**0.0254**	ND	ND
4,4'-DDE	ug/L	0.00059	**0.00536**	ND	**0.125**	ND
4,4'-DDT	ug/L	0.00059	ND	ND	ND	ND
Dieldrin	ug/L	0.00014	ND	ND	ND	ND
Toxaphene	ug/L	0.00075	ND	ND	ND	ND
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025	ND	ND	ND	ND
Diazinon	ug/L	0.1	ND	ND	ND	ND
Pyrethroid Pesticides						

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Permethrin, trans-	ug/L		ND	ND	0.125	ND
Permethrin, cis-	ug/L		ND	ND	0.255	ND
Fenpropathrin	ug/L		ND	ND	0.041	ND
Bifenthrin	ug/L	0.0006	**0.0016**	**0.0058**	**0.0408**	**0.0011**
Neonicotinoid Pesticides						
Acetamiprid	ug/L		0.0679	NS	NS	ND
Thiacloprid	ug/L		0.038	NS	NS	ND
Thiamethoxam	ug/L		0.00896	NS	NS	0.00678
Bacteria [5]						
E. coli	cfu/100 mL	320 (STV)	ND	**1210**	**1870**	NS
Enterococcus	cfu/100 mL	110 (STV)	NS	NS	NS	**410**

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.
DNQ = Detected, not qualified
ND = Not detected at the applicable reporting limit.
NR = Not recorded.
NS = Not Sampled

1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. The benchmarks for Ammonia-N are listed in order of monitoring event and were calculated based on the Basin Plan Amendment to Update Saltwater Ammonia Objectives (LARWQCB Resolution No. 2004-022). The benchmarks are based on the chronic saltwater equation and are dependent upon the pH, temperature, and salinity of the water at the time of sample collection.
3. There is no site-specific nitrogen objective in the Basin Plan (Table 3-8) applicable to this reach. The Basin Plan objective of 10 mg/L nitrate-N was used for comparison with VCAILG data for this site.
4. The copper benchmark for saltwater (shown in Table 16) applies at this site.
5. The bacteria indicator used for testing was revised according to site conditions with the implementation of the 2024 MRP.

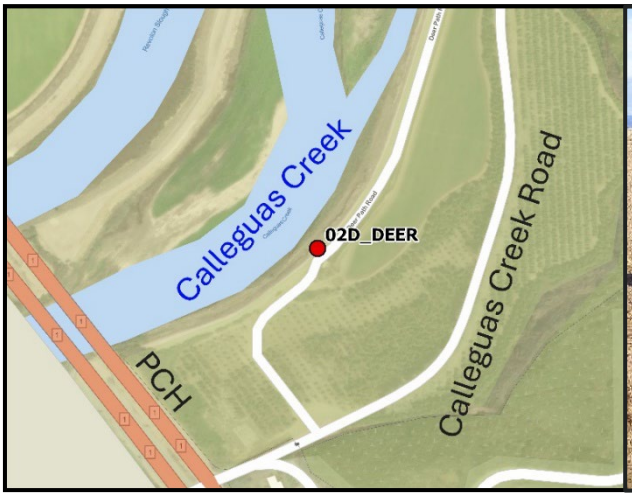
Table 26. 2024-2025 Trash Observations for 01T_ODD2_DCH

Event	Count	Types
62	0-5	Plastic
63	10	Trash bags, Styrofoam, plastic bottle, foil
64	0	
65	20-30	Foil, plastic tarp, rope, plastic bottle, wood, towel

02D_DEER

This monitoring site is located on an agricultural drain along Deer Path Road just upstream of its confluence with Calleguas Creek and PCH. Per approval of the 2024 MRP, this site replaces the 02D_BROOM monitoring site. Flow from this drain eventually flows into Calleguas Creek Reach 2.

Site Map



View toward NE looking downstream

Flow was not observed, and samples were not collected at this site during all four 2024-2025 monitoring events. **Table 27** summarizes the water quality benchmark exceedances at this site. **Table 28** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 29** summarizes the trash observations for each event.

Tree crops, including avocados, and row crops are the most common crops grown within this site drainage area.

Table 27. 2024-2025 Benchmark Exceedances at 02D_DEER

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	None	None	None	None

Table 28. 2024-2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: 02D_DEER

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs					
pH	pH	6.5 ≤ pH ≤ 8.5				
Temperature	ºC	≤ 26.67 [1]				
Dissolved Oxygen	mg/L	≥ 5				
Turbidity	NTU					
Conductivity	uS/cm					
General Water Quality						
TDS	mg/L					
TSS	mg/L					
Total Hardness as CaCO3	mg/L					
Chloride	mg/L					
Sulfate	mg/L		NS	NS	NS	NS
Nutrients						
Ammonia-N	mg/L	NC				
Nitrate-N	mg/L	10 [2]				
Nitrite-N	mg/L					
Total Nitrogen	mg/L					
Total Orthophosphate	mg/L					
Total Phosphorus	mg/L					
Metals						
Dissolved Copper	ug/L	NC				
Total Copper	ug/L					
Organochlorine Pesticides						
Total Chlordane	ug/L	0.00059				
4,4'-DDD	ug/L	0.00084				
4,4'-DDE	ug/L	0.00059				
4,4'-DDT	ug/L	0.00059				
Dieldrin	ug/L	0.00014				
Toxaphene	ug/L	0.00075				
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025				
Diazinon	ug/L	0.1				
Pyrethroid Pesticides						
Bifenthrin	ug/L	0.0006				
Bacteria						
E. coli	cfu/100 mL	320 (STV)				

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.

NS = No samples were collected due to lack of flow or site was ponded.
NC = Not calculated
1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. There is no site-specific nitrogen objective in the Basin Plan (Table 3-8) applicable to this reach. The Basin Plan objective of 10 mg/L nitrate-N was used for comparison with VCAILG data for this site.

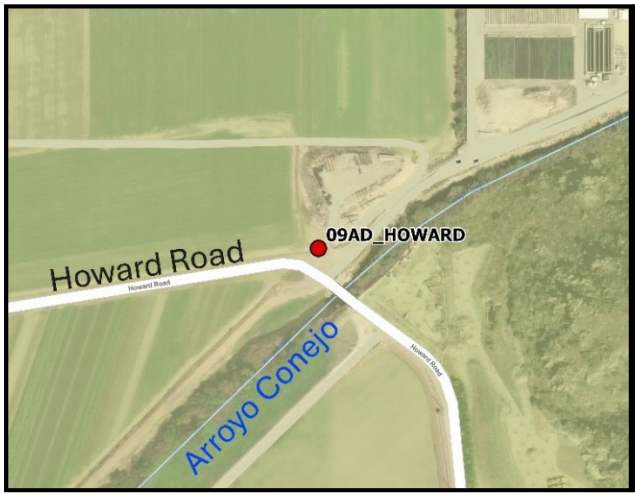
Table 29. 2024–2025 Trash Observations for 02D_DEER

Event	Count	Types
62	10-20	Bottles, cans, paper, plastic wrapper, gloves
63	4	Can, glove, cup, wrapper
64	3	Can, glove, wrapper
65	2	Plastic

9AD_HOWARD

This monitoring site is located on an agricultural drain just north of Howard Road before the bridge crossing Arroyo Conejo. Samples are collected upstream of the culvert that directs flows underneath Howard Road. The drainage area for this site is relatively small due to a multitude of urban discharges in the surrounding area reducing site location options to accurately represent agricultural discharges. Flow from this drain eventually discharges into Calleguas Creek Reach 9A (Arroyo Conejo).

Site Map



View toward Howard Road (S) looking downstream

Flow was not observed, and samples were not collected at this site during all four 2024-2025 monitoring events. **Table 30** summarizes the water quality benchmark exceedances at this site. **Table 31** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 32** summarizes the trash observations for each event.

Row crops and citrus trees are the most common crops grown within this site drainage area.

Table 30. 2024-2025 Benchmark Exceedances at 9AD_HOWARD

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	None	None	None	None

Table 31. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: 9AD_HOWARD

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs					
pH	pH	6.5 ≤ pH ≤ 8.5				
Temperature	ºC	≤ 26.67 [1]				
Dissolved Oxygen	mg/L	≥ 5				
Turbidity	NTU					
Conductivity	uS/cm					
General Water Quality						
TDS	mg/L	850				
TSS	mg/L					
Total Hardness as CaCO3	mg/L					
Chloride	mg/L	150				
Sulfate	mg/L	250	NS	NS	NS	NS
Nutrients						
Ammonia-N	mg/L	NC				
Nitrate-N	mg/L	10 [2]				
Nitrite-N	mg/L					
Total Nitrogen	mg/L					
Total Orthophosphate	mg/L					
Total Phosphorus	mg/L					
Metals						
Dissolved Copper	ug/L	NC				
Total Copper	ug/L					
Organochlorine Pesticides						
Total Chlordane	ug/L	0.00059				
4,4'-DDD	ug/L	0.00084				
4,4'-DDE	ug/L	0.00059				
4,4'-DDT	ug/L	0.00059				
Dieldrin	ug/L	0.00014				
Toxaphene	ug/L	0.00075				
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025				
Diazinon	ug/L	0.1				
Pyrethroid Pesticides						
Bifenthrin	ug/L	0.0006				
Bacteria						
E. coli	cfu/100 mL	320 (STV)				

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.

NS = No samples were collected due to lack of flow.
NC = Not calculated

1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. There is no site-specific nitrogen objective in the Basin Plan (Table 3-8) applicable to this reach. The Basin Plan objective of 10 mg/L nitrate-N was used for comparison with VCAILG data for this site.

Table 32. 2024–2025 Trash Observations for 9AD_HOWARD

Event	Count	Types
62	10-20	Ag trash, newspaper, bottles
63	>100	Aluminium, metal, paper, plastic, rubber, cloth, wood, foam, concrete
64	>30	Cardboard, plastic, metal
65	>25	Paper, plastic, aluminium, cigarette

9BD_GERRY

This monitoring site is located on an agricultural drain at the intersection of Santa Rosa Road and Gerry Road. Flow from this drain eventually discharges into Calleguas Creek Reach 9B (Arroyo Conejo).

Site Map

View toward S looking downstream

The site was dry, and samples were not collected during both dry weather events, as well as wet weather Event 63. **Table 33** summarizes the water quality benchmark exceedances at this site. **Table 34** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks**. Table 35** summarizes the trash observations for each event.

Avocados and other tree crops are the most common crops grown within this site drainage area.

Table 33. 2024-2025 Benchmark Exceedances at 9BD_GERRY

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	None	None	TDS Chloride Sulfate Nitrate-N Total Chlordane 4,4'-DDE Bifenthrin *E. coli*	None

Table 34. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: 9BD_GERRY

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs				0.5	
pH	pH	6.5 ≤ pH ≤ 8.5			8.1	
Temperature	ºC	≤ 26.67 [1]			12.9	
Dissolved Oxygen	mg/L	≥ 5			10.7	
Turbidity	NTU				1010	
Conductivity	uS/cm				2217	
General Water Quality						
TDS	mg/L	850			**1550**	
TSS	mg/L				1480	
Total Hardness as CaCO3	mg/L				866	
Chloride	mg/L	150			**306**	
Sulfate	mg/L	250			**412**	
Nutrients						
Ammonia-N	mg/L	NC/NC/ 2.33/NC [2]			0.49	
Nitrate-N	mg/L	10			**37.9**	
Nitrite-N	mg/L		NS	NS	0.95	NS
Total Nitrogen	mg/L				44.8	
Total Orthophosphate	mg/L				6.13	
Total Phosphorus	mg/L				5.8	
Metals						
Dissolved Copper	ug/L	NC/NC/ 29.28/NC [3]			24.6	
Total Copper	ug/L				186	
Organochlorine Pesticides						
cis-Nonachlor	ug/L				0.0095	
trans-Nonachlor	ug/L				0.0285	
Chlordane-alpha	ug/L				0.0219	
Chlordane-gamma	ug/L				0.0131	
Total Chlordane	ug/L	0.00059			**0.035**	
4,4'-DDD	ug/L	0.00084			ND	
4,4'-DDE	ug/L	0.00059			**0.0802**	
4,4'-DDT	ug/L	0.00059			ND	
Dieldrin	ug/L	0.00014			ND	
Toxaphene	ug/L	0.00075			ND	
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025			ND	
Diazinon	ug/L	0.1			ND	

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Pyrethroid Pesticides						
Cyhalothrin, Total Lambda-	ug/L				0.002	
Bifenthrin	ug/L	0.0006			**0.11**	
Bacteria						
E. coli	cfu/100 mL	320 (STV)			**15390**	

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.

ND = Not detected at the applicable reporting limit.

DNQ = Detected, not quantified.

NS = No samples were collected due to lack of flow.

NC = Not calculated

1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. The benchmarks for Ammonia-N are listed in order of monitoring event and were calculated based on the April 2002 Basin Plan Amendment chronic equation (ELS absent) and are dependent upon the pH and temperature of the water at the time of sample collection.
3. The benchmarks for copper are listed in order of monitoring event and were calculated for freshwater using the formula in Table 16.

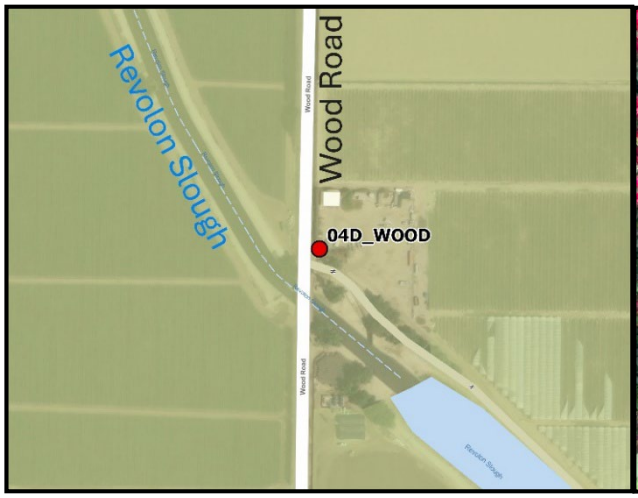
Table 35. 2024–2025 Trash Observations for 9BD_GERRY

Event	Count	Types
62	3	Plastic bags, hard plastic
63	0	
64	0	
65	0	

04D_WOOD

This monitoring site is located on an agricultural drain that runs parallel on the east side of Wood Road, just before Revolon Slough passes under Wood Road. This site is directly upstream of the Revolon Slough main stem site 04_WOOD. Flow from this drain eventually discharges into Calleguas Creek Reach 4 (Revolon Slough).

Site Map



View toward S looking downstream

Flow was not observed, and samples were not collected at this site during all four 2024-2025 monitoring events. **Table 36** summarizes the water quality benchmark exceedances at this site. **Table 37** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 38** summarizes the trash observations for each event.

Row crop and rotational crops are the most common crops grown within this site drainage area.

Table 36. 2024-2025 Benchmark Exceedances at 04D_WOOD

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	None	None	None	None

Table 37. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: 04D_WOOD

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs					
pH	pH	6.5 ≤ pH ≤ 8.5				
Temperature	ºC	≤ 26.67 [1]				
Dissolved Oxygen	mg/L	≥ 5				
Turbidity	NTU					
Conductivity	uS/cm					
General Water Quality						
TDS	mg/L	850				
TSS	mg/L					
Total Hardness as CaCO3	mg/L					
Chloride	mg/L	150				
Sulfate	mg/L	250	NS	NS	NS	NS
Nutrients						
Ammonia-N	mg/L	NC				
Nitrate-N	mg/L	10 [2]				
Nitrite-N	mg/L					
Total Nitrogen	mg/L					
Total Orthophosphate	mg/L					
Total Phosphorus	mg/L					
Metals						
Dissolved Copper	ug/L	NC				
Total Copper	ug/L					
Organochlorine Pesticides						
Total Chlordane	ug/L	0.00059				
4,4'-DDD	ug/L	0.00084				
4,4'-DDE	ug/L	0.00059				
4,4'-DDT	ug/L	0.00059				
Dieldrin	ug/L	0.00014				
Toxaphene	ug/L	0.00075				
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025				
Diazinon	ug/L	0.1				
Pyrethroid Pesticides						
Bifenthrin	ug/L	0.0006				
Bacteria						
E. coli	cfu/100 mL	320 (STV)				

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.

NS = No samples were collected due to lack of flow.
NC = Not calculated
1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. There is no site-specific nitrogen objective in the Basin Plan (Table 3-8) applicable to this reach. The Basin Plan objective of 10 mg/L nitrate-N was used for comparison with VCAILG data for this site.

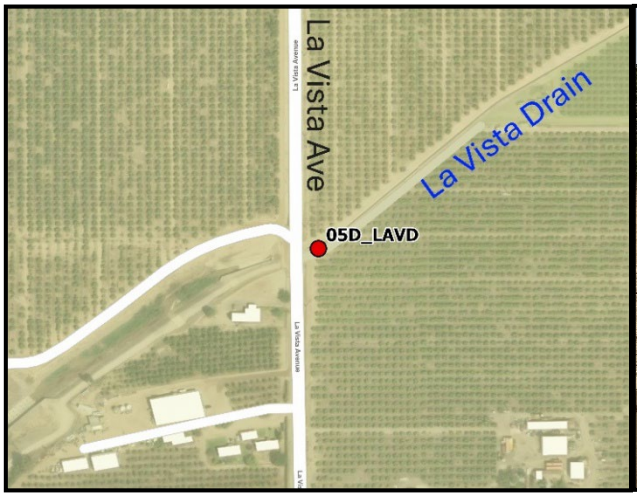
Table 38. 2024–2025 Trash Observations for 04D_WOOD

Event	Count	Types
62	10	Grocery bag, potting, paper cup
63	>15	Aluminium, plastic, foam, wood, cardboard
64	>10	Plastic, couch cushion, aluminium, rubber
65	>25	Paper, plastic, Styrofoam, foam

05D_LAVD

This monitoring site is located on the La Vista Drain just east of La Vista Avenue, north of Highway 118. Flow from this drain eventually discharges into Calleguas Creek Reach 5 (Beardsley Channel). The Ventura County Watershed Protection District maintains a stormwater monitoring station just downstream of the VCAILG monitoring site.

Site Map



View toward NE looking upstream

Flow was not observed, and samples were not collected at this site during all four 2024-2025 monitoring events. **Table 39** summarizes the water quality benchmark exceedances at this site. **Table 40** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 41** summarizes the trash observations for each event.

Avocados, citrus, and tree crops are the most common crops grown within this site drainage area.

Table 39. 2024-2025 Benchmark Exceedances at 05D_LAVD

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	None	None	None	None

Table 40. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: 05D_LAVD

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs					
pH	pH	6.5 ≤ pH ≤ 8.5				
Temperature	ºC	≤ 26.67 [1]				
Dissolved Oxygen	mg/L	≥ 5				
Turbidity	NTU					
Conductivity	uS/cm					
General Water Quality						
TDS	mg/L	850				
TSS	mg/L					
Total Hardness as CaCO3	mg/L					
Chloride	mg/L	150				
Sulfate	mg/L	250	NS	NS	NS	NS
Nutrients						
Ammonia-N	mg/L	NC				
Nitrate-N	mg/L	10 [2]				
Nitrite-N	mg/L					
Total Nitrogen	mg/L					
Total Orthophosphate	mg/L					
Total Phosphorus	mg/L					
Metals						
Dissolved Copper	ug/L	NC				
Total Copper	ug/L					
Organochlorine Pesticides						
Total Chlordane	ug/L	0.00059				
4,4'-DDD	ug/L	0.00084				
4,4'-DDE	ug/L	0.00059				
4,4'-DDT	ug/L	0.00059				
Dieldrin	ug/L	0.00014				
Toxaphene	ug/L	0.00075				
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025				
Diazinon	ug/L	0.1				
Pyrethroid Pesticides						
Bifenthrin	ug/L	0.0006				
Bacteria						
E. coli	cfu/100 mL	320 (STV)				

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.

NS = No samples were collected due to lack of flow.
NC = Not calculated

1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. There is no site-specific nitrogen objective in the Basin Plan (Table 3-8) applicable to this reach. The Basin Plan objective of 10 mg/L nitrate-N was used for comparison with VCAILG data for this site.

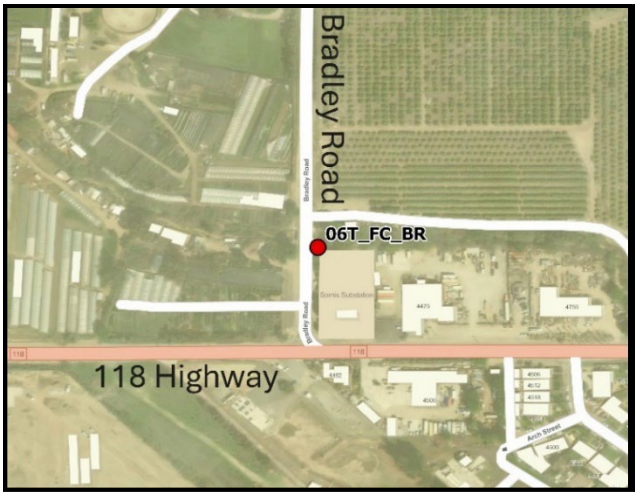
Table 41. 2024–2025 Trash Observations for 05D_LAVD

Event	Count	Types
62	10	Plastics
63	0	
64	0	
65	0	

06T_FC_BR

This monitoring site is located on Fox Canyon Barranca at the Bradley Road bridge north of Highway 118. Fox Canyon Barranca is a tributary to Calleguas Creek Reach 6 (Arroyo Las Posas).

Site Map



View toward E looking downstream

Flow was observed and samples were collected at 06T_FC_BR during 2024-2025 dry weather monitoring Event 62. The site was dry, and samples were not collected during both wet weather Events 63 and 64, as well as dry weather Event 65. **Table 42** summarizes the water quality benchmark exceedances at this site. **Table 43** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 44** summarizes the trash observations for each event.

Citrus, tree crops, and rotational row crops are the most common crops grown within this site drainage area.

Table 42. 2024-2025 Benchmark Exceedances at 06T_FC_BR

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	Ammonia Dissolved Copper 4,4'-DDD 4,4'-DDE 4,4'-DDT *E. coli*	None	None	None

Table 43. 2024-2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: 06T_FC_BR

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements				NS	NS	NS
Flow	cfs		0.2			
pH	pH	6.5 ≤ pH ≤ 8.5	7.9			
Temperature	ºC	≤ 26.67 [1]	18.8			
Dissolved Oxygen	mg/L	≥ 5	6.8			
Turbidity	NTU					
Conductivity	uS/cm		727			
General Water Quality						
TDS	mg/L	850	550			
TSS	mg/L		8			
Total Hardness as CaCO3	mg/L		257			
Chloride	mg/L	150	22			
Sulfate	mg/L	250	171			
Nutrients						
Ammonia-N	mg/L	2.12/ NC/ NC/NC [2]	**2.56**			
Nitrate-N	mg/L	10	1.5			
Nitrite-N	mg/L		0.09			
Total Nitrogen	mg/L		6.1			
Total Orthophosphate	mg/L		7.85			
Total Phosphorus	mg/L		3.05			
Metals						
Dissolved Copper	ug/L	20.06/ NC/ NC/NC [3]	**59**			
Total Copper	ug/L		181			
Organochlorine Pesticides						
Total Chlordane	ug/L	0.00059	ND			
2,4'-DDT	ug/L		DNQ			
4,4'-DDD	ug/L	0.00084	**0.00237**			
4,4'-DDE	ug/L	0.00059	**0.00562**			
4,4'-DDT	ug/L	0.00059	**0.00454**			
Dieldrin	ug/L	0.00014	ND			
Toxaphene	ug/L	0.00075	ND			
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025	ND			
Diazinon	ug/L	0.1	ND			
Pyrethroid Pesticides						
Permethrin, trans-	ug/L		DNQ			
Permethrin, cis-	ug/L		0.0102			

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Bifenthrin	ug/L	0.0006	ND			
Neonicotinoid Pesticides						
Acetamiprid	ug/L		0.0367			
Thiacloprid	ug/L		0.0317			
Bacteria						
E. coli	cfu/100 mL	320 (STV)	**27550**			

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.

ND = Not detected at the applicable reporting limit.

DNQ = Detected, not quantified

NS = No samples were collected due to lack of flow.

NC = Not calculated

1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. The benchmarks for Ammonia-N are listed in order of monitoring event and were calculated based on the April 2002 Basin Plan Amendment chronic equation (ELS absent) and are dependent upon the pH and temperature of the water at the time of sample collection.
3. The benchmarks for copper are listed in order of monitoring event and were calculated for freshwater using the formula in Table 16.

Table 44. 2024–2025 Trash Observations for 06T_FC_BR

Event	Count	Types
62	~10	Plastic, ag trash
63	>50	Aluminum, glass, metal, paper, plastic, Styrofoam, concrete
64	>100	Plastic, metal, rubber, paper
65	>50	Plastic, metal, paper

07D_HITCH_LEVEE_2

This monitoring site is located at the 2nd corrugated pipe discharging on the North side of the Arroyo Simi flood control levee East of Hitch Boulevard. This site discharges directly into Calleguas Creek Reach 7 (Arroyo Simi).

Site Map **View toward W looking downstream**

Flow was observed and samples were collected at 07D_HTCH_LEVEE_2 during 2024-2025 wet weather Event 64. The site was dry, samples were not collected during both dry weather Events 62 and 65, as well as wet weather Event 63. **Table 45** summarizes the water quality benchmark exceedances at this site. **Table 46** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 47** summarizes the trash observations for each event.

Row crops, potted plants, and sod are the most common crops grown within this site drainage area.

Table 45. 2024-2025 Benchmark Exceedances at 07D_HITCH_LEVEE_2

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	None	None	TDS Nitrate Dissolved Copper Total Chlordane 4,4'-DDD 4,4'-DDE Bifenthrin *E. coli*	None

Table 46. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: 07D_HITCH_LEVEE_2

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs				0.4	
pH	pH	6.5 ≤ pH ≤ 8.5			8.1	
Temperature	ºC	≤ 26.67 [1]			13.6	
Dissolved Oxygen	mg/L	≥ 5			10.8	
Turbidity	NTU				697	
Conductivity	uS/cm				1193	
General Water Quality						
TDS	mg/L	850			**903**	
TSS	mg/L				998	
Total Hardness as CaCO3	mg/L				65	
Chloride	mg/L	150			80	
Sulfate	mg/L	250			188	
Nutrients						
Ammonia-N	mg/L	NC/NC/ 2.23/NC [2]			0.83	
Nitrate-N	mg/L	10			**26.9**	
Nitrite-N	mg/L		NS	NS	0.27	NS
Total Nitrogen	mg/L				32.1	
Total Orthophosphate	mg/L				2.47	
Total Phosphorus	mg/L				8.75	
Metals						
Dissolved Copper	ug/L	NC/NC/ 6.20/NC [3]			**19**	
Total Copper	ug/L				143	
Organochlorine Pesticides						
Chlordane-gamma	ug/L				0.00308	
Total Chlordane	ug/L	0.00059			**0.00308**	
2,4'-DDE	ug/L				0.0123	
4,4'-DDD	ug/L	0.00084			**0.0629**	
4,4'-DDE	ug/L	0.00059			**0.437**	
4,4'-DDT	ug/L	0.00059			ND	
Dieldrin	ug/L	0.00014			ND	
Toxaphene	ug/L	0.00075			ND	
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025			ND	
Diazinon	ug/L	0.1			ND	
Pyrethroid Pesticides						
Fluvalinate	ug/L				0.228	

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Esfenvalerate	ug/L				DNQ	
Bifenthrin	ug/L	0.0006			**0.0038**	
Bacteria						
E. coli	cfu/100 mL	320 (STV)			**2720**	

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.
ND = Not detected at the applicable reporting limit.
DNQ = Detected, not quantified.
NS = No samples were collected due to lack of flow.
NC = Not calculated
1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. The benchmarks for Ammonia-N are listed in order of monitoring event and were calculated based on the April 2002 Basin Plan Amendment chronic equation (ELS absent) and are dependent upon the pH and temperature of the water at the time of sample collection.
3. The benchmarks for copper are listed in order of monitoring event and were calculated for freshwater using the formula in Table 16.

Table 47. 2024–2025 Trash Observations for 07D_HITCH_LEVEE_2

Event	Count	Types
62	0	
63	0	
64	>3	Plastic
65	<10	Plastic, paper

Oxnard Coastal Watershed

The Oxnard Coastal Watershed contains one VCAILG monitoring site and one background site. The VCAILG monitoring site is located on a drain that is used primarily for irrigated agriculture, while the background site drains primarily urban runoff.

CIHD_DORIS

This monitoring site is located on the Doris Drain at the corner before discharging into Edison Canal further downstream. The upstream background site, CIHD_DORIS_BKGD, characterizes the influence of urban runoff on applicable constituent concentrations collected at CIHD_DORIS. Per approval of the 2024 MRP, this site replaced CIHD_VICT to represent agricultural discharges in the Oxnard Coastal Area.

Site Map | **View toward S looking downstream**

Flow was observed and samples were collected at CIHD_DORIS during all four 2024-2025 events. **Table 48** summarizes the water quality benchmark exceedances at this site. **Table 49** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 50** summarizes the trash observations for each event.

Row crops and rotational crops are the most common crops grown within this site drainage area.

Table 48. 2024-2025 Benchmark Exceedances at CIHD_DORIS

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	Dissolved Oxygen 4,4'-DDE Bifenthrin	Nitrate-N 4,4'-DDE 4,4'-DDT Bifenthrin *E. coli*	Bifenthrin *E. coli*	Nitrate-N Bifenthrin

Table 49. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: CIHD_DORIS

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs		0.8	2.1	1	0.5
pH	pH	6.5 ≤ pH ≤ 8.5	7.2	7.4	7.4	7.5
Temperature	ºC	≤ 26.67 [1]	18.1	13.4	14.1	19.7
Dissolved Oxygen	mg/L	≥ 5	**4**	7.9	6.6	7.8
Turbidity	NTU		1.5	20.1	9.6	2.3
Conductivity	uS/cm		2600.9	2072.1	863	2661.4
General Water Quality						
TDS	mg/L		2270	1700	609	2350
TSS	mg/L		2	16	10	3
Total Hardness as CaCO3	mg/L		1150	878	276	1170
Chloride	mg/L		118	96	37	92
Sulfate	mg/L		1130	763	287	1110
Nutrients						
Ammonia-N	mg/L	4.28/5.09/ 4.86/3.12 [2]	0.06	0.18	0.21	0.3
Nitrate-N	mg/L	10 [3]	8.2	**14.9**	3.7	**10.3**
Total Nitrogen	mg/L		8.5	19.2	5.1	24.5
Total Orthophosphate	mg/L		0.16	1.44	1.07	2.96
Total Phosphorus	mg/L		0.14	0.47	0.57	1.01
Metals						
Dissolved Copper	ug/L	29.28/29.28/ 21.32/29.28 [4]	1.95	2.84	2.41	3.45
Total Copper	ug/L		1.96	4.98	34.5	3.68
Organochlorine Pesticides						
BHC-beta	ug/L		ND	0.02	ND	ND
Chlordane-alpha	ug/L		ND	DNQ	ND	ND
Chlordane-gamma	ug/L		ND	DNQ	ND	ND
Total Chlordane	ug/L	0.00059	ND	ND	ND	ND
2,4'-DDD	ug/L		ND	0.00391	DNQ	ND
4,4'-DDD	ug/L	0.00084	ND	ND	ND	ND
4,4'-DDE	ug/L	0.00059	**0.00209**	**0.0115**	ND	ND
4,4'-DDT	ug/L	0.00059	ND	**0.0105**	ND	ND
Dieldrin	ug/L	0.00014	ND	ND	ND	ND
Toxaphene	ug/L	0.00075	ND	ND	ND	ND
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025	0.001	ND	ND	ND
Diazinon	ug/L	0.1	ND	ND	ND	ND
Malathion	ug/L		0.075	ND	ND	ND

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Pyrethroid Pesticides						
Permethrin, trans-	ug/L		ND	0.269	0.0306	ND
Permethrin, cis-	ug/L		ND	0.208	0.0703	ND
Fenpropathrin	ug/L		0.0146	ND	ND	ND
Cypermethrin, total	ug/L		ND	0.0092	ND	ND
Cyfluthrin, total	ug/L		ND	0.006	ND	ND
Bifenthrin	ug/L	0.0006	**0.0032**	**0.0493**	**0.0747**	**0.0039**
Bacteria						
E. coli	cfu/100 mL	320 (STV)	ND	**1580**	**1870**	200

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.

DNQ = Detected, not qualified.

ND = Not detected at the applicable reporting limit.

1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. The benchmarks for Ammonia-N are listed in order of monitoring event and were calculated based on the April 2002 Basin Plan Amendment chronic equation (ELS absent) and are dependent upon the pH and temperature of the water at the time of sample collection.
3. There is no site-specific nitrogen objective in the Basin Plan (Table 3-8) applicable to this reach. The Basin Plan objective of 10 mg/L nitrate-N was used for comparison with VCAILG data for this site.
4. The copper benchmark for saltwater (shown in Table 16) applies at this site.

Table 50. 2024–2025 Trash Observations for CIHD_DORIS

Event	Count	Types
62	5-10	Ag plastic
63	10-20	Spray can, Styrofoam, urban trash
64	5-10	Glass bottle, spray can, wrapper
65	>10	Plastic, ag trash

CIHD_DORIS_BKGD

This background monitoring site is located upstream of CIHD_DORIS on the Doris drain, specifically where it daylights after passing underneath Patterson Road. This site drains predominantly urban land uses and characterizes the influence of urban runoff on applicable constituent concentrations collected at CIHD_DORIS.

Site Map

View toward E looking upstream

Flow was observed and samples were collected at CIHD_DORIS_BKGD during all four 2024-2025 Events. **Table 51** summarizes the water quality benchmark exceedances at this site. **Table 52** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 53** summarizes the trash observations for each event.

Table 51. 2024-2025 Benchmark Exceedances at CIHD_DORIS_BKGD

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	Dissolved Oxygen Total Chlordane 4,4'-DDD 4,4'-DDE 4,4'-DDT Bifenthrin *E. coli*	4,4'-DDE Bifenthrin *E. coli*	Dissolved Copper Bifenthrin *E. coli*	Bifenthrin *E. coli*

Table 52. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: CIHD_DORIS_BKGD

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs		0.2	0	2.3	0.1
pH	pH	6.5 ≤ pH ≤ 8.5	7.2	7.1	7.6	7.6
Temperature	ºC	≤ 26.67 [1]	18.3	11.9	13.6	19.5
Dissolved Oxygen	mg/L	≥ 5	**4**	8.8	10.3	5.5
Turbidity	NTU		74	34.3	11	NM
Conductivity	uS/cm		2993.4	699.1	84.8	2717.7
General Water Quality						
TDS	mg/L		2600	625	36	2240
TSS	mg/L		56	61	14	2
Total Hardness as CaCO3	mg/L		1580	332	21	1310
Chloride	mg/L		174	42	4	126
Sulfate	mg/L		1290	252	11	1050
Nutrients						
Ammonia-N	mg/L	4.22/6.71/ 4.22/2.88 [2]	0.81	0.48	0.27	0.64
Nitrate-N	mg/L	10 [3]	1.3	1.3	0.9	1.8
Total Nitrogen	mg/L		2.4	2.5	1	5.8
Total Orthophosphate	mg/L		0.52	1.59	0.76	1.33
Total Phosphorus	mg/L		1.22	0.73	0.35	0.44
Metals						
Dissolved Copper	ug/L	29.28/24.97/ 2.36/29.28 [4]	0.78	3.33	**3.34**	1.31
Total Copper	ug/L		7.92	16.2	7.38	2.32
Organochlorine Pesticides						
BHC-beta	ug/L		ND	0.025	ND	ND
cis-Nonachlor	ug/L		DNQ	ND	ND	ND
trans-Nonachlor	ug/L		0.00362	DNQ	ND	ND
Chlordane-alpha	ug/L		0.00463	DNQ	ND	ND
Chlordane-gamma	ug/L		0.0043	DNQ	ND	ND
Total Chlordane	ug/L	0.00059	**0.00893**	DNQ	ND	ND
2,4'-DDD	ug/L		0.00832	ND	ND	ND
4,4'-DDD	ug/L	0.00084	**0.0243**	ND	ND	ND
4,4'-DDE	ug/L	0.00059	**0.0546**	**0.0158**	ND	ND
4,4'-DDT	ug/L	0.00059	**0.00348**	ND	ND	ND
Dieldrin	ug/L	0.00014	ND	ND	ND	ND
Toxaphene	ug/L	0.00075	ND	ND	ND	ND
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025	ND	ND	ND	ND

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Diazinon	ug/L	0.1	ND	ND	ND	ND
Malathion	ug/L		0.212	ND	ND	ND
Mevinphos	ug/L		ND	0.022	ND	ND
Pyrethroid Pesticides						
Permethrin, trans-	ug/L		0.0121	0.0355	0.0451	ND
Permethrin, cis-	ug/L		0.0318	0.0515	0.0592	ND
Deltamethrin/Tralomethrin	ug/L		ND	0.0095	ND	ND
Cyhalothrin, Total Lambda-	ug/L		ND	0.0048	0.0146	ND
Cyfluthrin, total	ug/L		ND	0.0407	ND	ND
Bifenthrin	ug/L	0.0006	**0.145**	**0.181**	**0.208**	**0.0023**
Bacteria						
E. coli	cfu/100 mL	320 (STV)	**2620**	**17800**	**3640**	**1600**

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.
NM = Not measured
DNQ = Detected, not qualified.
ND = Not detected at the applicable reporting limit.

1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. The benchmarks for Ammonia-N are listed in order of monitoring event and were calculated based on the April 2002 Basin Plan Amendment chronic equation (ELS absent) and are dependent upon the pH and temperature of the water at the time of sample collection.
3. There is no site-specific nitrogen objective in the Basin Plan (Table 3-8) applicable to this reach. The Basin Plan objective of 10 mg/L nitrate-N was used for comparison with VCAILG data for this site.
4. The copper benchmark for saltwater (shown in Table 16) applies at this site.

Table 53. 2024–2025 Trash Observations for CIHD_DORIS_BKGD

Event	Count	Types
62	10-20	Plastic, trash bags, cans
63	10-20	Jacket, ag trash, urban trash, plastic bottles, cans
64	10-20	Jacket, glass bottle, pen, urban trash
65	>10	Ag trash, cans, bottles

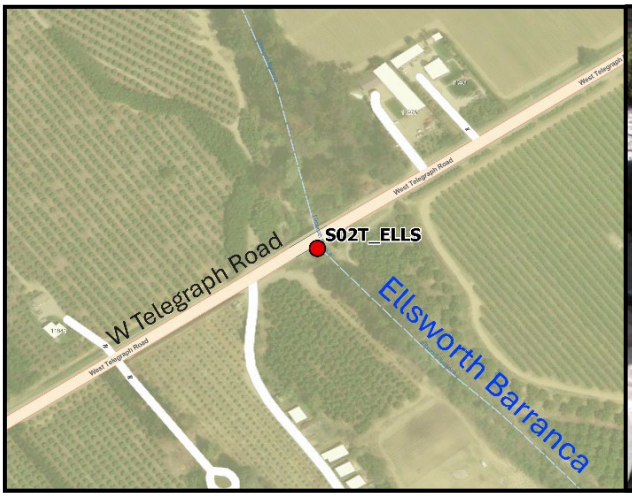
Santa Clara River Watershed

The Santa Clara River Watershed contains four VCAILG monitoring sites. Three of the sites are located on tributaries to the Santa Clara River. S03D_BARDS is the only monitoring site located on a drain used primarily for irrigated agriculture. Monitoring sites are discussed below in order of the Santa Clara River reach into which they drain.

S02T_ELLS

This monitoring site is located on Ellsworth Barranca just downstream of the Telegraph Road Bridge. Ellsworth Barranca drains the Aliso Canyon area and is a tributary to Santa Clara River Reach 2.

Site Map



View toward N looking upstream

Flow was observed and samples were collected at S02T_ELLS during both wet weather events and during dry weather Event 65. No flow was observed, and samples were not taken during dry weather Event 62. **Table 54** summarizes the water quality benchmark exceedances at this site. **Table 55** summarizes concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 56** summarizes the trash observations for each event.

Avocados, citrus, and rotational crops are the most common crops grown within this site drainage area.

Table 54. 2024-2025 Benchmark Exceedances at S02T_ELLS

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	None	4,4'-DDT *E. coli*	Nitrate-N Bifenthrin *E. coli*	*E. coli*

Table 55. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: S02T_ELLS

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs			0.02	0.1	1.3
pH	pH	6.5 ≤ pH ≤ 8.5		8.4	8.0	8.1
Temperature	ºC	≤ 26.67 [1]		11	14.5	18.6
Dissolved Oxygen	mg/L	≥ 5		12.8	10.3	9.4
Turbidity	NTU			67.2	869	121
Conductivity	uS/cm			1391	902	1332
General Water Quality						
TDS	mg/L	1200		1120	684	1060
TSS	mg/L			6	333	14
Total Hardness as CaCO3	mg/L			579	420	552
Chloride	mg/L	150		51	29	54
Sulfate	mg/L	600		488	308	438
Nutrients						
Ammonia-N	mg/L	NR/1.49/ 2.37/1.73 [2]		0.07	0.23	0.05
Nitrate-N	mg/L	10		1.7	**11.1**	1.7
Nitrite-N	mg/L			0.06	0.24	ND
Total Nitrogen	mg/L			1.6	15.5	3.2
Total Orthophosphate	mg/L		NS	0.14	1.17	0.09
Total Phosphorus	mg/L			ND	1.51	0.05
Metals						
Dissolved Copper	ug/L	NC/29.28/ 29.28/29.28 [3]		0.52	14.4	0.58
Total Copper	ug/L			1.11	114	0.76
Organochlorine Pesticides						
BHC-beta	ug/L			0.018	ND	ND
Total Chlordane	ug/L	0.00059		ND	ND	ND
4,4'-DDD	ug/L	0.00084		ND	ND	ND
4,4'-DDE	ug/L	0.00059		ND	ND	ND
4,4'-DDT	ug/L	0.00059		**0.283**	ND	ND
Dieldrin	ug/L	0.00014		ND	ND	ND
Toxaphene	ug/L	0.00075		ND	ND	ND
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025		ND	ND	ND
Diazinon	ug/L	0.1		ND	ND	ND
Phosmet	ug/L			ND	0.045	ND
Pyrethroid Pesticides						
Permethrin, trans-	ug/L			ND	0.0227	ND

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Permethrin, cis-	ug/L			ND	0.0252	ND
Bifenthrin	ug/L	0.0006		ND	**0.0021**	ND
Bacteria						
E. coli	cfu/100 mL	320 (STV)		**520**	**4200**	**410**

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.
ND = Not detected at the applicable reporting limit.
NC = Not calculated
NS = Not sampled due to site being dry.

1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. The benchmarks for Ammonia-N are listed in order of monitoring event and were calculated based on the April 2002 Basin Plan Amendment chronic equation (ELS present) and are dependent upon the pH and temperature of the water at the time of sample collection.
3. The freshwater copper benchmarks are listed in order of monitoring event and were calculated using the formula shown in Table 16.

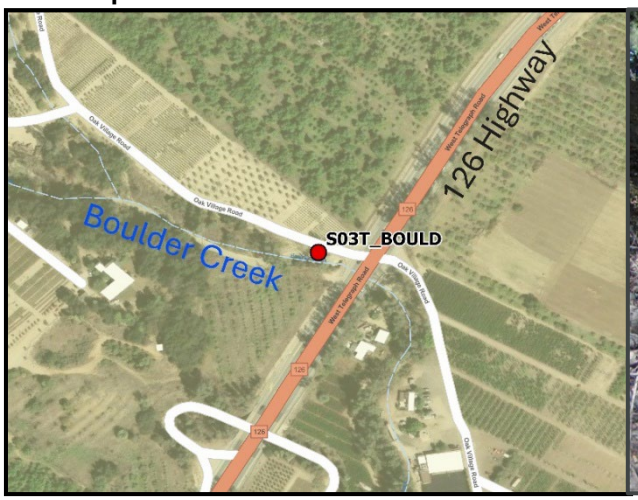
Table 56. 2024–2025 Trash Observations for S02T_ELLS

Event	Count	Types
62	0	
63	>10	cans, cups, plastic
64	>10	Cans, plastic cup, beer wrapper, chip wrapper
65	<5	Plastic

S03T_BOULD

This monitoring site is located on Boulder Creek just upstream of Highway 126, west of Fillmore. Boulder Creek is a tributary to Santa Clara River Reach 3.

Site Map



View toward NW looking upstream

Flow was observed and samples were collected during wet weather Event 64. The site was dry during both dry weather events as well as during wet weather Event 63. **Table 57** summarizes the water quality benchmark exceedances at this site. **Table 58** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 59** summarizes the trash observations for each event.

Avocados and citrus are the most common crops grown within this site drainage area.

Table 57. 2024-2025 Benchmark Exceedances at S03T_BOULD

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	None	None	TDS Sulfate Nitrate-N Bifenthrin *E. coli*	None

Table 58. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: S03T_BOULD

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements			NS	NS		NS
Flow	cfs				3.3	
pH	pH	6.5 ≤ pH ≤ 8.5			7.8	
Temperature	ºC	≤ 26.67 [1]			11.9	
Dissolved Oxygen	mg/L	≥ 5			10.8	
Turbidity	NTU				111	
Conductivity	uS/cm				1852	
General Water Quality						
TDS	mg/L	1300			**1640**	
TSS	mg/L				83	
Total Hardness as CaCO3	mg/L				788	
Chloride	mg/L	100			80	
Sulfate	mg/L	650			**840**	
Nutrients						
Ammonia-N	mg/L	NC/NC/ 3.54/NC [2]			2.55	
Nitrate-N	mg/L	5			**16.9**	
Nitrite-N	mg/L				0.4	
Total Nitrogen	mg/L				25.8	
Total Orthophosphate	mg/L				1.18	
Total Phosphorus	mg/L				0.78	
Metals						
Dissolved Copper	ug/L	NC/NC 29.28/NC [3]			9.99	
Total Copper	ug/L				18.9	
Organochlorine Pesticides						
Total Chlordane	ug/L	0.00059			ND	
4,4'-DDD	ug/L	0.00084			ND	
4,4'-DDE	ug/L	0.00059			ND	
4,4'-DDT	ug/L	0.00059			ND	
Dieldrin	ug/L	0.00014			ND	
Toxaphene	ug/L	0.00075			ND	
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025			ND	
Diazinon	ug/L	0.1			ND	
Pyrethroid Pesticides						
Bifenthrin	ug/L	0.0006			**0.0259**	
Bacteria						
E. coli	cfu/100 mL	320 (STV)			**3690**	

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.
ND = Not detected at the applicable reporting limit.
NS = No samples were collected due to lack of flow.
NC = Not calculated
1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. The benchmarks for Ammonia-N are listed in order of monitoring event, were calculated based on the April 2002 Basin Plan Amendment chronic equation (ELS present) and are dependent upon the pH and temperature of the water at the time of sample collection.
3. The freshwater copper benchmark was calculated for this site using the formula in Table 16.

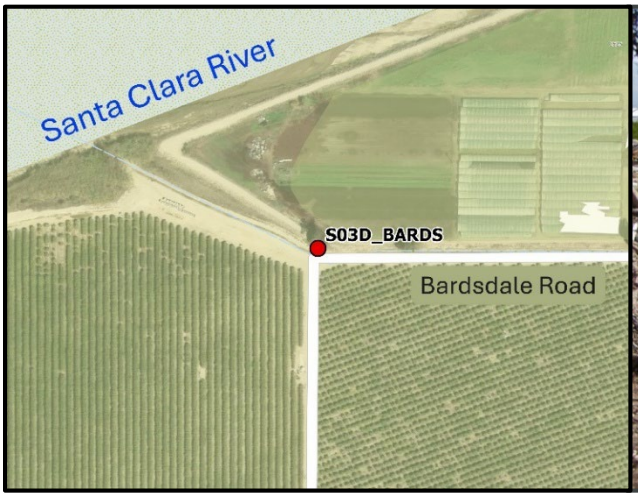
Table 59. 2024–2025 Trash Observations for S03T_BOULD

Event	Count	Types
62	0	
63	0	
64	0	
65	10	Ag plastic

S03D_BARDS

This monitoring site is located near the end of the agricultural drain that runs parallel to Bardsdale Avenue. The drain is located on the south side of the Santa Clara River and eventually discharges into Santa Clara River Reach 3.

Site Map



View towards W looking upstream

The site was dry, and no samples were collected during all four monitoring events. **Table 60** summarizes the water quality benchmark exceedances at this site**. Table 61** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 62** summarizes the trash observations for each event

Citrus and row crops are the most common crops grown within this site drainage area.

Table 60. 2024-2025 Benchmark Exceedances at S03D_BARDS

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	None	None	None	None

Table 61. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: S03D_BARDS

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs					
pH	pH	6.5 ≤ pH ≤ 8.5				
Temperature	ºC	≤ 26.67 [1]				
Dissolved Oxygen	mg/L	≥ 5				
Turbidity	NTU					
Conductivity	uS/cm					
General Water Quality						
TDS	mg/L	1300				
TSS	mg/L					
Total Hardness as CaCO3	mg/L					
Chloride	mg/L	100				
Sulfate	mg/L	650	NS	NS	NS	NS
Nutrients						
Ammonia-N	mg/L	NC				
Nitrate-N	mg/L	5				
Nitrite-N	mg/L					
Total Nitrogen	mg/L					
Total Orthophosphate	mg/L					
Total Phosphorus	mg/L					
Metals						
Dissolved Copper	ug/L	NC				
Total Copper	ug/L					
Organochlorine Pesticides						
Total Chlordane	ug/L	0.00059				
4,4'-DDD	ug/L	0.00084				
4,4'-DDE	ug/L	0.00059				
4,4'-DDT	ug/L	0.00059				
Dieldrin	ug/L	0.00014				
Toxaphene	ug/L	0.00075				
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025				
Diazinon	ug/L	0.1				
Pyrethroid Pesticides						
Bifenthrin	ug/L	0.0006				
Bacteria						
E. coli	cfu/100 mL	320 (STV)				

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.

NS = No samples were collected due to lack of flow.
NC = Not calculated
1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).

Table 62. 2024–2025 Trash Observations for S03D_BARDS

Event	Count	Types
62	0	
63	<5	Ag trash
64	<5	Ag trash, cardboard box
65	10	Ag trash

S04T_TAPO

This monitoring site is located on Tapo Creek south of Highway 126 and the Santa Clara River near the Ventura / Los Angeles County boundary. Tapo Creek is a tributary to Santa Clara River Reach 4.

Site Map

View towards N looking downstream

Flow was observed and samples were collected at S04T_TAPO during both wet events and during dry Event 62. **Table 64** summarizes the water quality benchmark exceedances at this site. **Table 64** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality benchmarks. **Table 65** summarizes the trash observations for each event.

Citrus, row crops, and strawberries are the most common crops grown within this site drainage area.

Table 63. 2024-2025 Benchmark Exceedances at S04T_TAPO

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	TDS Chloride Sulfate 4,4'-DDT *E. coli*	TDS Chloride Sulfate 4,4'-DDE Dieldrin *E. coli*	Total Chlordane 4,4'-DDD 4,4'-DDE 4,4'-DDT *E. coli*	None

Table 64. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: S04T_TAPO

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs		2.9	0.04	2.6	
pH	pH	6.5 ≤ pH ≤ 8.5	8.2	8.2	8	
Temperature	ºC	≤ 26.67 [1]	15.2	8.4	11.1	
Dissolved Oxygen	mg/L	≥ 5	10.2	11.4	10.2	
Turbidity	NTU		0.8	1.7	1000+	
Conductivity	uS/cm		3784.8	4751	227	
General Water Quality						
TDS	mg/L	1300	**3290**	**4130**	110	
TSS	mg/L		1	4	385	
Total Hardness as CaCO3	mg/L		1400	1470	112	
Chloride	mg/L	100	**252**	**277**	7	
Sulfate	mg/L	650	**1490**	**1970**	59	
Nutrients						
Ammonia-N	mg/L	1.69/ 2.54/ 3.22/ NC [2]	ND	0.43	0.12	
Nitrate-N	mg/L	5	3	0.8	2.6	
Nitrite-N	mg/L		ND	ND	0.08	
Total Nitrogen	mg/L		3	2.1	3.8	
Total Orthophosphate	mg/L		ND	0.39	0.97	
Total Phosphorus	mg/L		ND	0.11	1.06	NS
Metals						
Dissolved Copper	ug/L	29.28/29.28/ 9.87/NC [3]	6.24	15.7	5.12	
Total Copper	ug/L		6.46	18.5	28.4	
Organochlorine Pesticides						
BHC-alpha	ug/L		ND	0.014	ND	
Chlordane-gamma	ug/L		ND	ND	0.00812	
Total Chlordane	ug/L	0.00059	ND	ND	**0.00812**	
2,4'-DDD	ug/L		ND	DNQ	0.0394	
2,4'-DDE	ug/L		ND	ND	0.00917	
2,4'-DDT	ug/L		ND	ND	0.0357	
4,4'-DDD	ug/L	0.00084	ND	ND	**0.0351**	
4,4'-DDE	ug/L	0.00059	ND	**0.0389**	**0.179**	
4,4'-DDT	ug/L	0.00059	**0.00305**	ND	**0.294**	
Dieldrin	ug/L	0.00014	ND	**0.054**	ND	
Methoxychlor	ug/L		ND	0.015	ND	
Toxaphene	ug/L	0.00075	ND	ND	ND	
Organophosphorus Pesticides						

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Chlorpyrifos	ug/L	0.025	ND	ND	ND	
Diazinon	ug/L	0.1	ND	ND	ND	
Malathion	ug/L		ND	0.176	ND	
Methidathion	ug/L		ND	0.325	ND	
Parathion, Methyl	ug/L		ND	1.09	ND	
Pyrethroid Pesticides						
Bifenthrin	ug/L	0.0006	ND	ND	DNQ	
Bacteria						
E. coli	cfu/100 mL	320 (STV)	**410**	**410**	**1480**	

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.

DNQ = Detected, not qualified.

ND = Not detected at the applicable reporting limit.

NS = No samples were collected due to lack of flow.

NC = Not calculated

1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).
2. The benchmarks for Ammonia-N are listed in order of monitoring event and were calculated based on the April 2002 Basin Plan Amendment chronic equation (ELS present) and are dependent upon the pH and temperature of the water at the time of sample collection.
3. The freshwater copper benchmark was calculated for this site using the formula in Table 16. It was the same for all four events.

Table 65. 2024–2025 Trash Observations for S04T_TAPO

Event	Count	Types
62	3	Plastic lids, bags
63	<5	Plastic lid, plastic wrap
64	0	
65	5	Plastic

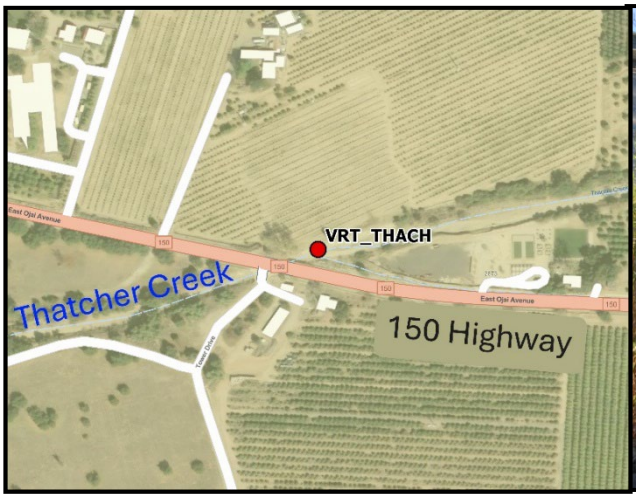
Ventura River Watershed

There are two VCAILG monitoring sites located in this watershed, and both are located on tributaries to the Ventura River on the east end of the City of Ojai.

VRT_THACH

This monitoring site is located on Thacher Creek just upstream of Highway 150 (Ojai Avenue) in Ojai. Thacher Creek is a tributary of San Antonio Creek, which is a tributary of the Ventura River.

Site Map



View toward SW looking downstream

The site was dry and no samples were collected during all four monitoring events. **Table 66** summarizes the water quality benchmark exceedances at this site. **Table 67** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality objectives. **Table 68** summarizes the trash observations for each event.

Citrus and avocados are the most common crops grown within this site drainage area.

Table 66. 2024-2025 Benchmark Exceedances at VRT_THACH

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	None	None	None	None

Table 67. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: VRT_THACH

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs					
pH	pH	6.5 ≤ pH ≤ 8.5				
Temperature	ºC	≤ 26.67 [1]				
Dissolved Oxygen	mg/L	≥ 5				
Turbidity	NTU					
Conductivity	uS/cm					
General Water Quality						
TDS	mg/L	800				
TSS	mg/L					
Total Hardness as CaCO3	mg/L					
Chloride	mg/L	60				
Sulfate	mg/L	300	NS	NS	NS	NS
Nutrients						
Ammonia-N	mg/L	NC				
Nitrate-N	mg/L	5				
Nitrite-N	mg/L					
Total Nitrogen	mg/L					
Total Orthophosphate	mg/L					
Total Phosphorus	mg/L					
Metals						
Dissolved Copper	ug/L	NC				
Total Copper	ug/L					
Organochlorine Pesticides						
Total Chlordane	ug/L	0.00059				
4,4'-DDD	ug/L	0.00084				
4,4'-DDE	ug/L	0.00059				
4,4'-DDT	ug/L	0.00059				
Dieldrin	ug/L	0.00014				
Toxaphene	ug/L	0.00075				
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025				
Diazinon	ug/L	0.1				
Pyrethroid Pesticides						
Bifenthrin	ug/L	0.0006				
Bacteria						
E. coli	cfu/100 mL	320 (STV)				

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.

NS = No samples were collected due to lack of flow.
NC = Not calculated
1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).

Table 68. 2024–2025 Trash Observations for VRT_THACH

Event	Count	Types
62	0	
63	0	
64	0	
65	1	Paper

VRT_SANTO

This monitoring site is located on San Antonio Creek just upstream of Grand Avenue in Ojai. San Antonio Creek is a tributary of the Ventura River.

Site Map

View towards S looking downstream

The site was dry, and no samples were collected during all four monitoring events. **Table 69** summarizes the water quality benchmark exceedances at this site. **Table 70** summarizes the concentrations recorded for each constituent and provides a comparison of results to applicable water quality objectives. **Table 71** summarizes the trash observations for each event.

Citrus and avocado orchards are the most common crops grown within this site drainage area.

Table 69. 2024-2025 Benchmark Exceedances at VRT_SANTO

	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Constituents Exceeding Ag Order Benchmarks	None	None	None	None

Table 70. 2024–2025 VCAILG Monitoring Data v. *Ag Order* Benchmarks: VRT_SANTO

Constituent	Units	Benchmark	Event 62 Dry 9/23/2024	Event 63 Wet 1/27/2025	Event 64 Wet 2/5/2025	Event 65 Dry 6/3/2025
Field Measurements						
Flow	cfs					
pH	pH	6.5 ≤ pH ≤ 8.5				
Temperature	ºC	≤ 26.67 [1]				
Dissolved Oxygen	mg/L	≥ 5				
Turbidity	NTU					
Conductivity	uS/cm					
General Water Quality						
TDS	mg/L	800				
TSS	mg/L					
Total Hardness as CaCO3	mg/L					
Chloride	mg/L	60				
Sulfate	mg/L	300	NS	NS	NS	NS
Nutrients						
Ammonia-N	mg/L	NC				
Nitrate-N	mg/L	5				
Nitrite-N	mg/L					
Total Nitrogen	mg/L					
Total Orthophosphate	mg/L					
Total Phosphorus	mg/L					
Metals						
Dissolved Copper	ug/L	NC				
Total Copper	ug/L					
Organochlorine Pesticides						
Total Chlordane	ug/L	0.00059				
4,4'-DDD	ug/L	0.00084				
4,4'-DDE	ug/L	0.00059				
4,4'-DDT	ug/L	0.00059				
Dieldrin	ug/L	0.00014				
Toxaphene	ug/L	0.00075				
Organophosphorus Pesticides						
Chlorpyrifos	ug/L	0.025				
Diazinon	ug/L	0.1				
Pyrethroid Pesticides						
Bifenthrin	ug/L	0.0006				
Bacteria						
E. coli	cfu/100 mL	320 (STV)				

Concentrations in **bold** indicate an exceedance of a water quality benchmark applicable to this site for the specified constituent. See **Table 14** through **Table 20** for a list of benchmarks applicable to this site.

NS = No samples were collected due to lack of flow.
1. The temperature limit for waterbodies designated as WARM is 80°F (26.67°C).

Table 71. 2024–2025 Trash Observations for VRT_SANTO

Event	Count	Types
62	0	
63	0	
64	3	Trash bag, large paint chips
65	0	

Chronic Toxicity Test Results

During the 2024-2025 monitoring year, PER performed single-species short-term chronic toxicity tests for samples collected during the first wet weather event (Event 63) and second dry weather event (Event 65).

Following the 2024 QAPP and MRP procedures, toxicity monitoring occurred at all VCAILGMP sites that require sampling for *Ag Order* Appendix 3, Table 1 constituents. Single-species toxicity testing was conducted using the appropriate invertebrate species, either *C. dubia* or *Hyalella azteca*, based on the conductivity of the sample. The *C. dubia* chronic test consisted of the 3-brood (6- to 8-day) survival and reproduction test, and the *Hyalella* test consisted of a 10-day survival test. **Table 72** summarizes the chronic toxicity results from wet weather Event 63 and dry weather Event 65. PER submitted two types of reports, an electronic data deliverable (EDD), which has been configured to California Environmental Data Exchange Network (CEDEN) format, and a narrative report. The toxicity data are included as Appendix G and the narrative lab reports are also included in this report submittal.

Table 72. Chronic Toxicity Results 2024-2025

Event	Site	*Ceriodaphnia dubia* [1]		*Hyalella azteca* [2]		TIE Triggered?
		Reproduction Toxicity	Reproduction % Effect	Survival Toxicity	Survival % Effect	
63: 1/27/2025 (wet weather)	01T_ODD3_EDI			Pass	10%[3]	--
	01T_ODD2_DCH			Fail	100%[3]	YES
	CIHD_DORIS	Fail	33.2%[3]			--
	CIHD_DORIS_BKGD	Fail	53.4%[3]			--
	S02T_ELLS	Fail	38.8%[3]			--
	S02T_TAPO			Pass	2.0%	--
65: 6/3/2025 (dry weather)	01T_ODD3_EDI			Pass	2.0%	--
	01T_ODD2_DCH			Pass	-2.0%	--
	CIHD_DORIS	Pass	13.8%[3]			--
	CIHD_DORIS_BKGD	Fail	39.4%[3]			--
	S02T_ELLS	Fail	45.1%[3]			--

1. *Ceriodaphnia dubia* (invertebrate – water flea) is evaluated for the reproduction endpoints.
2. *Hyalella azteca* (invertebrate – crustacean) is evaluated for the survival endpoint.
3. The response at this test treatment was significantly less than the Lab Control treatment response ($p < 0.05$).

Event 63: TIE Results

Complete mortality of *Hyallela azteca* occurred on day 5 in the 01T_ODD2_DCH sample and based on the observation of >50% reduction in survival on day 3 in the initial test, a TIE targeted for pesticides and metals was performed. No blank interreferences were observed for the TIE treatments. Toxicity was persistent in the sample, with complete mortality on Day 5 of testing. Toxicity was reduced in the centrifugation treatment, indicating that some of the toxicity was due to particulate associated contaminants. Toxicity was completely removed in the carbon column treatment, indicating that a dissolved non-polar organic contaminant was responsible for the toxicity. Toxicity was also completely removed in the cation exchange column treatment, indicating that either metals and/or a very hydrophobic organic contaminant (i.e., partitions to the column) was responsible for the toxicity. Toxicity was slightly delayed via the addition of Piperonyl Butoxide (PBO), indicating that a metabolically activated contaminant was responsible for the toxicity. Overall, these results are consistent with a potential mixture of contaminants (e.g., pyrethroid insecticides, organophosphate insecticides, and potentially metals) as the likely cause of the toxicity.

TMDL Load Allocations and Monitoring Results

Calleguas Creek Watershed

The Stakeholders Implementing TMDLs in the Calleguas Creek Watershed submit an annual monitoring report on December 15th of each year. This year's report, "Calleguas Creek Watershed TMDL Compliance Monitoring Program Annual Monitoring Report Year 17 – July 2024 to June 2025" (CCW TMDLs AMR) is being provided with the VCAILG AMR. The report includes summaries of the sampling events, data summaries, and progress towards meeting TMDL targets for five of the six of the currently effective TMDLs in the watershed:

- Nitrogen Compounds and Related Effects in Calleguas Creek (Nitrogen or Nutrients TMDL)
- Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs) and Siltation in Calleguas Creek, its Tributaries, and Mugu Lagoon (OC Pesticides TMDL)
- Toxicity, Chlorpyrifos, and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon (Toxicity TMDL)
- Metals and Selenium in Calleguas Creek, its Tributaries, and Mugu Lagoon (Metals TMDL)
- Boron, Chloride, Sulfate and TDS (Salts) in the Calleguas Creek, its Tributaries and Mugu Lagoon (Salts TMDL)

The Revolon Slough and Beardsley Wash Trash TMDL is addressed through a separate monitoring and reporting program. For additional information, refer to the "2025 Revolon Slough/Beardsley Wash Trash TMDL TMRP/MFAC Annual Report", which is also submitted in December 2025.

The following section shows the results of the exceedance evaluations for TMDLs in the Calleguas Creek Watershed. Only observed exceedances of final benchmarks are shown in the tables. **Table 73** shows the summary of the results of the comparison to the CCW Nitrogen TMDL benchmark. The water quality benchmark for the CCW Nitrogen TMDL is to be met by July 16, 2010.

Table 74 shows the summary of the results for the CCW Toxicity TMDL compared to water quality benchmarks. The compliance date for the final water quality benchmarks based upon TMDL LAs for the CCW Toxicity TMDL is March 24, 2016.

No exceedances were observed for the CCW Metals TMDL, CCW Salts TMDL, or CCW OC Pesticides TMDL. Final water quality benchmarks based upon TMDL LAs for the CCW Metals TMDL became effective on March 26, 2022. The deadline to achieve the water quality benchmarks based upon TMDL LAs for the CCW Salts TMDL was December 23, 2023. Final water quality benchmarks based upon TMDL LAs for CCW OC Pesticides TMDL will become effective on March 26, 2026. For complete results of CCW TMDLs monitoring, please refer to the CCW TMDLs AMR provided with this report. All constituents and sites not shown in the table met the applicable benchmarks based on load allocations.

Table 73: CCW Nitrogen TMDL Load Allocation Benchmark Exceedances

TMDL Monitoring Site Concentration > Benchmark (only exceedances shown)					
TMDL Monitoring Site	Date	Weather Condition	Constituent	TMDL Monitoring Site Result	Applicable LA to compare to Result
01T_ODD2_DCH	9/25/2024	Dry	Nitrate-N + Nitrite-N	57.48 mg/L	9 mg/L
01T_ODD3_EDI	9/25/2024	Dry	Nitrate-N + Nitrite-N	60.81 mg/L	9 mg/L
01T_ODD2_DCH	1/27/2025	Wet	Nitrate-N + Nitrite-N	64.91 mg/L	9 mg/L
01T_ODD3_EDI	1/27/2025	Wet	Nitrate-N + Nitrite-N	47.49 mg/L	9 mg/L
01T_ODD2_DCH	2/5/2025	Wet	Nitrate-N + Nitrite-N	29.35 mg/L	9 mg/L
01T_ODD3_EDI	2/5/2025	Wet	Nitrate-N + Nitrite-N	17.26 mg/L	9 mg/L
07D_HITCH_LEVEE_2	2/5/2025	Wet	Nitrate-N + Nitrite-N	27.17 mg/L	9 mg/L
9BD_GERRY	2/5/2025	Wet	Nitrate-N + Nitrite-N	38.85 mg/L	9 mg/L
01T_ODD2_DCH	6/3/2025	Dry	Nitrate-N + Nitrite-N	66.29 mg/L	9 mg/L
01T_ODD3_EDI	6/3/2025	Dry	Nitrate-N + Nitrite-N	57.28 mg/L	9 mg/L

Table 74. CCW Toxicity TMDL Load Allocation Benchmark Exceedances

Step 1. TMDL Agricultural Land Use Site Concentration > Benchmark (only exceedances shown)					
TMDL Agricultural Land Use Site	Date	Weather Condition	Constituent	TMDL Agricultural Land Use Site Results	Applicable LA to compare to Results
01T_ODD3_EDI	1/27/2025	Wet	Toxicity (Survival)	>1 Tuc[1]	1 TUc
01T_ODD2_DCH	1/27/2025	Wet	Toxicity (Survival)	>1 TUc	1 TUc
01T_ODD2_DCH	2/5/2025	Wet	Toxicity (Survival)	>1 TUc	1 TUc

1. Statistical analysis using the TST-Welch's t Test results in a "PASS" (no significant reductions in *Hyalella azteca* survival).

Santa Clara River Watershed

Effective TMDLs for the Santa Clara River Watershed are discussed below. Monitoring data and a comparison to the Santa Clara River TMDL benchmarks are included below as part of this AMR.

Santa Clara River Nitrogen Compounds TMDL

Load Allocations

The LA for the Santa Clara River Nitrogen Compounds TMDL applicable to VCAILG monitoring sites is listed in **Table 75**.

Table 75. Load Allocations for Nitrogen Compounds

Constituent	Load Allocation (mg/L) [1]
Ammonia-N + Nitrate-N + Nitrite-N	10

1. The specified load allocation applies to all Santa Clara River reaches within Ventura County.

Monitoring Results

Table 76 lists the data collected at the VCAILGMP monitoring sites located within the Santa Clara River Watershed for comparison to the nitrogen LA. Exceedances of the LA were observed during wet weather Event 64 at S02T_ELLS and S03T_BOULD. However, the exceedances at S02T_ELLS was only slightly above the TMDL LA and there was a lab QA flag that applies to the result (either the method or field blank had detected concentrations of the analyzed constituent at more than one-fifth the sample concentration); therefore, the actual concentration is likely lower than reported due to the QA flag and lab variability

Table 76. Nitrogen Load Allocations Compared to SCR VCAILGMP Site Data

Site	Constituent	LA (mg/L)	Event 62 Dry Sep-2024	Event 63 Wet Jan-2025	Event 64 Wet Feb-2025	Event 65 Dry Jun-2025
S02T_ELLS	Ammonia-N + Nitrate-N + Nitrite-N	10	NS	1.83	***11.57***[1]	1.77
S03T_BOULD	Ammonia-N + Nitrate-N + Nitrite-N	10	NS	NS	**19.85**	NS
S03D_BARDS	Ammonia-N + Nitrate-N + Nitrite-N	10	NS	NS	NS	NS
S04T_TAPO	Ammonia-N + Nitrate-N + Nitrite-N	10	2.95	1.23	2.85	NS

Concentrations in **bold** indicate an exceedance of the LA.
NS = Not Sampled due to lack of flow or site was dry.
1. A QA flag applies to this result and the actual concentration is likely lower than reported.

Upper Santa Clara River Chloride TMDL

Load Allocations

The Upper Santa Clara River (USCR) Chloride TMDL includes a chloride LA that applies to reaches 4B, 5, and 6 of the Santa Clara River, and listed in **Table 77**. There are two VCAILG monitoring sites, S04T_TAPO and S04T_TAPO_BKGD, which drain to reach 4B. The remaining reaches are located within Los Angeles County. The S04T_TAPO monitoring site represents agricultural discharges in SCR Reach 4B and 5; the S04T_TAPO_BKGD monitoring site represents natural source contributions of chloride for the same areas.

Table 77. Load Allocation for Chloride

Constituent	Load Allocation (mg/L) [1]
Chloride	100

1. Allocation applies as a 3-month rolling average.

Monitoring Results

The *Ag Order* compliance date for the USCR Chloride TMDL was October 14, 2020. According to the Upper Santa Clara River Chloride TMDL source analysis, nonpoint sources are not a major chloride source. Additionally, in the 2020 AMR[9], VCAILG submitted monitoring data and geologic evidence that elevated chloride levels at the S04T_TAPO monitoring site are due to natural sources and not the result of irrigated agricultural discharges. While site S04T_TAPO exceeded the USCR Chloride TMDL load allocation during two events conducted during the 2024-2025 monitoring year, the exceedances do not trigger discharge limitations due to irrigated agriculture not being the source of the exceeding chloride concentrations. To demonstrate that the conclusion of the natural source demonstration is still reflective of current environmental conditions, additional sampling was performed this year at S04T_TAPO_BKGD to verify the presence of natural source contributions of chloride in this reach. Exceedances of the load allocation were observed at S04T_TAPO_BKGD during both dry weather events, confirming that natural sources are contributing elevated chloride concentrations in the watershed.

Table 78 lists the results for samples collected at S04T_TAPO and S04T_TAPO_BKGD during VCAILG monitoring events. The S04T_TAPO site was sampled and had flow during three monitoring events. S04T_TAPO_BKGD is only required to be sampled during dry events in the first sampling year following MRP approval, and then three years later.

[9] Larry Walker Associates. 2020. Ventura County Agricultural Irrigated Lands Group (VCAILG) 2020 Annual Monitoring Report. Submitted to Los Angeles Regional Water Quality Control Board. December 15, 2020.

Table 78. Chloride Load Allocation Compared to S04T_TAPO Site Data

Site	Constituent	LA [1] (mg/L)	Event 62 Dry Sep-2024	Event 63 Wet Jan-2025	Event 64 Wet Feb-2025	Event 65 Dry Jun-2025
S04T_TAPO [2]	Chloride	100	**252**	**277**	7.2	NS
S04T_TAPO_BKGD	Chloride	100	**189**	NR	NR	**248**

Bold numbers indicate the value is greater than the Load Allocation.
NS = Not sampled due to lack of flow.
NR = Not required; background monitoring will only be conducted during dry weather.

1. While the load allocation is a 3-month rolling average, the data provided in this table consists of single samples.
2. Per discussion with Regional Board staff on June 24, 2024, elevated concentrations of chloride are caused by natural sources and do not trigger discharge limitations.

Santa Clara River Estuary Toxaphene TMDL

The Santa Clara River Estuary Toxaphene TMDL was adopted as a single regulatory action in the 2010 *Conditional Waiver*. The compliance date is October 7, 2025. The Ag *Order* and Appendix 3, Monitoring and Reporting Requirements, specify the following constituents be monitored as part of this TMDL: chlordane, dieldrin, and toxaphene. The constituents are also required to be analyzed in various media: fish tissue (every three years in the Estuary), water, and suspended sediment (during wet weather events). Under the 2024 MRP, one site is used to evaluate agricultural discharges within the TMDL area, and fish tissue are collected in the estuary every three years. The VCAILGMP site S02T_ELLS is monitored as the TMDL site for water and suspended sediment. A description of S02T_ELLS was provided previously. The Santa Clara River Estuary is the general area referenced for fish tissue collection and shown in **Figure 6**.

Load Allocations

The *Ag Order* incorporated toxaphene LAs for suspended sediment and fish tissue as Water Quality Benchmarks, shown in the table below.

Table 79. Load Allocations for Toxaphene

Reach	Toxaphene in Fish Tissue (µg/kg)	Toxaphene in Suspended Sediment (µg/kg)
Santa Clara River Estuary	6.1	0.1

Monitoring Results

LAs for the Santa Clara River Estuary Toxaphene TMDL were established for toxaphene measured in fish tissue and suspended sediment. Additionally, monitoring of chlordane and dieldrin is required; however, these constituents do not have LAs. In the VCAILG QAPP, it was specified that, if possible, targeted fish should be those that are commonly consumed by humans but based on the results of other studies in the estuary, that may not be feasible. Fish were previously collected in summer 2021 and results were reported in the 2020-21 AMR. Fish sampling was planned for completion during the 2023-24 reporting year. However, the approval of the California Department of Fish and Wildlife (CDFW) Scientific Collecting Permit Specific Use application was delayed due to technical issues with the CDFW online portal, preventing sampling from taking place as scheduled. Fish sampling occurred on September 23, 2024, and results are reported in **Table 80**. An exceedance of the toxaphene load allocation in fish tissue was observed.

The results of water and suspended sediment monitoring for the Santa Clara River Estuary Toxaphene TMDL are presented in **Table 81**, which lists no exceedances of the toxaphene suspended sediment LA.

Table 80. Santa Clara River Estuary Toxaphene TMDL Monitoring Data: Fish Tissue

Fish Species & Sample	Fish Tissue			
	Constituent	Units	Interim LA	Collected on 9/23/2024
Topsmelt composite	Chlordane[1]	µg/kg	--	ND
	Dieldrin	µg/kg	--	ND
	Toxaphene	µg/kg	6.1	**30.8**

Bold numbers indicate the value is greater than the Load Allocation.

1. Reported total chlordane is the sum of alpha- and gamma-chlordane.

Table 81. Santa Clara River Estuary Toxaphene TMDL Monitoring Data: Water and Suspended Sediment

Site	Constituent	Units	Load Allocation	Event 62 Dry Sep-2024	Event 63 Wet Jan-2025	Event 64 Wet Feb-2025	Event 65 Dry Jun-2025
S02T_ELLS	***Water***						
	TSS	mg/L	---	NS	6	333	13.8
	Chlordane [1]	µg/L	---	NS	ND	ND	ND
	Dieldrin	µg/L	---	NS	ND	ND	ND
	Toxaphene	µg/L	---	NS	ND	ND	ND
	Suspended Sediment						
	Chlordane [1]	µg/dry kg	---	NR	2.0	64.3	NR
	Dieldrin	µg/dry kg	---	NR	ND	ND	NR
	Toxaphene	µg/dry kg	0.1	NR	ND	ND	NR

Bold numbers indicate the value is greater than the Load Allocation.
DNQ = Detected, not qualified
NS = Not sampled due to lack of flow or site was dry.
ND = Not detected at the applicable reporting limit.
NR = Not required; filtered sediment sampling is only required during wet weather sampling events.

1. Reported total chlordane is the sum of alpha- and gamma-chlordane.

Santa Clara River Bacteria TMDL

The Santa Clara River Bacteria TMDL includes monitoring and reporting requirements as well as TMDL numeric targets and allowable exceedance days, which are included in the *Ag Order* as TMDL LA benchmarks. Using the SCR Bacteria TMDL boundary shapefiles provided by the Regional Board, three representative monitoring sites were selected and approved in the 2024 VCAILG MRP and QAPP. Sites S03D_BARDS and S03T_BOULD are representative monitoring sites discharging to reach 3 of the SCR. The SCR Bacteria TMDL also applies to reach 5; S04T_TAPO is the proxy representative monitoring site for the small number of operations located in this reach.

Load Allocations

Table 82 provides the numeric targets for bacteria. **Table 83** provides the final allowable number of exceedance days.[10] On March 21, 2023, the final allowable exceedance dates for dry weather became effective. The final compliance date for wet weather bacteria is March 21, 2029.

Table 82. Santa Clara River Bacteria TMDL, Numeric Targets

Objective	Constituent	Numeric Target: S03D_BARDS [1], S03T_BOULD [2], and S04T_TAPO [3]
Single Sample	*E. coli*	235 MPN/100 mL
Geometric Mean [4]	*E. coli*	126 MPN/100 mL

NA = Not Applicable

1. S03D_BARDS sampling location discharges to the southern part of Santa Clara River Reach 3.
2. S03T_BOULD sampling location discharges to the northern part of Santa Clara River Reach 3.
3. S04T_TAPO sampling location discharges to Santa Clara River Reach 4 and is representative of agricultural discharges in Reach 5.
4. Geometric mean targets are not in effect for wet weather until 2029.

Table 83. Santa Clara River Bacteria TMDL, Final Allowable Exceedance Days[1]

Time Period	Santa Clara River Reaches 3,5,6, & 7
	S03D_BARDS, S03T_BOULD, S04T_TAPO
Dry Weather	5 allowable exceedance days of single sample objectives
	0 allowable exceedance days of geometric mean objectives
Wet Weather [2]	16 allowable exceedance days of single sample objectives
	0 allowable exceedance days of geometric mean objectives

1. The calculated number of exceedance days assumes that daily sampling is conducted. To determine the number of allowable exceedances for less frequent sampling, a ratio is used.
2. Wet weather is defined as days of 0.1 inch of rain or more plus three days following the rain event.

Monitoring Results

Table 84 presents results of monitoring conducted during the current reporting period. **Table 85** presents the comparison of sample results to the final allowable exceedance days.

[10] As noted in Appendix 5 of the *Ag Order*, the calculated number of exceedance days assumes that daily sampling is conducted. A ratio is used to determine the number of allowable exceedances for less frequent sampling.

Table 84. Santa Clara River Bacteria TMDL Monitoring Data

	Objective Type	Numeric Target	Event 62 Dry Sep-2024	Event 63 Wet Jan-2025	Event 64 Wet Feb-2025	Event 65 Dry Jun-2025
S03T_BOULD						
E. coli (MPN/100 mL)	SSM	235	NS	NS	**3,690**	NS
	GM	126	NS	NS	**3,690**	NS
S03D_BARDS						
E. coli (MPN/100 mL)	SSM	235	NS	NS	NS	NS
	GM	126	NS	NS	NS	NS
S04T_TAPO						
E. coli (MPN/100 mL)	SSM	235	**410**	**410**	**1480**	NS
	GM	126	**410**	**410**	**779**	NS

Bold numbers indicate the value is greater than the Numeric Target.
NS = Not Sampled; site either dry or ponded.
SSM = Single sample maximum
GM = 30-day geometric mean

Table 85. SCR Bacteria TMDL Exceedance Days: Allowable Exceedance Days and Exceeded Days

Events/Exceedances	Santa Clara River Reaches 3, 5, 6, & 7					
	S03D_BARDS		S03T_BOULD		S04T_TAPO [1]	
	Dry Weather	Wet Weather	Dry Weather	Wet Weather	Dry Weather	Wet Weather
Single Sample Objectives						
Allowable Exceedance Days (ratio applied) [2,3]	0	0	0	1	0	1
Days Exceeded	0	0	0	1	**1**	**2**
30-day Geometric Mean Objectives						
Allowable Exceedance Days	0	0	0	0	0	0
Days Exceeded	0	0	0	**1**	**1**	**2**

Bold numbers indicate that the number of Allowable Exceedance Days has been exceeded.

1. S04T_TAPO is located in Santa Clara River Reach 4 but is used as a proxy site to represent agricultural discharges of Santa Clara River Reach 5.
2. Allowable exceedance days are calculated by the flowing equation: Allowable Exceedance Days = (Number of sampling days conducted during time period / Number of days during 1995 time period) x Allowable exceedance days (interim/final)
   a. Number of days during 1995: Wet days = 81; Dry days = 284
3. Consistent with the Santa Monica Bay Beaches TMDL, where the fractional remainder for the calculated allowable exceedance days exceeds 1/10th then the number of days is rounded up (e.g., 4.12 is rounded up to 5). In instances where the tenth decimal place for the allowable exceedance days (or weeks or months) is lower than 1/10th then the number of days is rounded down (e.g., 4.02 is rounded down to 4).

Ventura River Watershed

Effective TMDLs for the Ventura River Watershed are discussed below.

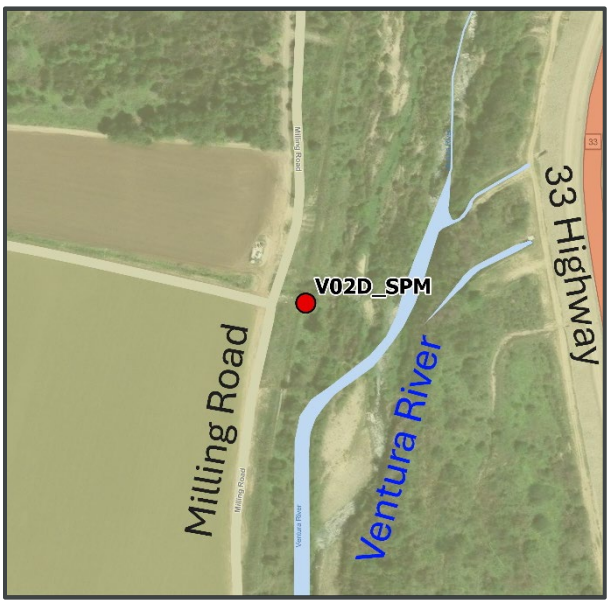
Ventura River Algae TMDL

The Ventura River Algae TMDL became effective on June 28, 2013. Load allocations for this TMDL were added to the 2016 *Conditional Waiver* as water quality benchmarks. Monitoring is performed to evaluate compliance with the Algae TMDL at the two VCAILGMP sites located in the upper watershed (VRT_SANTO and VRT_THACH; both drain to Reach 4 of the Ventura River) in conjunction with the *Ag Order* Appendix 3, Table 1 constituents monitored regionwide. Site descriptions and images were previously provided for VRT_SANTO and VRT_THACH. Additionally, the Algae TMDL required that the VCAILG monitoring program include an additional location to represent agricultural discharges in the lower watershed, which also represents crop types not included in the drainage areas to VRT_SANTO and VRT_THACH. This directive was incorporated into the 2016 *Conditional Waiver.* To meet this requirement, site V02D_SPM was added to the 2017 VCAILG MRP to be sampled for Algae TMDL constituents. This site is located in a drainage channel that discharges to a riparian forest adjacent to Reach 2 of the Ventura River.[11] V02D_SPM site information is provided below.

V02D_SPM

This site is an agricultural drainage channel that crosses SP Milling Road.

Site Map



View Upslope

Figure 7, presented in a previous section of this report, shows the site drainage areas for each of the three monitoring locations where data are compared to the Algae TMDL LAs. The drainage area for VRT_SANTO is its own responsibility area. The crop type distribution in the drainage area for VRT_THACH is more representative of the greater Ventura River Watershed. Therefore, VRT_THACH is the site used to evaluate TMDL compliance for the Ventura River Inland Responsibility Area (RA).

[11] Receiving water monitoring for the Algae TMDL is conducted separately by the TMDL responsible parties (of which VCAILG is a member) in accordance with the Oct. 20, 2014, Algae TMDL Comprehensive Monitoring Plan.

The Algae TMDL compliance date specified in the *Ag Order* is June 28, 2019. Dry weather LAs are provided in **Table 86**, and wet weather LAs are provided in **Table 87**. Monitoring results for the Ventura River Algae TMDL are presented in **Table 88** and **Table 89.**

Load Allocations

Table 86. Dry Weather Load Allocations for the Ventura River Algae TMDL

Constituent	Load Allocation	
	(lbs/day) [1]	(lbs/day/acre) [2]
Total Nitrogen	16	0.008
Total Phosphorus	0.12	0.000063

1. Daily load applies to the aggregate irrigated agricultural acreage in the watershed.
2. Values are translators provided on p. 12 of the Algae TMDL BPA. Monitoring results are weighted by irrigated agricultural acreage draining to a monitoring site.

Table 87. Wet Weather Load Allocations for the Ventura River Algae TMDL

Site	Constituent	Load Allocation (mg/L)
VRT_THACH[1]	Nitrate-N + Nitrite-N	5
VRT_SANTO[1]	Nitrate-N + Nitrite-N	5
V02D_SPM[2]	Nitrate-N + Nitrite-N	10

1. Sampling site drains to Reach 4
2. Sampling site drains to Reach 2

Monitoring Results

Flow was not present at any of the three TMDL monitoring sites during all monitoring events. Therefore, no exceedances were observed during the current monitoring year.

Table 88. Dry Weather Ventura River Algae TMDL Site Data

Site	Constituent	Load Allocation (lbs/day/acre)	Event 62 Dry Sep-2024	Event 65 Dry Jun-2025
VRT_THACH	Total Nitrogen	0.008	NS	NS
	Total Phosphorus	0.000063		
VRT_SANTO	Total Nitrogen	0.008	NS	NS
	Total Phosphorus	0.000063		
V02D_SPM	Total Nitrogen	0.008	NS	NS
	Total Phosphorus	0.000063		

NS = Not sampled, site dry.

Table 89. Wet Weather Ventura River Algae TMDL Site Data

Site	Constituent	Units	Load Allocation	Event 63 Wet Jan-2024	Event 64 Wet Feb-2025
VRT_THACH	Nitrate-N + Nitrite-N	mg/L	5	NS	NS
VRT_SANTO	Nitrate-N + Nitrite-N	mg/L	5	NS	NS
V02D_SPM	Nitrate-N + Nitrite-N	mg/L	10	NS	NS

NS = Not sampled, site dry

Ventura River Estuary Trash TMDL

The Ventura River Estuary Trash TMDL is addressed through a separate monitoring and reporting program, with the annual report submitted on December 15th. For additional information, please refer to the “2024-2025 Ventura River Estuary Trash TMDL TMRP/MFAC Annual Report”. The next annual report is due December 15, 2025.

Oxnard Plain

Harbor Beaches of Ventura County Bacteria TMDL

The Harbor Beaches of Ventura County Bacteria TMDL does not specify LAs for agricultural dischargers but does include a provision for monitoring. The 2024 QAPP specified sites, monitoring frequency, and constituents to comply with the implementation actions specified for agricultural dischargers in the TMDL. Descriptions of CIHD_DORIS and CIHD_DORIS_BKGD are provided in a previous section of this report and a map can be found in **Figure 5**. The CIHD_DORIS monitoring site is used to evaluate agricultural discharges to Edison Canal. The CIHD_DORIS_BKGD monitoring site is located at the edge of the residential area before it enters the agricultural area of Doris Drain. The CIHD_DORIS_BKGD monitoring site serves as a background site to characterize urban discharge when evaluating results from CIHD_DORIS.

Monitoring Data

As specified in the 2024 QAPP, CIHD_DORIS and CIHD_DORIS_BKGD are visited at the same frequency as *Ag Order* monitoring sites. During each event, flow and field meter parameters are measured in addition to water samples collected for bacteria testing. Flow was present at both sites during all events. **Table 90** provides monitoring information results. Bacteria concentrations at the CIHD_DORIS_BKGD monitoring location were greater than concentrations observed at the CIHD_DORIS monitoring location in the majority of events.

Table 90. Harbor Beaches of Ventura County Bacteria TMDL Monitoring Data

Event	Bacteria Concentrations (MPN/100mL)			
	E. coli	Fecal Coliform	Total Coliform	*Enterococcus*
CIHD_DORIS				
62: 9/24/2024	ND	23	24,000	100
63: 1/27/2025	1,580	4,900	>160,000	1,890
64: 2/5/2025	1,870	790	>160,000	7,590
65: 6/3/2025	200	490	43,520	310
CIHD_DORIS_BKGD				
62: 9/24/2024	2,620	7,000	160,000	1,080
63: 1/27/2025	17,800	54,000	>160,000	13,330
64: 2/5/2025	3,640	2,300	35,000	8,600
65: 6/3/2025	1,600	2,300	86,640	300

McGrath Lake PCBs, Pesticides, and Sediment Toxicity TMDL

The TMDL for PCBs, Pesticides, and Sediment Toxicity in McGrath Lake became effective June 30, 2011; after the adoption of the 2010 *Conditional Waiver*. To comply with the 2016 *Conditional Waiver* and subsequent extensions, the 2017 VCAILG QAPP and MRP were written to include the Phase 1 Central Ditch monitoring specified in the McGrath Lake TMDL. Inclusion of monitoring data within this AMR also fulfills the TMDL requirement for annual reporting. The existing VCAILGMP site, OXD_CENTR, is located at the Central Ditch, which drains into McGrath Lake. Information and *Ag Order* monitoring results related to this site can be found in the Water Quality Monitoring Results section. Water quality data collected at the OXD_CENTR site that pertains to this TMDL is summarized below and compared to the load allocation benchmarks. The final compliance date for the McGrath Lake TMDL in the *Ag Order* was June 30, 2021.

TMDL Monitoring and Load Allocations

The McGrath Lake PCBs, Pesticides, and Sediment Toxicity TMDL includes the following LAs (**Table 91**).

Table 91. McGrath Lake Central Ditch Load Allocations

Constituent	Water Column Load Allocation (µg/L)	Suspended Sediment Load Allocation (µg/dry kg)
Chlordane	0.00059	0.5
Dieldrin	0.00014	0.02
4,4'-DDD	0.00084	2
4,4'-DDE	0.00059	2.2
4,4'-DDT	0.00059	1
Total DDT	---	1.58
Total PCBs	0.00017	22.7

Monitoring Results

Water sampling occurred concurrently with VCAILG monitoring and included the addition of total organic carbon (TOC) and PCBs. Water quality data and suspended sediment data are presented in **Table 92** and **Table 93**, respectively. Per the QAPP, water column sampling occurs during every monitoring event and sampling for suspended sediment is takes place during wet weather.

Flow was observed and samples were taken during all four events. Exceedances of the 4,4'-DDD and 4,4'-DDE water column LAs occurred during Event 62. An exceedance of the 4,4'-DDE water column LA occurred during Event 64. Exceedances of the 4,4'-DDE and total DDT suspended sediment LAs were observed during Event 64.

Table 92. McGrath Lake TMDL Central Ditch Monitoring Data in Water: OXD_CENTR

Constituents in Water	Units	Water LA	Event 62 Dry Sep-2024	Event 63 Wet Jan-2025	Event 64 Wet Feb-2025	Event 65 Dry Jun-2025
TOC	mg/L	---	5.13	3.2	4.1	3.66
TSS	mg/L	---	16.3	2.9	2	2.5
Total PCBs[1]	µg/L	0.00017	ND	ND	ND	ND
4,4'-DDD	µg/L	0.00084	**0.00628**	ND	ND	ND
4,4'-DDE	µg/L	0.00059	**0.00998**	ND	**0.00422**	ND
4,4'-DDT	µg/L	0.00059	ND	ND	ND	ND
Dieldrin	µg/L	0.00014	ND	ND	ND	ND
Total Chlordane[2]	µg/L	0.00059	ND	ND	ND	ND

Bold numbers indicate the value is greater than the Load Allocation.
ND = Not detected at the applicable reporting limit.
1. Total PCBs include the 7 aroclors identified in CTR (1016, 1221, 1232, 1242, 1248, 1254, 1260).
2. Total chlordane is considered the sum of alpha- and gamma-chlordane.

Table 93. McGrath Lake TMDL Central Ditch Monitoring Data in Suspended Sediment: OXD_CENTR

Constituents in Sediment	Units	Sediment LA	Event 62 Dry Sep-2024	Event 63 Wet Jan-2025	Event 64 Wet Feb-2025	Event 65 Dry Jun-2025
TOC	% Dry Weight	---	NR[3]	ND	ND	NR[3]
Total PCBs[1]	µg/dry kg	22.7		ND	ND	
4,4'-DDD	µg/dry kg	2		ND	ND	
4,4'-DDE	µg/dry kg	2.2		1.24	**3.73**	
4,4'-DDT	µg/dry kg	1		ND	ND	
Dieldrin	µg/dry kg	0.02		ND	ND	
Total Chlordane[2]	µg/dry kg	0.5		ND	ND	
Total DDT	µg/dry kg	1.58		1.24	**3.73**	

Bold numbers indicate the value is greater than the Load Allocation.
NR = Not Required
ND = Not detected at the applicable reporting limit.
1. Total PCBs include the 7 aroclors identified in CTR (1016, 1221, 1232, 1242, 1248, 1254, 1260).
2. Total chlordane is considered the sum of alpha- and gamma-chlordane.
3. Sampling for suspended sediments is only required during wet weather.

Oxnard Drain #3 Pesticides, PCBs and Sediment Toxicity TMDL

The USEPA established the Oxnard Drain #3 Pesticides, PCBs, and Sediment Toxicity TMDL, which became effective October 6, 2011. The final compliance date for load allocations is April 14, 2026. TMDL load allocations were incorporated into the 2016 *Conditional Waiver* as water quality benchmarks. To evaluate agricultural discharges progress in attaining this TMDL, the 2024 MRP and QAPP include a monitoring site as well as specifics regarding monitoring frequency and constituents for comparison to the LAs. This TMDL includes LAs for water and sediment, which are presented in **Table 94**. Sampling is conducted during four monitoring events for comparison to the water allocations, and during one dry weather event for the sediment allocations.

Table 94. Oxnard Drain No. 3 TMDL Load Allocations

Constituents	Water Allocations (µg/L)	Sediment (µg/dry kg) [1]	Alternate Sediment (µg/dry kg) [2]
Bifenthrin[3]	0.0006	-	-
Chlordane, total[5]	0.00059	0.5	3.3
Chlorpyrifos[4]	0.0056	-	-
4,4'-DDT	0.00059	1	0.3
4,4'-DDE	0.00059	2.2	2.2
4,4'-DDD	0.00084	2	2
Dieldrin	0.00014	0.02	4.3
PCBs, total[6]	0.00017	22.7	180
Toxaphene	0.0002	0.1	360
Sediment Toxicity	-	No significant chronic sediment toxicity	-

Note: Footnotes 1 through 4 are taken directly from Appendix 5 of the *Ag Order.* Fish monitoring was not required of VCAILG and has not been performed in Oxnard Drain #3; therefore, it is the "sediment" allocations that apply to the VCAILG monitoring data.

1. Sediment concentrations associated with suspended sediment and Oxnard Drain #3 bottom sediment. Sediment allocations apply if there are fish tissue or sediment toxicity exceedances. All sediment allocations are Effects Range Low (ERL), except toxaphene. Toxaphene does not have an ERL, so the Threshold Effects Level (TEL) concentration was selected.
2. Sediment concentrations associated with suspended sediment and Oxnard Drain #3 bottom sediment. The alternate sediment allocation applies when the fish tissue target and the sediment toxicity allocation are achieved in Oxnard Drain 3. The alternate sediment allocation concentrations match the Mugu Lagoon TMDL allocations.
3. Bifenthrin allocations included to address the sediment toxicity impairment.
4. Chlorpyrifos allocations included to address the sediment toxicity impairment.
5. Total chlordane is considered the sum of alpha- and gamma-chlordane.
6. Total PCBs include the 7 aroclors identified in CTR (1016, 1221, 1232, 1242, 1248, 1254, 1260).

Monitoring Results

Monitoring data for water quality is provided in **Table 95**. Water LA exceedances of bifenthrin and total chlordane were observed during Events 62, 63, and 64. Exceedances of the water LA for 4,4'-DDE occurred during all four events. The water LA for 4,4'-DDT occurred during Event 62 and Event 65. The water LA for 4-4'-DDD was exceeded during Event 62.

Sediment monitoring results are provided in **Table 96**, with the results showing an exceedance of toxaphene. With regards to sediment toxicity, there was significant reduction in survival and significant reduction in growth for *Hyalella*.

Table 95. Oxnard Drain No. 3 TMDL Monitoring Data in Water: 01T_ODD3_EDI

Constituents	Water Allocations (µg/L)	Event 62 Dry Sep-2024	Event 63 Wet Jan-2025	Event 64 Wet Feb-2025	Event 65 Dry Jun-2025
Bifenthrin	0.0006	**0.00254**	**0.00447**	**0.00315**	DNQ
Chlordane, total[2]	0.00059	**0.00285**	**0.00203**	**0.00485**	ND
Chlorpyrifos	0.0056	ND	ND	ND	ND
4,4'-DDT	0.00059	**0.00677**	ND	ND	**ND**
4,4'-DDE	0.00059	**0.0332**	**0.0217**	**0.0936**	**0.0189**
4,4'-DDD	0.00084	**0.0159**	ND	ND	**0.00372**
Dieldrin	0.00014	ND	ND	ND	ND
PCBs, total[1]	0.00017	ND	ND	ND	ND
Toxaphene	0.0002	ND	ND	ND	ND

Bold numbers indicate the value is greater than the Load Allocation.
ND = Not Detected at the applicable reporting limit.
NS = Not sampled. The monitoring site was not accessible during this event.
DNQ = Detected, not qualified.
1. Total PCBs include the 7 aroclors identified in CTR (1016, 1221, 1232, 1242, 1248, 1254, 1260).
2. Total chlordane is considered the sum of alpha- and gamma-chlordane.

Table 96. Oxnard Drain No. 3 TMDL Monitoring Data in Sediment: 01T_ODD3_EDI

Constituents	Sediment Allocations (µg/dry kg)	Event 62 Dry Sep-2024	Event 63 Wet Jan-2025	Event 64 Wet Feb-2025	Event 65 Dry Jun-2025
Chlordane, total [1]	0.5	**4.37**	NR	NR	NR
4,4'-DDT	1	**11.8**			
4,4'-DDE	2.2	**70.3**			
4,4'-DDD	2	**12.2**			
Dieldrin	0.02	ND			
PCBs, total [2]	22.7	ND			
Toxaphene	0.1	**476**			
Sediment Toxicity	No significant chronic sediment toxicity	**Significant reduction in survival and in growth.**			

Bold numbers indicate the value is greater than the Load Allocation.
ND = Not Detected at the applicable reporting limit.
NR = Not Required; sediment monitoring is done annually.
1. Total chlordane is considered the sum of alpha- and gamma-chlordane.
2. Total PCBs include the 7 aroclors identified in CTR (1016, 1221, 1232, 1242, 1248, 1254, 1260).

Malibu Creek Watershed

Two TMDLs exist for the Malibu Creek Watershed: the 2013 Malibu Creek and Lagoon TMDL for Sedimentation and Nutrients to Address Benthic Community Impairments (2013 Benthic TMDL), and the 2003 Malibu Creek Watershed Nutrients TMDL (2003 Nutrient TMDL).

TMDL Monitoring and Load Allocations

Load allocations for the Malibu Creek Watershed TMDLs were incorporated into the 2016 *Conditional Waiver*. At this time, a very small number of Ventura County farmers operate in the Malibu Creek Watershed, and no monitoring site for VCAILG purposes has been designated in the watershed. Instead, monitoring results from site 05D_LAVD are used as "proxy" results to compare with Malibu Creek Watershed TMDLs LAs. LAs for the Benthic and Nutrients TMDLs are provided in **Table 97** and **Table 98**, respectively. The summer season is defined from April 15th to November 15th and the winter season is defined from November 16th to April 14th.

Table 97. 2013 Benthic TMDL Load Allocations

Constituent	Season	Load Allocation (mg/L)
Total Nitrogen	Summer	0.65
	Winter	1.00
Total Phosphorus	Summer	0.10
	Winter	0.10

Table 98. 2003 Nutrient TMDL Load Allocations

Constituent	Season	Load Allocation	Units
Total Nitrogen	Summer	3	lbs/day
Total Phosphorus		0.2	lbs/day
Nitrogen (nitrate-N + nitrite-N)	Winter	8	mg/L

Monitoring Results

Monitoring results for the Benthic TMDL are provided in **Table 99** and monitoring results for the Nutrients TMDL are presented in **Table 100**. Site was dry and no samples were collected during all four monitoring events.

Table 99. 2013 Benthic TMDL Monitoring Data: 05D_LAVD

Constituent	Event	Season	Load Allocation (mg/L)	Result (mg/L)
Total Nitrogen	62: 9/25/2024	Summer	0.65	NS
	63: 1/27/2025	Winter	1.00	NS
	64: 2/5/2025	Winter	1.00	NS
	65: 6/3/2025	Summer	0.65	NS
Total Phosphorus	62: 9/25/2024	Summer	0.10	NS
	63: 1/27/2025	Winter	0.10	NS
	64: 2/5/2025	Winter	0.10	NS
	65: 6/3/2025	Summer	0.10	NS

Bold numbers indicate the value is greater than the Load Allocation.
NS = Not Sampled due to site being dry.

Table 100. 2003 Nutrient TMDL Monitoring Data: 05D_LAVD

Constituent	Event	Season	Load Allocation	Units	Result
Total Nitrogen	62: 9/25/2024	Summer	3	lbs/day	NS
	65: 6/3/2025	Summer	3	lbs/day	NS
Total Phosphorus	62: 9/25/2024	Summer	0.2	lbs/day	NS
	65: 6/3/2025	Summer	0.2	lbs/day	NS
Nitrogen (nitrate-N + nitrite-N)	63: 1/27/2025	Winter	8	mg/L	NS
	64: 2/5/2025	Winter	8	mg/L	NS

Bold numbers indicate the value is greater than the Load Allocation.
NS = Not Sampled due to site being dry.

WQMP PROGRESS REPORT

The *Ag Order* specifies that a WQMP Progress Report include the following components for each responsibility area:

- List of enrolled and non-enrolled parcels (refer to Appendix A – VCAILG Parcel Enrollment Summary)
- Copies of outreach materials (mailings, handouts from education classes) (refer to Appendix I - WQMP Progress Report: Copies of Outreach Materials)
- Report on members who have and have not completed:
    - Field-level reports (Farm Evaluation Surveys) (refer to Appendix A)
    - Education requirements (refer to Appendix A)
    - ~~INMP or certified INMP~~ (as INMPs are intended to be kept on-farm and not required to be submitted to either VCAILG or the Regional Board, completion of INMPs can only be determined through a request from the Regional Board to the enrolled member, therefore a completion list cannot be produced by VCAILG)
    - INMR (first due March 1, 2026; therefore, producing a completion list is not applicable at this time)

Outreach Materials

During the reporting period for this annual report, VCAILG members have been sent mailed and electronic communications informing them of their responsibilities to comply with the *Ag Order* and keep them apprised of the overall program activities including the adoption of the waiver extension. Communications can be summarized as follows:

- Education meeting notices and handouts
- VCAILG newsletters
- Website updates
- TMDL exceedance notifications, where applicable

VCAILG has been implementing the Outreach Plan outlined in the 2018 Water Quality Management Plan (WQMP) and updated in the 2025 WQMP, submitted May 1, 2025 and pending Regional Board approval as of the submittal date of this AMR. Copies of the mailings and emails are included as Appendix I. Detailed information regarding VCAILG, links to past reports, and program compliance resources can be accessed from the Farm Bureau website here: www.farmbureauvc.com/vcailg/. The website also includes a special section dedicated to the 2025 WQMP, detailing the responsibility areas and including maps and a lookup file for farmers to determine the correct responsibility area for their farm: www.farmbureauvc.com/vcailg/water-quality-management-plan/. This is also where VCAILG members may download or print the compliance summary for their specific responsibility area. The compliance summaries have been updated to include the 2025 WQMP versions. Education opportunities have their own dedicated section of the website here: www.farmbureauvc.com/vcailg/education/. This page is continuously updated as additional classes become available. Additionally, VCAILG has developed a BMP Resources page with videos in English and Spanish covering topics important for training farm staff on regulatory requirements and best practices: www.farmbureauvc.com/vcailg/bmp-resources/.

In an effort to enhance the program interface with enrolled landowners and growers, as well as meet the new requirements of the Ag Order, VCAILG developed an improved data management system. This new system, called Clearwater, is designed for use by agricultural landowners, operators, and their designated partners. Clearwater facilitates compliance tracking; submission of surveys, plans, and reports; invoice payment to VCAILG; and maintenance of account and parcel information.

Clearwater itself has been developed and launched in phases, with the initial phase focused on confirming enrollees account and parcel information, viewing and paying annual program assessments,

and completing a Farm Evaluation Survey for each enrolled parcel. Recently, a module for the completion and tracking of TMDL-driven requirements was launched. The module for Irrigation and Nutrient Management Report (INMR) submissions is currently underway and Continuing Education Units tracking will be next on the development list. All enrolled landowners and grower operators were provided with unique login credentials to access their enrollment profiles.

Finally, the Farm Bureau YouTube channel includes recordings of past education meetings, instructional videos for using the new Clearwater platform, and other useful resources.

Survey Completion

Farm Evaluation Surveys were completed in September and early October 2024, providing the implementation information necessary to complete the 2025 VCAILG WQMP, which was submitted May 1, 2025. A list of VCAILG members that did, or did not complete the Farm Evaluation survey was included with the WQMP submittal. However, Farm Evaluation Survey completion is an eligibility component for complying with TMDL discharge limitations through Track 2 Management Practice Plans. VCAILG members have the opportunity to complete their Farm Evaluation Survey to meet those eligibility requirements. Appendix A includes Farm Evaluation Survey completion status as of December 3, 2025.

Education Requirements

The *Ag Order* requires that dischargers obtain a minimum of two hours of educational training every year. Appendix A includes the credit hours applicable to each property between January 1, 2025, and December 15, 2025. Nine education classes were offered during 2025. **Table 101** lists the education classes and the hours of credit for each class.

Table 101. Courses for Education Credit – January 1, 2025 through December 15, 2025

Date	Course Title	Education Hours
1/29/2025 & 1/30/2025	Irrigation and Nutrient Management Plan (INMP) Self-Certification Training	6
2/25/2025 & 2/26/2025	Irrigation and Nutrient Management Plan (INMP) Self-Certification Training	6
3/10/2025	Notice of Discharge Limitations Packet Workshop	1
5/8/2025	CropManage Hands-On Workshop	2.5
5/22/2025	Field Day – Irrigation Methods for Strawberry Establishment	2
7/10/2025	Ventura County Agriculture Resources 101	2
8/21/2025	2025 Irrigation and Nutrient Management Meeting for Vegetable and Berry Crops	3
9/23/2025	Agri-Tech Fair	2
12/9/2025 & 12/10/2025	Irrigation and Nutrient Management Plan (INMP) Self-Certification Training	6