



1521 I Street  
Sacramento, CA 95814  
Tel: (805) 668-1876

December 15, 2022

Ms. Renee Purdy  
Executive Officer  
State Regional Water Quality Board  
Los Angeles Region  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Subject: Nursery Growers Association  
Los Angeles County Irrigated Lands Group  
Conditional Waiver for Irrigated Lands  
**ANNUAL MONITORING REPORT**  
**# R4-2016-0143 (THROUGH DECEMBER 15, 2022)**

Dear Ms. Purdy:

Pacific Ridgeline prepared this *Annual Monitoring Report* on behalf of Nursery Growers Association, Los Angeles County Irrigated Lands Group (LAILG). Monitoring and reporting were conducted in accordance with the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (CWIL; Order # R4-2021-0045) under the Quality Assurance Project Plan and Monitoring and Reporting Plan submitted by LAILG for the previous CWIL.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment.

Respectfully submitted,

Los Angeles Irrigated Lands Group

Ariana Zamora McCray  
LAILG, Director of Member Relations



**ANNUAL MONITORING REPORT-  
ORDER # R4-2021-0045  
(THROUGH DECEMBER 15, 2022)**

**NURSERY GROWERS ASSOCIATION  
LOS ANGELES COUNTY  
IRRIGATED LANDS GROUP**

December 15, 2022

# TABLE OF CONTENTS

<b>1.0 INTRODUCTION .....</b>	<b>1</b>
1.1 PROGRAM HISTORY .....	2
<b>2.0 BACKGROUND .....</b>	<b>4</b>
2.1 HISTORICAL SAMPLING .....	4
2.2 CURRENT SAMPLING APPROACH .....	5
<b>3.0 SAMPLING EVENTS.....</b>	<b>7</b>
<b>4.0 WATER QUALITY BENCHMARKS.....</b>	<b>10</b>
4.1 WATER QUALITY BENCHMARKS.....	11
<b>5.0 INDIVIDUAL SAMPLING SITE RESULTS.....</b>	<b>16</b>
5.1 RANDOM SAMPLING LOCATIONS – WET SEASON .....	17
5.2 RANDOM SAMPLING LOCATIONS – DRY SEASON.....	33
5.3 SAMPLING LOCATIONS – CHOSEN SITE DRY .....	47
<b>6.0 SUMMARY OF SAMPLING SITE RESULTS.....</b>	<b>54</b>
6.1 WATER QUALITY BENCHMARK EXCEEDANCES .....	54
6.2 QUALITY ASSURANCE AND QUALITY CONTROL.....	63
<b>7.0 WQMP/MRP UPDATE .....</b>	<b>64</b>
7.1 GROUPING RESULTS.....	64
7.2 OUTREACH.....	65
7.3 EDUCATION REQUIREMENTS .....	65
7.4 ONGOING WQMP IMPLEMENTATION ISSUES.....	66

## TABLE OF CONTENTS, CONTINUED

### TABLES:

Table 1	LAILG Watershed Distribution
Table 2	LAILG Crop Type Distribution
Table 3	Historical Sampling Locations
Table 4	Grouping Sites
Table 5	2021-22 Wet Season Sampling Sites
Table 6	2021-21 Dry Season Sampling Sites
Table 7	Historical Sampling Timeline
Table 8	List of Constituents for Testing
Table 9	Water Quality Benchmarks, General Chemistry
Table 10	Water Quality Benchmarks, Pesticides, CWIL
Table 11	Additional Water Quality Benchmarks, Pesticides, California Toxic Rule
Table 12	Additional Water Quality Benchmarks, Pesticides, Aquatic Life Benchmarks
Table 13	Water Quality Benchmarks, Field Monitoring and Toxicity
Table 14	Summary of Samples Collected, NGA #19
Table 15	Summary of Water Quality Exceedances, General Chemistry
Table 16	Summary of Water Quality Exceedances, Pesticides
Table 17	Summary of Grouping Results

## TABLE OF CONTENTS, CONTINUED

### FIGURES:

Figure 1	Los Angeles Sampling Regions and Watershed
Figure 1.1	Sampling Region 1, West
Figure 1.2	Sampling Region 1, East
Figure 1.3	Sampling Region 1, West
Figure 1.4	Sampling Region 1, East
Figure 1.5	San Gabriel Watershed
Figure 2	Aerial Map of NGA #286
Figure 3	Aerial Map of NGA #180
Figure 4	Aerial Map of NGA #247
Figure 5	Aerial Map of NGA #333
Figure 6	Aerial Map of NGA #8
Figure 7	Aerial Map of NGA #92
Figure 8	Aerial Map of NGA #297
Figure 9	Aerial Map of NGA #149
Figure 10	Aerial Map of NGA #249
Figure 11	Aerial Map of NGA #253
Figure 12	Aerial Map of NGA #396
Figure 13	Aerial Map of NGA #348
Figure 14	Aerial Map of NGA #188
Figure 15	Aerial Map of NGA #385
Figure 16	Aerial Map of NGA #501
Figure 17	Aerial Map of NGA #24
Figure 18	Aerial Map of NGA #114
Figure 19	Aerial Map of NGA #19

### APPENDICES:

Appendix A	Updated List of LAILG, as of December 15, 2022
Appendix B	Current and Historic Sampling Results
Appendix C	Outreach Materials

## ACRONYMS

ABC	Aquatic Bioassay and Consulting Laboratories
ALB	Aquatic Life Benchmark
AMR	Annual Monitoring Report
BMP	Best Management Practice
COC	Chain of Custody
CWIL	Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands
EPA	United States Environmental Protection Agency
GPS	Global Positioning System
LAILG	Los Angeles Irrigated Lands Group
LARWQCB	Los Angeles Regional Water Quality Control Board
MDL	Method Detection Limit
MRP	Monitoring and Reporting Plan
NGA	Nursery Growers Association
OC	Organochlorinated Pesticides
OP	Organophosphate Pesticides
PacRL	Pacific Ridgeline
PP	Pyrethroid Pesticides
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
RPD	Relative Percent Difference
TDS	Total Dissolved Solids
TIE	Toxicity Identification Evaluation
TUc	Toxicity concentration in toxicity units
WMA	Watershed Management Area
WQBs	Water Quality Benchmarks
WQMP	Water Quality Management Plan

**ANNUAL MONITORING REPORT  
ORDER # R4-2021-0045 (THROUGH DECEMBER 15, 2021)**

**NURSERY GROWERS ASSOCIATION  
LOS ANGELES IRRIGATED LANDS GROUP**

**1.0 INTRODUCTION**

The NGA is a non-profit association chartered in the late 1950s. The purpose of NGA is to foster and encourage the growth and development of quality nursery stock and to promote all matters that pertain to the best interests of the wholesale nursery growers. NGA developed the LAILG for compliance with the CWIL, which currently consists of Order #R4-2021-0045. PacRL was contracted by NGA to manage the technical aspect of the LAILG.

The LARWQCB is a State of California Agency that regulates water quality within the coastal watershed of Ventura and Los Angeles Counties under the authorities of the Federal Clean Water Act and State Porter Cologne Water Quality Control Act. The area under the jurisdiction of the LARWQCB is known as the Los Angeles Region.

Water quality impacts associated with agriculture can be primarily traced to discharges resulting from irrigation or stormwater. These discharges may contain pollutants that have been imported or introduced into the irrigation or stormwater; in addition, irrigation practices can mobilize and or concentrate some pollutants. In order to mitigate these potentially polluted discharges from impacting the beneficial uses of water bodies within the Los Angeles Region, the LARWQCB adopted a CWIL (Order No. R4-2005-0080) on November 3, 2005, as mandated by state law and policy.

On October 7, 2010, the LARWQCB adopted a second CWIL for the Los Angeles Region (Order No. R4-2010-0186). Order R4-2010-0186 was extended for six months under Order R4-2015-0202. Order R4-2016-0134, adopted on April 14, 2016, slightly revised the program and extended water quality monitoring throughout the Los Angeles Region for an additional four years. The current program was extended with Order R4-2021-0045.

The LAILG has members within the Dominguez Channel LA/Long Beach Harbors WMA, the Los Angeles River Watershed, the San Gabriel River Watershed, the Santa Monica Bay WMA, and the eastern portion of the Santa Clara River Watershed. All five Watersheds and WMAs have impacted waterbodies that appear on the Federal 303(d) list, and listed contaminants include constituents that could be related to agricultural uses.

Agriculture in the County of Los Angeles mostly consists of smaller parcel sizes located in urban environments, specifically under power lines. The LAILG was initially formed to assist growers of nursery stock with compliance with the CWIL, but has since expanded to include any grower in the Los Angeles Region who wishes to be part of the group. Refer to Table 1 and Table 2 for crop type and watershed information specific to the LAILG.

The objective of this AMR is to evaluate compliance with water quality benchmarks established under the CWIL and various other water quality programs, and to report findings to the LARWQCB. This AMR describes the monitoring efforts and results that have been undertaken by the NGA for compliance with the CWIL through October 15, 2022, along with presenting historical data collected throughout the life of the program. This report also includes updated data collected as part of the Water Quality Management Plan (WQMP) dated November 5, 2020.

*Table 1 LAILG Watershed Distribution*

<b>Watershed</b>	<b># Total Locations</b>	<b>Total Irrigated Acres</b>
Dominguez Channel LA/Long Beach Harbors WMA	46	129.41
Los Angeles River Watershed	132	484.86
Santa Clara River Watershed	6	94.25
San Gabriel River Watershed	45	285
Santa Monica WMA	27	136.52
In Progress	0	0
<b>Totals</b>	<b>256</b>	<b>1130.04</b>

*Table 2 LAILG Crop Type Distribution*

<b>Crop Type</b>	<b># Total Locations</b>	<b>Total Irrigated Acres</b>
Cutflower	2	5
Ornamental	126	587.76
Color Plants	9	30.51
Vineyard	19	81.5
Greenhouse	1	1
Orchard	3	9
Sod	1	16.5
Multiple	9	191.73
Row Crop	3	7.15
In Progress	83	199.89
<b>Totals</b>	<b>256</b>	<b>1130.04</b>

Maps of enrolled growers are presented in Figures 1 through 1.5 at the end of the report.

## **1.1 PROGRAM HISTORY**

During the first Waiver period, LAILG collected samples from sixteen sampling locations during two sampling events each dry season and two sampling events each wet season. The program existed in this state for the entirety of the 2007 and 2008 monitoring years, and a working WQMP was submitted to the LARWQCB on July 8, 2009. The LAILG placed the program on hold at this time due to financial constraints from growers abandoning the program and a lack of enforcement by the LARWQCB.



LAILG reinstated the program briefly before the new Waiver, and one round of reduced sampling occurred in March of 2011. Following the release of the second Waiver, LAILG prepared a revised MRP and QAPP to address updated requirements. The new MRP presented a reduced sampling schedule in order to offset costs associated with the lack of growers enrolling in the Waiver program.

Water quality monitoring data collected during each Waiver period exceeded applicable Water Quality Benchmarks and necessitated the generation of a WQMP. LAILG prepared a Water Quality Management Plan, Version 1.1, dated July 26, 2013, which outlined steps LAILG would take to implement, track, and evaluate additional BMPs throughout the group. Updates to the original plan were submitted on August 21, 2015 and May 10, 2017 that outlined progress towards the original goals of the WQMP goals. The most recent WQMP, Version 2.2, was submitted on November 5, 2020.

LAILG previously operated under the basic parameters of the MRP and WQMP developed for Order R4-2010-0186, with the goal of gathering enough information to properly apply the WQMP methodology to develop a new MRP for Order R4-2016-0134. During the interim sampling period, LAILG focused sampling efforts to address locations where previous samples had been collected and WQB exceedances had been observed.

A new MRP was submitted to the LARWQCB on November 1, 2019 that outlined an updated approach to future sampling methodology within the group. LAILG has been operating under the most current MRP, although an approval letter was never officially filed by the LARWQCB.

## 2.0 BACKGROUND AND SAMPLING METHODOLOGY

### 2.1 HISTORICAL SAMPLING

Prior to two years ago, LAILG was operating under the basic parameters of the MRP and WQMP developed for Order R4-2010-0186, with the goal of gathering enough information to properly apply the WQMP methodology to develop a new MRP for Order R4-2016-0134. The historical sampling sites that were chosen for this interim period are presented on Table 3. A running log of all locations sampled since the inception of the program, along with sampling dates and site status is included in Appendix B. Maps presenting currently enrolled members are presented as Figures 1.0-1.5.

*Table 3 – Historical Sampling Locations*

NAME	SITE #	APPROXIMATE GPS LOCATION	ADDRESS	ACRES IRRIGATED	CROP TYPE
ABC Nursery, Inc.	4	N 33° 52' 55.7" W 118° 16' 06.0"	424 E. Gardena Boulevard Gardena, CA	11.51	General Ornamentals
Boething Treeland Farms, Inc.	19	N 34° 09' 51.1" W 118° 38' 20.7"	23475 Long Valley Road Woodland Hills, CA	14.68	General Ornamentals
H&H Nursery *	64	N 33° 52' 07.1" W 118° 08' 32.4"	6220 Lakewood Boulevard Lakewood, CA	2.50	Retail / Multiple
Norman's Nursery	125	N 34° 05' 42.3" W 118° 04' 53.5"	8550 E Broadway San Gabriel, CA	7.00	General Ornamentals
Colorama Wholesale Nursery	150	N 34° 08' 27.5" W 117° 55' 35.9"	1025 N. Todd Ave. Azusa, CA	15.30	Color Plants
Sakaida Nursery, Inc.	158	N 34° 06' 49.0" W 118° 04' 54.8"	8538-8601 Longden Ave San Gabriel, CA	6.89	General Ornamentals
SY Nursery Inc.	168	N 33° 50' 59.2" W 118° 04' 36.0"	19900 S Pioneer Blvd Cerritos, CA	4.75	General Ornamentals
T-Y Nursery	176	N 33° 51' 18.7" W 118° 23' 10.9"	Between Flagler/Paulina Redondo Beach, CA	7.50	General Ornamentals
Ultra Greens Nursery	178	N 34° 17' 57.4" W 118° 25' 06.5"	13102 Maclay Street Sylmar, CA	8.50	General Ornamentals
Valley Sod Farms, Inc.	184	N 34° 13' 23.1" W 118° 29' 34.5"	16405 Chase Street North Hills, CA	36.00	Sod
El Nativo Growers	202	N 34° 06' 38.2" W 117° 56' 26.4"	200 S. Peckham Azusa, CA	7.00	General Ornamentals

\* H&H added for interim sampling at during 4th Quarter of 2017, as Site #150 was no longer in operation.

## 2.2 CURRENT SAMPLING APPROACH

As of December 2022, the LAILG is comprised of 256 locations, 184 individual growers, and an estimated 1,130 irrigated acres. A complete list of current group members enrolled in LAILG is included in Appendix A, and a discussion of current enrollment and group status is discussed in Section 7.0.

As outlined in the MRP submitted on November 1, 2019, LAILG separates members into various groups based on their operational practices and land use patterns based on responses to a General Questionnaire submitted to each member. Members are broken into five groups: Large, Medium, Small, Micro, and non-responsive/unknown. Due to logistical issues with stormwater sampling in the Los Angeles Region during storm events, the entire group was divided into North and South Regions for sampling purposes. Table 4 presents the current grouping status for the LAILG.

*Table 4 – Grouping Status*

Grouping	# Total Locations	Total Irrigated Acres	# North Group	North Group Irrigated Acres	# South Group	South Group Irrigated Acres
Large	44	390.04	22	279.91	22	113.13
Medium	52	274.99	31	183.43	22	85.94
Small	65	216.58	28	80.29	39	133.48
Micro	23	38.92	14	23.33	13	21.32
Unknown	72	209.51	33	99.79	39	97.68

Reported	184	920.53	95	566.96	96	353.87
Total	256	1130.04	128	666.75	135	451.55

LAILG then randomizes sampling sites in each region for each sampling event, including randomization of members in each grouping in the region. Samples will be collected from one random member in each group during each sampling event, plus an additional follow up sample from a member that previously reported a WQB exceedance in historical sampling events in the region. A total of five sites will be visited each sampling event, once during the dry season and once during the wet season of each year.

Randomization for sampling sites is conducted with random.org, by randomizing each grouping within each region for each sampling event. Records of the randomization will be kept on file. The top location in each group will be selected as the sampling site, and the second location in each group will be selected as the alternate site. The follow up sampling for a location that previously reported a WQB exceedance will be hand selected by LAILG. Once a site has been randomly chosen for sampling, it will be removed from the randomization list. If WQB exceedances are reported at a location, it will be added to the list for follow up sampling.

Alternate sites are included in the randomization since many of the current locations have never been visited by LAILG personnel. It is anticipated that some chosen random locations may never have sufficient runoff during rain events for sampling, due to topography or operational practices. If a site is visited during a wet season sampling event and it is apparent that there will not be sufficient runoff for sampling during the time of the visit, the alternate location will be visited and site conditions will be noted if there is sufficient time in the day. Included in the notes will be observations on what size storm might be required in order to produce runoff at the location.

### 3.0 SAMPLING EVENTS

During the wet season of this reporting period, which lasted from October 15, 2021 through May 14, 2022, the primary randomized sampling sites listed in Table 5 and all four secondary sampling sites were visited on December 14, 2021. None of the visited sites visited had sufficient runoff to conduct sampling.

*Table 5 – 2021-2022 Wet Season Sampling Sites*

NGA #	GROUP	OWNER/ TENANT	PARCEL		CROP TYPE	ACREAGE	
			ADDRESS	CITY		TOTAL	IRRIGATED
<b>PRIMARY</b>							
286	Large	Moon Valley Nurseries	17020 Downey Rd.	Bellflower	GO	4.5	4
180	Medium	United Plant Growers	3698 Caspian Avenue	Long Beach	C	7.3	5.8
247	Small	Fuku Bonsai Nursery	560 W. 168th St.	Gardena	GO	2.2	2.2
333	Micro	Billy Lee	8600 Jefferson St.	Paramount	IP	2.85	2.85
114	Chosen	Mariposa Garden	6664 South Street	Lakewood	GO	4	3.61
<b>ALTERNATE</b>							
8	Large	ABC Nursery, Inc.	18601 Yukon Avenue	Torrance	GO	21.97	8.95
92	Medium	Kobata Growers, Inc.	17629 Van Ness Avenue	Torrance	C	6.5	6.5
297	Small	UVA Nursery	19033 Anelo Ave	Gardena	GO	2.1	2.1
149	Micro	Vargas Nursery	17020 Passage Ave	Bellflower	GO	1.75	1.75

During the dry season of this reporting period, which lasted from May 15, 2022 through October 14, 2022, the primary randomized sampling sites listed in Table 6 and all four secondary sampling sites were visited on September 22, 2022. All sites were visited during normal operating hours with observations of watering cycles, if applicable. During the visits, irrigation watering practices were observed and noted. Inspections included communicating with site operators (if available) regarding recently implemented BMPs at each site and verifying BMPs that had been implemented in the past. Irrigation runoff was not observed and samples were not collected at any of the selected sites visited during the dry season.

*Table 6 – 2019-2020 Dry Season Sampling Sites*

NGA #	GROUP	OWNER/ TENANT	PARCEL		CROP TYPE	ACREAGE	
			ADDRESS	CITY		TOTAL	IRRIGATED
<b>PRIMARY</b>							
294	Large	Moon Valley Nurseries	2600 W Lincoln Ave	Montebello	GO	16.5	7
253	Medium	Landscape Warehouse Nursery & Supply	2800 Royal Oaks Dr	Duarte	GO	2	1.25
396	Small	Wendy's Nursery	West of Laurel Canyon Blvd. between Saticoy and Cohasset	Los Angeles	C	2	1.7
348	Micro	Wilmington Nursery	West of Morella Ave between Arminta St. and Stagg St.	North Hollywood	IP	1.68	1.68
19	Chosen	Boething Tree Farm	23475 Long Valley Road	Woodland Hills	GO	32	14.68
<b>BACKUP</b>							
188	Large	West Covina Wholesale Nursery	Fairplex at Bracket Field / 1420 Puddingstone Dr.	La Verne	GO	20	15.25
385	Medium	New View Landscape, Inc./Green View Nursery	18590 Lassen St.	Northridge	GO	9.31	9.31
501	Small	Annandale Nursery	7720 N Figueroa St.	Los Angeles	GO	1.8	0.5
24	Micro	Calscape Growers	2103 Villa Heights Rd	Pasadena	GO	0.25	0.2

A total of 98 samples have been collected by LAILG during the life of the program. Over half of the samples were collected during the first two years of the program, prior to the suspension of the monitoring group. Collected samples have historically been from storm water runoff during the wet season; irrigated runoff from the dry season has not been encountered since 2008. A summarized history of collected samples is presented on Table 7. A complete history of collected samples is presented in Appendix B.

Table 7 – Historical Sampling Timeline

	CWIL Order # R4-2005-0080												Total
	YEAR 1 <sup>1</sup>				YEAR 2 <sup>2</sup>				YEAR 3		YEAR 4		
	Dry Season		Wet Season		Dry Season		Wet Season		Dry Season	Wet Season	Dry Season	Wet Season	
	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #1	Event #1	
Samples Collected	5	3	14	8	2	1	8	11	0	ns*	0	ns*	52
Sites Visited	16	16	16	16	14	14	18	18	18	N/A	18	N/A	164

1 Wet Season sampling events took place over five storms due to localized rain patterns and a general lack of uniform storm intensity and duration.

2 Wet Season sampling events took place during two storm days where all sites were visited.

	CWIL Order # R4-2010-0186																Total					
	Interim Sampling Event <sup>3</sup>	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				
		Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet Season		
		Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1		Event #2	Event #1	Event #2	Event #1	Event #2
Samples Collected	4	0	0	4	4	0	0	0	0	0	0	5	0	0	0	2	1	0	0	2	0	22
Sites Visited	4	5	5	5	5	5	5	na	na	5	5	5	na	5	5	5	5	5	5	5	na	84

3 The previous CWIL (Order R4-2005-0080) was replaced on October 7, 2010 with the adoption of a new Waiver (Order R4-2010-0186). As a good faith measure, the LAILG conducted a sampling event during the wet season between the execution of the new CWIL and the required submittal date of an MRP on April 7, 2011.

	CWIL Order # R4-2016-0143																Total	
	YEAR 1 <sup>4</sup>				YEAR 2 <sup>4</sup>				YEAR 3 <sup>4</sup>				YEAR 4 <sup>4</sup>		YEAR 4	YEAR 5		
	Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet	Dry		Wet
	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1		Event #1
Samples Collected	0	0	3	5	0	0	4	4	0	0	4	4	0	0	0	0	0	24
Sites Visited	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	7	0	82

4 Sites were sampled in the interim based on the MRP from CWIL Order R4-2010-0186.

	CWIL Order # R4-2021-0045				Total
	YEAR 1		YEAR 2		
	Dry Season	Wet Season	Dry Season		
	Event #1	Event #2	Event #1		
Samples Collected	0	0	0		0
Sites Visited	8	9	9		26

#### 4.0 WATER QUALITY BENCHMARKS

Samples were collected and analyzed as presented in the MRP and QAPP developed for Order R4-2016-0143. Table 8 presents the list of constituents analyzed during this reporting period.

*Table 8 - List of Constituents for Testing*

CONSTITUENT	UNITS	FIELD/LABORATORY TEST
Flow	Cubic feet per second	Field
pH	pH units	Field
Temperature	°F	Field
Dissolved Oxygen	mg/L	Field
Turbidity	NTU	Field
Total Dissolved Solids	mg/L	Laboratory
Total Suspended Solids	mg/L	Laboratory
Hardness (as CaCO <sub>3</sub> )	mg/L	Laboratory
Chloride	mg/L	Laboratory
Ammonia	mg/L	Laboratory
Nitrate-Nitrogen	mg/L	Laboratory
Phosphate	mg/L	Laboratory
Sulfate	mg/L	Laboratory
Total Copper	ng/L	Laboratory
Organophosphate Suite <sup>1</sup>	ng/L	Laboratory
Organochlorines Suite <sup>2</sup>	ng/L	Laboratory
Toxaphene	ng/L	Laboratory
Pyrethroids	ng/L	Laboratory
Toxicity	TU <sub>c</sub> <sup>3</sup>	Laboratory
E.Coli	MPN/100ml	Laboratory
Trash	Observations	Field

<sup>1</sup> Organophosphate Suite: Bolstar, Chlorpyrifos, Demeton, Diazinon, Dichlorvos, Dimethoate, Disulfoton, Ethoprop, Fenchlorophos, Fensulfothion, Fenthion, Malathion, Merphos, Methyl Parathion, Mevinphos, Phorate, Tetrachlorvinphos, Tokuthion, Trichloronate.

<sup>2</sup> Organochlorine Suite: 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-alpha, Chlordane-gamma, Dieldrin, Endosulfan sulfate, Endosulfan-I, Endosulfan-II, Endrin, Endrin Aldehyde, Endrin Ketone.

<sup>3</sup> Chronic Toxic Unit is the reciprocal of the sample concentration that caused no observable effect on the test organism by the end of a chronic toxicity test.

mg/l                    milligrams per liter  
 ng/L                    nanograms per liter  
 °F                        degrees Fahrenheit  
 TU<sub>c</sub>                    chronic toxic unit  
 NTU                     nephalitic turbidity units



#### 4.1 WATER QUALITY BENCHMARKS

The following tables present water quality benchmarks that apply to this program. They are derived from language included in Appendix 4 of the current Waiver, along with the Water Quality Control Plan Los Angeles Region (Basin Plan) objectives, along with the added California Toxics Rule benchmarks, USEPA ALB guidelines, and CCR Title 22 maximum contamination levels for municipal water (organic chemicals). The additional benchmarks are not currently regulated by the Waiver, and were added solely to evaluate operating practices within the group.

For the purpose of analysis, benchmarks are broken into four general groups: general chemistry (including nutrients), pesticides, toxicity, and field monitoring results.

##### *General Chemistry*

General Chemistry water quality objectives for each site were obtained from the *Water Quality Control Plan, Los Angeles Region*. To choose the most appropriate water quality objectives for each site, all sites were assumed to drain through storm drains that ran perpendicularly to the closest blue line stream. The most relevant stream reach and related water quality objectives were chosen for each site using this assumption. Table 9 outlines the site-specific water quality objectives in various watersheds used to evaluate general chemistry results for this report.

*Table 9 - Water Quality Benchmarks, General Chemistry*

Watershed/stream reach	Ammonia	TDS	Sulfate	Chloride	Nitrogen	TSS	Copper (µg/L)	Phosphate
<b>Los Angeles River:</b>								
Above Figueroa St.	a)	950	300	150	8	—	$CCC=0.960e^{[(0.8545(\text{in hardness}))]+(-1.702)]}$	—
Rio Hondo above Santa Ana Freeway	a)	750	300	150	8	—	$CCC=0.960e^{[(0.8545(\text{in hardness}))]+(-1.702)]}$	—
Pacoima Wash above Pacoima spreading grounds	a)	250	30	10	MUN	—	$CCC=0.960e^{[(0.8545(\text{in hardness}))]+(-1.702)]}$	—
<b>San Gabriel River:</b>								
Between Firestone Blvd. and San Gabriel River Estuary	a)	MUN				—	$CCC=0.960e^{[(0.8545(\text{in hardness}))]+(-1.702)]}$	—
Between Morris Dam and Ramona Blvd.	a)	450	100	100	8	—	$CCC=0.960e^{[(0.8545(\text{in hardness}))]+(-1.702)]}$	—
Dominguez Channel	a)	MUN				—	$CCC=0.960e^{[(0.8545(\text{in hardness}))]+(-1.702)]}$	—
Santa Monica Bay	a)	MUN				—	$CCC=0.960e^{[(0.8545(\text{in hardness}))]+(-1.702)]}$	—
<b>USEPA Municipal Drinking Water Standards</b>	a)	500	250	400	10	—	1.3 (mg/L)	—

\* All limits are recorded for milligrams per liter (mg/L)

a) Limit varies, see Water Quality Control Plan, Los Angeles Region

MUN No site specific objectives have been established. Objectives are based on USEPA guidelines for municipal drinking water standards.

— No numeric benchmarks, water quality benchmarks shall be based on the surface water and groundwater basin objectives currently contained in the Water Quality Control Plan Los Angeles Region (Basin Plan) or other applicable water quality standards established for the Los Angeles Region.

*Pesticides*

Pesticide water quality objectives were taken from the Waiver, USEPA ALB guidelines, and the California Toxics Rule. Table 10 presents pesticide benchmarks outlined in the Waiver. Table 11 presents OC pesticide benchmarks outlined by the California Toxics Rule.

*Table 10 - Water Quality Benchmarks, Pesticides, CWIL*

CONSTITUENT	UNITS	WATER QUALITY BENCHMARK
Chlordane	µg/L	0.00059
4,4' - DDT	µg/L	0.00059
4,4' - DDD	µg/L	0.00084
DDE	µg/L	0.00059
Dieldrin	µg/L	0.00014
Toxaphene	µg/L	0.00075
Chlorpyrifos	µg/L	0.025
Diazinon	µg/L	0.10
µg/L	micrograms per liter	

*Table 11 - Additional Water Quality Benchmarks, Pesticides, California Toxics Rule*

CONSTITUENT	UNITS	WATER QUALITY BENCHMARK
		Human Health (30-day Average) Drinking Water Sources (consumption of water and aquatic organisms)
Aldrin	ug/L	0.00013
alpha-BHC	ug/L	0.0039
beta-BHC	ug/L	0.014
gamma-BHC (Lindane)	ug/L	0.019
Endosulfan and derivatives	ug/L	110
Endrin	ug/L	0.76
Endrin aldehyde	ug/L	0.76
Heptachlor	ug/L	0.00021
Heptachlor epoxide	ug/L	0.0001

Table 12 presents ALB benchmarks for OP and pyrethroid pesticides. Any pesticide that exceeded the value reported for acute invertebrates were considered a water quality exceedance for LAILG evaluation purposes. The guidelines for acute invertebrates were chosen because historically the most sensitive species in toxicity testing was *Ceriodaphna dubia*, a species of water flea. The CWIL does not directly cover benchmarks for these constituents, and does not specifically require ALB benchmarks to be considered as WQBs.

Table 12 – Additional Water Quality Benchmarks, Pesticides, Aquatic Life Benchmarks

OPP Aquatic Life Benchmarks (µg / L) (Freshwater)

Pesticides	Footnote	CAS Number	Fish		Invertebrates		Nonvascular Plants	Vascular Plants	Office of Water Aquatic Life Criteria	
			Acute 1	Chronic 2	Acute 3	Chronic 4	Acute 5	Acute 6	Maximum Concentration (CMC)	Continuous Concentration (CCC)
<b>OP Pesticides</b>										
Azinphos Methyl	9	86-50-0	0.18	0.44	0.08	0.25	—	—	—	—
Chlorpyrifos		2921-88-2	0.90	0.57	0.05	0.04	140	—	—	—
Coumaphos	10	56-72-4	170	11.7	0.037	0.0337	—	166	—	—
Dichlovos (DDVP)		62-73-7	91.5	5.2	0.035	0.0058	14,000	—	0.083	0.041
Dimethoate	9	60-51-5	3100	430	21.5	0.5	20,000	>92,600	—	—
Disulfoton	9	298-04-4	19.5	3	1.95	0.01	—	—	—	—
Ethoprop		13194-48-4	150	24	22	0.8	8,400	—	—	—
Fenthion	8	55-38-9	415	7.5	2.6	0.013	400	> 2,800	—	—
Malathion		121-75-5	2.05	8.6	0.049	0.060	2,400	24,000	—	0.1
Methyl Parathion	13	298-00-0	925	< 10	0.485	0.25	15,000	18,000	—	—
Naled		300-76-5	46	2.9	0.07	0.045	25	> 1,800	—	—
Phorate	8	298-02-2	1.175	0.34	0.3	0.21	> 1,300	—	—	—
<b>Pyrethroid Pesticides</b>										
Allethrin		584-79-2	3.9	—	1.05	—	—	—	—	—
Bifenthrin		82657-04-3	0.075	0.04	0.8	0.0013	—	—	—	—
Cyfluthrin		68359-37-5	0.034	0.01	0.0125	0.0074	>181	—	—	—
Cypermethrin		52315-07-8	0.195	0.14	0.21	0.069	—	—	—	—
Fenpropathrin (Danitol)		64257-84-7	1.1	0.06	0.265	0.064	—	—	—	—
Deltamethrin		52918-63-5	0.29	0.017	0.055	0.0041	—	—	—	—
Esfenvalerate	9	66230-04-4	0.035	0.035	0.025	0.017	—	—	—	—
Lambda-cyhalothrin		91465-08-6	0.039	0.031	0.0035	0.002	> 310	—	—	—
Pendimethalin		40487-42-1	69	6.3	140	14.5	5.2	12.5	—	—
Permethrin	16	52645-53-1	0.395	0.0515	0.0195	0.0014	68	—	—	—
Prallethrin		23031-36-9	6	3	3.1	0.65	—	>1.324	—	—
Sumithrin		26002-80-2	7.9	1.1	2.2	0.47	—	—	—	—
Tefluthrin		79538-32-2	0.03	0.004	0.035	0.008	—	—	—	—

**Limits Reported in ug/L**

<sup>8</sup> Because the underlying toxicity value is a "greater-than" value (such as >265,000), this benchmark may overestimate toxicity.

<sup>9</sup> The chronic benchmark is based on the acute toxicity value (which was lower than the lowest available chronic toxicity value), and therefore may underestimate chronic

<sup>10</sup> Although the underlying acute toxicity value is greater than or equal to the chronic toxicity value, the acute benchmark is lower than the chronic benchmark because acute and chronic toxicity values were multiplied by LOC values of 0.5 and 1, respectively.

<sup>13</sup> Because the underlying toxicity value is a "less-than" value (such as <1,500), this benchmark may underestimate toxicity.

<sup>16</sup> Toxicity values and benchmarks apply to permethrin. If monitoring data represent only the *cis* isomer of permethrin in water, comparison with benchmarks may underestimate potential toxicity.

### *Toxicity*

Toxicity water quality objectives were determined as outlined in the MRP and QAPP, and through communications with ABC laboratory. Because tests are run on 100% concentration of samples (no dilution water), numerical values of TUC cannot be accurately determined. Due to the lack of TUC values, a TIE was generally run on samples that exhibited a high mortality. Chronic toxicity testing is conducted for *Pimephales promelas* (fathead minnow), *Ceriodaphnia* (water flea), and *Selenastrum capricornutum* (green algae). During this waiver period, *Ceriodaphnia* has been the most sensitive species and was the only species tested this sampling year.

Adequate sample volume was collected during sampling events so that TIE procedures could be initiated as soon as possible after toxicity was observed. TIE testing was only initiated if initial testing indicated the presence of significant toxicity in the sample. For the purpose of triggering TIE procedures, significant toxicity was defined as at least 50 percent mortality or a 50 percent reduction in growth. The 50 percent threshold is consistent with the approach recommended in guidance published by the EPA for conducting TIEs, which recommends a minimum threshold of 50 percent mortality because the probability of completing a successful TIE decreases rapidly for samples with less than this level of toxicity. Ultimately, it is up to the analyzing lab to determine if a TIE should be initiated.

### *Field Monitoring*

For field monitoring results, the Basin Plan for the Los Angeles Region contains narrative objectives for certain chemicals, most notably: biostimulator substances, temperature, pH, turbidity, and Total Suspended Solids. Table 13 presents field monitoring and toxicity benchmarks, as outlined in the Los Angeles Basin Plan. These narrative objectives contain verbiage stating that the natural or ambient conditions of receiving waters are not to be altered by discharges, including some of the constituents listed above. This is problematic, as natural or ambient conditions have not been established in many receiving waters, and discharges from growing operations in the urban Los Angeles Region drain primarily to storm drains. The ultimate endpoint of these storm drains are not well mapped or established, and are comingled with discharges from a number of land use types. Due to the difficulty in ascertaining the impacts to receiving waters, it is assumed in this report that discharges do not affect the receiving water bodies in a large enough magnitude to alter natural or ambient conditions.

Trash is visually observed during each sampling event and site visit and noted on field documents. Reporting is not included on the tables in Appendix B as there is no quantitative way to report any trash values, so LAILG has treated it as a yes/no qualitative analysis. There has not been any indication of significant trash releases from any of the sampling sites historically.

*Table 13 - Water Quality Benchmarks, Field Monitoring and Toxicity*

<b>Constituent</b>	<b>Narrative Objective</b>	<b>Applicable Benchmarks</b>
<b>pH</b>	The pH of inland surface water 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
<b>Temperature</b>	For water designated WARM, water temperature shall not be altered by more than 5°F above natural temperature. At no time shall WARM-designated waters be raised above 80°F as a result of water discharge	WARM: ≤ 80°F Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established
	For waters designated as 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.
<b>Dissolved Oxygen</b>	No single dissolved oxygen determination shall be less than 5 mg/L, except when natural conditions cause lesser concentrations.	≥ 5 mg/L
	The dissolved oxygen content of all surface waters designated as WARM shall not be depressed below 5 mg/L as a result of waste discharge.	WARM: ≥ 5 mg/L
	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 discharge.	COLD, SPWN: ≥ 7 mg/L
<b>Turbidity</b>	Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in natural turbidity attribute 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%.  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.
<b>Toxicity</b>	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.	≤ 1.0 TU <sub>c</sub> <sup>[3]</sup>
<b>Biostimulator Substances</b>	Waters shall not contain biostimulator substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affect beneficial uses.	No Numeric benchmarks. Nutrients listed on Table X.
<b>Total Suspended Solids (TSS)</b>	Wastes shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.	No numeric benchmarks.

## **5.0 INDIVIDUAL SAMPLING SITE RESULTS**

This section presents current and historical sampling events on a site-by-site basis for sampling sites sampled during this sampling year. The random site sampling approach outlined in the most recent MRP significantly changed the sampling approach for the LAILG, and as such, only sites that were visited during this AMR period were included. Samples collected from sampling sites that were sampled during previous sampling years or are no longer operating are included in the evaluation presented in Section 7 and in data presented in Appendix B, but are not presented in this section. Information includes: a summary of detected constituents from water quality sampling, photographs from visits conducted during the most recent site visits and sampling, site maps, and basic site information.

A complete tabulated summary of results from this sampling year, along with historical sampling results, is presented in Appendix B.

## 5.1 RANDOM SAMPLING LOCATIONS – WET SEASON

### NGA SITE #286

Sampling Group: LARGE  
Total / Irrigated Acres: 4.5/4.0 Acres  
Sample site GPS location: 33.879526° / -118.14992°

*December 14, 2021, wet season, no sample collected*



**Site Drainage and Access** - The site is very flat. The puddle in the picture was primarily from street flow, and was not from the facility. Would likely need heavy rain or multiple days of sustained rain to run off.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography, the site is unlikely to have significant runoff. It is unknown if there would be a large enough volume to sample during longer duration storms or heavier storm events.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 2.

Figure 2 – Aerial Map of NGA #286

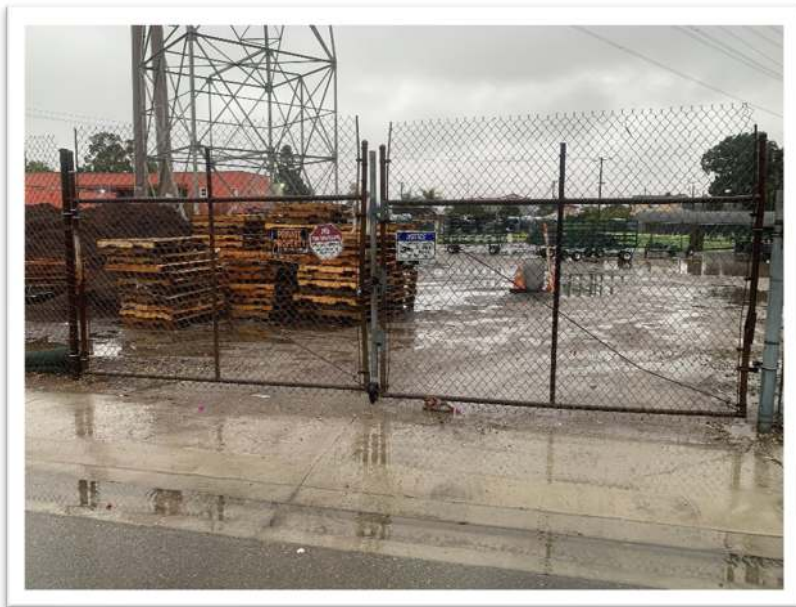




NGA SITE #180

Sampling Group: MEDIUM  
Total / Irrigated Acres: 7.3/5.8 Acres  
Sample site GPS location: 33.823631° / -118.21247°

*December 14, 2021, wet season, no sample collected*



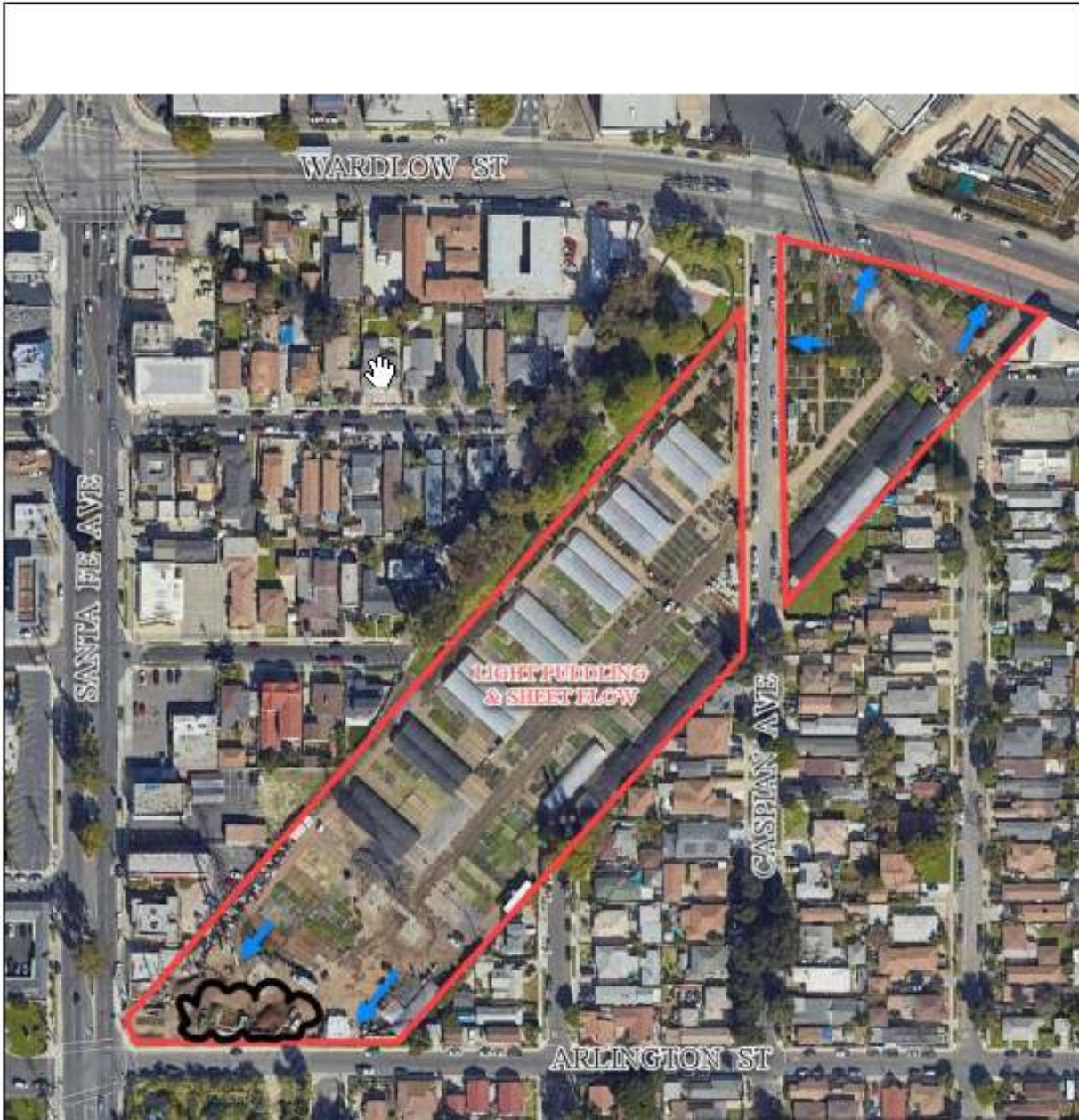
**Site Drainage and Access** – The site was relatively flat, and had filter socks in place as perimeter control BMPs. Some ponding was noted on the southern border with very minimal flow off site, which was insignificant enough to sample. The site may drain at various perimeter locations after flooding with a heavy sustained rainfall.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography, only a small portion of the southern section may run off to the south. It would most likely only run off during a larger active rain storm, and would not have sustained runoff.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 3.

Figure 3 – Aerial Map of NGA #180



**LEGEND**

Facility Boundary & APN	Potting Area
Drainage Ditch & Flow Direction	Plant Quarantine
Discharge Location	Groundwater Well
Fertilizer/Pesticide Storage Area	Filter Socks/Wattles
Soil/Compost Piles	Sand Bags

Access Notes: Entrance gate locked outside of regular business hours.



United Plant Growers  
 NGA#180

PREPARED BY:

PACIFICRIDGELINE

DATE: Not to Scale    DRAWN BY:    CHECKED: 12/15/22

NGA SITE #247

Sampling Group: SMALL  
Total / Irrigated Acres: 2.2/2.2 Acres  
Sample site GPS location: 33.879008° / -118.284294°

*December 14, 2021, wet season, no sample collected*



**Site Drainage and Access** - The site is very flat. Would likely need heavy rain or multiple days of sustained rain to run off.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography, the site is unlikely to have significant runoff. It is unknown if there would be a large enough volume to sample during longer duration storms or heavier storm events.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 4.

Figure 4 – Aerial Map of NGA #247



NGA SITE #333

Sampling Group: MICRO  
Total / Irrigated Acres: 2.85/2.85 Acres  
Sample site GPS location: 33.894755° / -118.147256°

*March 10, 2020, wet season, no sample collected*



**Site Drainage and Access** - The site was not planted at the time of visit and is very flat. Would likely need heavy rain or multiple days of sustained rain to run off.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography, the site is unlikely to have significant runoff. It is unknown if there would be a large enough volume to sample during longer duration storms or heavier storm events.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 5.

Figure 5 – Aerial Map of NGA #333



NGA SITE #8

Sampling Group: LARGE - ALTERNATE  
Total / Irrigated Acres: 22.0/9.0 Acres  
Sample site GPS location: 33.861638° / -118.336767°

*December 14, 2021, wet season, no sample collected*



**Site Drainage and Access** – The site is a large yard that is separated by multiple streets. Perimeter controls were noted in various locations. The entire area is flat, and would likely need heavy rain or multiple days of sustained rain to run off.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography, the site is unlikely to have significant runoff. It is unknown if there would be a large enough volume to sample during longer duration storms or heavier storm events.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 6.

Figure 6 – Aerial Map of NGA #8



Access Notes:



NGA SITE #92

Sampling Group: MEDIUM - ALTERNATE  
Total / Irrigated Acres: 6.5/6.5 Acres  
Sample site GPS location: 33.870638° / -118.319918°

*December 14, 2021, wet season, no sample collected*



**Site Drainage and Access** - The site was separated by a large pedestrian walkway, and completely fenced without visual or other access. The entire area is flat, and would likely need heavy rain or multiple days of sustained rain to run off.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – The facility does not have an easily accessible sampling location, and based on site topography, the site is unlikely to have significant runoff. It is unknown if there would be a large enough volume to sample during longer duration storms or heavier storm events.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 7.

Figure 7 – Aerial Map of NGA #92



NGA SITE #297

Sampling Group: SMALL - ALTERNATE  
Total / Irrigated Acres: 2.1/2.1 Acres  
Sample site GPS location: 33.857367° / -118.283386°

*December 14, 2021, wet season, no sample collected*



**Site Drainage and Access** - The site is relatively flat, but some riling was noted on a bank at the western border. No water was leaving the site during the visit. Sampling would likely need heavy rain or multiple days of sustained rain to run off.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography, a small amount of runoff would be anticipated on the western border during longer duration storms or heavier storm events.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 8.

Figure 8 – Aerial Map of NGA #297



**SITE IS FLAT,  
 DISCHARGE NOT  
 ANTICIPATED**

**LEGEND**

- Facility Boundary & APN
- Drainage Ditch & Flow Direction
- Discharge Location
- Fertilizer/Pesticide Storage Area
- Soil/Compost Piles
- ◇ Potting Area
- Plant Quarantine
- ⊕ Groundwater Well
- Filter Socks/Wattles
- Sand Bags



**UVA Nursery  
 NGA#297**

DESIGNED BY:



Access Notes: Entrance gate locked outside of regular business hours.

SCALE: Not to Scale    DRAWN BY: JD    NUMBER: 222422

NGA SITE #149

Sampling Group: MICRO - ALTERNATE  
Total / Irrigated Acres: 1.8/1.8 Acres  
Sample site GPS location: 33.879563° / -118.147836°

*December 14, 2021, wet season, no sample collected*



**Site Drainage and Access** - The site is very flat. Would likely need heavy rain or multiple days of sustained rain to run off.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography, the site is unlikely to have significant runoff. It is unknown if there would be a large enough volume to sample during longer duration storms or heavier storm events.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 9.

Figure 9 – Aerial Map of NGA #149



## 5.2 RANDOM SAMPLING LOCATIONS – DRY SEASON

### NGA SITE #294

Sampling Group: LARGE  
Total / Irrigated Acres: 16.5/7.0 Acres  
Sample site GPS location: 34.026448° / -118.126695°

*September 22, 2022, dry season, no sample collected*



**Site Drainage** - The site is located at the top of a large hill that flows north to Wilcox Ave. and south to Lincoln Ave. There is a six-inch drain pipe at the south corner of the property on Lincoln Ave. that appears to collect the drainage from the site.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on the presence of a drain, this site is anticipated to have runoff during active storm events, but a sampling pole or peristaltic pump would be required to reach over the fence.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 10.

Figure 10 – Aerial Map of NGA #294





NGA SITE #253

Sampling Group: MEDIUM  
Total / Irrigated Acres: 2.0/1.3 Acres  
Sample site GPS location: 34.146541° / -117.943713°

*September 22, 2022, dry season, no sample collected*



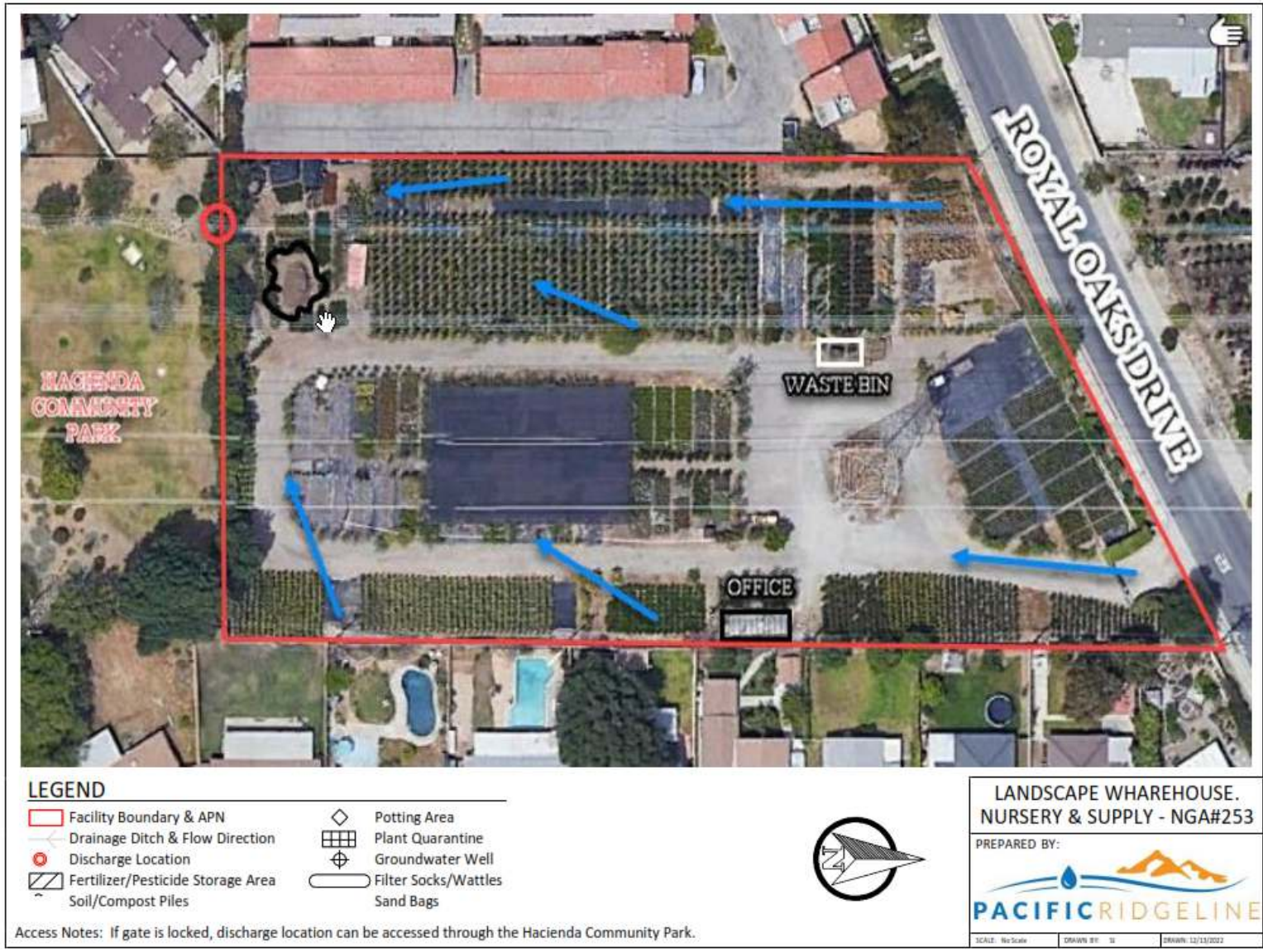
**Site Drainage and Access-** The site is relatively flat, but a portion of the property appears to drain southwest towards the corner of the property near Hacienda Park.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography, the southwest corner of the property may produce runoff during heavy sustained rain events.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 11.

Figure 11 – Aerial Map of NGA #253



NGA SITE #396

Sampling Group: SMALL  
Total / Irrigated Acres: 2.0/1.7 Acres  
Sample site GPS location: 34.20696° / -118.397289°

*September 22, 2022, dry season, no sample collected*



**Site Drainage and Access** - The site is relatively flat, but slightly slopes to the entrances/exits on the northwest and southeast portion of the property. Would likely need heavy rain or multiple days of sustained rain to run off.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography, the site is unlikely to have significant runoff, although it may discharge during heavier rain events.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 12.

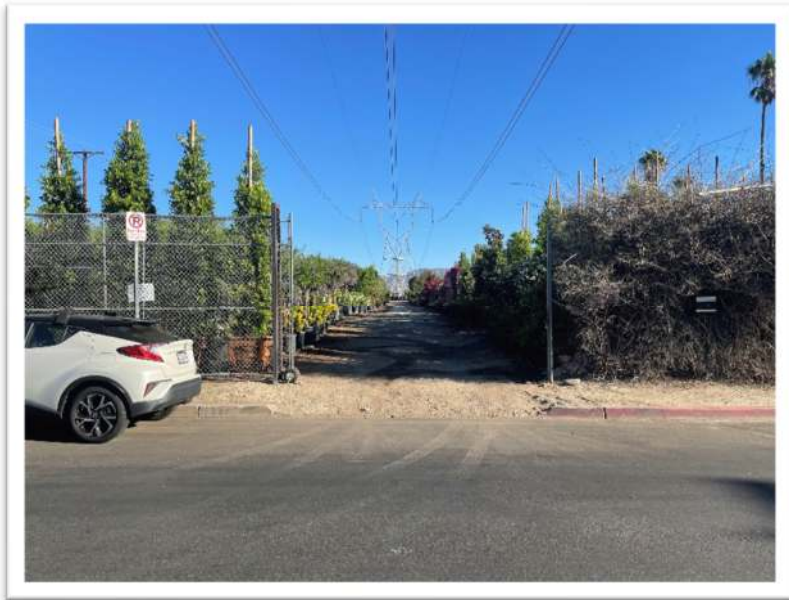
Figure 12 – Aerial Map of NGA #396



NGA SITE #348

Sampling Group: MICRO  
Total / Irrigated Acres: 1.7/1.7 Acres  
Sample site GPS location: 34.212989° / -118.390252°

*September 22, 2022, dry season, no sample collected*



**Site Drainage** - The site is relatively flat, and gently slopes inward and south to a grave path that runs through the property.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography, the site may discharge out the entrance exit near the intersection of Morella Ave. and Stagg St. during heavy, sustained flooding events.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 13.

Figure 13 – Aerial Map of NGA #348



NGA SITE #188

Sampling Group: LARGE - ALTERNATE  
Total / Irrigated Acres: 20.0/15.3 Acres  
Sample site GPS location: 34.093598° / -117.790797°

*September 22, 2022, dry season, no sample collected*



**Site Drainage** – The site was gated and locked, and only the perimeter was observed. The site drains primarily to the southwest as sheet flow that concentrates and channelizes before releasing along the southwestern border of the property. Releases drain directly to Puddingstone Reservoir.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography and previous visits, the site discharges from the southwestern edge of the property during sustained rain. However, access may be limited to this location during rain events.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 14.

Figure 14 – Aerial Map of NGA #188





NGA SITE #385

Sampling Group: MEDIUM - ALTERNATE  
Total / Irrigated Acres: 9.3/9.3 Acres  
Sample site GPS location: 34.247659° / -118.539885°

*September 22, 2022, dry season, no sample collected*



**Site Drainage** - The site is large and separated by multiple streets. The most northern parcel slopes gently to the south towards the gated entrance on Lassen St. and towards the southeast corner of the property. Straw wattles were placed along the fence line on Lassen St.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography, the site may discharge along points on the southern border of the northern parcel during active storm events.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 15.

Figure 15 – Aerial Map of NGA #385



<b>LEGEND</b>			<b>New View Landscape/ Green View Nursery - NGA#385</b> <small>DESIGNED BY</small>  <b>PACIFIC RIDGELINE</b>
 Facility Boundary & APN  Drainage Ditch & Flow Direction  Discharge Location  Fertilizer/Pesticide Storage Area Soil/Compost Piles	 Potting Area  Plant Quarantine  Groundwater Well  Filter Socks/Wattles Sand Bags		

Access Notes:

NGA SITE #501

Sampling Group: SMALL - ALTERNATE  
Total / Irrigated Acres: 1.8/0.5 Acres  
Sample site GPS location: 34.14484° / -118.184459°

*September 22, 2022, dry season, no sample collected*



**Site Drainage** - The site is located in a lowland bowl and primarily drains inward. Sand/gravel bags were noted on slopes and driveways were graveled for erosion control. No locations where stormwater would leave the site were noted, and the facility is gated and locked.

**Sampling** - No Samples were collected at the site due to lack of runoff.

**Evaluation** – Based on site topography, the site is not anticipated to discharge during rain events, and access would be limited.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 16.

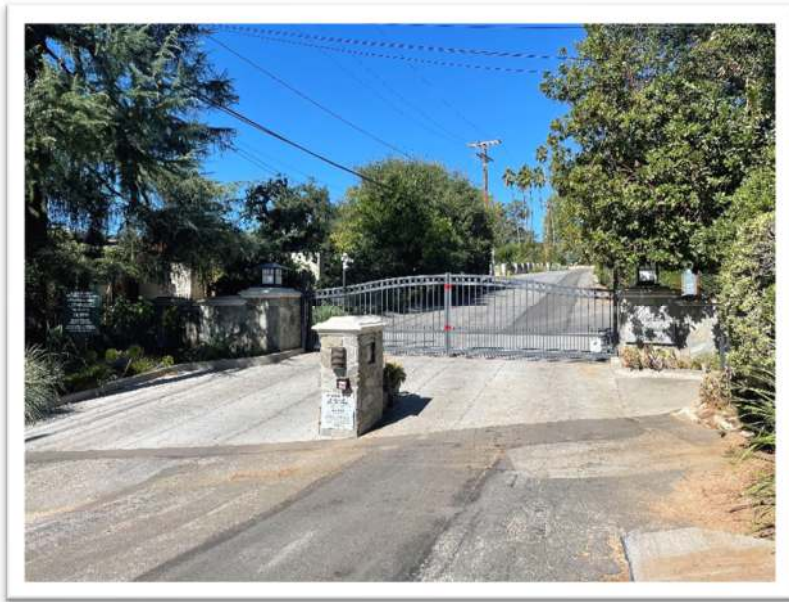
Figure 16 – Aerial Map of NGA #501



NGA SITE #24

Sampling Group: MICRO - ALTERNATE  
Total / Irrigated Acres: 0.25/0.2 Acres  
Sample site GPS location: 34.181183° / -118.084504°

*September 22, 2022, dry season, no sample collected*



**Site Drainage** - The site is located in a gated and locked residential community without access.

**Sampling** - No Samples were collected at the site due to lack of runoff and/or access.

**Evaluation** – The site is behind a locked residential gate and is not accessible without prior authorization.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 17.

Figure 17 – Aerial Map of NGA #24



### 5.3 SAMPLING LOCATIONS – CHOSEN SITES

#### WET SEASON

#### NGA SITE #114

Sampling Group: CHOSEN  
Total / Irrigated Acres: 4.0/3.6 Acres  
Sample site GPS location: 33.855886° / -118.102523°

*December 14, 2021, wet season, no sample collected*



**Site Drainage** - The site slopes gently to the south and ponds on the southern portion of the property onto a public greenway. There is a filter sock swale and perimeter controls on the southern portion. Site was visited with over an inch of rain, and would likely take multiple days of sustained rain to runoff in significant volumes.

**Sampling** – No Samples collected to date.

**Evaluation** – Based on site topography, the site may discharge along points on the southern border of the northern parcel during extended storm events, most likely over a couple of inches.

Based on what was available to be seen during the sampling event and from aerial photos, a site map was completed and is presented on Figure 18.

Figure 18 – Aerial Map of NGA #114





## **DRY SEASON**

### NGA SITE #19

Sampling Group: CHOSEN  
Total / Irrigated Acres: 32/14.7 Acres  
Sample site GPS location: 34.160628° / -118.639083

*September 22, 2022, dry season, no sample collected*



**Site Drainage** - The main area of the site drains eastward onto Valley Circle Boulevard. Based on site topography and historical sampling events, the eastern edge of the site along Valley Circle Boulevard was chosen as the sampling location.

**Sampling** - Ten samples collected to date. No samples were collected during the dry season of this sampling year.

Historical sampling results for this site are presented in Table 14.

A site map is presented on Figure 19.

Table 14 - Summary of samples collected, NGA #19

Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #4	NGA #4-LAILG-1	12/7/2007	0.48	20.64	1.1355	4.03	20.39	0.8	186	0.77	0.829	58	na	na	na
NGA #4	LAILG-NGA4-2	1/23/2008	0.24	1.45	0.1891	0.6	3.87	0.15	145	0.26	1.848	27	na	na	na
NGA #4	LAILG-NGA 4-3	8/13/2008	0.68	350.11	11.5262	<b>200.18</b>	219.52	69.7	<b>2,238</b>	13.05	31.713	371	na	na	na
NGA #4	LAILG-NGA 4-4	12/15/2008	0.52	8.67	1.0382	2.7	15.23	0.158	238	2.33	2.231	295	na	na	na
NGA #4	LAILG-NGA 4-5	3/21/2011	0.69	10	0.31	1.5	8.3	0.52	110	0.310	2.6	810	62	25	0.230
NGA #4	LAILG-NGA 4-6	3/25/2012	na	69	1.1	<b>17</b>	52	1.0	320	1.1	1.4	34	100	42	0.051
NGA #4	LAILG-NGA-4-8	1/20/2017	0.33	3.3	0.082	0.76	2.4	0.080	46	0.082	0.12	15	7.58	3.04	0.0045
NGA #4	LAILG-NGA-4-9	3/22/2018	0.32	2.4	0.25	0.58	2.500	0	42.000	0.25	0.44	82	13.5	5.4200	0.022
NGA #4	LAILG-NGA-4-10	1/14/2019	0.24	1.8	0.086	0.67	1.1	0.16	<10	0.084	0.21	31	12.5	3.70/0.784	0.009

Site	Sample #	Date	OC Pesticides (ng/L)			OP Pesticides (ng/L)				Pyd Pesticides (ng/L)
			Dicofol	Total DDT and Derivatives	Total Chlordane	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Total sum of all detected Pyrethroids
NGA #4	NGA #4-LAILG-1	12/7/2007	nd	nd	nd	<b>1,122.6</b>	<b>175.2</b>	11.3	nd	2,107.5
NGA #4	LAILG-NGA4-2	1/23/2008	nd	nd	nd	<b>153.8</b>	<b>2,212.1</b>	nd	<b>15,453.2</b>	1,389.4
NGA #4	LAILG-NGA 4-3	8/13/2008	485.7	nd	<b>38.8</b>	nd	<b>6,058.9</b>	nd	<b>1,148,630</b>	26,753.7
NGA #4	LAILG-NGA 4-4	12/15/2008	nd	nd	<b>99.5</b>	<b>590.9</b>	<b>859</b>	nd	<b>102,357.2</b>	96,588.0
NGA #4	LAILG-NGA 4-5	3/21/2011	na	<b>38</b>	<b>39.6</b>	<b>11,000</b>	<b>1,000</b>	nd	<b>7,300</b>	1,625.3
NGA #4	LAILG-NGA 4-6	3/25/2012	nd	nd	nd	<b>44,000</b>	nd	nd	<b>2,100</b>	109.7
NGA #4	LAILG-NGA-4-8	1/20/2017	nd	nd	nd	<b>11</b>	17	nd	<b>30</b>	nd
NGA #4	LAILG-NGA-4-9	3/22/2018	nd	nd	nd	<b>360</b>	62.0	nd	<b>160</b>	nd
NGA #4	LAILG-NGA-4-10	1/14/2019	nd	nd	nd	nd	nd	nd	nd	nd

Results above CWIL Limits are presented in **BOLD**.

mg/L	milligrams per liter	Diss	Dissolved
ng/L	nanograms per liter	Ortho	Orthophosphate
OC	Organochlorinated Pesticide	Phos	Phosphorus
OP	Organophosphorus Pesticide	TDS	Total Dissolved Solids
Pyd	Pyrethroid Pesticide	TSS	Total Suspended Solids
na	Constituent not analyzed	Ca	Calcium
nd	Constituent not detected	Cu	Copper

Figure 19 – Aerial Map of NGA #19



## **6.0 SUMMARY OF SAMPLING SITE RESULTS**

### **6.1 WATER QUALITY BENCHMARK EXCEEDANCES**

A total of 98 samples have been collected since the inception of the program. No samples were collected this year.

For the purpose of analysis, benchmarks are broken into four general groups: general chemistry (including nutrients), pesticides, toxicity, and field monitoring. Water quality benchmarks for each group are presented in Section 4. A summary of WQBs exceeded during this sampling year, and throughout the life of the program, is presented below. Numerical values for each constituent are presented on the tables included in Appendix B. A discussion of the exceedances follows.

#### **6.1.1 General Chemistry**

No samples were collected during this sampling year. Table 15 summarizes general chemistry exceedances for individual constituents reported throughout the life of the program. A complete summary of analytical results for general chemistry constituents is included in Appendix B.

##### *Total Dissolved Solids*

Laboratory results reported TDS exceedances in 32 of the 98 total samples (32.7 %) collected throughout the life of the program.

##### *Chloride*

Laboratory results reported Chloride exceedances in nine of the 98 total samples (9.2 %) collected throughout the life of the program.

##### *Sulfate*

Laboratory results reported Sulfate exceedances in 13 of the 98 total samples (13.3 %) collected throughout the life of the program.

*Nutrients (Nitrate/Ammonia/Phosphorus)*

Laboratory results reported Nitrogen exceedances in 51 of the 98 total samples (52.0 %) collected throughout the life of the program. Four of the 98 total samples (4.1 %) collected throughout the life of the program have reported exceedances of Ammonia. WQBs for Phosphate have not been established.

*Table 15 - Summary of Water Quality Exceedances, General Chemistry*

Constituent	CWIL Order # R4-2005-0080												Total	% of samples
	YEAR 1				YEAR 2				YEAR 3		YEAR 4			
	Dry Season		Wet Season		Dry Season		Wet Season		Dry Season	Wet Season	Dry Season	Wet Season		
	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #1	Event #1		
Ammonia	1	1	0	1	0	0	1	0	ns	ns	ns	ns	4	7.7%
TDS	4	3	5	2	1	0	2	2	ns	ns	ns	ns	19	36.5%
Sulfate	0	0	1	1	0	0	2	2	ns	ns	ns	ns	6	11.5%
Chloride	1	0	2	1	0	0	0	1	ns	ns	ns	ns	5	9.6%
Nitrogen	3	3	7	2	2	1	4	8	ns	ns	ns	ns	30	57.7%
Total Number of Exceedances	9	7	15	7	3	1	9	13	ns	ns	ns	ns	64	
Average # of Exceedances per sample	1.80	2.33	1.07	0.88	1.50	1.00	1.13	1.18	ns	ns	ns	ns	1.23	
Number of Samples Collected	5	3	14	8	2	1	8	11	ns	ns	ns	ns	52	

ns Program suspended, no sample collected

Constituents	Interim Sampling	CWIL Order # R4-2010-0186															Total	% of samples		
		YEAR 1				YEAR 2			YEAR 3			YEAR 4		YEAR 5						
		Dry Season		Wet Season		Dry Season		Wet Season	Dry Season		Wet Season	Dry Season		Wet Season	Dry Season				Wet Season	
		Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #2	Event #1	Event #1	Event #2	Event #1	Event #2	Event #1			Event #2	Event #1
Ammonia	0			0	0						0			0	0			0	0	0.0%
TDS	3			1	1						2			1	0			0	8	36.4%
Sulfate	0			1	1						1			1	0			0	4	18.2%
Chloride	0			0	0						1			0	0			0	1	4.5%
Nitrogen	2			2	1						3			1	1			1	11	50.0%
Total Number of Exceedances	5	0	0	4	3	0	0	0	0	0	7	0	0	3	1	0	0	1	24	
Average # of Exceedances per sample	1.25	--	--	1.00	0.75	--	--	--	--	--	1.40	--	--	1.50	1.00	--	--	0.50	1.09	
Number of Samples Collected	4	0	0	4	4	0	0	0	0	0	5	0	0	2	1	0	0	2	22	

\*Note: Blank cells mean no samples were collected during that sampling event.

Table 15, cont. - Summary of Water Quality Exceedances, General Chemistry

Constituents	CWIL Order # R4-2016-0143																		Total	% of samples
	YEAR 1, Interim				YEAR 2, Interim				YEAR 3, Interim				YEAR 4, Interim		YEAR 4		YEAR 5			
	Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet	Dry	Wet			
	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #1			
Ammonia			0	0			0	0			0	0							0	0.0%
TDS			0	1			2	1			1	0							5	20.8%
Sulfate			0	1			1	0			1	0							3	12.5%
Chloride			0	1			1	0			1	0							3	12.5%
Nitrogen			1	1			0	2			4	2							10	41.7%
Total Number of Exceedances	0	0	1	4	0	0	4	3	0	0	7	2	0	0	0	0	0	0	21	
Average # of Exceedances per sample	--	--	0.33	0.80	--	--	1.00	0.75	--	--	1.75	0.50	--	--	--	--	--	--	0.88	
Number of Samples Collected	0	0	3	5	0	0	4	4	0	0	4	4	0	0	0	0	0	0	24	

Constituent	CWIL Order # R4-2021-0045			Total	% of samples
	YEAR 1		YEAR 2		
	Dry	Wet	Dry		
	Event #1	Event #1	Event #1		
Ammonia				0	--
TDS				0	--
Sulfate				0	--
Chloride				0	--
Nitrogen				0	--
Total Number of Exceedances	0	0	0	0	
Average # of Exceedances per sample	--	--	--	--	
Number of Samples Collected	0	0	0	0	

Constituents	Totals, all Orders		Total	% of samples
	Dry Season	Wet Season		
Ammonia	2	2	4	4.1%
TDS	8	24	32	32.7%
Sulfate	0	13	13	13.3%
Chloride	1	8	9	9.2%
Nitrogen	9	42	51	52.0%
Total Number of Exceedances	<b>20.00</b>	<b>89.00</b>	<b>109</b>	
Average # of Exceedances per sample	1.82	1.02	1.11	
Number of Samples Collected	<b>11</b>	<b>87</b>	<b>98</b>	

\*Note: Blank cells mean no samples were collected during that sampling event.

### **6.1.2 Pesticides**

No samples were collected during this sampling year. Table 16 summarizes pesticide exceedances for individual constituents reported throughout the life of the program. A complete summary of analytical results for the analyzed pesticide constituents is included in Appendix B.

#### *OC Pesticides*

Laboratory results have reported OC Pesticide exceedances for 58 individual constituents of the 98 total samples collected throughout the life of the program.

Chlordane and 4,4' DDE have been the most prevalent OC pesticides detected, accounting for 39 of the 58 total exceedances. Exceedances were more prevalent during the original waiver period (CWIL Order #R4-2005-0080).

#### *OP Pesticides*

Laboratory results reported OP Pesticide exceedances for 29 individual constituents of the 98 total samples collected throughout the life of the program.

OP pesticides detected over WQBs throughout all waiver periods have been Chlorpyrifos, Diazinon, and Malathion.

#### *Pyrethroids*

Laboratory results reported Pyrethroid Pesticide exceedances for 100 individual constituent exceedances of the 98 total samples collected throughout the life of the program.

Table 16 - Summary of Water Quality Exceedances, Pesticides

Constituent	CWIL Order # R4-2005-0080													Total	% of samples
	YEAR 1				YEAR 2				YEAR 3		YEAR 4				
	Dry Season		Wet Season		Dry Season		Wet Season		Dry Season	Wet Season	Dry Season	Wet Season			
	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #1	Event #1			
<b>Waiver Limitations</b>															
<b>OC Pesticides</b>															
Chlordane	1	0	6	1	2	1	4	3	ns	ns	ns	ns	18	34.62%	
4,4' DDT	2	2	2	1	0	0	0	0	ns	ns	ns	ns	7	13.46%	
4,4' DDD	2	2	2	1	0	0	0	2	ns	ns	ns	ns	9	17.31%	
4,4' DDE	2	1	5	2	0	1	2	4	ns	ns	ns	ns	17	32.69%	
Dieldrin	0	0	0	0	0	0	0	0	ns	ns	ns	ns	0	0.00%	
Toxaphene	0	0	0	0	0	0	0	1	ns	ns	ns	ns	1	1.92%	
Waiver, OC Pesticide # of Exceedances	7	5	15	5	2	2	6	10	0	0	0	0	52		
<b>OP Pesticides</b>															
Chlorpyrifos	0	0	2	1	0	0	1	3	ns	ns	ns	ns	7	13.46%	
Diazinon	0	0	2	1	1	0	0	1	ns	ns	ns	ns	5	9.62%	
Waiver, OP Pesticide # of Exceedances	0	0	4	2	1	0	1	4	0	0	0	0	12		
<b>Aquatic Life Guidelines</b>															
<b>OP Pesticides</b>															
Malathion	0	0	1	1	1	0	0	2	ns	ns	ns	ns	5	9.62%	
ALB, OP Pesticide # of Exceedances	0	0	1	1	1	0	0	2	0	0	0	0	5		
<b>Pyrethroid Pesticides</b>															
Bifenthrin	1	2	4	0	0	0	2	3	ns	ns	ns	ns	12	23.08%	
Cyfluthrin	2	1	4	2	0	0	5	4	ns	ns	ns	ns	18	34.62%	
Fenpropathrin (Danitol)	1	0	3	2	1	0	2	2	ns	ns	ns	ns	11	21.15%	
Fluvalinate	0	1	0	0	1	0	2	3	ns	ns	ns	ns	7	13.46%	
Deltamethrin	0	0	2	2	1	0	0	2	ns	ns	ns	ns	7	13.46%	
Lambda-cyhalothrin	1	0	1	1	1	0	6	2	ns	ns	ns	ns	12	23.08%	
Permethrin	1	1	4	0	1	0	3	4	ns	ns	ns	ns	14	26.92%	
ALB, Pyrethroid Pesticide # of Exceedances	6	5	18	7	5	0	20	20	0	0	0	0	81		
<b>Total Number of Exceedances</b>	<b>13</b>	<b>10</b>	<b>38</b>	<b>15</b>	<b>9</b>	<b>2</b>	<b>27</b>	<b>36</b>	<b>ns</b>	<b>ns</b>	<b>ns</b>	<b>ns</b>	<b>150</b>		
<b>Average # of Exceedances per sample</b>	<b>2.60</b>	<b>3.33</b>	<b>2.71</b>	<b>1.88</b>	<b>4.50</b>	<b>2.00</b>	<b>3.38</b>	<b>3.27</b>	<b>ns</b>	<b>ns</b>	<b>ns</b>	<b>ns</b>	<b>2.88</b>		
<b>Number of Samples Collected</b>	<b>5</b>	<b>3</b>	<b>14</b>	<b>8</b>	<b>2</b>	<b>1</b>	<b>8</b>	<b>11</b>	<b>ns</b>	<b>ns</b>	<b>ns</b>	<b>ns</b>	<b>52</b>		

ns Program suspended, no sample collected



Table 16 cont.- Summary of Water Quality Exceedances, Pesticides

Constituents	CWIL Order # R4-2010-0186																	Total	% of samples	
	Interim Sampling	YEAR 1				YEAR 2			YEAR 3			YEAR 4				YEAR 5				
		Dry Season		Wet Season		Dry Season	Wet Season		Dry Season	Wet Season		Dry Season		Wet Season		Dry Season	Wet Season			
		March 2011	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1			Event #2
<b>Waiver Limitations</b>																				
<b>OC Pesticides</b>																				
Chlordane	1			0	0					0			0	0			0	1	4.55%	
4,4' DDT	1			0	0					0			0	0			0	1	4.55%	
4,4' DDD	0			0	0					0			0	0			0	0	0.00%	
4,4' DDE	1			1	1					0			0	0			0	3	13.64%	
Dieldrin	1			0	0					0			0	0			0	1	4.55%	
Toxaphene	0			0	0					0			0	0			0	0	0.00%	
Waiver, OC Pesticide # of Exceedances	4	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	6		
<b>OP Pesticides</b>																				
Chlorpyrifos	3			0	1					1			0	0			0	5	22.73%	
Diazinon	1			0	0					0			0	0			0	1	4.55%	
Waiver, OP Pesticide # of Exceedances	4	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	6		
<b>Aquatic Life Guidelines</b>																				
<b>OP Pesticides</b>																				
Malathion	1			0	1					0			0	0			0	2	9.09%	
ALB, OP Pesticide # of Exceedances	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2		
<b>Pyrethroid Pesticides</b>																				
Bifenthrin	0			0	0					1			1	0			0	2	9.09%	
Cyfluthrin	0			0	0					1			0	0			0	1	4.55%	
Cypermethrin	0			0	0					0			0	0			0	0	0.00%	
Fenpropathrin (Danitol)										0			1	0			0	1	4.55%	
Deltamethrin	0			1	0					0			0	0			0	1	4.55%	
Lambda-cyhalothrin	0			0	0					0			0	0			0	0	0.00%	
Permethrin	2			0	1					1			1	0			0	5	22.73%	
ALB, Pyrethroid Pesticide # of Exceedances	2	0	0	1	1	0	0	0	0	0	3	0	0	3	0	0	0	10		
Total # of Exceedances	11	0	0	2	4	0	0	0	0	0	4	0	0	3	0	0	0	24		
Average # of Exceedances per sample	2.75			0.50	1.00						0.80			1.50	0.00			1.09		
Number of Samples Collected	4	0	0	4	4	0	0	0	0	0	5	0	0	2	1	0	0	22		

\*Note: Blank cells mean no samples were collected during that sampling event.

Table 16 cont.- Summary of Water Quality Exceedances, Pesticides

Constituents	CWIL Order # R4-2016-0143																Total	% of samples	
	YEAR 1, Interim				YEAR 2, Interim				YEAR 3, Interim				YEAR 4, Interim		YEAR 4	YEAR 5			
	Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet	Dry			Wet
	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1			Event #1
<b>Waiver Limitations</b>																			
<b>OC Pesticides</b>																			
Chlordane			0	0			0	0			0	0						0	0.00%
4,4' DDT			0	0			0	0			0	0						0	0.00%
4,4' DDD			0	0			0	0			0	0						0	0.00%
4,4' DDE			0	0			0	0			0	0						0	0.00%
Dieldrin			0	0			0	0			0	0						0	0.00%
Toxaphene			0	0			0	0			0	0						0	0.00%
Waiver, OC Pesticide # of Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>OP Pesticides</b>																			
Chlorpyrifos			0	0			0	1			0	0						1	4.17%
Diazinon			0	0			0	0			1	0						1	4.17%
Waiver, OP Pesticide # of Exceedances	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	
<b>Aquatic Life Guidelines</b>																			
<b>OP Pesticides</b>																			
Malathion			0	0			1	1			0	0						2	8.33%
ALB, OP Pesticide # of Exceedances	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	
<b>Pyrethroid Pesticides</b>																			
Bifenthrin			0	2			0	0			1	0						3	12.50%
Cyfluthrin			0	1			0	0			1	1						3	12.50%
Cypermethrin			0	0			0	0			0	0						0	0.00%
Fenpropathrin (Danitol)			0	1			0	0			0	0						1	4.17%
Deltamethrin			0	0			0	0			0	0						0	0.00%
Lambda-cyhalothrin			0	0			0	0			0	0						0	0.00%
Permethrin			0	1			1	0			0	0						2	8.33%
ALB, Pyrethroid Pesticide # of Exceedances	0	0	0	5	0	0	1	0	0	0	2	1	0	0	0	0	0	9	
Total # of Exceedances	0	0	0	5	0	0	2	2	0	0	3	1	0	0	0	0	0	13	
Average # of Exceedances per sample			0.00	1.00			0.50	0.50			0.75	0.25						0.54	
Number of Samples Collected	0	0	3	5	0	0	4	4	0	0	4	4	0	0	0	0	0	24	

\*Note: Blank cells mean no samples were collected during that sampling event.

Table 16 cont.- Summary of Water Quality Exceedances, Pesticides

Constituents	CWIL Order # R4-2021-0045			Total	% of samples
	YEAR 1		YEAR 2		
	Dry	Wet	Dry		
	Event #1	Event #1	Event #1		
<b>Waiver Limitations</b>					
<b>OC Pesticides</b>					
Chlordane				0	--
4,4' DDT				0	--
4,4' DDD				0	--
4,4' DDE				0	--
Dieldrin				0	--
Toxaphene				0	--
Waiver, OC Pesticide # of Exceedances	0	0	0	0	
<b>OP Pesticides</b>					
Chlorpyrifos				0	--
Diazinon				0	--
Waiver, OP Pesticide # of Exceedances	0	0	0	0	
<b>Aquatic Life Guidelines</b>					
<b>OP Pesticides</b>					
Malathion				0	--
ALB, OP Pesticide # of Exceedances	0	0	0	0	
<b>Pyrethroid Pesticides</b>					
Bifenthrin				0	--
Cyfluthrin				0	--
Cypermethrin				0	--
Fenpropathrin (Danitol)				0	--
Deltamethrin				0	--
Lambda-cyhalothrin				0	--
Permethrin				0	--
ALB, Pyrethroid Pesticide # of Exceedances	0	0	0	0	
<b>Total # of Exceedances</b>					
0					
<b>Average # of Exceedances per sample</b>					
--					
<b>Number of Samples Collected</b>					
0					

\*Note: Blank cells mean no samples were collected during that sampling event.

Table 16 cont.- Summary of Water Quality Exceedances, Pesticides

Constituents	Totals, all Orders		Total	% of samples
	Dry Season	Wet Season		
<b>Waiver Limitations</b>				
<b>OC Pesticides</b>				
Chlordane	4	15	19	19.39%
4,4' DDT	4	4	8	8.16%
4,4' DDD	4	5	9	9.18%
4,4' DDE	4	16	20	20.41%
Dieldrin	0	1	1	1.02%
Toxaphene	0	1	1	1.02%
Waiver, OC Pesticide # of Exceedances	<b>16</b>	<b>42</b>	<b>58</b>	
<b>OP Pesticides</b>				
Chlorpyrifos	0	13	13	13.27%
Diazinon	1	6	7	7.14%
Waiver, OP Pesticide # of Exceedances	<b>1</b>	<b>19</b>	<b>20</b>	
<b>Aquatic Life Guidelines</b>				
<b>OP Pesticides</b>				
Malathion	1	8	9	9.18%
ALB, OP Pesticide # of Exceedances	<b>1</b>	<b>8</b>	<b>9</b>	
<b>Pyrethroid Pesticides</b>				
Bifenthrin	3	14	17	17.35%
Cyfluthrin	3	19	22	22.45%
Cypermethrin	2	9	11	11.22%
Fenpropathrin (Danitol)	2	7	9	9.18%
Deltamethrin	1	7	8	8.16%
Lambda-cyhalothrin	2	10	12	12.24%
Permethrin	3	18	21	21.43%
ALB, Pyrethroid Pesticide # of Exceedances	<b>16</b>	<b>84</b>	<b>100</b>	
<b>Total # of Exceedances</b>				
	<b>34</b>	<b>153</b>	<b>187</b>	
<b>Average # of Exceedances per sample</b>				
	<b>3.09</b>	<b>1.76</b>	<b>1.91</b>	
<b>Number of Samples Collected</b>				
	<b>11</b>	<b>87</b>	<b>98</b>	

### **6.1.3 Toxicity**

A total of 16 TIEs have been conducted throughout the life of the program. Seven of the TIEs did not show a significant observed toxicity effect in follow up testing.

Historical TIE results indicated a variety of reasons for toxicity, including non-polar organic compounds, particulate-bound toxicants, volatile compounds, organophosphates, particulate bound toxicants, metals, and a combination of the previously listed toxicants. A historical summary of analytical results for toxicity testing is included for each site in Appendix B.

### **6.1.4 Field Monitoring Results**

Field Monitoring Water Quality Benchmarks are based on the surface water and groundwater basin objectives currently contained in the Basin Plan or other applicable water quality standards established for the Los Angeles Region. Field monitoring readings have not exceeded Basin Plan objectives at any sites sampled during the entire program. A historical summary of results for field measurements is included for each site in Appendix B. Hard copies of field data sheets and field reports are kept on file at PacRL, and are available upon request.

## **6.2 QUALITY ASSURANCE AND QUALITY CONTROL**

There were no samples collected this year. All field monitoring equipment was calibrated prior to each monitoring event, and verified after calibration with mid-range standards. Calibration logs are kept on-file at PacRL.

Field duplicates and laboratory duplicates are used to check the precision of samples. Field duplicates were not collected this year as the one per 20 samples threshold had yet to be met. Lab duplicates, blank spike duplicates, laboratory control spike duplicates, and matrix spike duplicates were all accepted by the laboratory and did not cause any data to be estimated, as discussed in the laboratory analytical report.

Percent recoveries for blank spike samples, laboratory control samples, and matrix spike samples are used to check the accuracy of samples.

## 7.0 WQMP/MRP UPDATE

An updated WQMP Version 2.2 was submitted on November 5, 2020. This section summarizes results from the most recent WQMP. The only data that has been collected since WQMP Version 2.2 is from the General Operational Questionnaire, which is used to organize growers into sampling groups. Methodology and all additional information on the data presented can be found in the WQMP reports.

### 7.1 GROUPING RESULTS

A total of 126 out of the 184 individual operators (68.5%) and 184 of the 256 facilities (71.9%), which represent 920.53 of the 1,130.04 irrigated acres (81.5%) enrolled in the program, have answered the General Questionnaire and were able to be grouped for this report. The results are similar to the data presented in the WQMP. The current grouping status for members that have submitted sufficient data is summarized in Table 17, and the current status of all members of the group, including gaps in current information, is presented on the growers list in Appendix A.

*Table 17. Summary of Grouping Results*

Group	# Operators Grouped	# Facilities Grouped	Irrigated Acres Represented	% of Grouped Operators	% of Grouped Facilities
LARGE	18	44	390.04	14.3%	23.9%
MEDIUM	31	52	274.99	24.6%	28.3%
SMALL	57	65	216.58	45.2%	35.3%
MICRO	20	23	38.92	15.9%	12.5%
Total Grouped	126	184	920.53		
Total Enrolled	184	256	1130.04		
% of Total Grouped	68.5%	71.9%	81.5%		

## **7.2 OUTREACH**

The LAILG has full time personnel that are available for grower assistance via phone whenever necessary. LAILG is available to provide support, if required, to assist growers with information included in the documents. LAILG provides an online portal to offer modules for continuing education content and required paperwork. Members were given the option of completing required paperwork via online surveys or submitting hardcopy questionnaires, which then LAILG would input manually into the database.

Outreach to members is tailored to individual member requirements, including their most convenient form of communication. The best form of communication for each member is collected and recorded by LAILG. General communications are done with the website, mass emails, individual emails, phone calls, and/or mailers, depending on member requests.

LAILG assists with the preparation of individual, site specific maps for each enrolled grower who provided sufficient data to locate their property. Maps include specific instructions and a legend so growers can point out key features on their property, such as: drainage ditches and stormwater discharge locations, fertilizer and pesticide storage areas, soil piles and compost areas, potting areas, quarantine areas, and structural BMPs installed at the property. Whenever LAILG staff visits a new facility, a map is completed per the standards listed above. This will allow LAILG to get a more comprehensive picture of each growing facility, standard property uses, and assist with any future sampling that may take place at sites.

Examples of outreach materials and maps are included in Appendix C.

## **7.3 EDUCATION REQUIREMENTS**

In 2020 and 2021, in-person continuing education events were postponed due to the COVID-19 outbreak. LAILG launched an online portal to offer continuing education courses until in-person classes are once again permitted. These classes are pre-recorded and include quizzes with a mandatory passing rate of 70% to receive credit. Members have access to each presentation after they complete each course indefinitely for review. Login information to the private website has been provided to the LARWQCB Irrigated Lands Program staff and is available upon request. The 2020-21 and 2021-22 educational content is still available in the portal and members are encouraged to make up hours that were not earned in the respective water years.

LAILG offered three separate continuing education opportunities in 2022. The increase in COVID-19 cases in early 2022 forced postponements of in-person courses. LAILG partnered with the University of California Nursery and Floriculture Alliance and SAN Agrow to host webinars for the 2021-22 Water Year. The UCNFA Ask the Advisor: Nitrogen Management webinar on March 2, 2022 was an hour-long Q&A session with UCANR Nursery Advisors. The SAN Agrow Webinar on May 18, 2022 was a two-hour long webinar with presenters from UCANR and SAN Agrow.

LAILG hosted a two-hour in-person continuing education meeting on August 18, 2022. The presenters included LAILG and Regional Water Board staff and UCANR Nursery Advisors. This course provided continuing education hours for the 2022-23 Water Year. LAILG planned to offer more courses in late 2022, but decided to wait until the new Waste Discharge Requirements (WDR) were finalized. Since the WDR has been postponed until Fall of 2023, LAILG will offer at least one more continuing education opportunity in early 2023 to provide hours for members.

Despite offering an online alternative in the form of live webinars and a recording in the online portal, only 21.88% of members completed the online continuing education courses for 2021-2022.

Mandatory educational events will continue to be provided per Waiver requirements. The ultimate goal of the LAILG is to use more field training as continual education in order to further engage growers in the BMP implementation process. LAILG will pursue opportunities for grant money in order to pursue installations, including field training, of future BMPs.

#### **7.4 ONGOING WQMP IMPLEMENTATION ISSUES**

NGA enrollment has shown a constant and significant decline in enrolled acres. **Since the 2017 AMR report, total irrigated acres enrolled in the program have declined by 43.5%.** Further compounding the issue of lost irrigated acres and revenue is a lack of grower response to the paperwork required for the WQMP process. Two significant issues at this time are from land that is under third party control and a general lack of enforcement activity from the LARWQCB.

#### **LADWP and SCE**

The Los Angeles Department of Water & Power (LADWP) pays dues for all its agricultural parcels and is reimbursed by the growers. This is beneficial to LAILG because the Program Manager does not need to seek payment from over 100 different growers. As part of this agreement, LADWP does not allow LAILG to communicate with growers directly. LADWP sends all correspondence themselves and only allows growers to contact LAILG if they need assistance. To date, of the 128 DWP-owned sites, 86% of these accounts have not completed the continuing education requirements for 2021-22 and another 78% have not completed the required paperwork. LAILG has offered to communicate with growers in hopes of getting paperwork completed but has been denied by LADWP several times. Assistance from the LARWQCB with outreach to the LADWP or the issuance of Notices of Violations for not completing required paperwork and/or continuing education would help with acquiring the necessary data.

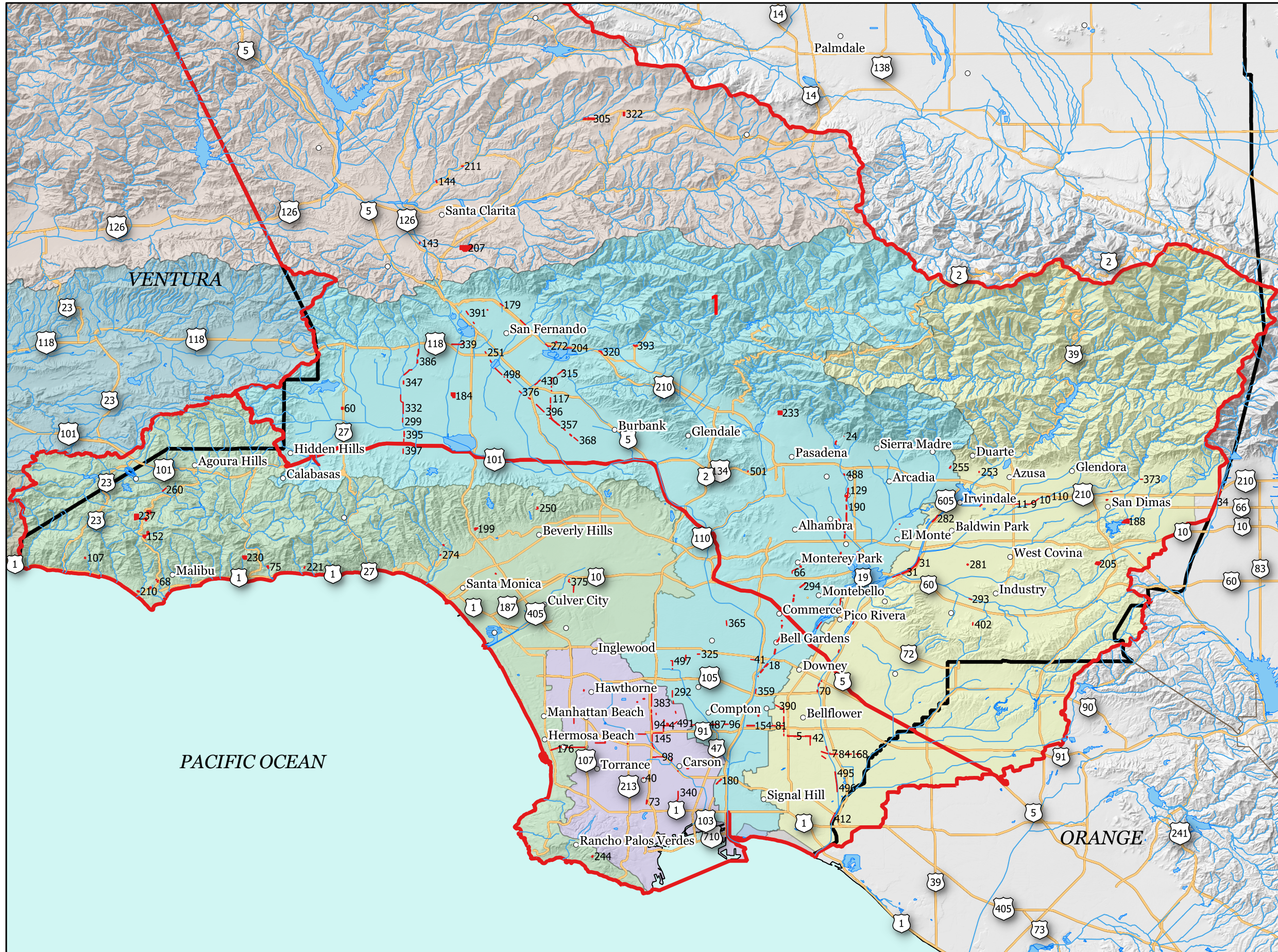
The LAILG also has growers on Southern California Edison (SCE) land. Currently there is no agreement in place with SCE. LAILG has attempted to contact growers in order to get paperwork completed with limited response. Assistance from the LARWQCB with outreach to SCE or the issuance of Notices of Violations for failure to enroll and/or not completing required paperwork would help with acquiring the necessary data.



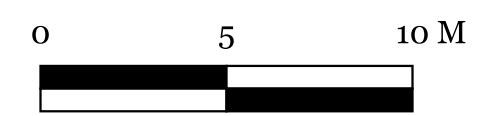
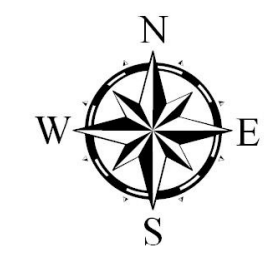
### Enforcement

LAILG has dropped accounts that were previously enrolled but have not made a payment in over six months. The Water Board was given the list of unenrolled operations, so they could issue a Notice of Violation for not enrolling in the group. The first list of enrolled sites that were unpaid was sent to the Water Board in October of 2019. Another list was provided in August of 2020 after unpaid sites were unenrolled from the program. On April 8, 2021, LARWQCB was sent an updated list of sites that are no longer enrolled in LAILG due to non-payment. To our knowledge, LARWQCB has not communicated with these growers regarding re-enrollment or done any enforcement action.

**FIGURE 1** Los Angeles County Irrigated Lands Group  
Los Angeles Sampling Regions and Watersheds

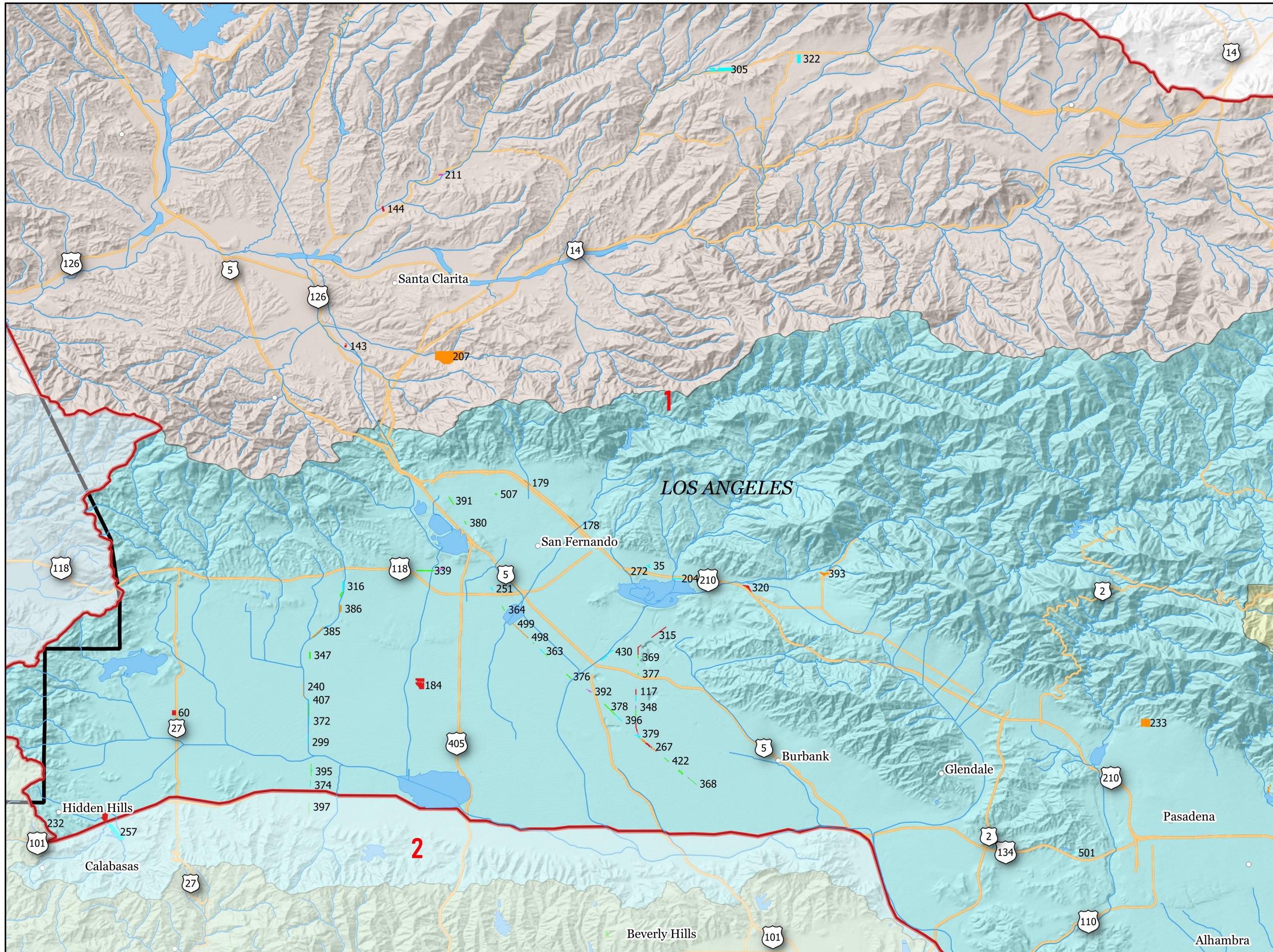


- Legend**
- Enrolled Grower and Number
  - Sampling Region 1
  - Sampling Region 2
  - LA County Boundary
  - CA State Road and Number
  - Water Bodies
  - Flowlines
  - LA Cities
- Watersheds**
- Callegus Creek
  - Dominguez Channel LA LB Harbor
  - Los Angeles River
  - Misc. Ventura Coastal Stream
  - Santa Clara River
  - San Gabriel River
  - Santa Monica Bay
  - Ventura River



Scale: 1 Inch = 5 Miles

**FIGURE 1.1** Los Angeles County Irrigated Lands Group  
Sampling Region 1, West Portion



**Legend**

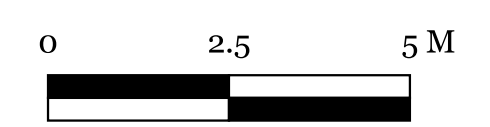
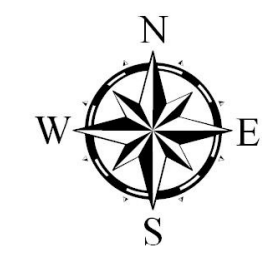
- Sampling Region and Number
- CA State Roads and Numbers
- LA Cities
- LA County Boundary
- Streams

**Enrolled Growers by Group**

- Unknown (No Data)
- Micro Growers
- Small Growers
- Medium Growers
- Large Growers

**Watersheds**

- Dominguez Channel LA LBHarbor
- Los Angeles River
- Santa Clara River
- San Gabriel River
- Santa Monica Bay
- Ventura River
- Misc. Ventura Coastal Stream
- Callegus Creek



Scale: 1 Inch = 2.5 Miles

Prepared by:  
  
**PACIFIC RIDGELINE**  
 1891 Goodyear Ave., Suite 621, Ventura CA, 93003  
 (855) 682-1802 | www.pacr.com