



**WATER QUALITY MANAGEMENT PLAN
UPDATE 1.0**

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

August 21, 2015



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CWIL Order No. R4-2010-0186

LIST OF COMMONLY USED ACRONYMS

ABC	ABC Laboratories
ALB	Aquatic Life Benchmark
AMR	Annual Monitoring Report
BMP	Best Management Practice
CCRWQCB	Central Coast Regional Water Quality Control Board
COC	Chain of Custody; Constituent of Concern
CRG	CRG Marine Laboratories
CWH	Council for Watershed Health
CWIL	Conditional Waiver Irrigated Lands
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DO	Dissolved Oxygen
DPR	Department of Pesticide Regulations
GPS	Global Positioning System
gal/acre	Gallons per Acre
IPM	Integrated Pest Management
KO ₂	Potassium, molecular formulation, fertilizer
LAILG	Los Angeles County Irrigated Lands Group
LADWP	Los Angeles Department of Water and Power
LARWQCB	Los Angeles Regional Water Quality Control Board
lb/acre	Pounds per Acre
MCL	Maximum Contaminant Level
MDL	Method Detection Limit
mg/L	Milligrams per Liter, parts per million
MRP	Method Reporting Limit
ng/l	Nanograms per Liter, parts per trillion
NGA	Nursery Growers Association
NOI	Notice of Intent
NPK	Nitrogen/Phosphorous/Potassium, fertilizer formulation
NTU	Nephelometric Turbidity Unit
OC	Organochlorinated
OP	Organophosphorus
P ₂ O ₅	Phosphorous, molecular formulation, fertilizer
PBO	Piperonyl Butoxide
PGE	Pacific Gas and Electric
PUR	Pesticide Use Report
PW	PW Environmental
QA	Quality Assurance
QC	Quality Control
QAPP	Quality Assurance Project Plan
RLs	Reporting Limits
SCE	Southern California Edison
TDS	Total Dissolved Solids
TIE	Toxic Identification Evaluation
TSS	Total Suspended Solids
TUc	Toxicity Unit
USEPA	United States Environmental Protection Agency
WQB	Water Quality Benchmarks
WQMP	Water Quality Management Plan

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WATER QUALITY MANAGEMENT PLAN
NURSERY GROWERS ASSOCIATION
LOS ANGELES COUNTY IRRIGATED LANDS GROUP

1.0 INTRODUCTION

The LARWQCB is a State of California Agency that regulates water quality within the Los Angeles Region. The Los Angeles Region includes coastal watersheds of Los Angeles and Ventura Counties, as well as very small portions of Santa Barbara, Kern and Orange Counties. The LAILG operates in the portion of the Los Angeles Region that is within the County of Los Angeles.

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. AMRs submitted by the LAILG reported runoff water quality that exceeded established WQBs. All five Watersheds and WMAs have affected waterbodies that appear on the Federal 303(d) list, and listed contaminants include constituents that potentially related to agricultural uses.

Water quality impacts associated with agriculture are primarily due to discharges resulting from irrigation or storm water. These discharges typically contain pollutants that have been imported or introduced into the irrigation or storm water; in addition, irrigation practices can mobilize and or concentrate some pollutants. In order to mitigate these potentially polluted discharges from affecting the beneficial uses of water bodies within the Los Angeles Region, the LARWQCB adopted Order No. R4-2005-0080 on November 3, 2005, as mandated by state law and policy. On October 7, 2010, the LARWQCB updated the previous Waiver for the Los Angeles Region (Order No. R4-2010-0186; Waiver).

The goal of this program is to protect and improve water quality, and to attain water quality objectives in the receiving water bodies. As a condition of the Waiver, dischargers are required to implement monitoring programs to assess the impacts of discharges from irrigated lands. LAILG developed a MRP and QAPP, both dated April 7, 2011, to outline the monitoring efforts and accepted methodology to collect and analyze runoff water samples in compliance with the new Waiver.

2.0 BACKGROUND

2.1 Program History

During the previous 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 after this time due to financial constraints from growers abandoning the program and a lack of enforcement by the LARWQCB. A discussion of the suspension of the LAILG is in the letter from the LAILG to the LARWQCB dated August 12, 2009.

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 new 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 the Waiver period exceeded applicable Water Quality Benchmarks and necessitated the generation of a WQMP.

Water quality monitoring data collected during the 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. This WQMP Update was prepared to present steps LAILG has undertaken to implement the original WQMP.

2.2 Current Sampling Program

As of September 2014, the LAILG was comprised of 209 sites and an estimated 1,684 acres. A regional map showing sampling locations, group boundaries, and all growers currently associated with the LAILG is presented as Figure 1.

As outlined in the newest version of the MRP, dated April 7, 2011, LAILG collects water quality data at 20 sampling sites throughout each year. Samples are collected from sites on a rotating schedule of five sites per monitoring event, with four events taking place each year. LAILG previously established fourteen of the sampling locations during Order No. R4-2005-0080 and have historical data associated with the location. Due to the loss of members, LAILG added two additional sampling sites, totaling sixteen fixed sites. Four additional revolving sites are selected randomly on a yearly basis for sampling. Table 1 presents a summary of historical sampling locations and current sampling locations associated with the LAILG. The MRP, dated April 7, 2011, contains a complete discussion of sampling methodologies.

Table 1 - Fixed Sampling Locations

NAME	SITE #	APPROXIMATE GPS LOCATION	ADDRESS	ACRES IRRIGATED	CROP TYPE
GROUP 1					
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
Norman's Nursery	125	N 34° 05' 42.3" W 118° 04' 53.5"	8550 E Broadway San Gabriel, CA	7.00	General Ornamentals
Ultra Greens Nursery	178	N 34° 17' 57.4" W 118° 25' 06.5"	13102 Macclay 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 Farms
GROUP 2					
Acosta Growers, Inc.	11	N 34° 06' 38.0" W 117° 54' 19.9"	669 S. Azusa Ave Azusa, CA	7.50	General Ornamentals
Rainbow Garden Nursery	110	N 34° 07' 05.5" W 117° 52' 19.8"	1132 S Grand Avenue Glendora, CA	3.75	Retail / Multiple
Colorama Wholesale Nursery	150	N 34° 08' 27.5" W 117° 55' 35.9"	1025 N. Todd Ave. Asuza, CA	15.30	Color Plants
West Covina Wholesale	189	N 34° 06' 58.1" W 117° 47' 05.1"	3425 Damien Ave La Verne, CA	1.25	General Ornamentals
GROUP 3					
Coiner Nursery	31	N 34° 02' 19.1" W 118° 01' 28.4"	285 San Fidel La Puente, CA	48.00	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
Centeno's Nursery and Landscaping	81	N 33° 52' 46.9" W 118° 09' 20.7"	6850 Paramount Blvd Long Beach, CA	3.00	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
GROUP 4					
ABC Nursery, Inc.	4	N 33° 52' 55.7" W 118° 16' 06.0"	424 E. Gardena Boulevard Gardina, CA	11.51	General Ornamentals
New West Growers	53	N 33° 52' 51.1" W 118° 12' 56.3"	1601 S. Santa Fe Ave Compton, CA	1.70	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
Church Estate Vineyards	210	N 34° 01' 10.0" W 118° 49' 05.6"	6415 Busch Drive Malibu, CA	2.75	Vineyard

Table 1 - Rotating Sampling Locations

NAME	SITE #	APPROXIMATE GPS LOCATION	ADDRESS	ACRES IRRIGATED	CROP TYPE
GROUP 1					
Canyon Way Nursery	26	N 34° 12' 04.9" W 118° 13' 22.3"	11745 Sherman Way Studio City, CA	4.25	General Ornamentals
Live Art Plantscapes, Inc.	105	N 34° 14' 34.3" W 118° 32' 36.1"	18809 Plummer St Northridge, CA	1.80	Greenhouse
Green Landscape Nursery	143	N 34° 23' 01.2" W 118° 31' 34.1"	22216 1/2 Placerita Canyon Rd Newhall, CA	4.00	General Ornamentals
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
Worldwide Exotics Inc	204	N 34° 16' 23.8" W 118° 22' 06.1"	11157 Orcas Avenue Lake Terrace, CA	2.00	General Ornamentals
GROUP 2					
Coiner Nursery	32	N 34° 6' 25.9" W 117° 46' 19.7"	3000 B Street La Verne, CA	15.00	General Ornamentals
West Covina Wholesale	188	N 34° 05' 38.0" W 117° 47' 31.3"	West end of Puddingstone La Verne, CA	15.25	General Ornamentals
El Nativo Growers, Inc.	202	N 34° 06' 34.8" W 117° 56' 29.8"	200 S. Peckham Azusa, CA	7.00	General Ornamentals
Choji Matsushita	226	N 34° 06' 52.9" W 117° 48' 41.1"	724 N. Cataract Avenue San Dimas, CA	1.70	Cutflower
Organicado	255	N 34° 08' 55.0" W 117° 58' 24.4"	460 Old ranch Road Bradbury, CA	1.00	Orchard
GROUP 3					
Carreon Nursery	50	N 34° 03' 10.6" W 118° 05' 48.5"	7900 La Merced Road Rosemead, CA	6.00	General Ornamentals
Humedo Nursery	70	N 33° 55' 00.5" W 118° 06' 44.3"	10040 Imperial Highway Downey, CA	2.20	General Ornamentals
San Gabriel Nursery & Florist	162	N 34° 02' 27.4" W 118° 06' 20.5"	2015 Potrero Grande Monterey Park, CA	6.00	General Ornamentals
Lam Farms	212	N 33° 53' 34.5" W 118° 08' 49.9"	8600 Jefferson Street Paramount, CA	1.00	Row Crop
ABC Rhubarb Farms	261	N 33° 57' 44.0" W 118° 09' 19.3"	6208 Clara Street Bell Gardens, CA	5.00	Row Crop
GROUP 4					
Color Spot Nurseries, Inc.	33	N 33° 48' 28.6" W 118° 16' 59.9"	321 W. Sepulveda Blvd Carson, CA	18.50	Color Plants
Intemational Plant Growers, Inc.	73	N 33° 47' 55.4" W 118° 17' 26.0"	24500 Vermont Ave Harbor City, CA	5.00	Color Plants
Toro Nursery Inc.	170	N 33° 52' 15.3" W 118° 19' 35.9"	17585 Crenshaw Blvd Torrance, CA	15.78	Color Plants
The Malibu Vineyard	221	N 34° 02' 36.5" W 118° 38' 47.5"	3222 Rambla Pacifico Malibu, CA	2.00	Vineyards
Schoelkopf Vineyard	224	N 34° 02' 19.6" W 118° 51' 36.9"	31499 Pacific Coast Hwy Malibu, CA	0.80	Vineyards

Table 1. Historical Sampling Locations

NAME	FORMER SITE#	ADDRESS	ACRES IRRIGATED	CROP TYPE
Carlos Soto, Jr	25	600 W. Alondra Blvd, Gardena	3.50	General Ornamentals
Norman's Nsy-Rosemead	130	475 Rosemead Blvd, S. El Monte	16.56	Tree
Valley Crest Tree Company	182	16202 Yarnell St. and 16222 Filbert St, Sylmar	16.00	Tree
Valley Sod Farms, Inc.	183	6301 Balboa Boulevard, Encino	60.00	Sod
Schoelkopf Vineyard	224	31499 Pacific Coast Highway, Malibu	0.80	Vineyard

Sixty nine (69) samples have been collected by LAILG through December 31, 2014. LAILG collected an additional three (3) samples during Year 4 of CWIL Order #R4-2010-0186; these results will be reported in the next AMR due in December of 2015. The majority of the samples were collected during the first two (2) years of the CWIL, prior to the suspension of the monitoring group. Samples were primarily from storm water runoff during the wet season. LAILG sampling teams have not encountered irrigated runoff from the dry season since 2008. Table 2 presents a summary of the sample collection timeline.

Table 2. Sampling Timeline

	CWIL Order # R4-2005-0080												Total
	YEAR 1 ¹				YEAR 2 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	
Number of Samples Collected	5	3	14	8	2	1	8	11	0	ns*	0	ns*	52
Total Number of 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 ³ March 2011	YEAR 1				YEAR 2				YEAR 3				
		Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet Season		
		Event #1	Event #2	Event #1		Event #2								
Number of Samples Collected	4	0	0	4	4	0	0	0	0	0	0	5	0	17
Total Number of Sites Visited	4	5	5	5	5	5	na	na	5	5	5	na	49	

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.

LAILG analyzes for the constituents listed on Table 3.

Table 3. 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 ₃)	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 ¹	ng/L	Laboratory
Organochlorines Suite ²	ng/L	Laboratory
Toxaphene	ng/L	Laboratory
Pyrethroids	ng/L	Laboratory
Toxicity	TU _c ³	Laboratory
Trash	Observations	Field

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

² 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.

³ 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_c chronic toxic unit
 NTU nephelitic turbidity units

2.3 Current Requirements

Results from group wide sampling are reported to the LARWQB on a yearly basis. As reported in previous AMRs, a number of water quality benchmarks established by the CWIL and other regulatory programs (i.e. Aquatic Life Benchmarks) have been exceeded during the program at multiple sampling locations, which mandated the development of a WQMP.

This WQMP Update presents the progress LAILG has made towards implementing the WQMP.

3.0 SUMMARY OF PREVIOUS FINDINGS

The following is a summary of findings presented in the original *Water Quality Management Plan*, dated July 26, 2013 along with additional findings, as appropriate. For detailed discussions, please refer to the original WQMP.

3.1 Assessment of Existing Conditions

3.1.1 Water Quality Benchmarks

The following tables present water quality benchmarks that apply to this program. They are derived from language included in Appendix 1 and Appendix 2 of the Waiver, along with the Water Quality Control Plan Los Angeles Region (Basin Plan) objectives, California Toxics Rule benchmarks, USEPA ALB guidelines, and CCR Title 22 maximum contamination levels for municipal water (organic chemicals).

Table 4. Water Quality Benchmarks, General Chemistry

Watershed/stream reach	NGA Site #	Ammonia	TDS	Sulfate	Chloride	Nitrogen	TSS	Copper (µg/L)	Phosphate
Los Angeles River:									
Between Figueroa and Willow St.	53	a)	1,500	350	150	8	—	$CCC=0.960e^{[(0.8545(\text{in hardness})) + (-1.702)]}$	—
Above Figueroa St.	19, 105, 184	a)	950	300	150	8	—	$CCC=0.960e^{[(0.8545(\text{in hardness})) + (-1.702)]}$	—
Rio Hondo above Santa Ana Freeway	124, 162	a)	750	300	150	8	—	$CCC=0.960e^{[(0.8545(\text{in hardness})) + (-1.702)]}$	—
Pacoima Wash above Pacoima spreading grounds	178	a)	250	30	10	MUN	—	$CCC=0.960e^{[(0.8545(\text{in hardness})) + (-1.702)]}$	—
San Gabriel River:									
Between Firestone Blvd. and San Gabriel River Estuary	168, 64	a)	MUN				—	$CCC=0.960e^{[(0.8545(\text{in hardness})) + (-1.702)]}$	—
Between Ramona and Firestone Blvd.	13, 20, 31, 122, 189, 109	a)	750	300	150	8	—	$CCC=0.960e^{[(0.8545(\text{in hardness})) + (-1.702)]}$	—
Between Morris Dam and Ramona Blvd.	150	a)	450	100	100	8	—	$CCC=0.960e^{[(0.8545(\text{in hardness})) + (-1.702)]}$	—
Dominguez Channel	4, 170	a)	MUN				—	$CCC=0.960e^{[(0.8545(\text{in hardness})) + (-1.702)]}$	—
Santa Monica Bay	176, 210	a)	MUN				—	$CCC=0.960e^{[(0.8545(\text{in hardness})) + (-1.702)]}$	—
USEPA Municipal Drinking Water Standard		a)	500	250	400	10	—	1.3 (mg/L)	—

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

a) Limit varies as a factor of temperature and pH. Objectives based on corresponding field readings for WARM water (One-hour average concentration), as outlined in the 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.

Table 5. 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 6. Water Quality Benchmarks, Pesticides, Aquatic Life Benchmarks

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)
OP Pesticides										
Azinphos Methyl	9	86-50-0	0.18	0.055	0.080	0.036	—	—	—	—
Coumaphos	10	56-72-4	140.00	11.700	0.037	0.037	—	—	—	—
Dichlovos (DDVP)		62-73-7	79.50	5.200	0.035	0.006	14000	—	—	—
Dimethoate	9	60-51-5	3100	430	21.5	0.5	84	—	—	—
Disulfoton	9	298-04-4	19.50	4.000	1.950	0.010	—	—	—	—
Ethoprop		13194-48-4	150.00	24.000	22.000	0.800	8,400	—	—	—
Fenthion	8	55-38-9	415.00	7.500	2.600	0.013	400	> 2,800	—	—
Malathion		121-75-5	16.40	8.600	0.300	0.035	2,400	—	—	0.1
Methyl Parathion	13	298-00-0	925.00	< 10	0.490	0.250	15,000	18000	—	—
Naled		300-76-5	46.00	2.900	—	0.045	25	> 1,800	—	—
Phorate	8	298-02-2	1.18	0.340	0.300	0.210	> 1,300	—	—	—
Pyrethroid Pesticides										
Allethrin		584-79-2	9.500	—	1.05	—	—	—	—	—
Bifenthrin		82657-04-3	0.075	0.04	0.8	0.0013	—	—	—	—
Cyfluthrin		68359-37-5	0.034	0.01	0.0125	0.007	—	—	—	—
Cypermethrin		52315-07-8	0.195	0.14	0.21	0.069	—	—	—	—
Fenpropathrin (Danitol)		64257-84-7	1.100	0.091	0.265	0.064	—	—	—	—
Deltamethrin		52918-63-5	0.290	0.017	0.055	0.0041	—	—	—	—
Esfenvalerate	9	66230-04-4	0.035	0.035	0.025	0.017	—	—	—	—
Lambda-cyhalothrin		91465-08-6	0.105	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	0.01	0.0014	68	—	—	—
Prallethrin		23031-36-9	6	3	3.1	0.325	—	—	—	—
Resmethrin		10453-86-8	0.14	0.32	1.55	—	—	—	—	—
Sumithrin		26002-80-2	7.9	1.1	2.2	0.47	—	—	—	—

Limits Reported in ug/L

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

⁹ 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

¹⁰ 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.

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

¹⁶ 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.

Table 7. Water Quality Benchmarks, Field Monitoring and Toxicity

Constituent	Narrative Objective	Applicable Benchmarks
pH	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
Temperature	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.
Dissolved Oxygen	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
Turbidity	<p>Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in natural turbidity attribute to contrrollable water quality factors shall not exceed the following limits:</p> <p>Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%.</p> <p>Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.</p>	No Numeric benchmarks. Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established.
Toxicity	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 Tuc ^[3]

3.1.2 Summary of Water Quality Benchmark Exceedances

LAILG has exceeded water quality benchmarks, as established in Section 3.1.1, throughout the life of the program. For the purpose of analysis, benchmarks are broken into four (4) general groups: general chemistry (including nutrients), pesticides, toxicity, and field monitoring. The following tables and paragraphs summarize exceedances up until the most recent Annual Monitoring Report, dated December 23, 2014.

Table 8. 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 #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	CWIL Order # R4-2010-0186											Total	% of samples
	Interim Sampling	YEAR 1				YEAR 2			YEAR 3				
		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 #1	Event #1	Event #2	Event #1		
Ammonia	0	--	--	0	0	--	--	--	--	--	0	0	0.0%
TDS	3	--	--	1	1	--	--	--	--	--	2	7	41.2%
Sulfate	0	--	--	1	1	--	--	--	--	--	1	3	17.6%
Chloride	0	--	--	0	0	--	--	--	--	--	1	1	5.9%
Nitrogen	2	--	--	2	1	--	--	--	--	--	3	8	47.1%
Total Number of Exceedances	5	0	0	4	3	0	0	0	0	0	7	19	
Average # of Exceedances per sample	1.25	--	--	1.00	0.75	--	--	--	--	--	1.40	1.12	
Number of Samples Collected	4	0	0	4	4	0	0	0	0	0	5	17	

-- No sample collected

Table 9. 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		
Waiver Limitations														
OC Pesticides														
Clordane	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	
OP Pesticides														
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	
Aquatic Life Guidelines														
OP Pesticides														
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	
Pyrethroid Pesticides														
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	
Total Number of Exceedances	13	10	38	15	9	2	27	36	ns	ns	ns	ns	150	
Average # of Exceedances per sample	2.60	3.33	2.71	1.88	4.50	2.00	3.38	3.27	ns	ns	ns	ns	2.88	
Number of Samples Collected	5	3	14	8	2	1	8	11	ns	ns	ns	ns	52	

ni Not included in laboratory analytical suite during this Waiver period
 ns Program suspended, no sample collected

Table 9, cont. Exceedances, Pesticides

Constituents	CWIL Order # R4-2010-0186											Total	% of samples	
	Interim Sampling	YEAR 1				YEAR 2			YEAR 3					
		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			
Waiver Limitations														
OC Pesticides														
Clordane	1	--	--	0	0	--	--	--	--	--	0	1	5.88%	
4,4' DDT	1	--	--	0	0	--	--	--	--	--	0	1	5.88%	
4,4' DDD	0	--	--	0	0	--	--	--	--	--	0	0	0.00%	
4,4' DDE	1	--	--	1	1	--	--	--	--	--	0	3	17.65%	
Dieldrin	1	--	--	0	0	--	--	--	--	--	0	1	5.88%	
Toxaphene	0	--	--	0	0	--	--	--	--	--	0	0	0.00%	
Waiver, OC Pesticide # of Exceedances	4	0	0	1	1	0	0	0	0	0	0	6		
OP Pesticides														
Chlorpyrifos	3	--	--	0	1	--	--	--	--	--	1	5	29.41%	
Diazinon	1	--	--	0	0	--	--	--	--	--	0	1	5.88%	
Waiver, OP Pesticide # of Exceedances	4	0	0	0	1	0	0	0	0	0	1	6		
Aquatic Life Guidelines														
OP Pesticides														
Malathion	1	--	--	0	1	--	--	--	--	--	0	2	11.76%	
ALB, OP Pesticide # of Exceedances	1	--	--	0	1	--	--	--	--	--	0	2		
Pyrethroid Pesticides														
Bifenthrin	0	--	--	0	0	--	--	--	--	--	1	1	5.88%	
Cyfluthrin	0	--	--	0	0	--	--	--	--	--	1	1	5.88%	
Cypermethrin	0	--	--	0	0	--	--	--	--	--	0	0	0.00%	
Fenpropathrin (Danitol)	--	--	--	ni	ni	--	--	--	--	--	0	0	0.00%	
Deltamethrin	0	--	--	1	0	--	--	--	--	--	0	1	5.88%	
Lambda-cyhalothrin	0	--	--	0	0	--	--	--	--	--	0	0	0.00%	
Permethrin	2	--	--	0	1	--	--	--	--	--	1	4	23.53%	
ALB, Pyrethroid Pesticide # of Exceedances	2	--	--	1	1	--	--	--	--	--	3	7		
Total # of Exceedances	11	--	--	2	4	--	--	--	--	--	4	21		
Average # of Exceedances per sample	2.75	--	--	0.50	1.00	--	--	--	--	--	0.80	1.24		
Number of Samples Collected	4	0	0	4	4	0	0	0	0	0	5	17		

ni Not included in laboratory analytical suite during this Waiver period
 -- No samples collected

Toxicity

Based on laboratory analytical results, toxicity was significant enough to initiate a TIE in 9 of the 17 sites sampled during Year 1 under Order No. R4-2005-0080, 10 of the 26 sites sampled during Year 2 under Order No. R4-2005-0080, 4 of the 8 sites sampled during Year 1 under Order No. R4-2010-0186, and 0 of the 5 sites sampled during Year 3 under Order No. R4-2010-0186. TIE results indicated a variety of reasons for toxicity, including non-polar organic compounds, particulate-bound toxicants, volatile compounds, organophosphates, metals, and a combination of the previously listed toxicants. To date, results from TIE testing have not provided significant evidence of a prevailing issue across sites, and does not appear to correlate strongly with laboratory analytical results.

Field Monitoring Results

Field monitoring readings have not exceed Basin Plan objectives.

3.2 Evaluation of Likely Sources, Constituent Specific

LAILG divided each sampling site into basic subgroups, and compared laboratory analytical results and field monitoring parameters to operational practices to evaluate if there was any correlation between data from runoff results and basic site use patterns. Since the original WQMP was prepared following Year 1 of the new CWIL, LAILG only collected eight total samples over the next three years due to draught conditions. Due to the small amount of additional data, no additional analysis was prepared beyond what the original WQMP. The original conclusions are still applicable, and are summarized in the following sections. For detailed discussions, please refer to the original WQMP.

3.2.1 General Chemistry (Including Fertilizers)

Chloride

Currently, LAILG does not consider chloride to be a primary constituent of concern for the program due to its widespread presence in drinking water and the relatively few exceedances observed. As Chloride is a dissolved ion, BMPs addressed towards this constituent could involve minimizing site runoff, lowering water use at sites in order to minimize the accumulation in soils, utilizing a source of water that is lower in Chloride concentrations, or treating the water prior to application or discharge with a filtering or osmosis system.

Sulfate

Currently, LAILG does not consider sulfide to be a primary constituent of concern for the program due to its widespread presence in drinking water and the relatively few exceedances observed. As Sulfate is a dissolved ion, BMPs addressed towards this constituent could involve minimizing site runoff, lowering water use at sites in order to minimize the accumulation in soils, utilizing a source of water that is lower in Sulfate concentrations, or treating the water prior to application or discharge with a filtering or osmosis system.

Nutrients (Nitrate/Ammonia/Phosphorus)

Nitrogen is a primary constituent of concern for the program, and phosphate is a secondary contaminant of concern. BMPs addressed towards Nitrogen, and all compounds associated with fertilization, could focus on either source BMPs, such as reducing or optimizing fertilizer use and application, or runoff BMPs. Runoff BMPs can include vegetative filter strips, reducing or eliminating runoff, and ground cover of the areas.

Nitrogen, ammonia, and phosphates are found in different types of fertilizers, and are widely applied in both dry, liquid, organic, and inorganic forms. Nitrogen as nitrate and nitrite is also present in low levels in the municipal water supply. Overuse of nitrogen may leach any unused nitrogen out of the primary growing mediums, where it can concentrate in surface soils at a site. Applying Nitrogen prior to a rain event may also leach directly from the potting mediums before uptake, causing the nitrogen to leave the site in surface water runoff. Nitrogen poses a potential threat to groundwater, as it can leach through surface soils and impact underlying aquifers.

Fertilizer application practices between sites varied considerably, with most sites applying fertilizers through a combination of practices. Linear regression analysis shows a slight correlation between nitrogen application rates and reported concentrations in sampling results, but further data is required.

TDS

Currently, LAILG does not consider TDS as a primary constituent of concern for the program due to its widespread presence in the supply water. TDS is currently present in the public water supply above Water Quality Benchmarks set for the program. Examples of BMPs addressed towards this constituent could involve water treatment and water utilization.

3.2.2 Pesticides

OC Pesticides

Legacy pesticides are a primary constituent of concern for the program due to their widespread prevalence in the environment and continual detections in runoff from parcels enrolled in the program. The United States has banned the majority of the Legacy OC Pesticides detected during sampling from as early as the 1970's. All exceedances of banned legacy pesticides originated from previous land uses. The sampling group does not use OC pesticides.

The legacy pesticide compounds have a very low solubility in water, and a high adsorption coefficient to soils. These characteristics indicate that exceedances due to Legacy Pesticides stem from soil particles with the compounds attached to them leaving the site. However, current analysis has not reported any significant trends between turbidity, TSS, and OC pesticides. Regressive trend lines do show a positive correlation, albeit somewhat weakly, at most sites. Further data is required; however, LAILG anticipates that BMPs directed towards reducing sediment loads from sites will help to reduce OC Pesticide exceedances.

OP Pesticides

OP pesticides are a primary constituent of concern for the program due to their toxicity to aquatic and some mammalian organisms. BMPs that may address exceedances are both source control and runoff control, as growers still utilize a number of these pesticides. Source control BMPs mainly involve the timing and proper application of the OP pesticides, along with eliminating their use where possible. OC pesticides adhere to sediment and organic matter, and reducing sediment loads from sites should reduce OC pesticide exceedances.

Although there was a very limited set of data, LAILG evaluated reported application dates of OP pesticide and laboratory analytical results reported in runoff. Results showed a weak correlation between the two factors, and additional data is required.

Pyrethroid Pesticides

Pyrethroid Pesticides are a primary constituent of concern for the program due to their acute toxicity to aquatic organisms. BMPs to address exceedances are both source control and runoff control, as growers still utilize a number of these pesticides. Source control BMPs mainly involve the timing and proper application of the OP Pesticides, along with eliminating and reducing their use where possible. As Pyrethroid pesticides may also be fixed to sediment and organic matter, reducing sediment loads from sites should also reduce OC Pesticide exceedances in runoff.

LAILG evaluated reported application dates of OP pesticide and laboratory analytical results reported in runoff. Results showed a weak correlation between the two factors, and additional data is required.

LAILG has detected several Pyrethroid pesticides at relatively high levels at sites that did not report them as used on the property. Currently the source of these pesticides are unknown, and LAILG will conduct additional evaluation over the course of the program to evaluate if the compounds are associated with a source other than historical pesticide application. It is likely that the transportation of plants between nurseries is contributing to this phenomenon.

3.2.3 Toxicity

TIE testing indicated that non-polar organics were the major source of toxicity. Non-polar organics are a class of chemical compounds that include a large number of constituents that are not covered under the laboratory-testing program outlined in the CWIL, in addition to the OP, OC, and Pyrethroid pesticides. PBO addition did not reduce toxicity in samples, indicating that OP compounds did not contribute to the toxicity. However, the addition of PBO has been shown to increase the toxicity of Pyrethroid compounds (Wheeler, et. al.), which could alter results. Currently the cause of non-polar organic toxicity at sites is unknown, although LAILG suspects Pyrethroid pesticides due to their documented high toxicity to aquatic organisms.

3.2.4 Field Monitoring Results

Flow rates and field readings indicate that runoff water will not adversely affect the pH, temperature, or dissolved oxygen of receiving surface water from any of the sites sampled in the group. All three parameters were within acceptable ranges as outlined in the Basin Plan.

Although field readings of turbidity and TSS were relatively high in some collected samples, the relatively low flows of runoff in comparison to the watershed as a whole do not appear to be great enough to potentially impact receiving waters after dilution in storm drains. However, a goal of reducing turbidity and TSS has been set for the group as part of the WQMP, as particulate matter can also carry constituents of concern off the sites.

3.3 Evaluation of Grouping Attributes vs Exceedances

3.3.1 General Methodology

LAILG utilized grower information to evaluate the potential impact of operations based on their growing “intensity,” or how much material (fertilizer, pesticides, irrigation water, etc.) members used on a per acre basis. The general hypothesis of the LAILG is that larger operations, based on sales, total company size, and shipping patterns, would show more intense fertilizer and pesticide use patterns. This level of intensity could correspond to a higher risk of contaminants leaving the property.

In order to separate sampling sites into groups, LAILG applied a matrix to sampling sites that utilized the following information: sales, acreage, and shipping information.

LAILG utilized the total operator acreage, including acreage both inside and outside LA County and California. Larger growers tend to implement similar growing practices throughout their corporation, regardless of the size of the plot. Thus, a small, 5-acre plot of land operated by a nation-wide company will have different growing practices than a 5-acre plot of land operated by a local only supplier.

LAILG utilized the gross sales for an operator, company-wide. Retail operations generally hold large-scale growers to a higher production standard for a higher quality product. They also tend to ship and grow more products on a tighter production schedule. This leads to a more intensive use of fertilizers, pesticides, herbicides, and fungicides.

Shipping patterns were the final input. Growers that ship both to Northern California and out of California are subject to different pest spraying protocol, and have the potential for a higher use of pesticides and other chemicals. Growers that ship between their own growing locations have the potential to transfer pesticides and fertilizers between locations. LAILG has seen this phenomenon in laboratory analytical results, where analytical results reported pesticides not applied on a property in stormwater runoff.

Table 10 presents the point scale used to separate sites into large, medium, and small intensity growers.

Table 10. Grouping Scores

<u>Total Operating Acres</u>		<u>Gross Revenue</u>		<u>Shipping Reach</u>	
0	≤ 5 Acres	0	≤ \$50k	(cumulative)	
2	5 < Acres ≤ 20	2	\$50k < \$ ≤ \$200k	1	Intra company
4	20 < Acres ≤ 50	4	\$200k < \$ ≤ \$1M	1	Northern California
6	50 < Acres ≤ 100	6	\$1M < \$ ≤ \$5M	1	Interstate
8	Acres > 100	8	\$ > \$5M		

Growers that cumulatively scored a 15 to 19 were considered large operations, growers that cumulatively scored 10 to 14 were considered medium operations, and growers that cumulatively scored a 9 or below were considered small operations.

3.3.2 Grouping Results, Application Intensity

LAILG utilized self-reported information to evaluate growing practices for sampling sites operating within the group, and organized according to the scoring matrix above for evaluation.

Based on data from the previous WQMP, members grouped into large operations apply the most Nitrogen (and fertilizer in general) on a per site basis, were higher than the medium operations on a pounds per acre basis, and had the most chemical applications on a per site basis and on a chemical application per acre basis.

3.3.3 Grouping Results, Observed Runoff Conditions

LAILG organized data from sampling events by parcel, sorted samples by growers who self-reported enough information for grouping, discarded samples from non-reporting growers and extreme outliers, and organized and averaged sampling results into groups according to the scoring matrix above for evaluation.

Nutrients

There is a clear distinction between sampling results, with the large operations reporting the highest concentrations for both nitrogen and phosphorous. The vast majority of samples collected have been from the larger members: 34 of the samples came from large operators, 13 of the samples came from medium operators, and 7 of the samples came from small operators. None of the samples collected from the small group reported concentrations of nitrogen above WQBs. The large group had the largest spread of detected concentrations, along with the highest reported values group wide.

Pesticides

In order to simplify the dataset, all detections of any OP pesticides, pyrethroid pesticides, and both OP and pyrethroid pesticides were summed for each individual sample. LAILG did not evaluate OC pesticides, as there is no way to determine which sites had historical applications of these constituents, and detections should not depend on operational practices.

Large operations had the most significant detections of pesticides, both in severity and frequency. Detections of the OP pesticides were sporadic across the sample set. Pyrethroid pesticides were detected more regularly in each sampling group. Overall there was a wide variance in detections at sites, most likely due to variations in application times, application locations, and application amounts prior to site discharges.

3.4 Summary and LAILG Stance

Based on the previous sections, discussed in depth in the previous WQMP dated July 26, 2013, LAILG believes that separating enrolled growers into various groups based on their operational patterns and prescribing sliding scale WQMP implementation guidelines for each group is the most applicable way to address BMP implementation going forward. Data collected to date indicates that growers that are involved in larger, more profitable operations have reported more WQO exceedances than growers in smaller operations have, and as such, should implement a more robust BMP implementation protocol.

4.0 LAILG GROUPING UPDATE

4.1 WQMP Information

As outlined in the WQMP, LAILG submitted basic information questionnaires to each grower during the initial roll out phase of WQMP implementation. Each questionnaire requested the following information: gross sales of company; total acreage operated by company; total fertilizer use and formulation, per parcel per year; total pesticide/herbicide/fungicide applications, per parcel per year; irrigation use per year; fertilizer application practices; and, irrigation practices. A copy of the general information questionnaire is included in Appendix A.

LAILG received a response rate for the original, mailed questionnaire of approximately 25 percent for parcels enrolled in the program. Due to the low response rate from the initial mailers and meetings, LAILG went forward with developing a website with a back end system for growers to enter their data on-line in a user-friendly format. The website also accepts text message answers for growers who did not have internet access, and is currently being translated into Spanish.

The website has the capability to transfer all data that is entered into an excel spreadsheet for tracking and analysis purposes. LAILG entered all the data collected from the original mailers into this database, and will utilize the website for future tracking of all group data.

4.2 Grouping Results

LAILG collected 55 operational questionnaires (36 different growers) during the initial roll out phase, which accounts for approximately 25 percent of the current group. Based on the first round of questionnaires, LAILG decided to add a “micro” category for growers that scored a zero on the grouping matrix. These growers are generally backyard growers and small vineyards, who don’t ship material, have less than five acres of irrigated land (generally less than one), and do not report more than \$50,000 in gross sales. In future iterations of the Waiver, LAILG plans to collect samples from this “micro” group to evaluate storm water leaving these parcels. LAILG generated randomized WQMP numbers for growers to protect anonymity. Table 11 presents grouping results.

Table 11. Grouping Results

WQMP Number	Gross Revenue	Total Acres, Co.	Shipping Reach	Total Score	Group Results
1	6	4	1	11	Medium
2	4	4	2	10	Medium
3	6	6	3	15	Large
4	6	2	0	8	Small
5	6	6	2	14	Medium
6	8	8	2	18	Large
7	6	2	1	9	Small
8	6	2	3	11	Medium
9	8	8	1	17	Large
10	8	8	3	19	Large
11	0	0	0	0	Micro
12	8	4	2	14	Medium
13	6	4	1	11	Medium
14	4	2	0	6	Small
15	8	8	3	19	Large
16	4	2	0	6	Small
17	6	2	1	9	Small
18	4	2	1	7	Small
19	4	2	1	7	Small
20	8	8	3	19	Large
21	0	2	0	2	Small
22	6	6	2	14	Medium
23	0	0	0	0	Micro
24	6	4	3	13	Medium
25	6	4	1	11	Medium
26	4	2	1	7	Small
27	6	4	1	11	Medium
28	8	8	3	19	Large
29	6	4	3	13	Medium
30	6	6	2	14	Medium
31	6	4	1	11	Medium
32	0	0	0	0	Micro
33	6	4	1	11	Medium
34	2	4	1	7	Small
35	8	8	3	19	Large
36	0	0	0	0	Micro
37	0	0	0	0	Micro
38	6	0	0	6	Small
39	6	6	2	14	Medium
40	6	4	1	11	Medium
41	0	0	0	0	Micro
42	6	8	0	14	Medium
43	6	2	0	8	Small
44	0	2	0	2	Small
45	8	8	3	19	Large
46	8	8	3	19	Large
47	0	0	0	0	Micro
48	0	0	0	0	Micro
49	6	2	0	8	Small
50	4	2	0	6	Small
51	6	8	0	14	Medium
52	6	4	3	13	Medium
53	6	4	1	11	Medium
54	8	8	1	17	Large
55	6	4	1	11	Medium

<u>Total Operating Acres</u>	
0	≤ 5 Acres
2	5 < Acres ≤ 20
4	20 < Acres ≤ 50
6	50 < Acres ≤ 100
8	Acres > 100
<u>Gross Revenue</u>	
0	≤ \$50k
2	\$50k < \$ ≤ \$200k
4	\$200k < \$ ≤ \$1M
6	\$1M < \$ ≤ \$5M
8	\$ > \$5M
<u>Shipping Reach</u>	
(cumulative)	
1	Intra company
1	Northern California
1	Interstate

Micro Growers	8
Small Growers	15
Medium Growers	21
Large Growers	11

4.3 Grouping Results, Application Intensity

Due to the lack of reporting growers, LAILG did not evaluate grouped categories in regards to fertilizer use or pesticide use. Once LAILG obtains additional information, compiled data will be re-evaluated to determine if the group as a whole follows the application intensity patterns described in the WQMP for the sampling sites.

4.4 Timeline, Future Actions

LAILG is going to mandate that all members submitting NOIs for the upcoming Waiver period submit the following documentation with the NOI: operational questionnaires, BMP questionnaires, and other supplemental documents as requested by LAILG or mandated by the NOI. Collected data will be utilized to establish a group-wide baseline. LAILG will request that growers update questionnaires annually, and will stress the importance of these documents in continual education events and group meeting. It is anticipated that the recently developed website will increase response rates throughout the group.

As stated in the original WQMP, once LAILG obtains enough data, members will be sorted into subgroups of fertilizer and pesticide use intensity. This information will be utilized to direct members towards categorized BMPs that will be most beneficial to protecting water quality at their operations. LAILG will determine the proper levels for grouping members upon receiving information from all the enrolled members.

5.0 BMP IMPLEMENTATION UPDATE

5.1 Sampling Sites

Growers enrolled as sampling sites have already begun implementing BMPs, as outlined in the WQMP. Sampling sites originally began to initiate BMPs as of January 1, 2009; individual BMPs historically implemented are included in Appendix B on a site-by-site basis. Due to the lack of collected samples since the WQMP, LAILG has not conducted evaluation or analysis to determine effectiveness of any additional BMPs outside of the BMPs installed by the Council for Watershed Health (CWH). Future laboratory analytical and field monitoring results will continue to be evaluated on an individual basis in conjunction with newly implemented BMPs to determine if they are effective in reducing or eliminating water quality issues with each site.

If implemented BMPs are not improving water quality, LAILG will work with individual growers to develop and implement additional BMPs, or to improve existing BMPs. LAILG will disseminate data from the evaluation of BMP effectiveness at sampling sites to all growers enrolled in the LAILG in order to focus implementation towards BMPs that have proven to be the most effective at reducing water quality impacts. Implemented BMPs will be documented in future reports for the group.

LAILG worked with the CWH under the San Gabriel Nurseries, Irrigated Lands, and Open Space Water Quality Improvement Project (Grant Agreement No. 11-098-554) to implement BMPs at select nurseries in the San Gabriel River Region. Although there was minimal sampling due to drought conditions, preliminary results collected from LAILG sampling sites indicate that the installed BMPs were effective in reducing concentrations of contaminants almost universally at sampled sites. Future sampling events at these sites will be closely evaluated to ascertain the continual effectiveness of the installed sediment control BMPs.

5.2 Mandatory, All Sites

LAILG has notified enrolled members of the mandatory BMP requirements outlined in the WQMP (Minimum BMP Requirements; Appendix C). LAILG has been acting on good faith with members to date, and limited actions have been taken to verify that mandatory minimum requirements of the WQMP have been implemented. Some members have submitted picture documentation of various BMPs into the website database, and LAILG anticipates more photo documentation to occur in the future with the website now operational. Future actions by LAILG may include randomized site inspections by LAILG staff to verify compliance.

5.3 BMP Questionnaire Response

A copy of the BMP Questionnaire is presented in Appendix A, and a summary of received BMP responses is presented in Appendix D. LAILG collected 37 complete BMP questionnaires during the initial roll out phase, which accounts for approximately 18 percent of the current group. The BMPs reported during this initial phase were before any of the mandatory BMPs (Appendix C) were communicated to the group as a whole by LAILG. A review of answered BMP questions indicates that a number of growers did not report that they previously implemented some of the basic BMPs that are now required under the

WQMP. It appears that LAILG will have to provide additional support to growers to insure that members complete the forms fully and properly.

5.4 Ongoing Training and Outreach

LAILG will continue to implement ongoing outreach and training throughout the life of the project. As a part of project outreach, LAILG will be providing all enrolled members with a Water Quality Recordkeeping notebook prepared by the University of California Cooperative Extension. Although completion of the notebook will not be required, it will be strongly recommended that growers utilize the notebook to track practices at their sites. LAILG will provide instructions on the completion of the notebook at ongoing education classes and through ongoing outreach and support.

LAILG will also continue to inform members of the various BMP implementation documents that are available to members free of charge, in order to assist with the proper selections of BMPs. LAILG will provide support, if required, to assist growers with information included in the documents.

As the program progresses and operations begin to implement further BMPs, LAILG will continue to attempt to conduct on-going education seminars at LAILG member properties. This will allow LAILG to lead educational tours, to give first hand examples of BMPs and demonstrate their potential uses. Hands on training on the implementation of simple BMPs will be provided during these seminars.

Examples of outreach performed by LAILG are included in Appendix E. LAILG is also a building an on-line resources library free of charge to members into the LAILG member section of the website.

5.5 Future BMP Implementation, Operational Groups

In addition to the BMPs being implemented at all sites enrolled in the program, growers identified as large operators will be required to begin implementation, fully implement, or significantly improve no fewer than three BMPs at each growing parcel. Medium operators will be required to begin implementation, fully implement, or significantly improve no fewer than two BMPs at each growing parcel. Small and Micro operators will be required to begin implementation, fully implement, or significantly improve no fewer than one BMP at each growing parcel. Should a grower operate on more than one parcel of land, operational BMPs applied company-wide will count for each parcel. All non-contiguous pieces of land are counted as different parcels, regardless of location.

LAILG will provide suggestions and assistance in BMP selection based on the grower's individual operation and reported use patterns on the general information form, but individual operators will ultimately be required to select and implement BMPs of their choosing. LAILG will stress the importance of sediment control BMPs for achieving applicable water quality benchmarks, and will provide continual outreach on the success of BMPs that are implemented at other properties in the group.

6.0 SUMMARY / GOALS

The ultimate goals of the WQMP for LAILG are:

- 1) To implement BMPs to improve water quality group-wide.
- 2) To evaluate the effectiveness of individual BMPs with subsequent monitoring and sampling.
- 3) To divide members into appropriate groups based on their potential threats to water quality in order to implement effective and appropriate BMPs.
- 4) To track BMP efforts implemented group wide.
- 5) To integrate water quality and water conservation into the growing process through education.
- 6) Ultimately protect water quality and improve grower proficiency.

Based on field monitoring and laboratory analytical results to date, discharges from LAILG sampling sites have exceeded CWIL benchmarks and/or water quality objectives set in the basin plan. Due to the exceedances, LAILG developed a WQMP, as required in the CWIL.

The first round of information gathering under the WQMP had a response rate of approximately 25%. LAILG set up a website with a built in database, including log in pages where members can directly input requested information, in order to facilitate a higher response through the group. LAILG is going to mandate that all members submitting NOIs for the upcoming Waiver period submit the following documentation with the NOI: operational questionnaires, BMP questionnaires, and other supplemental documents as requested by LAILG or mandated by the NOI.

LAILG believes that the original WQMP is still a viable document, and will move forward with the same methodology. The requirements to submit information along with the new NOI is anticipated to improve response rates group wide to levels that the plan, as outlined in the WQMP, will be able to be further evaluated and implemented.

7.0 REFERENCES

- Extoxnet. University of California-Davis. Sep 2008
<http://www.extoxnet.orst.edu/pips/ghindex.html>.
- Haver L. Darren. "Best Management Practices: A Water Quality Field Guide for Growers, Southern California Edition". 30 (2007).
- Meister Ag Crop Protection Data Base. Sep 2008
<http://www.meisterpro.com>.
- Newman, Julie, ed. Management Practices to Protect Water Quality: A Manual for Greenhouses and Growers. Ventura: University of California Cooperative Extension.
- Regional Water Quality Control Board, Central Coast Region (3). Management Practice Checklist Update Summary Report 2006. June 2007
- United States Environmental Protection Agency. Guidance Manual for Developing Best Management Practices (BMP). Office of Water (EN-336). Oct 1993
- Water Quality Control Plan Los Angeles Region. Basin Plan for the Coastal Watershed of Los Angeles and Ventura Counties. June 1994
- Wheelock, E.Craig, and et al. "Development of Toxicity Identification Evaluation Procedures for Pyrethroid Detection Using Esterase Activity" Environmental Toxicology and Chemistry. 23.11 (2004): 2699-2708
- LARWQCB. 2005. Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands Within the Los Angeles Region. Order No. R4-2005-0080.
- Los Angeles Regional Water Quality Control Board (LARWQCB). 2010. Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands Within the Los Angeles Region. Order No. R4-2010-0186.
- Los Angeles Regional Water Quality Control Board (LARWQCB). 1994. Water Quality Control Plan Los Angeles Region (4), Basin Plan for the Coastal Watershed of Los Angeles and Ventura Counties.
- U.S. Environmental Protection Agency. Office of Pesticides Programs' Aquatic Life Benchmarks. Pesticides: Environmental Effects, July 17, 2013.
http://www.epa.gov/oppefed1/ecorisk_ders/aquatic_life_benchmark.htm.
- Wayne R. Ott. 1995. Environmental Statistics and Data Analysis. Boca Raton, Florida. CRC Press, Inc.

Myra L. Samuels and Jeffrey A. Witmer. 1989. Statistics for the Life Sciences: Second Edition. Upper Saddle River, New Jersey. Prentice-Hall, Inc.

University of California Cooperative Extension Agricultural Water Quality Research and Education San Diego County. 2011. Self Assessment: Greenhouse & Container Nurseries. San Diego, CA. Regents of the University of California.
<http://ucanr.edu/sites/agwaterquality/files/125548.pdf>.

University of California Cooperative Extension Agricultural Water Quality Research and Education San Diego County. 2011. Ag Water Quality Record Keeping. San Diego, CA. Regents of the University of California.
<http://ucanr.edu/sites/agwaterquality/files/125551.pdf>.

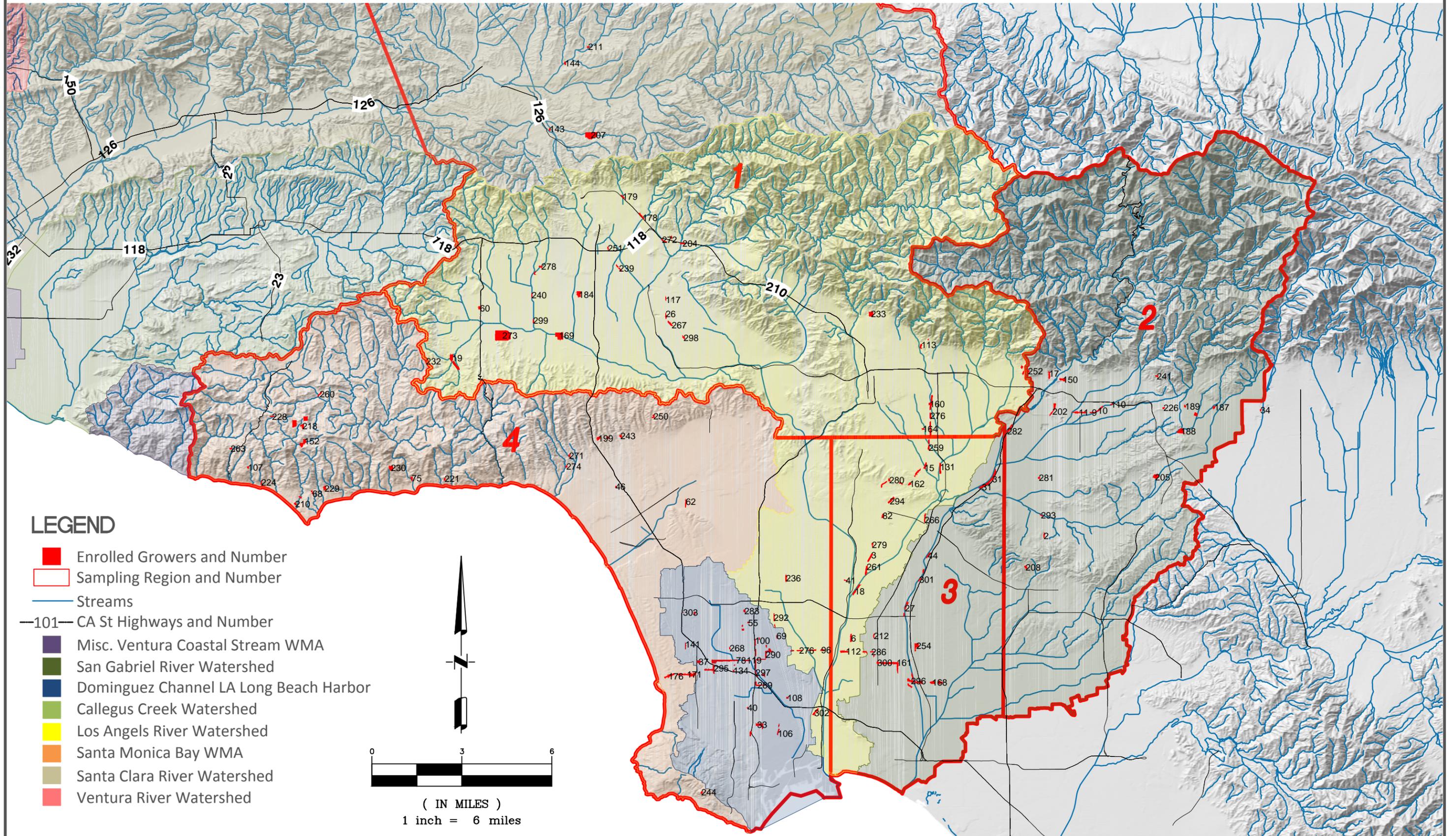
T. Yeager, R. Wright, D. Fare, C. Gilliam, J. Johnson, T. Bilderback, and R. Zondag. 1993. Six State Survey of Container Nursery Nitrate Nitrogen Runoff. Gainesville, Florida. University of Florida.

SWDIV and EFA West of Naval Facilities Engineering Command. July 1999. Handbook for Statistical Analysis of Environmental Background Data.

VeriFlora 3.0. April 2007. Certification of Sustainably Grown Cut Flowers and Potted Plants: Requirements for Growers and Handlers. Emeryville, California. Scientific Certification Systems

FIGURE 1 LOS ANGELES COUNTY IRRIGATED LANDS GROUP

LOS ANGELES REGIONAL WATERSHEDS



APPENDIX A

GENERAL INFORMATION QUESTIONNAIRE

LA ILG WQMP General Operational Questionnaire

Company: _____ Facility: _____
Filled out by: _____ Title: _____
Email: _____ Phone: _____

Instructions

Please fill out one questionnaire for ***EACH FACILITY*** that you have enrolled in the LA ILG

Part I: General Company

1. _____ **How would you characterize your crop? Circle ONE- choose your *primary* crop definition.**

Color / Bedding Plant	Vineyard
Orchard	Box Tree & Shrub
Greenhouse	Farm / Row Crop
Retail w/Production	

2. _____ **What is your total company yearly Gross sales? CIRCLE ONE.**

Less than \$50,000 per year

Between \$50,000 and \$200,000 per year

Between \$200,000 - \$1,000,000 per year

Between \$1,000,000 - \$5,000,000 per year

Over \$5,000,000 per year

3. _____ **Please tell us how many TOTAL ACRES you have within your company. That is ALL facilities in the entire country, please!**

_____ acres

4. _____ **How many facilities does your company operate? All facilities in the US, please.**

_____ facilities

5. _____ **Do you ship out of state?**

YES

NO

6. _____ **Do you move material between facilities if you have more than one?**

YES

NO

7. _____ **Do you ship material (either sales or intracompany transfer) north of Santa Barbara County?**

YES

NO

Part II: General Pesticide

8. _____ **Reviewing your Pesticide Usage Reports and records for the stated time period- How many applications did you make in total? Just count up each line of your PUR.**

_____ applications

9. _____ **What methods do you use to apply pesticides? Please break down into percentages?**

____% Spray

____% Drench or Sprench

____% Other

Part IV: General Irrigation

12. _____ **What methods of irrigation do you use? Please breakdown your methods by percentage**

_____% Drip

_____% Overhead Sprinkler

_____% Handwater

_____% Furrow

13. _____ **Reviewing your water usage for the year- What was your volume of water applied? Depending on your supply this figure may be in gallons or CF, etc... Please include your measure!**

We applied _____ (Unit of measure)

14. _____ **Do you recycle water in your facility**

YES

NO

15. _____ **Do you use reclaimed water**

YES

NO

16. _____ **From where to you get your water? Please provide percentages**

_____% City/Municipal

_____% Water District

_____% Well

**THANK YOU! PLEASE RETURN WITH YOUR BMP QUESTIONNAIRE TO THE
LA ILG PROJECT MANAGER**

WQMP QUESTIONNAIRE LA Irrigated Lands Group – BMPs (Best Management Practices) for Water Quality

Company Name:

Facility location:

1. Please circle the pesticide use/storage BMPs you currently have in place in your facility. Circle all that apply. Indicate whether it is completed for your entire facility or partially complete.

	Complete	or	Partial		Complete	or	Partial
a) IPM Program	C		P	b) IPM Manager	C		P
c) Covered Storage area for your materials AND equipment	C		P	d) Spill Kits - checked and restocked regularly	C		P
e) Sticky card monitoring	C		P	f) Using newer, less environmentally persistent chemistry	C		P
g) Regular scouting for pest issues	C		P	h) Regular weed control	C		P
i) Dust control	C		P	j) Spot Spraying	C		P
k) Using non-chemical means for pest control. ex. Biologicals, Exclusion, ...	C		P	l) Conduct monthly tailgate meeting on pesticide management and water quality issues	C		P
	C		P		C		P
	C		P		C		P

WQMP QUESTIONNAIRE LA Irrigated Lands Group – BMPs (Best Management Practices) for Water Quality

Company Name:

Facility location:

2. Please circle the nutrient use/storage BMPs you currently use in your facility. Circle all that apply. Indicate whether it is completed for your entire facility or partially complete.

	Complete	or	Partial		Complete	or	Partial
a) Regular Soil and Tissue sampling	C		P	b) pH and EC monitoring	C		P
c) Trained personnel making fertilizer decisions	C		P	d) Source Water sampling to determine existing nutrient content	C		P
e) Covered Storage Area for your materials AND equipment	C		P	f) Spill Kits - checked and restocked regularly	C		P
g) Pulse Irrigation for liquid fertilizers	C		P	h) Controlled release fertilizers to match crop production schedules	C	r	P
i) Conduct monthly tailgate meeting on nutrient management and water quality issues	C		P		C		P
	C		P		C		P
	C		P		C		P
	C		P		C		P

WQMP QUESTIONNAIRE LA Irrigated Lands Group – BMPs (Best Management Practices) for Water Quality

Company Name:

Facility location:

3. Please circle the sediment control BMPs you currently employ in your facility. Circle all that apply. Indicate whether it is completed for your entire facility or partially complete.

	Complete	or	Partial		Complete	or	Partial
a) Graveled roads	C		P	b) Groundcover in production blocks	C		P
c) Filter Socks	C		P	d) Water Diversion to funnel water to one area for collection	C		P
e) Covered Trash Collection areas	C		P	f) Tarp over soil piles. Compost and/or planting	C		P
g) Water truck for dust control	C		P	h) Silt Fencing and/or Sandbagging	C		P
i) Canning areas away from water drainage channels	C		P	j) Runoff Collection pond and/or area	C		P
k) Hillsides are covered or planted	C		P	l) Gopher and/or Ground Squirrel Control	C		P
m) Polyacrylimide (PAM)	C		P	n) Filters/traps around all exit drains	C		P
o) No till farming	C		P	p) Windbreaks to prevent wind erosion	C		P
q) Conduct monthly tailgate meeting on sediment control and water quality issues	C		P				

WQMP QUESTIONNAIRE LA Irrigated Lands Group – BMPs (Best Management Practices) for Water Quality

Company Name:

Facility location:

4. Please circle the water management BMPs you currently use in your facility. Circle all that apply. Indicate whether it is completed for your entire facility or partially complete.

	Complete	or	Partial		Complete	or	Partial
a) Drip Irrigation	C		P	b) Soil Moisture Monitoring	C		P
c) Weather Station	C		P	d) Automated Irrigation	C		P
e) Regular training for your Irrigation personnel	C		P	f) Irrigation Equipment Inspections	C		P
g) Shut off valves on all hoses	C		P	h) Crop location with crops with similar water needs	C		P
i) Different Irrigation Zones	C		P	j) Yearly irrigation audits	C		P
k) Conduct monthly tailgate meeting on water management and water quality issues	C		P		C		P
	C		P		C		P
	C		P		C		P

WQMP QUESTIONNAIRE LA Irrigated Lands Group – BMPs (Best Management Practices) for Water Quality

Company Name:

Facility location:

5. Please circle the housekeeping BMPs you currently use in your facility. Circle all that apply. Indicate whether it is completed for your entire facility or partially complete.

	Complete	or	Partial		Complete	or	Partial
a) Regular trash collection	C		P	b) Weed control	C		P
c) Covering of maintenance and storage areas prior to rain	C		P	d) Sweeping all paved areas on site prior to rain event	C		P
e) Washing used containers before replanting	C		P	f) Sanitization of production areas between crops	C		P
g) Conduct monthly tailgate meeting on housekeeping and water quality issues	C		P		C		P
	C		P		C		P
	C		P		C		P
	C		P		C		P
	C		P		C		P

APPENDIX B

CURRENT BMPs, SAMPLING SITES

Historically Implemented BMPs, Sampling Sites

NGA #	Historically Implemented BMPs, Sampling Sites											
	Water Conservation		Sedimate Control			Filtration	General Housekeeping	Pesticide and Nutrient Storage		Pesticide and Fertilizer Applicaiton		Training
	Drip Irrigation	Retention Ponds	Sweeping BMP	Gravel	Straw Waddles/Sand Bags	Silt Screening, filter socks, etc.	Drain Maintenance	Coverage of Pesticide storage areas	Coverage of Nutrient/soil storage areas			
4	Use of a "water wand" nozzle to help minimize overspraying		Street sweeper used on weekly basis and at least one day prior to forecasted rain events		Sandbags were placed around dirt areas near the sidewalk & drain		Planted Equisetum in dirt areas near sidewalk & drain					
13			Parking area and driveways are swept on a weekly basis & prior to forecasted rain events	Gravel has been applied to dirt roads and driveways	Sand bags placed near discharge points to reduce sedimate discharge			Spray rig is covered during rain events		Hand application of fertilizer into each container	No application of herbicides or pesticides a week prior to forecasted rain event	
19					Sand bags with pass-through PVC piping placed along dirt drainage channels located onsite, straw waddles around culverts	Silt screen placed along fence adjacent to stormwater drainage channel	Sand bags and straw waddles places around drains with metal grating					
31	Drip irrigation implemented on 45% of site	All runoff directed to holding pond. Water from holding pond used for dust supression.				Filter socks placed throughout property as part of the 319 Grant program.						All employees are trained on water conservation techniques and have stressed not overwatering. Have dedicated two employees to trouble shoot leaking valves or underperforming sprinkler heads
64	100% hand watering											
110	Implemented drip where possible, maintenance of irrigation system and eliminated excess watering, plants organized by water needs		Sod delivery area swept regularly	Weed clothe on slopes, mulch and gravel on walkways	Straw waddles placed at the end of beds and adjacent to sidewalks			Fertilizers are stored in covered containers	liquid fertilizer, Spray program for problem crops.	EC testing performed weekly so fertilizer is applied as needed		All workers trained to keep space clean of trash, soil and fertilizer. Regular inspections for for pest and disease problems
124	100% drip irrigation and is monitored monthly		Loading area is swept daily		Sand bags and straw waddles placed aroung perimeter of property and soil piles			Spray tank is kept in enclosed shed		Granular fertilizer is applied every other month, liquid fertilizer is applied quarterly		
150	All watering is done by hand, drip or flood benches	All water irrigation and stormwater runoff is routed to a large retention and filtration pond onsite. Water is purified and reused for irrigation					Pots are new and sterile, work areas are clean and tools are sanitized			Increase amounts of slow release fertilizer in lieu of liquid fertilizer, pre -plant fertilizer is incorporated in all soil mixes	trained personnel identifies pest problems, stcky traps used to identify pest pressure. Anemometer is used for drift management. Reduce the frequency of Pyrethoid insecticides.	
162					Straw waddles placed around discharge points and where necessary							
168	Combination of drip, sprinklers and hand watering. Maintenance of drip system monthly				Maintenance of sand bags & screens are monthly	Filter socks placed throughout property as part of the 319 Grant program.		Spray truck is parked under canopy when not in use				
176	All perimeter areas of the property are all on drip irrigation, and is monitored weekly		Sweep all driveways & blacktops on a weekly basis. Larger areas are cleaned with a street sweeper and prior to a forecasted rain event.		Perimeter of property is lined with straw waddles and sand bags where necessary		All catch basins and gutters are cleaned & maintained twice per month and/or prior to a forecasted rain event	Soil piles are surrounded by straw waddles				
178	75% drip & 25% hand watering											
189	100% drip irrigation before 9:00AM			Placed gravel on dirt walkways adjacent to street			Constructed a small berm between plants & fence at perimeter of property			Pesticides are not sprayed		

APPENDIX C

MINIMUM BMP REQUIREMENTS

MINIMUM BMP REQUIREMENTS BMP IMPLEMENTATION GUIDELINES FOR GROUPS

All Sites

A number of BMPs that have been identified in guidance documents are both inexpensive and simple to implement at growing sites. These BMPs mainly revolve around simple housekeeping, operational practices, and proper employee training. Due to their ease of use for implementation, LAILG has required that the following BMPs have been implemented at all growing sites enrolled in the LAILG:

- Irrigation Management:
 - 1) Train personnel to manage spray stakes and drip system to ensure all operational discharge points are located inside pots.
 - 2) Train all employees that apply irrigation water to maintain irrigation system properly.
- Pest Management:
 - 1) Avoid application of pesticides prior to forecasted rain events.
 - 2) Train all employees to clean up spills immediately based on predetermine protocols or spill management plan.
 - 3) Train all employees on the basic principles of pesticide use and spill control.
- Nutrient Management:
 - 1) Avoid application of fertilizer prior to forecasted rain events.
 - 2) Train all employees to clean up spills immediately based on predetermine protocols or spill management plan.
- Erosion and Runoff Management:
 - 1) Inform all employees as to the location of all drainage conduits, where they drain to, and the location of stormwater and sewer system drains.
 - 2) Train all employees on the basic principles of stormwater runoff management and current regulations (including the CWIL program).
- Non-Production Areas:
 - 1) Maintain all company vehicles to prevent leaks.
 - 2) Keep wash water from vehicle cleaning on property and prevent it from entering storm drains or sewer system.
 - 3) Train all employees to clean up spills immediately and properly from vehicles.
 - 4) Maintain site and keep it free from trash and debris.
 - 5) Keep outdoor garbage containers covered.
 - 6) All outhouses need to be periodically cleaned and maintained.
 - 7) Properly dispose of hazardous waste and oil.
 - 8) Train all employees to clean up prior to forcasted rain events.
 - 9) an.

APPENDIX D
RECEIVED BMP RESPONSES

PESTICIDES	1a	1b	1c	1d	1e	1f	1g	1h	1i	1j	1k	1l
	None	None	Complete	Complete	None	None	Complete	Complete	Complete	Complete	None	Partial
	Partial	Partial	Complete	Complete	Partial	Partial	Complete	Complete	Partial	Complete	Partial	Partial
	Partial	Partial	Complete	Complete	Partial	Complete	Partial	Complete	Partial	Complete	Complete	Partial
	Partial	None	Complete	None	None	N/A	Complete	Complete	N/A	N/A	N/A	N/A
	Complete	Complete	Complete	Complete	None	Complete						
	None	None	Complete	None	None	None	None	Complete	None	Complete	None	None
	None	None	Complete	None	None	None	None	Complete	None	Complete	None	None
	None	None	Complete	Complete	None	None	None	Complete	None	None	None	None
	None	None	Complete	None	None	None	None	Complete	None	None	None	None
	None	None	Complete	None	None	None	None	Complete	None	None	None	None
	Complete	Complete	Complete	Complete	None	Complete						
	Partial	None	N/A	Partial	Partial	Partial	Complete	Complete	Complete	Complete	Partial	Partial
	Complete	Partial	None									
	Complete	Complete	Complete	Complete	None	Complete						
	Complete	Complete	Complete	Complete	None	Complete	Complete	Partial	Partial	Complete	None	None
	None	None	Complete	Partial	None	None	Complete	Complete	Complete	Complete	None	Complete
	Partial	None	Partial	Complete	Complete	None	Complete	Complete	Complete	Complete	None	Complete
	Complete	Complete	Complete	Complete	None	Complete	Complete	Complete	Complete	Complete	None	Partial
	Complete	Complete	Complete	Complete	None	Complete						
	Complete	Complete	Complete	Complete	None	None	Complete	Partial	None	Partial	None	Complete
	Partial	Partial	Complete	N/A	Complete	Complete	Complete	Complete	N/A	N/A	Partial	None
	Complete	Complete	Complete	Complete	None	Complete						
	Partial	None	Complete	None	None	None	Complete	Complete	Complete	Complete	None	None
	Partial	Partial	Complete	Partial	Complete	Partial	Complete	Complete	Partial	Complete	Partial	Partial
	None	None	Complete	None	None	None	Complete	Complete	None	Complete	None	None
	Complete	Complete	Complete	Complete	None	Complete						
	Complete											
	Complete											
	Partial											
	Complete											
	Complete											
	Partial	Partial	Complete	Partial	Complete	Partial						
	Complete	Complete	Complete	Complete	None	Complete						
	None	None	Complete	Partial	None	None	Complete	Complete	Partial	None	None	None
	None	None	Complete	Partial	None	None	Complete	Complete	Partial	None	None	None
	None	None	Complete	Partial	None	None	Complete	Complete	Partial	None	None	None
	None	None	Complete	Partial	None	None	Complete	Complete	Partial	None	None	None
	None	None	Complete	Partial	None	None	Complete	Complete	Partial	None	None	None
Complete	14	14	34	20	9	17	29	34	18	26	13	13
Partial	11	7	2	9	4	4	3	3	10	2	6	9
None	12	16	0	7	24	15	5	0	7	7	17	14
No Answer	12	12	12	12	12	12	12	12	12	12	12	12
N/A	0	0	1	1	0	1	0	0	2	2	1	1

SEDIMENT	3a	3b	3c	3d	3e	3f	3g	3h	3i	3j	3k	3l	3m	3n	3o	3p	3q
	Complete	None	Partial	None	Partial	None	None	Complete	Complete	None	None	Complete	None	Partial	None	None	Partial
	Complete	Partial	Partial	Complete	Partial	Partial	Partial	Partial	Complete	Partial	Partial	Complete	Partial	Partial	Complete	Partial	Partial
	Partial	Complete	Partial	Partial	Partial	Complete	Partial	Complete	Complete	Partial	Complete	Complete	Partial	Complete	Complete	Complete	Partial
	N/A	Complete	N/A	Complete	N/A	N/A	Complete	N/A	N/A								
	N/A	Partial	N/A	N/A	Complete	N/A	N/A	N/A	N/A	N/A	Complete	Complete	N/A	N/A	N/A	Partial	None
	Partial	None	None	None	None	None	None										
	None	Complete	None	None	None	None	None	None	None	None							
	Partial	None	Complete	None	None	None	None	None	None	None	Partial						
	Partial	None	None	None	None	None	None										
	Partial	None	Complete	None	None	None	None	None	None	None	None						
	None	None	None	None	Complete	None	None	None	None	None	None	Complete	None	None	Complete	None	None
	Partial	Partial	Partial	Partial	None	None	Complete	Partial	Complete	None	Complete	Partial	N/A	Partial	N/A	Partial	Partial
	Complete	N/A	Partial	N/A	Partial	N/A	None	Partial	N/A	Partial	Partial						
	N/A	Partial	N/A	N/A	Complete	N/A	N/A	N/A	N/A	N/A	Complete	Complete	N/A	N/A	N/A	Partial	None
	Partial	None	None	None	Partial	Partial	None	None	None	None	Partial	Partial	None	None	None	None	None
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	None	None	None	None	Complete	None	None	None	None	None	None	Complete	None	None	Complete	None	None
	Partial	None	None	None	Complete	Complete	None	Complete	Complete	None	None	Complete	None	None	None	None	None
	N/A	N/A	N/A	Complete	N/A	N/A	N/A	N/A	N/A	N/A	Complete	Complete	N/A	N/A	Complete	N/A	N/A
	N/A	Partial	N/A	N/A	Complete	N/A	N/A	N/A	N/A	N/A	Complete	Complete	N/A	N/A	N/A	Partial	None
	Complete	None	None	None	Complete	Complete	N/A	N/A	N/A	N/A	N/A	N/A	None	N/A	N/A	N/A	None
	Complete	Complete	Partial	Complete	Complete	N/A	Complete	N/A	N/A	Complete	Complete	Complete	N/A	Complete	Complete	Partial	Partial
	None	None	None	None	Complete	None	None	None	None	None	None						
	None	None	None	None	Complete	None	None	None	None	None	None	Complete	None	None	Complete	None	None
	Complete	None	None	None	Complete	Complete	None	Complete	Complete	None	None	Complete	None	Complete	None	None	Complete
	Partial	Partial	Partial	Complete	Partial	Partial											
	Complete	None	Complete	N/A	Complete	Complete											
	Complete	None	Complete	N/A	Complete	Complete											
	Complete	Complete	Complete	Complete	Partial	N/A	Complete	Complete	N/A	Complete	Complete	Complete	N/A	Complete	Complete	N/A	Partial
	N/A	Partial	N/A	N/A	Complete	N/A	N/A	N/A	N/A	N/A	Complete	Complete	N/A	N/A	N/A	Partial	None
	Complete	Partial	None	None	Complete	None	None	None	Complete	None	None	None	None	None	None	None	None
	Complete	Partial	None	None	Complete	None	None	None	Complete	None	None	None	None	None	None	None	None
	Complete	Partial	None	None	Complete	None	None	None	Complete	None	None	None	None	None	None	None	None
	Complete	Partial	None	None	Complete	None	None	None	Complete	None	None	None	None	None	None	None	None
Complete	14	8	3	7	20	8	6	9	17	5	12	19	0	8	12	5	3
Partial	12	11	8	5	8	3	4	4	2	4	4	3	4	6	0	9	10
None	5	16	20	19	7	17	19	15	8	20	18	13	24	16	16	19	22
No Answer	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
N/A	6	2	6	6	2	9	8	9	10	8	3	2	9	7	9	4	2

WATER
MANAGEMENT

	4a	4b	4c	4d	4e	4f	4g	4h	4i	4j	4k
	None	None	None	None	None	Complete	Complete	Complete	None	None	Partial
	Partial	Partial	Partial	Partial	Partial	Partial	Complete	Complete	Complete	Complete	Partial
	Partial	Partial	Partial	Partial	Partial	Complete	Partial	Complete	Complete	Partial	Partial
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Complete	None	None	None	Complete	Complete	Complete	N/A	Complete	None	Partial
	Complete	Complete	None	Complete	Complete	Complete	Complete	N/A	Complete	None	Partial
	None	None	None	None	None	None	Complete	None	Complete	None	None
	None	None	None	None	None	None	Complete	Complete	None	None	None
	None	None	None	None	None	None	Complete	Partial	None	None	None
	None	None	None	None	None	None	Complete	None	None	None	None
	None	None	None	None	None	None	Complete	None	N/A	None	None
	Complete	Complete	None	Complete	Complete	Complete	Complete	Complete	Complete	None	None
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Complete	Complete	Partial	Partial	Complete	Complete	Complete	None	Complete	Complete	Partial
	Complete	Complete	None	Complete	Complete	Complete	Complete	N/A	Complete	None	Partial
	None	Complete	None	Partial	None	Complete	None	Complete	Complete	None	None
	None	Complete	None	None	Complete	Complete	None	None	Complete	Complete	Complete
	Partial	Partial	None	Partial	Complete	Partial	Partial	Complete	Partial	None	None
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	Complete	Complete	None	Complete	Complete	Complete	Complete	N/A	Complete	None	Partial
	Complete	None	N/A	Complete	Partial	Complete	Complete	Partial	Complete	None	None
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	Partial	None	None	Partial	None	None	Complete	None	Complete	None	None
	Complete	Complete	None	Complete	Complete	Complete	Complete	Complete	Complete	None	None
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	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial
	Partial	Complete	N/A	Complete							
	Partial	Complete	N/A	Complete							
	Complete	Complete	None	None	Complete	Complete	Complete	N/A	Complete	Complete	Partial
	Complete	Complete	None	Complete	Complete	Complete	Complete	N/A	Complete	None	Partial
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Complete	14	16	0	11	17	21	26	11	22	9	4
Partial	7	4	5	8	4	3	3	3	2	2	13
None	10	11	23	12	10	7	2	9	6	20	14
No Answer	12	12	12	12	12	12	12	12	12	12	12
N/A	6	6	9	6	6	6	6	14	7	6	6

HOUSEKEEPING 5a 5b 5c 5d 5e 5f 5g Other

Complete Complete Complete Complete None None Partial
 Complete Partial Complete Partial Complete Partial Partial
 Complete Complete Complete Complete Complete Complete Partial
 N/A N/A N/A N/A N/A N/A N/A Flat orchard w/ natural ground cover
 Complete Complete Complete None N/A N/A Complete
 None Complete None None None None None
 None Complete None None None None None
 Partial None Complete Complete None None None
 None Complete None None None None None
 Complete Complete Complete None None None None
 N/A N/A N/A N/A N/A N/A N/A
 Complete Complete Complete Complete Complete Complete Partial
 N/A N/A N/A N/A N/A N/A N/A

Complete Partial Complete None Complete Partial None

Complete Complete Complete Complete None Partial Complete

Complete Complete Complete None None Complete None

Complete Complete Complete Complete Complete None None
 Complete Complete Complete None None None None
 Complete Partial Complete None Partial None None
 N/A Complete N/A N/A N/A N/A N/A No employees
 Complete Complete Complete None N/A N/A Complete
 Complete Complete Partial Partial N/A N/A N/A
 Complete Complete Complete N/A N/A N/A Partial No fertilizer use

Complete None None None None None None
 Complete Complete Complete None None None None

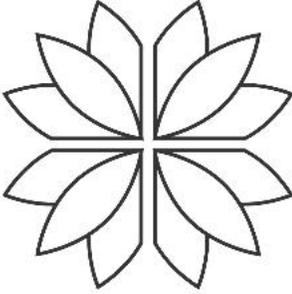
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Partial Partial Complete Partial Partial Partial Partial
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 Complete Complete Complete Complete Complete Complete Complete
 Complete Complete Complete N/A N/A N/A Partial
 N/A N/A N/A N/A N/A N/A N/A
 N/A N/A N/A N/A N/A N/A N/A

Complete	22	23	22	10	8	7	6
Partial	2	4	1	3	2	4	8
None	4	2	5	13	13	12	13
No Answer	12	12	12	12	12	12	12
N/A	9	8	9	11	14	14	10

APPENDIX E

LAILG OUTREACH EXAMPLES



NURSERY GROWERS ASSOCIATION

Los Angeles Irrigated Lands Group
June 16, 2014

Hello NGA LAILG,

Quick reminder - if you haven't already attended a WQMP meeting there is still space in our meeting on Wednesday at Nuccio's in Altadena. Please RSVP via this link if you would like to attend.

[Nuccio's Altadena, Wednesday June 18, 10 am - 12 pm](#)

I would like to have two more meetings in the week of July 7th. If you would be available to host, please send me a note [here](#). We need a shady space, indoors or outdoors that can accommodate up to 25 people.

For all of you who have already attended a meeting - thank you for your time and let me know if you have any questions!

Thank you,

Tara Herrera
888.502.5197 ext 2
tara@nurserygrowers.org

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RAIN TOMORROW



Hello!

We are expecting significant rain on Tuesday. Please review your facilities to minimize run-off, and reduce the sediment load carried in that run-off. It is likely that this rain storm will be large enough to trigger a sampling event, so be prepared if you are one of our sampling sites.

BMP Checklist for rain events

- Sweep up loading area - no spilled fertilizer prills!
- Do a trash sweep around the facility
- Park all spray equipment out of the rain- under cover
- Place filter socks in runoff channels to reduce speed
- Clean out catch basins, runoff channels and ditches
- Cover your soil pile
- Filter socks around your planting area to catch soil
- Filter socks around the perimeter where water is likely to leave your property. You want to slow it down so the sediment will settle out before the water exits.
- Do not spray or fertilize today (Monday)
- Sweep up loose soil in exposed production blocks
- Cover exposed hillsides to reduce cutting
- Enjoy the free water

Thanks for your diligence and feel free to contact me with any questions or concerns.

**Sincerely,
Tara Herrera
Project Manager ILG
tara@nurserygrowers.org
888.502.5197 ext. 2**

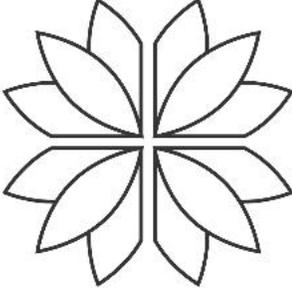
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Herrera Horticultural Consulting | 3380 La Sierra Ave | Suite 104-340 | Riverside | CA | 92503



NURSERY GROWERS ASSOCIATION

Los Angeles Irrigated Lands Group Fall 2014 News

In This Issue

[Invoices](#)

[Website - update](#)

[NGA MEETING 10/21](#)

[WQMP update](#)

[California Nursery
Conference 11/13](#)

Hello LAILG!

We conducted our two dry season sampling events last week and I am happy to report that no samples were collected. That is great news for us. We have moved into the official 'wet season' and will be ready to sample should we get any actual rain...

NGA MEETING - OCT 21 H&H Nursery, Lakewood - 5:30pm

I passed along your comments and feedback, and the NGA Board of Directors have listened. We will be having quarterly NGA meetings so that you can come and hear the latest news, and find out what the NGA is doing for YOU and your business. You asked for regular meetings, and I am so pleased that we have added it to our schedule! Please join us for the first meeting in this new format. We need your RSVP! Come and meet us in person! If you have nursery neighbors that should be part of NGA, please invite them! RSVP to Claudette ASAP.

[H&H Nursery in Lakewood](#) will be hosting.

\$25 per person; dinner and cocktail hour included

[RSVP to Claudette](#)

Tours of H&H and Cocktail Hour - 5:30pm - 6:30pm
Dinner - El Farolito, Jr. Tacos! Muy excelente! 6:30pm

See you there!

WQMP meetings - Follow-up and Thanks!

Thank you to everyone who attended. To those of you who have already returned your questionnaires - many, many thanks! This is a

NGA Invoices- PAST DUE & ILG Billing Date

We still have some past due invoices out there. Please check your records and contact Claudette or Tara.

After an informal poll, it seems that most of you would prefer that ILG Invoices go out in the Spring along with the NGA Dues, rather than separately in the Fall. We have not finalized this

decision, so please let me know what you prefer.

[Fall or Spring Billing?](#)

Update- Website

You should see the new website up and running very soon. We are making our way into the digital world, slowly but surely! Stay tuned!

long process, and I appreciate your time and effort. Unfortunately, we are behind schedule in that we don't have enough questionnaires back to make an accurate analysis. So we are in a bit of a holding pattern. I have to reconfigure the implementation schedule and will update you all accordingly. If you would like to start your BMP implementation, or have already done your installations - please document and send me pictures as we discussed. If you would like to wait for your group assignment, that is also fine- just remember everyone will have to do at least 1 BMP installation. You may as well get a jump now before the rainy season! If you haven't sent in your questionnaires, PLEASE put that on the top of your 'to do' list.

[Contact me](#) if you have any questions.

California Nursery Conference - NOV 13 Etiwanda Gardens- Etiwanda, CA 7 LARWQCB education credits requested

UCNFA has put together an outstanding program for us. This is a full day devoted to water issues and solutions! Come and get your education hours, and enjoy a beautiful day at Etiwanda Gardens. This is a great opportunity for new group members to get up to speed AND get your education credits.

Lunch Included; \$65 per person

[Agenda](#) link for your review

[RSVP online HERE](#) or mail to the address included on the agenda.

Don't miss this- it's a great event!

As always, please contact me with any questions or concerns!

Regards,

Tara Herrera
Project Manager - NGA ILG

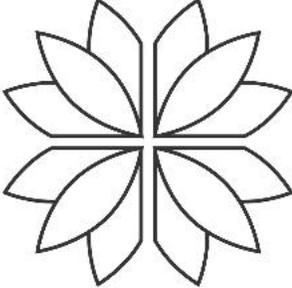
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Nursery Growers Association | 1589 N. Main Street | Orange | CA | 92867



NURSERY GROWERS ASSOCIATION

Los Angeles Irrigated Lands Group Summer 2014 News

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[Santa Monica Mountain
Land Use Plan changes](#)

[Calendar](#)

[DWP](#)

[NGA dues are due!](#)

[NEW WEBSITE!](#)

Gracias a MB Nursery!

Gracias a Maria
Martinez y MB
Nursery! Nosotros
tuvimos una junta
bien informativo y
bien atendido. Fue
agradable ver
algunas caras
nuevas!

Update- Land Use changes in SM Mountains

Hello LAILG!

There is a lot to cover!

As we did not have much of a rainy season - there was only one storm that produced enough rain to sample. We are now in the dry season sample period and I expect we will be out in August and again in September to verify that our group does not have summer runoff.

WQMP meetings - I need to see you!

There is still space available in all of the locations/dates. First come, first serve; 25 spots per location. It is time to implement our plan collectively and individually. You need information from me and I need information from you. Applied for 2 hrs of educational credit.

[CLICK HERE TO RSVP](#) - choose one via google doodle! Or
RSVP via [email](#)

May 29th - Rosenthal Estate/Malibu 8:30 am

May 30th - Le Chene Alonoso Vineyard/Sta Clarita-Agua Dulce 8:30 am

June 2nd - Rainforest Flora/Torrance 8:30 am

June 16th or 20th - TBD - Riverside in the morning

June 17th or 18th - TBD - Magic Growers/Pasadena in the morning

JULY- more WQMP meetings- Quiero tener DOS EN ESPANOL

UPDATE - DWP Letters to Leaseholders and Pollution Insurance

It seems the Pollution Insurance issue has resolved favorably for some of you? Keep pressing and remind them that you are part of the Waiver group. I am still hopeful! Could you please let me know if anything changes for you with this leasing requirement!

I am still waiting on them to send out their 'Enroll in the Waiver' letter.

We sent out an alert a while back regarding a change to the Land Use plan for the unincorporated areas of the Santa Monica Mountains. The Coastal Commission voted to approve the plan with minor modifications. The news for agricultural land uses is not good. Some small scale organic farming was allowed, but grapes are not. Nursery uses are unclear. It has adversely impacted some of our members.

PAST DUE

NGA 2014 dues invoices are out and due. Please make sure you are current.

New WEBSITE coming!

Development of our new website is underway. You will be able to submit your pictures, fill out data forms, check on your educational hours, find resources, and pay your invoices with a credit card if you so choose! I hope to have it testing by the end of June. Stay tuned!

As always, please contact me with any questions or concerns! I'll see what I can do!

Regards,

Tara Herrera
Project Manager - NGA ILG

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