



# California Regional Water Quality Control Board Central Coast Region



**Linda S. Adams.**  
*Secretary for  
Environmental Protection*

895 Aerovista Place, Suite 101, San Luis Obispo, California 93401-7906  
(805) 549-3147 • Fax (805) 543-0397  
<http://www.waterboards.ca.gov/centralcoast>

**Arnold Schwarzenegger**  
*Governor*

Agricultural Order Renewal  
Public Comments and Alternatives to  
02/01/2010 Preliminary Draft Staff Recommendations  
Group 15: Comment Letters

All of these letters were received after the deadline of April 1<sup>st</sup>, 2010.

Comment ID	Affiliation	Date Received
A32	California Association of Nurseries and Garden Centers	5/13/2010
A33	San Luis Obispo County Cattlemen	6/02/2010
D6	Bill Coy	6/05/2010
D7	Bradley R. Miles	6/05/2010
D8	Rick Shade	6/05/2010
F70	William Thomas/ Best Best & Krieger LLP	6/04/2010
F71	OSR Enterprises/ Price, Postel & Parma LLP	6/04/2010
FB8	San Benito Farm Bureau	6/03/2010
FB9	California Farm Bureau	6/04/2010
M17	Senator Strickland	5/24/2010
M18	County of San Benito	5/28/2010
P23	Ralph Bishop	5/24/2010
P24	Carol Georgi	5/25/2010
T7	Rachelle Antinetti	6/04/2010
T8	Jim Moore	5/19/2010
U16	Environmental Justice Coalition for Water	6/04/2010

Dear Angela,

Our working group notes that, upon study, considerable difference of opinion exists between facts found in the public regulatory record and the representations staff made

- \* in the preliminary draft order (§§64-66, 68-69, 74, and 76, but especially §§127 and 130),
- \* at presentations at our meeting of April 30 ("Growing high quality ornamental flowers and plants requires large amounts of water, fertilizer, and pesticides"; "Toxicity from Pesticides"; "Santa Maria River Toxicity"), and
- \* at the workshop presentation yesterday regarding nurseries' use of agricultural plant health products as being causative of toxicity for invertebrates and fish measured in surface waters and groundwater.

In nurseries' case, these false representations are foundational and were apparently offered to provide cause for proposing to invoke specific remedies and regulatory mandates on nursery operations.

At our meeting on Friday, April 30, in response to our specific inquiry seeking to clarify issues of major concern, staff expressed their strong and specific concern over nurseries' alleged excess use of two specific compounds: chlorpyrifos and diazinon. As you are aware, the draft preliminary order contains significant compliance and regulatory burdens to prevent nurseries from polluting surface streams and groundwater as a direct result of these two compounds' use. That these presumptive uses are attributable to nurseries must be supported by specific scientific data in your possession, but such data was not provided to us nor to other stakeholders.

Using county pesticide reports for a nearly 20 year period, our group created the attached spreadsheet detailing use of the two compounds of special concern in nursery/greenhouse operations in the geographically significant Region 3 counties (Data for Santa Cruz, Monterey, San Benito, San Luis Obispo, and Santa Barbara counties; because only small geographic portions of Ventura, San Mateo and Santa Clara counties are included in Region 3, we did not pull data for them.) Please refer to the attached spreadsheet.

The resolution of these data maintained by DPR is so specific that individual applications of compounds can be identified to individual pesticide operator and specific landowner. Such data permits you and your staff to determine if and when county agriculture offices that oversee pesticide applications have failed to perform diligent oversight in any specific instance or application not in compliance with the California DPR and federal US-EPA FIFRA label requirements. (Of course, such violation would have already been identified by DPR and subjected to regulatory penalty.)

Such studies should be part of the supporting documentation provided with the draft preliminary order before a credible case can be built to support the draft's prescriptions based on the overly broad §130 statement that "heavy pesticide use, coupled with an intensive irrigation regime used by many nurseries may result in a discharge of waste and poses significant threat of pollution to surface water and groundwater from pesticides."

In fact, however, nursery's region-wide progress and responsible behavior in reducing application of these compounds in Region 3 is clear and evident over the 1991-2008 period reported:

\* Chlorpyrifos dropped from a peak of 4,051 lbs. applied in 1996 in the five counties to 937 lbs. in 2008, a three-fold reduction, or 23% of the 1996 rate. Much of this improvement came after 2005.

\* Diazinon dropped from a peak of 1,952 lbs. in 1993 in the five counties to just 248 lbs in 2008, a nearly 10 times reduction to 13% of the 1993 rate. Much of this improvement came after 2002.

\* Not only have total amount applied dropped significantly, the number of individual applications have dropped significantly:

- \* 1,594 applications in 1996 to 346 in 2008 for Chlorpyrifos
- \* 1,460 applications in 1996 to 288 in 2008 for Diazinon

\* The rate of application of each was also reduced:

- \* 0.891 lbs/acre in 1991 to 0.641 in 2008 for Chlorpyrifos
- \* 1.407 lbs/acre in 2006 to 0.47 in 2008 for Diazinon

\* And the number of acres treated with each was also reduced:

- \* 10,087 acres treated with Chlorpyrifos in 1996 to 1,462 acres treated in 2008
- \* 5,630 acres treated with Diazinon in 1996 to 527 acres treated in 2008

None of these data provided in the case of chlorpyrifos and diazinon support the staff contention and public statement that many tons of these pesticides were ever or are currently being applied to nursery, greenhouse, and cut flower crops, nor is it accurate that use is expanding by any commonly applied measure applicable to nursery. To the contrary, these data document specific and continued trends of reduction for our industry over long periods in total amount, applications, rates of application, and total acres treated. These are demonstrable proofs of our nurseries, greenhouses, and cut flower producers' efforts to protect surface water and ground water in Region 3.

Regards,

Robert

Robert J. Dolezal

Executive Vice President

CA Assoc. of Nurseries and Garden Centers

3947 Lennane Drive, Suite 150

Sacramento CA 95834

(916) 928-3900 Ext. 17

Fax (916) 567-0505

PANNA (DPR County Ag) Stats on Pesticide Use by Nursery Segments

Description	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
<b>Chlorpyrifos</b> used per year on Greenhouse and Nursery in Monterey, San Benito, San Luis Obispo, Santa Barbara, and Santa Cruz Counties										
Gross Pounds	936.8	1,038.8	1,660.0	2,165.7	2,194.6	2,194.7	1,488.1	2,717.3	1,813.4	2,515.1
Number of Applications	346.0	354.0	527.0	703.0	619.0	685.0	558.0	952.0	892.0	1,224.0
Acres Planted	3,961.1	2,876.4	1,407.6	2,595.9	2,096.1	4,877.7	2,964.4	4,794.6	3,018.2	3,994.7
Acres Treated	1,462.4	1,358.2	2,625.9	3,137.8	3,057.5	3,246.2	2,386.9	3,960.8	3,343.6	4,064.4
Lbs/Planted Acre	0.2	0.4	1.2	0.8	1.0	0.4	0.5	0.6	0.6	0.6
Lbs/Treated Acre	0.6	0.8	0.6	0.7	0.7	0.7	0.6	0.7	0.5	0.6
Lbs/Application	2.7	2.9	3.1	3.1	3.5	3.2	2.7	2.9	2.0	2.1

Description	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
<b>Diazinon</b> used per year on Greenhouse and Nursery in Monterey, San Benito, San Luis Obispo, Santa Barbara, and Santa Cruz Counties										
Gross Pounds	247.7	591.5	459.4	688.0	685.2	999.0	1,450.8	1,307.2	1,706.6	1,413.2
Number of Applications	288.0	321.0	230.0	495.0	408.0	607.0	841.0	711.0	762.0	900.0
Acres Planted	4,274.9	1,643.3	469.6	1,620.1	914.6	870.8	2,022.0	1,390.0	1,747.8	2,583.7
Acres Treated	526.9	640.3	400.6	690.5	898.2	984.2	1,826.5	1,612.7	1,620.2	1,981.8
Lbs/Planted Acre	0.1	0.4	1.0	0.4	0.7	1.1	0.7	0.9	1.0	0.5
Lbs/Treated Acre	0.5	0.9	1.1	1.0	0.8	1.0	0.8	0.8	1.1	0.7
Lbs/Application	0.9	1.8	2.0	1.4	1.7	1.6	1.7	1.8	2.2	1.6

**SOURCE DATA BY PESTICIDE, CROP, AND COUNTY**

Description	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
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**Chlorpyrifos** (Chem Code: 253) used on Greenhouse Flowers (Site Code: 151) in Monterey. (County Code: 27)

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	13.9	39.2	1.5	18.4	9.5	2	36.7	125.2	51.9	244.9
Appl Count:	10	16	1	18	7	1	31	50	35	143
Field Count:	5	3	1	2	3	1	5	8	6	10
Acres Plant:	79.5	21	4	4	47	2	60	78	44	83
Acres Treat:	3.5	11	0.75	4	8	1	64	121	51	74.8
Appl Rate:	0.46	0.23	2	2	1.19	2	0.57	1.03	1.02	0.99

**Chlorpyrifos** (Chem Code: 253) used on Greenhouse Flowers (Site Code: 151) in San Benito. (County Code: 35)

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:									4	22
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Appl Count:	0	0	0	0	0	0	0	0	2	11
Field Count:	0	0	0	0	0	0	0	0	1	1
Acres Plant:									5	5
Acres Treat:									4	22
Appl Rate:									1	1

**Chlorpyrifos (Chem Code: 253) used on Greenhouse Flowers (Site Code: 151) in San Luis Obispo. (County Code: 40)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	1.75	0.47		24	2	10.7	15.6	51.8	28.5	32.5
Appl Count:	1	1	0	8	1	12	18	40	26	38
Field Count:	1	1	0	1	1	3	4	3	2	3
Acres Plant:	10	5		6	10	23	25.5	39	69	72.6
Acres Treat:	3.5	0.75		48	4	22	36.2	90.2	54.8	59.9
Appl Rate:	0.5	0.62		0.5	0.5	0.49	0.43	0.57	0.52	0.51

**Chlorpyrifos (Chem Code: 253) used on Greenhouse Flowers (Site Code: 151) in Santa Cruz. (County Code: 44)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	32	45	70.7	41.4	51	7	17.4	12.6	11.2	25.9
Appl Count:	24	12	42	20	9	6	9	8	9	26
Field Count:	2	4	4	1	1	1	2	2	3	6
Acres Plant:	28	61.7	49.7	7	7	7	22	8.5	11.8	35.8
Acres Treat:	36	33.8	103.6	30.5	47.5	7.6	15.8	16.6	16	36.4
Appl Rate:	0.81	1.33	0.68	0.87	1.07	0.92	1.1	0.76	0.7	0.52

**Chlorpyrifos (Chem Code: 253) used on Greenhouse Flowers (Site Code: 151) in Santa Barbara. (County Code: 42)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	175.2	50.6	147.2	187.7	125	104.6	99	117.8	216.9	327.2
Appl Count:	93	34	93	110	77	91	44	69	126	137
Field Count:	7	5	11	8	12	8	13	10	14	17
Acres Plant:	68	60	165	110	141	68	144	108	137.8	176.5
Acres Treat:	220.2	82.5	307.3	479.9	354.9	353.6	226	220.2	449.2	569.8
Appl Rate:	0.8	0.61	0.48	0.39	0.35	0.3	0.44	0.53	0.48	0.57

**Total Central Coast**

Gross Pounds:	222.85	135.27	219.4	271.5	187.5	124.3	168.7	307.4	312.5	652.5
Appl Count:	128	63	136	156	94	110	102	167	198	355
Field Count:	15	13	16	12	17	13	24	23	26	37
Acres Plant:	185.5	147.7	218.7	127	205	100	251.5	233.5	267.6	372.9

Acres Treat:	263.2	128.05	411.65	562.4	414.4	384.2	342	448	575	762.9
Appl Rate:	2.57	2.79	3.16	3.76	3.11	3.71	2.54	2.89	3.72	3.59

**Chlorpyrifos (Chem Code: 253) used on Outdoor Flower Nursery (Site Code: 152) in Monterey. (County Code: 27)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	21.9	18.6					14.4	60.2	73.8	143.3
Appl Count:	14	15	0	0	0	0	11	29	49	64
Field Count:	2	5	0	0	0	0	3	7	6	11
Acres Plant:	50	176					89.2	354	314	403.9
Acres Treat:	36.5	29					16	129.9	169.5	266.2
Appl Rate:	0.6	0.38					0.9	0.46	0.44	0.54

**Chlorpyrifos (Chem Code: 253) used on Outdoor Flower Nursery (Site Code: 152) in San Benito. (County Code: 35)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	2				7.88	2	4.31	16	26	2.5
Appl Count:	1	0	0	0	4	3	9	5	2	2
Field Count:	1	0	0	0	3	1	1	3	1	2
Acres Plant:	4				30	30	30	54.5	25	45
Acres Treat:	4				18	4	8	19.5	26	3
Appl Rate:	0.5				0.44	0.5	0.54	0.82	1	0.83

**Chlorpyrifos (Chem Code: 253) used on Outdoor Flower Nursery (Site Code: 152) in San Luis Obispo. (County Code: 40)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	16.5	5.15	29.6	23	52.1	65.1	59.2	103.4	45.7	49.5
Appl Count:	10	6	25	21	55	65	69	102	42	35
Field Count:	2	2	2	2	2	3	3	5	6	3
Acres Plant:	140	140	140	140	140	160	95	110.8	167	94
Acres Treat:	31.5	10.2	50.2	32	74	98.7	111.8	147.4	105.5	99.2
Appl Rate:	0.52	0.5	0.59	0.72	0.7	0.66	0.53	0.7	0.43	0.5

**Chlorpyrifos (Chem Code: 253) used on Outdoor Flower Nursery (Site Code: 152) in Santa Cruz. (County Code: 44)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	86.3	13.9	6.5	12.7	15	16	37.5	23.4	42.3	32.8
Appl Count:	33	2	5	8	7	8	22	20	55	38
Field Count:	7	1	1	4	2	4	7	7	17	8
Acres Plant:	133.5	34	18	96	26	47	61	90	260.8	222.3
Acres Treat:	153	28	12.5	17	25	24.5	46.9	54.7	187.7	87.6

Appl Rate:	0.56	0.5	0.52	0.71	0.6	0.65	0.8	0.43	0.23	0.37
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**Chlorpyrifos (Chem Code: 253) used on Outdoor Flower Nursery (Site Code: 152) in Santa Barbara. (County Code: 42)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	485.7	699.1	1,343	1,598	1,839	1,871	966.9	2,051	1,143	977
Appl Count:	98	155	300	368	363	405	223	464	361	321
Field Count:	38	62	70	64	94	94	65	94	96	65
Acres Plant:	509	781	827.9	948.3	1,271	4,177	1,364	3,423	1,455	987.6
Acres Treat:	658.1	986.6	2,072	2,352	2,353	2,590	1,478	2,797	1,730	1,655
Appl Rate:	0.74	0.71	0.65	0.68	0.78	0.72	0.65	0.73	0.66	0.59

**Total Central Coast**

Gross Pounds:	612.4	736.75	1379.1	1633.7	1913.98	1954.1	1082.31	2254	1330.8	1205.1
Appl Count:	156	178	330	397	429	481	334	620	509	460
Field Count:	50	70	73	70	101	102	79	116	126	89
Acres Plant:	836.5	1131	985.9	1184.3	1467	4414	1639.2	4032.3	2221.8	1752.8
Acres Treat:	883.1	1053.8	2134.7	2401	2470	2717.2	1660.7	3148.5	2218.7	2111
Appl Rate:	2.92	2.09	1.76	2.11	2.52	2.53	3.42	3.14	2.76	2.83

**Chlorpyrifos (Chem Code: 253) used on Greenhouse Plants (Site Code: 153) in Monterey. (County Code: 27)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	33.2	110.5	57.7	208.9	45.4	103.7	29.7	54.6	96.5	103.7
Appl Count:	21	61	32	105	65	64	35	101	137	195
Field Count:	5	9	5	37	10	7	8	8	6	15
Acres Plant:	2,136	937.6	47.5	926.3	143	127.6	97.1	77.2	36.2	175.8
Acres Treat:	4	28	50.2	79.4	85	106	55.5	121.3	219.1	215
Appl Rate:	0.57	0.9	1.15	0.98	0.53	0.98	0.54	0.45	0.44	0.4

**Chlorpyrifos (Chem Code: 253) used on Greenhouse Plants (Site Code: 153) in San Benito. (County Code: 35)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:					1.35					
Appl Count:	0	0	0	0	3	0	0	0	0	0
Field Count:	0	0	0	0	1	0	0	0	0	0
Acres Plant:					5					
Acres Treat:					3					
Appl Rate:					0.45					

**Chlorpyrifos (Chem Code: 253) used on Greenhouse Plants (Site Code: 153) in San Luis Obispo. (County Code: 40)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	36.1	13.8	3.1	14.4	9.47	12.9	12.7	9.85	84.5	114.6
Appl Count:	14	4	4	19	12	23	24	6	36	62
Field Count:	2	1	0	1	0	2	2	3	2	3
Acres Plant:	39.7	6.08		6.5		3.14	3.24	27.7	25.8	663.6
Acres Treat:	34.3	2.05	3.46	15.5	11.4	16.9	17.4	17.1	164.5	153.1
Appl Rate:	0.71	1.39	0.9	0.83	0.83	0.76	0.73	0.58	0.51	0.72

**Chlorpyrifos (Chem Code: 253) used on Greenhouse Plants (Site Code: 153) in Santa Cruz. (County Code: 44)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	72.3	9.46	3	3.4					0.2	9.15
Appl Count:	4	18	2	3	0	0	0	0	1	11
Field Count:	1	3	1	0	0	0	0	0	1	0
Acres Plant:	6	12	3						0.75	
Acres Treat:	4.9	12.7	5						0.75	1.75
Appl Rate:	0.46	0.33	0.6						0.27	0.24

**Chlorpyrifos (Chem Code: 253) used on Greenhouse Plants (Site Code: 153) in Santa Barbara. (County Code: 42)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	20.9	23	4.2	30.9			2.62	29.8	38.4	87.3
Appl Count:	109	116	5	84	0	0	3	9	22	85
Field Count:	5	5	1	6	0	0	2	5	6	14
Acres Plant:	31.5	31.5	7	29.5			10	70.5	80.5	146.5
Acres Treat:	2	6	9	2.1			5	12.8	70.7	136.5
Appl Rate:	0.12	0.17	0.47	3.87			0.52	2.34	0.54	0.55

**Total Central Coast**

Gross Pounds:	162.5	156.76	68	257.6	56.22	116.6	45.02	94.25	219.6	314.75
Appl Count:	148	199	43	211	80	87	62	116	196	353
Field Count:	13	18	7	44	11	9	12	16	15	32
Acres Plant:	2213.2	987.18	57.5	962.3	148	130.74	110.34	175.4	143.25	985.9
Acres Treat:	45.2	48.75	67.66	97	99.4	122.9	77.9	151.2	455.05	506.35
Appl Rate:	1.86	2.79	3.12	5.68	1.81	1.74	1.79	3.37	1.76	1.91

**Chlorpyrifos (Chem Code: 253) used on Outdoor Container Nursery (Site Code: 154) in Monterey. (County Code: 27)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	1.33	2.63	0.94	10.1	2.25					1.2
Appl Count:	2	4	1	5	3	0	0	0	0	1
Field Count:	1	1	1	3	1	0	0	0	0	1
Acres Plant:	40	20	20	44	15					15
Acres Treat:		3	1.5	3.25	5					
Appl Rate:		0.83	0.63	1.13	0.45					

**Chlorpyrifos (Chem Code: 253) used on Outdoor Container Nursery (Site Code: 154) in San Benito. (County Code: 35)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:				0.63						7.9
Appl Count:	0	0	0	1	0	0	0	0	0	9
Field Count:	0	0	0	1	0	0	0	0	0	1
Acres Plant:				12						36
Acres Treat:										
Appl Rate:										

**Chlorpyrifos (Chem Code: 253) used on Outdoor Container Nursery (Site Code: 154) in San Luis Obispo. (County Code: 40)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:			0.15	8.2	10.1	10.1	11.2	8.88	15.2	44.5
Appl Count:	0	0	1	10	13	12	10	8	13	23
Field Count:	0	0	1	2	2	1	1	1	2	1
Acres Plant:			1.5	21.5	21	20	20	20	33	30
Acres Treat:			0.75	7	7	8.08	6	3.35	11.4	29
Appl Rate:			0.2	1.17	1.44	1.25	1.88	2.65	1.34	1.53

**Chlorpyrifos (Chem Code: 253) used on Outdoor Container Nursery (Site Code: 154) in Santa Cruz. (County Code: 44)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	32.5	39.9	1.18	0.48			3	12.3	68.2	17
Appl Count:	13	21	2	2	0	0	1	5	6	5
Field Count:	8	10	2	2	0	0	1	2	3	3
Acres Plant:	95.5	104.5	72	82.5			20	48.5	58	56.8
Acres Treat:	41.3	73	3.75	3			4	18.2	26	37.1
Appl Rate:	0.78	0.49	0.31	0.16			0.75	0.67	2.62	0.45

**Chlorpyrifos (Chem Code: 253) used on Outdoor Container Nursery (Site Code: 154) in Santa Barbara. (County Code: 42)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	24.6	42.2	4.65	13.8	31.9	53.3	87.4	44	99.5	39.1
Appl Count:	27	57	6	29	17	16	24	22	35	70
Field Count:	7	9	3	6	9	6	12	6	14	6

Acres Plant:	190.8	126.8	36	59	99.8	68	136.3	82.5	162	94.5
Acres Treat:	46.5	56.4	11	24.4	95.5	117.8	163.4	151.2	134.6	155.4
Appl Rate:	0.46	0.67	0.42	0.44	0.33	0.45	0.53	0.29	0.74	0.19

**Total Central Coast**

Gross Pounds:	58.43	84.73	6.92	33.21	44.25	63.4	101.6	65.18	182.9	109.7
Appl Count:	42	82	10	47	33	28	35	35	54	108
Field Count:	16	20	7	14	12	7	14	9	19	12
Acres Plant:	326.3	251.3	129.5	219	135.8	88	176.3	151	253	232.3
Acres Treat:	87.8	132.4	17	37.65	107.5	125.88	173.4	172.75	172	221.5
Appl Rate:	1.24	1.99	1.56	2.9	2.22	1.7	3.16	3.61	4.7	2.17

**Chlorpyrifos (Chem Code: 253) used on Greenhouse Propagation (Site Code: 155) in Monterey. (County Code: 27)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:				1.16	0.44		1.38		2.18	0.4
Appl Count:	0	0	0	5	2	0	4	0	15	2
Field Count:	0	0	0	2	1	0	2	0	2	1
Acres Plant:				36	18		22		20	5
Acres Treat:				5	0.7		11.3		20.8	2
Appl Rate:				0.23	0.62		0.12		0.1	0.2

**Chlorpyrifos (Chem Code: 253) used on Greenhouse Propagation (Site Code: 155) in San Benito. (County Code: 35)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:										0.05
Appl Count:	0	0	0	0	0	0	0	0	0	2
Field Count:	0	0	0	0	0	0	0	0	0	0
Acres Plant:										
Acres Treat:										
Appl Rate:										

**Chlorpyrifos (Chem Code: 253) used on Greenhouse Propagation (Site Code: 155) in San Luis Obispo. (County Code: 40)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	0.47	0.38		0.15	0.26	2.5	3.5	0.6	0.51	0.5
Appl Count:	3	3	0	1	2	2	3	4	4	11
Field Count:	1	1	0	1	1	2	1	0	2	3
Acres Plant:	1.6	1.25		1.25	1.12	17	5.1		3.5	4.54
Acres Treat:	1.25	2.25		0.75	1.25	3.1	5.42	2	3	2.81

Appl Rate:	0.22	0.17		0.2	0.21	0.81	0.65	0.3	0.17	0.17
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**Chlorpyrifos (Chem Code: 253) used on Greenhouse Propagation (Site Code: 155) in Santa Cruz. (County Code: 44)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:										1.88
Appl Count:	0	0	0	0	3	0	0	0	0	0
Field Count:	0	0	0	0	1	0	0	0	0	0
Acres Plant:					7.5					
Acres Treat:					4.75					
Appl Rate:					0.39					

**Chlorpyrifos (Chem Code: 253) used on Greenhouse Propagation (Site Code: 155) in Santa Barbara. (County Code: 42)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:							1.44	0.94	0.78	3.27
Appl Count:	0	0	0	0	0	0	5	4	4	16
Field Count:	0	0	0	0	0	0	1	1	1	2
Acres Plant:							5	5	5	155.3
Acres Treat:							7.25	5.5	5.5	19.2
Appl Rate:							0.2	0.17	0.14	0.15

**Total Central Coast**

Gross Pounds:	0.47	0.38	0	1.31	2.58	2.5	6.32	1.54	3.47	4.22
Appl Count:	3	3	0	6	7	2	12	8	23	31
Field Count:	1	1	0	3	3	2	4	1	5	6
Acres Plant:	1.6	1.25	0	37.25	26.62	17	32.1	5	28.5	164.84
Acres Treat:	1.25	2.25	0	5.75	6.7	3.1	23.97	7.5	29.3	24.01
Appl Rate:	0.22	0.17	0	0.43	1.22	0.81	0.97	0.47	0.41	0.52

**Chlorpyrifos (Chem Code: 253) used on Outdoor Propagation Nursery (Site Code: 156) in Monterey. (County Code: 27)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	65.2	36.7	0.31	38.8	26.5	4.55	10	17.7	4.57	21.8
Appl Count:	17	10	2	10	5	5	5	10	5	17
Field Count:	3	4	1	3	3	2	3	4	1	3
Acres Plant:	382	186	2	50	60.7	104	162	89.2	3	18.9
Acres Treat:	266.8	77	5	66.1	32.6	11.5	35.5	35.1	9.13	44
Appl Rate:	0.24	0.48	0.06	0.59	0.81	0.4	0.28	0.5	0.5	0.49

**Chlorpyrifos (Chem Code: 253) used on Outdoor Propagation Nursery (Site Code: 156) in San Benito. (County Code: 35)**

Accuracy of acres planted data not evaluated for this crop.

**Gross Pounds:**

Appl Count:	0	0	0	0	0	0	0	0	0	0
Field Count:	0	0	0	0	0	0	0	0	0	0
Acres Plant:										
Acres Treat:										
Appl Rate:										

**Chlorpyrifos (Chem Code: 253) used on Outdoor Propagation Nursery (Site Code: 156) in San Luis Obispo. (County Code: 40)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	1.34	2.85	2.55	1.34	1.39	5.54	0.64	9.62	0.28	24.3
Appl Count:	19	32	26	24	13	23	27	15	14	18
Field Count:	2	3	2	2	3	2	2	6	3	5
Acres Plant:	16	33	14	16	15	24	11	20.2	16.5	13
Acres Treat:	2.84	7.39	6.92	5.59	4.36	7.33	6.6	11.6	3.78	31.4
Appl Rate:	0.22	0.37	0.37	0.22	0.32	0.76	0.1	0.83	0.07	0.77

**Chlorpyrifos (Chem Code: 253) used on Outdoor Propagation Nursery (Site Code: 156) in Santa Cruz. (County Code: 44)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:		13.7			15		4.75	0.25	25.5	
Appl Count:	0	3	0	0	3	0	3	1	2	0
Field Count:	0	2	0	0	1	0	1	1	1	0
Acres Plant:		139			38		38	38	38	
Acres Treat:		41			30		19	3	12	
Appl Rate:		0.33			0.5		0.25	0.08	2.12	

**Chlorpyrifos (Chem Code: 253) used on Outdoor Propagation Nursery (Site Code: 156) in Santa Barbara. (County Code: 42)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:							185.7	72.2	39.8	502.3
Appl Count:	0	0	0	0	0	0	40	30	4	147
Field Count:	0	0	0	0	0	0	28	8	4	72
Acres Plant:							544	50	46.5	454.1
Acres Treat:							221.2	155.9	40.6	584.7
Appl Rate:							0.84	0.46	0.98	0.86

**Total Central Coast**

Gross Pounds:	66.54	53.25	2.86	40.14	42.89	10.09	201.09	99.77	70.15	548.4
Appl Count:	36	45	28	34	21	28	75	56	25	182

Field Count:	5	9	3	5	7	4	34	19	9	80
Acres Plant:	398	358	16	66	113.7	128	755	197.4	104	486
Acres Treat:	269.64	125.39	11.92	71.69	66.96	18.83	282.3	205.6	65.51	660.1
Appl Rate:	0.46	1.18	0.43	0.81	1.63	1.16	1.47	1.87	3.67	2.12

**Diazinon (Chem Code: 198) used on Greenhouse Flowers (Site Code: 151) in Monterey. (County Code: 27)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:		0.96	8.5	6.19	27.7	51.3	105.3	96.6	67.1	90.3
Appl Count:	0	1	10	5	22	54	72	48	32	90
Field Count:	0	1	5	2	5	7	6	9	5	5
Acres Plant:		0.5	14.2	15	42.8	52.5	42.5	84.5	32.5	46
Acres Treat:		0.5	9.25	3.5	64.9	135.4	84.2	62.8	38	34.2
Appl Rate:		1.92	0.92	1.05	0.43	0.38	1.25	1.54	1.76	1.49

**Diazinon (Chem Code: 198) used on Greenhouse Flowers (Site Code: 151) in San Benito. (County Code: 35)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:				4.05	44.6	24.3	44.6	44.6	57.1	67.9
Appl Count:	0	0	0	1	11	6	11	12	16	14
Field Count:	0	0	0	1	1	1	1	1	2	1
Acres Plant:				5	2	5	5	5	8	5
Acres Treat:				2	22	12	31	24	30.8	28
Appl Rate:				2.03	2.03	2.03	1.44	1.86	1.86	2.43

**Diazinon (Chem Code: 198) used on Greenhouse Flowers (Site Code: 151) in San Luis Obispo. (County Code: 40)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	0.14		1.58	0.04	2.29	82.5	105.4	100.1	83.8	70.3
Appl Count:	5	0	7	2	6	43	156	169	95	94
Field Count:	1	0	2	0	1	3	4	4	5	4
Acres Plant:	5		13.1		8.1	27.5	26.3	46.1	88.2	33.4
Acres Treat:	7.8		9.1		7.44	66	198.9	186.1	154	144.6
Appl Rate:	0.02		0.17		0.31	1.25	0.53	0.54	0.54	0.49

**Diazinon (Chem Code: 198) used on Greenhouse Flowers (Site Code: 151) in Santa Barbara. (County Code: 42)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	54.2	47.8	78.1	77.9	135.3	174.5	302.4	199	235.5	138.7
Appl Count:	16	23	29	34	40	62	77	63	66	80

Field Count:	4	5	9	8	15	12	26	12	18	14
Acres Plant:	63	69	117	123	158.2	101.2	295	112.5	199.5	151.1
Acres Treat:	96.5	85.3	76.5	150.3	209.9	161.9	315.1	194.2	189.7	246.8
Appl Rate:	0.56	0.56	1.02	0.52	0.64	1.08	0.96	1.02	1.24	0.56

**Diazinon (Chem Code: 198) used on Greenhouse Flowers (Site Code: 151) in Santa Cruz. (County Code: 44)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	43	62.6	54.8	109.7	51.1	102.2	254.4	124.3	114.4	43.7
Appl Count:	23	32	29	49	23	41	60	41	55	23
Field Count:	3	3	3	2	2	2	3	3	3	4
Acres Plant:	42.7	42.7	42.7	19.7	19.7	19.7	34.7	24.7	22	63.2
Acres Treat:	45.5	59.2	73.6	125.6	50.2	63.8	124.4	131.1	153.4	29.7
Appl Rate:	0.84	0.8	0.75	0.81	1.02	1.6	2.05	0.95	0.75	1.01

**Total Central Coast**

Gross Pounds:	97.34	111.36	142.98	197.88	260.99	434.8	812.1	564.6	557.9	410.9
Appl Count:	44	56	75	91	102	206	376	333	264	301
Field Count:	8	9	19	13	24	25	40	29	33	28
Acres Plant:	110.7	112.2	187	162.7	230.8	205.9	403.5	272.8	350.2	298.7
Acres Treat:	149.8	145	168.45	281.4	354.44	439.1	753.6	598.2	565.9	483.3
Appl Rate:	1.42	3.28	2.86	4.41	4.43	6.34	6.23	5.91	6.15	5.98

**Diazinon (Chem Code: 198) used on Outdoor Flower Nursery (Site Code: 152) in Monterey. (County Code: 27)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	2	1.08	1.2	2.42	3.57	8.73	34	154.4	94.5	39.7
Appl Count:	1	7	20	23	33	18	28	53	40	16
Field Count:	1	2	2	3	3	3	4	6	3	4
Acres Plant:	14	23	12	21	18	87	207.5	369	200	224.9
Acres Treat:	4	21	52.8	44	79.2	44	36.5	234.8	166.5	64.5
Appl Rate:	0.5	0.05	0.02	0.06	0.05	0.2	0.93	0.66	0.57	0.52

**Diazinon (Chem Code: 198) used on Outdoor Flower Nursery (Site Code: 152) in San Benito. (County Code: 35)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:					3.12			2.5	4.05	3.75
Appl Count:	0	0	0	0	1	0	0	2	1	5
Field Count:	0	0	0	0	1	0	0	1	1	2

Acres Plant:					5		40	5	8
Acres Treat:					2		2.5	2	8.25
Appl Rate:					1.56		1	2.03	0.45

**Diazinon (Chem Code: 198) used on Outdoor Flower Nursery (Site Code: 152) in San Luis Obispo. (County Code: 40)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	0.09	2.75			0.5	7.35	6.15	1.13	10.4	9.74
Appl Count:	2	2	0	0	1	10	10	3	10	24
Field Count:	1	1	0	0	1	1	2	2	7	2
Acres Plant:	40	40			100	100	70	60	110.8	23
Acres Treat:	4.7	5.5			1	14.6	12.3	2.99	21.5	27
Appl Rate:	0.02	0.5			0.5	0.5	0.5	0.38	0.48	0.36

**Diazinon (Chem Code: 198) used on Outdoor Flower Nursery (Site Code: 152) in Santa Barbara. (County Code: 42)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	5.96	2.24	9.83	4.31	12.9	9	14.6	24.1	25.6	46
Appl Count:	8	4	11	7	3	1	9	22	20	16
Field Count:	3	2	5	2	2	1	6	5	7	7
Acres Plant:	31.5	16.5	55.5	18.5	39.5	50	64	54	470	461
Acres Treat:	8.05	3.39	19.9	8.19	21.2	6	29	48.2	56.5	98.5
Appl Rate:	0.74	0.66	0.5	0.53	0.61	1.5	0.5	0.5	0.45	0.46

**Diazinon (Chem Code: 198) used on Outdoor Flower Nursery (Site Code: 152) in Santa Cruz. (County Code: 44)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	3.75	4.5	19.5	7.81	3.75	12.8	13	83.6	18.5	76.6
Appl Count:	1	2	4	5	1	3	6	14	24	26
Field Count:	1	2	3	2	1	2	2	4	5	5
Acres Plant:	16.5	23	36.5	26.5	12	36.5	28	136.5	127	186
Acres Treat:	5	6	26	8	5	15	15	119.2	26.7	45
Appl Rate:	0.75	0.75	0.75	0.75	0.75	0.85	0.87	0.7	0.7	1.7

**Total Central Coast**

Gross Pounds:	11.8	10.57	30.53	14.54	23.84	37.88	67.75	265.73	153.05	175.79
Appl Count:	12	15	35	35	39	32	53	94	95	87
Field Count:	6	7	10	7	8	7	14	18	23	20
Acres Plant:	102	102.5	104	66	174.5	273.5	369.5	659.5	912.8	902.9
Acres Treat:	21.75	35.89	98.7	60.19	108.4	79.6	92.8	407.69	273.2	243.25
Appl Rate:	2.01	1.96	1.27	1.34	3.47	3.05	2.8	3.24	4.23	3.49

**Diazinon (Chem Code: 198) used on Greenhouse Plants (Site Code: 153) in Monterey. (County Code: 27)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	0.7	2.75		76.5	102.3	112.8	126.2	45.8	173.9	169.1
Appl Count:	8	7	0	50	94	160	161	75	127	155
Field Count:	3	3	0	18	6	8	6	8	8	22
Acres Plant:	96	105		343	28.6	71.8	43.1	38.7	57.4	206.7
Acres Treat:		2		21.4	149.2	213.9	327.7	90.4	216.2	186.2
Appl Rate:		1		0.31	0.69	0.53	0.39	0.51	0.8	0.59

**Diazinon (Chem Code: 198) used on Greenhouse Plants (Site Code: 153) in San Benito. (County Code: 35)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	0.06			0.25	1.54					
Appl Count:	1	0	0	1	3	0	0	0	0	0
Field Count:	1	0	0	1	1	0	0	0	0	0
Acres Plant:	2.75			5	5					
Acres Treat:	0.75			0.5	3					
Appl Rate:	0.08			0.5	0.51					

**Diazinon (Chem Code: 198) used on Greenhouse Plants (Site Code: 153) in San Luis Obispo. (County Code: 40)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	81.1	240	253.6	271.7	246.7	300.6	326.5	345.5	519.7	443.2
Appl Count:	16	48	49	54	53	86	88	68	94	95
Field Count:	1	1	1	3	2	5	3	2	4	4
Acres Plant:	33.6	33.6	33.6	42.9	36	49.8	31.6	27	52.6	44.3
Acres Treat:	27.5	67.2	11.6	16.9	52.2	52	96.9	120.1	176.7	164.1
Appl Rate:	2.94	3.57	22	15.9	4.72	5.78	3.37	2.88	2.94	2.67

**Diazinon (Chem Code: 198) used on Greenhouse Plants (Site Code: 153) in Santa Barbara. (County Code: 42)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	1.43	4.67	6.87	2.18	0.5	57.4	9.5	3.73	92.2	17
Appl Count:	4	6	5	3	1	9	8	2	5	21
Field Count:	1	3	3	1	1	3	2	1	5	5
Acres Plant:	13	28	13	3	0.5	10.5	14	13	50	50.5
Acres Treat:		6	5	3.25	0.25	17	19	2.5	40	2.3
Appl Rate:		0.5	1.37	0.67	1.99	3.37	0.5	1.49	2.31	0.72

**Diazinon (Chem Code: 198) used on Greenhouse Plants (Site Code: 153) in Santa Cruz. (County Code: 44)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:		0.92		0.84		1	1			1.97
Appl Count:	0	3	0	7	0	1	1	0	0	5
Field Count:	0	0	0	0	0	0	0	0	0	0
Acres Plant:										
Acres Treat:		2.36				1	1			
Appl Rate:		0.32				1	1			

**Total Central Coast**

Gross Pounds:	83.29	248.34	260.47	351.47	351.04	471.8	463.2	395.03	785.8	631.27
Appl Count:	29	64	54	115	151	256	258	145	226	276
Field Count:	6	7	4	23	10	16	11	11	17	31
Acres Plant:	145.35	166.6	46.6	393.9	70.1	132.1	88.7	78.7	160	301.5
Acres Treat:	28.25	77.56	16.6	42.05	204.65	283.9	444.6	213	432.9	352.6
Appl Rate:	3.02	5.39	23.37	17.38	7.91	10.68	5.26	4.88	6.05	3.98

**Diazinon (Chem Code: 198) used on Outdoor Container Nursery (Site Code: 154) in Monterey. (County Code: 27)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	1.87	19.1		11.2	2	0.75		2.83		
Appl Count:	1	4	0	4	1	1	0	11	0	0
Field Count:	1	1	0	3	1	1	0	2	0	0
Acres Plant:	20	20		40	9	6		0.38		
Acres Treat:	1.88	16.9		8.25	2	0.75		3.3		
Appl Rate:	1	1.13		1.36	1	1		0.86		

**Diazinon (Chem Code: 198) used on Outdoor Container Nursery (Site Code: 154) in San Benito. (County Code: 35)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:							0.98	2.46	0.02	1.32
Appl Count:	0	0	0	0	0	0	3	5	3	1
Field Count:	0	0	0	0	0	0	1	1	0	1
Acres Plant:							10	7		1.75
Acres Treat:							3	17		1.75
Appl Rate:							0.33	0.14		0.75

**Diazinon (Chem Code: 198) used on Outdoor Container Nursery (Site Code: 154) in San Luis Obispo. (County Code: 40)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:		138.5					8.04			8.89
Appl Count:	0	3	0	0	0	0	9	0	0	14
Field Count:	0	1	0	0	0	0	1	0	0	4
Acres Plant:		46					24.5			51.5
Acres Treat:		138					15			22.2
Appl Rate:		1					0.54			0.39

**Diazinon (Chem Code: 198) used on Outdoor Container Nursery (Site Code: 154) in Santa Barbara. (County Code: 42)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	0.62	11.5	2.09	10.9	10.2	29	39.4	23.1	54	68.5
Appl Count:	1	14	2	13	13	26	35	15	36	46
Field Count:	1	3	2	8	7	4	9	6	4	4
Acres Plant:	1	32	16.5	94.5	112.5	58	125.5	87.5	57	69.5
Acres Treat:	1	29	3.25	25.8	31.5	57	64.2	25.5	59	72.8
Appl Rate:	0.62	0.39	0.64	0.42	0.32	0.51	0.61	0.9	0.92	0.94

**Diazinon (Chem Code: 198) used on Outdoor Container Nursery (Site Code: 154) in Santa Cruz. (County Code: 44)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:		0.67	3.75	16			15.3		10.4	17
Appl Count:	0	2	1	8	0	0	5	0	4	5
Field Count:	0	2	1	3	0	0	3	0	3	2
Acres Plant:		30.2	25	70			73		50.5	40.8
Acres Treat:		1.86	5	77.2			25		17.2	21
Appl Rate:		0.36	0.75	0.21			0.61		0.6	0.81

**Total Central Coast**

Gross Pounds:	2.49	169.77	5.84	38.1	12.2	29.75	63.72	28.39	64.42	95.71
Appl Count:	2	23	3	25	14	27	52	31	43	66
Field Count:	2	7	3	14	8	5	14	9	7	11
Acres Plant:	21	128.2	41.5	204.5	121.5	64	233	94.88	107.5	163.55
Acres Treat:	2.88	185.76	8.25	111.25	33.5	57.75	107.2	45.8	76.2	117.75
Appl Rate:	1.62	2.88	1.39	1.99	1.32	1.51	2.09	1.9	1.52	2.89

**Diazinon (Chem Code: 198) used on Greenhouse Propagation (Site Code: 155) in Monterey. (County Code: 27)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	5.81	1.38	0.89	15.7	2.6	1.77	6.69	6.08	6	27.9
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Appl Count:	30	2	3	64	11	6	24	24	20	60
Field Count:	3	1	1	11	1	1	1	2	1	3
Acres Plant:	76	32	14	253	14	14	14	28	14	34
Acres Treat:	6.25		0.88	3.5	3.13	5.5	11.4	7.62	5.64	13.9
Appl Rate:	0.24		1.01	0.87	0.83	0.32	0.59	0.8	1.06	0.78

**Diazinon (Chem Code: 198) used on Greenhouse Propagation (Site Code: 155) in San Benito. (County Code: 35)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	1.76	1.24	2.11	1.69	3.81	4.23	2.88	3.56	6.21	7.01
Appl Count:	17	7	6	6	11	17	6	11	19	18
Field Count:	2	1	2	1	1	1	1	1	1	1
Acres Plant:	5	2.75	4.25	5	5	2.75	5	2.75	3	3
Acres Treat:	10.5	3	3.25	5.75	13.2	16.5	11.5	12	21.5	19.2
Appl Rate:	0.17	0.41	0.65	0.29	0.29	0.26	0.25	0.3	0.29	0.36

**Diazinon (Chem Code: 198) used on Greenhouse Propagation (Site Code: 155) in San Luis Obispo. (County Code: 40)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	2.04		0.33	13.2	2.27	13	23.6	20.8	95	25
Appl Count:	2	0	2	59	13	35	60	48	59	27
Field Count:	1	0	2	3	2	3	3	3	5	4
Acres Plant:	6.08		23.2	41.5	35	28	23.3	21	45.8	36
Acres Treat:			0.74	9.35	6.3	56.8	89.6	81.4	113.4	25.2
Appl Rate:			0.45	0.31	0.36	0.23	0.26	0.25	0.84	0.79

**Diazinon (Chem Code: 198) used on Greenhouse Propagation (Site Code: 155) in Santa Barbara. (County Code: 42)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:					4.21					
Appl Count:	0	0	0	0	17	0	0	0	0	0
Field Count:	0	0	0	0	1	0	0	0	0	0
Acres Plant:					0.5					
Acres Treat:					7.5					
Appl Rate:					0.56					

**Diazinon (Chem Code: 198) used on Greenhouse Propagation (Site Code: 155) in Santa Cruz. (County Code: 44)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	6.58	9.41	13	7.56	13.4	5.31	0.25	2.84	4.38	
Appl Count:	19	36	46	16	37	24	2	13	14	0
Field Count:	1	1	1	1	1	1	1	1	1	0
Acres Plant:	10	10	10	10	7.5	7.5	7.5	5.93	5.2	

Acres Treat:	37.8	66	80.8	54.2	82.2	25	1	13	18
Appl Rate:	0.17	0.14	0.16	0.14	0.16	0.21	0.25	0.22	0.24

**Total Central Coast**

Gross Pounds:	16.19	12.03	16.33	38.15	26.29	24.31	33.42	33.28	111.59	59.91
Appl Count:	68	45	57	145	89	82	92	96	112	105
Field Count:	7	3	6	16	6	6	6	7	8	8
Acres Plant:	97.08	44.75	51.45	309.5	62	52.25	49.8	57.68	68	73
Acres Treat:	54.55	69	85.67	72.8	112.33	103.8	113.5	114.02	158.54	58.3
Appl Rate:	0.58	0.55	2.27	1.61	2.2	1.02	1.35	1.57	2.43	1.93

**Diazinon (Chem Code: 198) used on Outdoor Propagation Nursery (Site Code: 156) in Monterey. (County Code: 27)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	17.7	13.3		14.8	1.14		2.65			5.85
Appl Count:	88	75	0	48	4	0	1	0	0	19
Field Count:	5	2	0	7	1	0	1	0	0	3
Acres Plant:	3,392	717.3		172	14		101			122
Acres Treat:				4.25	1.25		8.5			18
Appl Rate:				0.38	0.91		0.31			0.2

**Diazinon (Chem Code: 198) used on Outdoor Propagation Nursery (Site Code: 156) in San Benito. (County Code: 35)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:					0.5					3.75
Appl Count:	0	0	0	0	1	0	0	0	7	0
Field Count:	0	0	0	0	1	0	0	0	1	0
Acres Plant:					5					3
Acres Treat:					2					9.25
Appl Rate:					0.25					0.41

**Diazinon (Chem Code: 198) used on Outdoor Propagation Nursery (Site Code: 156) in San Luis Obispo. (County Code: 40)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:	18.9	26.1	3.24	21.9	1.68	0.44	2.85	6.17	29.8	18.6
Appl Count:	45	43	6	30	4	4	7	9	13	14
Field Count:	2	3	3	3	2	2	3	4	6	5
Acres Plant:	8.75	13.7	23	42.5	39	15	10.5	19	38.3	159
Acres Treat:		1.67	11	28.2	4.7	1.24	6.01	8.42	37.2	4.03

Appl Rate:	0.75	0.29	0.28	0.36	0.35	0.47	0.73	0.8	0.58
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**Diazinon (Chem Code: 198) used on Outdoor Propagation Nursery (Site Code: 156) in Santa Barbara. (County Code: 42)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:				11.2	7.5			14	
Appl Count:	0	0	0	6	4	0	0	3	0
Field Count:	0	0	0	5	2	0	0	1	0
Acres Plant:				203	84			10	
Acres Treat:				18.7	10			20	
Appl Rate:				0.6	0.75			0.7	

**Diazinon (Chem Code: 198) used on Outdoor Propagation Nursery (Site Code: 156) in Santa Cruz. (County Code: 44)**

Accuracy of acres planted data not evaluated for this crop.

Gross Pounds:							5.06		0.25	15.2
Appl Count:	0	0	0	0	0	0	2	0	2	32
Field Count:	0	0	0	0	0	0	1	0	1	3
Acres Plant:							11		4	77
Acres Treat:							18		1.5	44.5
Appl Rate:							0.28		0.17	0.34

**Total Central Coast**

Gross Pounds:	36.6	39.4	3.24	47.9	10.82	0.44	10.56	20.17	33.8	39.65
Appl Count:	133	118	6	84	13	4	10	12	22	65
Field Count:	7	5	3	15	6	2	5	5	8	11
Acres Plant:	3400.75	731	23	417.5	142	15	122.5	29	45.3	358
Acres Treat:	0	1.67	11	51.15	17.95	1.24	32.51	28.42	47.95	66.53
Appl Rate:	0	0.75	0.29	1.26	2.27	0.35	1.06	1.43	1.38	1.12

1998	1997	1996	1995	1994	1993	1992	1991
2,750.0	3,697.3	4,051.4	3,557.7	1,706.9	2,803.4	2,754.6	2,742.6
1,184.0	1,538.0	1,594.0	1,509.0	1,236.0	976.0	979.0	829.0
3,612.3	387,228.6	40,358.3	54,117.8	3,100.4	2,890.7	104,662.6	22,002.8
4,555.7	8,647.8	10,087.6	6,963.3	5,121.9	4,279.5	3,405.4	3,077.5
0.8	0.0	0.1	0.1	0.6	1.0	0.0	0.1
0.6	0.4	0.4	0.5	0.3	0.7	0.8	0.9
2.3	2.4	2.5	2.4	1.4	2.9	2.8	3.3

1998	1997	1996	1995	1994	1993	1992	1991
1,247.8	1,254.5	1,376.6	1,133.6	1,912.8	1,952.7	1,506.9	1,411.2
970.0	892.0	991.0	787.0	1,460.0	1,279.0	967.0	715.0
2,002.8	89,198.7	2,760.3	2,372.7	21,371.6	2,329.3	2,971.3	93,200.7
1,760.1	1,922.5	5,629.5	2,621.3	1,814.2	3,720.6	2,208.4	1,749.0
0.6	0.0	0.5	0.5	0.1	0.8	0.5	0.0
0.7	0.7	0.2	0.4	1.1	0.5	0.7	0.8
1.3	1.4	1.4	1.4	1.3	1.5	1.6	2.0

1998	1997	1996	1995	1994	1993	1992	1991
258.6	188	314.9	264.3	306.2	408.8	501.7	396.5
207	175	168	113	130	129	125	98
15	17	22	11	10	17	14	28
116	230,782	36,142	69	91	475	100,112	155.7
50.3	201.7	77.7	97.4	91.4	829.1	196.6	187.5
0.71	0.16	0.67	0.71	0.71	0.42	2.25	2.01
15.5	17	21		12	28	11.5	9

## Lindsay Ringer - support of term renewal

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**From:** Aaron Lazanoff <alazanoff@msn.com>  
**To:** <AgOrder@waterboards.ca.gov>  
**Date:** 6/2/2010 1:22 PM  
**Subject:** support of term renewal

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Dear Regional Water Quality Control Board:

The San Luis Obispo County Cattlemen's Association supports the term renewal of the existing Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands for 18 months, until December 8, 2011. We hope this will allow you more time to look at the proposed irrigated agriculture waivers and examine the scientific data so that we may come up with an agriculture waiver that would both improve our water supply and allow agriculture to thrive in our region.

Sincerely,

Aaron Lazanoff  
San Luis Obispo County Cattlemen's President

June 1, 2010

Mr. Jeffrey Young, Chairman  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place #101  
San Luis Obispo, CA 93401

Dear Chairman Young,

I am an avocado grower in Cayucos, in San Luis Obispo County. We planted our 37 acres of avocados and oranges in 1979. Our ranch is typical of most of the orchards along the north coast. The best farm land is along the creeks and tributaries. Also the only water availability is usually within the proposed buffer zones. The proposed rules would probably put me out of business. Our ranch straddles two tributaries of Cottontail Creek. To try to install a buffer zone defies reality and doesn't address the actual "buffer" now being provided by the planted acreage. It is impossible to judge that there is degradation occurring on our property. In fact, we have made it better...for decreased run-off, enhanced wildlife habitat, overall beauty, etc. We have created a special environment.

I have provided a line-by-line cost breakdown for the California Avocado Commission. I will be glad to break it down for you. However, for the sake of brevity, this plan would cost me \$4,063 per acre per year. Most of that is the impact of the buffer zone. All of my 5 wells are within the proposed buffer zone. They are properly sealed. The cost above does not include the cost of capping those wells. If that happened, then we would certainly be out of business the day the plan goes in to effect. Would the buffer preclude re-drilling any failed wells? Does this make any sense? I beg you...reconsider this plan. We are in the business of providing locally grown food for California. We believe that we do that in a way that protects the environment. You need to do your homework before bringing the hammer down on many family farms that are innocent bystanders of this mess. Please listen to us.

Bill Coy  
2255 Cottontail Creek Road  
Cayucos, CA 93430  
805-995-2699

To: Central Coast Regional Water Quality Control Board

Dear Chairman Young:

I want to thank you for the work shop last month. It was very informative.

As an avocado grower for over fifty years, I listened with a bit of dismay on the blanket attitude of some of the presenters, as well as some of the slanted data.

I have been in the Ag Waiver Program for four or more years, and along with the other farmers here in Carpinteria, we take pride in our water management.

We only put enough water on our trees to make them grow. Overwatering causes root rot. Besides, we cannot afford to be wasteful with the cost of water. We use micro sprinklers that put out an average of 20 gals per hour, for a 6-8 hour set. Fertigation makes sure the nutrients are absorbed by the trees and nothing else.

The Rincon creek, which Surfrider Foundation used as an example of contamination, is a little off base. There are tributaries that have somewhere around 135 parts, per million, of natural nitrates from springs. The high calcinates coming down from the Casitas Creek into the Rincon, plus natural oil seepage farther up the Rincon Creek, makes it a not so "clean, natural" water flow. Despite this, trout and salmon have survived for hundreds of years in the Rincon.

I believe that the clustering of growers, as well as a ban on nitrates, demonstrates how ill informed staff and some of the concerned urban environmentalists are. Most farmers believe in being good stewards of their land. We want our children to enjoy the quality of life we have had.

Respectfully Yours,

Bradley R. Miles

**Shade Farm Management**  
**P.O. Box 957**  
**Summerland, Ca 93067**

June 2, 2010

Mr. Jeffrey Young, Chairman  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place #101  
San Luis Obispo, CA 93401

Dear Mr. Young,

I am an avocado grower and farm manager in Santa Barbara County and am writing with my concerns regarding the proposed RWCB staff Ag Waiver Draft Proposal. I am very concerned with how much additional compliance cost expense is going to be generated by the proposed regulation. With the average avocado orchard running around 10 acres, the compliance cost will be, for many, the straw that breaks their back and puts them out of business. Let me cite a few specifics:

- 1,000 foot riparian and aquatic buffers – I manage one 48 acre avocado ranch, where this buffer will remove over one half of the planted acreage. This is a property that has been farmed continuously by the same family for over 130 years. Another 16 acre property will be completely removed from farming. This is a property that has been in orchard crops for most of the 20<sup>th</sup> century and all of the 21<sup>st</sup>.
- Avocados are one of the most salt sensitive crops grown. We must be able to leach salts out of the root zones of our trees, or they will become unproductive. In normal rainfall years, Mother Nature takes care of this for us. In drought years, our trees will die without leaching.
- Containment of storm water discharges: small and even medium sized orchardists do not have the land mass available to create basins to contain storm water. The permitting process to build a structure of this type will be overwhelming to the typical small farmer. As an added question, how will the beaches of our fair state have sand replenished if we contain all sediment on site? Beach erosion is also a major concern.

I have concerns with nearly ever facet of the proposed plan and the costs associated with implementation. With fewer farmers on fewer acres trying to feed an ever growing population, is it wise to regulate our food producers out of existence? U.S. Judge Wenger of Fresno ruled recently that water plans MUST also consider the “human element.” I strongly urge you to do so, as well.

Respectfully submitted,

Rick Shade  
Owner, Shade Farm Management



**BEST BEST & KRIEGER**  
ATTORNEYS AT LAW

William J. Thomas  
(916) 551-2858  
William.Thomas@bbklaw.com

400 Capitol Mall, Suite 1650  
Sacramento, CA 95814  
Phone: (916) 325-4000  
Fax: (916) 325-4010  
bbklaw.com

June 4, 2010

**SENT VIA EMAIL**

Jeffrey S. Young, Chairperson  
Roger Briggs, Executive Officer  
California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA. 93401-7906

Re: Central Coast Ag Waiver, Staff Proposal  
*Ocean Mist and RC Farms Supplemental Response*

Dear Mr. Young and Mr. Briggs:

**I. Introduction**

Ocean Mist and RC Farms and their related operations are major farm operations in the Salinas/Watsonville areas and hereby submit the following comments to the Central Coast Regional Board concerning draft amendments to the agricultural waiver ("ag waiver") proposed by Central Coast Regional Board ("Regional Board") staff. The farming operations identified above have actively participated in efforts to improve water quality in the region during the course of the existing ag waiver. They have participated in group monitoring programs as well as on-the-farm management practices to improve water quality and, more recently, in the collaborative effort to develop reasonable and practical amendments to the ag waiver. These efforts have led to the development of reasonable and practical general amendments to the ag waiver known as the "ag alternative" which has been submitted to staff. However, the comments presented here supplement previously submitted comments, are in direct response to proposed staff amendments and further question the existence of regulatory authority necessary for imposition of several of the staff proposals.

It is suspected that after the first field workshop in the southern portion of the region, the Board recognized that there are many of the problems associated with the staff proposal and that Central Coast agriculture regards this proposal by this Regional agency to be the greatest present risk to coastal agriculture. This should not be the case, and we stand ready to cooperate with Regional staff and members in revising the ag alternative to move the Central Coast waiver forward.

Not only have these farm operations actively participated in the development of the proposed ag waiver, they have also voluntarily developed and implemented additional water quality management practices not required under the waiver. As additional monitoring data becomes available, and monitoring points are adjusted to focus better on specific local water quality concerns, these farming operations stand willing to adopt additional reasonable management practices to address exceedances of water quality objectives in the local area.

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Notwithstanding this commitment to actively address water quality issues throughout their operations, it is firmly believed that the staff draft as proposed totally abandons the principles of the existing waiver in favor of an oppressive regulatory program that overburdens the farm operations, and even threatens the continued existence of the farming operations. Many of the proposed waiver's features are beyond the jurisdiction of the Central Coast Regional Board, and are violative of the principles of reasonableness and due process which are express cornerstones of the Porter-Cologne Water Quality Act and other controlling statutes. Many of the staff proposals constitute a de facto prohibition of farming and, therefore, are beyond all statutory authority, and are arbitrary and capricious.

The problems with these provisions will be further identified below. We advance these comments to point out that many components of the staff's draft must be abandoned or significantly modified to reflect the Board's statutory authority and to address practical limitations to implementation. The farming operations stand ready to work closely with the staff and members of the Central Coast Regional Board to develop reasonable amendments to the existing ag waiver.

## **II. Issues of Concern**

1. **Waivers Must be Moderate.** The California Water Code generally requires a regulatory approach to exercise the Porter-Cologne water quality authority. However, section 13269 of the Water Code sets forth the waiver provisions and is intended to allow a program designed to streamline the regulatory approach to (a) relieve complications associated with administering tens of thousands of individual WDRs by the Regional Board and (b) relieve farmers from having to engage in a full WDR process. The Regional Board staff, however, have designed such an onerous regulatory program that it compels a program which is far more onerous than a traditional individual WDR. The staff waiver itself points out that the Regional Board cannot administer individual WDRs, therefore it is self-defeating to advance a regulatory program that farms cannot operate under, and which makes the individualized WDRs more attractive. Finding #49 in the staff draft (page 10) declares that the waiver process is desirable over WDRs "in order to simplify and streamline the regulatory process. It is not an efficient use of resources to adopt individual WDRs for all dischargers." Therefore, this extreme and oppressive proposal, addressed further below, must be wholly reformed. In many ways, the proposed waiver would instantaneously make the ag waiver more oppressive than NPDES requirements for point source discharge.

2. **Waivers Must be Reasonable.** The Porter-Cologne statutes advance the notion that the Regional Board can only require reasonable steps to achieve water quality objectives. The staff draft seems to selectively omit the reasonableness concept from the staff proposal. Reasonableness embraces the notion of feasibility, achievability, and reasonable timelines, and also envisions the preservation of agriculture production, which is one of the highest beneficial uses of water.

In several sections of the staff proposal, staff attempt to implement components (i.e., sediment, pesticides, nutrients, etc.) designed to "implement the most effective management" (Staff Rpt. pg. 7, ¶1.5). However, the Water Code is clear that this is not the operative legal standard. The Water Code demands only "water quality which is reasonable, considering all demands on those waters."

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The draft falls well short of this balanced legal standard.

It appears the staff draft may have been confused by federal rules on municipal storm water which does require controls on such storm water to the “maximum extent practicable” (33 USC § 1340, CWA § 402). This is directly inconsistent with the Porter-Cologne statute, but it is very reflective on the staff language.

California Water Code section 13241 also expressly states that the Regional Board shall establish water quality objectives as in its judgment will ensure “the reasonable” protection of beneficial uses. The Code goes further to express that “it is recognized that the quality of water will be changed as a result of use without unreasonably affecting beneficial uses.” These principles appear to have been abandoned by staff in their proposed amendment.

In the Central Valley, where that Regional Board is presently renewing its waiver, the staff notice of proposed amendments includes the following explanatory language which captures the necessary balance of costs versus benefits.

“Water Board staff are also mindful that there is a balancing of costs associated with a new regulatory program. A more stringent regulatory program may increase the likelihood of improving and protecting water quality, but the cost of compliance for dischargers and the State to oversee the program can be overly burdensome. The California Water Code requires that costs be considered when developing programs for agriculture. Given that agricultural operations are price takers in the market and cannot directly pass on their costs to consumers, these costs become especially important. Conversely, a regulatory program that is lax or allows too much time for compliance can lead to an exacerbation of water quality problems and prolonged impacts on beneficial uses.”

This entire balanced concept is lost in the proposed Central Coast staff waiver.

**3. The Regional Boards Cannot Convert Farm Plans to Permits to Farm.** It is totally unacceptable that the Regional staff proposes to amend the waiver to become virtually a permit to farm. They propose to convert what is presently a private farm plan designed to address specific farm site issues related to ag water discharges and make farm plans enforceable public permits to farm. The waiver would require over six sub-permit sections dealing with: a) irrigation practices, b) pest control practices, c) nutrient control practices, d) salt controls, e) sediment toxicity controls, and f) aquatic species preservation practices. Within each of these permit subsections the restrictive elements are not only extreme and impractical, but go well beyond the Regional Board’s jurisdiction and province.

As an example, the irrigation control plan requires the amount of water needed for each crop, the amount delivered, the irrigation schedule, and prohibits any water to percolate below the root zone (notwithstanding the fact that this is required agronomically to effectively grow most crops on most soils). The plan also suggests the Regional Board will police irrigation water use against certain

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governmentally contrived irrigation efficiency standards. This is well beyond the Board's authority and utterly arbitrary and capricious.

Another shocking regulatory overreach is the farm plan permit for pest control/toxicity. This pest control/toxicity plan would require the location of each crop, require pest population counts, dictate certain thresholds for pest control treatment, dictate IPM checklists and, interestingly, prohibit the use of products designed to breakdown pesticides and eliminate toxicity.

A third example of an impractical and overreaching sub-permit section is the proposed nutrient management permit element. It would require a limit on the amount of nutrients that can be applied to supply the crop's demands, limit the amount of water applied, limit the frequency and total applied fertilization, would deduct from the fertilizer allowance the nutrients in the irrigation water, and would control the timing and amount of fertilizer which can be applied. These oppressive requirements and restrictions are without jurisdictional basis, do not reflect the diversity in Central Coast agriculture, do not pass agronomic standards and are not issues effectively dealt with by the Regional Board.

These permit requirements are directly contrary to the authority limits of the Regional Board, and would act to supersede the jurisdictional authority of other agencies such as Cal EPA, Department of Pesticide Regulation and California Department of Food and Agriculture.

The proposed Farm Plan in Part E also requires: type of irrigation system, distribution efficiency, and distribution uniformity; average total water demand per crop; total water applied per crop; and, schedule, duration, and frequency of irrigation waters. The burden on a grower to prepare and put forward this type of information in a Farm Plan for the Central Coast Water Board's purposes is significant, and goes into "on farm" management dictates which are beyond the Board's authority.

**4. Waivers Must Consider Reasonable Costs and Timelines.** The staff draft is oppressively broad and restrictive, demanding incredible management detail in many areas (as set forth above), which includes both trade secret information and data which is irrelevant to water quality. The Water Code at section 13267 points out that the "burden, including costs of the reports, shall bear a reasonable relationship to the need and benefits." That principle is wholly ignored by the staff draft. The staff proposal ignores reasonableness, costs or reasonable timelines. Water Code section 13241(d) expressly compels the Regional Board to evaluate economics in its proposals. Water Code section 13242 demands that regulatory programs have reasonable time schedules for implementation.

**5. Waivers Must Protect Trade Secrets.** The Regional Board staff attempts to be the farming "police" by requiring all detailed farm management information. Much of this detail is actually proprietary trade secret information. The fresh produce segment of agriculture deals in a very competitive environment. Most produce is marketed with branded labels and marketing strategies, as well as production strategies, are competitive, important and closely guarded. Water Code § 13267(b)(2) expressly states and recognizes the importance of trade secrets, and calls for such information not to be made public.

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6. **Waivers Must be Flexible and Practical.** It is imperative that the waiver acknowledge and allow flexibility to deal with the significant variables that exist in the Central Coast Region agricultural production areas (i.e., soil type, topography, irrigation systems, source water, crops, drainage systems, pests). Many proposed practices cannot be employed universally. Accordingly, the restrictive regulatory program that has been advanced will not achieve the desired goals, and will be needlessly oppressive. The Board cannot control agriculture's inside-the-farm operation.

7. **Farms are Only Responsible for Their Contributions.** The Ocean Mist and RC Farms operations have similar objectives as those of the Regional Board with respect to minimizing ag's effect on waters of the state. Over time, they can reasonably address the inputs their farm operations may contribute, but farm operations cannot be responsible for the quality of their source water or cleaning up waters after it leaves the farm as those waters have been impacted by other parties. This point needs to be made expressly clear in the waiver.

This concept is fully embraced in the Water Code as § 13241(b) expressly states that the Board shall consider "the quality of the water available." The source waters used by these farms have water quality issues which they operate around, but they cannot be responsible for cleaning it all up at the point of discharge. The farms can only deal with their inputs. This statutory concept needs to be expressly acknowledged in the waiver.

8. **The Boards Cannot Control Agriculture's Inside-the-Farm Operation.** The Regional Board's legal jurisdictional boundary starts at the point where there is a potential discharge of waste to waters of the state. The staff draft violates that boundary. This long adhered to principal is that the Water Boards can only regulate the quality of water that is discharged. Said differently, the Regional Board can demand certain reasonable practices to achieve water quality objectives in a reasonable time at the point of discharge. The Regional Board cannot go into the farm operation and start telling the farms how to operate (i.e., how to irrigate, what crop to grow, how to fertilize, how to protect from pests) any more than they can tell Chevron how to run a refinery or Campbell Soup how to run a tomato processing plant. In its draft, the Regional Board staff appears to have incorporated notions of getting involved in each of the myriad management activities of a farm regarding irrigation, pesticides, and nutrients (as addressed above in point #3). This is entirely beyond the Board's authority.

9. **The Regional Boards Have Limited Jurisdiction.** The Regional Boards are also required to coordinate actions with other state agencies. Pesticides are rigorously and exclusively regulated by the California Department of Pesticide Regulation ("DPR"), a sister agency at Cal EPA. DPR has historically controlled pesticides relative to water quality. They do this at the registration level, and the county permit level. They also license pest control advisors and pest control operators and applicators, and enforce regulations on pesticide use and as to groundwater pest management zones. They have recently mandated label changes to chlorpyrifos and diazinon, and have promulgated dormant spray regulations all entirely focused on water quality. They have several pesticides in re-evaluation relative to water quality and are presently developing comprehensive regulations dealing directly with the protection of surface and groundwater from pesticides. The Regional Board is not the "pesticide agency" and should be coordinating with other agencies, rather than attempting this jurisdictional end-run.

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Contrary to DPR's proposed regulations, the Central Coast Water Board proposes to limit ground applications of pesticides within 50 feet of *any* surface water body. Regardless of the conflict, the Central Coast Water Board has no authority to restrict the use of pesticides in the manner proposed.

Similarly, the California Department of Food and Agriculture has state statutory authority over fertilizers, and similar coordination must occur with that lead agency in respect to fertilizers. The staff draft improperly attempts to become the farming and fertilizer regulatory agency.

**10. Where Does Percolating Irrigation Water Reach Waters of the State.** There remains an open question as to where the Regional Board's authority commences as to groundwater. The state's authority is very limited regarding groundwater. The statutory jurisdictional limit is wherever the discharge of waste reaches waters of the state. The point of discharge is not clear as to groundwater. Based upon statutory authority, this would appear to not be before where water first intersects with an aquifer or underground stream. Can the Regional Board advance some guidance and authority as to their position as to irrigation water percolation?

The Legislature has not defined what constitutes "agricultural drainage." The regulatory distinction between percolation from irrigation and agricultural drainage resulting in discharge is unclear. The State Water Board Office of Chief Counsel appears to support the argument that the discharge of agricultural drainage occurs after the drainage water has been collected and stored in a manner that then seeps through soil to reach groundwater. Analysis of Legal Issues Raised by the San Joaquin River Basin Technical Committee, Prepared by Sheila K. Vassey, Office of Chief Counsel, State Water Resources Control Board (Feb. 1987, as amended April 1987) (Analysis at p. 45 ["[b]ecause irrigation return flows and agricultural drainage waters constitute waste, the discharge of these wastes into a disposal area or into receiving waters is subject to regulation if the discharge could affect either surface or groundwaters".]) Further, the State Water Board's regulations governing the appropriation of water rights specifically provide that "[n]o permittee shall be required to file a report of waste discharge pursuant to Section 13260 of the Water Code for percolation to the groundwater of water resulting from the irrigation of crops." (Cal. Code Regs., tit. 23 § 783.) Thus, the State Water Board does not consider the percolation of irrigation water to groundwater a "discharge of waste."

Based on the State Water Board's treatment of the distinction between percolation and discharge, agricultural activities subject to regional board authority for the protection of groundwater is limited to those activities that collect and store agricultural drainage water versus the application of water for irrigation that may percolate to groundwater. Thus, the Central Coast Water Board proposes to exceed its authority by requiring irrigation water to be of a quality sufficient to protect beneficial uses.

With respect to salt management, the provisions in Attachment B are *not* consistent with the salt management provisions in the Basin Plan. For example, Attachment B would propose to eliminate the use of leaching to control salt in the soil profile. However, the Basin Plan provides that implementation of leaching with the use of low leaching fractions can be beneficial. (See Basin Plan at p. IV-48.) The Basin Plan also recognizes that with sales the issue is much larger to solve than can be accomplished on an individual farm basis, yet the Preliminary Draft Order fails to recognize the need to address the issue regionally. (See Basin Plan at p. IV-49 ["The off-farm part of drainage, however, is too

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big for individual farmers to solve, and some form of collective, organized large scale action is needed.”].)

**11. Use of Recycled Water.** The use of recycled water has reached widespread acclaim from municipal users, regulators, environmentalists, and those interested in water conservation and reuse. For purposes of this discussion, agriculture has taken low quality municipal discharges that would otherwise have gone directly into the ocean and have used them for irrigation, and improved the quality of the water as it returns to the environment. Consequently, not only are we 1) conserving water, 2) reusing water, and 3) taking problem discharges from municipalities, but we are discharging far cleaner water than what would have been discharged by the municipalities. It is for those reasons that these programs have reached widespread acclaim.

a. The Regional staff proposal would effectively mandate the termination of this recycled water use program. The proposal would more broadly require the termination of the use of tile drains, which are a widely-used means by which waters that can be problematic in the crop root zone be eliminated so as to allow the farming of such lands. This staff proposal would, by its extreme measures, terminate the recycled irrigation program, and would also render significant portions of the region to be agriculturally abandoned.

California Water Code section 13241(f) expressly encourages the use of recycled water. This staff waiver would put this acclaimed re-use program in jeopardy.

**12. Tile Drains are Imperative to Agriculture.** The Regional staff proposal would mandate the termination of the use of tile drains. Tile drains are widely used to remove excessive and problem water from the crop root zone. The drains have been relied on by California agriculture for decades and have been responsible for making otherwise unproductive areas productive. Eliminating the use of the tile drains would limit the productivity of land where they are used, and likely require significant land to be taken out of production altogether. The Regional Board’s authority covers the issue of water quality not irrigation infrastructure improvements.

**13. Private Property Rights.** The California Water Code is very clear, and the other Regional Boards and the State Board have consistently acted in a manner that respects private property rights. The staff draft wrongfully and unlawfully advances at least two components that violate private property rights.

a. First, the proposed waiver suggests that compliance with the waiver provisions require a grower to allow Regional Board staff to enter upon his private property. The Water Code does not condition waiver compliance of a landowner upon the grant of authority for trespass by Regional Board staff. Any such requirement is in violation of state law because lawful entry upon private property requires either permission or a warrant. Clearly, these terms and conditions need to be removed from the waiver.

b. The waiver also suggests that the third party monitoring group may be required to monitor at locations where trespass would be required. This, again, suggests a stark departure

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from California law, and is wholly inconsistent with State and Regional Board authority. Any such requirement needs to be removed from the waiver.

California Water Code section 13267(c) expressly limits all regulatory access to be either by permission or by warrant.

**14. The Regional Board Cannot Control What a Farmer Grows Where.** The Regional Board staff proposal attempts to exercise land use authority and crop control authority by mandating what growers must grow in certain locations of their fields. The Regional Board has no authority to require certain vegetation to be planted in certain areas, or to compel the removal of certain vegetation.

There is no question that regulatory efforts can occasionally result in unintended consequences, and it sometimes takes a year or two for things to come into balance. Some buyers in the produce industry sought to control how produce growers grow their commodities, and, in reaction to the leafy green issue, required in some locations a “clean farm” order of management. This is not something that production agriculture has brought on itself. This situation seems to be coming back into balance. There may, however, be some legitimate water quality issues resulting from this situation, but they appear temporary in nature. However, this does not give the Regional Board jurisdiction to become a land use agency. Other regulators such as Department of Fish and Game, Fish and Wildlife Service, County Planning Commissions, and Department of Food and Agriculture, all have some responsibilities in this area. These agencies would be attentive to water quality issues advanced by the Regional Board; however, nothing has changed the jurisdictional limitations of the Porter-Cologne statutes to make the Regional Boards the agricultural or plant and wildlife agency, or to give them authority over production or land use.

The staff proposal attempts to turn this Board into the regional land use authority by advancing from 50 up to 100 feet non-farm zones on the field’s edge. Such a regulatory taking of private property is beyond the agency’s authority and is actionable.

The structure of the staff report is written to demand that the edge of the field irrigation drain water meet all water quality standards. This is not expressed nor consistent with the Central Coast Basin Plan.

The Regional staff, in Part B, proposes blanket prohibitions on any discharge that may violate a water quality standard. This is wide overkill, and not supported by the Porter-Cologne law, the Codes, waiver provisions or the Central Coast Basin Plan.

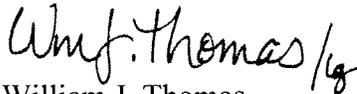
The Regional staff proposal in Part E prohibits discharge if in proximity (1000 feet) of a tributary leading to an impaired water body. This prohibition is not within the Regional Board’s waiver authority.

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**Conclusion:**

The points addressed above make the staff draft a non-starter. Said differently, it would compel appeal, litigation, or a non-compliance reaction from the farm community. The amendments are a significant departure from the existing regulatory program, and raise such far reaching and new concepts that an entire CEQA review would be triggered. This 14-point list is somewhat long because the staff draft has incorporated many new and extreme regulatory components. While the farm operations are pointing out these "hard points," the Regional Board should not lose sight of the fact that they are very committed to improving water quality, will actively participate in third party monitoring, and stand ready to coordinate with the Regional Board staff relative to additional monitoring obligations. In addition, they are ready to discuss the nature of what has to be sampled and where, the urgency of reports of exceedances being supplied to the Regional Board, and the possibility of additional monitoring strategies. The ag alternative also outlines certain additional reports. These would be reasonable steps to move the waiver forward over the next few years to target problem areas, determine the source of pollution and to develop reasonable and practical solutions that will achieve water quality goals.

Sincerely,



William J. Thomas  
for BEST BEST & KRIEGER LLP

WJT:lmg

cc: Board Members  
John Hayashi, David Hodgin, Monica Hunter,  
Russell Jeffries, Gary Shallcross, Tom O'Malley  
Angela Schroeter  
Lisa McCann  
Ocean Mist  
RC Farms

PRICE, POSTEL & PARMA LLP

JAMES H. HURLEY, JR.  
J. TERRY SCHWARTZ  
DAVID W. VAN HORNE  
PETER D. SLAUGHTER  
DOUGLAS D. ROSSI  
ERIC P. HVOLBØLL  
CRAIG A. PARTON  
CLYDE E. WULLBRANDT  
KENNETH J. PONTIFEX  
CHRISTOPHER E. HASKELL  
TIMOTHY E. METZINGER  
TODD A. AMSPOKER  
MARK S. MANION  
MELISSA J. FASSETT  
IAN M. FISHER  
SHEREEF MOHARRAM  
SAM ZODEH  
KRISTEN M.R. BLABEY  
LESLEY E. CUNNINGHAM

COUNSELLORS AT LAW  
200 EAST CARRILLO STREET, SUITE 400  
SANTA BARBARA, CALIFORNIA  
93101-2190

MAILING ADDRESS P. O. BOX 99  
SANTA BARBARA, CA 93102-0099

TELEPHONE (805) 962-0011  
FACSIMILE (805) 965-3978

OF COUNSEL  
ARTHUR R. GAUDI  
DANIEL C. DAVID  
SUSAN M. BASHAM  
STEVEN K. MCGUIRE

RETIRED PARTNERS  
GERALD S. THEDE  
DAVID K. HUGHES

OUR FILE NUMBER

20904.1

June 4, 2010

**VIA FACSIMILE: (805) 543-0397  
AND FEDERAL EXPRESS**

Mr. Jeffrey S. Young, Chairman  
Mr. Roger Briggs, Executive Officer  
California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

Re: ***OSR Alternative to Preliminary Staff Recommendations for an Agricultural Order to Control Discharges from Irrigated Lands and Additional Comments following May 21, 2010 Workshop***

Dear Chairman Young and Mr. Briggs:

On March 31, 2010, this firm submitted to you, on behalf of OSR Enterprises, Inc., an alternative to the Preliminary Staff Recommendations for an Agricultural Order to Control Discharges from Irrigated Lands (the "Staff Proposal"). Subsequently staff provided limited comments on the OSR Alternative in its Staff Report prepared on April 21, 2010. Representatives of OSR attended the Board's workshop on May 21, 2010 and I provided an oral presentation of OSR's position. In response to staff and public commentary, and in anticipation of the Board's continuing consideration of input from the agricultural community at its next workshop scheduled for July 8, 2010, we would like to summarize OSR's additional observations.

Having listened carefully to all of the presentations and commentary, OSR remains convinced that the current Conditional Waiver provides a proven, workable model for monitoring agricultural uses and encouraging corrective action to improve water quality. The OSR Alternative reflects OSR's support for the 2004 Conditional Waiver as a model for cooperation that has taken root over the past five years. Of the several alternatives presented, it is the only one that builds upon the format and elements of the 2004 Waiver while making improvements responsive to current conditions. In short, the OSR Alternative is the Board's best

opportunity for continued collaboration with the agricultural community. To provide for continuity and to avoid precipitous action under a pressing deadline, OSR requests that the Board immediately renew the current Conditional Waiver for an extended period, during which the provisions of the OSR Alternative may be reviewed and implemented.

The OSR Alternative improves upon the 2004 Waiver in several important ways. It retains and bolsters requirements for grower education and for preparation and maintenance of Farm Plans – two of the most significant implementation tools in the program. It abandons a “tiering” system for growers and instead provides a continuing framework for existing enrollees and specific requirements for new enrollees. The requirements for participation and the level of effort needed to comply with those requirements are directly correlated to the size of their operations, which OSR believes is a critical distinction that must be incorporated into any compliance program. The OSR Alternative introduces the concept of legacy issues where the 2004 Waiver is silent, recognizing that causes of poor water quality are diverse and must be examined and understood. The OSR Alternative identifies and provides protections for proprietary grower information. It also recognizes that communication and reporting is critical to the success of the Waiver program. To that end, it provides that the Board should receive regular updates from the Executive Officer as to progress under the Waiver and it allows the agricultural community to provide a biennial report that “summarizes the ongoing efforts by enrolled participants designed to understand, improve, and document water quality.”

When the 2004 Conditional Waiver was approved with a cooperative monitoring option, OSR and all of the major growers throughout the region agreed to participate in the monitoring program. The program has functioned successfully and has gathered extensive data as contemplated in the Waiver. Staff has not claimed that the current Waiver does not work or that the data is inadequate for the intended purpose, nor can it – the monitoring program has had only 3.5 years to get off the ground. Staff simply wants to abandon one process in favor of another, which inevitably will have its own extended start-up period. Instead of focusing all of its attention on advancing its preferred model, staff could be following through under the existing Waiver and ensuring that its important purposes are being met.

The more we and OSR learn about the Staff Proposal, the greater is our concern that staff’s hyper-regulatory model ultimately will destroy the cooperative effort achieved under the current Conditional Waiver. The Staff Proposal responds to incomplete information from non-agricultural sources and it is premised in incorrect presumptions about agriculture. It replaces general compliance requirements, grower education, and grower self-correction with a dictatorial set of prohibitions and requirements. It also establishes an aggressive timetable for compliance, virtually guaranteeing that many if not all growers will fail despite good-faith efforts or will be driven out of business in the process of complying.

Staff's presentation in the workshop made it abundantly clear that staff has turned its attention away from the surface water quality concerns underlying the current Conditional Waiver and toward a new set of groundwater quality concerns – specifically nitrates found in drinking water. OSR recognizes that drinking water quality cannot be ignored and that it is important to address contaminants at the source. However, targeting agriculture as the presumed source of nitrate contamination results from purely deductive and simplistic reasoning on staff's part. It fails to consider the complexity of groundwater hydrology and ignores the fact that agriculture cannot control nitrates present in water sources before they reach or are used on planted fields. Growers cannot be held entirely responsible for solving a problem with a multiplicity of causes.

Under the Staff Proposal, the Farm Plan, which has worked well as an on-farm management tool, would be converted to a regulatory and oversight tool for staff. The degree of oversight proposed by staff is unreasonably intrusive and is inconsistent with the cooperative arrangement established under the current Conditional Waiver. The Staff Proposal disregards the fact that growers operate in a competitive environment and, while they are willing to participate cooperatively in a monitoring program and to make the results of that monitoring available to the Board, they should not be asked to reveal their proprietary management and operational practices which we believe, as a legal matter, constitute trade secrets.

While staff criticized the OSR Alternative because it does not include timetables and milestones, the OSR Alternative builds upon the current Waiver and does not presume the need for changes in applicable time intervals. If implementation of the OSR Alternative requires additional milestones, they should be developed with input from the agricultural community. OSR finds the general tightening of time limits and the vastly expanded submittal and compliance requirements in the Staff Proposal unreasonably burdensome and threatening to agriculture's economic viability.

OSR also has reviewed in detail the "Farm Bureau Alternative" as presented at the workshop. Participants in the development of the Farm Bureau Alternative include both OSR's long-time agricultural associates throughout the region and membership organizations in which OSR has participated in the past. OSR recognizes that, in concept, the Farm Bureau Alternative has much in common with the OSR Alternative because it seeks to correct the same flaws in the Staff Proposal. The data presented by the Farm Bureau and other sponsoring entities supports the OSR Alternative at least as much as it supports their concept because the two alternatives have in common an understanding of farming operations and a recognition that monitoring programs must be designed to enable growers to learn and make voluntary changes in their operations in order to achieve the desired results. In OSR's view, however, the OSR Alternative

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provides a superior approach and one that can be implemented more readily. While OSR certainly remains willing to work cooperatively with other agriculturalists in representing agriculture's interests in this matter, we and OSR will continue to advocate the adoption of the OSR Alternative and OSR will be an active, individual participant in the proceedings.

In summary, the current Conditional Waiver is an effective framework for influencing agricultural operations in a positive way to achieve improvements in water quality, and it can be used to respond to new concerns as they arise. The agricultural community has participated willingly in monitoring programs under the existing Waiver precisely because it is structured to encourage voluntary and continuing participation. Starting over with an unreasonably burdensome and punitive model as proposed by staff threatens to destroy the cooperation that has taken years to develop. In the OSR Alternative, the Board has an opportunity to continue to work cooperatively with agriculture within a proven framework.

OSR anticipates being a part of any effort by staff to coordinate with, or receive input from, the agricultural community and will appreciate receiving notice of any opportunity for collaborative effort. OSR looks forward to attending the workshop scheduled for July 8, 2010.

Very truly yours,



Susan M. Basham  
for PRICE, POSTEL & PARMA LLP

SMB:lkh

cc: OSR Enterprises  
John Hayashi  
David Hodgin  
Monica Hunter  
Tom O'Malley  
Gary Shallcross  
Angela Schroeter, Senior EG ([aschroeter@waterboards.ca.gov](mailto:aschroeter@waterboards.ca.gov))  
Harold Kolb ([hkolb@waterboards.ca.gov](mailto:hkolb@waterboards.ca.gov))



May 17, 2010

Mr. Anthony Botelho,

Dear Supervisor Botelho:

Thank you for the opportunity to meet with you today and hear the San Benito County Farm Bureau concerns regarding the economic impact of the Regional Board Staff's February 1, 2010 proposed Conditional Ag Waiver. We ask that you consider writing to Chairman Young and the Regional Board highlighting the direct effects that this will have on San Benito County and its farming community.

The San Benito County Farm Bureau realizes that the proposed Waiver is a draft; however the effects on our community will be devastating if implemented as is. San Benito County is unique with the amount of tributaries funneled through the northern end of the County and the effects will be multiplied on the potential loss of prime farmland and farmland of statewide importance. There are numerous and complex water sheds in our County.

- The arduous reporting requirements will be overly burdensome as you will see below as the cost of compliance exceeds the profitability of farming in San Benito County.
- The implementation of this will cause an economic chain reaction felt throughout the entire County.
- San Benito County Farmers have been cooperating and participating in the current Ag Waiver. Due to the success and enrollment of the Ag Waiver we ask that the San Benito County Board of Supervisors write the Regional Board to keep the existing Ag Waiver.

Our organization feels it is important that the County indicate the potential lost business revenues as well as impacts to the public infrastructure in San Benito County. We see this as having short term and long term negative social economic impacts directly on the San Benito County budget.

We are supplying you with statistical data that was compiled by Grower Shipper Association of Central Coast. These data were collected through a series of sequential steps. The first was to review staff's proposed Waiver to identify compliance requirements which might generate costs for the growers. As stated, it is expected that the proposal will be amended. It should also be noted that aspects of the proposed Waiver were ambiguous; and therefore, it was difficult to assess the proposed cost. Every effort was made to be fair about anticipated impacts. For example, few specifics were provided regarding grower monitoring and reporting. Are growers

Telephone: 831.637.7643 ▪ Facsimile: 815.366.7902  
530 San Benito Street, Suite 201 ▪ Hollister, CA 95023  
sanbenito.cfbf.com

required to monitor on a monthly or quarterly basis? Are they required to monitor in one location per farm or at each discharge point? For the sake of simplicity, we assumed that the growers will only have to sample one time annually and once per operation for a cost of \$1,600 per year.

The next step was to conduct grower interviews of cool season vegetables, avocado and grape growers. We were unable to obtain strawberry grower interviews. Warm season vegetables and stone fruit growers will definitely feel the economic impact of compliance requirements on a localized basis. However, the acreage of these other crops is not significant to the overall Central Coast economy and we could not justify the resources to do grower interviews in these crops. Hence, the costs presented here do not estimate the true extent of the economic impact. They are limited to the commodities for which interviews were conducted.

Grower interviews concentrated on the costs of compliance in a field of a specific size and with specific parameters rather than for a grower's entire operation. Field sizes in question ranged from 14 to 500 acres. This approach allowed us to calculate a cost per acre and economies of scale are reflected for the larger operations. Often, growers interviewed would provide a cost range. For example, a grower must halt nitrate fertilizer applications three days prior to a forecasted rain and three days after a rain. Cool season vegetable growers estimated that the loss of the crop grown during the rainy season would vary with the amount of rain received. Also, there is the possibility that packers might shift winter grown crops to other areas of the country such as Yuma or Texas or to Mexico. Therefore, the losses for the winter crop might be anywhere from 0 to 100 percent. Consequently, we estimated minimum and maximum costs per acre as shown below.

**Avocados = \$705.45 - \$2,189.94/acre** (Note: the range was largely influenced by whether a creek bordered or ran through an orchard.)

**Cool Season vegetables = \$528.11 – 660.74/acre**

**Wine Grapes = \$469.05 - \$519.05/acre**

Next, the cost per acre was multiplied by the number of acres per commodity in Santa Clara, San Benito, Santa Cruz, Monterey, San Luis Obispo and Santa Barbara Counties. These data were based on the County Agricultural Commissioner reports. These calculations **estimated Central Coast lost business revenue to be between \$231,453,102.33 and \$298,707,620.54.**

Finally, an economist inserted the minimum and maximum lost business revenue into a model used to calculate lost indirect tax revenue, lost labor income and lost employment. Lost indirect tax revenue consists of lost property, sales and excise taxes, fees and licenses that would have been paid by businesses. Taxes on profits or income and lost taxes from declining property values are not included in these estimates. Lost labor income includes all forms of employee compensation that would have been paid by employers. Lost employment is straightforward in

that it demonstrates the number of jobs lost and is calculated in a full-time equivalent employment value on an annual basis. We expect that lost employment will not be consistent across the region but will be concentrated in Monterey and Santa Barbara Counties. For example, in 2007, in Monterey County 21 percent or 38,000 employees depend directly upon agriculture for employment while 54 percent or approximately 45,000 depend on agriculture for employment.

**The model indicates that lost tax revenue is between \$ 19,624,441.00 and \$25,326,816.00. Lost labor income is between \$87,302,937.00 and \$112,670,999.00. It is estimated that 2,572 to 3,320 jobs will be lost.**

Total output losses are total revenues lost for a given time period for an industry in dollars. This is the best measure of lost business and economic activity. The model indicates that **total output losses are between \$364,393,461.00 and \$470,277,123.00.**

It is also interesting to compare median sales revenue per farm to the average sales revenue per farm in each county. Fifty percent of the growers have greater sales revenue and 50 percent of the growers has less sales revenue than the ranges presented below. The average sales revenue is the total sales revenue divided by the number of growers in each county. These data are based upon the 2007 census data.

	Monterey	Santa Cruz	Santa Clara	San Benito	SLO	Santa Barbara
Median Sales Revenue/farm (\$)	\$25K-39,999	\$10K-19,999	\$2,500-\$4,999	\$5,000-9,999	\$25K-39,999	\$10K-19,999
Average Sales Revenue/farm (\$)	\$1,816,906	\$656,037	\$220,906	\$356,577	\$201,368	\$595,696

The point of interest here is that the compliance costs for the Conditional Waiver could potentially exceed the median sales revenue of 50 percent of the growers in most counties. This will unfairly target small, family-owned farms that are the heart of San Benito.

One last calculation notes that a certain percent of commodities might not be able to sustain the costs of the proposed Conditional Ag Waiver. Cool season vegetables, strawberries and nursery crops are considered to be “crops at risk”. These three commodities comprise 75.8 percent of all acres grown on the Central Coast.

Grower Shipper Association of the Central Coast provided this general information to the Regional Board. We hope this data is useful to the San Benito County Board of Supervisors as it considers drafting a letter to the Regional Board highlighting the huge and devastating economic impacts on our County. All comments must be received to the Regional Board by Friday,

June 4, 2010.

Thank you for your consideration. If you have any questions or concerns please contact Richard Bianchi, San Benito County Farm Bureau Director.

Regards,  
San Benito County Farm Bureau



# CALIFORNIA FARM BUREAU FEDERATION

NATURAL RESOURCES AND ENVIRONMENTAL DIVISION

2300 RIVER PLAZA DRIVE, SACRAMENTO, CA 95833-3293 · PHONE (916) 561-5665 · FAX (916) 561-5691

June 4, 2010

*Via U.S. Mail and Email*

*AgOrder@waterboards.ca.gov  
cjones@waterboards.ca.gov  
rbriggs@waterboards.ca.gov*

Jeffrey S. Young, Chairman of the Board  
California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, California 93401

**Re: *Outcomes from the May 12, 2010 Public Workshop and Potential Options for Regulating Waste Discharge for Discharges from Irrigated Lands***

Dear Chairman Young,

Multiple agricultural organizations would like to thank you for the opportunity to present our ideas to the Regional Board members at the Public Workshop held on May 12, 2010. Given the length of the meeting and the volume of information discussed, we respectfully request confirmation that the following time schedule proposed by staff, as well as directions given to staff by Chairman Young, are correct and will be fulfilled:

Time Schedule:

1. May-August 2010
  - a. Staff will analyze and prioritize recommendations from all three proposals.
  - b. Staff will consider multiple orders, and provide clear, specific priorities for this conditional waiver or order.
  - c. Staff will evaluate and respond to written comments as they create a new draft.
  - d. Staff will seek direct input on the Draft Order(s).
    - i. Staff will hold small interest-specific meetings in lieu of reconvening the Ag Panel.
    - ii. Meetings will include at least one meeting of persons representing agriculture's interest and staff only.
    - iii. The purpose of the meetings is to discuss overarching goals for water quality in the region, to affirm common interest in those goals, and to outline realistic parameters for progress on common goals over a reasonable period of time.

2. July 2010 in Watsonville
  - a. A Board Meeting/Workshop will be held in Watsonville on July 8, 2010.
    - i. The current (2004) Conditional Ag Waiver will be renewed for 18 months, until December 8, 2011.
  - b. A second Public Workshop will take place in which agriculture will have the opportunity to make a new presentation, and attendees will have the opportunity to speak for 2-3 minutes.
  - c. Comments submitted prior to June 4, 2010 will be included in Board binders for this Workshop.
3. November 2010
  - a. A revised draft Ag Waiver or Order will be released by staff.
4. February 2011
  - a. A revised Ag Waiver or Order will be proposed to the Central Coast Regional Water Quality Board at the February 2011 meeting (date has yet to be determined).

Directions to Staff:

At the conclusion of the Workshop, Chairman Young and his fellow Board Members directed staff and/or legal counsel to:

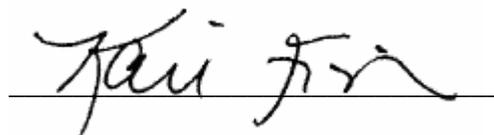
1. Hold interest-specific meetings with stakeholders in lieu of reconvening the Ag Panel.
2. Prepare a memorandum outlining all types of trade secrets, proprietary information, and confidential business records, as well as the provisions of the Water Code which allow for privacy of such proprietary information.
3. Prepare a legal memorandum by Board Counsel responding to all of the legal issues raised by agriculture in written comments and presented orally at the Workshop.
4. Assess staff resources and capabilities to accomplish its existing workload of established responsibilities prior to adding new time-intensive requirements.
5. Justify costs (of staff, resources, etc) to run and manage the waiver/order.
6. Evaluate and justify the amount of information the Central Coast Regional Water Quality Control Board reasonably needs to request from growers with the expectation that most of the records should be kept on the farm, and considering staff capacity to manage requested data.
7. Consider a "waiver" or similar process spanning at least a 10-year period of time rather than a 5-year period of time. Such a waiver should have provisions for extensions.
8. Prioritize water quality goals, tackling higher priority issues first, and focus on long-term goals instead of attempting to fulfill all of the CCRWQCB's water quality aspirations

within 5 or 10 years. Acknowledge that due to the complexity of the issue, solutions will take more than 10 years.

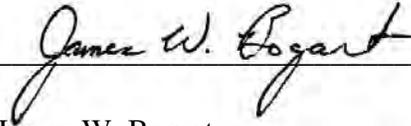
9. Support the idea of a voluntary SMART sampling program.
10. Take a new approach to the formation of the revised waiver/order, realizing the traditional approach of using an engineering concept used to regulate point source dischargers in a permitting setting is not an effective way to address multiple and diverse farming operations under a waiver and is not compatible with a farming region of this size.
11. Directly involve and collaborate with the California Department of Pesticide Regulation in the creation of a new waiver, to better understand and incorporate the technical issues surrounding toxicity.
12. Coordinate with all applicable local and state agencies in addition to DPR.
13. Determine the status of enrollment and the extent of non-enrollees.
14. Create a waiver or order that recognizes growers' good-faith efforts.
15. Prepare a draft MRP document by the July Workshop, stressing the importance of receiving a draft as soon as possible.
16. Incorporate continuing educational requirements into the new waiver/order.

Given the importance of this issue, we respectfully request confirmation that the summary of the time schedule and the directions to staff described herein are accurate and will be completed in a timely fashion.

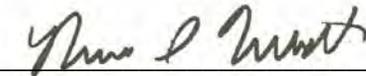
Sincerely,

A handwritten signature in black ink, appearing to read "Kari Fisher", is written over a horizontal line.

Kari E. Fisher  
Associate Counsel  
California Farm Bureau Federation  
Monterey County Farm Bureau  
San Benito County Farm Bureau  
San Luis Obispo County Farm Bureau  
San Mateo County Farm Bureau  
Santa Clara County Farm Bureau  
Santa Cruz County Farm Bureau  
Santa Barbara County Farm Bureau



James W. Bogart  
President & General Counsel  
Grower-Shipper Association of Central California



Richard Quandt  
President  
Grower-Shipper Association of Santa Barbara  
and San Luis Obispo Counties



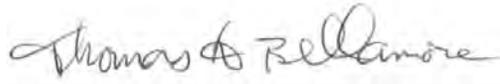
Gail Delihant  
Director, CA Government Affairs  
Western Growers



Kay Mercer  
Executive Director  
Central Coast Agricultural Water Quality Coalition

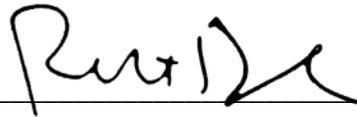


Kris O'Connor  
Executive Director  
Central Coast Vineyard Team



---

Tom Bellamore  
President  
California Avocado Commission



---

Robert Dolezal  
Executive Vice President  
California Association of Nurseries and Garden Centers



---

Rick Tomlinson  
Director of Government Affairs  
California Strawberry Commission

cc: John H. Hayashi, Board Member  
David T. Hodgin, Board Member  
Dr. Monica S. Hunter, Board Member  
Russell M. Jeffries, Vice Chairman of the Board  
Gary C. Shallcross, Board Member  
Tom P. O'Malley, Board Member  
Roger Briggs, Executive Director

CAPITOL OFFICE  
STATE CAPITOL  
ROOM 4062  
SACRAMENTO, CA 95814  
TEL (916) 651-4019  
FAX (916) 324-7544

DISTRICT OFFICES  
2655 FIRST STREET  
SUITE 230  
SIMI VALLEY, CA 93065  
TEL (805) 306-8886  
FAX (805) 306-8899

610 ANACAPA STREET  
UNIT B-4  
SANTA BARBARA, CA 93101  
TEL (805) 965-0862  
FAX (805) 965-0701

# California State Senate

SENATOR  
**TONY STRICKLAND**  
ASSISTANT MINORITY LEADER  
NINETEENTH SENATE DISTRICT



COMMITTEES  
HEALTH  
VICE-CHAIR  
BUDGET & FISCAL REVIEW  
ENERGY, UTILITIES  
& COMMUNICATIONS  
ELECTIONS,  
REAPPORTIONMENT &  
CONSTITUTIONAL  
AMENDMENTS  
SELECT COMMITTEE ON  
CALIFORNIA'S WINE  
INDUSTRY  
SELECT COMMITTEE ON  
IMPROVING STATE  
GOVERNMENT

May 19, 2010

Chairman Jeffrey Young  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906

Re: Ag Waiver Order

Dear Chairman Young:

As you know, the Central Coast Regional Water Quality Control Board is considering adoption of an Ag Waiver Rule. You recently held a workshop in San Luis Obispo to hear from the agricultural community in regards to their concerns. From that workshop you have now scheduled a workshop for Salinas on July 8, 2010 to allow the farming community in northern SLO and Monterey counties to voice their input in regards to this proposal.

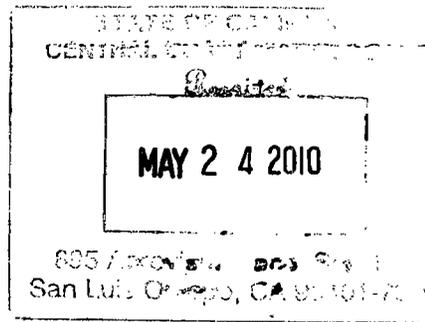
I am writing to formally request that you also schedule a workshop in Santa Barbara or Goleta. Southern Santa Barbara County and Northern Ventura County have substantial agricultural interests. The workshops you've had were not conveniently located for them to hear from your Board and to provide your Board input. By scheduling a workshop in Santa Barbara or Goleta, my hope is all parties involved will be heard from.

I hope you can confirm for me in the near future such a workshop will be scheduled so I can inform my agricultural constituents.

Thank you for your attention to this matter.

Sincerely,

**Tony Strickland**  
Senator, 19<sup>th</sup> District





## COUNTY OF SAN BENITO BOARD OF SUPERVISORS

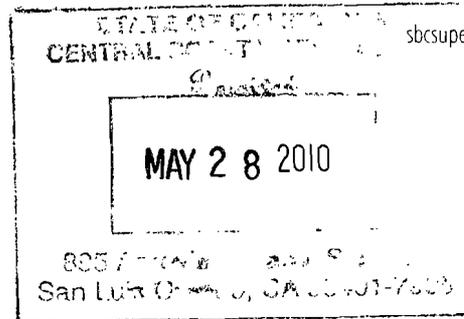
481 Fourth Street • Hollister, CA 95023  
Phone: 831-636-4000 • Fax: 831-636-4010

[www.san-benito.ca.us](http://www.san-benito.ca.us)

[sbcsuper@supervisor.co.san-benito.ca.us](mailto:sbcsuper@supervisor.co.san-benito.ca.us)

May 25, 2010

Chairman Jeffrey Young  
Central Coast Regional Water Control Board  
895 Aerovista Place, Ste. 101  
San Luis Obispo, CA 93401-7906



RE: Central Coast Regional Water Quality Control Board's Preliminary Draft  
Agricultural Order to Control Discharges from Irrigated Lands.

Dear Chairman Young:

We are writing to the response to the Preliminary Draft Agricultural Order that the Central Coast RWQCB is considering. While we recognize the importance of water quality, this proposal could have serious economic impacts to our local economy. We are requesting that your agency consider these impacts when developing the Agricultural Order, and develop a system that provides protection to the area water while at the same time protects agriculture's livelihood.

Agriculture is San Benito County's number one industry. Any negative impacts on this industry are likely to have impacts on local employment, income and the general well being of the county. In addition, the Central Coast RWQCB proposal for dealing with Agricultural Waivers appears to be more burdensome to the producers of this region than those producers which are located in the other eight regional boards. This action may put this region's agriculture at an economic disadvantage to the other regions in the state. These factors in turn could have a direct effect on our county's abilities to generate tax revenues to provide essential services.

San Benito County is unique in that most of the agricultural production is found in the northwest corner of the county. This area is blessed with excellent soils, good weather, abundant of water supplies and has an established infrastructure to support intensive agriculture. This area also has many water tributaries which converge in this same region. As written, this plan would result in the loss of some of our best farm ground by requiring a buffer zone around these tributaries. A loss of local farm ground would cause an economic chain of events which would be felt throughout the county.

By limiting the use of region's land near waterways moves the Central Coast RWQCB into a position of regulating local land use. The public use of its land is already regulated by this county's general plan. We question if another layer of governmental regulation is desirable for the local economy and the public in general. Because of this, we are asking you to consider the effects of entering into local land use policies.

A healthy agricultural economy is a key ingredient to a healthy local economy. While water quality is indeed an important part of the county health, any additional regulation must be reviewed carefully to ensure that it is actually effective and it will contribute to the overall health of the community.

We have enclosed a copy of a letter to Supervisor Anthony Botelho from the San Benito County Farm Bureau which includes statistical data that was compiled by the Grower Shipper Association of the Central Coast which shows the tremendous fiscal impact upon San Benito County's agriculture industry.

The San Benito County Board of Supervisors recommends maintaining the current Ag Waiver for another term.

Thank you for considering our response regarding the potential impacts to our county.

Sincerely,



Reb Monaco, Chairman  
San Benito County Board of Supervisors

Enc. (1)

Cc: Roger Briggs, Executive Officer, Central Coast RWQCB }  
San Benito County Farm Bureau  
San Benito County Agricultural Commissioner



May 17, 2010

Mr. Anthony Botelho,

Dear Supervisor Botelho:

Thank you for the opportunity to meet with you today and hear the San Benito County Farm Bureau concerns regarding the economic impact of the Regional Board Staff's February 1, 2010 proposed Conditional Ag Waiver. We ask that you consider writing to Chairman Young and the Regional Board highlighting the direct effects that this will have on San Benito County and its farming community.

The San Benito County Farm Bureau realizes that the proposed Waiver is a draft; however the effects on our community will be devastating if implemented as is. San Benito County is unique with the amount of tributaries funneled through the northern end of the County and the effects will be multiplied on the potential loss of prime farmland and farmland of statewide importance. There are numerous and complex water sheds in our County.

- The arduous reporting requirements will be overly burdensome as you will see below as the cost of compliance exceeds the profitability of farming in San Benito County.
- The implementation of this will cause an economic chain reaction felt throughout the entire County.
- San Benito County Farmers have been cooperating and participating in the current Ag Waiver. Due to the success and enrollment of the Ag Waiver we ask that the San Benito County Board of Supervisors write the Regional Board to keep the existing Ag Waiver.

Our organization feels it is important that the County indicate the potential lost business revenues as well as impacts to the public infrastructure in San Benito County. We see this as having short term and long term negative social economic impacts directly on the San Benito County budget.

We are supplying you with statistical data that was compiled by Grower Shipper Association of Central Coast. These data were collected through a series of sequential steps. The first was to review staff's proposed Waiver to identify compliance requirements which might generate costs for the growers. As stated, it is expected that the proposal will be amended. It should also be noted that aspects of the proposed Waiver were ambiguous; and therefore, it was difficult to assess the proposed cost. Every effort was made to be fair about anticipated impacts. For example, few specifics were provided regarding grower monitoring and reporting. Are growers

Telephone: 831.637.7643 ▪ Facsimile: 815.366.7902  
530 San Benito Street, Suite 201 ▪ Hollister, CA 95023  
sanbenito.cfbf.com

Group 15 - M18  
July 8, 2010 Workshop  
[Preliminary Draft Agricultural Order](#)

required to monitor on a monthly or quarterly basis? Are they required to monitor in one location per farm or at each discharge point? For the sake of simplicity, we assumed that the growers will only have to sample one time annually and once per operation for a cost of \$1,600 per year.

The next step was to conduct grower interviews of cool season vegetables, avocado and grape growers. We were unable to obtain strawberry grower interviews. Warm season vegetables and stone fruit growers will definitely feel the economic impact of compliance requirements on a localized basis. However, the acreage of these other crops is not significant to the overall Central Coast economy and we could not justify the resources to do grower interviews in these crops. Hence, the costs presented here do not estimate the true extent of the economic impact. They are limited to the commodities for which interviews were conducted.

Grower interviews concentrated on the costs of compliance in a field of a specific size and with specific parameters rather than for a grower's entire operation: Field sizes in question ranged from 14 to 500 acres. This approach allowed us to calculate a cost per acre and economies of scale are reflected for the larger operations. Often, growers interviewed would provide a cost range. For example, a grower must halt nitrate fertilizer applications three days prior to a forecasted rain and three days after a rain. Cool season vegetable growers estimated that the loss of the crop grown during the rainy season would vary with the amount of rain received. Also, there is the possibility that packers might shift winter grown crops to other areas of the country such as Yuma or Texas or to Mexico. Therefore, the losses for the winter crop might be anywhere from 0 to 100 percent. Consequently, we estimated minimum and maximum costs per acre as shown below.

**Avocados = \$705.45 - \$2,189.94/acre** (Note: the range was largely influenced by whether a creek bordered or ran through an orchard.)

**Cool Season vegetables = \$528.11 - 660.74/acre**

**Wine Grapes = \$469.05 - \$519.05/acre**

Next, the cost per acre was multiplied by the number of acres per commodity in Santa Clara, San Benito, Santa Cruz, Monterey, San Luis Obispo and Santa Barbara Counties. These data were based on the County Agricultural Commissioner reports. These calculations **estimated Central Coast lost business revenue to be between \$231,453,102.33 and \$298,707,620.54.**

Finally, an economist inserted the minimum and maximum lost business revenue into a model used to calculate lost indirect tax revenue, lost labor income and lost employment. Lost indirect tax revenue consists of lost property, sales and excise taxes, fees and licenses that would have been paid by businesses. Taxes on profits or income and lost taxes from declining property values are not included in these estimates. Lost labor income includes all forms of employee compensation that would have been paid by employers. Lost employment is straightforward in

that it demonstrates the number of jobs lost and is calculated in a full-time equivalent employment value on an annual basis. We expect that lost employment will not be consistent across the region but will be concentrated in Monterey and Santa Barbara Counties. For example, in 2007, in Monterey County 21 percent or 38,000 employees depend directly upon agriculture for employment while 54 percent or approximately 45,000 depend on agriculture for employment.

**The model indicates that lost tax revenue is between \$ 19,624,441.00 and \$25,326,816.00. Lost labor income is between \$87,302,937.00 and \$112,670,999.00. It is estimated that 2,572 to 3,320 jobs will be lost.**

Total output losses are total revenues lost for a given time period for an industry in dollars. This is the best measure of lost business and economic activity. The model indicates that **total output losses are between \$364,393,461.00 and \$470,277,123.00.**

It is also interesting to compare median sales revenue per farm to the average sales revenue per farm in each county. Fifty percent of the growers have greater sales revenue and 50 percent of the growers has less sales revenue than the ranges presented below. The average sales revenue is the total sales revenue divided by the number of growers in each county. These data are based upon the 2007 census data.

	Monterey	Santa Cruz	Santa Clara	San Benito	SLO	Santa Barbara
Median Sales Revenue/farm (\$)	\$25K-39,999	\$10K-19,999	\$2,500-\$4,999	\$5,000-9,999	\$25K-39,999	\$10K-19,999
Average Sales Revenue/farm (\$)	\$1,816,906	\$656,037	\$220,906	\$356,577	\$201,368	\$595,696

The point of interest here is that the compliance costs for the Conditional Waiver could potentially exceed the median sales revenue of 50 percent of the growers in most counties. This will unfairly target small, family-owned farms that are the heart of San Benito.

One last calculation notes that a certain percent of commodities might not be able to sustain the costs of the proposed Conditional Ag Waiver. Cool season vegetables, strawberries and nursery crops are considered to be “crops at risk”. These three commodities comprise 75.8 percent of all acres grown on the Central Coast.

Grower Shipper Association of the Central Coast provided this general information to the Regional Board. We hope this data is useful to the San Benito County Board of Supervisors as it considers drafting a letter to the Regional Board highlighting the huge and devastating economic impacts on our County. All comments must be received to the Regional Board by Friday,

June 4, 2010.

Thank you for your consideration. If you have any questions or concerns please contact Richard Bianchi, San Benito County Farm Bureau Director.

Regards,  
San Benito County Farm Bureau

STATIONERY  
CENTRAL POST OFFICE

Postmark

MAY 24 2010

May 2010

Dear Angela

Time constraints ~~dictated~~ allow

me to share my thoughts on May 12th.

For that reason I have penned my thought  
in this communication. I would ask  
you to give copys to each member of the  
Board.

Altho we have not spent a great  
deal together you have shown more  
competant spine than <sup>in</sup> the rest of the "Staff"

Combined, you can be proud of that trait.

May the creator bless you and hold you  
all the days of your life.

For only  
Paul Bishop

1  
May 2010

Ladies and Gentlemen of the Board

As time constraints did not allow me to remain to testify at the May 12th meeting by this communication I would like to express my thoughts.

First I pledge my undying gratitude for the Water Board's integrity in acting in a timely fashion to implement language that will appropriately deal with its activities that in the past has had such detrimental affects on the community of both man and nature: Provision #28. after 9 years of blood sweat and tears and a Coloum expense higher than the national

debt: One sentence. But a very good sentence! Straight forward without any controversy concerning "what the definition of it is." This simple citizen appreciates straight forward simplicity. I'm sure the community appreciates the work you have done. It is sad that some of the residents, especially who contributed photographic proof have passed and did not live to see their work come to fruition. Other frustrated by what they perceived as governmental manipulation moved thinking their households would never be safe.

Not being an ideologist and a person of a conservative mind set

Very appreciative and interested at the extensive time given to the Ag community at the May 12th meeting. While I find provision #28 an uncomplicated common sense provision that should be a no brainer for any reasonable person no what a persons ideology (and cost neutral too boot) I find some of the others confusing. I have a feeling that painting some issues with a broad brush may lead to over bearing and unintended consequences. This is a situation that I feel could be avoided by members listening to Mr. Nagashii thoughts seriously. He has proven at least to me by walking the walk in Ripoma the gateway to the

work and therefore an appropriate mind set.

Mr. Hayashi has a life time of feet on the ground

Knowledge concerning Ag Operations. Feet on

the ground experience embodies knowledge in

the form of reality just as our feet on the

ground did.

By far the most disturbing thing

I heard at the May 12th meeting was an Ag

lawyer questioning the legality of the water

board controlling this issue! If Calif. Fish

& Game is given the reins there will not be

a shot in Hell chance that the implementation of

your good work will occur. With out doubt the

most absymal entity that operated against

the effort to clean up Nipomo was Calif. Fish

and Game. It is my opinion after 9 years of experience that their activities were far beyond dereliction of duty and exhibited an overt air of corruption under the color of authority! It is not no wonder the lawyer (who is paid to take an obstinate negotiating position) wants to cut your agency out: you've actually done something! Urra!

I was born in the Santa Maria Valley and have lived here most of my life. In that time I have watched the foot print of a man turn our water into a chemistry <sup>experiment</sup> & your agency is doing the right thing for the right reason. Know that! My heart has bled

enough, when I am sitting on the banks  
of the Umpqua, Swan and Wind Rivers cupping  
cupping sweet pure water to my lips my  
thoughts and prayers will be with each and  
every one of you.

Sincerely  
 Ralph Bishop

# FW: research shows AG runoff contributes to toxic red tide

From: **Carol Georgi** (cdgeorgi@hotmail.com)  
Sent: Tue 5/25/10 11:27 AM  
To: info3@waterboards.ca.gov

---

Carol Georgi (degeorgi@hotmail.com)  
243 Vista Del Mar Ave  
Shell Beach, CA 93449

May 12, 2010

California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906

RE: public comment of the Agricultural Order

Dear Water Quality Board Members,

I am writing this letter in support of the California Agricultural Order for water quality regulations. I am including research that documents how the urea in agricultural runoff results in the formation of domoic acid that acts as a neurotoxin in marine mammals and humans. This chemical reaction is one example of the harmful results caused by agricultural runoff.

Our CA coastal waters need protection from agricultural runoff that could affect our seafood supply, our businesses associated with the catching, selling, and preparation of seafood, and our enjoyment both personal and business of the water.

The coastal waters are not a sewer for agricultural runoff.  
non-polluted coastal waters is an important resource for all of California.  
We must work together to keep pollutants out of the water.

Sincerely,  
Carol Georgi



Dr Raphael Kudela of UCSC spoke at the April MIG meeting  
"Marine Animals as Ocean Sentinels of Harmful Algae: Early Warning or ignored Problem"

Notes:  
the presence of urea in ocean water is rare  
humans are the main source of urea in the ocean water from AG run off & septic system leakage  
urea in ocean water increases (doubles) the growth of the toxic bloom associated with red tide. when the toxic bloom growth is doubled, toxicity results.  
Domoic Acid (DA) is a chemical that is produced by algae or plankton when it blooms.  
In marine mammals and humans, DA is a tricarboxylic acid that acts as a neurotoxin.

65% of CA sea lion and sea otters studied, tested positive for domoic acid in their blood

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domoic acid information and history:  
[http://www.cimwi.org/stranded\\_domoic.html](http://www.cimwi.org/stranded_domoic.html)

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this url is the pdf of Dr. Raphail Kudela's scientific research on toxic algae in California.

[http://oceansci.ucsc.edu/faculty/documents/1\\_Kudela\\_HA\\_2008.pdf](http://oceansci.ucsc.edu/faculty/documents/1_Kudela_HA_2008.pdf)

Accepted Manuscript

Title: The Potential Role of Anthropogenically Derived Nitrogen in the Growth of Harmful Algae in California, USA

Authors: Raphael M. Kudela, Jenny Q. Lane, William P. Cochlan

PII: DOI: Reference:

To appear in:

Received date: Revised date: Accepted date:

S1568-9883(08)00108-X doi:10.1016/j.hal.2008.08.019 HARALG 453

*Harmful Algae*

30-4-2007 22-7-2007 1-8-2008

Please cite this article as: Kudela, R.M., Lane, J.Q., Cochlan, W.P., The Potential Role of Anthropogenically Derived Nitrogen in the Growth of Harmful Algae in California, USA, *Harmful Algae* (2007), doi:10.1016/j.hal.2008.08.019

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10 11 12 13 14 15 16 17 18 19 20 21 22 23

The Potential Role of Anthropogenically Derived Nitrogen in the Growth of Harmful Algae in California, USA

Raphael M. Kudela<sup>1\*</sup>, Jenny Q. Lane<sup>1</sup>, and William P. Cochlan<sup>2</sup>

<sup>1</sup>Ocean Sciences Department, University of California Santa Cruz, 1156 High Street, Santa Cruz, CA 95064, USA

<sup>2</sup>Romberg Tiburon Center for Environmental Studies, San Francisco State University, 3152 Paradise Drive, Tiburon, CA 94920-1250, USA

\*Author for correspondence: [kudela@ucsc.edu](mailto:kudela@ucsc.edu), 831-459-3290, 831-459-4882 (FAX)

1

1 **Abstract** 2 3 Cultural eutrophication is frequently invoked as one factor in the global increase in 4  
harmful algal blooms, but is difficult to definitively prove due to the myriad of factors 5 influencing  
coastal phytoplankton bloom development. To assess whether eutrophication 6 could be a factor in the  
development of harmful algal blooms in California (USA), we 7 review the ecophysiological potential  
for urea uptake by *Pseudo-nitzschia australis* 8 (Bacillariophyceae), *Heterosigma akashiwo*  
(Raphidophyceae), and *Lingulodinium* 9 *polyedrum* (Dinophyceae), all of which have been found at  
bloom concentrations and/or

10 exhibited noxious effects in recent years in California coastal waters. We include new 11  
measurements from a large (Chlorophyll a > 500 mg m<sup>-3</sup>) red tide event dominated by 12  
*Akashiwo sanguinea* (Dinophyceae) in Monterey Bay, CA during September 2006. All of 13 these  
phytoplankton are capable of using nitrate, ammonium, and urea, although their 14 preference for these  
nitrogenous substrates varies. Using published data and recent 15 coastal time series measurements  
conducted in Monterey Bay and San Francisco Bay, 16 CA, we show that urea, presumably from  
coastal eutrophication, was present in 17 California waters at measurable concentrations during past  
harmful algal bloom events. 18 Based on these observations, we suggest that urea uptake could  
potentially sustain these 19 harmful algae, and that urea, which is seldom measured as part of coastal  
monitoring 20 programs, may be associated with these harmful algal events in California. 21 22 23 **Key**  
**Words:** ammonium, eutrophication, nitrate, nitrogen uptake kinetics, urea

<http://people.ucsc.edu/~kudela/>

## Raphael M. Kudela



**Associate Professor, Ocean Sciences Department**

Ph.D., University of Southern  
California

**Office:** E&MS A461  
**Office Phone:** 831-  
459-3290  
**Lab Phone:** 9-2688, 9-  
4298 (labs)

Group 15 - P24  
July 8, 2010 Workshop  
Preliminary Draft Agricultural Order

- [Kudela lab web page](#)
  - [Latest Satellite Imagery](#)
  - [Cal-PReEMPT \(HAB monitoring\)](#)
- Class web pages
- [Ocea130/230 Biological Oceanography](#)
  - [Ocea 101 The Marine Environment](#)

## Overview:

I am a phytoplankton ecologist who wishes to understand the fundamental question: what controls phytoplankton growth and distribution in the ocean. More specifically, how do the multiple interactions of light, macro- and micronutrients and phytoplankton physiology determine the rates, processes, and patterns we observe in the marine environment?

Oceanography is rapidly moving away from observational science towards an understanding of underlying mechanistic processes at all scales, in part because of the wealth of revolutionary new technological and scientific advances. My approach is to combine a suite of 3 tools: (1) remotely sensed data from moorings and satellites in combination with biological models; (2) novel bio-optical methods assaying phytoplankton physiology; and (3) the refinement of stable and radio-tracer isotopes.

**Specific Research:** We are currently working on several projects in the laboratory and field, primarily in central California.

**CIMT:** Within the Monterey Bay National Marine Sanctuary, we are part of a multi-institution program (the Center for Integrated Marine Technology) which aims to understand the linkages from wind to whales. We are involved in the shipboard and remote sensing components of this project. The CIMT website has many more details.

**ECOHAB:** Within the Monterey Bay region, there are several funded groups working closely together on the *Pseudo-nitzschia*/domoic acid complex. We are funded to develop in the field and laboratory an understanding of how Si, N, C, and light interact physiologically to trigger DA production, and to develop molecular markers for toxin production. Colleagues at MBARI (C. Scholin), UCSC (D. Garrison, M. Silver, J. Goldman, E. Rue), U. Maine (M. Wells), and MLML (G.J. Smith) are working on related aspects, ranging from the role of metal availability, including iron, to the transfer of toxin

through the marine food web.

**Cal-PreEMPT:** In collaboration with Dr. Gregg Langlois at the California Department of Health Services, we are developing better monitoring tools for Harmful Algal Blooms occurring in the state of California, with funding from the NOAA MERHAB program. This is a multi-year effort involving Peter Miller (lead PI) and Mary Silver at UCSC, as well as Rick Stumpf (NOAA) and collaborators in Oregon and Washington states. See the [Cal-PreEMPT webpage](#) for details.

**NASA projects:** A physiological model of nitrogen utilization by natural phytoplankton assemblages which can predict new production in coastal waters using remotely sensed data (AVHRR and ocean color data) or moorings was developed as part of NASA grant NAG5-6563. As part of the EPA funded Coastal Intensive Sites Network (CISNet; NASA grant NAG5-7632), we also developed regional algorithms (pigments, CDOM, sediments, new production) along a gradient of water conditions, from the blue-water stations occupied off central California to the turbid waters of San Pablo Bay. These methods are currently being applied to ongoing projects, including CoOP and CIMT.

**CoOP:** As part of an NSF-sponsored Coastal Ocean Projects program, we were part of a 5-year study of coastal productivity (The Role of Wind Driven Transport in Shelf Productivity). This program has 3 field years, with a combination of instrumented moorings and cruises, followed by two years of data assimilation and development of a coupled physical-biological model. We are responsible for the bio-optical component and shipboard process studies, and is developing regional algorithms for new and primary production. More information is available [here](#).

As part of the CoOP program River Influences on Shelf Ecosystems (RISE), we are currently evaluating the role of the Columbia River Plume in modulating coastal productivity. This program is also 5 years, with 4 field seasons and an integrated modeling component. More information is available [here](#).

### **Selected Publications (click the PDF link for reprints):**

Kudela, R., G. Pitcher, T. Probyn, F. Figueiras, T. Moita, and V. Trainer. 2005. Harmful Algal Blooms in coastal upwelling systems. *Oceanography*, 18(2): 184-197. [\[PDF\]](#)

Ryan, J.P., H.M. Dierssen, R.M. Kudela, C.A. Scholin, K.S. Johnson, F.P. Chavez, A.M. Fischer, E.V. Rienecker, P. McEnaney, R. Marin, and J.M. Sullivan. Coastal ocean physics and red tides. *Oceanography*, 18(2): 214-223. [\[PDF\]](#)

Croll, D.A., and R. Kudela. Ecosystem impact of the decline of large

whales in the North Pacific. In: J.Estes, R. Brownell, D. Doak, and T. Williams (Eds.). Whales, Whaling, and Ocean Ecosystems. UC Press (submitted 3-15-04).

Kudela, R.M. and F.P. Chavez. 2004. The impact of coastal runoff on ocean color during an El Niño year in central California. *Deep-Sea Research II*, in press. doi:10.1016/j.dsr2.2004.04.002. **[PDF]**

Coale KH, Johnson KS, Chavez FP, Buesseler KO, Barber RT, Brzezinski MA, Cochlan WP, Millero FJ, Falkowski PG, Bauer JE, Wanninkof RH, **Kudela RM**, Altabet MA, Hales BE, Takahashi T, Landry MR, Bidigare RR, Wang X, Chase Z, Strutton PG, Friederich GE, Gorbunov MY, Lance VP, Hilting AK, Hiscock MR, Demarest M, Hiscock WT, Sullivan KF, Tanner SJ, Gordon RM, Hunter CN, Elrod VA, Fitzwater SE, Jones JL, Tozzi S, Koblizek M, Roberts AE, Herndon J, Brewster J, Ladizinsky N, Smith G, Cooper D, Sheridan CC, Twining BS, Johnson ZI. 2004. Southern Ocean Iron Enrichment Experiment: Carbon cycling in high- and low-Si waters. *Science* 304:408-414. **[PDF]**

Kudela, R, W. Cochlan, and A. Roberts. 2003. Spatial and temporal patterns of *Pseudo-nitzschia* spp. in central California related regional oceanography. In: Steidinger, K.A., J.H. Landsberg, C.R. Tomas, and G.A. Vargo (Eds.) Harmful Algae 2002. Florida and Wildlife Conservation Commission, Florida Institute of Oceanography, and Intergovernmental Oceanographic Commission of UNESCO. In press. **[PDF]**

Kudela, R., A. Roberts, and M. Armstrong. 2003. Laboratory analyses of nutrient stress and toxin production in *Pseudo-nitzschia* spp. from Monterey Bay, California. In: Steidinger, K.A., J.H. Landsberg, C.R. Tomas, and G.A. Vargo (Eds.) Harmful Algae 2002. Florida and Wildlife Conservation Commission, Florida Institute of Oceanography, and Intergovernmental Oceanographic Commission of UNESCO. In press. **[PDF]**

Berelson, W., J. McManus, K. Coale, K. Johnson, D. Burdige, T. Kilgore, D. Colodner F. Chavez, R. Kudela, J. Boucher. 2003. A time series of benthic flux measurements from Monterey Bay, CA. *Continental Shelf Research*, 23: 457-481. **[PDF]**

Kudela, R.M. and F.P. Chavez. 2002. Multi-platform remote sensing of new production in central California during the 1997-1998 El Niño. *Progress in Oceanography* 54: 233-249. **[PDF]**

Kudela, R.M. and W.P. Cochlan. 2000. Nitrogen and Carbon Uptake Kinetics and the Influence of Irradiance for a Red Tide Bloom Off Southern California. *Aquat. Microb. Ecol.* 21: 31-47. **[PDF] large (3.9 MB) file.**

Kudela, R.M. and F.P. Chavez. 2000. Modeling the impact of the 1992 El Niño on new production in Monterey Bay, California. *Deep-Sea Res. II* 47: 1055-1076. **[PDF]**

Kudela, R.M. and R.C. Dugdale. 2000. Nutrient regulation of phytoplankton productivity in Monterey Bay, California. *Deep-Sea Res. II* 47: 1023-1053. **[PDF]**

Wilkerson, F.P. R.C. Dugdale, F.P. Chavez, and R.M. Kudela. 2000. Biomass and productivity in Monterey Bay, CA: contribution of the larger autotrophs. *Deep-Sea Res. II*47:1003-1022. [\[PDF\]](#)

Kudela, R.M., W.P. Cochlan and R.C. Dugdale. 1997. Carbon and nitrogen uptake response to light by phytoplankton during an upwelling event. *J. Plankton Res.* 19: 609-630.

Kudela, R.M. and F.P. Chavez. 1996. Bio-optical properties in relation to an algal bloom caused by iron enrichment in the equatorial Pacific. *Geophys. Res. Letters*, 23: 3751-3754.

Coale, K.H., K.S. Johnson, S.E. Fitzwater, R.M. Gordon, S. Tanner, F.P. Chavez, L. Ferioli, C. Sakamoto, P. Rogers, F. Millero, P. Steinberg, P. Nightingale, D. Cooper, W. Cochlan, M.R. Landry, J. Constantinou, G. Rollwagen, A. Trasvina and **R. Kudela**. 1996. A massive phytoplankton bloom induced by an ecosystem-scale iron fertilization experiment in the equatorial Pacific Ocean. *Nature* 383: 495-501.

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>>> "R. Antinetti" <rantinetti@yahoo.com> 6/4/2010 4:42 PM >>>

June 4, 2010

Jeffery S. Young, Chairman of the Board  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, Ca. 93401

CC: Roger Briggs, Angela Schroeter

Re: CCRWQB Request for Public Comment on Preliminary Draft Agricultural Order dated February 1, 2010

CSIRO opposes this amendment to the waiver, as it implies that the registration of products through the US EPA and TSCA (processes) is an insufficient demonstration of environmental efficacy and safety for approved enzymes for on farm use. The beneficial use of enzymes on farm is a route to the significant reduction and potential removal below detectable limits of certain classes of pesticides currently present in Basin Plan water bodies. CSIRO is actively engaged with staff to have get clarification of the expectations and proposed standards for use in "waters of the state" and Basin Plan water bodies. We believe that the use of enzymes that breakdown said pesticide residues will be of significant benefit to aquatic habitats throughout California.

We suggest the complete removal of item number 30 on page 56 of the newly proposed waiver, or failing this a very clearly articulated and science based process that outlines the requirements for such an approval, ensuring that the requirements are consistent with the needs of industry, the environmental outcomes sought and the approvals already obtained for any product registered for the proposed use.

Sincerely,

Rachelle Antinetti, Antinetti Consulting, Inc. on behalf of Cameron Begley, CSIRO

Cameron Begley  
General Manager  
Business Development & Commercialization  
CSIRO Entomology  
Ph: +612-6246-4033  
Mob: +61-438-210-667  
Skype: Cameron.Begley

May 19, 2010

To: Central Coast Regional Water Quality Control Board  
Roger Briggs and Staff

From: Jim Moore  
Phyto Remediation Engineering LLC  
[sequoyallc@yahoo.com](mailto:sequoyallc@yahoo.com)

Dear Roger Briggs and Water Board Staff:

I attended the May 17<sup>th</sup> meeting in San Luis to make contact and speak briefly about pollution cleanup by means of phyto remediation.

The enormity of the problems detailed by your staff report caused me to step back and take some deep breaths.

A few weeks earlier I had spoken with Dr. Louis Licht about what I had perceived as problems in the Santa Maria area. Dr. Licht is probably the most knowledgeable expert in the country, with more than 60 successful Phyto Remediation projects in the past 20 years. He asked some specific questions and volunteered to consult with us to plan cleanup solutions.

I will share with him whatever information your staff may provide and meet with a few other parties that impressed me at that meeting.

Possibly some staff members had already contacted Dr. Licht as he mentioned an inquiry from a party in Salinas.

I understand the water board's function is to monitor and find ways to improve the water quality with the means available to them: Measurement and Regulation.

My focus and the focus of my company will be:

- 1 To remove toxins from the runoff leaving the fields as much as possible.
- 2 Develop a system to reduce the nitrate levels in collection ponds.
- 3 Develop the best system to lower nitrate concentrations in wells.

Over the past 25 years many universities in the U.S. have studied the problems we face. Now is the time to put that intelligence to work.

I look forward to working with you and your staff in the most amicable and efficient manner.

Sincerely,  
Jim Moore  
Manager, Director  
Phyto Remediation Engineering LLC



June 4, 2010

To,  
Angela Schroeter/ Howard Kolb  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA. 93401-7906  
Submitted via E-mail: [aschroeter@waterboards.ca.gov](mailto:aschroeter@waterboards.ca.gov), [hkolb@waterboards.ca.gov](mailto:hkolb@waterboards.ca.gov)

**Subject:** Comments on the San Luis Obispo workshop and continued **SUPPORT** for the Central Coast Regional Water Quality Control Board's Preliminary Draft Recommendations for an Updated Agricultural Order

Dear Regional Water Quality Control Board Members,

Thank you for another opportunity to provide public comments on the Central Coast Water Board's consideration of Staff Recommendations for an Updated Agricultural Order. On behalf of the Environmental Justice Coalition for Water, we applaud your continued prioritization of this critical program necessary to protect and restore the quality of the Central Coast's precious water resources.

The Environmental Justice Coalition for Water (EJCW) is a statewide coalition of more than 70 community-based and non-profit organizations working to achieve water justice in California. Water justice is the ability of all communities to access safe, affordable water resources for all beneficial uses. Most pertinent to the Board's efforts, we work with disadvantaged communities struggling to gain access to water for basic human needs like drinking, bathing, and cooking. These communities are often forced to drink contaminated groundwater, or to pay high rates for alternate water because their drinking water is non-potable, while still bathing and washing their clothes and dishes in contaminated water. Implementation of the preliminary staff report would provide these communities with another tool to help them to achieve access to safe water.

EJCW was present at the workshop in San Luis Obispo on May 12, 2010, along with community members who asked you to keep in mind how families and communities are damaged by contaminated water. We continue to urge you to consider environmental justice before making your decisions. Community members were at San Luis Obispo not just from the Central Coast areas such as Salinas, Santa Cruz, Monterey, Fort Ord and San Luis Obispo, but community people also came from Tulare county (Central Valley), Maywood (Los Angeles), Oxnard, Ventura and San Francisco. They travelled long distances to stand for Central Coast community members who could not afford to take a day off of work to attend the all-day meeting. These community members do not have vacation time they can take and still get paid. In fact some of

them face the jeopardy of losing their jobs altogether if they do not show up for work every single day.

EJCW appreciated the opportunity to make a 15 minute presentation at the San Luis Obispo meeting. We will also attend the July 8, 2010 workshop in Watsonville along with local community members and we respectfully request 15 minutes of time to speak to the Board in support of the Staff recommendations. We will bring new information regarding the specific concerns in the northern part of the region.

### **Agricultural Discharges and Contaminated Groundwater**

At the San Luis Obispo workshop, we were pleased that the gravity of the nitrate contamination in the Central Coast region was acknowledged, and also the fact that it is largely due to agricultural practices and contaminated agricultural discharges. After decades without regulation, groundwater contamination from nitrates severely impacts domestic drinking water supplies in the area.

For small, disadvantaged communities, such as San Jerardo Cooperative, the costs of drilling a new well or paying for water treatment become increasingly expensive, and they can be left entirely without safe drinking water. For cities like Salinas, Watsonville, King City and Soledad, ratepayers pay higher prices over time for water treatment. The costs of nitrate contamination in the Salinas valley are high, and none of these costs are being borne by the polluters (agricultural dischargers). Now that the severity of the situation has become evident, we urge the Board to take immediate steps to rectify the situation.

Many farmers stated at the San Luis Obispo workshop that they would go out of business if the Staff Recommendations went into effect. The agriculture presentation estimated that Central Coast lost business revenue would be between \$231.4 Million and \$298.7 Million<sup>1</sup>. However, almost no explanation is provided for these numbers. There are no details on how the data was collected. Detailed information on how costs were estimated should be clearly outlined before these numbers are taken into consideration by the Regional Board. We would also like to point out that the agricultural industry is highly profitable; any economic considerations must be thoroughly documented and considered within the context of the industry's overall revenue.

The agricultural community's presentation compared their Ag Alternative to the current Order, exalting the virtues of the current Order and its effectiveness. If the current order were effective we would not continue to see worsening groundwater quality conditions across the State. We would respectfully like to remind the Board that these same growers and farmers were against the current Order when it was being considered in 2004. It is understandable that any business/commercial group being regulated would be wary of and perhaps opposed to new regulation. However, the Regional Board is the only agency in the area with the regulatory authority to protect the water and hence we urge you to look beyond the exaggerated numbers.

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<sup>1</sup> Ag Alternative presentation made at San Luis Obispo, titled 'Economic Impact of the CCRWQCB's Proposed Ag Waiver on Central Coast Agriculture', available at:  
[http://www.swrcb.ca.gov/rwqcb3/board\\_info/agendas/2010/may/item3/2010\\_05\\_12\\_CCRWQCB%20Ag%20Alt%20Proposal%20ALL.pdf](http://www.swrcb.ca.gov/rwqcb3/board_info/agendas/2010/may/item3/2010_05_12_CCRWQCB%20Ag%20Alt%20Proposal%20ALL.pdf)

Furthermore, for too long, the costs of regulation have been used to argue against stronger requirements and costs such as groundwater contamination have been externalized onto the general public, often small communities like San Jerardo who are the least able to cover these costs. We feel strongly feel that the Regional Board must move beyond these limitations to fulfill its responsibilities and protect the water quality of the Central Coast region.

EJCW, like the Regional Board, supports agriculture in the Central Coast, but it must be sustainable. Protecting and restoring water quality and supporting agricultural benefits are both essential to the region and must go hand-in-hand.

At the end of the workshop in San Luis Obispo, it was heartening to hear the Board's comments that we do have a widespread problem and we do need to fix it. We appreciate that you like the Staff's approach that ultimately focuses on water quality improvements. For this, ongoing monitoring and reporting is essential, so we urge you to focus on these sections of the recommendations.

### **Extension of Current Waiver**

The Regional Board Staff has proposed to extend the current Conditional Waiver (Agricultural Order No. R3-2009-0050) by 18 months, until December 8, 2011. The Waiver originally expired in July 2009 and has already been extended for a year. Since water quality is worsening in most places, we believe the extension period of 18 months is too long, and urge the Board to adopt an extension of 12 months instead, until June 8, 2011.

### **Continued support for Staff Recommendations**

We continue to strongly support the Water Board's intent to directly address the discharges of waste from irrigated lands, and particularly stress the importance of tying all regulation to actual measureable and required outcomes. We must get beyond process and to a condition where outcomes are measured and achieved. We support the inclusion of compliance schedules to reduce nutrient discharges to surface waters and groundwater, reducing toxic discharges of agricultural pesticides to surface waters and groundwater; reducing sediment discharges from agricultural lands and protecting aquatic habitat, but all of these rely on credible and frequent real-time monitoring to make them useful tools. We strongly support Farm Plans, with a strict timeline for compliance. We strongly support the Board's enforcement of these conditions in a timely manner.

Sincerely,



Dipti Bhatnagar  
Northern California Program Director  
Environmental Justice Coalition for Water  
1201 Martin Luther King Jr. Way,  
Oakland, CA 94612