



Steve Shimek
Monterey Coastkeeper

Mid 1800s



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Mount Diablo Mtn.

Monterey

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HORNE

GLIMPSE OF SALINAS RIVER



Date unknown





09.15.2009



Wells in Salinas Valley. 28% above DWS

Nitrate Concentration (DWS =45)	Number of Wells	Percentage of Wells
Less than 45	272	72
46-90	50	14
91-135	32	8
Greater than 135	24	6
Total	378	100



PACIFIC
INSTITUTE

The Human Costs of Nitrate-contaminated Drinking Water in the San Joaquin Valley

Executive Summary
March 2011



In Collaboration With





Central Coast Regional Water Quality Control Board goals:

- Eliminate toxic discharges of ag pesticides to surface and ground waters
- Reduce nutrient discharges to surface waters
- Reduce nutrient discharges to groundwater
- Minimize sediment discharges from agricultural lands
- Protect aquatic habitat

No Regulation

2004

Total Regulation

0

3

10



No
Regulation

2004

Feb
2010

Total Regulation

0

3

7

10



No
Regulation

2004

Nov
2010

Feb
2010

Total Regulation

0

3

5

7

10



No
Regulation

2004

March
2011

Feb
2010

Total Regulation

0

3

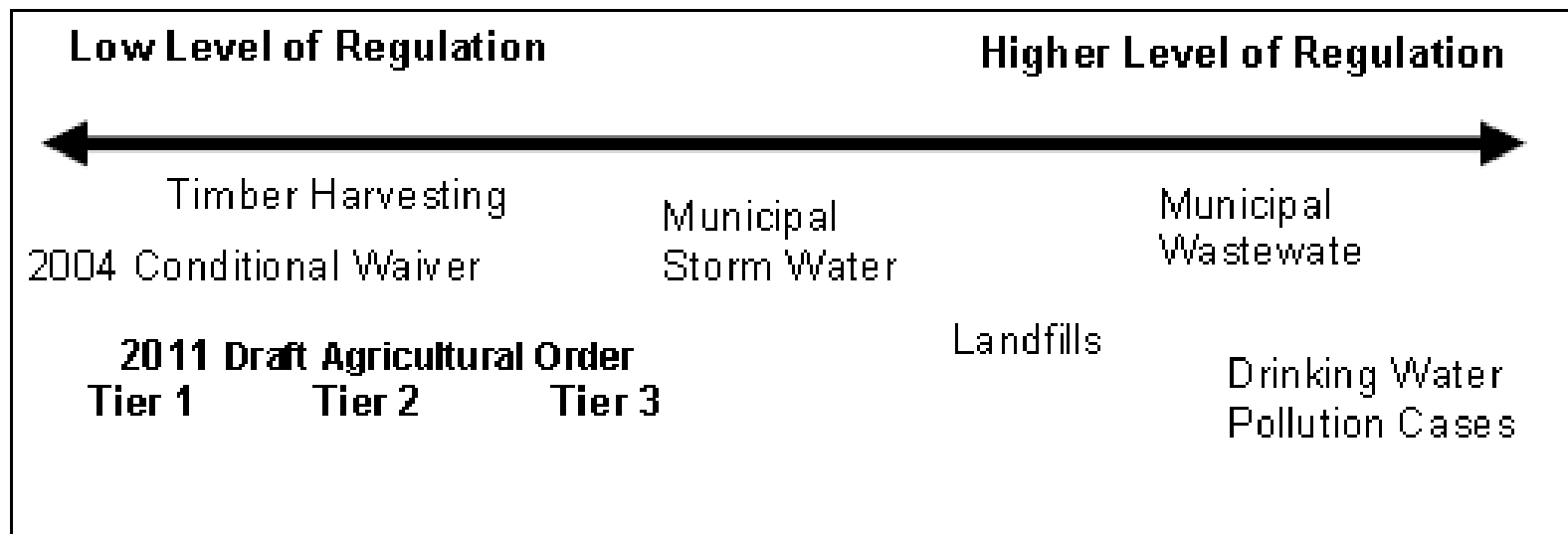
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Figure 2: Relative Degree of Regulation between the 2011 Draft Agricultural Order and Other Programs



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- Our organizations continue to support adoption of the February 2010 Draft Order, as it is most protective of water quality and adequate to fulfill your statutory duties;
 - Our organizations conditionally support adoption of Order R3-2011-0006, contingent on several additions and revisions as follows.

Tiering

- According to Table 5, on page 23 of the staff report, Tier 3 is expected to include 54 percent of the acreage and 13 percent of the operations enrolled in the Conditional Waiver
- **New Language, Part A, 21:** “This order shall be scaled to adequately regulate discharges to impaired surface water and to groundwater. After this order has been effective for one year, the tiering structure shall be modified as appropriate to capture at least 10 percent of the total operations or 40 percent of the total acreage enrolled in Tier 3. The tiering structure shall be re-evaluated at least every two years to ensure that at least 10 percent of the total operations or 40 percent of the total acreage enrolled in the conditional waiver are in Tier 3.”

Tiering

- Order R3-2011-0006 adds proximity to public water supply wells contaminated with nitrates (or other nitrogen) into the tiering structure.
- Operations less than 1,000 acres and within 1,000 feet of a public water supply well are included in Tier 2.
- The staff report describes Tier 2 as approximately the same level of regulation as Order R3-2004-0117: “Tier 2 requirements are comparable to the 2004 Conditional Waiver, with a few additional reporting requirements...”

Tier 2 - Applies to all Dischargers who do not meet the Tier 1 or Tier 3 criteria. In general, Tier 2 Dischargers meet at least one of the characteristics described in (2a), (2b), or (2c):

2a. Discharger applies chlorpyrifos or diazinon, which are documented to cause toxicity in surface waters in the Central Coast Region;

2b. Operation is located within 1000 feet of a surface waterbody listed for toxicity, pesticides, nutrients, turbidity or sediment on the 2010 List of Impaired Waterbodies (see Table 1);

~~2c. Discharger grows crop types with high potential to discharge nitrogen to groundwater (as defined in Attachment A), and the operation total irrigated acreage is less than 1000 acres, and the operation is within 1000 feet of a public water system well that exceeds the maximum contaminant level (MCL) for nitrate, nitrite, or nitrate + nitrite;~~

Tier 3 - Applies to all Dischargers who meet one the following sets of criteria *(3a) or (3b) or (3c)*:

3a. Discharger grows crop types with high potential to discharge nitrogen to groundwater (as defined in Attachment A), and operation total irrigated acreage is *greater than or equal to 1000 acres*;

3b. Discharger applies chlorpyrifos and diazinon, and operation discharges irrigation or stormwater runoff to a waterbody listed for toxicity or pesticides on the 2010 List of Impaired Waterbodies (Table 1);

3c. Discharger grows crop types with high potential to discharge nitrogen to groundwater (as defined in Attachment A), and the operation total irrigated acreage is less than 1000 acres, and the operation is within 1000 feet of a public water system well that exceeds the maximum contaminant level (MCL) for nitrate, nitrite, or nitrate + nitrite;

84. By October 1, 2013, Tier 3 Dischargers must **effectively control** individual waste discharges of pesticides and toxic substances to waters of the State and of the United States.

85. By October 1, 2014, Tier 3 Dischargers must **effectively control** individual waste discharges of sediment and turbidity to surface waters of the State or of the United States.

86. By October 1, 2015, Tier 3 Dischargers must **effectively control** individual waste discharges of nutrients to surface waters of the State or of the United States.

87. By October 1, 2015, Tier 3 Dischargers must **effectively control** individual waste discharges of nitrate to groundwater.



Central Coast Regional Water Quality Control Board goals:

- Eliminate toxic discharges of ag pesticides to surface and ground waters
- Reduce nutrient discharges to surface waters
- Reduce nutrient discharges to groundwater
- Minimize sediment discharges from agricultural lands
- Protect aquatic habitat

Toxicity

84. By October 1, 2013, Tier 3 Dischargers must ~~effectively control~~ eliminate individual waste discharges of pesticides and toxic substances to waters of the State and of the United States.

Toxicity

16. Tier 3 - Applies to all Dischargers who meet one the following sets of criteria *(3a) or (3b)*:

3a. Discharger grows crop types with high potential to discharge nitrogen to groundwater (as defined in Attachment A), and operation total irrigated acreage is *greater than or equal to 1000 acres*;

3b. Discharger applies **chlorpyrifos and diazinon**, and operation discharges irrigation or stormwater runoff to a waterbody listed for toxicity or pesticides on the 2010 List of Impaired Waterbodies (Table 1);

16. Tier 3 - Applies to all Dischargers who meet one the following sets of criteria *(3a) or (3b) or (3c) or (3d)*:

3a. Discharger grows crop types with high potential to discharge nitrogen to groundwater (as defined in Attachment A), and operation total irrigated acreage is *greater than or equal to 1000 acres*;

3b. Discharger applies chlorpyrifos and diazinon, and operation discharges irrigation or stormwater runoff to a waterbody listed for toxicity or pesticides on the 2010 List of Impaired Waterbodies (Table 1);

[3c. Proximity to contaminated well]

3d. After October 1, 2013, any operation that discharges to a waterbody impaired for toxicity and continues to show water or sediment toxicity in the previous two toxicity tests immediately moves to tier 3 unless it can be shown by the operation that the toxicity is caused by legacy contaminants such as DDT/DDE.

Vegetated Buffers and Aquatic Life

80. By October 1, 2015, Tier 3 Dischargers with operations adjacent to or containing a waterbody identified on the 2010 List of Impaired Waterbodies as impaired for temperature, turbidity, or sediment (see Table 1) must develop a Water Quality Buffer Plan... The purpose of the Water Quality Buffer Plan is to control discharges of waste that cause or contribute to exceedances of water quality standards in waters of the State or United States in compliance with this Order and the following Basin Plan requirement:

a. Basin Plan (Chapter 5, p. V-13, Section V.G.4 - Erosion and Sedimentation, *"A filter strip of appropriate width, and consisting of undisturbed soil and riparian vegetation or its equivalent, shall be maintained, wherever possible, between significant land disturbance activities and watercourses, lakes, bays, estuaries, marshes, and other water bodies. For construction activities, minimum width of the filter strip shall be thirty feet, wherever possible. . ."*)

Vegetated Buffers and Aquatic Life

- February 2010 Draft Order
 - 100, 75 and 50-foot buffers (50-foot buffers required for streams that are not impaired).

November 2010 Draft Order

- 30-foot buffer for impaired waters and no buffer along unimpaired waters
- Order R3-2011-0006
 - nothing more than a vague reference to a buffer PLAN for Tier 3 near impaired waterways.

Vegetated Buffers and Aquatic Life

~~80. By October 1, 2015, Tier 3 Dischargers with operations adjacent to or containing a waterbody identified on the 2010 List of Impaired Waterbodies as impaired for temperature, turbidity, or sediment (see Table 1) must develop a Water Quality Buffer Plan... The purpose of the Water Quality Buffer Plan is to control discharges of waste that cause or contribute to exceedances of water quality standards in waters of the State or United States in compliance with this Order and the following Basin Plan requirement:~~

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Vegetated Buffers and Aquatic Life

80. *A vegetated buffer strip of at least 30 feet shall be maintained along all Tier 2 and 3 streams based on the National Hydrography Dataset Plus (NHDPlus,) and a vegetated buffer strip of at least 50 feet shall be maintained along lakes, wetlands, estuaries, and other natural bodies of standing water.*



Thank you!

Are there any questions?

Table 6.6 1995 Nitrate Concentrations in the Salinas Valley Basin

Area or Aquifer	Number of Wells Sampled	Average Nitrate as NO_3 (mg/L)	Number of Wells Greater than DWS ^a	% of Wells Greater Than DWS ^a	Minimum Concentration (mg/L)	Maximum Concentration (mg/L)
Pressure 180-Foot	78	35	15	19	Less than 1.0	402
Pressure 400-Foot	116	8	6	5	Less than 1.0	198
Pressure 180- and 400-Foot	194	19	21	11	Less than 1.0	402
East Side	88	89	32	47	Less than 1.0	397
Forebay	81	45	30	37	Less than 1.0	143
Upper	35	98	23	66	4.0	681
Total Areas	378	41	108	28	Less than 1.0	681
All Areas (excluding P-400 Foot)	262	55	100	38	Less than 1.0	681

^a DWS-Drinking Water Standard

Table 6.7 1995 Nitrate Value Distribution for 378 Study Wells in the Salinas Valley Basin

Nitrate ^a Concentration as NO_3	Number of Wells	% of Wells
Less than 45	272	72
46 to 80	50	14
81 to 135	32	8
Greater than 135	24	6

^aDWS is 45mg/L NO_3





