



**Recommendation for an
Updated Conditional Waiver of Waste
Discharge Requirements
for Discharges from Irrigated Lands**

Item 4
March 14, 2012
Central Coast Water Board Hearing

Background Photo, Elkhorn Slough Watershed 2003

1



Action Before the Board

**Vote on adoption of an updated Agricultural Order
(Draft Order No. R3-2012-0011)**

*“Ensure the highest reasonable quality
for waters of the State”*

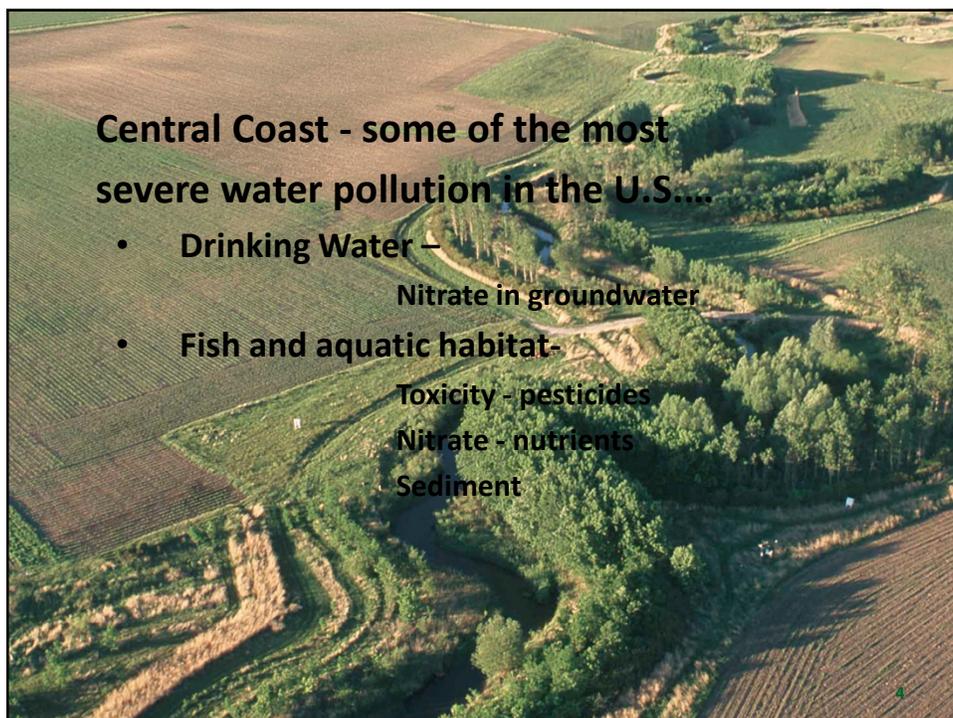
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Overview

- Introduction
- Process to renew Agricultural Order
- Water Quality Conditions
- Summary of Draft Agricultural Order
- Implementation and Enforcement
- Conclusion
- Opportunity for Public Comment
- Staff Recommendation

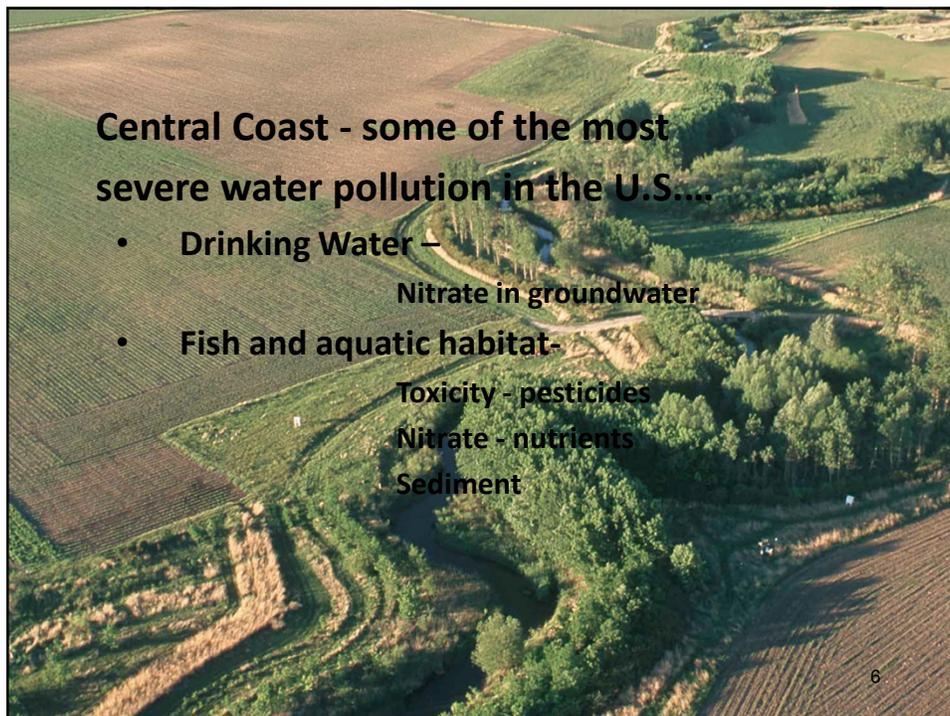
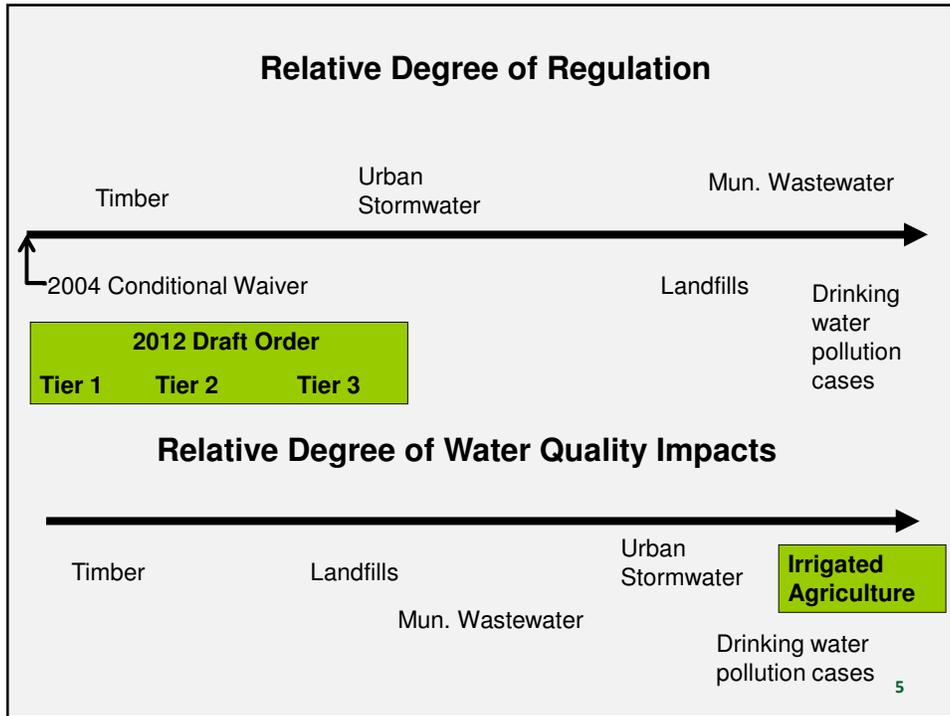
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Central Coast - some of the most severe water pollution in the U.S....

- Drinking Water –
Nitrate in groundwater
- Fish and aquatic habitat-
Toxicity - pesticides
Nitrate - nutrients
Sediment

4





Order includes...

- Implementation practices
 - Groundwater protection
 - Discharge control or treatment
 - Irrigation and nutrient management
- Monitoring & reporting - effectively indicate
 - pollution reduction and
 - water quality improvement

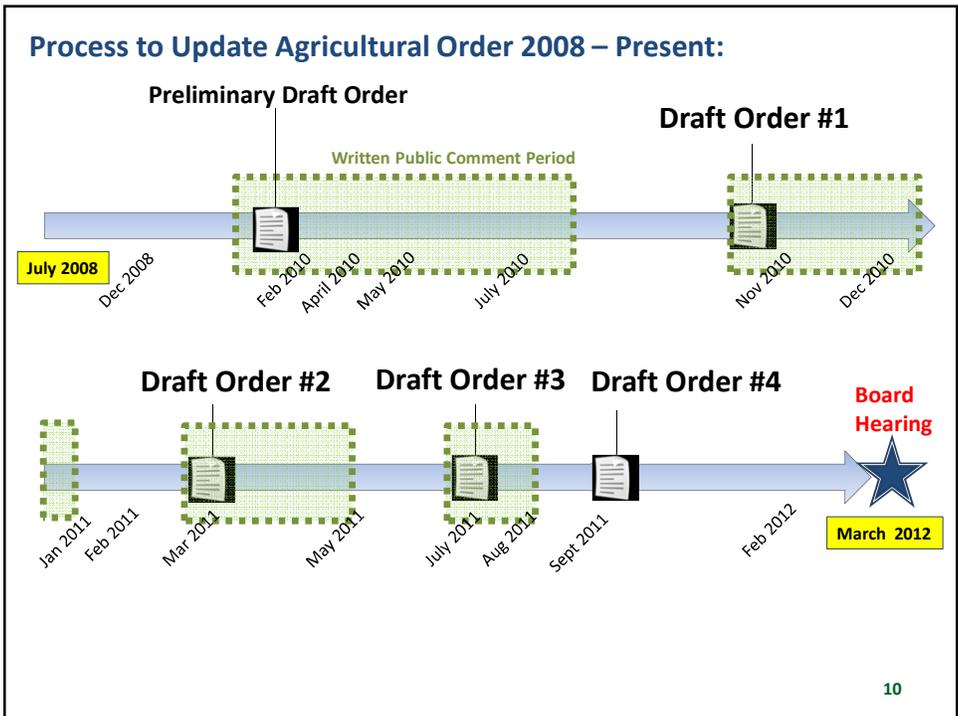
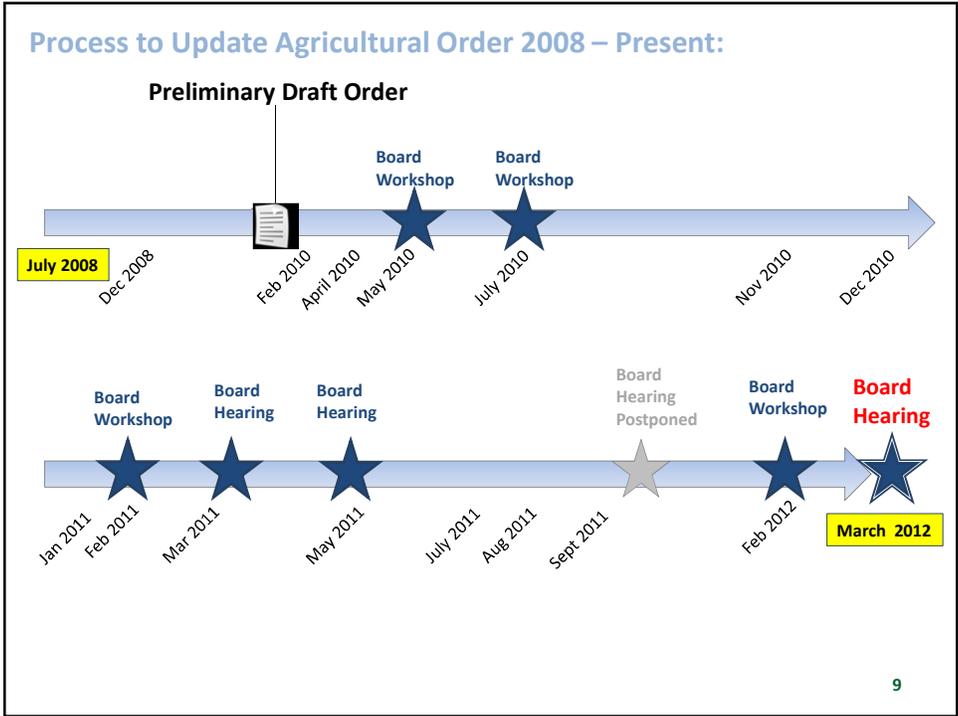
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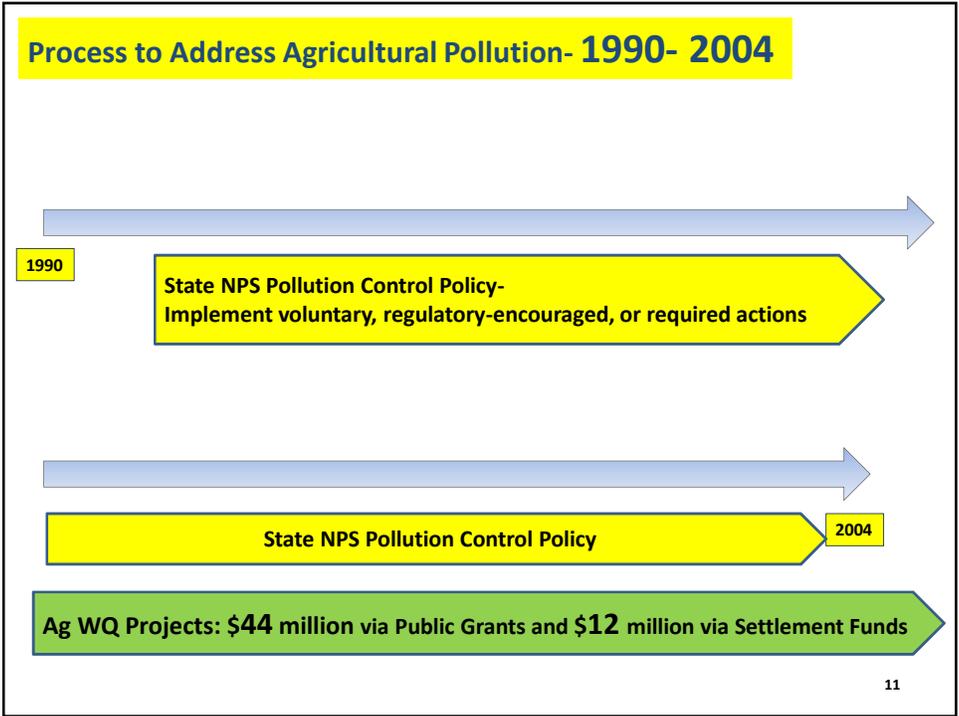


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8





Projects

Research/Education

Monitoring

Management Practices

12

Process to Address

2002 CWA SECTION 303(d) LIST OF IMPAIRED WATERS

REGION	STATE	NAME	CALIFORNIA WATERWAYS	POLLUTANTS	POTENTIAL SOURCES	BIODIVERSITY	BIODIVERSITY ADJUSTMENT
		Salinas River		Chloride	<p>Agriculture</p> <ul style="list-style-type: none"> Agribusiness On-farm Crop Production On-farm Pesticide and/or Fertilizer On-farm Irrigation On-farm Livestock Operations On-farm Fuel Combustion On-farm Land Development On-farm Chemical Use On-farm Storage 		
		Salinas River Laguna Grande	2001210	Phosphate	<p>Agriculture</p> <ul style="list-style-type: none"> On-farm Livestock Operations and/or Cattle On-farm Fuel Combustion On-farm Storage 		
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Page 10 of 22

1990

State NPS P Implement

State NPS Pollution Control Policy

2004

\$\$\$ Ag WQ Projects via Public Grants and Settlement- Funds \$\$\$

2004 NPS Policy

FACT SHEET

POLICY FOR THE IMPLEMENTATION AND ENFORCEMENT OF THE NONPOINT SOURCE POLLUTION CONTROL PROGRAM (NPS Implementation and Enforcement Policy)






Why is The NPS Implementation And Enforcement Policy Necessary?

- California's most serious water quality problem is NPS pollution. Polluted runoff from nonpoint sources accounts for more than 76 percent of the water bodies where Total Maximum Daily Loads (TMDLs) are required.
- The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) was amended in 1999 to require the SWRCB to develop guidance to enforce the state's NPS pollution control program. The SWRCB complied by adopting the NPS Implementation and Enforcement Policy on May 20, 2004. The Office of Administrative Law approved the policy on August 26, 2004.

What Does The Policy Require The RWQCBs To Do?

- The RWQCBs must regulate all nonpoint sources of pollution, using the administrative permitting authorities provided by the Porter-Cologne Act.

The permitting authorities include but are not limited to:

- Basin Plan prohibitions
- Waste Discharge Requirements (WDRs)
- Waivers of WDRs. In addition, Porter-Cologne requires that:
 - Waivers must be conditional and may be terminated at any time.
 - Waivers must be consistent with the public interest and any applicable state or regional water quality control plan.
 - Waivers may not exceed five years, but may be renewed following consideration of the necessity for issuing WDRs.
 - Waivers must be enforced.

What Are Dischargers Required To Do?

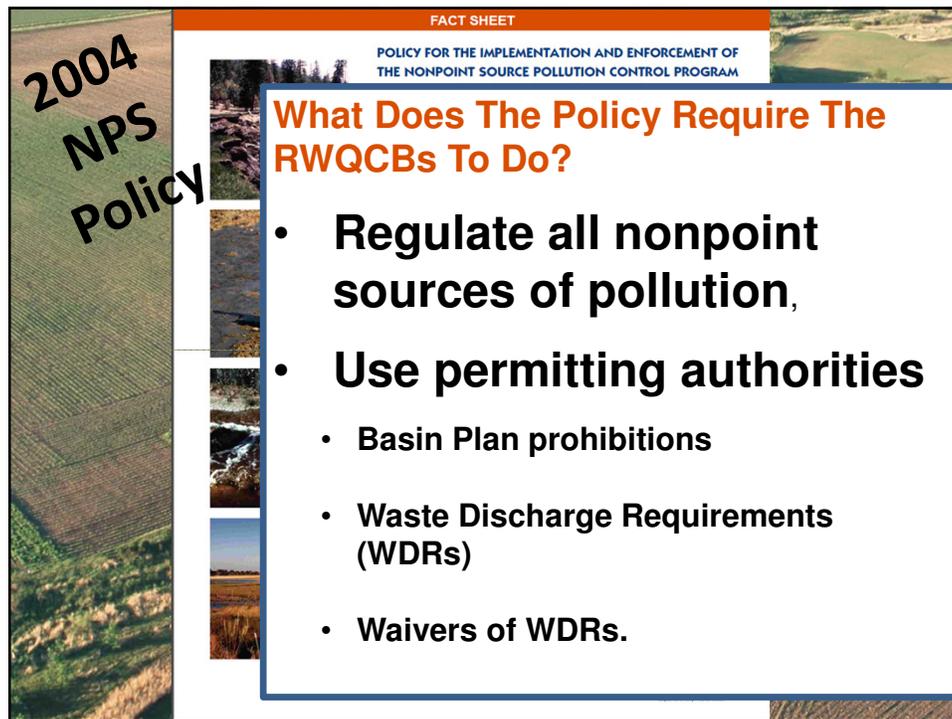
- Dischargers must comply with the administrative permits issued by the RWQCBs by participating in the development and implementation of NPS pollution control programs, either individually or collectively as participants in third-party coalitions.
- NPS pollution control implementation programs may be developed by a RWQCB, an individual discharger, or a discharger coalition in cooperation with a third-party representative, organization or government agency. The third-party role is restricted to entities that are not actual dischargers under RWQCB/SWRCB permitting and/or enforcement jurisdiction.



http://www.swrcb.ca.gov/water_issues/programs/nps/docs/npsfactsheet.pdf

14

7



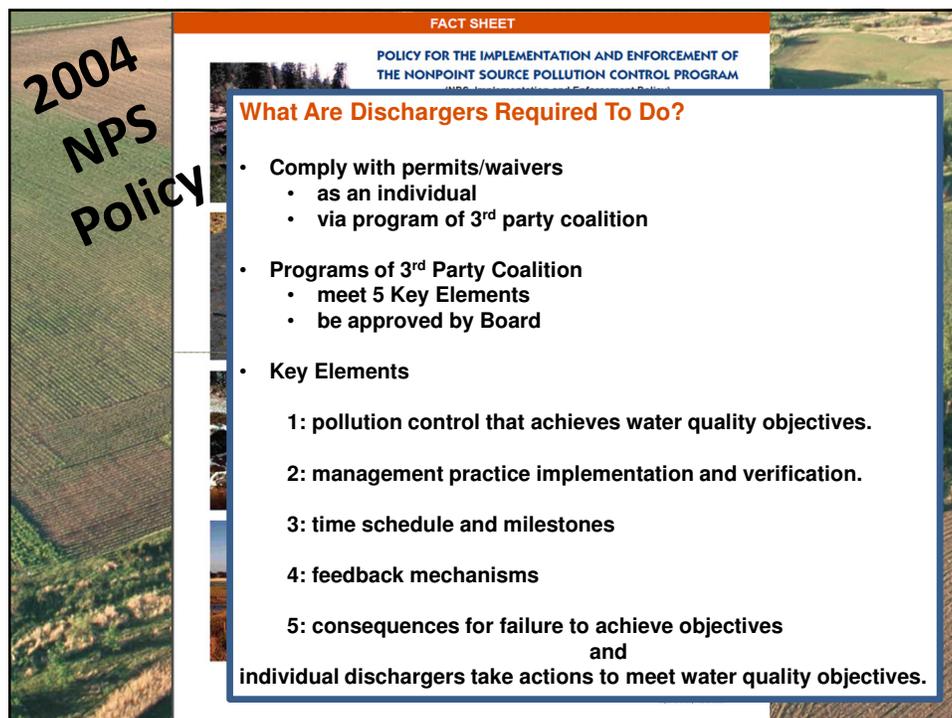
2004 NPS Policy

FACT SHEET

POLICY FOR THE IMPLEMENTATION AND ENFORCEMENT OF THE NONPOINT SOURCE POLLUTION CONTROL PROGRAM

What Does The Policy Require The RWQCBs To Do?

- **Regulate all nonpoint sources of pollution,**
- **Use permitting authorities**
 - Basin Plan prohibitions
 - Waste Discharge Requirements (WDRs)
 - Waivers of WDRs.



2004 NPS Policy

FACT SHEET

POLICY FOR THE IMPLEMENTATION AND ENFORCEMENT OF THE NONPOINT SOURCE POLLUTION CONTROL PROGRAM

What Are Dischargers Required To Do?

- **Comply with permits/waivers**
 - as an individual
 - via program of 3rd party coalition
- **Programs of 3rd Party Coalition**
 - meet 5 Key Elements
 - be approved by Board
- **Key Elements**
 - 1: pollution control that achieves water quality objectives.
 - 2: management practice implementation and verification.
 - 3: time schedule and milestones
 - 4: feedback mechanisms
 - 5: consequences for failure to achieve objectives
and
individual dischargers take actions to meet water quality objectives.

2004 NPS Policy- voluntary → required

- Implement and verify practices
- Meet water quality objectives
- Monitor and report
- Be Accountable
 - Adapt practices
 - Enforcement

• Waivers must be conditional and may be terminated at any time.
 • Waivers must be consistent with the public interest and any applicable

2004 Conditional Waiver

In response to WQ Problems

After 20+ Years of \$\$\$ and Assistance

Water Boards

17

3rd Party Programs

- Allowed by NPS Policy
- Ag Group Proposal- 3rd Party
- Ag Group Proposal inconsistent with NPS Policy and Water Code

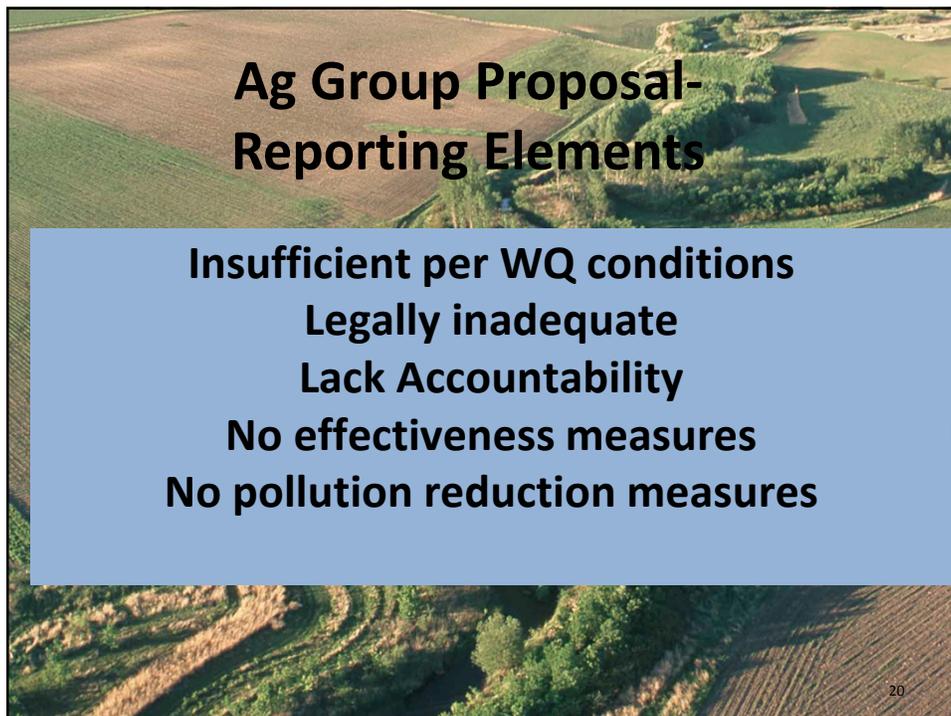
18



Ag Group Proposal- Reporting Elements

- Names of participants
- Number of operations audited
- Watersheds where audits conducted
- Aggregated summary of audit results
- Summary of 3rd party assistance
- Summary of education workshops

19



Ag Group Proposal- Reporting Elements

Insufficient per WQ conditions
Legally inadequate
Lack Accountability
No effectiveness measures
No pollution reduction measures

20

Reporting Elements Compared

Staff 2012 Draft Order	Ag Industry Group Proposal
Receiving Water	Receiving Water
Nitrate loading indicators (tiers 2 and 3) <ul style="list-style-type: none"> e.g., nitrogen applied short-term, farm-level 	NONE
Pollution reduction indicators (tiers 2, 3) <ul style="list-style-type: none"> e.g., less chemical use short-term, farm-level 	NONE
Practice effectiveness indicators (tiers 2, 3) <ul style="list-style-type: none"> e.g., amount of sediment controlled short-term, farm-level 	NONE
Individual discharge (tier 3)	NONE

21

Environmental Organization's Alternative Proposal

- February 2010 Staff Draft Order
- "More protective of water quality"
 - Monitoring requirements
 - Increased erosion and sediment control
 - Riparian area protection
 - Clarification

22



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25



Nitrate in Drinking Water

Regional-scale groundwater pollution

“Every citizen of California has the right to pure and safe drinking water.”

Section 116270(a) of the California Health and Safety Code

26

Recent Research by Lawrence Livermore National Laboratory

- 2011 Salinas Valley nitrate study
 - Source is chemical fertilizer
 - San Jerardo well
 - Pollution is legacy AND recent
 - Well pumping accelerates movement



Gloria Martinez



Mercedes Amezquita

- 2005 Llagas Groundwater Basin
 - Chemical fertilizer
 - Recent nitrate loading (years)
 - Increasing nitrate trends

27

Impacts of Nitrate Pollution

Public Drinking Water Wells:

- King City - **\$1.5+ Million(x4)**
- Salinas - **\$2 Million/yr**
- Morro Bay - **\$1.5 Million**
- San Jerardo - **\$4+ Million**

Private Domestic Drinking Water Wells:

- Reverse Osmosis: **\$800, + \$100/year**
- Bottled Water: **\$350/year**

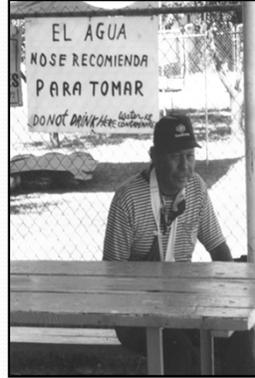
Monterey Co. Elementary School – Bottled Water \$400/mo.



28

Water Board's Highest Priorities

- Domestic wells
 - Data indicate 20-40% of domestic wells in agricultural areas exceed drinking water standard
- Farm labor camps
- Schools
 - Anchor point Academy
- Local Communities
 - San Lucas
 - King City
 - San Jerardo
- Protecting all Beneficial Uses



29

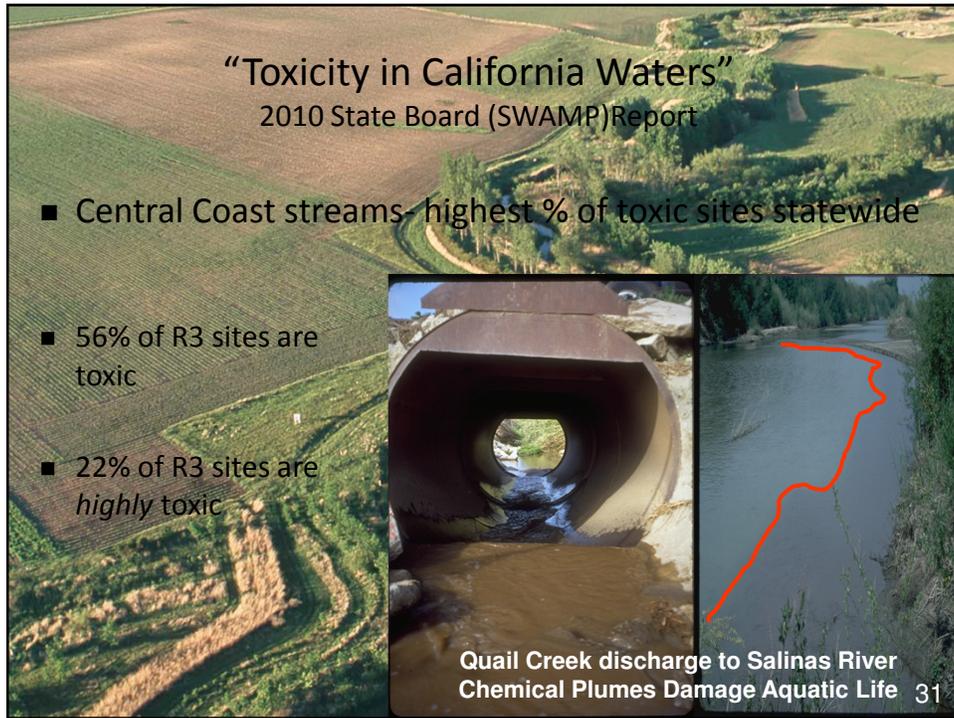
Surface Water Quality in Agricultural Areas

Karen Worcester
Staff Environmental Scientist

30

“Toxicity in California Waters” 2010 State Board (SWAMP) Report

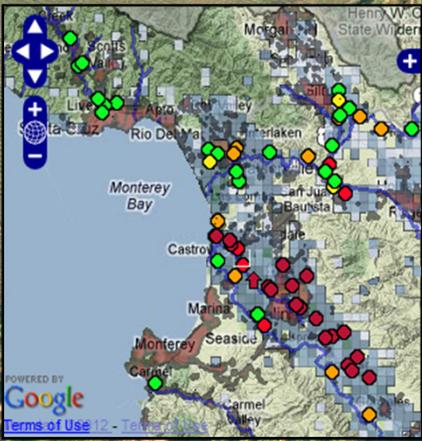
- Central Coast streams- highest % of toxic sites statewide
- 56% of R3 sites are toxic
- 22% of R3 sites are *highly toxic*



Quail Creek discharge to Salinas River
Chemical Plumes Damage Aquatic Life 31

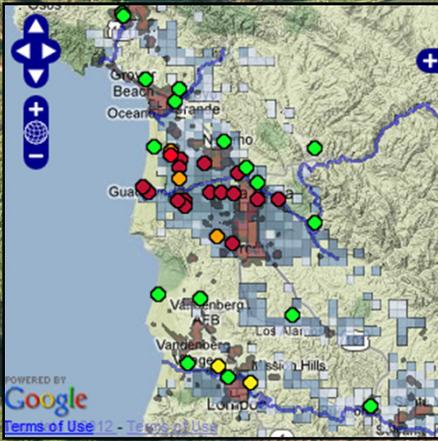
Salinas and Santa Maria areas are severely impaired by toxicity

Lower Salinas Area



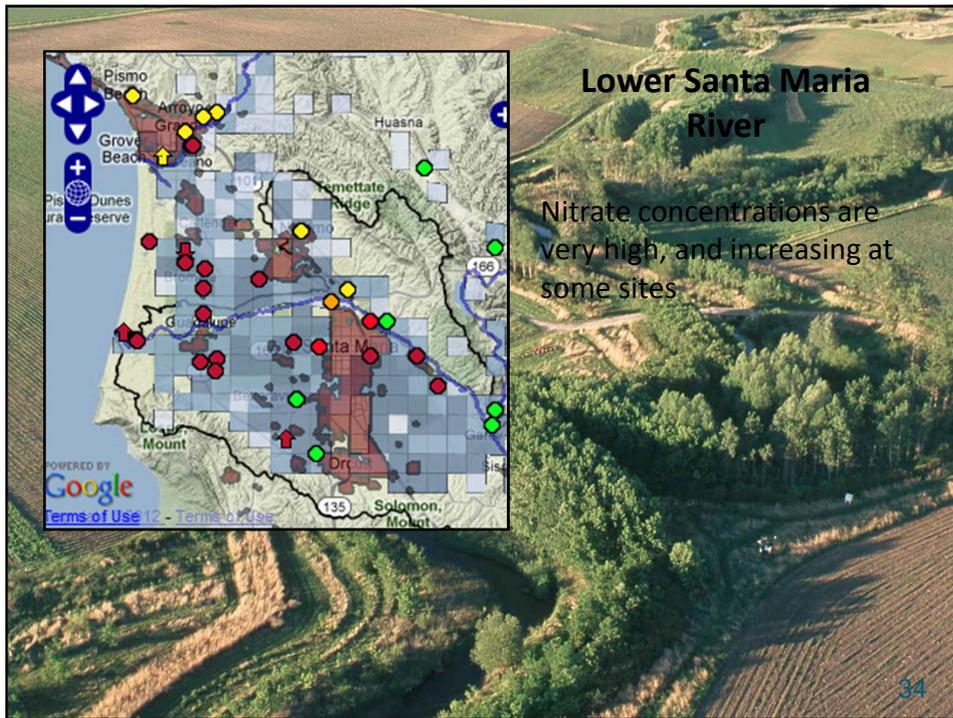
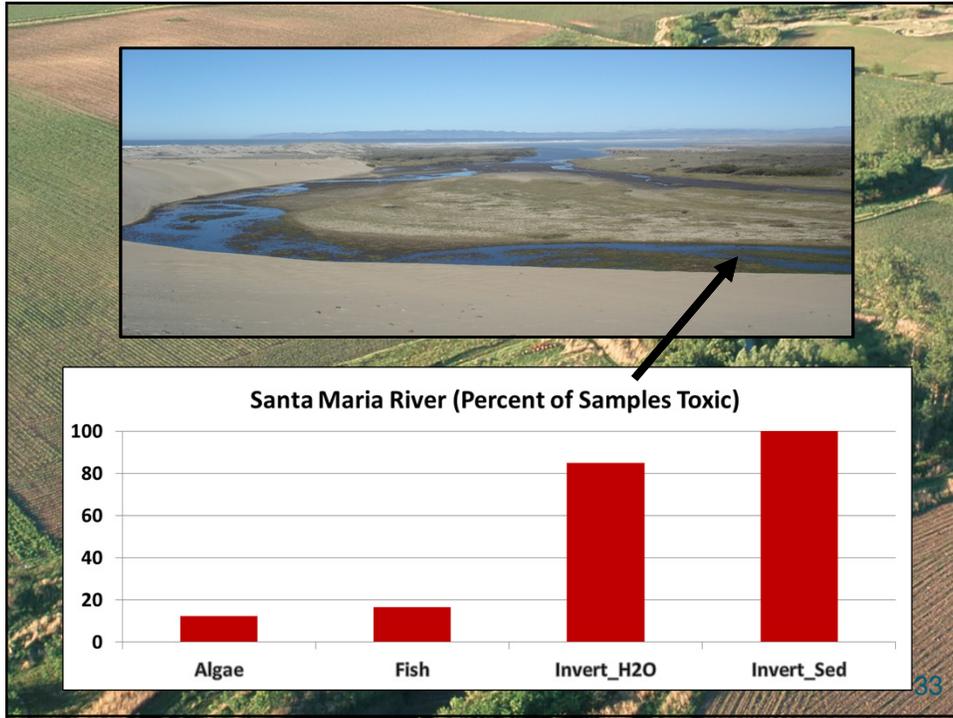
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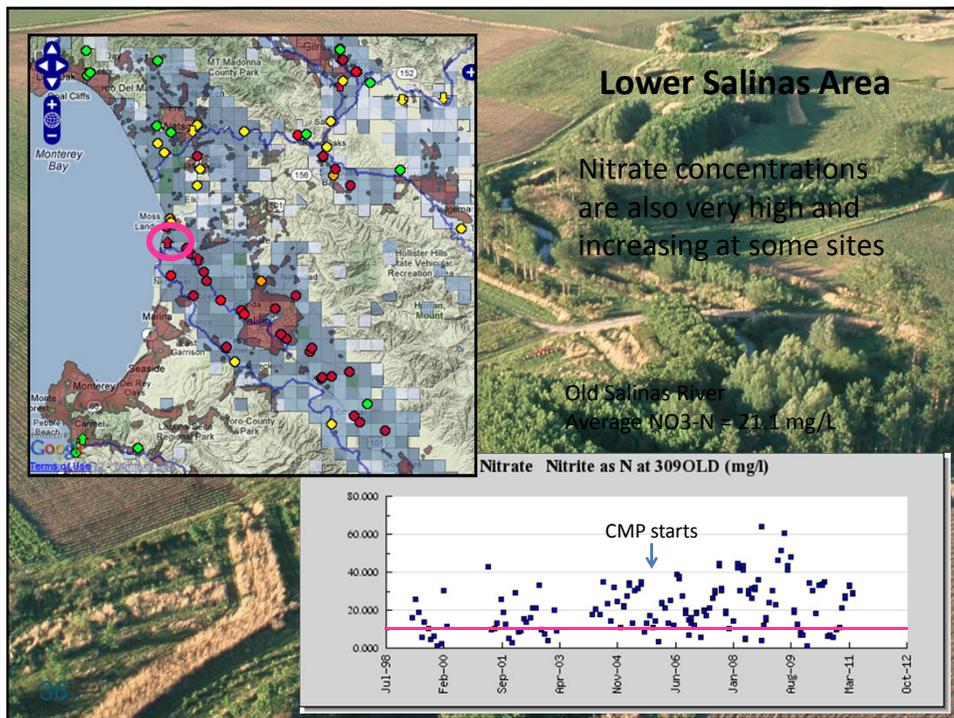
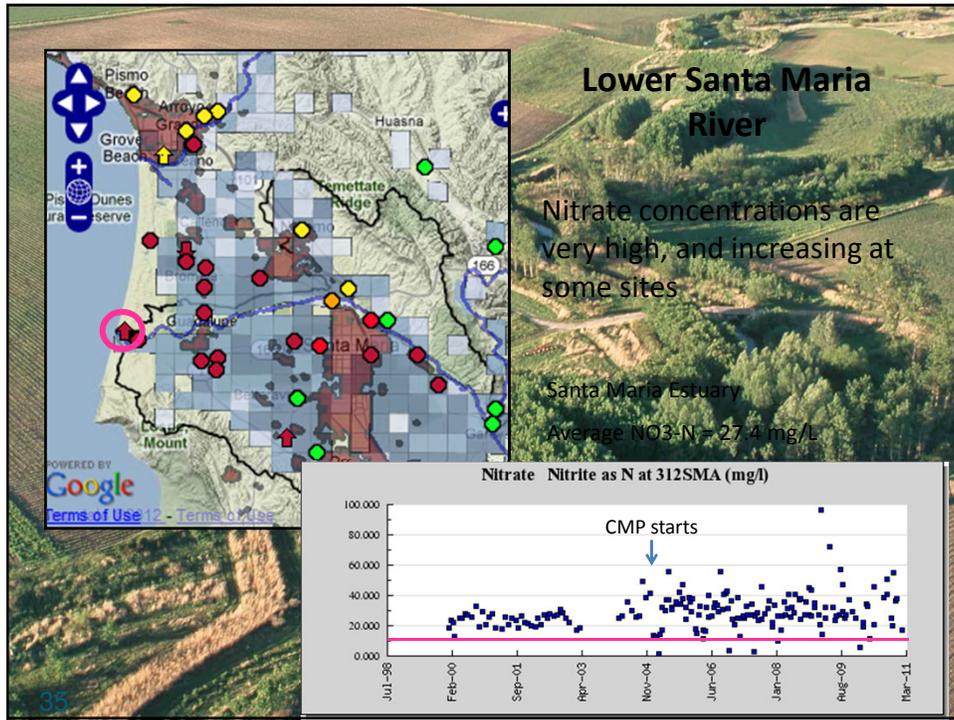
Lower Santa Maria Area

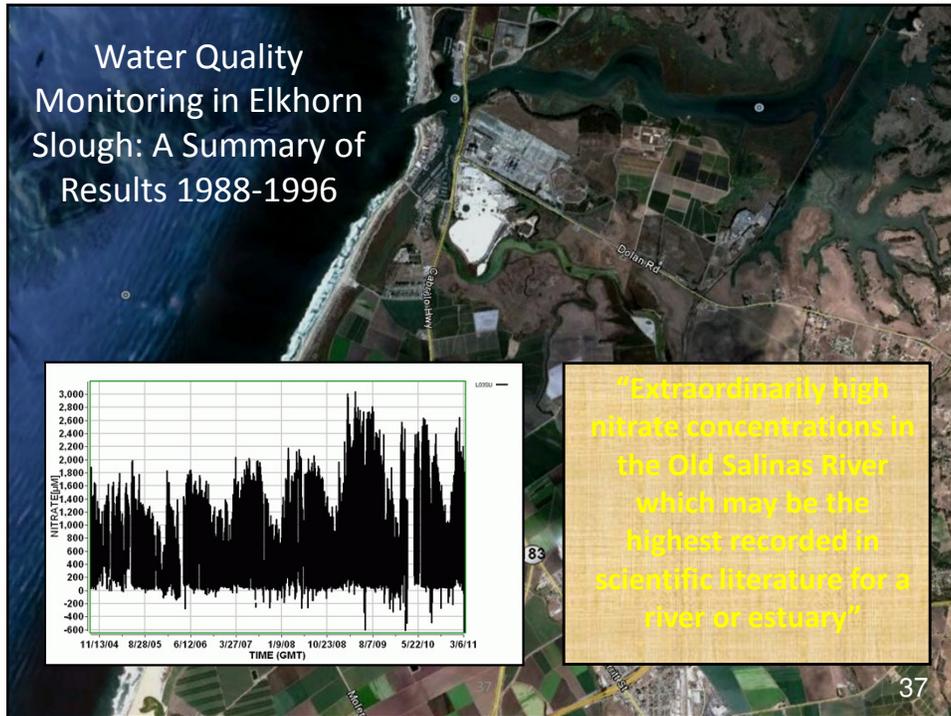


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32







In summary

In many agricultural areas, especially the lower Salinas and Santa Maria rivers:

- Extremely high nitrate concentrations
- Widespread toxicity
- Very poor biological health
- Most sites do not show improvement, but some loads are decreasing

These waters are not healthy for aquatic life and are not supporting recharge of drinkable groundwater

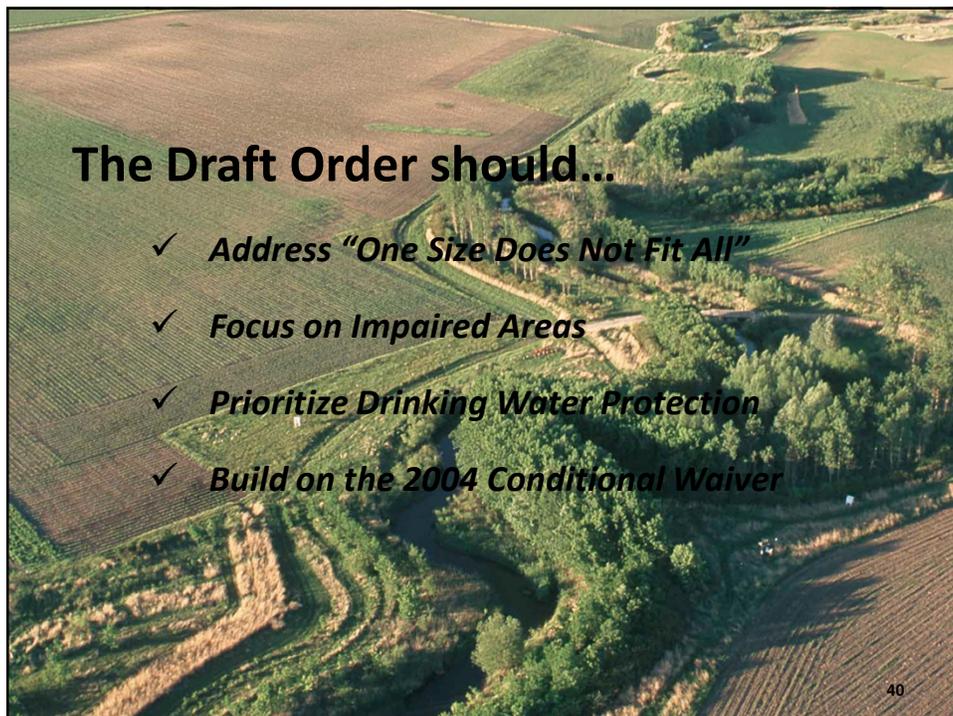
38



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39



The Draft Order should...

- ✓ *Address "One Size Does Not Fit All"*
- ✓ *Focus on Impaired Areas*
- ✓ *Prioritize Drinking Water Protection*
- ✓ *Build on the 2004 Conditional Waiver*

40

Proposed Tiers and Criteria

Address "one size does not fit all"
Focus on impaired areas
Prioritize drinking water protection

Tier 1 (Lower Threat)

- NO chlorpyrifos or diazinon
- NO impaired surface water or drinking water well
- If nitrogen loading crop, must be less than 50 acres
- Or Sustainable-In-Practice (SIP) Certified (or similar)

Tier 2

- Chlorpyrifos or diazinon
- Impaired surface water or drinking water well
- If nitrogen loading crop, between 50 – 500 acres

Tier 3 (Higher Threat)

- Chlorpyrifos or diazinon, and discharge to impaired surface water
- If nitrogen loading crop, greater than or equal to 500 acres

41

2004 Conditional Waiver

Meet Water Quality Standards

File / Update Notice of Intent

Farm Plan

- irrigation management
- pesticide management
- nutrient management
- erosion management
- schedules to implement

Management Practice Checklist

**Surface Receiving Water
Monitoring**

Education, Time Schedules

**Groundwater Monitoring and
Reporting**

**Backflow prevention and Proper
Well Abandonment**

**Annual compliance info -
Online entry form**

- Total Nitrogen Applied Reporting**
- Photo Monitoring**

42

2012 Order Tier 1	2012 Order Tier 2	2012 Order Tier 3
<p><i>Tier 2 Minus:</i></p> <p>Annual compliance info - Online entry form</p>	<p>Meet Water Quality Standards</p> <p>File / Update Notice of Intent</p> <p>Farm Plan</p> <ul style="list-style-type: none"> -- irrigation management -- pesticide management -- nutrient management -- erosion management -- schedules to implement <p>Management Practice Checklist</p> <p>Surface Receiving Water Monitoring</p> <p>Education, Time Schedules</p> <p>Groundwater Monitoring and Reporting</p> <p>Backflow prevention and Proper Well Abandonment</p> <p>Annual compliance info - Online entry form</p> <ul style="list-style-type: none"> -- Total Nitrogen Applied Reporting** -- Photo Monitoring** 	<p><i>Tier 2 Plus:</i></p> <p>Ind. Discharge Monitoring</p> <p>Irrigation and Nutrient Mgmt. Plan**</p> <p>Nutrient Balance Targets**</p> <p>Water Quality Buffer Plan**</p>
		<p>**Subset of Tier</p>
		<p>43</p>

2012 Order Tier 1	2012 Order Tier 2	2012 Order Tier 3
<p>141,186 Acres (39%)</p> <p>1986 Farms (55%)</p>	<p>174,150 Acres (47%)</p> <p>1523 Farms (42%)</p>	<p>51,019 Acres (14%)</p> <p>103 Farms (3%)</p>
	<p>Education, Time Schedules</p> <p>Groundwater Monitoring and Reporting</p> <p>Backflow prevention and Proper Well Abandonment</p> <p>Annual compliance info - Online entry form</p> <ul style="list-style-type: none"> -- Total Nitrogen Applied Reporting** -- Photo Monitoring** 	<p>Water Quality Buffer Plan**</p> <p>**Subset of Tier</p>
		<p>44</p>



Incentives

- Sustainable Certifications (Condition #14.1d)
- Transfer to lower tier (Condition #17)
- Cooperative projects (e.g. treatment wetlands and managed aquifer recharge) → alternative monitoring and time schedules (Finding #11)

45



Flexibility / Alternatives

- Individuals or groups can request specific order (Condition #6)
- Third-party groups acceptable (Condition #10)
- Cooperative or individual surface receiving water monitoring (Condition #51)
- Cooperative or individual groundwater monitoring (MRP Part 2A.6)
- Use of existing groundwater data (MRP Part 2A.3)

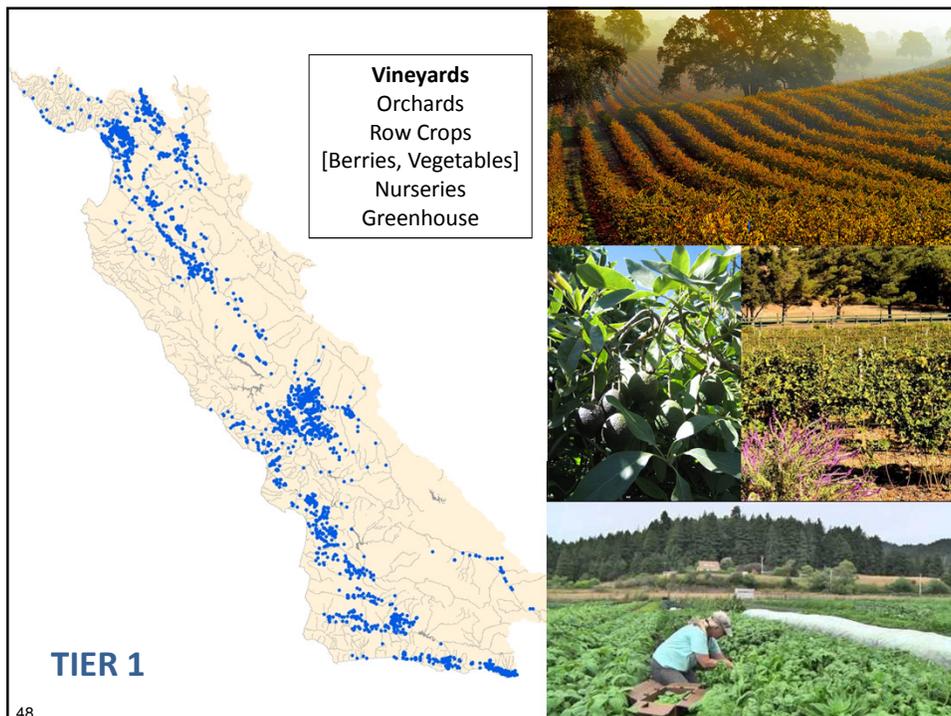
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Flexibility / Alternatives cont.

- Evaluate nitrate loading risk by farm or unit (Condition #68)
- Alternative to Tier 2 reporting total nitrogen applied (Condition #71)
- Alternative to Tier 3 certified Irrigation and Nutrient Management Plan (Condition #76)
- Alternative to Tier 3 Water Quality Buffer Plan (Condition #80b)



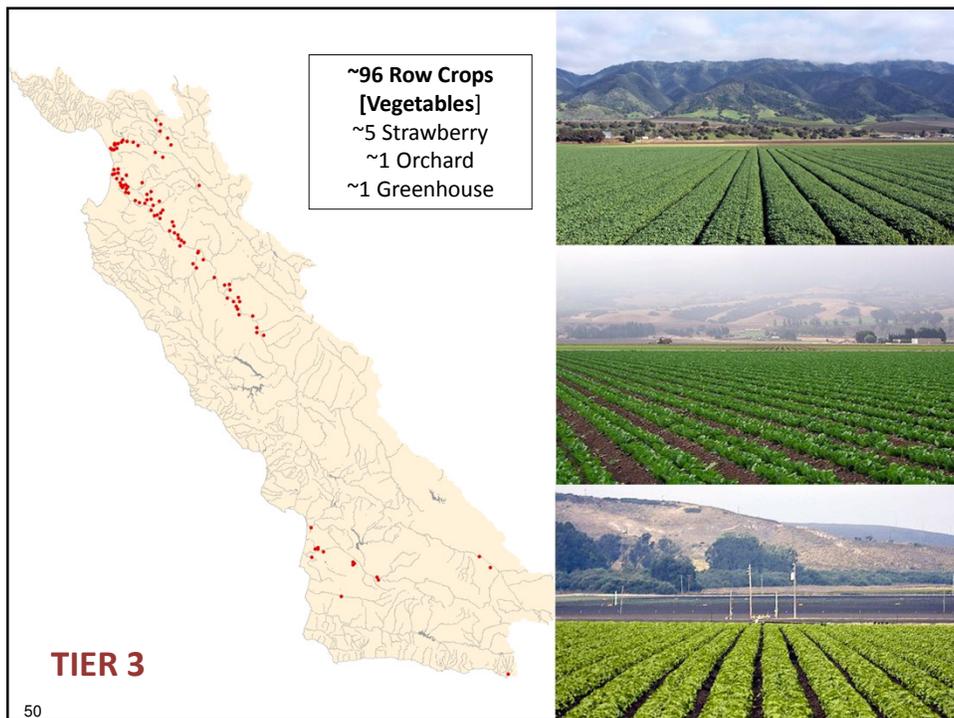
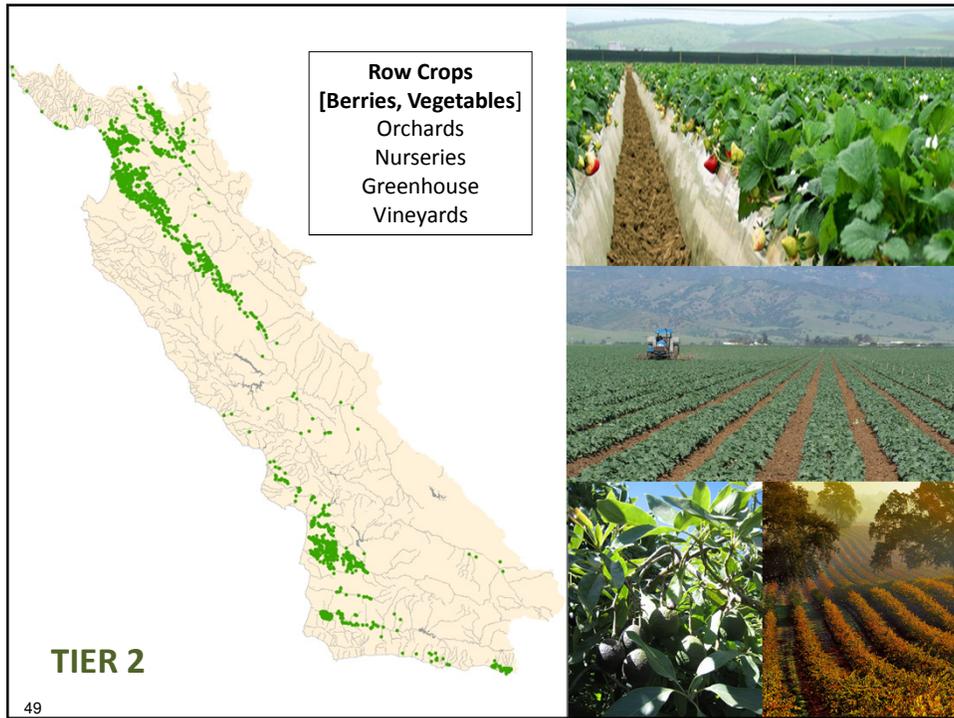
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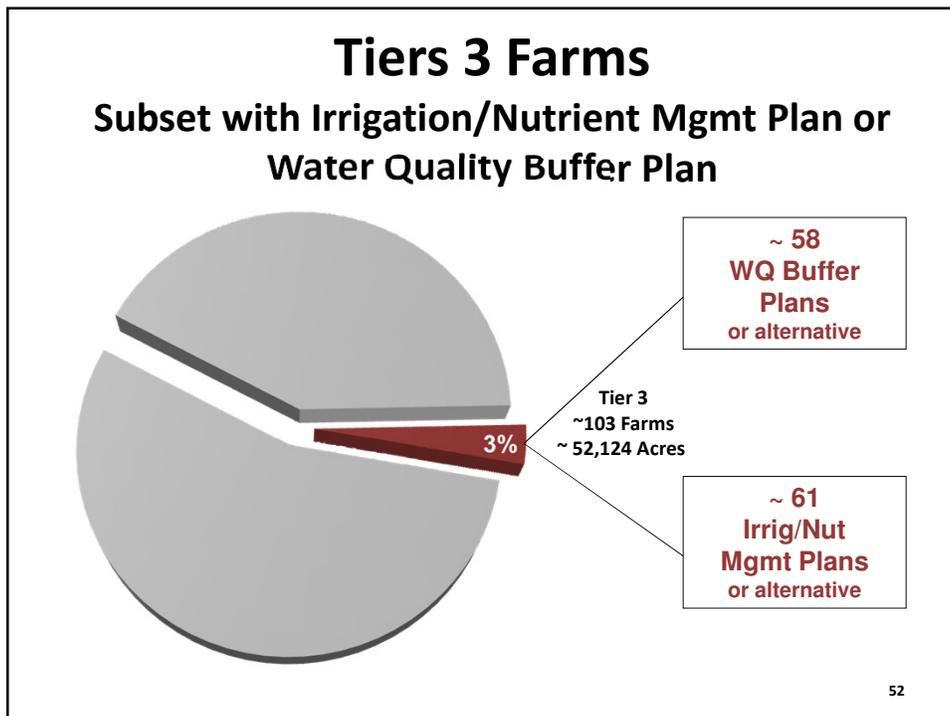
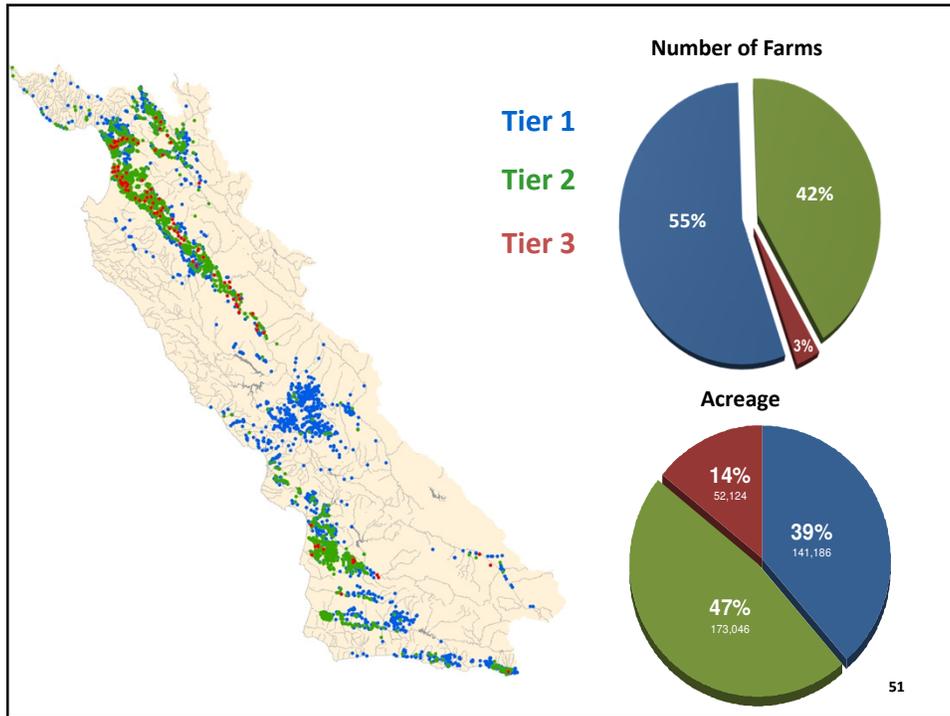


Vineyards
Orchards
Row Crops
[Berries, Vegetables]
Nurseries
Greenhouse

TIER 1

48





What new information is gained?

All

- Data to identify groundwater impacted by nitrate
- Data to protect drinking water beneficial uses
- Individual pesticides detected in surface water
- Farms certified sustainable

Many

- Farms with increased nitrate loading risk
- Practices implemented
- Indicators that practices are effective and pollutant load is reduced

Some higher risk farms

- Certification of irrigation and nutrient management plans
- Data to evaluate the quality of individual discharges
- Protection of adjacent surface water
- Verification of progress and effectiveness, specific indicators and milestones

53



54



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55

Conditional Waiver of Waste Discharge Requirements Enforcement Approach

2012 Conditional Waiver includes administrative type requirements:

- Enrollment
- Fees
- On-line Report Submittal Due Dates

Staff can pursue enforcement for violations of these administrative requirements.

Typical Sequence:

- Phone call or email
- Letter to discharger
- Notice of Violation
- 2nd Notice of Violation
- Propose Fine
- Board Hearing

56

Conditional Waiver of Waste Discharge Requirements Enforcement Approach

What about enforcement of water quality standards?

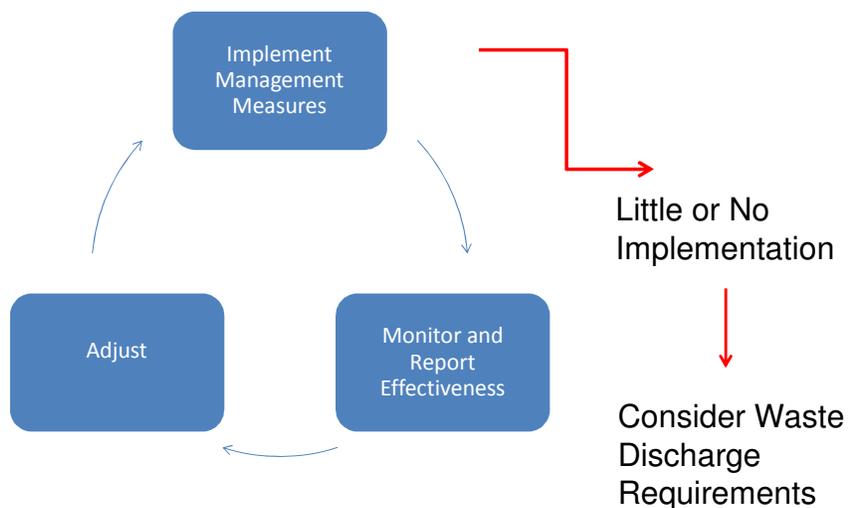
Will farmers be in violation and subject to enforcement when the Order is adopted? **No.**

Permits States (Attachment A, page 2):

The Central Coast Water Board recognizes that Dischargers may not achieve immediate compliance with all requirements. Thus, this Order provides reasonable schedules for Dischargers to reach full compliance over many years by implementing management practices and monitoring and reporting programs that demonstrate and verify measurable progress annually.

57

Meeting Water Quality Objectives Over Time Iterative Process



58



The Best Defense is a Good Offense
Erosion Control/Vegetative
Management





Standards in Practice Certification

- Standards look at the farm in its entirety:
 - the worker
 - soil fertility
 - cover crops
 - wildlife
 - native plants
 - Irrigation
 - and more



Staff Resources Dedicated

- **Lisa McCann**
- **Angela Schroeter**
- **Monica Barricarte**
- **Matt Keeling**
- **Karen Worcester**
- Mary Adams
- Barbara Brooks
- Cecile DeMartini
- Stacy Denney
- Katie DiSimone
- Donette Dunaway
- John Goni
- Phil Hammer
- Hector Hernandez
- Corinne Huckaby
- Mike Higgins
- Alison Jones
- Cyndee Jones
- Howard Kolb
- Shanta Keeling
- Sorrel Marks
- Peter Meertens
- John Mijares
- Gary Nichols
- Jill North
- Harvey Packard
- John Robertson
- Dominic Roques
- Chris Rose
- Elaine Sahl
- Steve Saiz
- Kim Sanders
- Sheila Soderberg
- Todd Stanley
- Dean Thomas
- Thea Tryon

Priorities Deferred

- **Ag Program Implementation (Compliance Eval., Assistance and Enforcement)**
- **Public Health Protection: Drinking Water**
- **Total Maximum Daily Load Orders: Address severe Ag issues**
- **Basin Plan Amendments**

63

The Water Board's mission is:

To preserve, enhance, and restore the quality of California's water resources... for the benefit for present and future generations.



64

Our Environmental Justice Policy goal is to:

Integrate Environmental Justice considerations into the development, adoption, implementation and enforcement of Board decisions, regulations and policies.



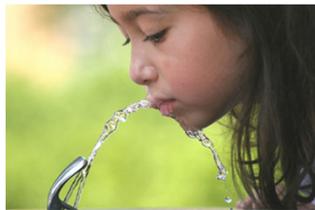
Sonia Lopez and her son Leonardo

“Our problem is going to be your problem,” she said. “It’s everyone’s problem. There are solutions, but we need the people in charge of our communities to do something about it.”

65

Porter Cologne says the Water Board:

...must be prepared to exercise its full power and jurisdiction to protect the quality of waters in the state from degradation...



“Every citizen of California has the right to pure and safe drinking water.”

Section 116270(a) of the California Health and Safety Code



66

Conclusion

- Water quality degradation is severe and getting worse.
- Threat to public health is paramount– we must act now and comply with our laws, plans, and policies.
- We cannot negotiate away protection of public health or public resources.
- Delay prevents implementation and action on priority cases.
- Unwillingness to submit data or specified information is not a reason to delay.
- Solutions are available.

67

