

CONTINUATION MARCH 17, 2011 - ITEM 14

**Conditional Waiver of
Waste Discharge Requirements
Discharges from Irrigated Lands**

**Central Coast Water Board
May 4, 2011
Item 4**

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Panel Hearing Continuation

Continue Public Comment

Staff Conclusion and Recommendation

Board Panel Discussion

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Overview

Staff Presentation - 3/17

Water quality problems severe

Order addresses water quality problems

Includes three Tiers

Tier 3 - More discharge control requirements

Many changes in response to comments

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2011 Order Tier 1

Tier 2 Minus:

Annual compliance info -
Online entry form

2011 Order Tier 2

Meet Water Quality Standards

File Notice of Intent

Farm Plan

-- irrigation management

-- pesticide management

-- nutrient management

-- erosion management

-- schedules to implement

Surface Water Monitoring

Education

Time Schedules

Annual compliance info – Online entry

Groundwater sampling and reporting

Backflow prevention

2011 Order Tier 3

Tier 2 Plus:

Individual Runoff
Monitoring

Water Quality Buffer Plan

Irrigation and Nutrient
Mgmt Plan (N balance)

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Public Comments

Oral comments from 3/17

Would have closed hearing, but room closed

Continue comments from those who
submitted cards 3/17

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Continue Public Comment

**Yellow light – get to conclusion.
Otherwise, when the timer beeps,
please finish the sentence and stop.**

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BREAK

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**Staff Conclusion and
Recommendation**

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Public Comments

Groundwater Conditions

Protect Drinking Water

Accountability

Nitrate Loading Risk from Strawberries

Cost and Economic Issues

Farm Bureau Proposal

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Public Comments - Specific

Tier individual farms, instead of operations

Tiering criteria – acreage

Include additional pesticides

Allow use of Nitrate Hazard Index

Remove EO authority to modify tiering criteria

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Staff Response to Comments

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Nitrate Loading and Groundwater Conditions

Nitrate loading significant

Water quality conditions severe

Drinking water supplies impacted

Overwhelming evidence

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Response to Nitrate Loading Risk from Strawberry Production Issues Raised by Strawberry Commission

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Staff Response to Strawberry Commission Comments

- Staff does not agree that strawberries are low risk
- Strawberries determined high risk due to crop characteristics¹
- Results of strawberry study² – March 17
 - Too few farms to represent region
 - Santa Maria underrepresented
 - Compost application not included
 - Only measures part of growing season

¹ University of California, Division of Agriculture and Natural Resources

² University of California, Cooperative Extension

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Staff Response to Strawberry Commission Comments

- Results of strawberry study show:
 - Strawberries nitrogen needs
 - Subset of growers implementing efficient practices
 - Strawberry growers can reduce nitrate loading
- Order provides opportunity to move to lower tier – INCENTIVE
 - Dischargers provide information (Condition 17)
 - Example: Show strawberry farm meeting nutrient balance ratio target of 1.2*

*Considers all sources of Nitrogen, not only fertilizer applications

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Staff Response - Farm Bureau Proposal Update March 2011

Coalitions and audits- Order allows

Inadequate monitoring, reporting, time schedules and milestones

Does not protect drinking water

Included groundwater sampling in Dec 2010, then eliminated in March 2011 version

Not enforceable

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Staff Response - Comments to Tier Farms Instead of Operations

- **Comment:** “Draft Order tiering criteria should use characteristics of individual farms, not operations”
- Staff agrees and recommends changes to Draft Order.

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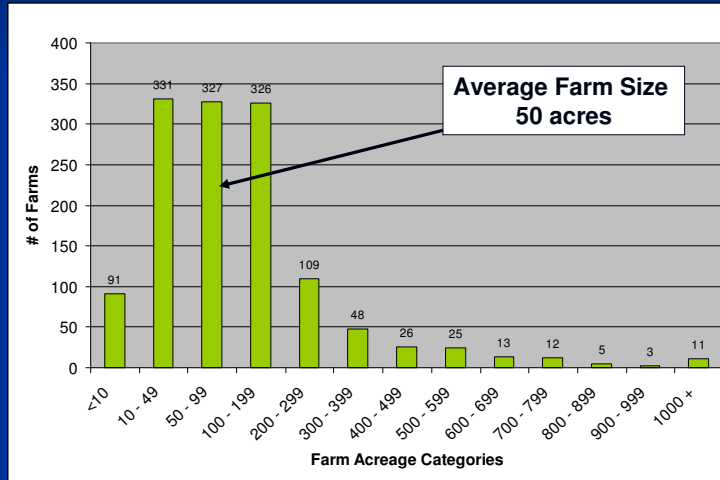
Staff Response - Comments on Use of Acreage in Tiering Criteria

- **Comment:** “Tiering criteria should not be based on acreage”
- Staff evaluated individual farm acreage relative to nitrate loading risk and concludes that farm size is a meaningful tiering criteria.

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Farms with High Potential to Load Nitrate to Groundwater

~1372 Farms / ~189,000 Acres



*Based on 2011 eNOI

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Is your N application program reasonable ?

In more than 100 lettuce fields monitored over the past decade ...

	Seasonal N application (lb /acre)	
	Spring planting	Summer planting
High	392	306
Low	70	27
Average	215	152
Average of lowest 50% of fields	149	106
Average of highest 50% of fields	281	198

Graphic presented at the 2011 Irrigation and Nutrient Management Meeting and Cover Crop and Water Quality Field Day Presentations (UCANR)

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Relative Nitrate Loading Potential Based on Acreage

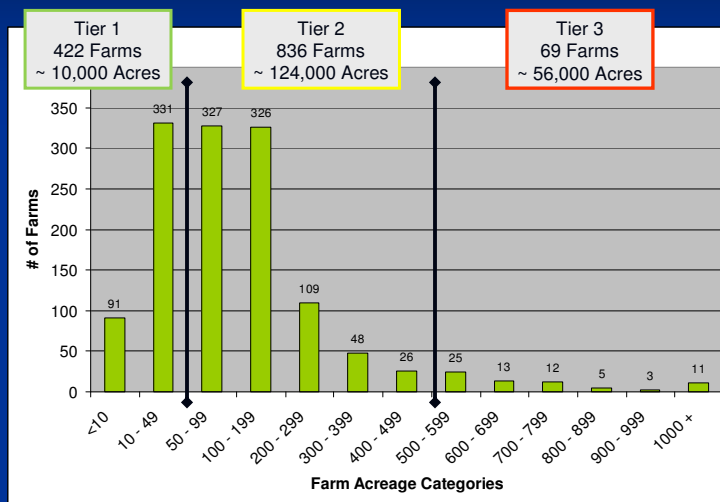
Farm Size (acres)	Potential Excess Nitrogen Applied (lbs N)*	Relative Nitrate Loading
10	x 75 lb/acre = 750	0.2X
50	x 75 lb/acre = 3750	1
100	x 75 lb/acre = 7500	2X
500	x 75 lb/acre = 37,500	10X
1000	x 75 lb/acre = 75,000	20X
5000	x 75 lb/acre = 375,000	100X

Average farm size = 50 acres.

* Example: Average seasonal nitrogen application lettuce = 215 lb/acre and crop need = 140 lb/acre, 215 - 140 = 75 lb/acre excess nitrogen average per season (based on UCCE data).

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Farms with High Potential to Load Nitrate to Groundwater



*Based on 2011 eNOI

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Recommended Change Tier 3 Criteria

- ~~Operation > 1000~~ Farm \geq 500 acres, and grows crops with high potential to load nitrate to groundwater; or
- Use chlorpyrifos or diazinon, and discharge to waterbody impaired for toxicity or pesticides;

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Staff Response - Comments to Allow Use of UC Nitrate Hazard Index

- **Comment:** "Draft Order should allow use of UC Nitrate Hazard Index, including soil type"
- Staff agrees and recommends changes to Draft Order.

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Staff Response - Comments to Include Additional Pesticides in Tiering Criteria

- **Comment:** “Tiering criteria should include additional pesticides”
 - Toxicity is a result of more than just chlorpyrifos and diazinon
 - Lots of pesticides can cause toxicity and won't be addressed
 - By focusing on 2 specific chemicals, growers are likely to switch pesticides.

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Staff Response - Comments to Include Additional Pesticides in Tiering Criteria

- **Draft Order includes:**
 - Toxicity monitoring in receiving surface water
 - Pesticide monitoring in receiving surface water
 - Toxicity Identification Evaluation (TIE) follow-up
 - Tier 3 - Individual discharge monitoring for toxicity and pesticides.
 - EO can add pesticides to monitoring, based on use
 - Board can change tiering criteria
- **Consequences of adding pesticides**
- **No changes recommended at this time**

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Staff Response - Comments to Remove EO Authority to Change Tiering Criteria

- **Comment:** “Board should have exclusive authority to modify tiering criteria, not Executive Officer”
- Staff agrees and recommends changes to Draft Order.

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Summary of Recommended Changes to Draft Order

Tier individual farms, instead of operations

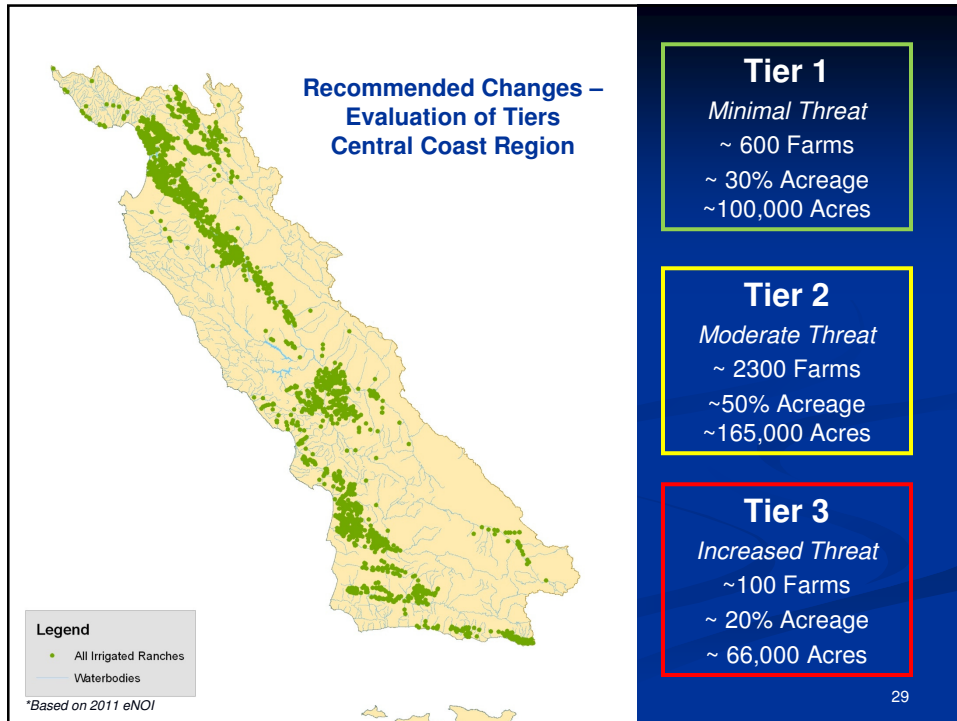
Modify tiering criteria – acreage and nitrate loading

Allow use of UC Nitrate Hazard Index

Remove EO authority to modify tiering criteria

Adjust dates in Order and MRP

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Conclusion

Water quality problems severe

Order addresses water quality problems

Tiering approach is reasonable

Order is flexible

Many changes in response to comments

Conclusion

Water Board authority, responsibility, accountability.

Solutions

Discharger accountability

Urgency

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Recommendation:

Adopt the proposed Order with changes - and move on to implementation and water quality protection.

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