Emerging Regulations for Nutrient Management – What’s Next?

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Program Objectives

- Characterize discharge from irrigated agriculture in the Central Valley
- Identify potential source(s) of the exceedances
- Promote to landowners the implementation of management practices to eliminate water quality problems.

Groundwater to be covered in Long Term Program
Impacted Acreage and Costs

- 7 million irrigated acres in Central Valley
- 4.8 million acres enrolled in current program
- Since 2004 growers have been paying 12 cents per acre to State Water Board to monitor pesticides
- In 2012 fees expected to increase to over 53 cents per acre to expand program to include nutrients
  - Water/Sediment monitoring
  - Reports to Regional Water Board
  - Grower Outreach and Education
  - Farm Management Plans
  - Third Party Certification of Nutrient Management
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2 or more exceedances = Management Plan

With Management Plans, Grower coalitions must…

- Identify Sources (uses/crops)
- Determine farming practices through field BMP surveys
- Encourage growers to implement BMPs
  - Outreach: Meetings
  - Landowner mailings
  - Personal visits
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June 2011 Regional Water Board decision:
Get Started on Orders - Waste Discharge Requirements

Key points

- **First** Orders to be approved in July 2012
- **Nutrient plans** in place by 2013
- **Use existing coalition structure**
- **Each coalition gets unique WDR**
- **Current ILRP participants** grandfathered into new program; no need to reapply
- **Groundwater included: nitrogen is priority constituents**
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General Order/Waste Discharge Requirements:
WDR to include

- General regulatory language (consistent among coalitions)
- Revised surface water program (MRP) specific to region
- New groundwater program (MRP) specific to region
- Implementation timelines and performance goals

WDR documents compiled; put to Regional Water Board for vote

- Will board send back for revisions?
- Will actions be taken by activist organizations?
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Surface Water - Monitoring and Reporting Program Plan (MRP)

- Most of existing SW plan rolls forward
- Review product profile to determine if poses risk
- Begin sampling in 2013

Issues

- What are the WQ criteria for the products
- Are commercial labs capable of economical analysis
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Groundwater:

What are “discharges of waste from irrigated lands” to groundwater? (waste defined as farm inputs + salt)

- Leaching of waste to groundwater (nitrates/pesticides moving past root zone)
- Backflow of waste into wells (during chemigation/fertigation)
- Waste discharged into unprotected wells
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Groundwater – Management Practices

How can we confirm that management practices implemented to improve groundwater quality are working?

- “…properly designed and constructed groundwater monitoring network would be needed”
- “…monitoring well network could be used as part of a special study to evaluate individual management practices.
- “…modeling combined with some groundwater monitoring to validate the models assumptions and conclusions.”
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Nutrient Management Plan Components

- Testing well water for nitrogen levels (then adjust N applications accordingly)
- Leaf / tissue testing
- Soil testing
- Use N at crop removal rates
  - Dairies regulated to 140% of crop use (N applications)
- Well head protection
  - Grade away from casing
  - Seal abandoned wells
- Back flow preventors when fertigating (fertilizer injection to drip)
- Irrigation management
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Grower Coalition Responsibilities for Groundwater Quality Mgmt Plans

- Identify groundwater quality management areas
- Summarize / assess water quality data for aquifers and parameters
- Identify irrigated agriculture source(s)—general practice(s) or specific location(s)—that may be cause of water quality problem

In lieu of conducting additional source analysis, MP can focus on ensuring that all growers are implementing practices that achieve Best Practical Treatment Controls for constituent(s) of concern