
VCAILG

Water quality monitoring results near strawberry fields in Ventura County

Presented by:

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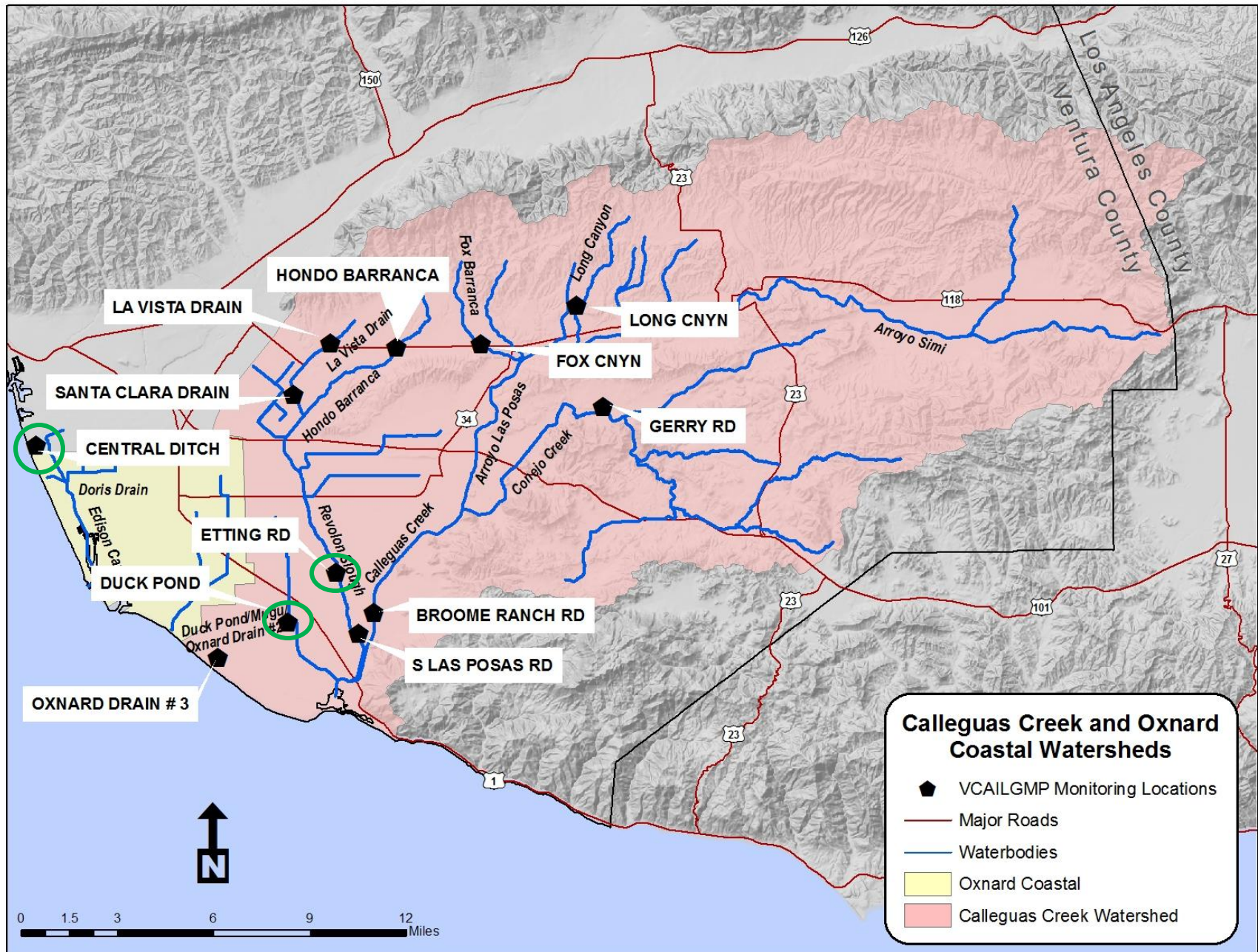


Outline

- Overview of VCAILG Monitoring Sites
- Sites that predominantly drain strawberry fields
- General Monitoring Information
- Data from identified “strawberry” sites



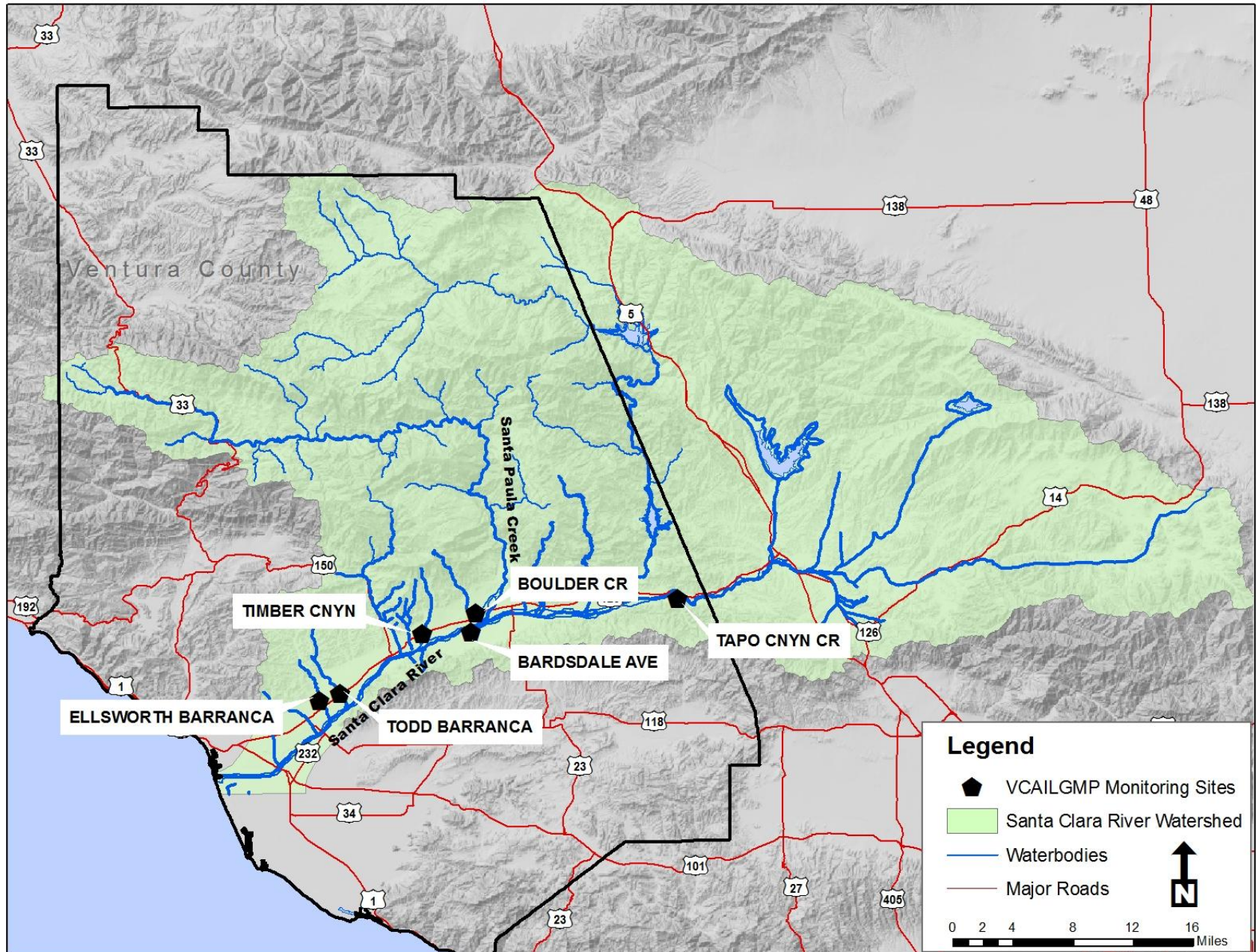
Calleguas Creek Watershed



Calleguas Creek/Oxnard Coastal Watershed

Site Name	Row Crops	Strawberries	Orchards	Other Berries	Sod
Duck Pond	X	X (66%)			X
Arnold Rd.	X				X
Broome Ranch Rd.	X		X	X	
Etting Rd.	X	X (29%)			
S. Las Posas Rd.	X	X			X
LaVista Drain			X	X	
Santa Clara Drain	X	X	X		
Hondo Barranca			X		
Fox Canyon	X		X		
Long Canyon			X		
Gerry Rd.			X	X	
Central Ditch	X	X (52%)			

Santa Clara River Watershed



Santa Clara River Watershed

Site Name	Row Crops	Orchards	Strawberries	Nursery
Ellsworth Barranca	X	X	X	
Todd Barranca	X	X		
Bardsdale Ave.	X	X		X
Boulder Creek		X		X
Timber Canyon		X		
Tapo Canyon	X	X		X

General Water Quality Monitoring Program Information

- 5 years of monitoring completed between 2007-2010, and 2012 (New Waiver). 15 events total.
- Sampling conducted during winter storms and the dry season.
- Parameters monitored include:
 - Flow, pH, Temperature, Turbidity, Conductivity, Dissolved Oxygen, Total Dissolved Solids, Total Suspended Solids, Chloride, Sulfate
 - Nutrients: Ammonia, Nitrate, Phosphate
 - Pesticides: Organochlorines, Organophosphorus, Pyrethroids
 - Toxicity
 - *New constituents: Copper, Hardness, & Trash*

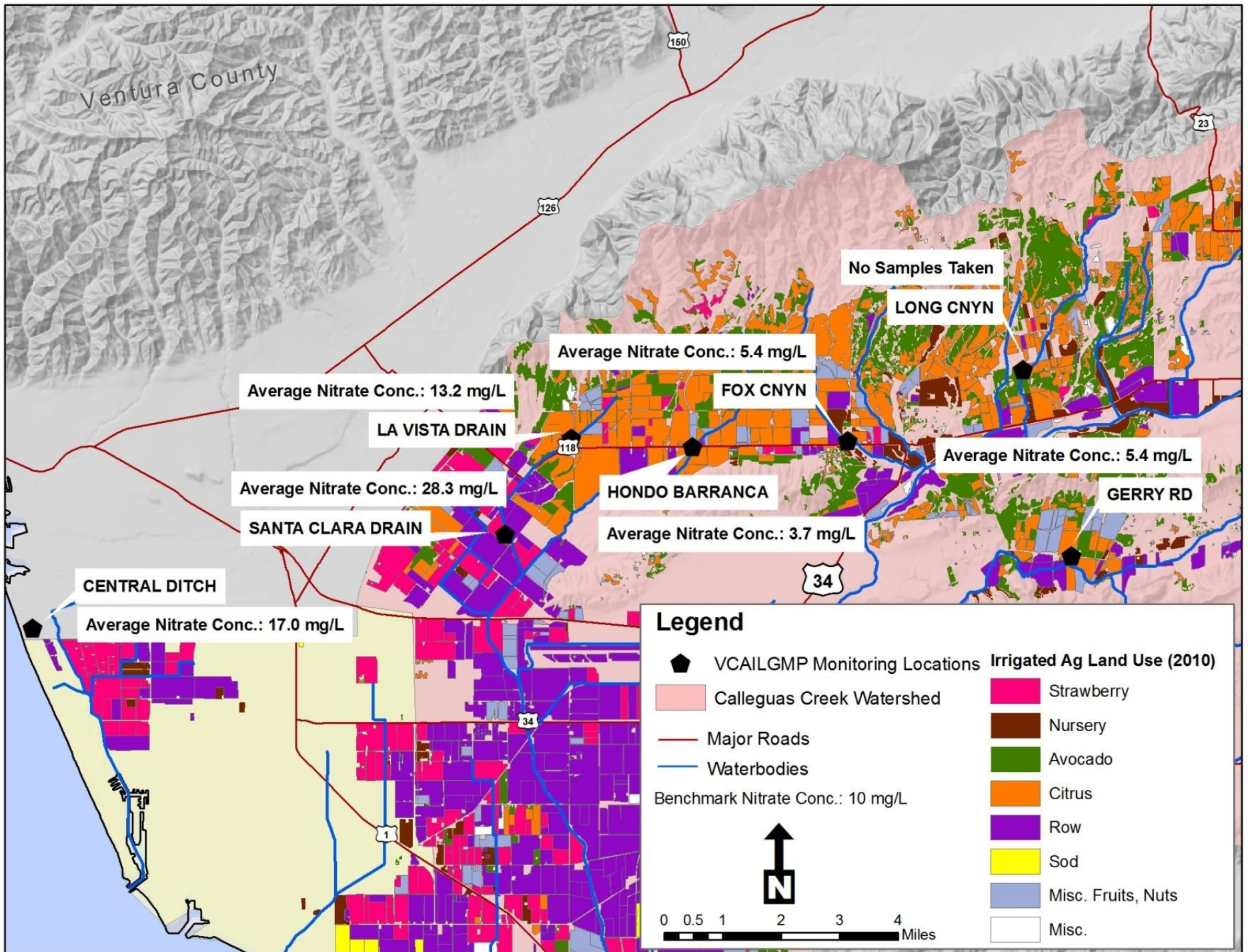
Summary of Water Quality Issues

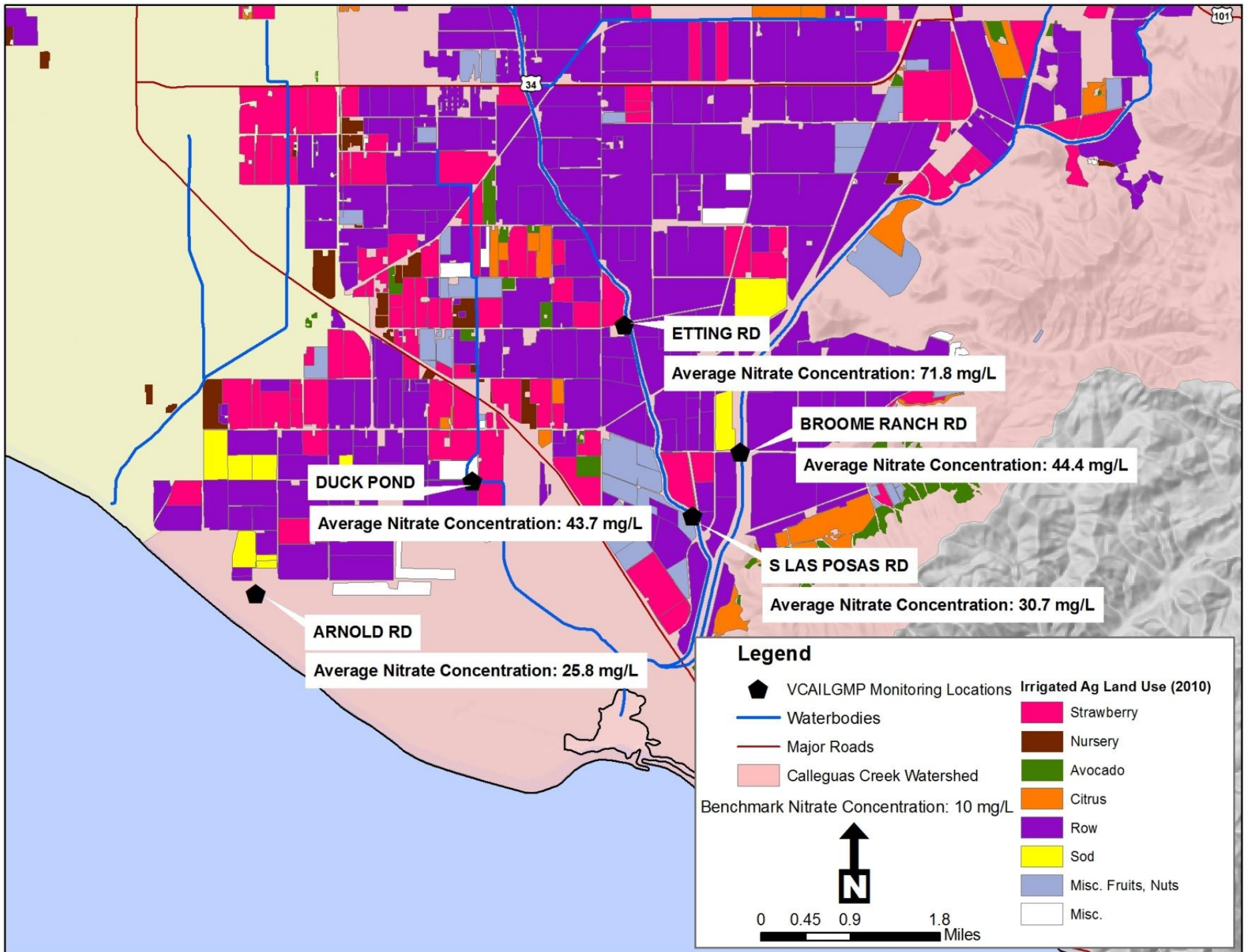
- Most exceedances of water quality benchmarks at the strawberry sites are due to the following:
 - Nitrate
 - Organochlorine (legacy) Pesticides
 - Typically forms of DDT, Chlordane, and Toxaphene
 - Organophosphorus Pesticides
 - Diazinon
 - Chlorpyrifos (Lorsban)

Water Quality Data

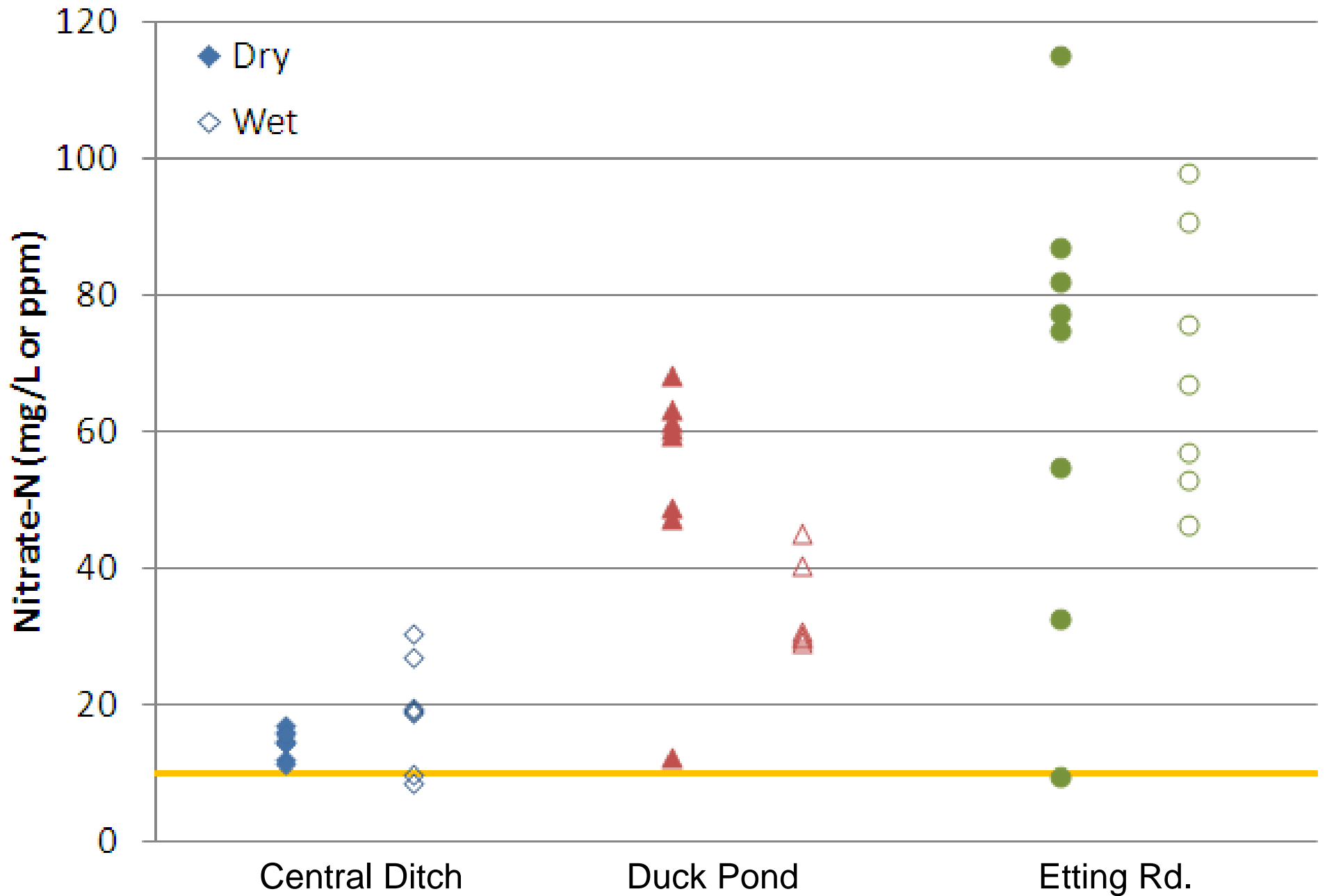
- The following are graphs of the water quality sample data collected from 2007-2012.
- Data presentation focused on constituents which most consistently exceed benchmarks.
 - Nitrate
 - DDT Compounds

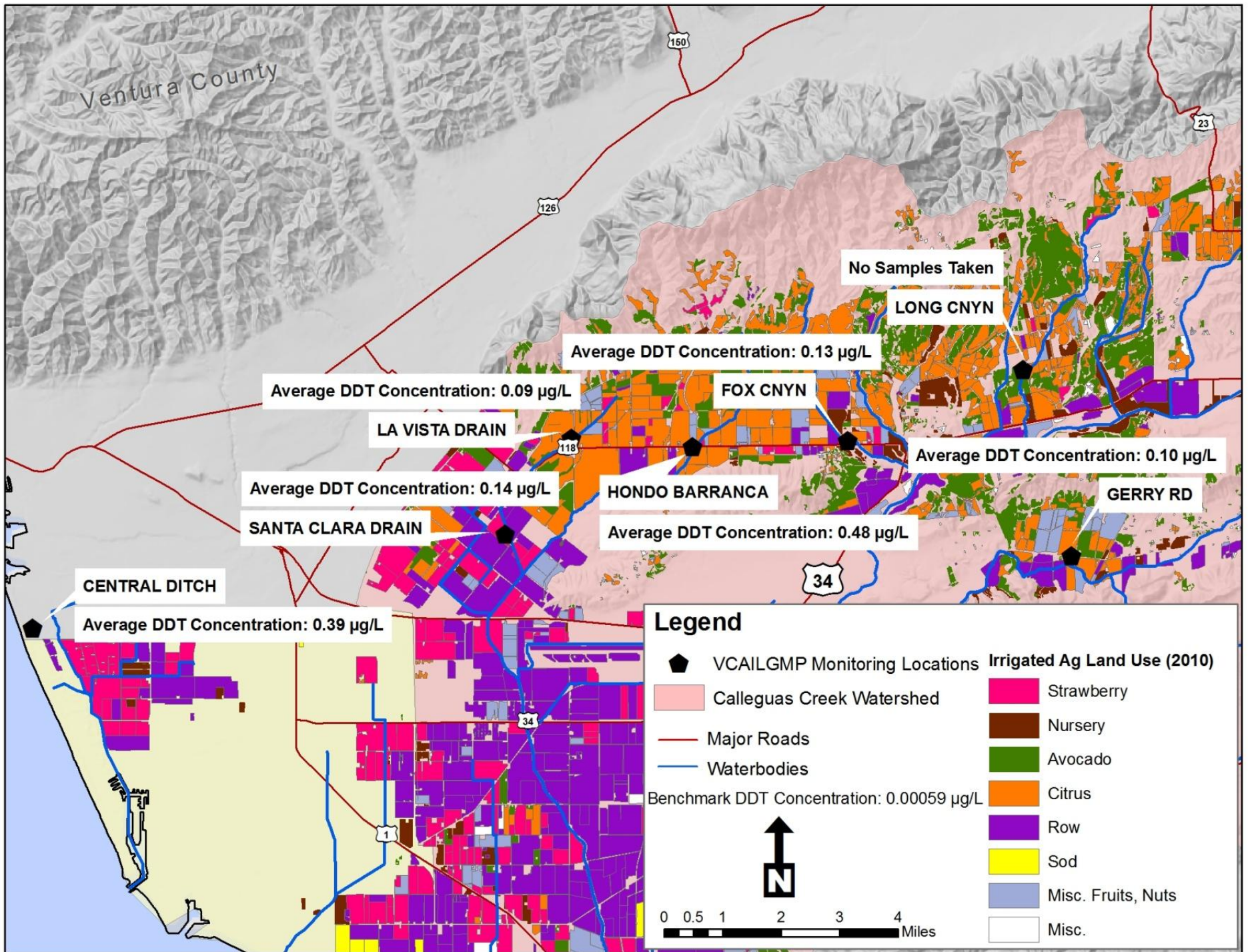


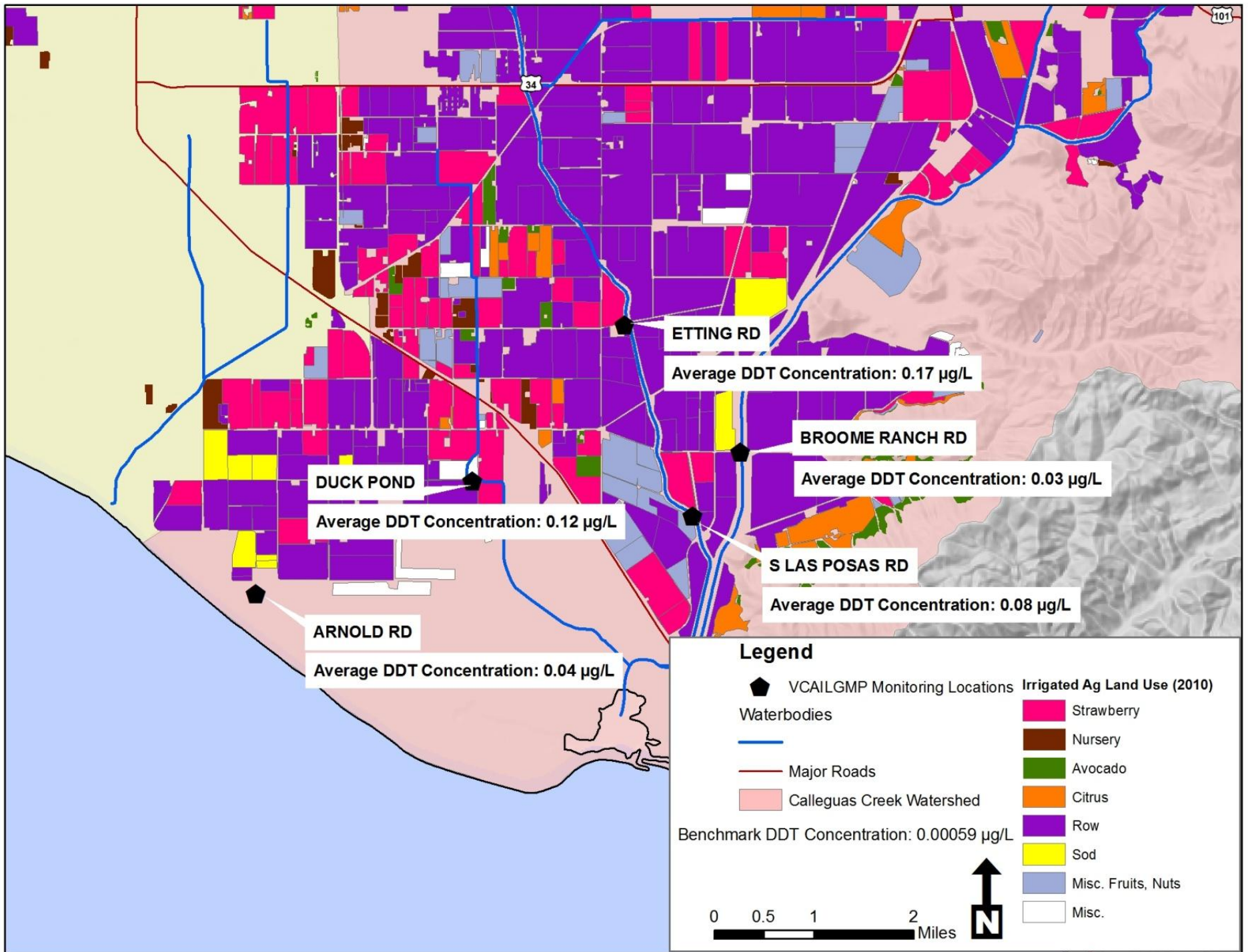




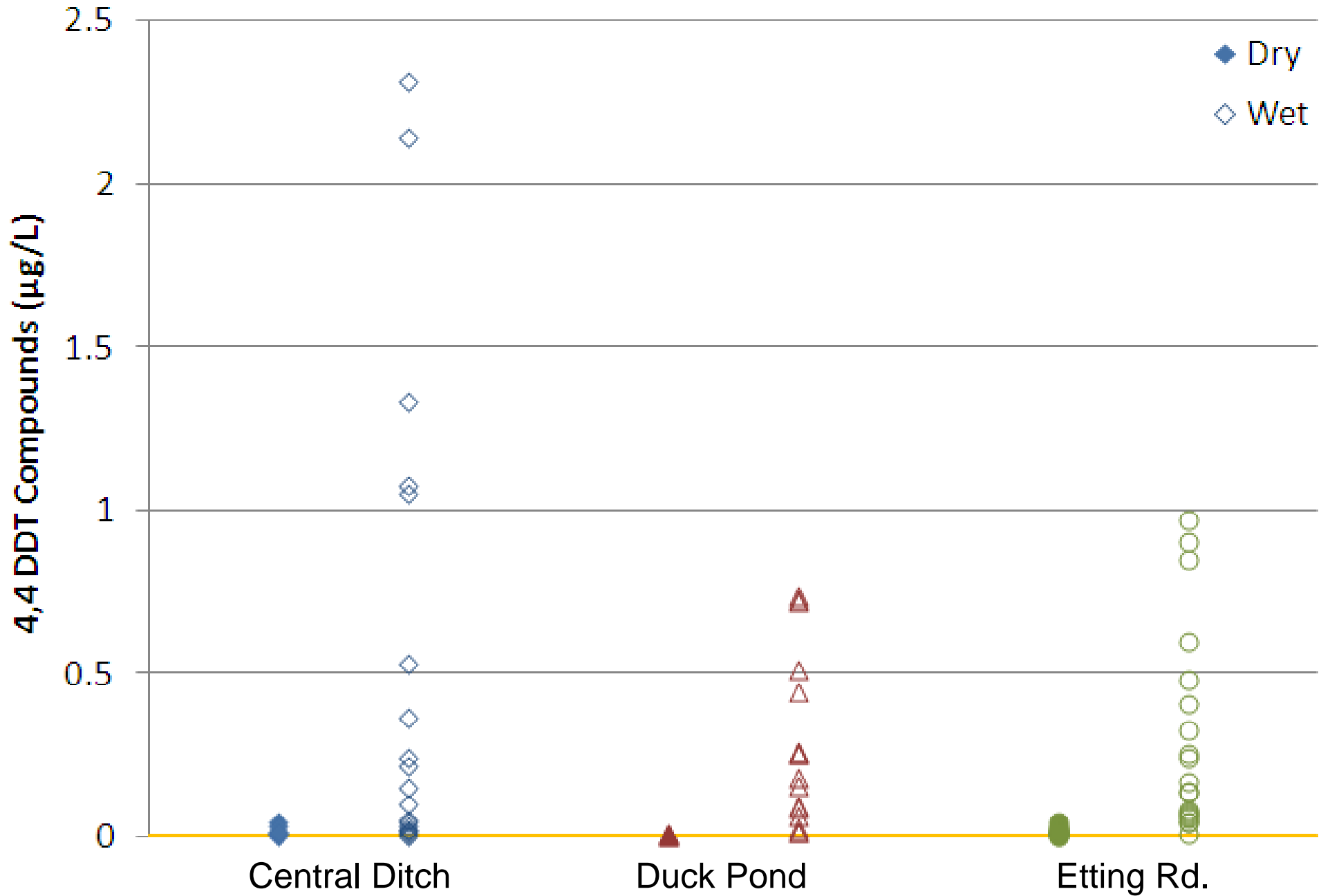
Nitrate Concentrations 2007-12







4,4 DDT Compounds 2007-2012



Conclusions

- BMPs are NOT prescribed.
- However, BMPs must be implemented and we must document changes in water quality.
- Focus should be on Nitrogen management and sediment/erosion control
- Next Steps:
 - VCAILG will continue monitoring and reporting
 - Farmers to complete their 8 hours of education (by Sept. 15, 2013)
 - Implement on-farm BMPs, take advantage of assistance

One last comment on trash...



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