



## Nitrates in Groundwater

May 18, 2012

2:30 pm (eastern), 1:30 pm (central), 12:30 pm (mountain), 11:30 am (pacific)

Agriculture relies on the addition of nitrogen in the form of commercial fertilizers and manure to maintain current production levels. Nitrates, a form of nitrogen, can leach through the soil contaminating groundwater, potentially harming human health. Recent California studies reported that 96% of all nitrate leached to the groundwater comes from cropland. Nitrate issues from a regional perspective will be discussed in this webcast. Recent findings in California and the proposed solutions will be presented, as will nitrate issues in the Southeast, Midwest, and Intermountain West. *An application for continuing education credit for Certified Crop Advisors (CCAs) and members of the American Registry of Professional Animal Scientists (ARPAS) has been submitted.*

**Marsha Campbell Mathews**, a farm advisor with University of California Cooperative Extension in Stanislaus County, has spent the last 15 years developing and extending innovative and practical methods of applying dairy manures, especially lagoon water, to cropland in ways that maintain yields while minimizing adverse impacts to the groundwater. Her research and education program integrates agronomic and engineering aspects of nutrient management that address the entire system. She is developing software to provide dairy operators with a systems approach to effectively address the agronomic needs of crops, the timing of manure applications, and the delivery of liquid manure through irrigation. She received her M.S. in Agronomy/Soils from the University of California – Davis. Phone: 209-525-6800; Email: [mcmathews@ucdavis.edu](mailto:mcmathews@ucdavis.edu)



**Mark Risse** is the Georgia Power Professor of Water Policy at the University of Georgia. His expertise is in non-point source pollution management, water resources policy, stormwater management and erosion control, animal waste and nutrient management. He actively works on development of policy and techniques to conserve soil and water resources, and works to preserve and protect agricultural systems through improved management and pollution prevention. He is on the leadership team for the LPE Learning Center and conducted numerous research and education projects in Georgia and around the country relate to livestock and poultry manure management. He received his Ph.D. in Agricultural Engineering from Purdue

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**Satish Gupta** is a Professor of Soil Physics /Soil Hydrology at the University of Minnesota. His expertise is in the areas of water quality, soil hydrology, soil management, waste utilization, and soil mechanics. Recent projects include fate and transport of manure applied antibiotics; antibiotic uptake by vegetables; sediment and phosphorus pollution from river bank erosion; river water quality; sediment and nutrient transport through leaching and overland flow; nutrient losses from winter waste application on frozen ground; and use of recycled materials in pavements. He received his Ph.D. in Soil Physics from Utah State University. Phone: 612-625-1241; E-mail: [gupta002@umn.edu](mailto:gupta002@umn.edu)



**Rhonda Miller** is the Agricultural Environmental Quality Extension Specialist and an Associate Professor in the Agricultural Systems Technology and Education (ASTE) Department at Utah State University. Dr. Miller works with animal waste management, water quality, and air quality issues. She serves as an agricultural liaison for many state committees and actively works to help agriculture remain economically viable while preserving the environment. Her research focuses upon environmental impacts in agricultural systems. Dr. Miller serves as chair of the LPE Environmental Planning group. She received her Ph.D. in Agronomy from Iowa State University. Phone: 435-797-3772; E-mail: [rhonda.miller@usu.edu](mailto:rhonda.miller@usu.edu)

### How Do I Participate?

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### Links For More Information

California groundwater nitrate report: <http://groundwaternitrate.ucdavis.edu/>

The LPE Learning Center is a project dedicated to the vision that individuals involved in public policy issues, animal production, and delivery of technical services for confined animal systems should have on-demand access to the nation's best science-based resources. See our website at: [http://www.extension.org/animal\\_manure\\_management](http://www.extension.org/animal_manure_management).