

## CV-SALTS Technical Advisory Committee Meeting

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**When:** Friday, November 15, 2013 from 2:00 to 4:00 PM

**Location:** Teleconference

**Conference #:** (712) 432-0360 Participant Code: 927571#



### Agenda

**1. Welcome and Introductions**

Approve action notes from October 15, 2013

**2. Presentation and Discussion of Phase II Conceptual Model Workplan, LWA Team - 75 minutes**

**3. Highlights from the Darcy Lecture: [Managing Groundwater Under the Agricultural Landscape](#) – Vicki Kretsinger - 10 minutes**

**4. Other CV-SALTS Project/[Contract Updates](#) – As needed Status Updates - 10 minutes**

- a) ICM Report – Richard Meyerhoff
- b) Agricultural Zone Mapping – Richard Meyerhoff
- c) Aquatic Life Study – Richard Meyerhoff
- d) Tulare Lake MUN Archetype – Richard Meyerhoff
- e) SSALTS – Roger Reynolds
- f) MUN POTW – Jeanne Chilcott
- g) Lower San Joaquin River Committee – Mike Johnson

**5. [Next Meeting/Call](#) Preliminary Date: December, TBD**

***One or more Central Valley Regional Water Quality Control Board members may attend.***

## 2013 Darcy Lecture

# Managing Groundwater Beneath the Agricultural Landscape

David L. Rudolph, Ph.D., PE

Thursday, 11/7/2013 from 12 - 1 pm  
Plant and Environmental Sciences 3001, UC Davis

### ABSTRACT:

Attend Dr. David L. Rudolph's 2013 Darcy Lecture presentation and gain insight on how the nature of groundwater quality has been impacted from agricultural land-use practices, at both local and regional scales, with a specific focus on nitrate and microbial indicator species.

Agricultural land use represents the largest nonpoint source threat to groundwater quality on a global scale. As a result of decades of fertilizer application and surface spreading of animal manure, chronic increases in nutrient concentrations have been documented in both private and municipal well systems. The occurrence of pathogenic microbes in groundwater supply wells has also been associated with agricultural practices at the land surface. Beneficial management practices (BMPs) designed to reduce the risk of groundwater quality impacts in agricultural environments are being implemented worldwide, yet very little data are available to assess the performance of these BMPs.

The complexities associated with variable mass loading to the water table will be explored, considering regional recharge distributions. The role of the vadose zone in controlling subsurface redistribution, and as an archive of past land-use activities, will also be considered relative to the legacy of agricultural impacts on groundwater quality. The performance of a regional-scale BMP program designed to reduce nutrient loading to the subsurface in the vicinity of an impacted municipal groundwater supply system will be evaluated based on more than a decade of field monitoring evidence. The utility of a targeted in situ denitrification approach designed as a remedial strategy to temporarily augment the BMP program in the vicinity of the municipal wells will be addressed based on the results of field experiments.

Finally, the potential influence of extreme climatic variability on the mobility of nutrients and microbial species in agricultural environments will be explored relative to aquifer and well vulnerability.

### ***About the speaker:***

David Rudolph, PhD, PE, is a geological engineer and professor in the Department of Earth and Environmental Sciences and is cross-appointed to the Department of Civil and Environmental Engineering at the University of Waterloo, Canada. He specializes and teaches in the areas of regional hydrogeology and groundwater protection and management. Dr. Rudolph heads a nationwide research team working on prioritizing risk to water quality from various agricultural practices and evaluating performance of beneficial management practices or BMPs. He recently served as executive director of the Water Institute at the University of Waterloo. Dr. Rudolph has also served as a member on the National Groundwater Association's (NGWA's) Scientists and Engineers Division Board and was the 2010 recipient of NGWA's M. King Hubbert Award for contributions to the field of hydrogeology.

## Technical Project Status Updates – as of November 5, 2013

- **ICM Study**
  - Final Report submitted to Project Committee on September 13; no additional comments received
  - Final Report will be posted to the CV-SALTS website
  
- **Phase II Conceptual Model**
  - LWA under contract to prepare the project workplan
  - Draft workplan will be submitted November 11 for review
  - Draft workplan will be discussed at November 15 TAC meeting
  - Written comments will be due by COB November 22
  
- **Agricultural Zone Mapping**
  - Draft 5.1/5.2 Report reviewed and commented on by PC
  - Workshop on November 13 with Ag Community regarding report findings and discuss alternatives for moving forward in context of ongoing AGR policy discussions
  
- **Aquatic Life Study**
  - Received a few comments on the Final Report
  - Comments provided to David Buchwalter and being addressed
  
- **Tulare Lake Bed Archetype**
  - Revised draft technical report reviewed; prepared summary for Tulare Lake Drainage District regarding where additional information was needed to be fully responsive to comments on the draft report
  - Next step will be a meeting with Water Board staff to discuss revised draft report and review how their comments were addressed
  
- **SSALTS**
  - Comment/response to Draft Phase 1 Report included teleconferences with stakeholders where requested
  - Comments received on Phase 1 Draft Report have been incorporated into the Final Report
  - Have request out to verify no other comments expected; posting of the Final Report dependent on outcome of this request
  - Next Steps
    - Phase 2 – Develop and characterize potential salt disposal alternatives (in-valley, out-of valley, hybrid)
    - Phase 3 – Evaluate and prioritize salt disposal alternatives to identify acceptable alternatives for implementation (based on agree upon feasibility screening criteria and feasibility analysis)
  - Intended project outcome – Acceptable Central Valley salt disposal alternatives for inclusion as implementation measures in the SNMP

# CV-SALTS Meeting Calendar

## 2013

1 January						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
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9 September						
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10 October						
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11 November						
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12 December						
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Notes	
2nd or 3rd Thursdays	
<b>Dark Green</b> Exec Comm Policy	
<b>RWQCB Update</b> <i><b>Bold Underline</b></i>	
2nd or 3rd Tuesdays	
<b>Lt. Green Hatch</b> Exec Comm Admin	
First Monday except conflicts	
<b>Yellow Salty 5</b>	
<b>Lower San Jaquin River Committee</b>	
Light Red conflicts	
<b>TAC Meeting</b>	
<b>Third Thursday Exceptions</b>	
January 7, 2014 State Board Presentation	
Dark in July & December for Policy	
Nov 14 vs 21 due to Thanksgiving	