

# Evaluating Drinking Water Impacts of Wetland Derived Organic Carbon

William T. Stringfellow

Environmental Engineering  
Research Program  
University of the Pacific  
Stockton, CA



Future Ag  
Sacramento, CA  
August 7, 2008

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## Outline

- Research Objectives
- Research approach
  - > Study sites
  - > Data sources
- Preliminary results



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## Research Objectives

- Characterize chemical and biological properties of OC released by managed wetlands
- Measure mass loading OC and nutrients from regional wetland in SJR drainage
- Determine relation between management practices and “quality” of OC
- Relate findings to overall SJR ecosystem



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## Research Approach

- Wetland Study
  - > San Luis National Wildlife Refuge
    - Refuge input & output study
    - Compare internal management areas
  - > OC characterization
    - Biodegradation, THMFP
- Basin Study
  - > Collection of upstream & downstream data
  - > Use of available SJR data
  - > Relate wetland to regional context



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## Wetland Study

- Collect flow and water quality data
  - > One inlet, three outlets
  - > Permanent wetland
  - > Seasonal wetland
- Characterize organic carbon
- Mass balance and temporal analysis
- Coordination of activities with other studies
  - > Mercury, DO TMDL, Conditional Waiver



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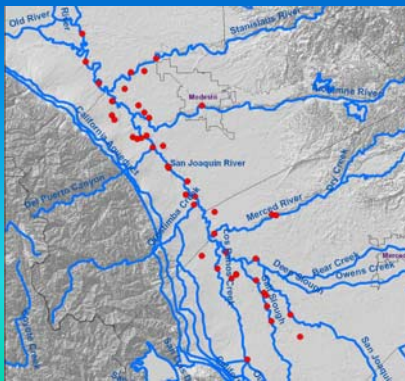
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## San Joaquin River Basin Data



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***Preliminary Results***

- Individual wetlands have low drainage flows
  - Small local impact on mass basis
- Wetland drainage has high OC content
  - Significant THMFP
- Regional data on OC in SJR is available
  - Data not included in Conceptual Model



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