

# PULLING TOGETHER PARTNERS, TOOLS AND DATA TO MEET WATER QUALITY OBJECTIVES

Farmer led  
Cooperative to  
improve water  
quality in the  
Salinas Valley

Farmers,  
Scientists,  
Industry,  
Regulators and  
Environmental  
NGOs



## Problem

- High production farming of central California has led to big water quality problems

## Challenges

- Standard prescriptive actions are not equally effective on all farms for all crops
- Assuming reported actions equate to reduced pollution is unsubstantiated at a watershed scale
- Crops change throughout seasons and between years
- Water Quality improvements are hard to document

Nitrate Concentrations in Agricultural Source Water

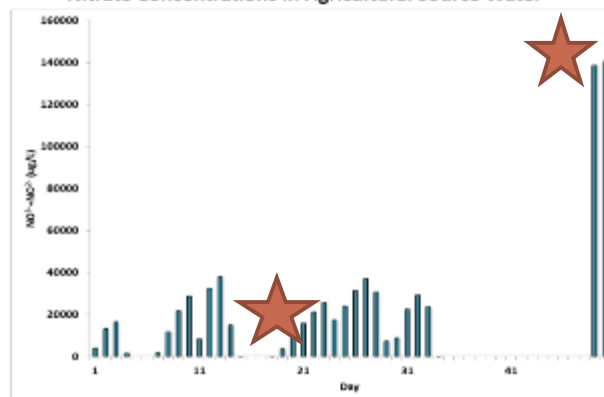


Fig. 1. Nitrate concentrations are represented as a daily average concentration over a month period in the summer of 2015. Concentration fluctuates from below detection limits to 140 mg/L. Documenting this temporal variability in concentrations will aid the design of the mixing forebay, residence time within the chambers and selected sampling protocol.

CHALLENGES TO  
CURRENT APPROACH

# POSSIBLE SOLUTION: FARMER WATER QUALITY CO-OP

- View water resources holistically – as a system
- Encourage local ownership of nutrient management solutions and resulting improvements to waterways
- Integrate on-farm BMPs with cooperative treatment wetlands within defined drainages – focus monitoring to document success



# ON FARM PRACTICES



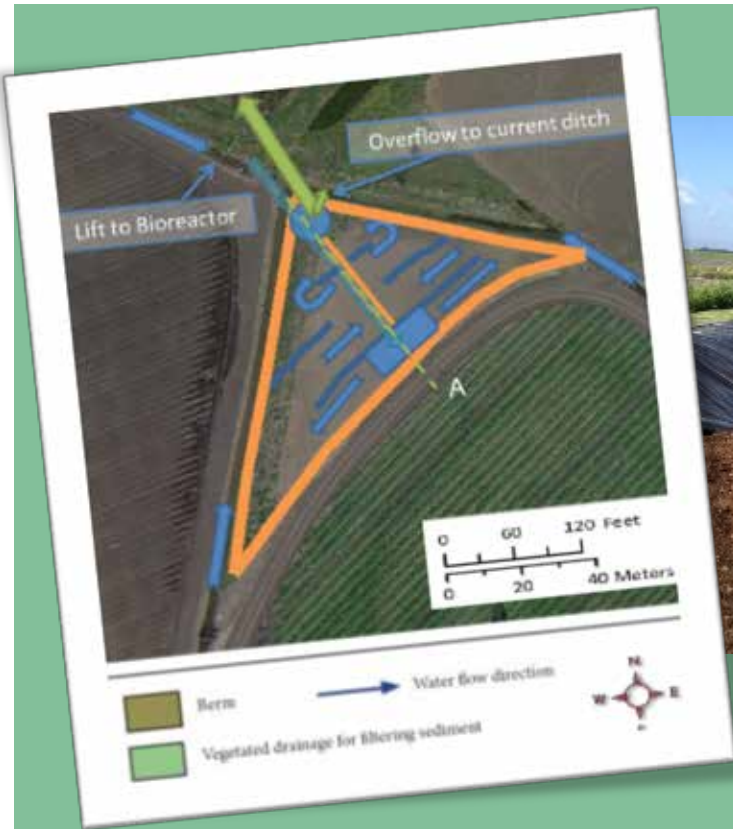
Resource Conservation District  
UC Davis Cooperative Extensions



Frisee with beneficial plants



# SEAMIST BIOREACTOR

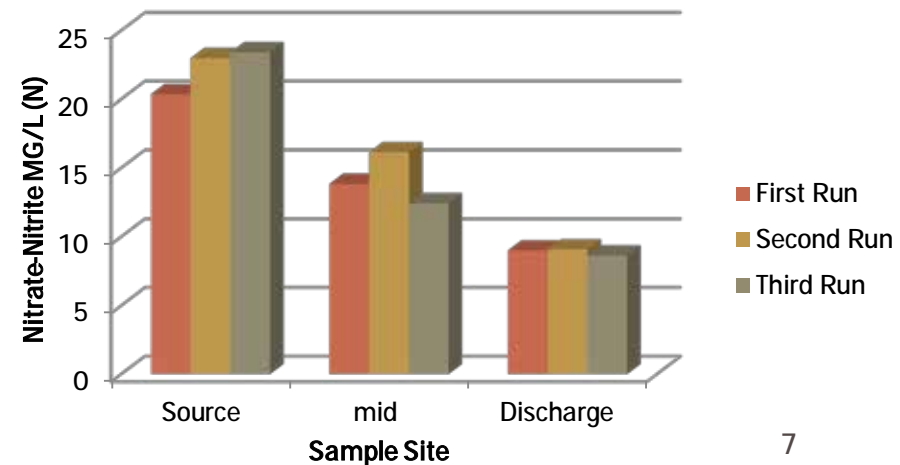




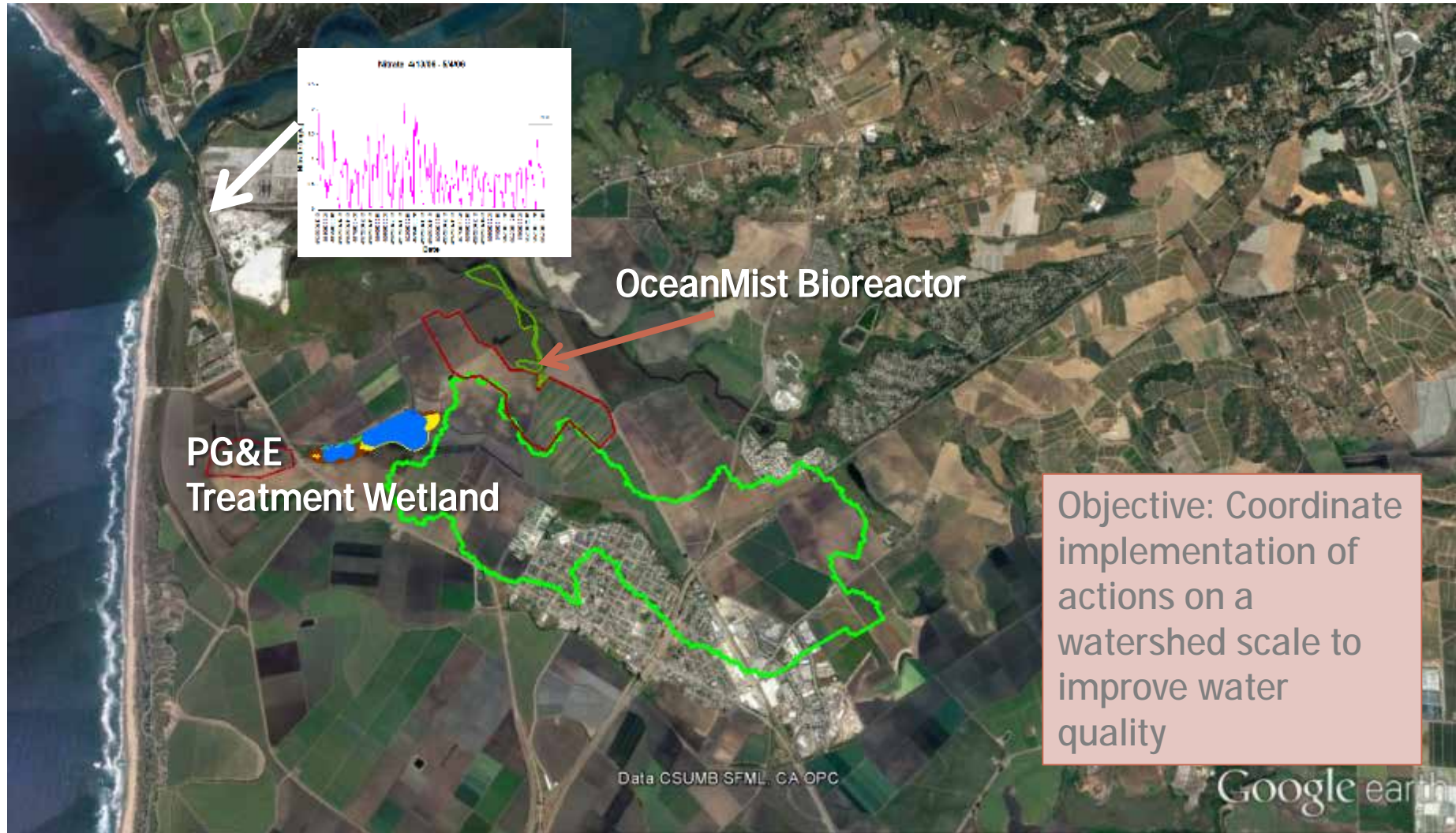
# PG&E TREATMENT WETLANDS



# PG&E TREATMENT WETLANDS INITIAL WQ RESULTS



# OFF FARM TREATMENT OF NITRATES IN A WATERSHED CONTEXT





# WATERSHED COOPERATIVE APPROACH (IN DEVELOPMENT)

- Promotes industry leadership in selecting water management approaches as a cooperative
- Encourages cooperative treatment projects
- Establishes a science-based environmental objective for distinct drainages - focused monitoring at lower cost
- Compliance through results

