

Consolidated Management of Nitrate Treatment: Implementation, Demonstration, and Affordability Assessment

Project Status Update
2nd Workshop
October 17th 2018



Introductions & Meeting Agenda

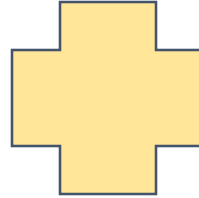
- Project Status Update
- Policy Options, Legislative Update
- Treatment Costs and Affordability
- Working Lunch
- Overview of Funding Options
- Brainstorming & Discussion

Project Status Update

- Preliminary assessment of utilities and cost analysis
- Procurement Process
- Milestones and Next Steps

Background

Chronic
non-compliance



Lack of affordable
solutions

Need alternative approach for small water systems
and economically disadvantaged communities



Consolidated management of nitrate treatment
with Assessment of Affordability

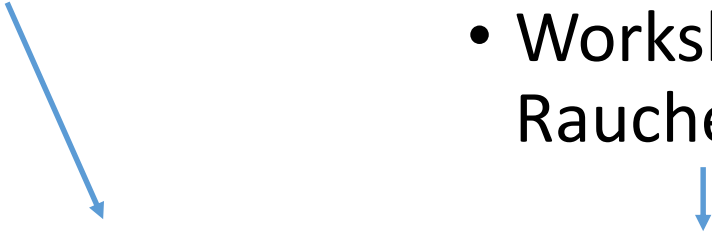
Two Parts of the Project

Consolidated Management

- Treatment installation
- Shared O&M

Economic Aspect

- What is affordable?
- What are the policy options for making water affordable?
- Workshops and Bob Raucher's work



Analysis of cost reduction
under the consolidated
management model

Consolidated Management - Objectives

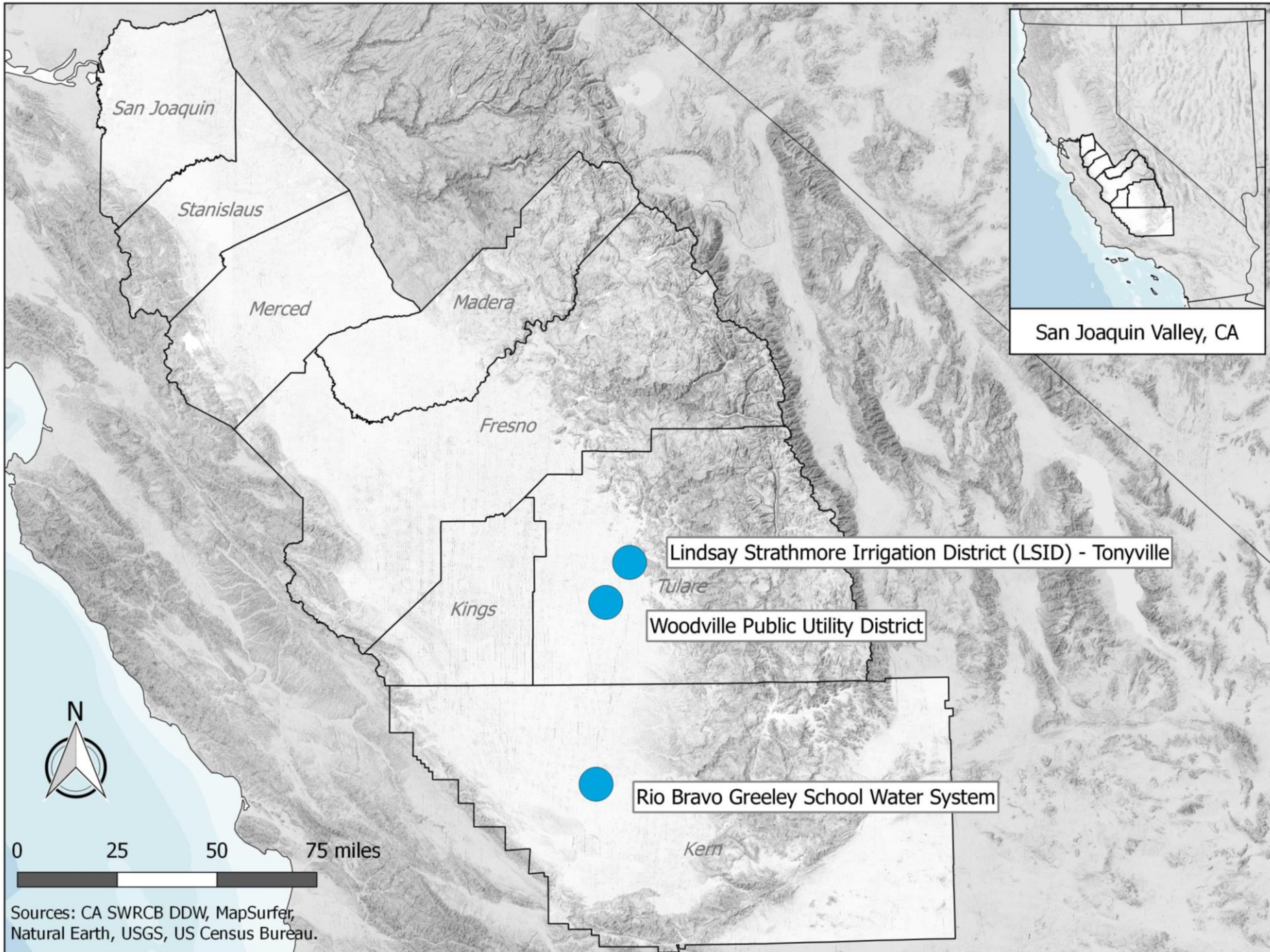
- Install and operate nitrate treatment systems over a three-year period
- Minimize small water system O&M costs by sharing:
 - An operator
 - Waste disposal
 - Chemical delivery
- Reduce waste disposal costs through efficiencies in:
 - Collection
 - Administration
 - Purchasing agreements with disposal providers

Affordability Assessment - Objectives

- Estimating and comparing Triple Bottom Line lifecycle treatment costs with and without consolidated management
- Developing and applying a range of informative affordability metrics
- Evaluating a range of potential funding mechanisms for economically disadvantaged communities
- Formulating specific recommendations on addressing affordability on a statewide basis

Overview of 1st Report

- Preliminary assessment of participating utilities
 - Water quality, water production, site details, costs
 - Summary report
- Treatment cost analysis
 - Vendor provided budgetary cost estimates
 - Co-contaminants
 - Site improvements
 - Equipment costs versus installed costs
 - Capital and O&M costs



San Joaquin Valley, CA

Lindsay Strathmore Irrigation District (LSID) - Tonyville

Woodville Public Utility District

Rio Bravo Greeley School Water System

Sources: CA SWRCB DDW, MapSurfer, Natural Earth, USGS, US Census Bureau.

Water Quality

- Rio Bravo
 - Nitrate and 1,2,3-TCP
- LSID-Tonyville
 - Nitrate, perchlorate, and arsenic
 - Time series results
 - Arsenic ~10 µg/L, speciation work in progress
- Woodville
 - Nitrate
 - 1,2,3-TCP above MCL in recent years
 - Currently low-level
 - In cost recovery process

Findings of 1st Report

- Updated budgetary cost estimates exceed proposed budget
- Options to achieve project objectives within budget
 - Competitive bid process
 - Equipment
 - Delivery
 - Cost share from utilities
 - GAC for Rio Bravo
 - LSID-Tonyville contribution to installation
 - Additional grant funding
 - Remove a participating utility from the project
 - Woodville potential new source
- Develop procurement package

Procurement Specification Update

- Follow Construction Specification Institute MasterFormat (16 Divisions)
 - Division 00 Bid Documents
 - Division 01 General Requirements
 - Division 11 Equipment
 - Division 15 Mechanical
- Drawings
 - General Process Flow Diagram (PFD)
 - PFD Ion Exchange System
 - PFD Regeneration Process

Procurement Milestones

- *60% Review Workshop*
 - *Held on September 20th 2018*
- 90% Review Workshop
 - Anticipated December 2018
- Complete Bid Package
 - Send to Vendors Early 2019
- Award Contract
 - 60-90 days later

Affordability Assessment Milestones

- *1st Workshop, Project Kickoff, April 13th 2018*
 - *Project background and objectives*
 - *Policy, research, and affordability presentations and discussion*
- **2nd Workshop, October 17th 2018**
 - Treatment costs, affordability, funding/policy options
 - Legislative update, brainstorming, and discussion
- **3rd Workshop, Spring 2019**
 - Development of detailed recommendations
 - Report on top policy recommendations and potential pathways to effective implementation