Nitrate Implementation Measures Study (NIMS): Alta Irrigation District Pilot Study

Northern Tulare County Water Alliance Meeting #7

February 13, 2016

Central Valley Regional Water Quality Control Board

- Regional Board establishes water quality objectives to protect water quality – for example nitrate contamination problems
- All groundwater in the Central Valley is considered suitable for drinking water supply and should be protected
- Drinking waters shall not contain concentrations of chemicals in excess of the maximum contaminant levels (MCLs)

California Antidegradation Policy

- You should not degrade water quality even if the action does not violate water quality standards.
- Example: Water quality standards for nitrate are exceeded only in certain areas, but actions that increase existing nitrates in groundwater are widespread throughout the San Joaquin Valley.
- Bottom line: you can make water quality worse, but need to make a best effort to mitigate impacts

Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS)

- Regional Board needs to address nitrate and salinity as existing discharges may violate water quality standards and the State's Anti-degradtion Policy.
- CV-SALTS is a collaborative stakeholder-driven program to develop sustainable salinity and nitrate management planning
- Developing "Salt and Nutrient Management Plan" (SNMP):
  - Regulate discharge of nitrate to groundwater
  - Remediate contaminated groundwater

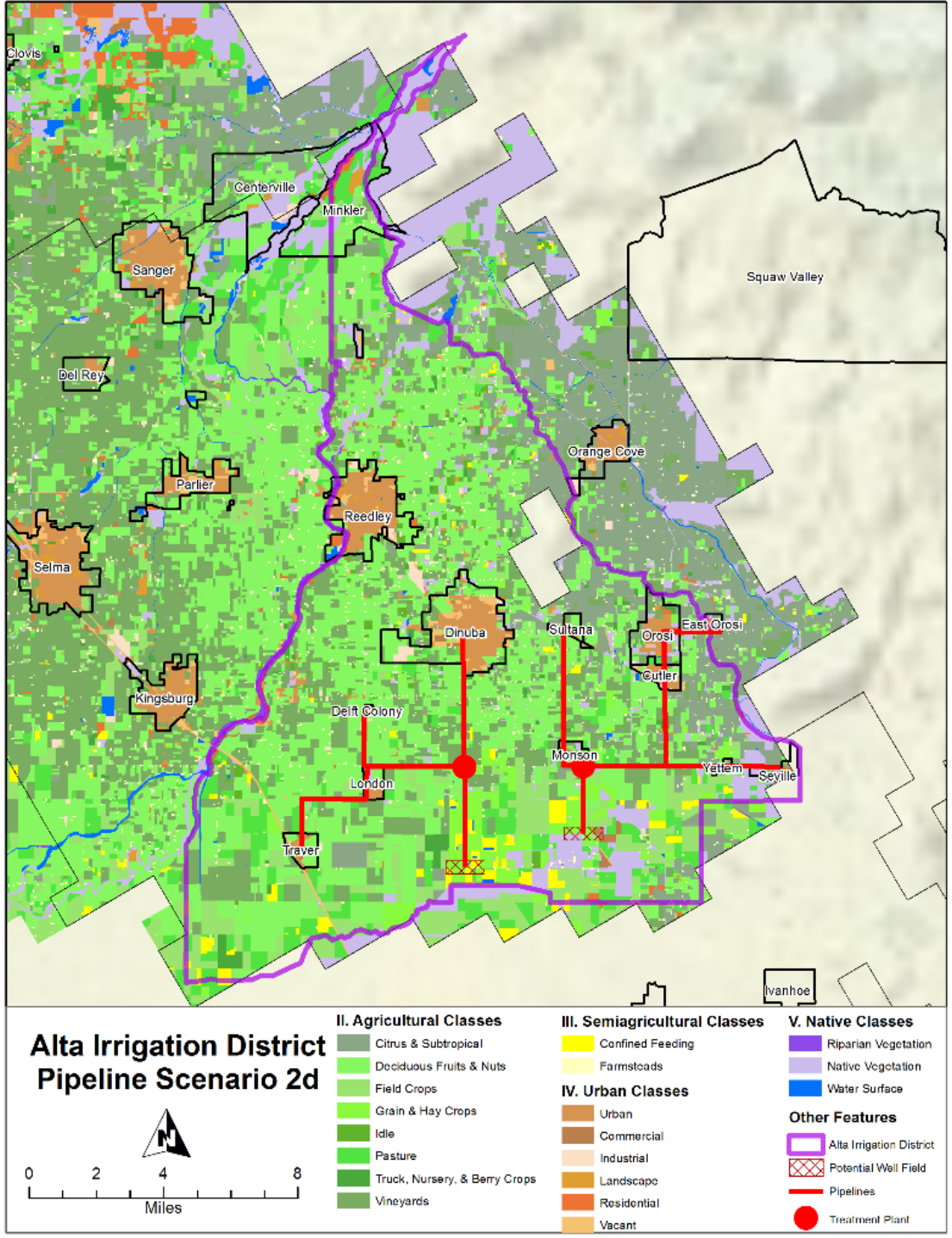
Pilot Studies: Alta Irrigation District

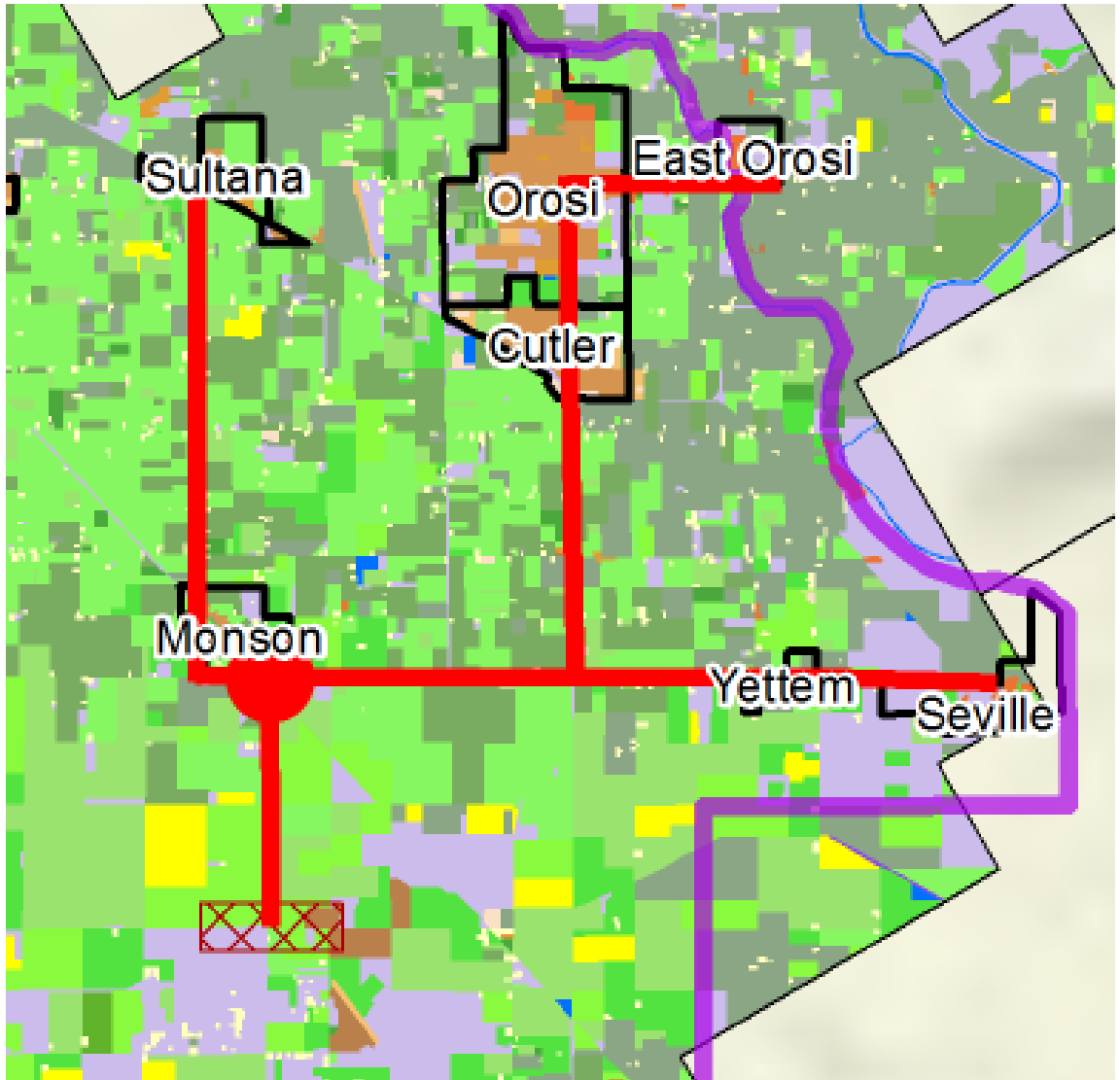
- CV-SALTS is conducting pilot studies in high-priority areas to develop SNMP
  - Special emphasis on groundwater basins that exceed or threaten to exceed the MCL
- Alta Irrigation District Pilot Study
  - Well documented nitrate problems
  - Extensive water quality database
  - Discharge permitting options
  - Remediation options

Nitrate Implementation Measures Study (NIMS)

- NIMS is identifying feasible measures to reduce nitrates in groundwater.
- For areas already contaminated with nitrate above MCL, projects could accelerate remediation and provide drinking water
  - Potential for projects to be funded through fees charged to nitrate dischargers
- Alta Irrigation District Pilot Study
  - One option is “Pump, Treat, and Serve” – pump groundwater, remove the nitrate, and serve the water to communities as drinking water
  - Develop concept-level costs for this remediation scenario

Remediation Scenario: Pump, Treat, & Serve





Things to consider for NTCWA Group

- NIMS Study is planned to be complete in February and provides a rough estimate of costs to treat groundwater for comparison to surface water
  - Engineers (CDM Smith) could be invited to present conclusions to this group March 5
- The CV SALTS process will be controversial and may take several years to fully implement.
- CV SALTS could result in fees collected from dischargers to provide a source of funding for drinking water projects, possibly for both capital and operation and maintenance costs.
- Also, Prop 1 grants for groundwater clean-up could be used.