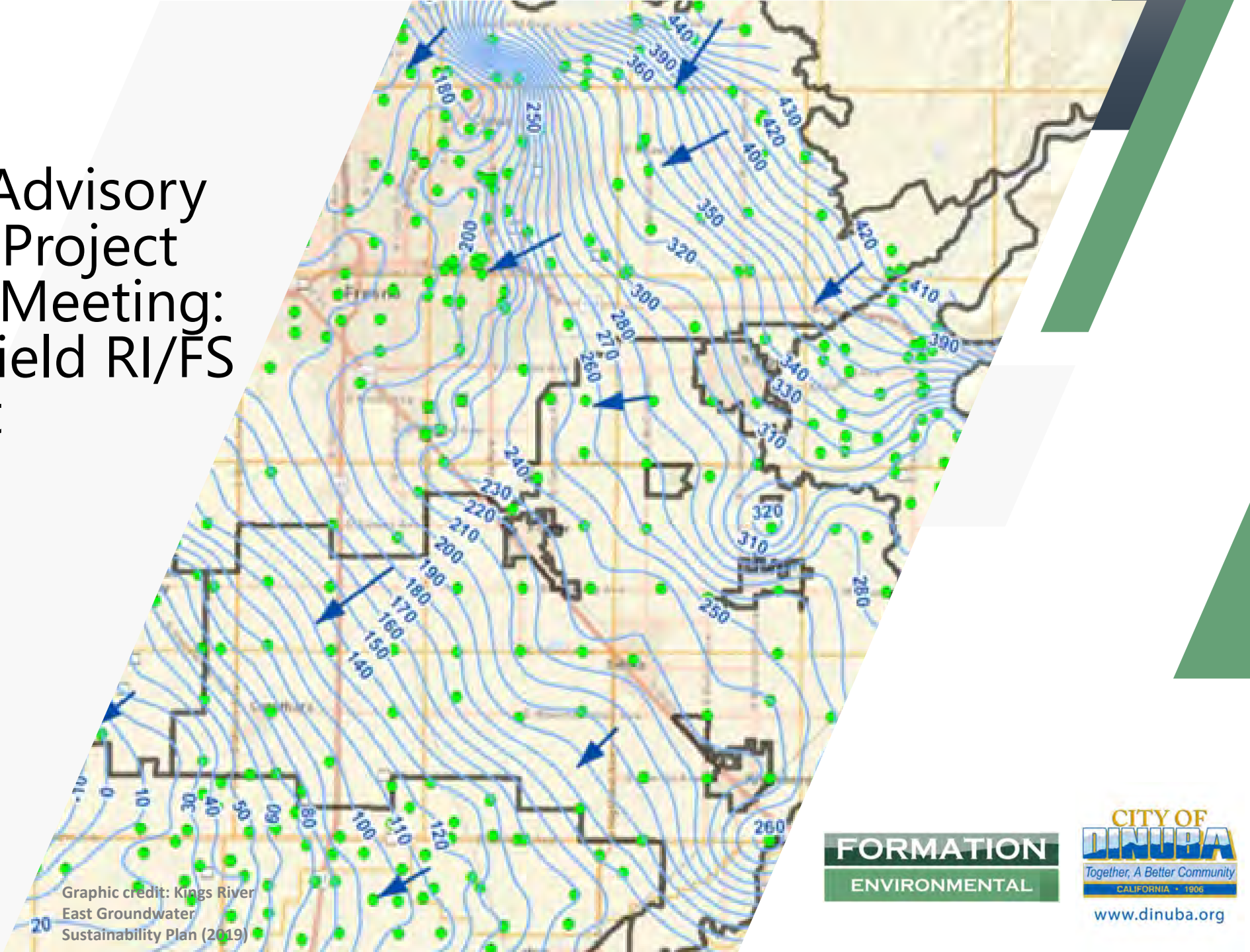
Stakeholder Advisory Group (SAG) Project Introduction Meeting: Dinuba Wellfield RI/FS Study Project

November 18, 2020



Graphic credit: Kings River East Groundwater Sustainability Plan (2019)

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Funding Disclosure

Funding for this project has been provided in full or in part by Proposition 1 – the Water Quality, Supply, and Infrastructure Improvement Act of 2014 through an agreement with the State Water Resources Control Board. The contents of this presentation do not necessarily reflect the views and policies of the foregoing, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

Agenda

Project Introductions & Roles

Project Objectives, Goals & Benefits

SAG Meeting Schedule

Project Deliverables

Next Steps, Questions & General Commentary

Meeting Objectives

- ✓ Develop shared understanding of the grant project scope and goals.
- ✓ Review timetables and project schedule.
- ✓ Establish communication channels and introduce opportunities to collaborate and provide feedback.
- ✓ Introduce the RIFS Workplan.
- ✓ Coordinate future quarterly meeting schedule.

Project Introductions & Team Roles

Project Team

CALIFORNIA WATER BOARDS
State Water Resources Control Board

Grant Program Management
Robin Guillot, Grant Manager

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Grant Management
Municipal Engineering Support

Ismael Hernandez, City Project Manager, Public Works Director

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Technical Project Management
Hydrogeology
Water Quality

Mike Tietze, CEG, GHG, Project Director
Carla Landrum, PhD, Project Manager

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CONSULTING GROUP
An Employee Owned Company

Project Engineering
Water Treatment
Field Work

Rich Fink, PG, Project Manager
Kevin Berryhill, PE, Lead Engineer
Trilby Barton, Public Outreach

Technical Advisory Committee and Stakeholder Advisory Group

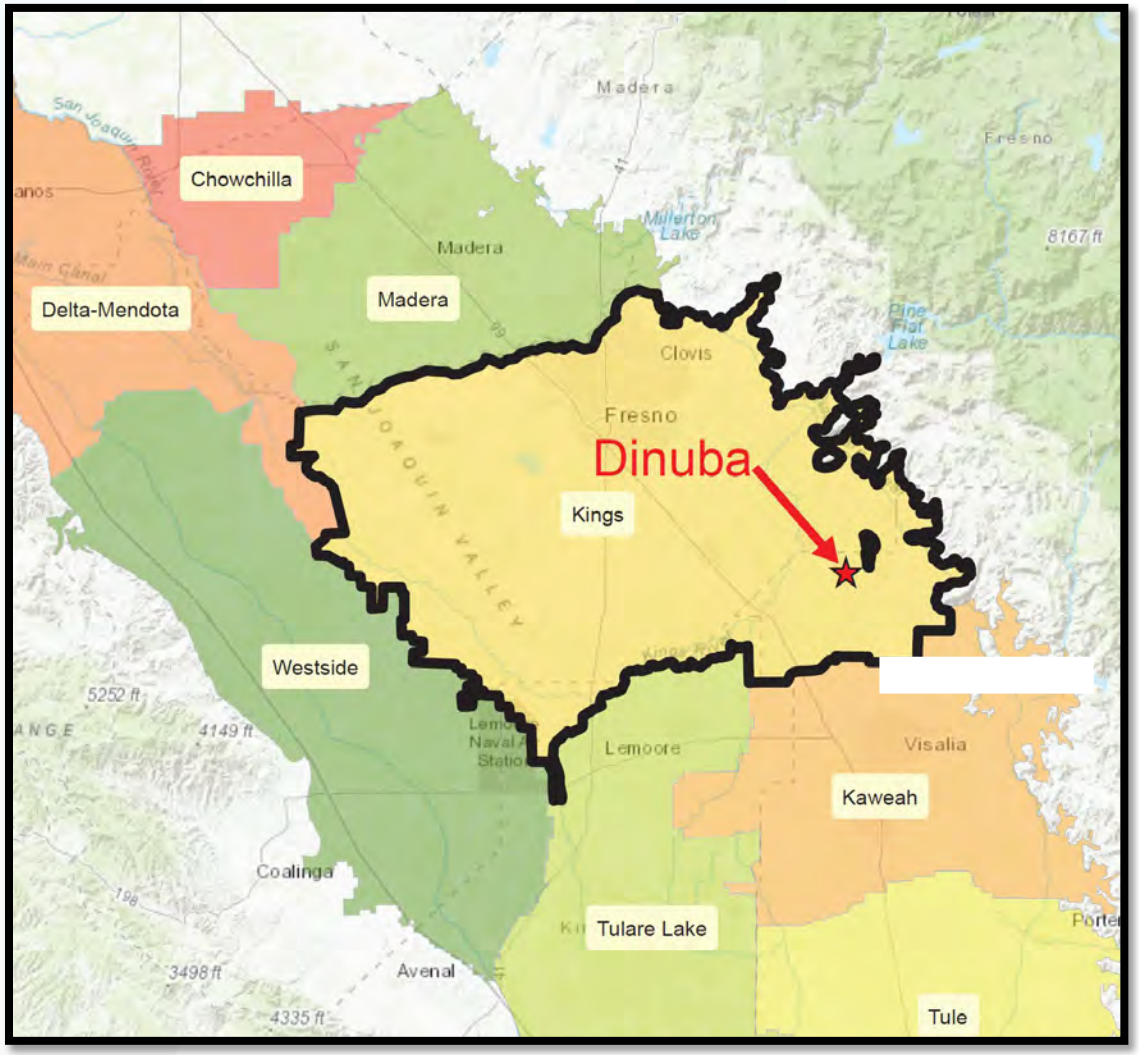
Technical Advisory Committee (TAC)

Representative	Agency
Robert Reeves, Senior Engineering Geologist robert.reeves@waterboards.ca.gov	State Water Resources Control Board – Division of Financial Assistance
Robin Guillot, Engineering Geologist robin.guillot@waterboards.ca.gov	State Water Resources Control Board – Division of Financial Assistance
Chad Wegley, Executive Director cw@altaid.org	Kings River East Groundwater Sustainability Agency
Bryan Potter, Senior WRCE Bryan.Potter@waterboards.ca.gov	Tulare District SWRCB- Division of Drinking Water
Kristin Willet kristin.willet@waterboards.ca.gov	Tulare District SWRCB- Division of Drinking Water
Paul Dotson, Engineering Geologist Paul.Dotson@waterboards.ca.gov	Central Valley Regional Water Quality Control Board

Project Overview, Goals & Benefits

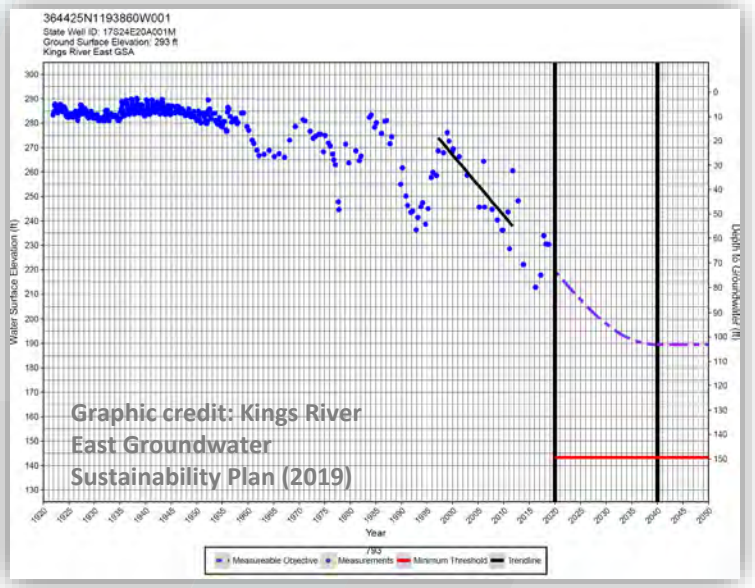
Setting

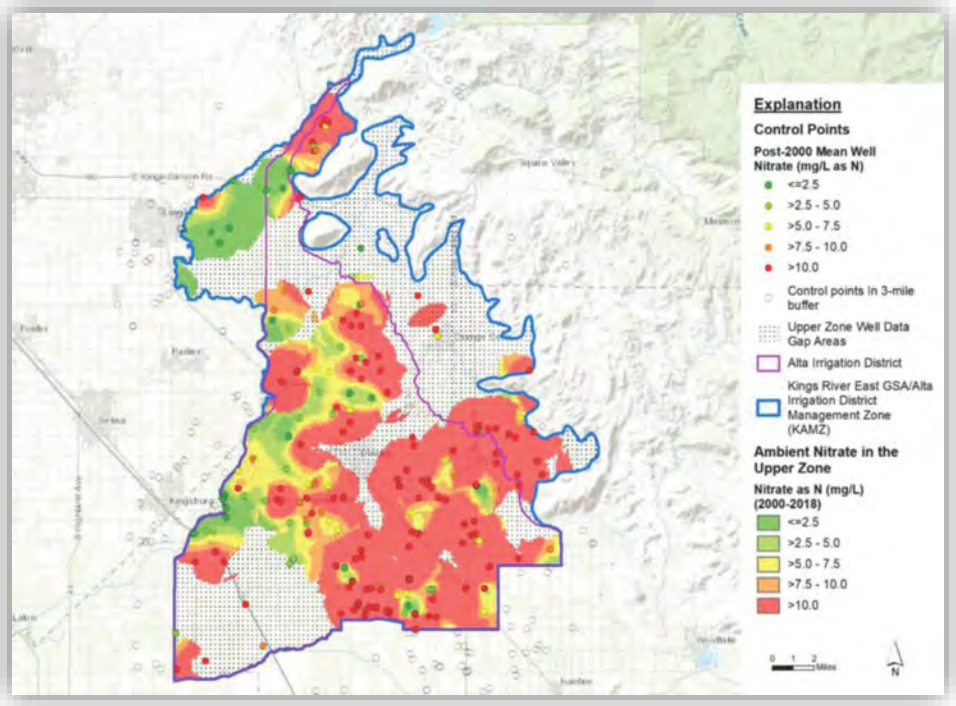
- ✓ Disadvantaged community in agricultural area
- ✓ Groundwater is sole municipal water supply
- ✓ Kings Groundwater Subbasin considered critically overdrafted
- ✓ Priority basin for establishment of Nitrate Management Zones
- ✓ Located in Kings River East GSA

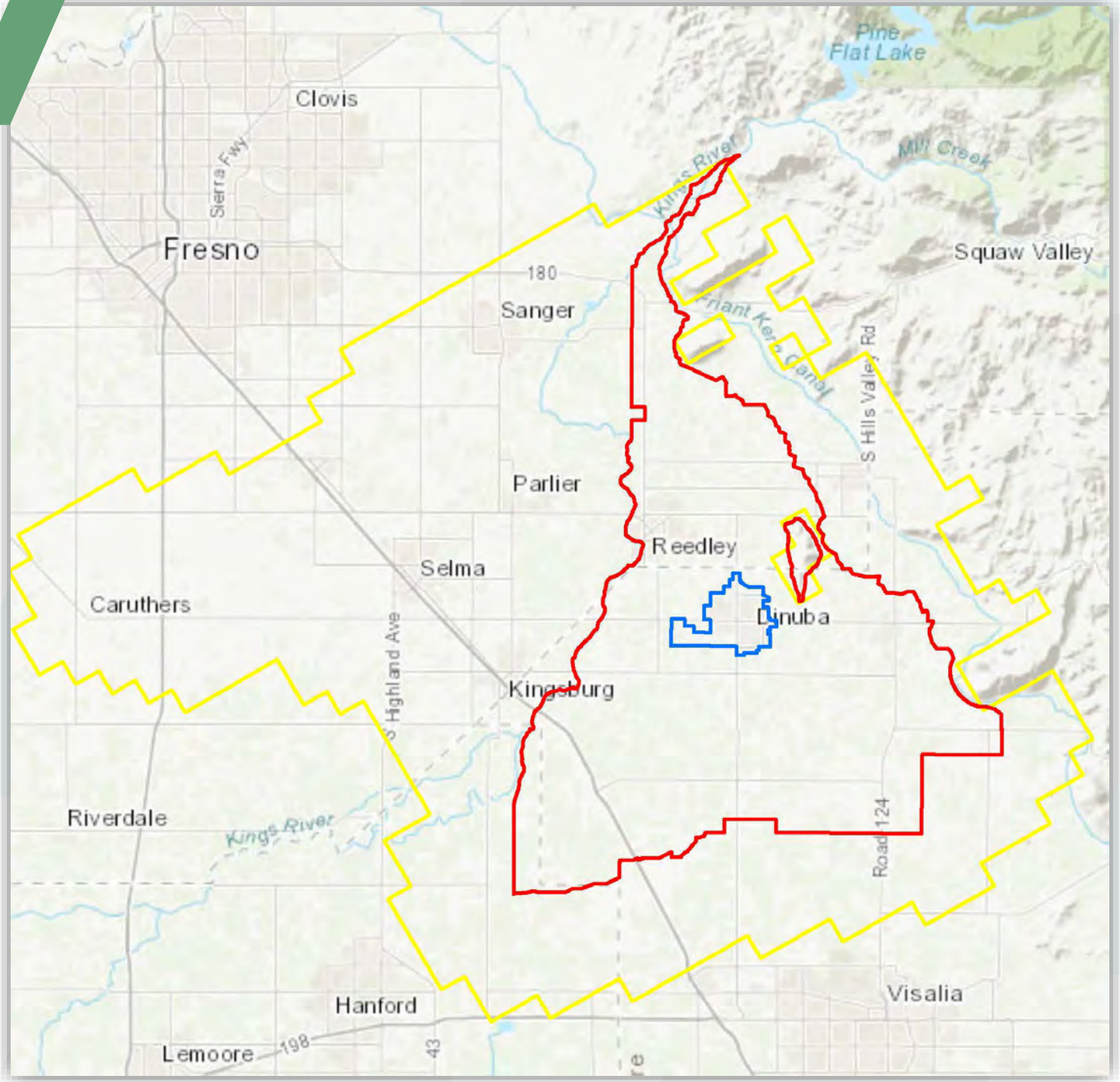


Regional Groundwater Issues

- ✓ Long-term groundwater level decline
- ✓ Widespread shallow groundwater impacts:
  - o Nitrates from agricultural activities, municipal wastewater and septic systems
  - o Dibromochloropropane (DBCP) soil fumigant
  - o 1,2,3-trichloropropane (TCP), component of soil fumigants

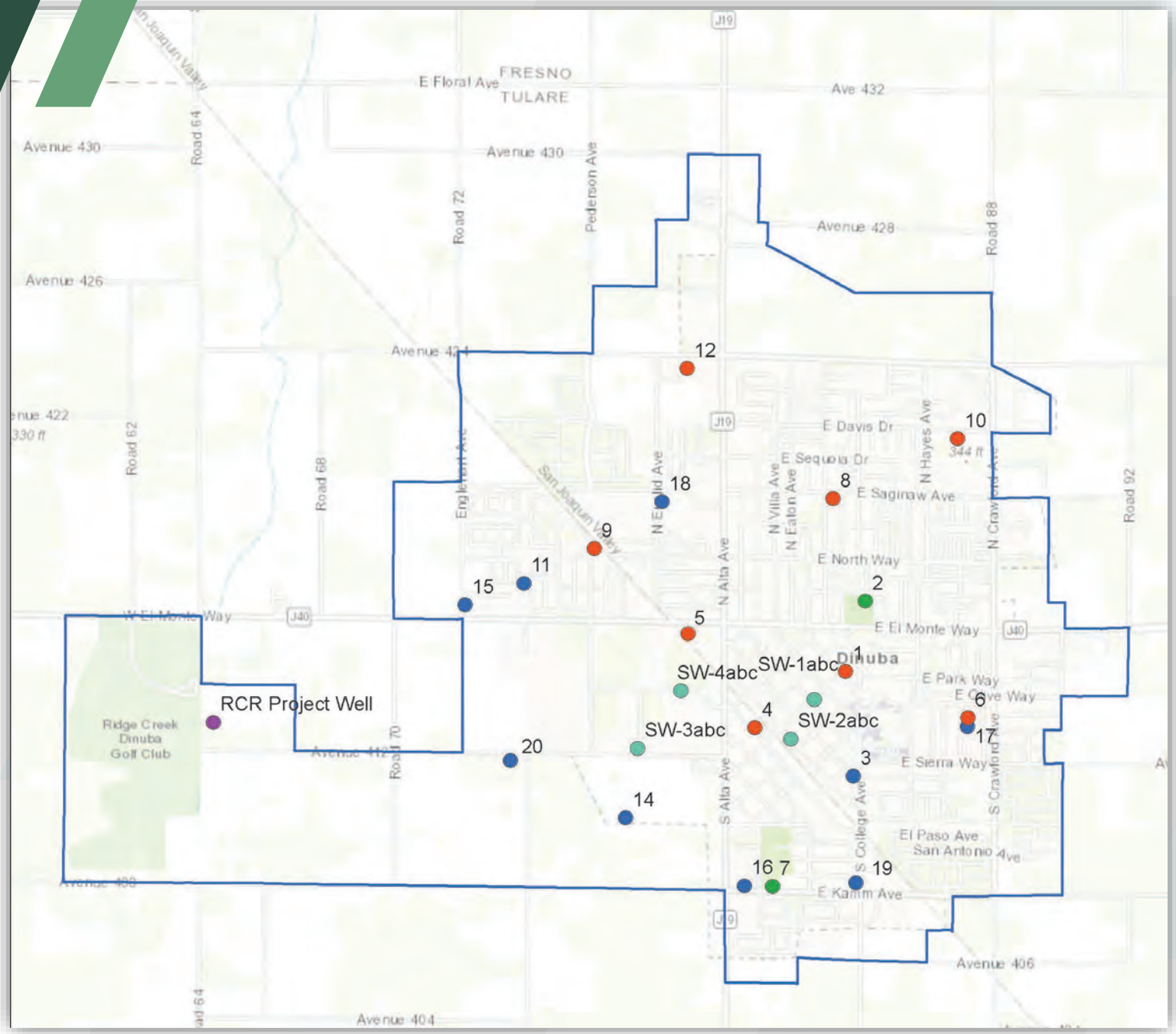






Legend

- Alta Irrigation District
- AID Model Boundary
- City of Dinuba Water Service Area



Legend

City of Dinuba Water Service Area

Well Type

- Active Well
- Destroyed Well
- Irrigation Well
- Monitoring Well
- RCR Project Well
- Standby Well

The Challenge

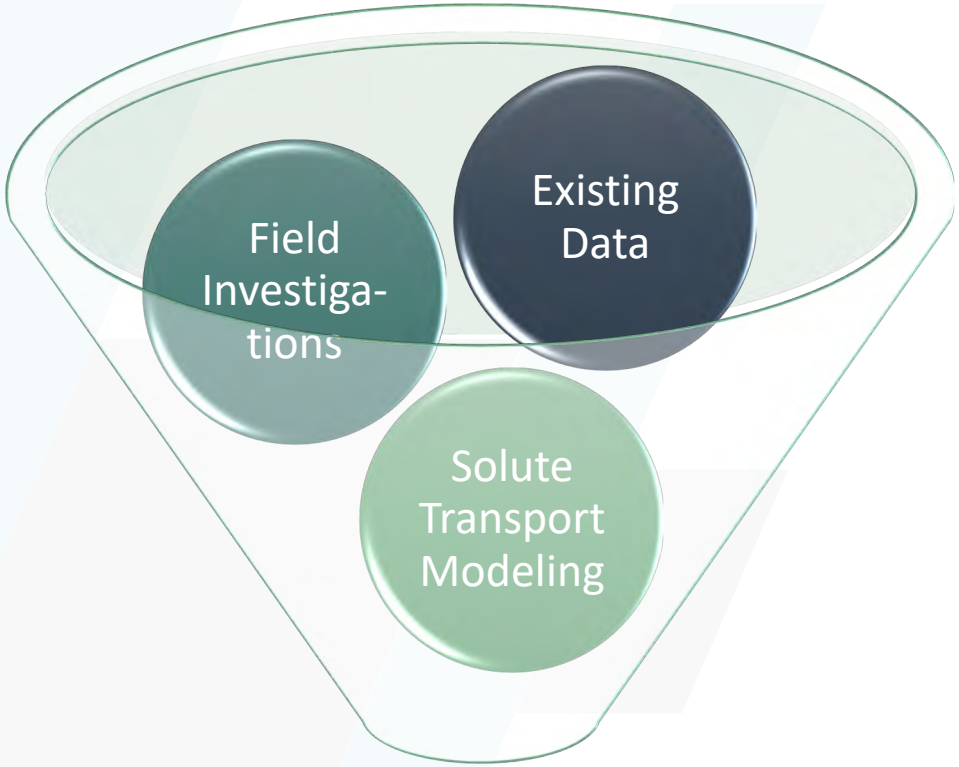
- Dinuba has removed a number of wells from service due to Nitrate, DBCP or 1,2,3-TCP
- Water from some wells must be treated to achieve drinking water requirements
- Groundwater is increasingly important for reliable municipal water supply
- Drilling deeper or providing wellhead treatment alone do not solve issues within the shallow aquifer

The Opportunity

- Dinuba is an ideal location to evaluate groundwater cleanup and supply management strategies
- Build on USGS groundwater model and studies of nitrate conducted in the Dinuba area as part of CV-Salts program
- Compile data from City of Dinuba, State databases and regional studies for CV-SALTS
- Incorporate cutting edge technologies for well flow and contaminant profiling

Approach

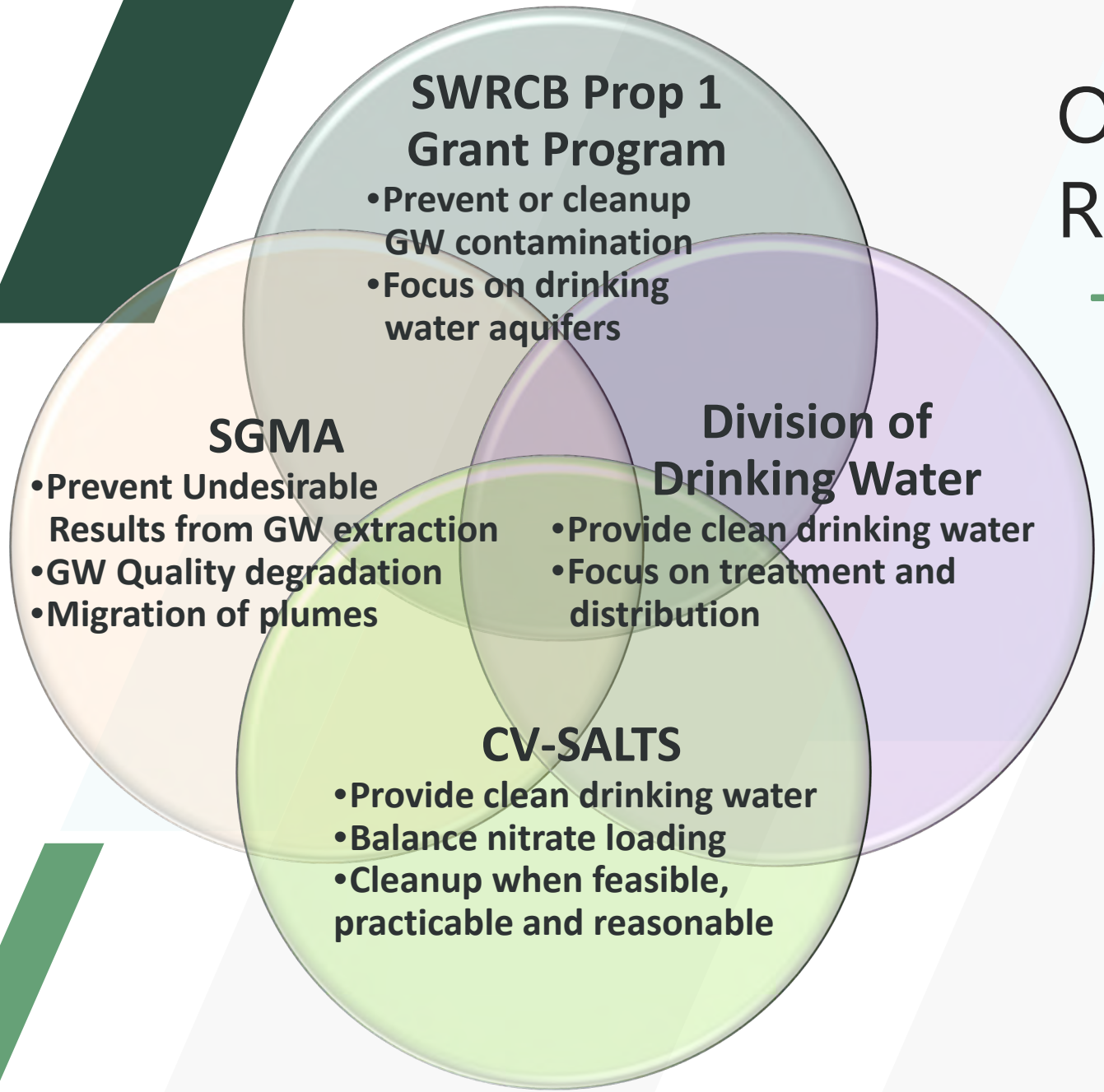
- ✓ Identify, evaluate and rank project alternatives that slow or prevent contamination spread; help clean up aquifers over time
- ✓ Identify a preferred project for implementation under future grant funding
- ✓ Potential projects include:
  - o Wellfield modifications
  - o Wellfield operation strategies
  - o Recharge projects
  - o Source reduction



Feasibility Study

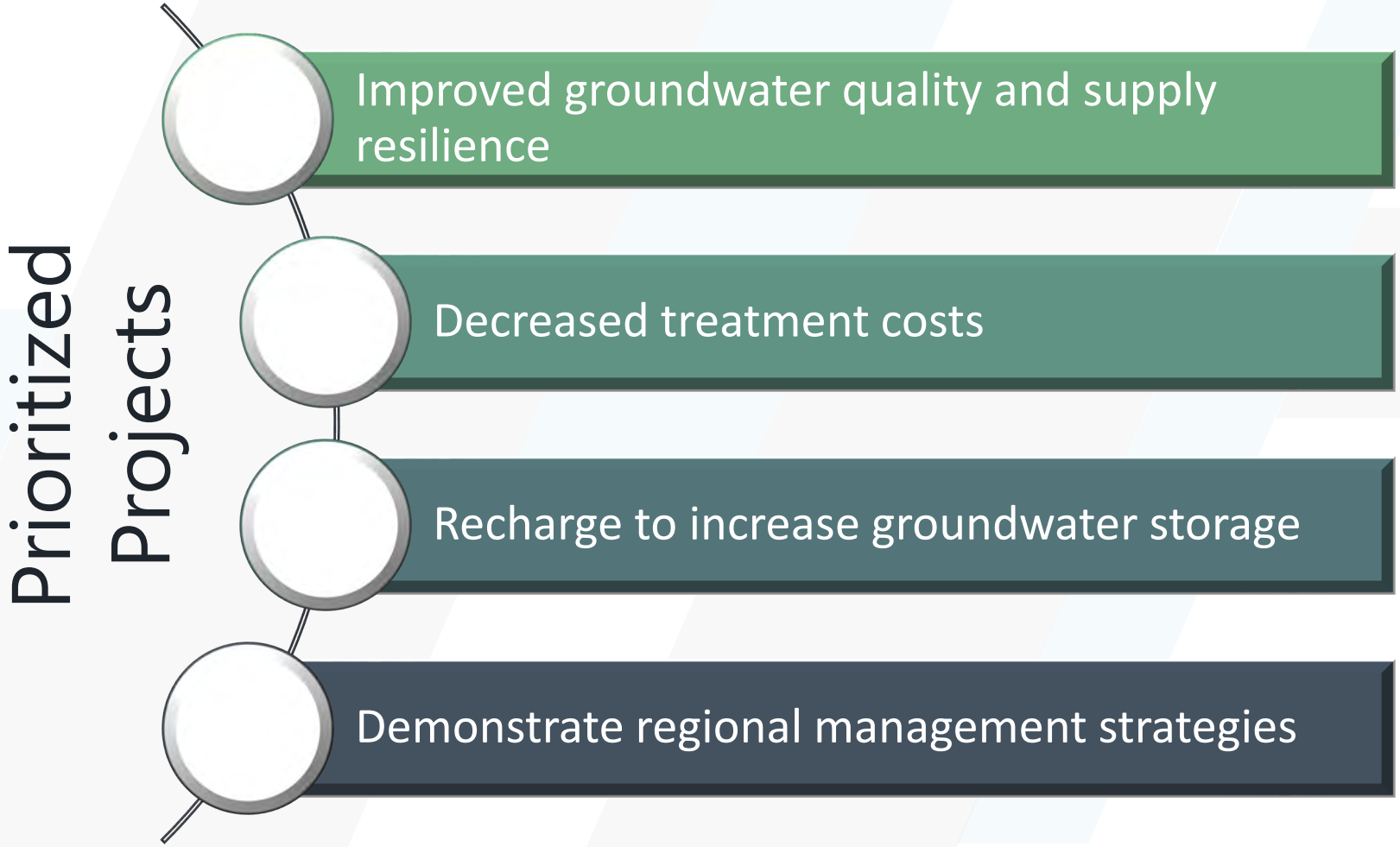
Prioritized Projects

Overlapping Regulatory Programs



The proposed RI/FS will study potential implementation projects that fall within the Prop 1 program, explore alternatives to and coordinate with treatment engineering approaches, explore practical aquifer cleanup solutions under CV-SALTS and the Water Code, and support sustainable groundwater management under SGMA.

Benefits


Prioritized Projects
Improved groundwater quality and supply resilience
Decreased treatment costs
Recharge to increase groundwater storage
Demonstrate regional management strategies

Project Schedule

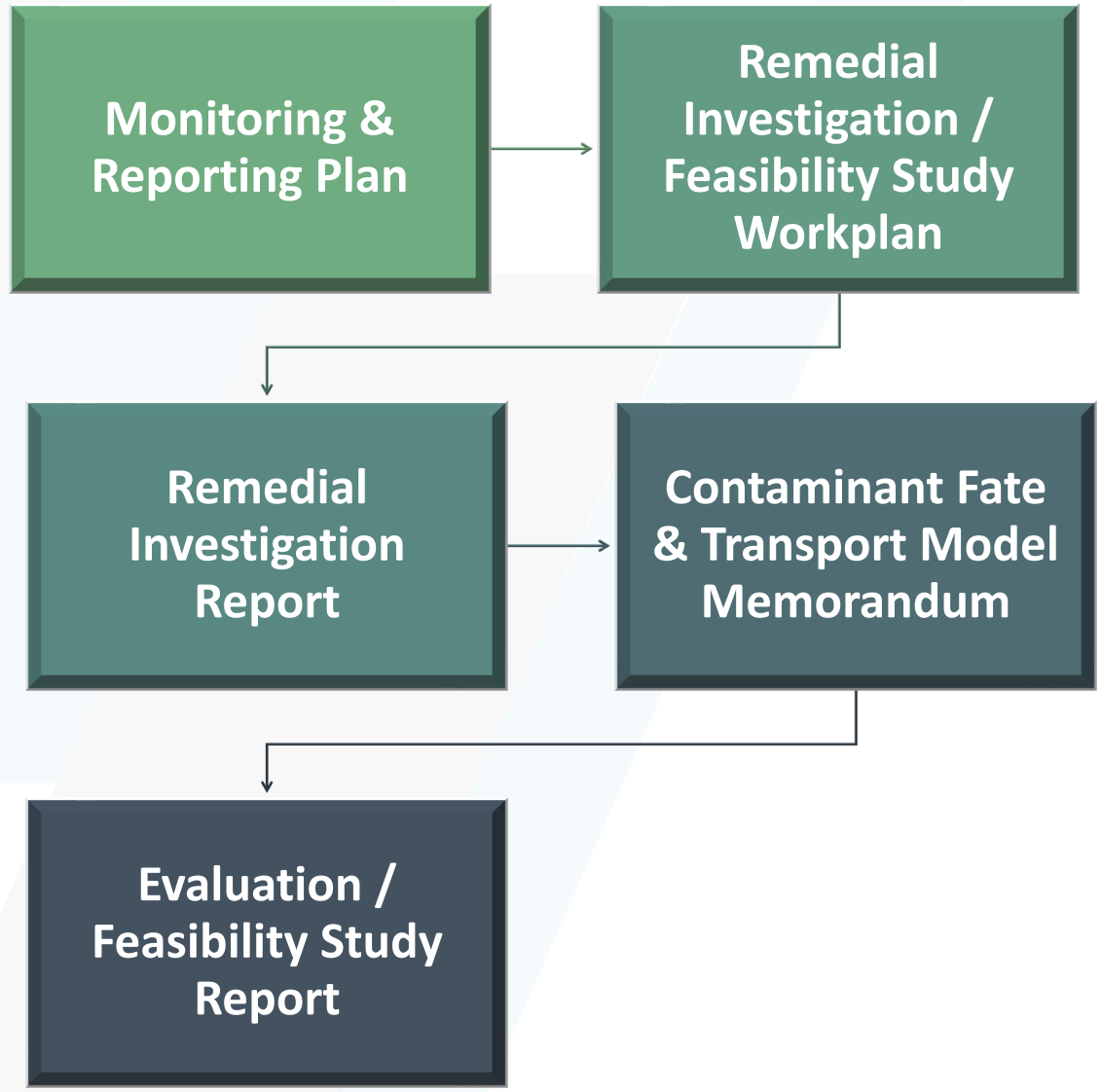
General Execution Timeline

	Data Sourcing & Analytics	2D/3D Data Visualization & Exploratory Data Analysis	Conceptual Site Model	Remedial Investigation	Groundwater Transport Model	Feasibility Study
3rd Quarter 2020						
4th Quarter 2020						
1st Quarter 2021						
2nd Quarter 2021						

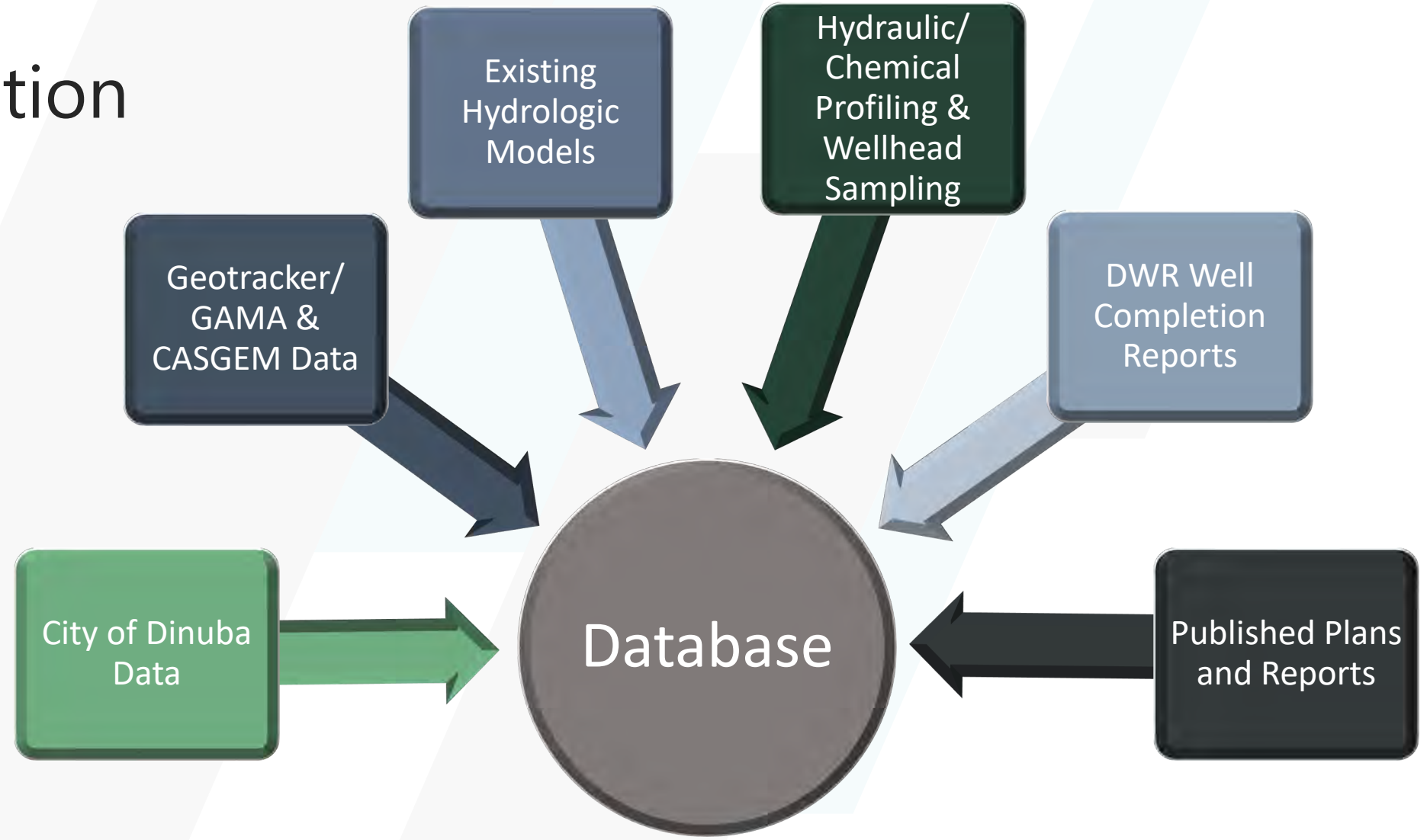
Not applicable In Progress Complete

Project Deliverables

Major Project Deliverables



Data Compilation



Remedial Investigation Fieldwork

Well Monitoring & Sampling

- Water levels
- Sampling and analysis

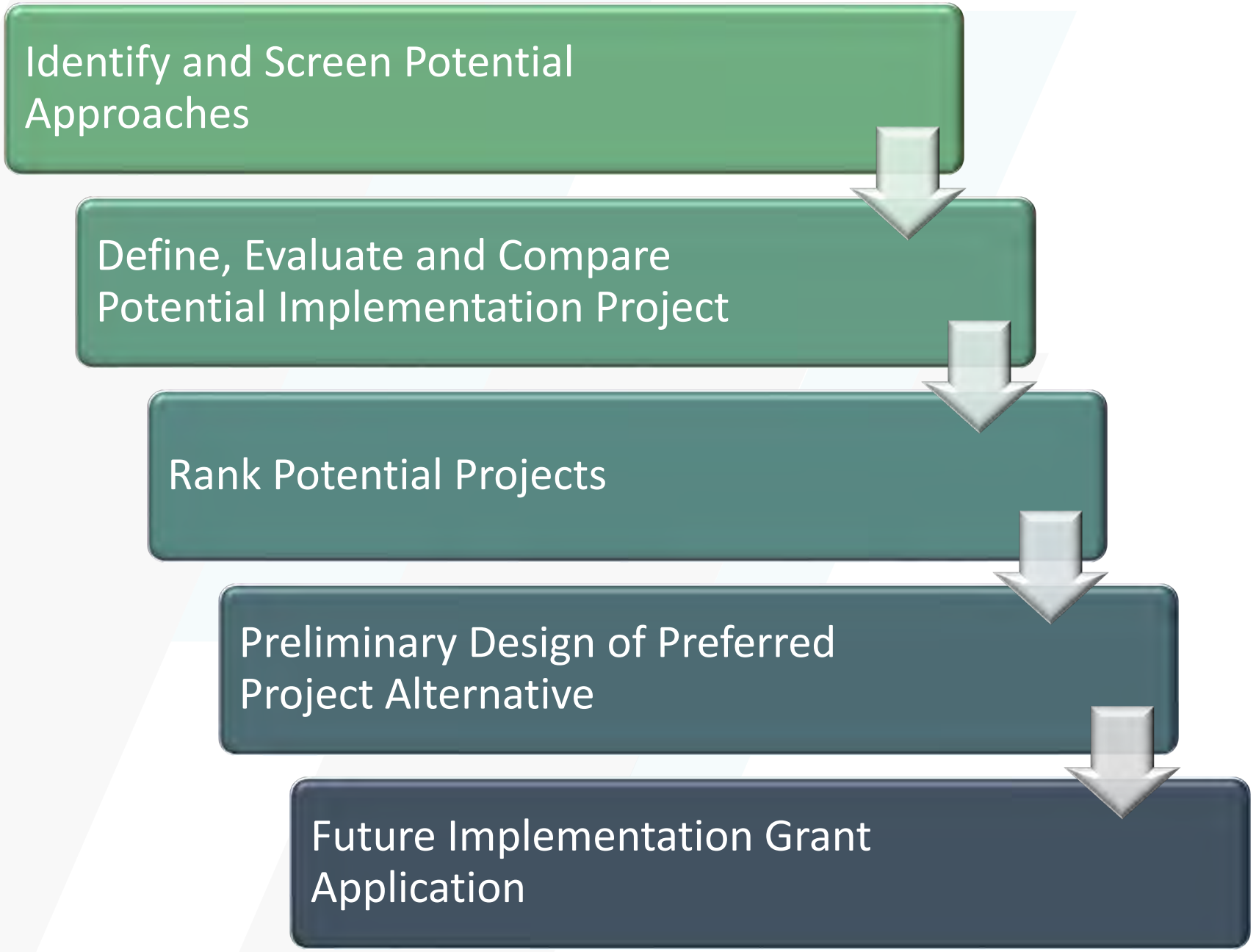
Supply Well Profiling

- Ambient and pumping flow profiling
- Chemical flow profiling
- Well interference

Opportunistic Sampling

- Sampling during ongoing monitoring programs
- Test well data
- Drawdown interference

Feasibility Study



Next Steps, Opportunities for Involvement, Questions & Comments

Next Steps

- ✓ Questions?
- ✓ Next meeting date in February 2021
- ✓ Project Website: http://www.dinuba.org/departments/122-public-works/598-dinuba-rifs
- ✓ Thank you for participating

For more information please contact:
Trilby Barton at tbarton@ppeng.com
Mike Tietze at mtietze@formationenv.com
Carla Landrum at clandrum@formationenv.com