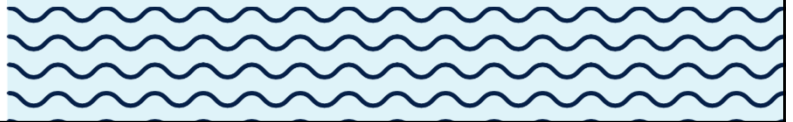




Sustainable Groundwater Management Projects Update

Becky Fairbanks
Stakeholder Advisory Committee
October 23, 2024



Background



- California Department of Water Resources Sustainable Groundwater Management Implementation Grant
 - Vina Groundwater Sustainability Agency (GSA) awarded \$5.5M
- Vina GSA Board approved the approach to partner with Butte County Department of Water and Resource Conservation and Agricultural Groundwater Users of Butte County (AGUBC) to lead portions of the grant funded work.



Projects implemented through March 2026:

- Data Gap Identification and Data Improvement
- Lindo Channel Recharge Feasibility
- Outreach Program
- Project Management and Grant Administration
- Demand Reduction Strategies



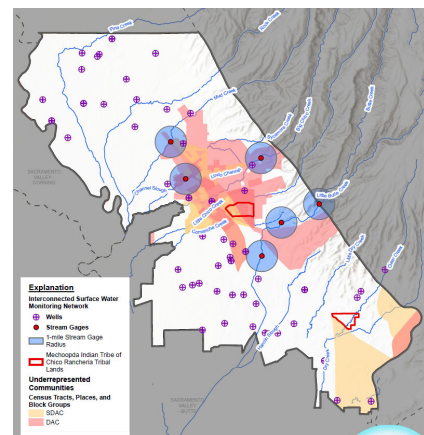
Data Gap Identification & Data Improvement

Why it matters:

- **Accurate data** is essential for making informed decisions about water resources.

Our plan:

- Invest in **new monitoring sites and equipment** for more precise data on surface and groundwater conditions.
- **Better understand the system** and amend the Vina GSA GSP over time to respond to new data and feedback from DWR.



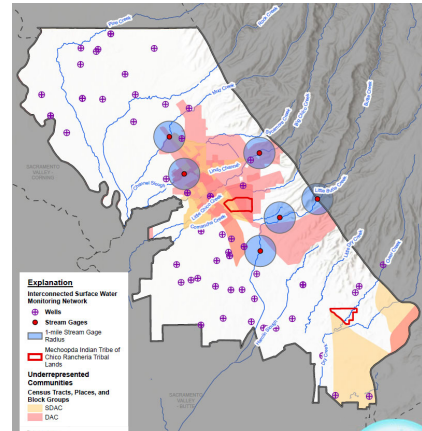
Data Gap Identification & Data Improvement

Updates on Tasks during 4/1/24 - 9/30/24:

- Project is on track and within budget.

Consultant Progress on Tasks Includes:

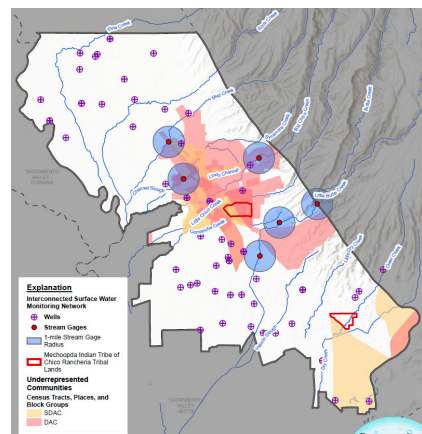
- Began identifying areas within the subbasin for potential new monitoring network sites. Coordination with Butte County to understand existing network.
- Developed approach to classify shallow and deep monitoring wells to support monitoring network enhancements. Analysis underway.
- In process of reviewing the GSP and DWR determination letter to identify data gaps and areas of refinement.



Data Gap Identification & Data Improvement

Next Steps:

- Finalize draft map of proposed locations for new monitoring sites
- Present the map of proposed locations to the Stakeholder Advisory Committee (SHAC) on October 23rd
- Present recommendations for proposed new monitoring sites to the Vina GSA Board for approval



Lindo Channel Recharge Feasibility

- Assess feasibility of enhancing natural recharge along the Lindo Channel in Chico.
- Project Outcomes:
 - **Develop Recharge Feasibility Study**
 - **Monitoring Network**
 - **Stakeholder Engagement**



Lindo Channel Recharge Feasibility

Updates on Tasks during 4/1/24 - 9/30/24:

- Project is within budget.
- Schedule has been slightly delayed but overall is on track

Consultant Progress on Tasks Includes:

- Reviewed water rights to assist in developing the flow thresholds for diversion.
- Reviewed AEM data and well logs for assessment of groundwater recharge potential.
- Revised the project schedule.



Lindo Channel Recharge Feasibility

Revised Schedule

	Start	Finish
C4.1: Project Management	3/18/2024	6/17/2025
C4.b.2: Pilot Project Feasibility and Initial Design (Completion date is contingent upon receiving acceptance from CDFW by 1/17/25)	3/18/2024	3/31/2025
C4.b.3 Design Consultation and Meetings	3/18/2024	6/17/2025
C4.c.4 Task 1: Final Implementation Design (Start date is dependent on meeting the deadline for the Initial Design task)	4/1/2025	6/17/2025
C4.c.5: Install Monitoring Network	7/29/2024	6/17/2025
C4.c.6: Implementation Consultation and Meetings	3/18/2024	6/17/2025
C4.e.7: Stakeholder Engagement	3/18/2024	6/17/2025



Outreach Program

Updates on Tasks during 4/1/24 - 9/30/24:

- Project is on track and within budget.

Consultant Progress on Tasks Includes:

- Created a style guide to promote consistency in outreach materials.
- Began creating project-specific outreach plans.

Upcoming:

- Finalize project-specific outreach plans.
- Develop and design outreach materials for projects.



Project Management & Grant Administration

Updates on Tasks during 4/1/24 - 9/30/24:

- Project is on track and within budget

Progress on Tasks Includes:

- Hosted a big team kickoff meeting with all consultants
- Scheduled regular check-in meetings with each consulting team
- Filed environmental forms
- Submitted two quarterly invoices and progress reports to DWR



Demand Reduction Strategies Update

Tovey Giezentanner
Project Manager

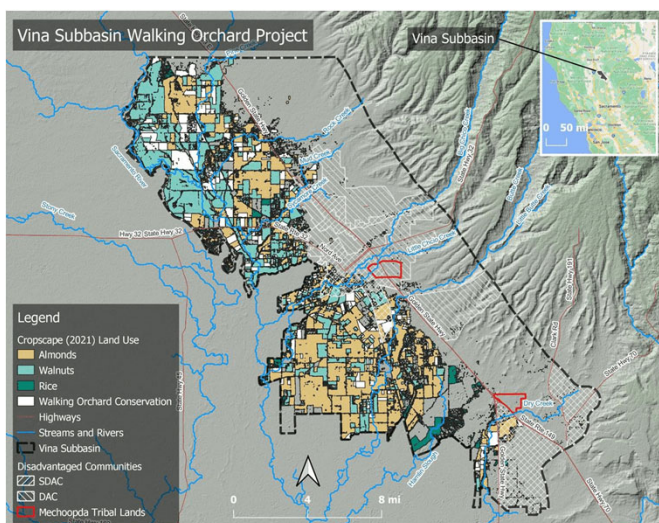
Demand Reduction Strategies

Will improve subbasin sustainability related to groundwater levels and groundwater storage **by decreasing consumptive use** through two programs:

1. Precision Irrigation Program
2. Extend Orchard Replacement Program



Extend Orchard Replacement Program



What:

Incentivize local growers to **extend the duration of their current fallowing practice** between orchard removal and replanting by one or more growing seasons.

Why:

Extra time allows the soil to fallow and **reduces the overall demand** on groundwater.

Goals & Benefits:

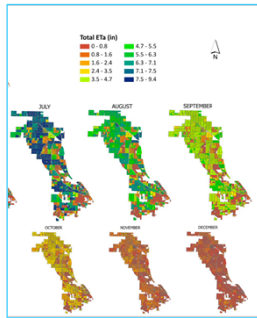
- Temporarily fallow between 1,600 and 3,200 acres per year.
- Reduce groundwater use by 4,000 to 8,000 acre-feet per year in the Subbasin.



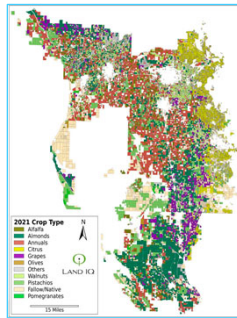
Precision Irrigation Program

Perform a comprehensive state of irrigation technology and systems analysis in the Subbasin:

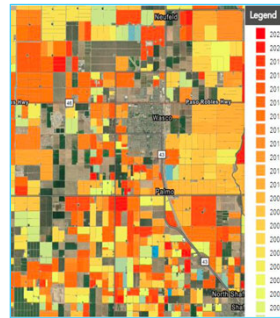
1. Step 1 – Use spatial data (ET, crop type, & crop age) to compare orchards of the same type and maturity. Find out which orchards have higher water use and lower water use (i.e., consumptive use, NOT applied)
2. Step 2 - Use spatial data to see if there are any relationships between water use and soil type, tree density, and/or irrigation method.
3. Step 3 – Identify orchards of interest (depending on results of Step 2) and collect information from owners on historical yields, irrigation scheduling/management, and variety on orchards of interest.
4. Step 4 – Identify strategies to reduce ET without decreasing yield for basin-wide implementation.



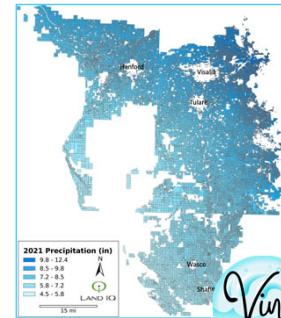
ET



Crop Type



Crop Age



Precipitation



Demand Reduction Strategies: Timeline & Activity

	2024	2025	2026
Phases	Develop Pilot Programs	Implement Pilot Programs	Finalize Technical Memos / Programs
Precision Irrigation	<ul style="list-style-type: none"> Install ET stations. Develop spatial map. Add layers to spatial map. 	<ul style="list-style-type: none"> Analysis of outputs from the spatial map. Conduct educational outreach to landowners based on results and solicit input / feedback. 	<ul style="list-style-type: none"> Finalize Technical Memo for the Subbasin, based on comprehensive spatial mapping analysis and grower input.
Extend Orchard Replacement	<ul style="list-style-type: none"> Collect economic data. Develop and Finalize Pilot Program Guidelines. 	<ul style="list-style-type: none"> Implement Extend Orchard Pilot Program. 	<ul style="list-style-type: none"> Finalize Technical Memo for the Subbasin, based on comprehensive spatial mapping analysis and results of Extend Orchard Pilot Program.



Upcoming Public Events



Vina SGM
Projects

- 11/7/24 – Extend Orchard Replacement Webinar
- 11/13/24 – Lindo Channel Recharge Feasibility Stakeholder Meeting
- Extend Orchard Replacement Public Workshop

Questions?

