

Vina Subbasin Demand Reduction Strategies

Precision Irrigation (PI) Pilot Program Summary

Background

Improving irrigation efficiency is the first step in conserving agricultural water use. However, irrigation water applied in excess of crop needs mostly goes back to replenish the groundwater system. Therefore, improving irrigation efficiency can reduce recharge to the groundwater basin. However, reducing *non-beneficial* consumptive use (or evapotranspiration (ET)) from weeds, evaporation of applied water, or vegetative growth that doesn't improve yield can improve sustainability by reducing water demand without sacrificing crop yield.

The PI Pilot Program is funded by the Sustainable Groundwater Management grant program through March 2026. It is being implemented by the Vina Subbasin GSA and its cooperators to demonstrate quantifiable water savings and other potential benefits such as pumping cost reduction and improved yield by reducing non-beneficial ET during the 2025 growing season.

Approach

1. Employ technical advisors to work with landowners/operators of almond and walnut orchards to plan and implement site-specific strategies to minimize non-beneficial ET. These strategies include irrigation management; implementation of irrigation scheduling technologies such as plant and soil real-time monitoring, and irrigation application automation; and potentially other recommendations.
2. Collect ET data to quantify water use changes that result from implementing site-specific strategies.
3. Quantify water savings of EOR pilot orchards and make recommendations, based on the pilot program, for subbasin-wide implementation.
4. **All farm data will be confidential and aggregated with anonymity for GSA purposes.**

Landowner Benefits

Landowners/operators who agree to implement PI Plans developed cooperatively with technical advisors will receive, free of charge:

- Technical assistance to develop a PI Plan for the 2025 growing season (April-November)
- Precision irrigation equipment and subscription (if applicable) for the 2025 growing season
- Results of ET data collection and analysis

Landowner Requirements

- Must provide yield data
- Must provide irrigation and other management information
- Must work with Technical Advisor to develop PI Plan
- Must implement PI Plan
- Must have flow meter (previously installed or installed at expense of program)

Eligibility

- Almond orchards planted between 2006 and 2019; walnut orchards planted between 2001 and 2017
- Limited to between 5 and 500 acres per landowner

How to Participate

Submit the following information to (vinademandreduction@landiq.com)

1. Landowner/operator name

2. Landowner/operator contact information

Phone: _____

Email address: _____

Orchard Location (APN)	Crop Type	Acreage (must be 5-500 ac)	Planting Density	Planting Year	Irrigation Type