

# **Vina Subbasin GSAs Demand Reduction Strategies: Precision Irrigation Pilot Study - Summary**

Prepared for  
**Vina Subbasin GSAs**



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## FIELD DATA COLLECTION

Field data collection included irrigation method and practices, pertinent environmental conditions (i.e. soil type, proximity to surface water, etc.), limiting factors such as disease and production challenges, applied water and yield. Yield data for 2024 and 2025 seasons were collected for all the pilot study orchards but applied water was not available for five of the orchards. Consumptive use data was also collected on all pilot orchard fields.

Selected PI pilot study orchards are shown in the map and table below. Exact locations are not provided to protect the identify and data of the pilot study participants.

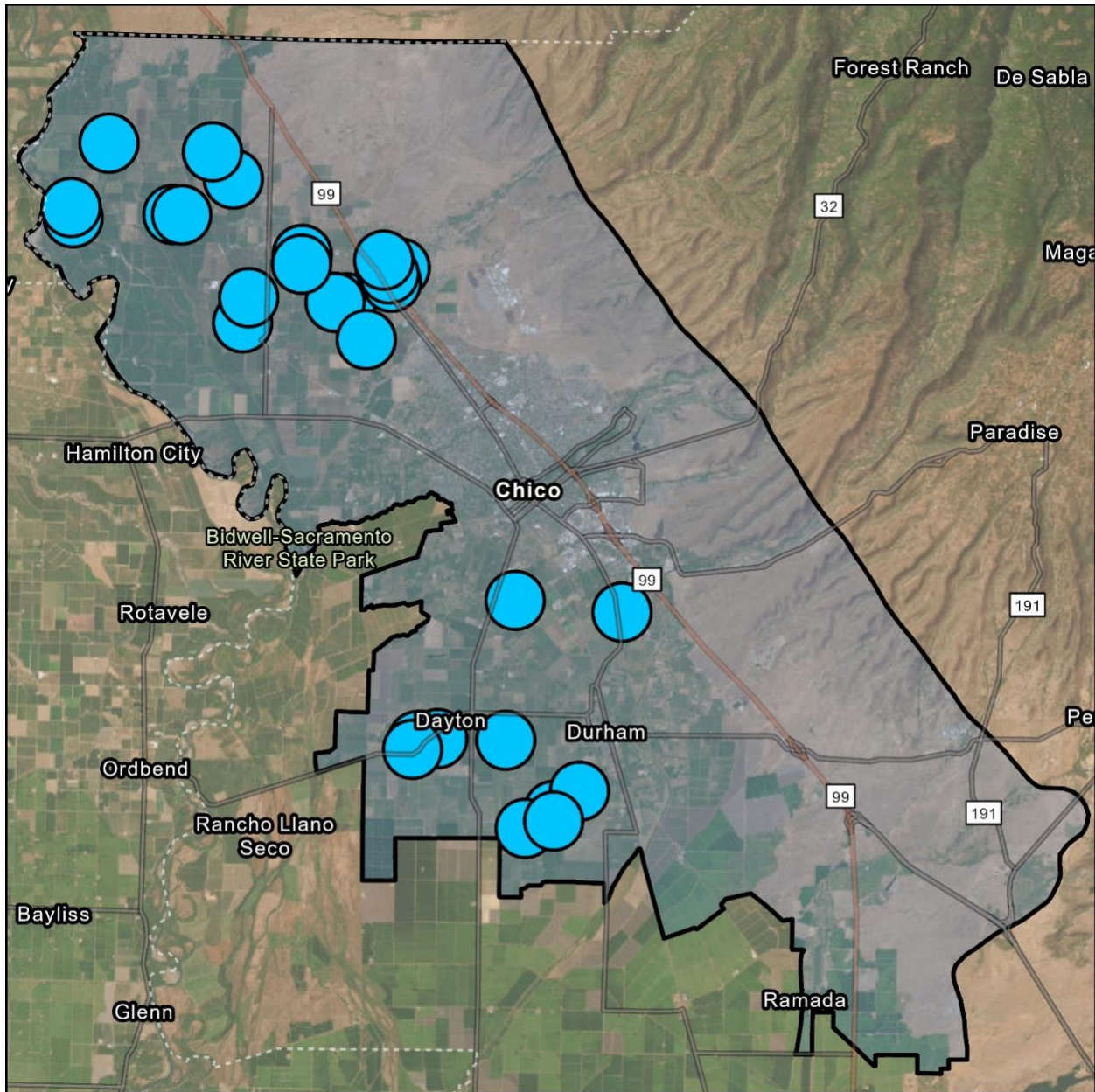


Figure 1. General locations of PI pilot study orchards.

**Table 1. Almond PI Pilot Study Orchards and Site Conditions**

| # | Pilot Number | Age | Acres | Spacing      | Variety   | Rootstock                       | Irrigation Method                         | 2025 Applied Water Provided | 2025 Yield Provided | 2024 Yield Provided |
|---|--------------|-----|-------|--------------|---|---------------------------------|---|-----------------------------|---------------------|---------------------|
| 1 | PI0004ALM    | 20  | 75.0  | 16 x 21      | Nonpareil (25%), Price (25%), Winters (25%), and Carmel (25%)     | 25% Krymsk 86, 75% Mariana 2624 | Double line drip and solid set sprinklers | Y                           | Y                   | Y                   |
| 2 | PI0005ALM    | 20  | 76.0  | 16 x 23      | Nonpareil (50%), Price (25%), Winters (12.5%), Carmel (12.5%)     | Lovell Peach                    | Double line drip and solid set sprinklers | Y                           | Y                   | Y                   |
| 3 | PI0006ALM    | 20  | 76.0  | 16 x 23      | Nonpareil (50%), Price (25%), Winters (12.5%), Carmel (12.5%)     | None provided                   | Double line drip and solid set sprinklers | Y                           | Y                   | Y                   |
| 4 | PI0010ALM    | 16  | 76    | 21 x 16      | Nonpareil (50%), Peerless (12.5%), Winters (12.5%), Monterey(25%) | Krymsk 86                       | Solid set                                 | Y                           | Y                   | Y                   |
| 5 | PI00117ALM   | 17  | 57.0  | 27 x 27      | Nonpareil (50%), Aldrich (50%)                                    | Lovell Peach & Krymsk86         | Solid set                                 | Y                           | Y                   | Y                   |
| 6 | PI00120ALM   | 15  | 115.0 | 22.5 x 17.25 | Nonpareil (66%), Winters (11%), Price (11%), & Carmel (11%)       | Krymsk 86                       | Solid set                                 | Y                           | Y                   | Y                   |

| #  | Pilot Number | Age | Acres | Spacing | Variety   | Rootstock     | Irrigation Method                         | 2025 Applied Water Provided | 2025 Yield Provided | 2024 Yield Provided |
|----|--------------|-----|-------|---------|---|---------------|---|-----------------------------|---------------------|---------------------|
| 7  | PI00123ALM   | 6   | 30.4  | 24 x 14 | Nonpareil (50% or 75%?) & Bennet (50% or 25%?)        | None provided | Double line drip and solid set sprinklers | Y                           | Y                   | Y                   |
| 8  | PI00124ALM   | 9   | 42.0  | 24 x 16 | Nonpareil (50%), Aldrich (25%), and Wood Colony (25%) | Krymsk 86     | Double line drip and solid set sprinklers | Y                           | Y                   | Y                   |
| 9  | PI00127ALM   | 12  | 50.9  | 22 x 14 | Nonpareil (50%), Monterey (25%), & Aldrich (25%)      | Krymsk 86     | Solid set                                 | N                           | Y                   | Y                   |
| 10 | PI00136ALM   | 6   | 14.3  | 24 x 14 | Nonpareil (50% or 75%?) & Bennet (50% or 25%?)        | None provided | Double line drip and solid set sprinklers | Y                           | Y                   | Y                   |
| 11 | PI00144ALM   | 8   | 47.6  | 22 x 14 | Nonpareil (50%), Monterey (25%), & Aldrich (25%)      | Krymsk 86     | Solid set                                 | N                           | Y                   | Y                   |

Note: Some orchards had both types of irrigation systems and in these instances double line drip was the used predominantly during the growing season. The exceptions were solid set for frost control during bloom and nut set and post-harvest irrigation for rapid recovery from high crop stress.

**Table 2. Walnut Pilot Study Orchards and Site Conditions**

| #  | Pilot Number | Age | Acres | Spacing   | Variety  | Rootstock                 | Irrigation Method | 2025 Applied Water Provided | 2025 Yield Provided | 2024 Yield Provided |
|----|--------------|-----|-------|-----------|----------|---------------------------|-------------------|-----------------------------|---------------------|---------------------|
| 12 | PI0001WAL    | 13  | 63.0  | 25 x 25   | Chandler | VX211                     | Solid set         | Y                           | Y                   | Y                   |
| 13 | PI0002WAL    | 16  | 60.0  | 25 x 25   | Chandler | Paradox Hybrid (seedling) | Solid set         | N                           | Y                   | Y                   |
| 14 | PI0008WAL    | 22  | 118   | 25 x 12.5 | Howard   | Paradox Hybrid (seedling) | Solid set         | Y                           | Y                   | Y                   |
| 15 | PI0009WAL    | 20  | 156   | 30 x 15   | Chandler | Paradox Hybrid            | Solid set         | Y                           | Y                   | Y                   |
| 16 | PI00118WAL   | 16  | 58.9  | 27 x 27   | Chandler | Paradox Hybrid (seedling) | Solid set         | Y                           | Y                   | Y                   |
| 17 | PI00119WAL   | 20  | 15.0  | 30 x 30   | Chandler | Paradox Hybrid (seedling) | Solid set         | Y                           | Y                   | Y                   |
| 18 | PI0011NWAL   | 12  | 80.0  | 28 x 18   | Chandler | Paradox Hybrid            | Solid set         | Y                           | Y                   | Y                   |
| 19 | PI0011SWAL   | 29  | 54.0  | 30 x 30   | Chandler | Paradox Hybrid            | Solid set         | Y                           | Y                   | Y                   |
| 20 | PI00121WAL   | 13  | 61.9  | 24 x 28   | Solano   | VX211                     | Solid set         | Y                           | Y                   | Y                   |
| 21 | PI00122WAL   | 16  | 18.3  | 30 x 28   | Chandler | Paradox Hybrid            | Solid set         | Y                           | Y                   | Y                   |
| 22 | PI00125WAL   | 22  | 50.8  | 26 x 22   | Howard   | Paradox Hybrid (seedling) | Solid set         | N                           | Y                   | Y                   |

| #  | Pilot Number | Age | Acres | Spacing | Variety  | Rootstock                 | Irrigation Method | 2025 Applied Water Provided | 2025 Yield Provided | 2024 Yield Provided |
|----|--------------|-----|-------|---------|----------|---------------------------|-------------------|-----------------------------|---------------------|---------------------|
| 23 | PI00126WAL   | 15  | 94.1  | 26 x 22 | Solano   | Paradox Hybrid (seedling) | Solid set         | N                           | Y                   | Y                   |
| 24 | PI00128WAL   | 28  | 14.2  | 30 x 30 | Chandler | Paradox Hybrid (seedling) | Micro sprinkler   | Y                           | Y                   | Y                   |
| 25 | PI0012WAL    | 8   | 39.5  | 28 x 28 | Chandler | Paradox Hybrid (seedling) | Solid set         | Y                           | Y                   | Y                   |
| 26 | PI0013WAL    | 12  | 64.3  | 28 x 20 | Chandler | Paradox Hybrid (seedling) | Solid set         | Y                           | Y                   | Y                   |

