

City of Santa Paula Water Supply Facts

Where does the City of Santa Paula obtain its water?

- Currently, the City of Santa Paula obtains its water supply from the court-adjudicated Santa Paula Groundwater Basin (Basin) and in lieu surface water from Santa Paula Creek (i.e., additional Basin groundwater that it receives through an exchange agreement with Canyon Irrigation Company whereby the City exchanges its Santa Paula Creek water entitlement for groundwater rights). The City owns, operates and maintains all of its groundwater pumping facilities (deep wells) to serve its customers.

What is a groundwater basin?

- A groundwater basin is an alluvial aquifer or a stacked series of alluvial aquifers within reasonably well-defined boundaries. The Basin is technically a sub-basin of the larger Santa Clara River Valley Basin. Other upstream sub-basins within the Santa Clara River Valley are the Piru and Fillmore Basins. See attached map.

How much water is estimated to be in each basin?

- Piru - One to two million acre-feet in storage depending on calculation assumptions; surface area is 8,900 acres.

- Fillmore - One to seven million acre-feet in storage depending on calculation assumption; surface area is 20,100 acres.
- Santa Paula - One to five million acre-feet in storage depending on calculation assumptions, surface area is 13,000 acres;

How do the basins recharge annually?

- Piru - Recharge occurs through percolation of runoff from Piru Creek, Hopper Creek, the Santa Clara River, and State Water.
- Fillmore - Recharge occurs through percolation of surface flow in the Santa Clara River, Sespe Creek, minor tributary streams, and State Water.
- Santa Paula - Recharge occurs through percolation of surface flow in the Santa Clara River, under flow from the Fillmore Basin, Santa Paula Creek, other minor tributary streams, and State Water.

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How much water does the average household consume annually?

Based on the average water consumption of 132 gallons per day per person (City of Santa Paula 2005 Urban Water Management Plan), a family of 5 would use 240,900 or 0.74 acre-feet per year. Water efficiency improvements have reduced demand over time. By comparison, thirty years ago the rule of thumb for water use in Southern California for a family of 5 was one acre-foot.

Is state water project available in the Santa Clara River Valley?

- State Water is delivered to Lake Pyramid (a component of the State Water Project System) which then flows into Lake Piru. The fall release by UWCD from Lake Piru (including releases of state water) is generally designed to carry the water downstream as quickly as possible to maximize deliveries to the Freeman Diversion for seawater intrusion abatement on the Oxnard Plain. UWCD's past calculations indicate that approximately 10% of the fall release percolates into the Santa Paula Basin. Thus, approximately 10% of State Water accrues to the benefit of the Santa Paula Basin using long term averages.

How does Santa Paula Basin water levels compare with water levels in other basins in the Santa Clara Valley?

- Piru - Hydrographs show 1998 water levels equaled their historic maximum, indicating a full basin (UCWD 1999b) and 1999 levels indicate the sub-basin was at 90 percent of storage capacity (Panaro 2000). DWR Bulletin 118 February 27, 2004.
- Fillmore - Like the Piru Basin to the east, the Fillmore Basin recharges rapidly and fills to capacity in years of abundant precipitation. DWR Bulletin 118 February 27, 2004.
- Santa Paula - The hydrographs show an annual cyclic rise and fall of water level of about 20 feet with longer-term variations apparently following precipitation cycles. The sub-basin was at a low level in 1991 and 1992, then recovered by 1994 and has remained stable since then. DWR Bulletin 118 February 27, 2004.
- From the attached hydrographs recently produced by UWCD it is apparent that water levels in the Santa Clara River Valley have been and continue to be very stable.

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What limits pumping from the Basin?

- Under the judgment adjudicating the Basin, the parties' rights were restricted to each party's "Individual Party Allocation," which establishes a maximum quantity of water that can be produced on average annually (calculated on a seven-year running average).

Which basins are adjudicated in Ventura County?

- Only the Santa Paula Basin is adjudicated. The Fillmore and Piru Basins are managed through a statute authorizing local entities to establish basin management plans, commonly referred to as AB 3030 plans following from the legislation that created the statute.

What are the critical facts regarding the Santa Paula Basin adjudication?

- Water Rights ("Individual Party Allocation") were assigned to the respective overlying pumpers and the City of Santa Paula, as a part of a stipulated Judgment in 1996 using average annual water use reported to UWCD during a 10 year period from 1981 to 1990.
- The Santa Paula Basin Pumpers Association (Association), a non-profit mutual benefit corporation, was created to act as the trustee of the parties granted

Individual Party Allocation, to represent their interests, and to participate in the management of the Basin together with the City of Ventura and UWCD.

- The Association has approximately 70 members that were allocated approximately 27,500 acre-feet of groundwater.
- Association members for the last 7 years (2006-2012) averaged approximately 24,200 acre-feet of production, approximately 3,300 acre-feet under their total allocation or a 12% "buffer" of unproduced water.

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What happens if pumping rights are reduced due to proven "overdraft" (over-pumping) in Santa Paula Basin?

- The Judgment includes cut back provisions set forth in six progressive stages that can be implemented to reduce production as necessary to balance total production with the Basin's safe yield. Cutbacks would likely only be required if the Basin were deemed to be in overdraft and opportunities to remediate the overdraft through additional recharge and other basin management techniques were unavailable.
- The first stage of cutbacks requires the Association members to reduce production by 500 acre-feet (approximately 2% of total Individual Party Allocation). In the second phase of cutbacks, the City of Ventura reduces production from its current allocation of approximately 3,000 acre-feet to 1,141 acre-feet. In Stage 3, the City further reduces its production to 641 acre-feet and the Association's cumulative allocation is reduced by 2,000 acre-feet (a cumulative reduction of roughly 9% from current allocations). In Stage 4, the City reduces production to 481 acre-feet and the Association's cumulative allocation is reduced by an additional 120 acre-feet. In Stage 5, the City must eliminate all production from the Basin. Finally, in Stage 6, the Association's members must reduce production to bring production in balance with the

Basin's safe yield. Thus, through Stage 5, the cumulative pumping reduction required of the Association's members would be less than 10% of the membership's current allocation; an amount within the Association's current "buffer" of average annual unproduced water of roughly 12% of cumulative allocations.

Who governs the adjudicated Santa Paula Basin?

- The Judgment is under the jurisdiction of the Ventura County Superior Court with assistance from a "Technical Advisory Committee" that is comprised of the Association, the City of Ventura and the UWCD.

How much allocation does the City of Santa Paula have under the Basin Judgment?

- The City possesses an Individual Party Allocation (IPA) of 5,488 acre-feet.

How much water has the City of Santa Paula historically used?

- The City, during the past 7 years (2006-2012), has under produced their 5,488 acre-foot allocation by an average of 540 acre-feet annually (roughly 10% underproduction).

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Does the City of Santa Paula have other available water supplies?

- In addition to Basin groundwater the City has access to up to 500 acre-feet of water from Santa Paula Creek by agreement with the Canyon Irrigation Company, plus over 2,000 acre-feet of salty recycled water that could be further treated and exchanged for additional groundwater supplies. Further, all new real-estate developments are required to dedicate adequate water rights to the City to offset the demand of the development.

How much allocation does the Limoneira have under the Basin Judgment?

- Limoneira possesses IPA and through memberships in mutual water companies (Farmers Irrigation Company and Canyon Irrigation Company) it has access to a total of 8,642 acre-feet from the Basin.

How much water has Limoneira historically used from the Santa Paula Basin?

- Limoneira, during the past 7 years (2006-2012), has produced 5,748 acre-feet, leaving 2,894 acre-feet un-pumped as a result of Limoneira's

substantial investments in more efficient irrigation systems, the use of green waste mulch to save additional water, and other water management practices.

What are Limoneira's Santa Paula Basin Allocation Sources?

- | | |
|-------------------------------------|---------------|
| • Farmers Irrigation Company Shares | 4,785 AF |
| • Canyon Irrigation Company Shares | <u>246 AF</u> |
| • Total from Mutual Water Companies | 5,031 AF |
| • Limoneira IPA | 3,611 AF |
| • Total Limoneira Water | 8,642 AF |

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Where will the water for East Area I and East Area II come from?

- Limoneira will provide all water necessary to serve the East Area I and II developments as set forth in the development agreements. All water will come from Limoneira's water rights in the Santa Paula and Fillmore Basins. The Fillmore/Santa Paula Basin boundary splits East Area I. See attached aerial photo.
- By written agreement with the AB 3030 Council Limoneira has secured 375 acre-feet of groundwater pumping right from the Fillmore Basin, which when required will be transferred to the City allowing future pumping from wells in the Fillmore Basin. All other water will be sourced from Limoneira's Santa Paula Basin allocation.
- The future water demand for East Areas I and II will be minimized by employing the latest water use efficiency technology. The water demand for these developments will be less than the demand from current crops located on the lands planned for development. Thus, the shift from agriculture to municipal use on these properties will reduce the overall Basin water demand.

How many gallons of water is an acre foot of water?

- An acre foot of water is defined as an acre of land surface area one foot deep. An acre foot of water contains 325,851 gallons.

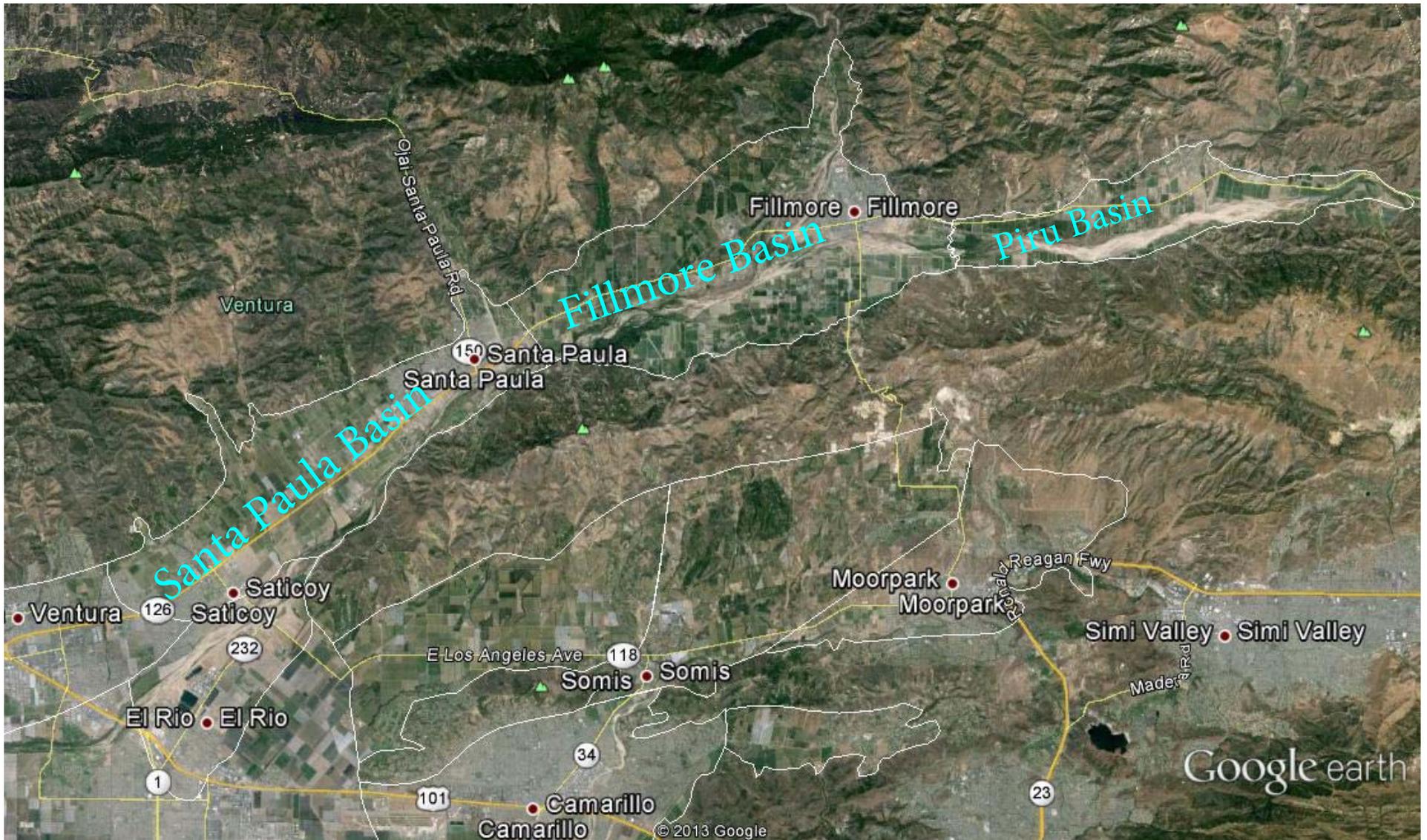
How much water do typical crops in the Santa Clara River Valley consume?

- Actual annual water demand per crop is a function of effective rainfall, soil type, and temperature during the year. Average annual water demands per acre for common crops in the area are:
 - Lemons 2.0 AF per acre
 - Avocados 2.1 AF per acre
 - Strawberries 3.0 – 3.5 AF per acre
 - Various Row Crops 2 - 5 AF per acre

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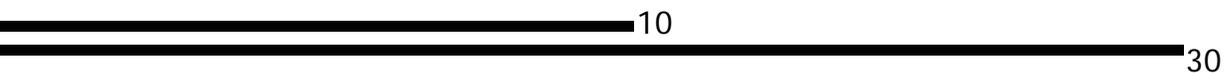
Other City of Santa Paula water benefits being provided by Limoneira's East Area I and East Area II development projects include:

- Addition of five million gallons of elevated water storage:
 - Enough water to supply the East Area I development for 5 days,
 - Nearly 3 times the per capita storage capacity of the existing City water system,
 - Providing emergency storage benefit to existing customers.
- Upon build out of East Area I the fixed cost of operations of the wastewater recycling plant will be shared with nearly 20% more customers providing a corresponding reduction in per capita fixed operating costs.
- Provides overlying land to the City of Santa Paula in the Fillmore Groundwater Basin:
 - To produce abundant and high quality groundwater from a location that readily recharges,
 - By written agreement with Fillmore/Piru Basin Management Council, 375 acre-feet of annual groundwater pumping from the Fillmore Basin can be transferred to the City,
 - The Fillmore supply will diversify the City's groundwater supply in addition to Santa Paula Basin rights transferred to the City from Limoneira.

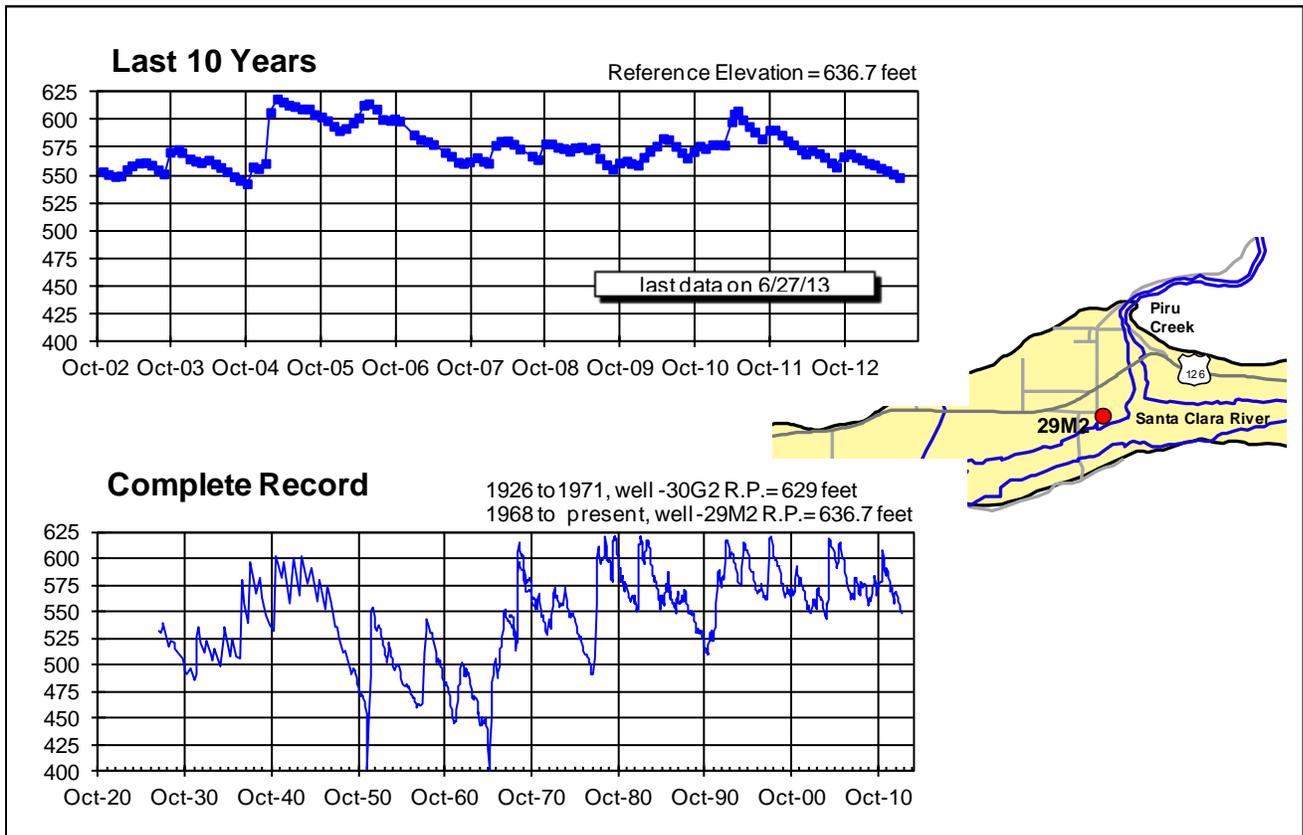


Google earth

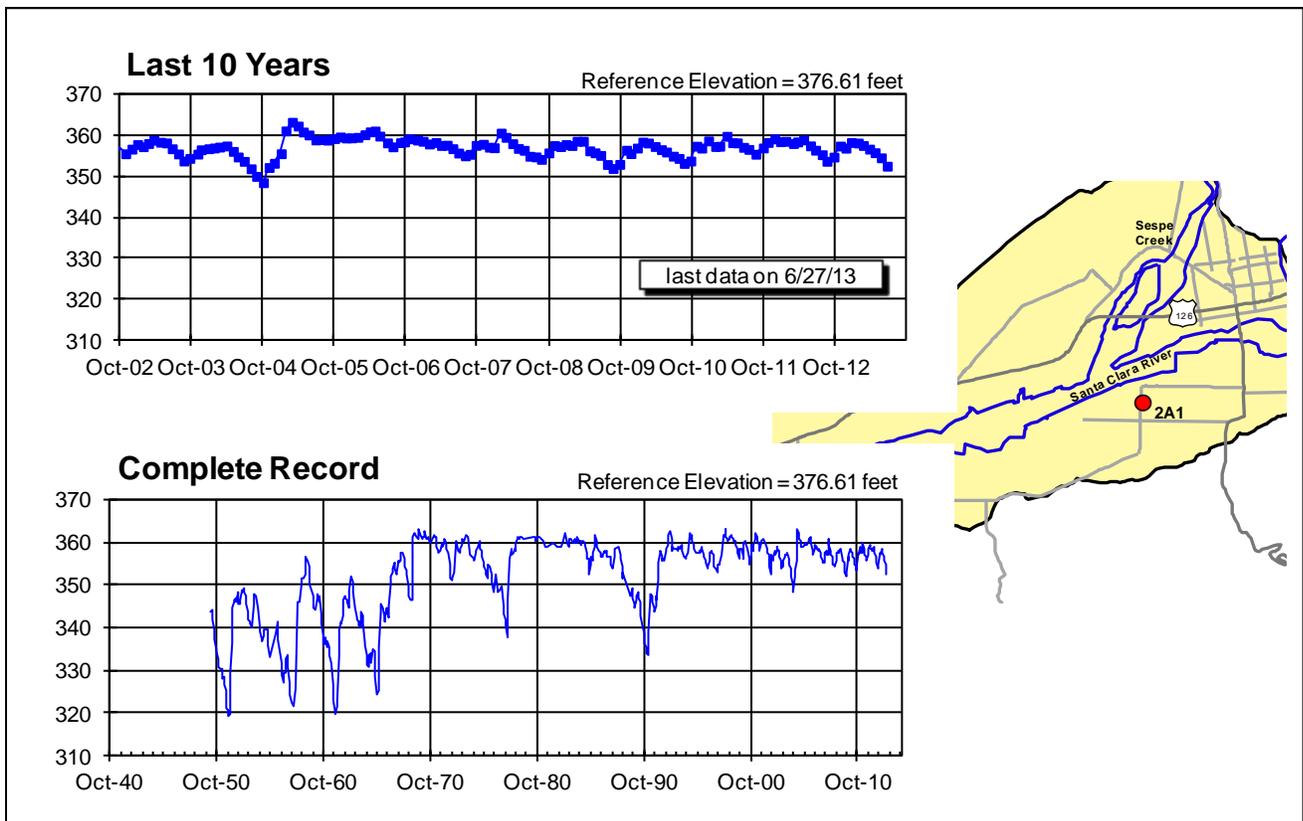
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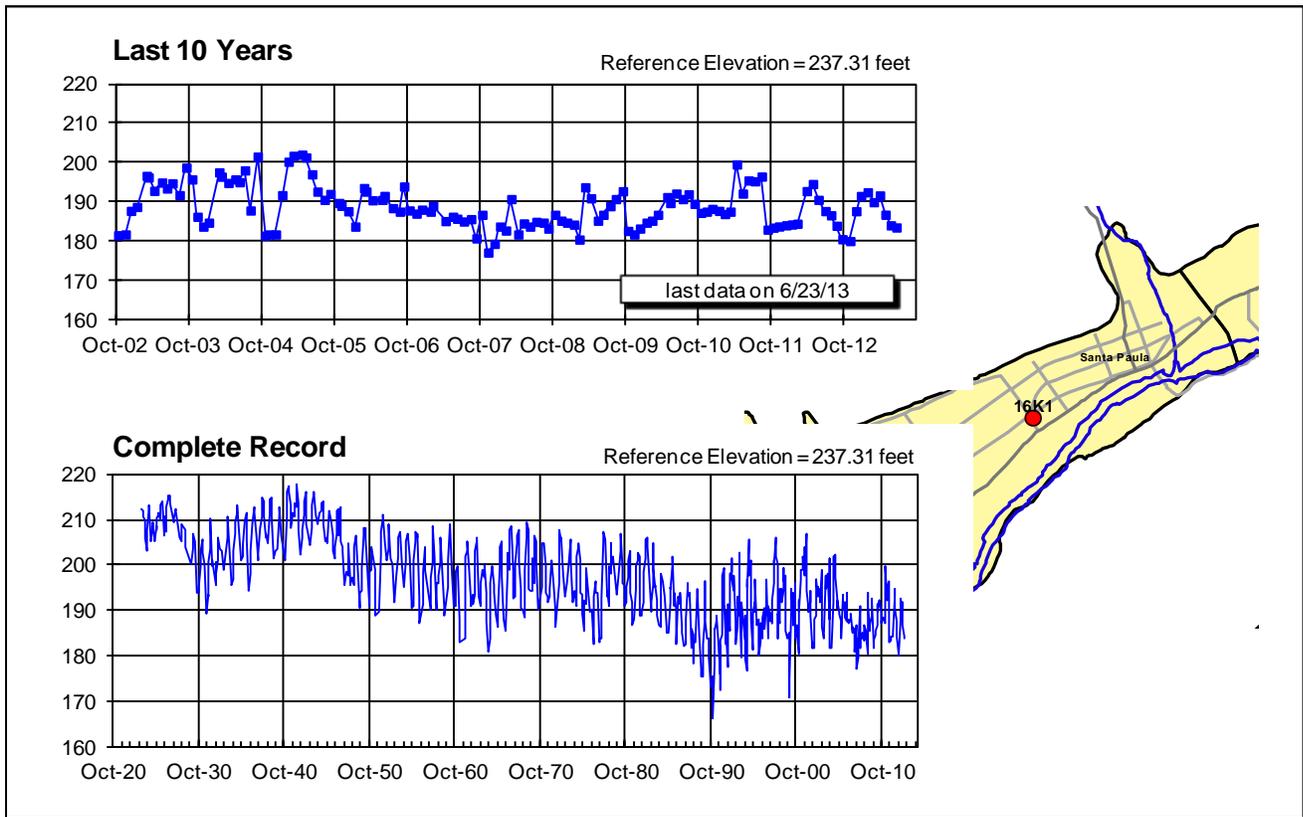
The lower Santa Clara River Groundwater Basin Locations



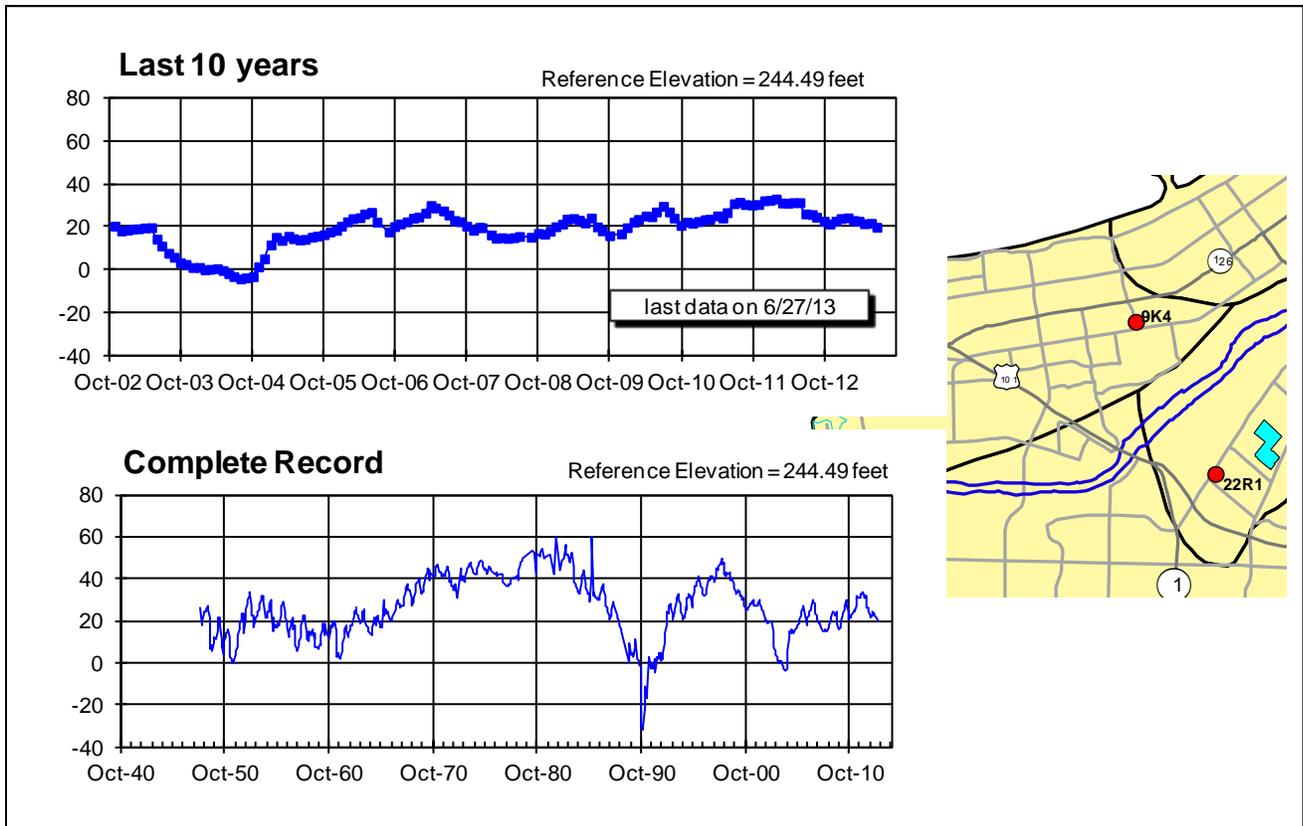
Historic groundwater elevation records, well 04N18W29M02S, Piru basin



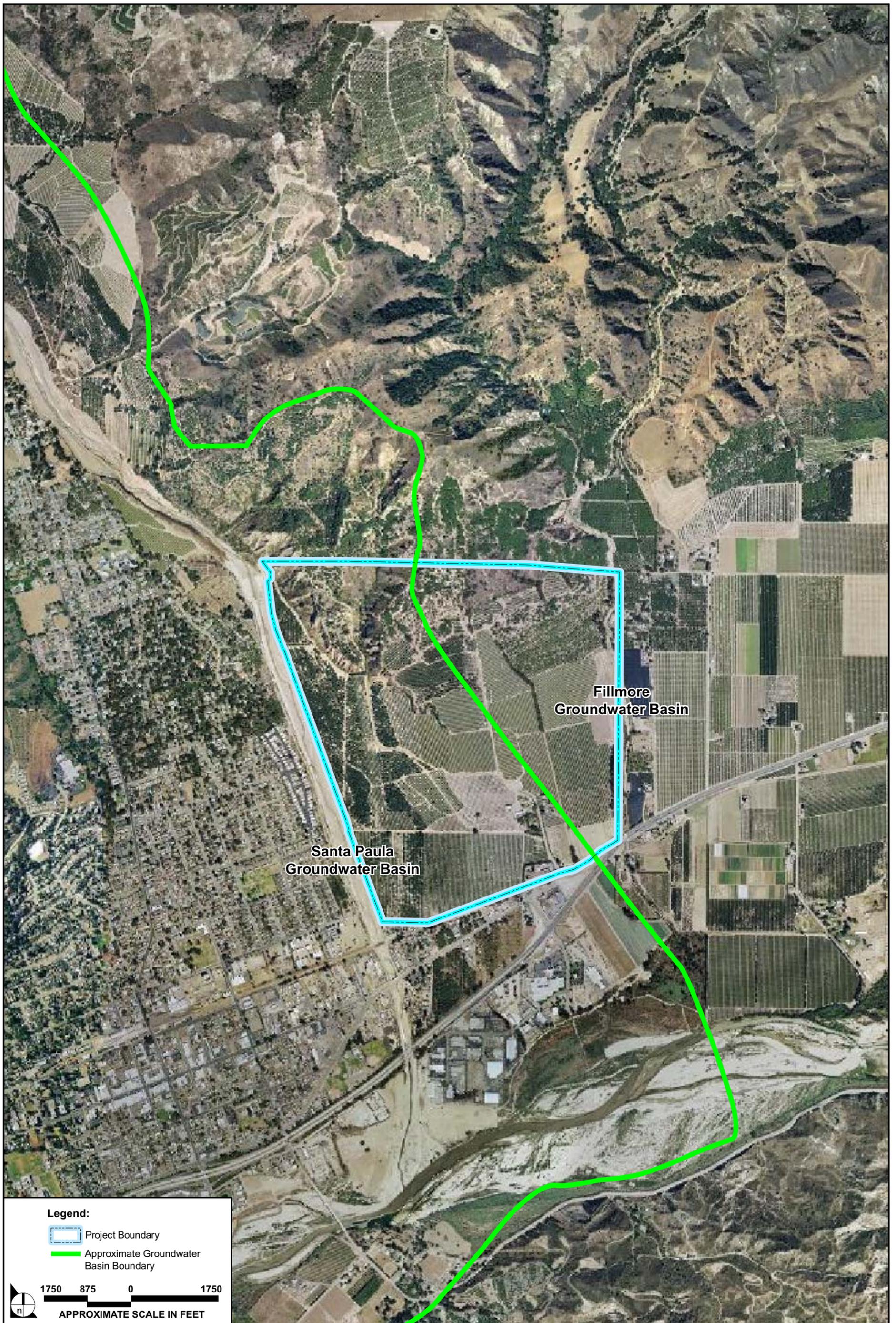
Historic groundwater elevation records, well 03N20W02A01S, Fillmore basin



Historic groundwater elevation records, well 03N21W16K01S, Santa Paula basin



Historic groundwater elevation records, well 02N22W09K04S, Mound basin



SOURCE: United Water Conservation District - 2004

FIGURE 2

Santa Paula and Fillmore Groundwater Basins Boundary Map