

Case Study 1: Paso Robles Aquifer, Northern San Luis Obispo County

Over the last four years, rapidly declining groundwater levels in the Paso Robles aquifer have caused some residential and smaller agricultural wells to go dry. This triggered an emergency county ordinance requiring any new groundwater pumping to be offset with an equal amount of reduced groundwater demand in the basin. The community is still dealing with this crisis and searching for long-term water management solutions.

Background

The Paso Robles aquifer is a large groundwater basin underlying 505,000 acres in San Luis Obispo County along the central California coast. The basin is the primary water source for the northern part of the county, which includes several small communities, rural residences, vineyards and other irrigated agriculture.¹ In July 2013, more than 100 rural property owners went to the San Luis Obispo (SLO) County Board of Supervisors (the Board), with complaints that their water wells were going dry. On August 27, 2013, the Board passed a 45-day temporary “urgency” ordinance requiring new development and new irrigated agriculture to offset projected water use in the basin at a 1:1 ratio. This temporary urgency ordinance was intended to give the county and local stakeholders time to investigate permanent solutions for managing the groundwater basin.² In accordance with state law, the Board extended the ordinance for two years, starting October 11, 2013.

While the groundwater crisis in the Paso Robles Basin erupted in 2013, its roots can be traced back 30 years, when lands uses overlying the Basin started changing from dryland agriculture and grazing to irrigated agriculture and residential development (Table 1). With respect to irrigated agriculture, alfalfa production declined over time as vineyard development increased. Along with the changes in irrigated agriculture, the period between 1980 and 2010 also saw the rise of low-density residential development around the basin; sizeable lots and cheap land attracted people to the area. Many of these residences have their own domestic wells, typically drilled to a depth of 400 feet.

¹ San Luis Obispo County, “Paso Robles Groundwater Basin.” Available at slocounty.ca.gov/planning/commguidelines/PRgroundwater.htm.

² David Sneed, “Supervisors approve emergency Paso groundwater ordinance,” August 27, 2013, *San Luis Obispo Tribune*. Available at sanluisobispo.com/2013/08/27/2654250/emergency-paso-groundwater-ordinance.html.

Table 1. Land Use Changes Over Time in Paso Robles Basin (in acres)

Year	Irrigated Agriculture		Residential		
	Alfalfa	Vineyard	Low Density Residential	Med. Density Residential	High Density Residential
1985	10,945	6,032	3,261	0	0
1997	4,702	13,706	19,461	0	0
2007	2,726	38,864	145,537	2,481	1,074

Data obtained from the Draft Approach and Methodology for Water Balance Estimation - Paso Robles Groundwater Basin Model Update, 2013.

The first groundwater study of the basin conducted by the county in 2002 indicated that groundwater pumping was rising with the land use changes as shown in Table 1. The first groundwater model for the Paso Robles basin completed in 2005 established a perennial yield of 97,700 acre-feet per year and estimated pumping at 80,000 acre-feet per year. By 2011, a Resource Capacity Study³ showed that pumping had increased to 95,000 acre-feet per year, which is at or approaching the estimate of perennial yield. Recognizing the severity of the issue, and using its land use authority, the Board adopted a set of actions on groundwater monitoring, water conservation, and land use measures. These actions were meant to address groundwater demand based on recommendations of the Resource Capacity Study.⁴ In 2011, a voluntary groundwater management plan (under AB3030) was completed.

Despite groundwater pumping at or below level the estimated perennial yield for the basin, groundwater elevations in the Basin have dropped substantially (Figure 2). Several factors are likely contributing to declining groundwater levels, including increasing groundwater pumping and below-average precipitation.

Through a five-part series entitled ‘Wine and Water,’ reporters from the *San Luis Obispo Tribune* raised public awareness of the basin’s groundwater issues and generated sufficient momentum locally and regionally for the Board of Supervisors to pass the urgency ordinance.

What is the outcome?

While the urgency ordinance is intended to provide the county and local stakeholders with time to investigate permanent solutions for managing the groundwater basin, it is important to note that the 1:1 water-offset ratio only

³ A Resource Capacity Study is a San Luis Obispo County General Plan study to assess whether resources and services are adequate to serve new development.

⁴ Examples of actions include subdivision prohibition and 2:1 water offset for all discretionary land uses. San Luis Obispo County, “Paso Robles Groundwater Basin.” Available at slocounty.ca.gov/planning/commguidelines/PRgroundwater.htm.

maintains current rates of basin overdraft. As a result, without significant decreases in groundwater pumping or increases in groundwater recharge, the Paso Robles Groundwater Basin will continue to be in a state of overdraft.

Local stakeholder groups representing certain basin landowners have been investigating a more permanent structure for managing the Paso Robles groundwater basin. The two main stakeholder groups are PRO Water Equity, a coalition of rural residential property owners and small landowners; and Paso Robles Agricultural Alliance for Groundwater Solutions, representing large agricultural landowners. It is clear that the current AB3030 plan is not adequate to deal with the current crisis, and the county is working with these stakeholders to enhance that plan. These two groups have also joined to recommend a special district for managing local groundwater supply and obtaining supplemental water, but they are still working out the exact terms of the district and its governance before they submit a bill to the Legislature.⁵ While the issue of fair representation among small and large basin landowners on the Board of the future district has been a major topic of debate, the proposed district's goals and objectives, particularly its regulatory ability to manage water demand in addition to procurement of supplemental water, have not been discussed as prominently. Some believe that a water district should require well metering, with the ability to determine the fair share of water among basin users and supervise their water use.⁶

⁵ Julie Lynem & David Sneed, 'Groups reach agreement on managing Paso Robles groundwater basin,' *San Luis Obispo Tribune*, December 5, 2013. Available at sanluisobispo.com/2013/12/05/2819418/paso-robles-groundwater-basin.html.

⁶ Phil Dirx, 'Groundwater pumping needs to be regulated,' *San Luis Obispo Tribune*, December 5, 2013. Available at sanluisobispo.com/2013/12/05/2819978/groundwater-pumping-needs-to-be.html.

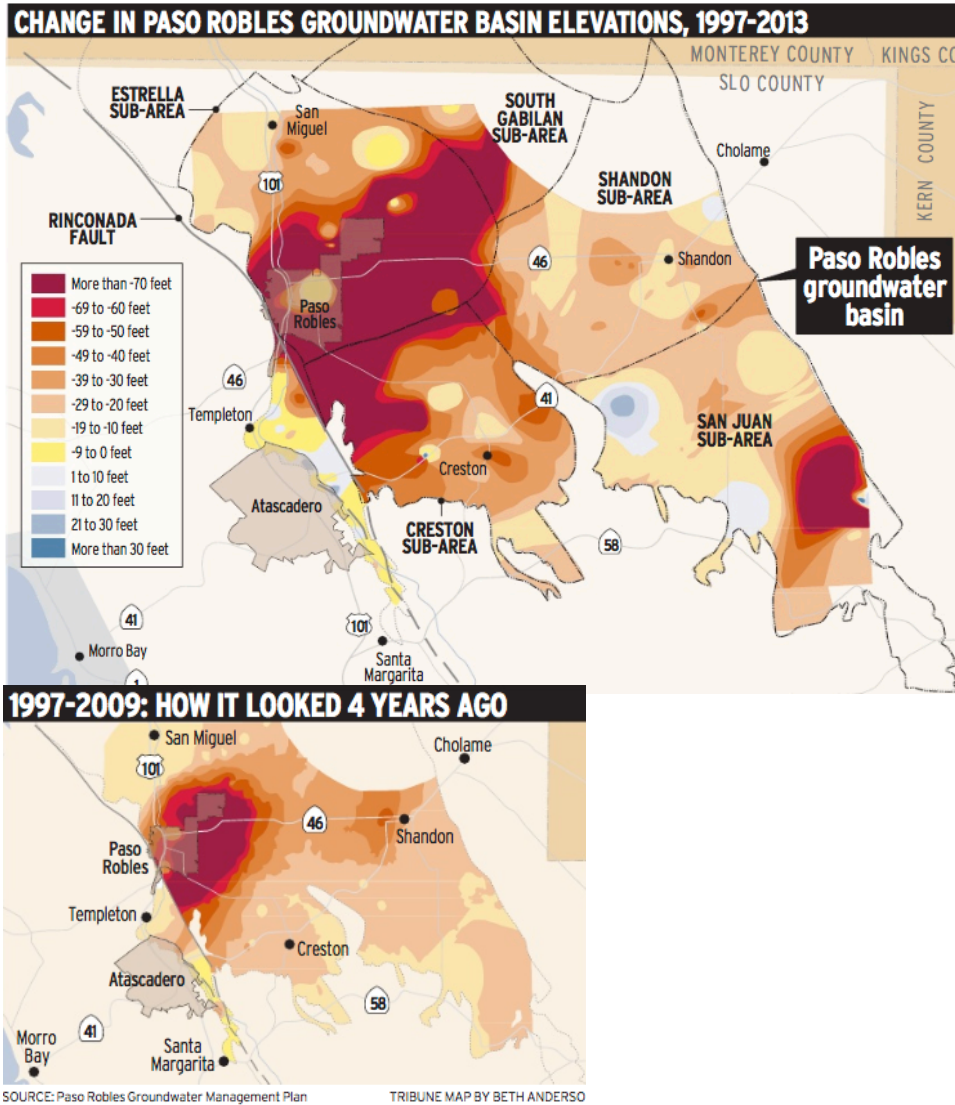


Figure 2. Changes in Paso Robles Groundwater Basin Elevations, 1997-2013 (top) and 1997-2009 (bottom). Source: Paso Robles Groundwater Management Plan, 2011 and *San Luis Obispo Tribune*.

There has also been controversy over vested rights that predate the urgency ordinance. Some landowners petitioned for an exemption from the offset requirement, arguing that they had invested planning and resources into activities for new irrigated agriculture prior to the passage of the urgency ordinance. In response, the county developed eligibility criteria for vested rights to determine who may proceed without the offset requirement.⁷

⁷ David Sneed, 'Exemptions to North County water limits on supervisors' agenda,' November 24, 2013, *San Luis Obispo Tribune*. Available at sanluisobispo.com/2013/11/24/2802409/exemptions-to-north-county-water.html; San Luis Obispo County, "Paso Robles Groundwater Basin" available at slocounty.ca.gov/planning/commguidelines/PRgroundwater.htm.

To implement the new urgency ordinance, the county is in the process of developing the details of the offset program for rural residential development and new irrigated agriculture. As of January 2014, new development will have to meet CAL Green standards with an anticipated water use of 280 gallons per household per day. Proponents of new development would then pay into a fund an amount that can be used to retrofit existing development to reduce an equivalent amount of existing water use. For new irrigated agriculture, the county is working with the local resource conservation district to develop an offset program that would promote efficiency measures for irrigated fields by fall 2014.⁸

Two lawsuits regarding the Basin were filed in November 2013. One lawsuit is a writ of mandamus seeking to overturn the urgency ordinance, and the other is a quiet title claim that asks the court to affirm the rights of overlying property owners to access basin groundwater. The quiet title claim may be the first step toward an adjudication in which the court would decide who has rights to groundwater in the basin and in what quantity based on historical usage.

For the Paso Robles Groundwater Basin, a special water district, court adjudication and permanent county groundwater ordinance are possibilities in the foreseeable future. Which one or more of these options will ultimately prevail is uncertain.

What are the main lessons to be learned?

The situation that emerged in the Paso Robles Groundwater Basin in the summer of 2013 showed that the county had limited tools to deal proactively with the groundwater overdraft problem. Although county officials had just completed an AB3030 plan in 2012, the plan did not give them adequate authority to manage groundwater in a way that would cope with the crisis. Ultimately, the county had to rely on its police powers to pass the urgency ordinance, rather than any powers under the plan. This case highlights that a county's police power can be used to regulate land uses that affect groundwater on a temporary basis until a viable basin management plan that can achieve results on the ground is adopted and implemented.

Cities and counties should regularly review local regulations and antiquated subdivision plans, and modify or remove those that don't make sense. This "housecleaning" would help minimize the unintentional consequences of outdated land use decisions. Antiquated subdivisions in the Paso Robles basin created in the 1920s were developed in the '80s and '90s under entirely different conditions than when the plans were first created. These water demands, along with those from irrigated agriculture, contributed to the groundwater depletion in the basin.

⁸ Most retrofit programs in the county are funded by water rates. So direct-subsidy program (e.g. turf buyback) will require the use of general-fund money.

In addition, Paso Robles has suffered from not dealing with the groundwater overdraft problem until it turned into a crisis. Regardless of the method used to manage groundwater, communities should take steps earlier when data indicate that a basin is in overdraft.

Finally, the situation in Paso Robles basin demonstrated that public awareness and media focus can make a difference. Reporters from the *San Luis Obispo Tribune* wrote an award-winning five-part series entitled 'Wine and Water' that created public awareness of the basin's groundwater issues and generated sufficient momentum locally and regionally for the Board of Supervisors to pass the urgency ordinance.⁹ In part because of these articles, the community acknowledged a major problem, and the Board garnered the political support necessary to pass a fairly serious ordinance.

⁹ *San Luis Obispo Tribune*, 'The Tribune wins top state journalism award for 'Wine and Water' series,' October 19, 2013. Available at sanluisobispo.com/2013/10/19/2740788/the-tribune-wins-top-state-journalism.html.