BARTKIEWICZ, KRONICK & SHANAHAN

PAUL M. BARTKIEWICZ
RICHARD P. SHANAHAN
ALAN B. LILLY
RYAN S. BEZERRA
JOSHUA M. HOROWITZ
KATRINA C. GONZALES
ANDREW J. RAMOS
PATRICK K. FITZGERALD

Of Counsel
STEPHEN A. KRONICK
JENNIFER T. BUCKMAN

A PROFESSIONAL CORPORATION
1011 TWENTY-SECOND STREET
SACRAMENTO, CALIFORNIA 95816-4907
TEL. (916) 446-4254
FAX (916) 446-4018
E-MAIL bks@bkslawfirm.com

July 18, 2016

California Water Commission
Post Office Box 942836
Sacramento, California 94236-0001

VIA E-MAIL
cwc@water.ca.gov

Re: July 21, 2016 Meeting, Item 10 (DWR Groundwater Basin Boundary Adjustments) – Comments of Templeton Community Services District

Dear Chair Byrne and Members of the Commission:

Templeton Community Services District (Templeton) urges the Commission to advise the Department of Water Resources (DWR) to reconsider its proposed decision to reject Templeton's application to modify the existing Paso Robles Area Subbasin identified in DWR's Bulletin 118 to separate an Atascadero Area Subbasin from the Paso Robles Area Subbasin.[1] DWR has identified the Paso Robles Area Subbasin as being "critically overdrafted" based on the existence of significant groundwater declines that do not affect the Atascadero Area Subbasin and that management of that subbasin cannot affect. The proposed boundary between the Atascadero Area Subbasin and the Paso Robles Area Subbasin is nearly identical to the boundary between the Paso Robles Area Subbasin and Bulletin 118's Upper Salinas Valley Subbasin to the north. The technical work supporting Templeton's application was conducted by Paul Sorensen, formerly of Fugro West, whose prior work provides the primary basis for Bulletin 118's discussion of the Paso Robles Area Subbasin. Templeton and the other major water supplier in the Atascadero Area Subbasin are committed to sustainable groundwater management in that subbasin. Those management efforts will only be impaired if that subbasin is retained in the Paso Robles Area Subbasin, whose landowners recently rejected overwhelmingly the establishment of a water district to manage their groundwater problems.

I have enclosed comments that Templeton provided to DWR at DWR's comment session last Friday, July 15. To date, Templeton has received no substantive explanation from DWR for its proposed rejection of Templeton's application. Templeton's comments therefore reflect its best effort to respond to that proposed rejection.

[1]The proposed Atascadero Area Subbasin currently is part of Bulletin 118's Paso Robles Area Subbasin. For clarity, this letter generally refers to them as separate subbasins.

Background

Templeton serves approximately 8,000 people in the unincorporated community of Templeton in northern San Luis Obispo County, just south of the City of Paso Robles. Templeton conjunctively uses surface water and groundwater, relying primarily on surface water diverted from the Salinas River's underflow in wetter winter months and pumping of deeper, percolating groundwater in the summer months. For many years, Templeton had a moratorium on new connections due to the limits on its water supplies. Templeton was able to lift that moratorium partly because Templeton, along with other local water suppliers, is investing over $100 million to import water from Nacimiento Reservoir, which is located further north in San Luis Obispo County. While the City of Paso Robles also has invested in that project, there is essentially no other investment in augmented water supplies in the vast majority of the Paso Robles Area Subbasin, which is almost wholly dependent on groundwater pumping.

This heavy reliance on groundwater in the Paso Robles Area Subbasin has led to significant declines in groundwater levels as the area's wineries and other irrigated agriculture have expanded. I have enclosed a graphic from Templeton's application to DWR that shows the significant groundwater declines in the Paso Robles Area Subbasin in recent years and the absence of any such declines in the Atascadero Area Subbasin. The boundary between the two subbasins is the Rinconada Fault, which severely limits any groundwater interaction between the two subbasins to a narrow gap where the fault crosses under the Salinas River. (If you are familiar with the area, the gap is roughly where Highway 101 passes the Firestone Brewery just south of the City of Paso Robles.) As a result of the significant groundwater declines, DWR included the entire existing Paso Robles Area Subbasin on the list of "critically overdrafted" basins that the Sustainable Groundwater Management Act (SGMA) required DWR to produce. (See Water Code § 10722.2.) Due to the Rinconada Fault's significant constraint on groundwater flow, it is not possible for the activities of Templeton and other water users in the Atascadero Area Subbasin to affect the conditions created by the "critical overdraft" in the Paso Robles Area Subbasin and it is not possible for those conditions to affect groundwater supplies in the Atascadero Area Subbasin.

Templeton's Application to Modify Basin Boundaries

Because of the very distinct conditions in the Paso Robles Area Subbasin and the Atascadero Area Subbasin, Templeton applied to DWR for a "scientific" basin modification to segregate the Atascadero Area Subbasin from the Paso Robles Area Subbasin. Templeton based its application on the work of Paul Sorensen, formerly of Fugro West, whose prior work is one of the primary technical bases that DWR has cited in Bulletin 118's existing discussion of the Paso Robles Area Subbasin. In that discussion, DWR cited Mr. Sorensen's work for Fugro West no fewer than 17 times in just over two pages of text. I have enclosed a copy of that discussion.

Based on Mr. Sorensen's work, Templeton's application demonstrates that the Rinconada Fault constrains groundwater flow from the Atascadero Area Subbasin to the Paso Robles Area Subbasin to only about 500 acre-feet per year, with the Paso Robles Area Subbasin's perennial yield being about 81,000 acre-feet per year. Mr. Sorensen's work and Templeton's application

also demonstrates that this level of groundwater flow is almost identical to the amount of groundwater flow from the Paso Robles Area Subbasin to the adjacent Upper Salinas Valley Subbasin identified in Bulletin 118. In another similarity, the Salinas River runs across both the existing Bulletin 118 boundary between the Upper Salinas Valley Subbasin and the Paso Robles Area Subbasin, as well as Templeton's proposed boundary between that latter subbasin and the Atascadero Area Subbasin. In essence, Templeton's application asks DWR to apply the same technical standard in dividing subbasins on either end of the Paso Robles Area Subbasin.

Inconsistency in DWR Draft Basin-Boundary Decisions

DWR has listed Templeton's application as "rejected" on its list of its draft basin-boundary decisions. To date, Templeton has received no substantive explanation for this proposed rejection.

DWR's handling of Templeton's application appears to have been significantly different than its handling of a proposed subdivision of another nearby Bulletin 118 basin. DWR proposes to approve a "scientific modification" of Bulletin 118's existing Pleasant Valley Subbasin located in Fresno and Kings Counties that would subdivide it into a smaller Pleasant Valley Subbasin and a new Kettleman Plains Subbasin. The boundary that DWR proposes to accept for that basin subdivision is the Fresno-Kings County line. Templeton has reviewed the technical materials supporting DWR's proposed approval of that "scientific modification." Those materials do not appear to quantify how much groundwater flow occurs across the Fresno-Kings County line – unlike Templeton's quantification of the small amount of groundwater flow across its proposed boundary – and appear to contain significantly less robust and timely data than Templeton's application. In addition, DWR provided the proponents of the Pleasant Valley subdivision an opportunity to respond to DWR's questions about their application before preparing a draft decision, but did not give Templeton a similar opportunity. If DWR had applied the same technical and procedural standards to Templeton's application as it has applied to the Pleasant Valley application, then DWR should be proposing to approve Templeton's application.

Need for Separation of Atascadero Area and Paso Robles Area Subbasins

Under SGMA, a groundwater sustainability agency (GSA), or multiple coordinated GSAs, must be established for each Bulletin 118 basin by June 30, 2017. (Water Code §§ 10724, 10735.2(a)(1).) If a basin is not fully covered by a GSA or coordinated GSAs by this deadline, then SGMA authorizes the State Water Resources Control Board to declare the basin to be a "probationary basin" and begin taking steps toward state regulation of the whole basin. (Water Code § 10735.2(a)(1).) The Legislature required DWR to consider modifications to Bulletin 118's basin boundaries before 2017 so that local agencies would have time to organize themselves into GSAs based on appropriate basin boundaries.

While Templeton and other interests in the Atascadero Area Subbasin are organizing to form a GSA by mid-2017 in that subbasin, it is at best highly uncertain how any coordinated management of the Paso Robles Area Subbasin may occur. In 2014, the Legislature enacted Assembly Bill 2453 (Achadjian) to authorize a special Paso Robles Basin Water District. When

the San Luis Obispo County Board of Supervisors applied to the Local Agency Formation Commission to form the new district, it explicitly omitted the Atascadero Area Subbasin to reflect longstanding local practice. In a special landowner election in March 2016, the landowners within the proposed new district rejected the district's formation by a 3-to-1 vote. In addition, landowners primarily in the Paso Robles Area Subbasin have filed litigation against Templeton, the City of Paso Robles and other water suppliers to seek to establish a water-right "priority" against those water suppliers. In their public comments, those landowners have asserted that joining the litigation will result in landowners being exempt from SGMA. The litigation is in its preliminary stages. To date, Templeton has not been able to remove itself from the litigation, partly because it is currently located within Bulletin 118's existing Paso Robles Area Subbasin.

Templeton and its adjacent water supplier, Atascadero Mutual Water Company (AMWC), along with the County of San Luis Obispo, intend to lead good groundwater management in the Atascadero Area Subbasin under SGMA. Accomplishing that local and state goal, however, probably will depend on that subbasin being separated, in one way or another, from the Paso Robles Area Subbasin. It therefore is very important that DWR separate the two subbasins now, before SGMA requires that all basins be covered by GSAs. The consequences of not doing so could be to force Templeton, among others, into a State Water Resources Control Board "probationary basin" proceeding based on groundwater conditions that do not apply to it and that it cannot affect, either physically or politically.

Conclusion

Templeton respectfully requests that the Commission advise DWR to reconsider its proposed rejection of Templeton's basin boundary modification request. Templeton's ability to participate effectively in good groundwater management will be affected – and its ability to serve its 8,000 residents may be affected – by DWR's decision.

Please do not hesitate to contact Templeton's General Manager Jeff Briltz or me if you have any questions. Mr. Briltz can be reached at (805) 434-4900 or jbrilitz@templetoncsd.org.

Kind regards,

Ryan S. Bezerra

RSB:tmo
3730/Paso Robles Basin/ L071616rsb CWC clean
Enclosures
Cc (w/encl, via e-mail):
Joseph Byrne (joseph.byrne@cwc.ca.gov)
Carol Baker (carol.baker@cwc.ca.gov)
Andrew Ball (andrew.ball@cwc.ca.gov)

Daniel Curtin	(daniel.curtin@cwc.ca.gov)
Paula Daniels	(paula.daniels@cwc.ca.gov)
Joe Del Bosque	(joe.delbosque@cwc.ca.gov)
Maria Herrera	(maria.herrera@cwc.ca.gov)
David Orth	(david.orth@cwc.ca.gov)
Armando Quintero	(armando.quintero@cwc.ca.gov)
Dave Gutierrez	david.gutierrez@water.ca.gov)
Dane Mathis	(dane.Mathis@water.ca.gov)
Jeff Briltz	(jbriltz@templetoncsd.org)
Paul Sorensen	(psorensen@gsiws.com)

Templeton Community Services District

Comments on DWR Draft Determination on Basin Boundary Application
DWR Comment Session
July 15, 2016 – West Sacramento

Templeton Community Services District (TCSD) has prepared these comments based on the draft decision made by DWR concerning our Basin Boundary Modification request. Our request contained three parts, all three being listed as denied in the draft decision. Our comments made herein reflect the most important aspect of the request, the establishment of the Atascadero Area Subbasin. Our comments are made without having yet received a detailed explanation as to why the draft decision has been made.

1. TCSD's proposed boundary at the Rinconada fault between the Atascadero Area Subbasin and the Paso Robles Area Subbasin[1] reflects a virtually identical hydrologic condition as Bulletin 118's northern boundary between the Paso Robles Area Subbasin and the Upper Salinas Valley Subbasin. In fact, the geologic evidence that supports the existence of the northern boundary of the Atascadero Area Subbasin at the Rinconada fault is more scientifically defensible than Bulletin 118's accepted northern boundary of the Paso Robles Area Subbasin.

    A. The percolating groundwater flow in the Paso Robles formation across the proposed boundary and the existing northern boundary is essentially the same – roughly 500 acre-feet per year (AFY).

    B. The Salinas River's flow from the Atascadero Area Subbasin to the Paso Robles Area Subbasin is <u>less than</u> the river's flow from the Paso Robles Area Subbasin to the Upper Salinas Valley Subbasin. The Nacimiento River flows into, and contributes significant flow to, the Salinas River in the Paso Robles Area Subbasin and the river flows into the Upper Salinas Valley Subbasin downstream of that confluence.

2. TCSD's proposed boundary is based on better technical information than Bulletin 118's existing discussion of the Paso Robles Area Subbasin and a nearby scientifically-based basin subdivision that DWR has on its draft approval list.

    A. Bulletin 118 cites no scientific authority at all for defining the existing boundaries of the Paso Robles Area Subbasin.

    B. Bulletin 118's existing discussion relies heavily on work by Fugro West to define key characteristics of that subbasin. That discussion cites Fugro West's work 17 times in just over two pages of discussion. Fugro West's work is the sole scientific basis for Bulletin 118's discussion of the subbasin's amount of stored water and is the primary basis for its discussion of the subbasin's water budget.

---

[1]For ease of reference, these comments refer to the Atascadero Area Subbasin proposed by TCSD and the remainder of the existing Paso Robles Area Subbasin as separate subbasins.

C. TCSD's application is based on original work that is an extension of the Fugro West work on which Bulletin 118 heavily relies. Paul Sorensen, formerly of Fugro West, prepared the technical analysis on which TCSD relies and was Fugro West's lead in developing the work on which Bulletin 118 heavily relies.

D. TCSD's proposed boundary has a much more robust technical basis than the scientific basin subdivision of the Pleasant Valley Subbasin that DWR apparently plans to approve. Applying the same level of technical requirements to TCSD's application as has been applied to the Pleasant Valley Subbasin subdivision would result in TCSD's application being approved.

i. DWR is proposing to approve, partly as a scientific modification, a subdivision of the existing Pleasant Valley Subbasin into a Pleasant Valley Subbasin and a Kettleman Plain Subbasin, with the boundary between the two subbasins being the Fresno-Kings County line.

ii. The technical report on which the Pleasant Valley Subbasin subdivision request is based states the justification that the subdivision is necessary to "make the sub-basin coincide more with where Pleasant Valley is actually located." (*Technical Report on Hydrogeologic Conditions in Pleasant Valley Sub-Basin*, Kenneth D. Schmidt and Associates, March 2016). That report states further that, "[f]or groundwater management purposes, the Pleasant Valley Sub-basin…is a preferred area, as it is entirely in Fresno County, and largely within the boundaries of the Pleasant Valley W.D." (Schmidt, 2016)

iii. That technical report describes no barrier to groundwater flow at the boundary that DWR apparently proposes to accept between the Pleasant Valley and Kettleman Plans Subbasins. That report also contains no estimate of groundwater flow across that boundary. It provides only general, qualitative information about water levels across the proposed basin boundary, and describes a groundwater divide that was based on water level data from 1950 and described in a Stanford University study from 1954. Lastly, the report justifies the boundary with that conclusion that "[w]hereas recharge in Kettleman Plain and Sunflower Valley is highly limited because of the lack of major streams, recharge in Pleasant Valley is relatively large due to such streamflow." (Schmidt, 2016)

iv. TCSD's report is much more technically robust, estimating groundwater flow across the proposed boundary, which is based on a geologic fault that indisputably constrains groundwater flow and not a county line that has no geologic or hydrologic relevance.

v. DWR also apparently provided the proponents of the Pleasant Valley Subbasin subdivision with comments during DWR's review and

allowed them to provide a response. TCSD received no such comments during the review and had no opportunity to respond to any concerns about its technical information.

3. The Atascadero Area Subbasin and the Paso Robles Area Subbasin indisputably demonstrate very different groundwater conditions.

   A. DWR has declared the Paso Robles Area Subbasin to be a "critically overdrafted" basin under SGMA because "[f]rom 1997-2013 the groundwater table in parts of the basin declined more than 70 feet." (DWR August 25, 2015 PowerPoint.)[2]

   B. Those declines do not exist in the Atascadero Area Subbasin, as demonstrated by TCSD's application. This fact is undisputed.

4. It is essentially impossible for groundwater pumping from the Paso Robles formation in the Atascadero Area Subbasin to affect conditions in the Paso Robles Area Subbasin or vice versa.

   A. The Rinconada fault severely constrains percolating groundwater flow from the Atascadero Area Subbasin to the Paso Robles Area Subbasin, and vice versa, to the narrow gap where the fault crosses the Salinas River's channel.

   B. The fault prevents pumping in the Atascadero Area Subbasin from affecting water levels in the Paso Robles Area Subbasin. Because of the presence of the fault, the only adverse impact that pumping in the Atascadero Area Subbasin could cause would be to diminish the already minor flow of about 500 AFY of percolating groundwater across the fault where it cuts across the Salinas River's channel – an impact that would be prevented through the proposed management strategy of stakeholders in the Atascadero Area Subbasin.

   C. Even if pumping in the Atascadero Area Subbasin were to completely eliminate that flow, the impact would only be about 500 AFY in comparison with the sustainable yield of about 81,000 AFY from the Paso Robles Area Subbasin.

   D. The Rinconada fault prevents the apparent over-pumping in the Paso Robles Area Subbasin from affecting groundwater supplies in the Atascadero Area Subbasin because the only characteristic that such over-pumping could affect is a lowering of groundwater levels and attendant decline in outflow of the Atascadero Area Subbasin. The data clearly demonstrate that no such decline in Atascadero outflow has occurred.

   E. The SWRCB already has declared the Salinas River from Salinas Dam upstream of Atascadero to the river's confluence with the Nacimiento River to

[2]http://www.water.ca.gov/groundwater/sgm/pdfs/CriticalOverdraftPresentation_V8_final.pdf

be fully appropriated from May 15 to September 31,[3] so at most minor additional diversions from the river's underflow during low-flow periods would be possible.

5. Management conditions in the Atascadero Area Subbasin and the Paso Robles Area Subbasin are very different.

   A. As discussed in TCSD's application, the primary groundwater demand in the Atascadero Area Subbasin is for municipal and industrial use. Any proposed growth in that demand would be subject to land use regulations. Agricultural demand is minor and has been in steady decline for many years.

   B. As also discussed in TCSD's application, the primary groundwater demand in the Paso Robles Area Subbasin is agricultural use. Growth in that use is subject to little or no regulation, other than possible future regulation under SGMA.

   C. Public agencies and water suppliers in the Atascadero Area Subbasin, including TCSD and Atascadero Mutual Water Company (AMWC), are investing about $100,000,000 to augment the subbasin's water supplies to construct and operate a pipeline from Nacimiento Reservoir that delivers approximately 3,650 acre-feet per year of water in the subbasin. The City of Paso Robles on the Paso Robles Area Subbasin's far western side has similarly invested in the Nacimiento project, but there has been no similar investment in water-supply augmentation in the rest of that Subbasin.

6. It is critical that DWR approve a separation of the Atascadero Area Subbasin from the Paso Robles Area Subbasin in this round of consideration of Bulletin 118 boundaries because SGMA requires that groundwater sustainability agencies be established for basins by June 30, 2017.

   A. DWR apparently plans to consider further adjustments to Bulletin 118's basin boundaries in 2018.

   B. SGMA, however, requires that the entirety of each Bulletin 118 basin be covered by GSA designations by June 30, 2017 at the risk of a basin being declared a probationary basin. (Water Code §§ 10724(b), 10735(a)(1).)

   C. If TCSD's application is not approved in this round of Bulletin 118 basin boundary adjustments, then TCSD and all other water users in the Atascadero Area Subbasin will be forced to consider participating in a Paso Robles Area Subbasin GSA even though they are not contributing to, and have no ability to affect, the conditions that have caused DWR to call that basin critically overdrafted.

   D. There appears to be significant resistance to coordinated management of the the Paso Robles Area Subbasin. In 2014, the Legislature enacted Assembly

[3]SWRCB Order WR 98-08, Exh. A, p. 47.

Bill 2453 (Achadjian) to enact the creation of a Paso Robles Basin Water District. The San Luis Obispo County Board of Supervisors applied to the Local Agency Formation Commission to form the district after making the explicit decision to omit the Atascadero Area Subbasin from the district. In the formation election, however, approximately 73% of the votes opposed the district's formation.[4] As a result, it is unclear what sort of management structure can be formed within the Paso Robles Area Subbasin.

E. TCSD and AMWC are cooperating with the County of San Luis Obispo to form a GSA for the Atascadero Area Subbasin. TCSD and AMWC have conducted outreach to landowners within the subbasin and have not encountered significant resistance to the formation of such a GSA. It is unclear how these efforts would be affected by the retention of the Atascadero Area Subbasin in the Paso Robles Area Subbasin, given the defeat of proposed water district.

[4]http://www.slocounty.ca.gov/clerk/Elections/ElectionsInfo/Past_elections/030816SpecialElectionPasoRoblesGroundwaterBasin.htm.

Salinas Valley Groundwater Basin, Paso Robles Area Subbasin

- Groundwater Basin Number: 3-4.06
- County: San Luis Obispo
- Surface Area: 597,000 acres (932 square miles)

Basin Boundaries and Hydrology

The Paso Robles Subbasin is bordered on the north by the Upper Valley Aquifer Subbasin, on the east by the Temblor Range, on the south by the La Panza Range, and on the west by the Santa Lucia Range. The San Andreas fault zone bounds the basin on the northeast. The San Marcos-Rinconada fault system traverses the western part of the basin. The Red Hill, San Juan, and White Canyon faults form the eastern boundary of the subbasin. The subbasin is drained by the Salinas River and Estrella, San Juan, and Huerhuero Creeks. Rainfall averages 15 inches.

Hydrogeologic Information

Water Bearing Formations

Groundwater is found in Holocene age alluvium and the Pleistocene age Paso Robles Formation.

Specific yield values in the Paso Robles Subbasin range from 7 to 11 percent, with an average specific yield of 9 percent (Fugro West 2001c). DWR (1958) estimated the average specific yield for the subbasin at 8 percent. DWR (1999) estimated the average specific yield at 15 percent for the alluvium and 9 percent for the Paso Robles Formation.

Alluvium. Holocene age alluvium consists of unconsolidated, fine- to coarse-grained sand with pebbles and boulders. This alluvium provides limited amounts of groundwater and reaches 130 feet thick near the Salinas River, but is generally less than 30 feet thick in the minor stream valleys (DWR 1999). Its high permeability results in a well production capability that often exceeds 1,000 gpm (Fugro West 2001a). Groundwater in Holocene alluvium is mostly unconfined.

Paso Robles Formation. Pleistocene age Paso Robles Formation, which is the most important source of groundwater in the subbasin, is unconsolidated, poorly sorted, and consists of sand, silt, gravel, and clay (DWR 1979). This formation reaches a thickness of 2,000 feet and groundwater within it is generally confined (DWR 1958).

Restrictive Structures

The Rinconada fault zone forms a leaky barrier that restricts flow from the Atascadero portion of the subbasin to the main part of the Paso Robles Subbasin (Fugro West 2001a). The San Andreas fault restricts subsurface flow.

Recharge Areas

Natural recharge in the subbasin is derived from infiltration of precipitation, seepage from streams, and return flow from irrigation and other uses (DWR 1958).

Groundwater Level Trends

Hydrographs show that groundwater levels have been steady since 1995 (DWR 1999). Groundwater flow in the subbasin is generally northwestward.

Groundwater Storage

Groundwater Storage Capacity. DWR (1958) estimated the storage capacity to be 3,000,000 af in the zone 100-feet below 1958 static levels. DWR (1975) estimated the total storage capacity at 6,800,000 af. A study by Fugro West (2001a) estimates the total capacity at more than 30,400,000 af. DWR (1975) estimated the usable capacity at 1,700,000 af.

Groundwater in Storage. The estimated groundwater in storage for 1980 was 30,420,822 af (Fugro West 2001a). The estimated groundwater in storage for 1997 was 30,355,508 af (Fugro West 2001a). The average annual groundwater in storage over the 17-year period from 1980 to 1997 was 30,534,535 af (Fugro West 2001c).

Groundwater Budget (Type A)

Recharge is estimated at 47,000 af/yr (DWR 1975). Extractions for 1967 were estimated at 48,000 af (DWR 1975). Budget calculations were done for a 17-year base period from 1980 to 1997 by Fugro West (2001c) using the inventory method. All subsequent averages are from Fugro West (2001c) for the 17-year period. The average subsurface inflow was estimated at 7,500 af and the average subsurface outflow was estimated at 600 af. The average streambed percolation was estimated at 41,800 af. The average amount of percolation from irrigation water was determined to be 2,300 af and the average amount of percolation from precipitation was estimated at 42,400 af. The 17-year average extraction by phreatophytes was calculated at 3,800 af. Groundwater pumpage due to municipal and irrigation demand averaged 7,700 af. Groundwater pumpage from agricultural demand averaged 8,400 af.

Groundwater Quality

Characterization. The predominant cations are calcium and sodium and the predominant anion is bicarbonate (DWR 1981; Fugro West 2001b). Analyses of 48 public supply wells in the subbasin show an average TDS content of 614 mg/L and a range of 346 to 1,670 mg/L.

Impairments. In one study (Fugro West 2001b), 23 of 74 samples collected exceeded one or more of the drinking water standards. The maximum contaminant level for TDS was exceeded in 14 samples (Fugro West 2001b). The maximum contaminant level for nitrate was exceeded in 4 samples (Fugro West 2001b). Analyses of samples from 2 wells near San Juan Creek showed TDS content exceeding the maximum contaminant level (Fugro West 2001b). The Bradley portion of the subbasin had the highest percentage of samples with constituents higher than the drinking water

standards (Fugro West 2001b). Water quality trends indicate an increasing concentration of TDS and chloride in shallow Paso Robles Formation deposits along the Salinas River, and an increasing concentration of chloride in the artesian aquifer in the area northeast of Creston (Fugro West 2001b). Trends also show an increasing concentration of nitrate between the Salinas and Huerhuero rivers in two locations; north of Highway 46 and south of San Miguel (Fugro West 2001b).

Another major problem is the unpredictable occurrence of hydrogen sulfide in the ground water (DWR 1981).

Water Quality in Public Supply Wells

Constituent Group[1]	Number of wells sampled[2]	Number of wells with a concentration above an MCL[3]
Inorganics – Primary	56	1
Radiological	52	5
Nitrates	58	4
Pesticides	51	0
VOCs and SOCs	51	1
Inorganics – Secondary	56	13

[1] A description of each member in the constituent groups and a generalized discussion of the relevance of these groups are included in *California's Groundwater – Bulletin 118* by DWR (2003).
[2] Represents distinct number of wells sampled as required under DHS Title 22 program from 1994 through 2000.
[3] Each well reported with a concentration above an MCL was confirmed with a second detection above an MCL. This information is intended as an indicator of the types of activities that cause contamination in a given basin. It represents the water quality at the sample location. It does not indicate the water quality delivered to the consumer. More detailed drinking water quality information can be obtained from the local water purveyor and its annual Consumer Confidence Report.

Well Production characteristics

	Well yields (gal/min)
Municipal/Irrigation	Range: 500 – 3,300 (DWR 1958)
	Total depths (ft)
Domestic	
Municipal/Irrigation	

Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
San Luis Obispo County	Groundwater levels	183
	Miscellaneous water quality	NKD
Department of Health Services and cooperators	Title 22 water quality	58

NKD: No Known Data

Basin Management

Groundwater management:	The County of San Luis Obispo manages the Paso Robles Groundwater Subbasin
Water agencies	
Public	Paso Robles WD, San Luis Obispo County, Templeton CSD, City of Paso Robles
Private	Atascadero MWC

References Cited

California Department of Water Resources (DWR). 1958. *San Luis Obispo County Investigation*. Bulletin 18, 288 p.

_____. 1975. *Sea-Water Intrusion in California: Inventory of Coastal Ground Water Basins.* Bulletin 63-5.

_____. 1981. *Water Quality in the Paso Robles Area: Memorandum Report* 116 p.

_____. 1999. *Evaluation of Groundwater Overdraft in the Southern Central Coast Region, Part 2.* Technical Information Record SD-99-2, 116 p.

Fugro West. 2001a. *Interim Report, Task 2 – Basin Definition: Paso Robles Groundwater Basin Study.* http://www.slocountywater.org (October 2001).

_____. 2001b. *Interim Report, Task 4 – Water Quality: Paso Robles Groundwater Basin Study.* http://www.slocountywater.org (January 2002).

_____. 2001c. *Interim Report, Task 5 – Hydrologic Budget: Paso Robles Groundwater Basin Study.* http://www.slocountywater.org (December 2001).

Additional References

California Department of Water Resources (DWR). 1971. *Preliminary Evaluation of the Water Supply of the Arroyo Grande and Paso Robles Areas*.

_____. 1979. *Ground water in the Paso Robles Basin***.** 88 p.

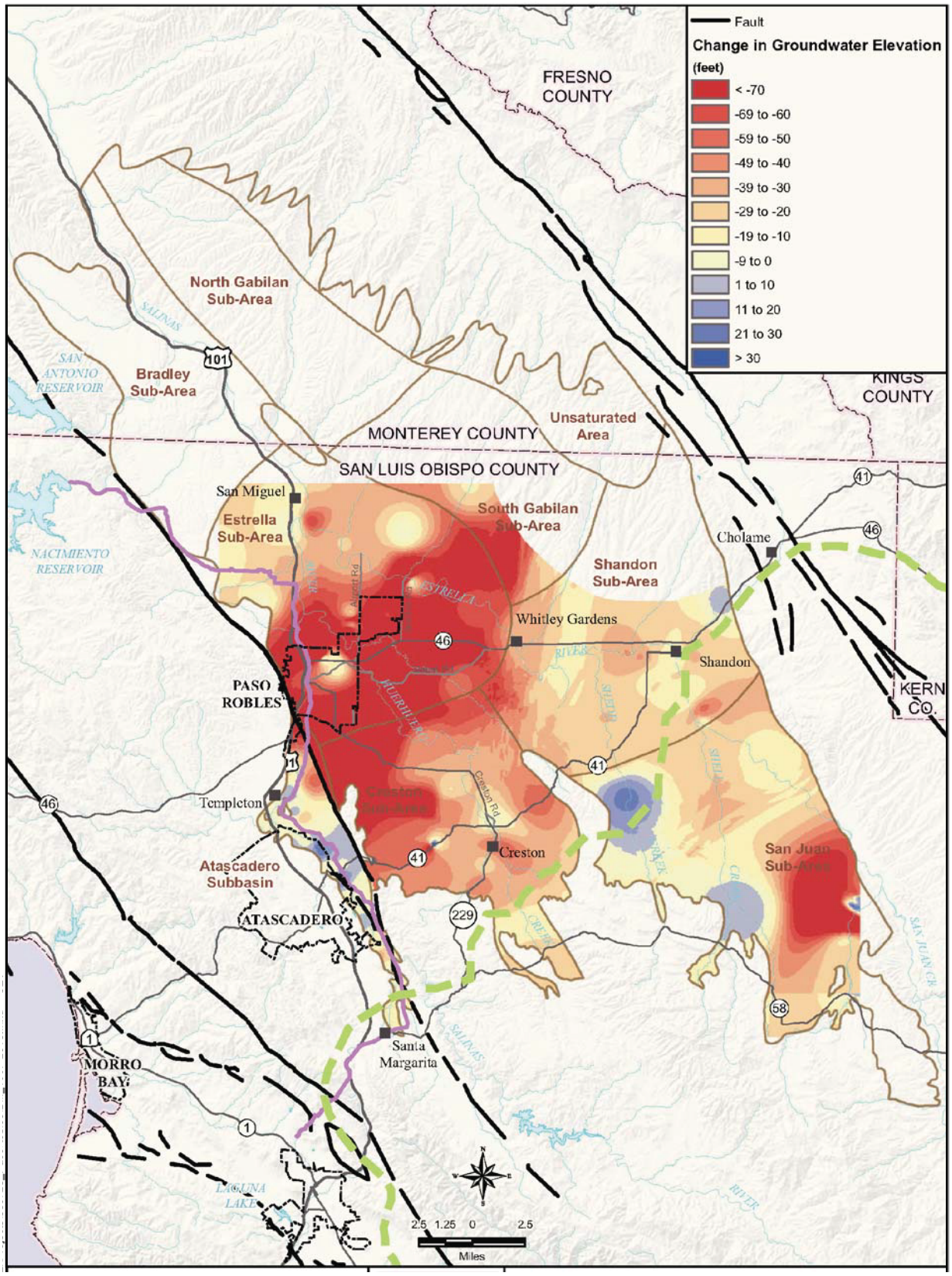
Errata

Changes made to the basin description will be noted here.

TECHNICAL REPORT
SALINAS VALLEY -- ATASCADERO AREA SUBBASIN
BASIN BOUNDARY MODIFICATION APPLICATION

Prepared for:
DEPARTMENT OF WATER RESOURCES

March 2016



Source: http://www.slocountywater.org/site/Water%20Resources/Water%20Forum/pdf/1997-2013SpringGWsurface.pdf

GENERALIZED DIFFERENCE IN SPRING GROUND-WATER ELEVATIONS BETWEEN 1997 - 2013

Atascadero Basin Boundary Modification Application PLATE 16

N:\Projects\04_2015\04_6215_0041_AtascaderoBasin\Outputs\2016_02_11_AtascaderoBasinMod\mxd\Plate16_1997_2013GW.mxd, 3/23/2016, cdean