

PUBLIC WORKSHOP PROCEEDINGS

Implementing the Sustainable Groundwater Management Act (SGMA) in the Solano Subbasin



February 25, 2016	March 2, 2016	March 7, 2016
6:30-8:30PM	6:30-8:30PM	3:00-5:00PM
Ulatis Community Center	Rio Vista High School	Veteran's Memorial Center
1000 Ulatis Drive	410 South 4th Street	203 East 14th Street
Vacaville, CA 95687	Rio Vista, CA 94571	Davis, CA 95616
(~60 attendees)	(~30 attendees)	(~55 attendees)

PURPOSE

These workshops were intended as a two-way information exchange between groundwater users and other stakeholders, and local public agency and California Department of Water Resources (DWR) staff. Participants were invited to learn about the Sustainable Groundwater Management Act (SGMA) regulations and implementation timeline, as well as about our local water sources and groundwater conditions. They were also invited to ask questions, share on-the-ground knowledge about local groundwater conditions, and provide input on when and how to best engage the public during the SGMA implementation process in the Solano Subbasin.

OVERVIEW

Part 1: Presentations on the Local Water System and SGMA

- [What is the role of groundwater in our local water supply, and what do we know and not know about conditions in the Solano Subbasin?](#) With *Chris Lee of the Solano County Water Agency*. At the Davis workshop we also heard from Tim O'Halloran of the Yolo County Flood Control and Water Conservation District on conditions within the Yolo County portion of the subbasin.
- [What is SGMA and what does it require? What are we doing to meet SGMA requirements in the Solano Subbasin?](#) With *Lucas Patzek of Ag Innovations*.

Part 2: Discussion on Public Participation and Local Groundwater Conditions

During a facilitated, large-group conversation, participants were asked to offer input on when and how to engage the public in the SGMA implementation process. Secondly, they were asked to share any trends that they have observed in their local groundwater conditions. Those who wished to provide additional information about their groundwater use and local groundwater conditions were asked to fill out a questionnaire. Those interested in sharing monitoring data with local public agencies were invited to contact Chris Lee at the Solano County Water Agency (clee@scwa2.com, 707-451-6090). Information collected during these public workshops is summarized in this report.

Part 3: Q&A with Experts

Experts from local public agencies - Solano County, Solano Irrigation District, and Solano County Water Agency - and DWR attended each workshop to answer participant questions. Participants were asked to write down

their questions on index cards throughout the first two parts of the workshop. These were collected ahead of the Q&A session to allow for more thoughtful responses and the development of a Frequently Asked Questions (FAQ) document to be publicly posted following the workshops.

The FAQ, presentation slides, and other resources are available at <http://scwa2.com/sgma>.

OUTCOMES

How and where are attendees interested in participating in the SGMA process?

Generally, participants expressed a stronger interest in being involved in the Groundwater Sustainability Plan development stage than in the Groundwater Sustainability Agency (GSA) formation stage of the SGMA implementation process. Many expressed appreciation for the existence of the email listserv used to share updates on the process, and recommended continued regular email communication. A few without email access requested occasional updates by mail or phone. Postcards were sent to all ag parcel landowners in the Subbasin to advertise these workshops, and a similar strategy can be used again at key decision-making points. Directors of local Resource Conservation Districts were also suggested as a useful conduit for circulating SGMA related information directly to landowners and farmers, and it was suggested that information could be sent along with water bills.

Participants shared some specific suggestions, considerations, and concerns for the Solano Subbasin SGMA implementation process. These concerns are summarized below.

Governance:

- The SGMA process should involve local people who are directly impacted by the decisions that will be made. State government should stay out of the local process as much as possible.
- There is a concern that ag interests will not be adequately represented in this process, despite the fact that ag interests use the majority of the groundwater in the subbasin.
- There is a need to ensure the people who are served by a water district have the ability to use the water they need for irrigation - but who will represent them on the GSA?

Costs:

- There is a broad concern about planning for unknown additional costs to landowners and farm operators from new fees or assessments related to SGMA.
- A customized local fee structure is preferable to a flat fee structure across the subbasin.
- Those designing the plan should consider the impact of existing regulatory and financial burdens to landowners and farm operators, such as high PG&E energy costs for rural well users, and the impact of adhering to the Irrigated Lands Program.

Local Groundwater Conditions:

- Most participants who are residential well operators, and most based in the 95688 zip code of west Solano County, have not seen major changes in their local groundwater conditions. Agricultural groundwater users were more varied in their observations across the subbasin. More on this below.

- There is a broad concern about deep wells being drilled that might impact neighboring groundwater conditions.



Local groundwater conditions and trends

It became apparent in early stakeholder assessments and public comments made during agency board meetings that local groundwater conditions vary across the subbasin. These variations are likely due in large part to differences in geology, well depth, and proximity to other wells. During these meetings we asked for specific examples of observed variations in local groundwater conditions. The information below is a summary of input across all three meetings organized by area.

General Findings:

- In some areas of the subbasin well operators are *not* noticing any or major changes in groundwater levels, quality, or recharge rates. This seems to be the case in the Montezuma and Birds Landing area (94512), Rio Vista and Isleton area (94571, 95690), and Vacaville and Bucktown area (95688). Still, there is some variability even within these areas.
- The majority of respondents who are noticing changes in groundwater are mostly noticing lowered levels and decreased flow rates, although some commented to high salt levels. These trends have been noticeably worse during these last several drought years. Some of the largest changes are being reported in the Winters and Norton area (95694) and in central Solano County (95620).
- Generally, new wells are being dug deeper than older, established wells. One respondent estimated that ag wells are now being drilled to a 500-1100 foot depth whereas the average was 90-300 feet in past decades.
- Some attendees noted that some recharge is being lost due to shifts to perennial cropping systems from annual systems, improvements in irrigation efficiencies, drought water management practices, and the concrete-lining of canals.
- Of the 40 respondents who completed the groundwater conditions questionnaire and lie within the Solano Subbasin:
 - ◆ 23 do *not* receive water from a water district
 - ◆ 39 have a water supply on their property
 - ◆ 8 use water for residential purposes
 - ◆ 32 use water for ag purposes
 - ◆ The age of wells ranges from 1 to 75 years
 - ◆ The depth of wells ranges from 22 ft (south Solano Co.) to 1100 ft (central and west Solano Co.)

Findings by Area:

Vacaville & Bucktown Area:

- Most well operators indicated stable water levels.
- Some well operators reported decreased recovery rates and more sand, and had to lower their pumps.
- Some specific local data on changes over time include:

- ◆ A drop in water level from 8 ft to 14 ft over 25 years in the outskirts of Vacaville.
- ◆ The recovery rate for one well has decreased from over 2 GPM to 0.5 GPM over the last 35 years.

Rio Vista & Montezuma Hills Area:

- Most well operators indicated relatively stable groundwater conditions.
- In the Montezuma Hills, a few respondents reported that deeper wells are producing water with higher salt concentrations.
- An independently commissioned geology study showed the Montezuma Hills is a very fragmented area, the fractured rock geology creates huge hydrological differences over only a few miles. The study showed that it is not clear where recharge comes from in this area.
- Some specific local data on changes over time included:
 - ◆ North of Rio Vista, the groundwater level has dropped from 28 ft to 35 ft from 2010 to today.
 - ◆ West of Trilogy, there has been a 40 ft groundwater level drop for 3 domestic wells over the last 3-4 years.
 - ◆ Wells have been down 40 to 50 feet by a Trilogy subdivision with an irrigated golf course.

Dixon Area:

- In Dixon, several well operators indicated stable groundwater levels and normal recharge.
- However, partial casing collapses, problems with compression and well lowering were also reported.
- In this area, some of the changes seemed likely to be related to the recent drought.
- Some specific local data on changes over time included:
 - ◆ Some wells in the Dixon area were experiencing partial casing collapse and well compression problems at 100-200 ft.
 - ◆ One well operator reported lowered pumps and a pond going dry for the first time in 25 years, likely drought related.
 - ◆ In south Dixon, groundwater is stable at 9-10 ft, might move 2 ft from wet to dry season with recharge, but nearly static levels.

Allendale:

- One well operator reported no change for this location.

Dixon Ridge / Winters / Norton.

- The Dixon Ridge and Winters area had reports of lower groundwater levels, especially during the drought, as well as reports of wells sucking air and needing to be replaced.
- Some well operators reported concerns that SCWA is releasing less water down Putah Creek, which is having an impact on farmers. The majority of groundwater is used for agricultural purposes in this area.
- Some specific local data on changes over time included:
 - ◆ One Dixon Ridge well operator had to drop wells 120 ft (from 120 to 240 ft), and began sucking air on that well;
 - ◆ Another dropped a pump 60 ft and it started sucking air at the end of the last irrigation season. That resident noticed similar conditions for several neighbors: at least 3 wells were completely lost this past season and had to be redrilled, and there has been much less groundwater pumping because water levels have been so low.
 - ◆ This area is seeing new wells being drilled to around 1000 ft.
 - ◆ One well operator's groundwater level has fallen over 80 ft from 2012 to 2015, from 120 ft to 200 ft on one well and 130 ft to 210 ft on another.
 - ◆ Another well operator reported that wells within 2 miles of their property have seen a steady decline for the last 80 years.
 - ◆ We also received one report of stable conditions in this area.

South Davis / Putah Creek / El Macero:

- Well operators reported high nitrate levels and lower water levels during the recent drought years.
- Some specific local data on changes over time included:
 - ◆ One well operator in South Davis reported more variance in water levels in drought years, normally 30-40 ft water levels going down to 80-90 ft in recent years. Levels are better during normal rain years. There are draw downs during the year due to pumping.
 - ◆ Near Davis, one well operator reported 20-40 ft lower groundwater levels in the last few years.
 - ◆ We also received one report of stable conditions in this area.

English Hills:

- Well operators reported decreased flows over the last 35 years, lower groundwater levels, and more sand.
- Some specific local data on changes over time included:
 - ◆ One respondent reported a decrease from 2 GPM to less than 1 GPM over the last 35 years.

Elmira / Maine Prairie:

- Some specific local data on changes over time included:
 - ◆ Slight drop in water table in last 26 years (8 ft to 14 ft).
 - ◆ Another well operator described stable groundwater levels of about 10 ft throughout the year.

Twin Sisters Mountain (outside of Solano Subbasin):

- One well operator noticed that since an earthquake several months ago, they've seen a significant increase in water volume from their well, and slightly less bacterial iron in the water. They also think their water has less silt since the earthquake.

Table - Average characteristics of well operators in the Solano Subbasin. Based on 40 responses to public workshop questionnaire.

Location	Zip Code	Well Depth (ft)	# of Wells?	Age of Well(s)	Property Size (ac)
Yolano, Liberty Farms, Saxon, Dixon, Batavia (central Solano Co.)	95620	421.2	2.7	35.5	411.0
Winters & Norton (northwest Solano Co.)	95694	415.4	6.0	36.2	468.1
El Macero (northeast Solano Co.)	95618	310.0	2.5	40.0	118.0
Bucktown & Vacaville (west Solano Co.)	95688	268.1	1.0	34.2	5.7
Birds Landing & Montezuma (south Solano Co.)	94512	170.5	3.7	26.0	850.7
Rio Vista (south Solano Co.)	94571	157.5	4.5	55.3	2050.0
South of Elmira, west of Maine Prairie and northeast of Fairfield (south Solano Co.)	95687	96.7	1.0	40.0	67.4