



Solano Subbasin GSA Collaborative Meeting

November 21, 2024 | 1:00 - 2:00 p.m. | Via Zoom

Participants

x	Solano Subbasin GSA Chris Lee		Solano Irrigation District Cary Keaten		Sacramento County Chris Hunley
x	Misty Kaltreider	x	Paul Fuchslin		Austin Miller
x	“Dick” Chun Tzou		Gerardo Santana		Rodney Fricke, GEI Consultants
x	Maritza Flores				Kerry Schmitz
	Alex Rabidoux				
x	Northern Delta GSA Erik Ringelberg		City of Vacaville Justen Cole		
	Chris Thomas	x	Tim Hawkins		
x	Luhdorff & Scalmanini Engineering (LSCE) Vicki Kretsinger Grabert	x	Ag Innovations Jenn Fox		
x	Nick Watterson	x	Guadalupe Garcia		
x	Faithe Lovelace		Jessie Holtz		
Kelly Huff, Dixon Resource Conservation District (RCD) x					

AGENDA

1. GSA Updates
2. GSP Implementation
 - a. Projects and Management Actions
 - b. Updates on Well Permitting, State Activities, Funding
3. Stakeholder Engagement
4. Forecast next Collaborative meeting topics

MEETING NOTES

Groundwater Sustainability Agency (GSA) Updates

- **Northern Delta GSA:** next board meeting is scheduled for January. The South American Subbasin did not receive funding from the Department of Water Resources.
- **Solano Subbasin GSA:** provided some surface water updates. The State Water Board is holding Bay Delta Plan Update workshops. Golden Mussels have been observed in the



SF Bay Delta Delta and this is a big concern. They are in the State Water Project system, and there is concern about what could happen if the invasive species were to enter Lake Berryessa. Water agency representatives have been meeting in an attempt to slow down the potential for this aquatic invasive species to spread. While authorities have not been amenable to restrictions, they are supporting steps to decontaminate vessels that self-identify as coming from the Delta.

- **Sacramento County GSA:** not present.
- **City of Vacaville GSA:** no updates.
- **Solano Irrigation District:** will send Water Quality Testing results to LSCE soon.

Groundwater Sustainability Plan (GSP) Implementation

Updates on GSP Implementation

LSCE shared GSP Implementation updates. LSCE is pulling together annual report information and are requesting data by December 13. If GSAs need an extension, contact LSCE or submit data in stages. Data should also include any actions or projects related to groundwater sustainability. The aim is to have a draft Annual Report for Collaborative members for review in early March for submission on April 1, 2025.

In the last Solano GSA Collaborative Meeting, LSCE presented preliminary results of the surface water diversion inventory. LSCE now has the well permit data from Sacramento County that they are incorporating into their analysis. LSCE will share a Technical Memorandum (TM) - including wells for targeted sampling as part of the grant requirements - with the Collaborative. GSA Collaborative members are encouraged to provide feedback on the TM.

LSCE is working on the well and surface water diversion inventory data and model refinement efforts. They are also taking a closer look at some evapotranspiration (ET) data to evaluate whether any modifications are needed to the crop coefficients in the model such as ways to use open ET data. LSCE is reaching out to growers with the help of Solano and Dixon RCDs, who have land-based sensors. This will allow them to ground-truth the open ET data and incorporate it into their model refinements.

LSCE is working with another engineering company to support and refine the complexities in the GSP model related to how the Delta system functions. Specifically, they want to better incorporate the complexities around shallow groundwater and plant uptake of groundwater. The goal is to more accurately reflect the smaller water budget components in the Delta. This will be an ongoing effort to refine the model and improve its representation of the Delta system.

The Collaborative engaged in a discussion of groundwater modeling and water balances. A participant mentioned that one group looking at island depletion and water balances in the Delta, decided that they would leave out the groundwater interaction component because they couldn't figure it out.



Question: How is LSCE tackling the challenge of accurately representing the groundwater interactions in the Delta?

LSCE described the challenge of accurately modeling groundwater interactions in the Delta. Models have difficulty accounting for the complex dynamics in the Delta and default to meeting landscape water demand first from surface water supplies. However, in the Delta, if the model is allowed to meet demand from groundwater, it will show all the demand being met through direct groundwater uptake by plants. LSCE knows that surface water is being applied to those Delta lands in addition to the groundwater uptake.

LSCE is working to refine the model to better capture this nuance and complexity of how water demands are met in the Delta, rather than just defaulting to all demands being met by groundwater. It's an ongoing challenge they work to address through model refinements. LSCE has engaged engineering support to help them explore tailored approaches to better represent the complex groundwater-surface water dynamics in different parts of the basin.

Another participant asked: How is LSCE distinguishing between groundwater pumping versus surface water diversions and uptake in the Delta area within their model?

LSCE described the model limitations in accurately capturing the complex interplay between surface water, shallow groundwater, and plant water use in the unique Delta environment. LSCE is working to refine the model to better represent these dynamics.

LSCE updated the group about new surface water-groundwater monitoring sites at Stevensons Bridge Road. Unlike some of their other monitoring sites, these are not dedicated monitoring wells that were installed. Instead, LSCE has been working with owners of existing domestic and agricultural wells in the area to instrument those wells for monitoring, installing a stream gauge at this location. The goal is to monitor different depth horizons. This new monitoring setup is aimed at trying to better understand the surface and groundwater interactions in this area.

Projects and Management Actions

LSCE is working on a cover crop field study south of Tremont in a collaborative effort with the landowner and the RCDs to instrument the site and monitor various elements of the water budget. The work will monitor runoff coming out of a dry period and allow for observation (for example, how much precipitation it takes to start generating runoff) and utilize telemetry providing real-time information. The texture of the field compared to last year is different; it is rougher with more dirt/clay clods. LSCE will be watching and sharing insights from detailed monitoring at this pilot site.

LSCE has ongoing meetings with Dixon RCD and Solano County Water Agency on multi-benefit concepts and will reach out to others about these meetings. They also have been having



conversations with Solano GSA and a local grower about an off-channel small recharge pond, not far from a diversion dam. There will be about 40 or 50 shallow monitoring wells to look at percolation next to the creek and what could be done with excess run-off. This may have broader lessons for groundwater recharge and/or potential flood attenuation for the Northwest Focus Area and beyond. LSCE is putting together a map to show the design and plan to consider it in that context. Looking closer at the dynamics of the stream - gaining and losing reaches - should help share more about the groundwater interactions and whether water will quickly go back into the river or not.

Dixon RCD provided an update - a staff member has been visiting sites with project potential. A grower they worked with last year will install soil moisture monitoring on three sites.

LSCE shared that members of the LSCE office have been working on comments related to the Department of Water Resources (DWR) Interconnected Surface Water (ISW) technical papers 1, 2, and 3. Comment letters will seek clarification and better adherence to the GSP regulations. There is concern that the simplified scenarios presented in the papers don't match system complexity. The guidance on establishing sustainability metrics for stream depletion heavily emphasizes the use of modeling as the primary method. Many Groundwater Sustainability Plans (GSPs) have relied on alternative metrics, such as groundwater levels as proxies, but these approaches are being revisited based on feedback and emerging guidance. Solano has used a combination of methods, but recommended actions include revisiting stream depletion metrics once formal guidance is released. Current technical papers suggest evaluating scenarios with varying levels of pumping; final guidance on sustainable management criteria is still pending. DWR is anticipated to require model-derived metrics (noting that simpler methods like field observations or shallow groundwater levels may not be sufficient).

Updates on Well Permitting, Funding, State Activities, and Funding

Federal support is expected to be more limited, so agencies will need to pay attention to and coordinate on sustainability funding opportunities. The Safe Drinking Water Bond passed by California voters provides some opportunities for multi-benefit projects. While not a typical water infrastructure bond, significant funds are available across various programs, though some are tied to budget stopgaps. The next steps will involve identifying and pursuing these potential funding sources.

Stakeholder Engagement

Outreach on well monitoring is being led by Dixon RCD and LSCE with support by Ag Innovations. In addition to supporting updates to the interactive Webmap linked from SolanoGSP.com, this is an opportunity to engage with well owners. LSCE shared that the ArcGIS bug on the interactive Webmap has been addressed so that the Subbasin can update the Webmap when outreach is completed. Ag Innovations shared the Webmap link in the chat: https://www.solanogsp.com/subbasin_conditions/#:~:text=The%20web%20map,Monitoring%20Web%20Map



Dixon RCD will host its third annual groundwater workshop on the morning of Thursday, January 30. This year's event will feature an extended grower panel with fewer participants, allowing for in-depth discussions and the sharing of innovative ideas on groundwater management. Registration details will be shared soon, and the workshop promises to deliver valuable insights and foster meaningful dialogue.

Ag Innovations described updates to the SolanoGSP.com public website, including a specific link for to the cover cropping video on the Subbasin Highlights page:
<https://www.solanogsp.com/outreach/#:~:text=Subbasin%20Highlights.Virtual%20Town%20Hall>.
Alongside GSA's own websites, this site provides public information and links. Collaborative members were reminded that the GSA websites are important for public outreach. They were invited to contact Ag Innovations for support on their websites and/or concerns or suggested additions to SolanoGSP.com.

Looking ahead, Ag Innovations is preparing a newsletter in the new year for the Solano Subbasin. They invited Collaborative members to suggest topics or share information for inclusion, emphasizing the newsletter's role in fostering communication and engagement with stakeholders.

Forecast Upcoming Meeting Discussions

GSA participants were asked if they would be open to having a few additional attendees in the Solano GSA Collaborative Meetings. Members present provided a "thumbs-up" to this idea. The GSA Collaborative decided to cancel the December 19 meeting, and Ag Innovations will update the calendar invitation.

Next GSA Collaborative Meeting: Thursday, January 16, 2025