

San Pasqual Valley (SPV) Groundwater Sustainability Plan (GSP)
Stakeholder Workshop
Meeting Summary

The following is a summary of the Stakeholder Workshop, comments, and questions. This summary reflects the general content and spirit of each discussion point, but is not a verbatim recording.

Date: Tuesday January 31, 2023 from 1:00 pm to 2:56 pm
Location: GoToMeeting
Purpose: Stakeholder Workshop

Attendees:	Public	<ul style="list-style-type: none"> • Andre Monette (AM), Best Best & Krieger, on behalf of Ranch Guejito • Craig Cooledge • Daniel Silver • Erica Wolksi, Ramona Municipal Water District • Frank Konym (FK), Konym Dairy • Joel Kramer (JK), Mission Resource Conservation District • John Helminski • Joseph Rivera (JR), San Dieguito River Valley Conservancy • Khayri Carter • Lani Lutar, on behalf of Rancho Guejito • Marissa Potter (MP), Santa Fe Irrigation District • Matt Witman, Witman Ranch • Megan Otto • Peter Quinlan (PQ), Ranch Guejito • Rikki Schroeder (RS), Ranch Guejito • Stephanie Mar 	City of San Diego (City) <ul style="list-style-type: none"> • Staci Domasco • Julie MarLett • Keli Balo • Christopher Berkoben • Sergio Angulo • Anna Vacchi Hill • Nicole DeSantis
		County of San Diego (County) <ul style="list-style-type: none"> • Jim Bennett • Leanne Crow 	
		Consultant Team <ul style="list-style-type: none"> • Sally Johnson (SJ), Woodard & Curran • Micah Eggleton (ME), Woodard & Curran • Christy Kennedy, Woodard & Curran • Nate Brown (NB), Jacobs • Paula Silva, Jacobs • Craig Cooledge, Jacobs • Mark Elliot, Jacobs 	

Welcome and Introductions

Sally Johnson (Consultant Team) greeted participants as they signed onto GoToMeeting.

Julie MarLett greeted the stakeholders, and then introduced new members of the consultant team.

Sally introduced herself to the Stakeholders and provided a brief background of her experience and new role in the project. Christy Kennedy was also introduced.

Paula Silva, Nate Brown, and Mark Elliot also introduced themselves from Jacobs.

Surface Water Recharge Evaluation

Sally went over the stakeholder input format. A question about when written comments are due from Rikki Schroeder (RS) was entered into the chat. Staci Domasco responded indicating that all written comments were due within a week or two of this meeting.

Sally then provided a review of the agenda. Agenda items are:

1. Welcome and Introductions
2. Scope of PMA No. 7: Initial Surface Water Recharge Evaluation
3. Revisions to TM 1 – Evaluation Criteria
4. Task 2 – Streambed Investigation
5. Task 3 – Water Sources for Potential Recharge Projects
6. Public Comment
7. Next Steps and Closing Remarks

Sally then provided an overview of the Preliminary Feasibility Study, and the six tasks included in the study. Each technical memorandum (TM) is a piece of the Preliminary Feasibility Study (PFS) and they each build on one another. Sally then described how these TMs and the PFS will be a part of the updated GSP as an appendix in the 5-year GSP Update. The intent of the TMs and PFS is to explore recharge options now before there is a potential need to implement any recharge strategy in the future.

Sally then reviewed the schedule of the tasks. We are currently on Tasks 2 and 3 in January 2023, and will meet again in April for Tasks 4 and 5. There will be a public review period for the PFS in November, though all the TMs that will make up the PFS will have already been available to stakeholders for review prior to November.

Task 1 Draft Final Evaluation Criteria TM

Sally then provided a brief review of the Evaluation Criteria, Task 1 revisions. These criteria were discussed in June of 2022 and revised based on feedback received by stakeholders. The table of how the eight criteria will be weighted in the evaluation was shared.

Task 2 Streambed Investigation

The draft of TM 2: Streambed Investigation was provided last Friday and is ready for review and comments by stakeholders at this time. Nate began to describe the work completed under this task explaining that the focus of the fieldwork and evaluation was in the eastern portion of the Basin and aimed at reducing the uncertainty about streambed characteristics in this area. Scope included the stream channel survey, streambed infiltration testing, and photographic survey.

Nate explained the importance of stream channel shape and characteristics and its relationship in understanding how infiltration may occur. Different channel shapes can provide greater or fewer opportunities for infiltration. Therefore, four sites along Santa Ysabel Creek and one site along Guejito Creek were chosen for stream channel surveying and investigations.

Field work including cross channel surveys were completed in June of 2022 and found that the channel surface generally becomes wider and flatter as the creek moves downstream, widening from approximately 250 feet to around 600 feet within the areas surveyed. This information will be used to update the Basin model, which previously used simple rectangular stream channels.

Nate then described the streambed infiltration testing. The goal for this testing was to assess site-specific infiltration characteristics along Santa Ysabel Creek. This was done by monitoring the flow / infiltration of water into the streambed using both single- and double-ring infiltrometers. These data are used to calculate hydraulic conductivity (K), which is a measure of how easily a fluid can move through

soil and rock. High K values means rapid infiltration, lower K values mean slower infiltration. Potential future infiltration projects should target areas with higher vertical hydraulic conductivity.

Two streambed infiltration tests were conducted at four different cross sections along the Santa Ysabel Creek: one in the bottom of the main lower-flow channel and one on an interior higher-flow bank of the channel. Sediment samples were also collected at each test site and sieve tests were conducted on each sample. Results of these tests show the main channel has higher vertical K values (116 to 522 feet per day [ft/day]) than the bank (24 to 83 ft/day), and that the tested portions of the Santa Ysabel Creek channel has relatively high vertical hydraulic conductivity.

Lastly, the photographic survey was done. The photographic survey was conducted when streamflow was observed in the stream so that staff could see how far into the eastern end of the Basin streamflows occurred in response to the substantial rainfall events that occurred in early January 2023. A few example photos were provided in the slides. Nate expressed the Core Team and Consultant Teams' appreciation to the stakeholders who have been communicative and supportive of the field work and providing on-the-ground information and support during this time. Nate also asked that if people would like to provide pictures of streamflows or streambeds during different times, that this information could be very helpful in understanding when streamflows occur or do not occur relatively to rainfall events.

Questions/Comments

- **Peter Quinlan [PQ]** – Would like to add to Nate's request for infield information/pictures. Providing pictures even during storm events with no flow can be helpful information as well.
- **Frank Konyn [FK]** – Main channel infiltration rates are around 100 to 250 feet per day, but do we know what may be happening say 50 feet below surface?
 - **NB** – Clarified that although the units for vertical K are in "ft/day", that it's important to understand that these K values are not rates. The vertical K provides a measure of the resistance to infiltration. Regardless, the intent of the comment is important. The vertical K values estimated from the infiltration testing are representative of the near-surface sediments only. For the same sandy materials, the vertical K would decrease with depth due to compaction, which reduces the interconnected pore space between the sand grains. TM 2 provides additional discussion about this topic.
- **FK** – Did you do any correlation between when you observed the river flowing and the USGS gage behind Mr. Witman's office to determine amount of flows and how the timing works?
 - **NB** – Yes we did do analysis to look at the timing of flows and quantity of flows so we can better understand when the soils get saturated and how infiltration may impact flows in the creek. There is a complex timing effect that cannot be understood from looking at just one storm runoff event. Great questions.

Task 3 Water Sources for Potential Recharge Projects

Sally introduced Task 3. This work is still preliminary. Would like to emphasize that we are looking for feedback based on locations, access, and source of water.

Nate then began describing why we are looking at sources of water first, considering quantity, timing, reliability/consistency, operations, and legality. The approach for assessing these considerations utilized historical data from water years 2005 through 2019 to calculate a *hypothetical* result of what water might have been made available if recharge strategies had been put in place over that 15-year period. This is just to provide a numerical estimate of what each strategy could have potentially provided given the hydrologic conditions over that past 15-year period.

Recharge sources evaluated include:

- Streamflow's from stormwater capture
- Uncontrolled release from Sutherland Reservoir
- Controlled releases from Sutherland Reservoir
- Raw water from Ramona Municipal Water District.

Stormwater Capture along Santa Ysabel Creek

Nate described how the Consultant Team believes the best location for stormwater capture would be along Santa Ysabel Creek due to the large quantities of water that could be available during large storm events and the large surface area available for infiltration. Looking at the historical period using model results, the Basin could see as much as 11,000 AF of stormwater during large events. The main challenge for this source is that it is drought sensitive, and there are several years where no excess water from streamflows available for recharge projects.

Uncontrolled Releases from Sutherland Reservoir

Paula then continued with the next potential source, uncontrolled releases from Sutherland Reservoir. Based on historical data, only 6% of the time were there uncontrolled releases from 1954 - 2021, with minimum 5,000 AF per uncontrolled release. Although there is a potential for large quantities of uncontrolled releases, this source is also drought sensitive, there would be conveyance losses before reaching the Basin, and it could require another strategy to capture released water for beneficial uses further downstream in the Basin. For context, even during the substantial recent storm events in January 2023, there were no uncontrolled releases.

Controlled Releases from Sutherland Reservoir

Controlled releases may be available while maintaining existing deliveries to San Vicente Reservoir and Ramona MWD, all while storage levels are kept close to historical levels. This strategy is more appealing because it is more predictable, and no significant changes in infrastructure would be needed. However, future unknowns such as the impacts of climate change and potential changes around operations and regulations create uncertainty regarding the amount of water potentially available. Additional challenges associated with this source include that it is drought sensitive, releases are still subject to conveyance losses before reaching the Basin, and use of this water would require additional operational agreements.

Questions/Comments

- RS – Is there a potential to release water to Santa Ysabel Creek in higher water years to boost groundwater storage to reduce likelihood of reaching undesirable levels?
 - PS – This is what will be looked at in Task 4. Right now this is just looking at how much water may be available for each strategy.

Raw Water from Ramona MWD

Analysis found that there is an estimated annual 850 AF to 3,350 AF that could potentially be available for direct or in-lieu recharge strategies. Advantages of this source include it being less sensitive to *local* drought, allows the use of existing infrastructure, has less conveyance loss than other sources, and seasonal delivery is flexible. However, a large construction project would be needed to install pipelines and potential recharge facilities, the connection point with the Ramona MWD system could limit recharge location options and supply availability, and there is added complexity of SDCWA 1st Aqueduct's future operations and potential restrictions to agricultural customers.

Recharge Location Criteria (for consideration for the Ramona MWD supply)

The consultant team is looking for additional feedback on potential approaches for how to implement different recharge strategies. For now, the Consultant Team developed the following recharge location criteria:

- Prioritizing retention of water in eastern portion of the Basin
- Prioritizing recharge on City Parcels
- Prioritizing shorter pipelines
- Prioritizing recharge near existing roadways for ease of access
- Prioritizing recharge near representative monitoring wells
- Minimizing disturbance to exiting ag lands

Because of these considerations, eight potential recharge areas have been identified, and the Consultant Team is looking for feedback from stakeholders on the potential recharge area locations and potential associated pipeline alignments. Recharge Areas 1 and 2 are along creeks, and the rest are on City-owned parcels. Maps were then shown of the potential conveyance to recharge locations using the above six criteria.

Public Comments and Questions

- Matt Witman [MW] – When talking about uncontrolled releases from Sutherland – whenever there has been uncontrolled releases from Sutherland, the Basin has already been full. So that doesn't make much sense as a recharge strategy unless operations change such that the reservoir is kept nearly full so that the frequency of spills increases compared to the past.
- MW – From my experience, streamflow that does enter the Basin infiltrates in the upper portions and fills up the Basin there. As it fills and saturates the ground, then flow starts moving down the Basin. So there is no more soaking in once it is saturated.
- MW – In 2008/09 flows are not relevant because of the previous fires. So much silt and material was in the water that it clogged up the creek bed. In my opinion, recharge should be done in the creek beds and no agricultural land should be taken out to accommodate recharge strategies, because agriculture is what would be protected by implementing the recharge strategy. Otherwise, we might as well remove the land out of production in the first place.
 - NB – What was the name of the fire?
 - MW – Witch Creek Fire in 2007. Runoff into the streams during the two years after the fire was really impacted by the fire (lots of soot, ash, and debris). Also, in 2004 a lot of the watershed was burned as well.
 - Carol Burkhard – The Witch Creek Fire started October 21st, 2007 and came through Basin on the 24th.
- PQ – Looking at bringing Ramona MWD water in, the #2 option has a pipeline that enters the Santa Maria Creek lower down, but maybe if we put the pipe further upstream in the creek then the cost savings of laying pipe may be worth it.
 - SJ – Yes we considered that and will look into it more, it would just require cutting through private land.
- FK – Reading the report, looks like anything along the Santa Maria Creek was not as desirable because it does not provide enough recharge to the eastern portion of the Basin. That's why I think 2, 7, 8 were not as desirable options (from the maps). Based on my experience in the Basin, the infiltration rate in the Santa Maria Creek is not as desirable or good as that in the Santa Ysabel

Creek, partly due to the rock formation underground of the Valley floor on that mountain [where the Santa Maria Creek comes into the Basin].

- FK – Follow up on the relationship of creek flows – would be interesting to see an overlay of the USGS gage flows to see it and compare it.
 - NB – This is provided in Figure 4-4 in draft TM 2.
- FK – Thank you for the clarification.
- FK – Seems like alignments go down roads which generally requires more permits and costs. Alignments should also consider using farm roads to reduce costs.
- FK – Nothing was mentioned about the potential cost for importing water from Ramona – is it a benefit as Ramona grows, they need to get rid of more water? Will it need to be treated? Any cost or benefit information about this?
 - SJ – Costs have not been factored in yet but is part of the feasibility assessment in later TMs. There is the cost of the water, and conveyance of the water. If injection wells are used, then treatment may be needed (above using infiltration ponds). But for today and this memo, we have no costs.
- PQ – Just a comment of injection wells – they can be trouble because of the costs and microbial growth. So infiltration in the creek would probably be a much easier option. Just don't underestimate the cost and maintenance of injection wells.
 - SJ – any other considerations when we are looking at the feasibility of these options? Such as using creeks for infiltration more than ag land, etc.?
- Joel Kramer (RCD SD County) – we have been doing some work about water around the county. Is there connectivity between Ramona and SPV? Ramona also needs infiltration so just wondering. Also has there been any consideration or interest the SD Desalination plant helping?
- NB – As for your first question, the only connection is through Santa Maria Creek but Ramona and SPV are in separate groundwater basins.
 - JM – As for question two, no there is no discussion about restarting the desalination plant.
- NB – Just to provide some clarity and further discussion – when considering recharge locations [on the slide maps] 2, 6, 7, 8, etc., are there opportunities, based on current ag production practices and equipment, to utilize those areas as storage ponds and when the opportunity arises to pump from those ponds as an in-lieu source for groundwater pumping? Would this work?
- MW – Potentially this could work but would depend on the design of the system. Would depend if it is a seasonal thing, and how it was all constructed. Something like an avocado grove could utilize it. However, 850 AF is something we could manage, but something in the 2,000-3,000 AF begins to be a bit much to handle because then you're looking at incorporating multiple farms and adjusting strategies to use the water. Could do in lieu recharge if irrigation systems have dual hookups but then landowners would need to maintain two systems.
- NB – Thank you, that is helpful. We are trying to gauge if that is something folks like or dislike so your feedback is helpful.
- FQ – In October, myself, Matt Witman, and Rancho Guejito had concerns about levels in Hodges and the earthquake concerns and levels being lower than normal. How does this also affect the model and conditions in the Basin?
 - JM – Thank you for bringing this back up. At this time, we are seeking funding options to look into this more, and working with Division of Safety of Dams (DSOD) about future operations of Hodges.

- FQ – Thank you Julie. Nate, have you considered this in the modeling?
- NB – Yes, in the model, there is a feature at the western end of the Basin that is tied to the stage of Lake Hodges. When doing the future projections, we did incorporate the “cap” of the DSOD decision. As we look into Task 4 we can consider this. We will not be looking into it in detail for the recharge strategies, but if anything comes to light we will let you all know.
- JK - Among the water sources considered, was the City of Escondido’s recycled water considered? They are expanding their treatment.
 - SJ – Yes, at this time, our understanding is that most of that water is already “allocated” to other entities.
- Joel – I have heard they may be willing to expand if there are additional customers interested. I can send information.
 - SJ – Yes, please send the information and we will look into it.

Next Steps and Closing Remarks

Sally described that the next steps include develop potential recharge strategies (Task 4) and updating the model and runs simulations for recharge strategies (Task 5). Additionally, the Annual Report is being drafted now and a brief summary will be provided in the next meeting in April.

A brief summary of Management Action Implementation was then provided for MAs 3 through 8.

Comments should be sent directly to Staci Domasco at SDomasco@sandiego.gov.

Stakeholder Workshop ended at 2:36pm.

GoToMeeting Chat Log from Workshop

Rikki - sent a chat · 1:09 PM

When are written comments due?

AC - Carole Burkhard - Small Landowner - sent a chat · 1:18 PM

I apologize to the team. I've had continual spotting internet connection since the storm and I may be disconnected several times throughout the next two hours!

Peter Quinlan - sent a chat · 1:32 PM

I have a comment

Rikki - sent a chat · 1:50 PM

I have a question

Joel Kramer (RCD San Diego) - sent a chat · 2:31 PM

Glad to share, thank you.

Joel Kramer (RCD San Diego) - sent a chat · 2:36 PM

Thank you!