Public Utilities

# San Pasqual Valley (SPV) Groundwater Sustainability Plan (GSP)
# Advisory Committee Meeting
# Meeting Summary

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

Date: Thursday January 14, 2021 from 2:00 to 4:00 pm

Location: GoToMeeting

Purpose: Advisory Committee Meeting

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| Attendees: | Advisory Committee (AC)<br>• Carole Burkhard (CB)<br>• Frank Konyn (FK)<br>• Lisa Peterson<br>• Matt Witman (MWit)<br>• Rikki Schroeder (RS)<br>• Trish Boaz (TB)<br>• Eric Larson (EL)<br>• Dave Toler | City of San Diego (City)<br>• Sandra Carlson<br>• Karina Danek (KD)<br>• Mike Bolouri<br>• Keli Balo<br>• Surraya Rashid<br><br>County of San Diego (County)<br>• Leanne Crow<br>• Jim Bennett<br>• Nancy Karas |
| | Public<br>• Anita Regmi, Dept of Water Resources<br>• Raj Brown, San Diego Safari Park<br>• Charlie de la Rosa, San Diego Safari Park<br>• Chris Brzezicki, San Diego Safari Park<br>• Robyn Badger, San Diego Safari Park<br>• Alicia Appel, City of Escondido<br>• Hank Rupp, Rancho Guejito (RG)<br>• Lani Lutar, Responsible Solutions, RG<br>• Andre Monette, Best Best & Krieger (BBK), RG<br>• Pat McTigue, San Diego Safari Park<br>• Greg Porter, San Diego Safari Park, Browse Team<br>• Elyse Levy, CDFW<br>• Brad Blaes, The Pinery<br>• Charles Fleuret, San Diego Safari Park | Consultant Team<br>• John Ayres (JA), Woodard & Curran<br>• Rosalyn Prickett (RP), Woodard & Curran<br>• Nicole Poletto, Woodard & Curran<br>• Heidi Gantwerk, HG Consulting |

## Roll Call and Introductions

Rosalyn Prickett, Consultant Team, greeted participants as they signed onto GoToMeeting and reviewed basic instructions for GoToMeeting user tools. Rosalyn reviewed when and how members of the public can provide input.

## Review

Heidi Gantwerk, Consultant Team, reviewed the meeting agenda and meeting objectives. She directed participants to Handout 1 with the last meeting summary. Heidi reminded the group that comments need to be provided directly via email to Karina Danek and that no other addresses should be cc'd in the emails.

John Ayres, Consultant Team, provided a recap of the last two TPR meeting topics. This included a December 17 TPR meeting focused on the groundwater model update, and the TPR meeting this morning that included the water budgets and hydrographs that will be included in the February AC Meeting.

## GSP Content Review

John provided an overview of the Sustainable Groundwater Management Act (SGMA) and reviewed the GSP schedule. No AC members had comments or questions.

## Groundwater Model Updates

John provided an overview of the updates that were completed for the groundwater model. The model was built to account for the rain and runoff from the greater watershed into the SPV Basin and the geology of the Basin in order to evaluate our Sustainable Management Criteria (SMCs) and prioritize data gaps. John explained that the Basin is about 13 square miles and model domain is about 42 square miles. He reviewed the cross sections that we developed a few months ago, which were used to construct the model (Layer 1 is alluvium, Layer 2 is residuum, and layers 3 and 4 are bedrock). Slide 20 shows model area with stream reaches, wells, and gages. In the February meeting, more model information will be provided for model calibration, forecast development, and water budgets.

- AC Member (RS): Is there a table for the various things on the map on Slide 20?
    - JA: Yes, the detailed information is in the December TPR PPT. All of those TPR materials are on the project website, available here: https://www.sandiegocounty.gov/content/sdc/pds/SGMA/san-pasqual-valley.html.

## Sustainable Management Criteria

John explained what the sustainable management criteria includes: undesirable results (UR), minimum threshold (MT), and measurable objective (MO). Thresholds must be set for all six sustainability indicators: groundwater levels, groundwater storage, seawater intrusion, degraded groundwater quality, land subsidence, and depletion of interconnected surface waters. Seawater intrusion and land subsidence have been removed as SMC for the SPV Basin.

He provided an example of what groundwater levels thresholds might look like. There is no regulatory repercussions of achieving (or not) the MO, just the MT. Note that conditions are different on west side, which include GDEs. There are thresholds for the 15 wells in the monitoring well network. Adaptive Management Threshold (AMT) is an early warning signal. Thresholds need to consider nearby well infrastructure, GDEs, and historical changes in groundwater levels.

John explained "range of measurement" which is the range that groundwater levels (highest and lowest) and "percentage of range" which is the application of some percentage of the range of measurement (50% or 100%). Well depth percentiles are considered to make sure that thresholds aren't set below the 20$^{th}$ percentile of wells.

- AC Member (EL): Will the GSP contain the adaptive measures for a standalone program should the thresholds be exceeded.
    - JA: Yes, we'll explain the adaptive management process today.

- AC Member (TB): Is there a predictive "sustainability" modeling tool?
    - JA: Yes, we have a model that considers future conditions under climate changes. They will be compared with the thresholds here.
    - TB: Have you considered General Plan projections and habitats? The predictive model should include those considerations.
    - JA: We do show groundwater levels in the model outputs. SPV is considered an agricultural preserve, so we did not project future growth in the Valley.
    - TB: Not necessarily housing, but what if leases come up? Can we apply specific land use proposals and predict changes to land uses?
    - JA: We can do that with the model at the 5-year update; though we don't anticipate substantial land use changes based on current City policy.

The minimum threshold is regulatory and determines what is considered a significant and undesirable result. The MT is designed to be deeper than the historical low, above bedrock, and above 20$^{th}$ percentile of nearby wells. Western wells – 100% of range below minimum; Eastern wells – 50% of historical range. The AMT is an intermediate threshold used to inform the GSAs when they need to start investigations. The AMT is shallower than MTs. Western wells – 80% of range below minimum; Eastern wells – 30% of historical range. John acknowledged that we received a comment during the TPR meeting that the AMTs should be lower, to give the City more time to course correct.

The MO is above the MT and AMT and provides for 5-years of storage for drought. For wells near GDEs, set 10 ft below GSE; if not, set at 5-year decline above MT. The 5-year timeframe is intended to reflect the recent 5-year drought. He reviewed sample hydrographs with the thresholds on them (Slide 36) – brown line is ground surface, green is MO, orange is AMT, red is MT, grey dashed are bottom of the Basin, and pink lines are well screen intervals. Groundwater level information shows that western wells stay full, even in drought. Eastern wells are more variable and decline during droughts.

Adaptive management is triggered when 30% of wells concentration rises above AMT for 12 months (5 of 15 wells). UR is detected when 30% of wells rises above MT for 24 months. This format gives the GSA time to do some management before the undesirable result occurs.

- AC Member (MWit): In separation of AMT and MT, is there a time factor? If there is only one year between the AMT and the MT, how will adaptive management be implemented in time?
    - JA: The AMT is set so that the GSA has adequate time to implement management actions before the UR is triggered. If the levels dip below the AMT or MT for the summer and then bounce back up, that doesn't count and the timeline is started over. We established the 24 months trigger because we want to make sure that actions are triggered as a result of a real, long-term issue.
- AC Member (FK): Will there be only 2 groundwater level samples per year? What if there is a rainstorm right after a measurement and that isn't captured, then next sample isn't until following summer?
    - JA: We will be measuring for 12 consecutive months and the timing of those two measurements is flexible. Flexibility is built in so the GSA can make decisions on its management rather than have actions be prescribed. The GSP will include language about "12 consecutive months" – so the GSA could then do an investigation because they determine that we had 2 summer measurements and want to wait until the next winter measurement. Had a prior project where we did not include an AMT; learned from that mistake and are including the AMT so the GSA and stakeholders can work together to figure out best management actions moving forward. Requirements are about communication.

- AC Member (FK): The Core Team is City and County staff, but John also mentioned stakeholders. Can you explain further?
    - JA: We will address this in the PMAs portion of presentation.

John explained that the groundwater storage criteria will use groundwater levels as a proxy.

John explained groundwater storage levels and recommended using groundwater levels as a proxy for the groundwater storage criteria, which is consistent with other completed GSPs. Groundwater storage is a less important SMC because the levels are protective of groundwater storage. This means that no additional calculations or modeling work is required, reducing implementation costs in the future. This is standard across GSPs. John explained the groundwater quality criteria should consider high concentrations of TDS and nitrate in creek inflows. To set thresholds for groundwater quality, the Consultant Team was mindful to set thresholds on constituents that are reflective of the tools the GSA has that may affect groundwater quality. We want to set thresholds based on the GSA's ability to influence groundwater quality for constituents that can be affected by water volume management and within the range that the GSA can cost-effectively manage. John discussed the interaction of water quality with local streams based on the Nitrate and TDS chemographs for the Basin. For Nitrate, there were generally downward trends; except at Cloverdale Creek. For TDS, both downward and slight increasing trends. John also explained surface water quality trends for creek inflows. One well with increasing water quality is not "significant and unreasonable"; we need to focus on long-term, basin-wide trends. We cannot change water quality when surface water inflows are so high. The thresholds for nitrate and TDS differ, but can be higher than the MCL due to the poor water quality of incoming streams.

Nitrate MT has a Basin Plan Water Quality Objective of 45 mg/L; AMT is at historic high or MO, whichever is higher; MO is the SNMP objective of 10 mg/L. TPR raised issue of Nitrogen vs Nitrate objectives and making sure we're using correct one from SNMP. TDS MT is 10% range above historic high; AMT is historic high measurement; MO is 1,000 mg/L. Again, adaptive management is triggered when 30% of wells concentration rises above AMT for 12 months and UR is detected when 30% of wells rises above MT for 24 months. John showed some examples of sample chemographs with thresholds. He explained why the MTs and MOs are reversed, with MTs higher.

- AC Member (EL): As John says, it's the RWQCB that deals with water quality. They're creating a plan for every farmer developing a Nitrogen Management Plan. I just wanted to let everyone know that there are regulations coming.

John continued to explain other SMCs as it relates to subsidence. DWR provides INSAR measurements that calculate changes in ground surface over time. SPV has only seen extremely little subsidence, even after significant drought. Subsidence is unlikely to cause an UR because there are few clays in the alluvium, plus very little infrastructure to be damaged by subsidence. The team suggest removing subsidence as a sustainability indicator. The fall back plan is to point to groundwater levels as a proxy. There were no AC comments on the subsidence criteria.

John then explained the final indicator: interconnected surface water. The GSA Core Team recommends using levels as a proxy for interconnected surface waters. There are 6 wells in the surface water proxy monitoring network (each within 2,000 ft of a GDE). AMT trigger would be 30% of wells (2 of 6) for 12 months. John then noted that he noticed that the map shows 7 wells in the network, so need to revisit writeup.

To summarize, sustainability is set by the monitoring network and thresholds. The SPV is not currently within a UR situation, so the GSA doesn't need to take immediate action. This means that we don't have to take on costly projects to fix something right away. Instead, we've created a program to implement them when and how they are needed. There were no other AC comments on the SMCs.

## Projects and Management Actions

SGMA regulations require GSPs to include a list of projects and management actions (PMAs) that can be used to avoid URs. John explained that because SPV is currently considered sustainable, no projects or management actions need to be implemented at this time for groundwater quality or groundwater levels. The implementation of the PMAs have been designed to be responsive to changes in the future through the adaptive management process. PMAs have been presented in two groupings – Plan implementation, and Adaptive management actions. GSP Implementation Tasks will be implemented regardless of basin conditions. Adaptive management allows for more local control, with adequate warning time prior to a minimum threshold. Management is triggered by monitoring.

The proposed AMTs provide warning time to GSAs so that management actions can be implemented before a UR occurs. This facilitates local control. Adaptive management is triggered when 30% of wells (5 of 15 for levels, 3 of 10 for quality) exceeds AMT for 12months; a UR is detected when 30% of wells (5 of 15 for levels, 3 of 10 for quality) exceed MTs for 24 months.

John presented an adaptive management cycle graphic to explain the steps in the process. If an exceedance occurs, the Core Team will investigate. If it's a localized issue, we go back to monitoring. If it is a long-term basin trend, the Core Team works with stakeholders to discuss and determine actions. Finally, the GSA needs to implement the selected management action. Public communication and coordination with stakeholders is an important part of this adaptive management cycle (in the investigation, action selection, and action implementation steps).

- AC Member (FK): 10-15 years from now, who is the Core Team?
    - JA: The Core Team is made up of folks from the GSA. The GSA MOU dictates that the Core Team is City and County staffers.
    - KD: John was correct. The GSA MOU defines the Core Team as staff from the City and County. There is no expiration to that MOU. Staff may change, but SGMA is a priority and there will always be staff involved.
- AC Member (FK): The Salt and Nutrient Management Plan (SNMP) that was used as a basis for thresholds said that the City will give stakeholders updates periodically. But it has been 7 years since the last update. How can we write the Plan to ensure that the Core Team follows through with their commitments to include stakeholders?
    - JA: SGMA is more robust than the SNMP requirements, and requires 5-year updates and Annual Reports following GSP adoption. The report is required by SGMA, but that will prompt the GSA to involve stakeholders. Based on my work with the Core Team, the City and the County are committed to this GSP process and will not let 7 years go by without a stakeholder meeting.
- AC Member (RS): Was the SNMP a State mandated plan? What are the requirements for this Plan?
    - RP: SNMPs are required by the state's Recycled Water Policy, though not sure about requirements in that Policy for ongoing stakeholder coordination.

John explained that the list of PMAs to be included in the GSP. Plan Implementation tasks include continued monitoring, public meetings, annual reports, 5-year Plan Update, numerical model update, and pursuing funding opportunities in addition to groundwater monitoring improvements, public outreach and website maintenance, and education and outreach for TDS and Nitrate loading. The plan is to hold a public meeting annually with the release of the Annual Report. There are eight proposed management actions and two projects that are proposed for inclusion in the GSP. Management actions include a well inventory, GDEs Study, basin-wide metering program, education and outreach, pumping restrictions, farming best practices, supporting WQIP activities, and coordination with other SPV entities. Projects include coordination on construction of an infiltration basin and coordination on implementation of invasive species removal.

Heidi invited AC members to comment on the PMAs. There were no additional comments.

## Final Thoughts by AC Members

- AC Member (MWit): Your thresholds need to be our thresholds because the thresholds do not do any good if they're below the point that I can pump water. That is certainly a compromise. I want this group to be clear that under the proposed MTs, the output of my well has been decreased by about 2/3's. I would have had to do some company action to deal with the decline far before any action is mandated under SGMA. I want to make sure that we all don't fail prior to the GSP being implemented.
- AC Member (FK): What Matt did not chime in on is that bureaucracy moves slower than what the farmers need on the ground. There might be a planting window of 45 days, but farmers may not have information back from GSAs before that window closes. This would cause missing an entire year of crops until the next season. This is an issue that should be recognized. Farmers need to move faster than the folks that are just monitoring as part of their jobs.
- AC Member (FK): Slide 80 from the TPR meeting this morning showed a projected, gradual decline over time, going out until 2071. The cumulative groundwater storage was becoming less over time. It's only a model, but this is alarming. The TPR didn't appear to consider it alarming because it was only 100 AF. But up at the east end of the Valley, Matt will run out of water sooner than folks in the western portion of the Basin. As you look out long-term, are you concerned about the Valley?
    - JA: We will be reviewing the water budget slides with the AC next month in February. We wanted to check in with the TPR first, to confirm our modeling approach. If there is a gradual decline to groundwater of 100 AF, what can we do to resolve it? Can we remove invasive species? Can we implement other actions? This issue can be managed by the GSA. Each annual report will have a public meeting that will present monitoring results and how close we're getting to the AMTs at that time. There will also be 5-year updates of the GSP. If any of the wells trigger the AMTs, the Core Team will host a public meeting to talk about it. In other basins, they were below the MT and had to immediately implement actions. In SPV, we're one wet year away from being sustainable. With conscientious management, we'll be fine.
- AC Member (FK): How reliable is the predictive modeling of weather patterns and rainfall?
    - JA: We'll discuss in detail next month. We'll refine the discussion to address your questions at that time.
    - JA: Another thought on thresholds, we recognize that some AC members believe they are too low. We can implement a few PMAs to address issues. However, as suggested by Matt earlier, the Core Team will further discuss the AMTs. We want to get that right!

## Public Comments

Public comments provided in the "Chat" during the meeting are listed in the GoToMeeting Chat Log below. The following public comments were provided verbally by meeting participants:

- Elyse Levy, California Department of Fish & Wildlife – Will the biological study that was conducted be available for review? What is the basis for the adaptive management 24-month threshold for interconnected surface water? Will there be ground truthing of impacts to GDE's when the adaptive management threshold is almost met? Could there be an intermediate threshold to look at GDE's at 12 months if the levels indicate a decline?

## Next Steps

The next AC meeting is scheduled for Thursday, February 18, 2021 from 2:00 to 4:00 pm

Please send any comments to Karina Danek at the City of San Diego using her email address at kdanek@sandiego.gov.

The AC meeting ended at 4:02 pm.

## GoToMeeting Chat Log from AC Meeting

**Rikki (to Everyone):** 2:19 PM: Is there a table for the various things on the map on pg. 20

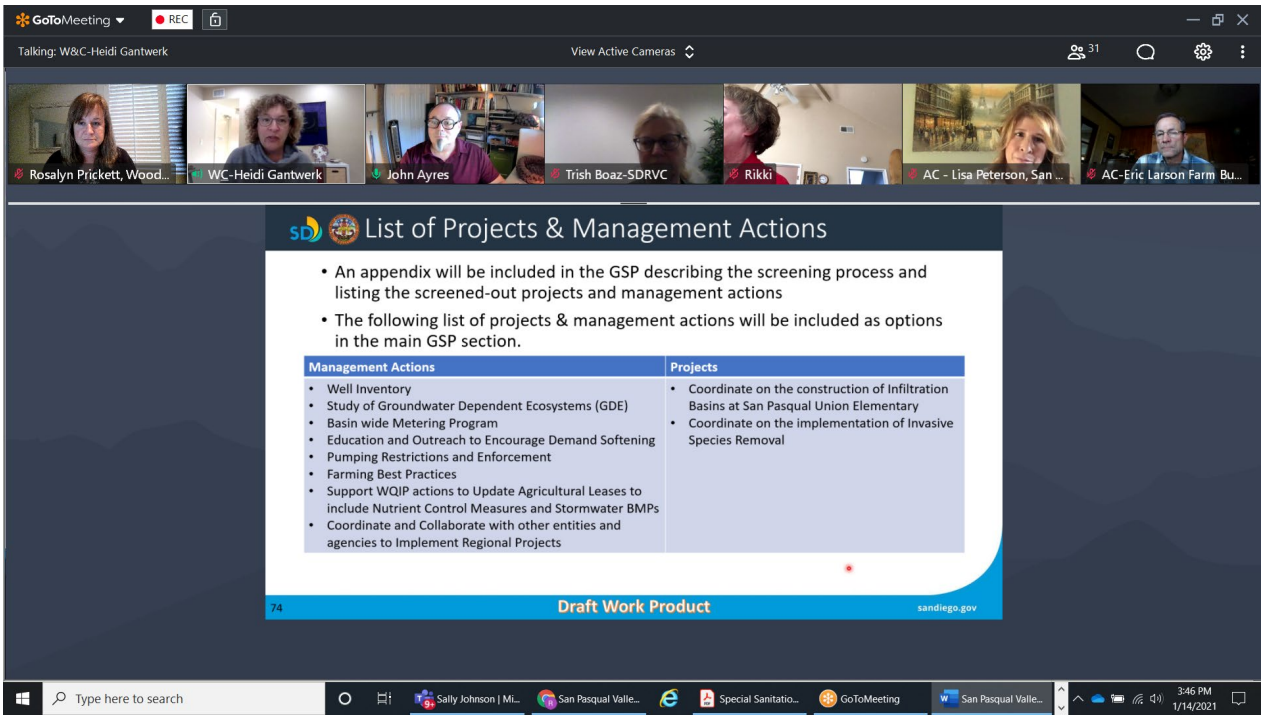
**Rosalyn Prickett, Woodard & Curran (to Everyone):** 2:20 PM: Project website: https://www.sandiegocounty.gov/content/sdc/pds/SGMA/san-pasqual-valley.html

**Trish Boaz-SDRVC (to Everyone):** 2:24 PM: Is there a predictive "sustainability" modeling tool?

**W&C-Heidi Gantwerk (to Everyone):** 3:37 PM: As a reminder, if you wish to speak during public comment, please place your name and organization into the chat.

**Elyse Levy CDFW (to Everyone):** 3:53 PM: Elyse Levy CDFW: Will the biological study that was conducted be avaiable for review? What is the basis for the adaptive management 24 month threshold for interconnected surface water? Will there be ground truthing of impacts to GDE's when the adaptive management threshold is almost met? Could there be an intermediate threshold to look at GDE's at 12 months if the levels indicate a decline?

## Images from AC Meeting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Talking: W&C-Heidi Gantwerk
View Active Cameras
Rosalyn Prickett, Wood...
WC-Heidi Gantwerk
John Ayres
Trish Boaz-SDRVC
Rikki
AC - Lisa Peterson, San ...
AC-Eric Larson Farm Bu...
List of Projects & Management Actions
An appendix will be included in the GSP describing the screening process and listing the screened-out projects and management actions
The following list of projects & management actions will be included as options in the main GSP section.
Management Actions
Well Inventory
Study of Groundwater Dependent Ecosystems (GDE)
Basin wide Metering Program
Education and Outreach to Encourage Demand Softening
Pumping Restrictions and Enforcement
Farming Best Practices
Support WQIP actions to Update Agricultural Leases to include Nutrient Control Measures and Stormwater BMPs
Coordinate and Collaborate with other entities and agencies to Implement Regional Projects
Projects
Coordinate on the construction of Infiltration Basins at San Pasqual Union Elementary
Coordinate on the implementation of Invasive Species Removal
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