Las Posas Valley Groundwater Basin
Technical Advisory Committee Special Meeting

Friday July 18, 2025, 2:00 PM

Via Zoom:
https://us02web.zoom.us/j/84168071218?pwd=Kv42H0XegH4TthbvJUgzTrzACgXM8b.1
Webinar ID: 841 6807 1218
Passcode: 150451

NOTICE OF MEETING

NOTICE IS HEREBY GIVEN that the Las Posas Basin Technical Advisory Committee (TAC) will hold a special meeting via Zoom at **2 PM on Friday July 18, 2025**.

AGENDA

A. Call to Order

B. Roll Call

C. Agenda Review

D. Public Comments

E. TAC Member Comments

F. Regular Agenda

1. Approve Minutes from previous meetings

The TAC will review and consider adoption of minutes meetings from previous meetings held on May 6, 2025 (regular meeting, draft minutes attached beginning on agenda page 3) and May 9, 2025 (special meeting, draft minutes attached starting at agenda page 8).

2. Discussion of Watermaster Response to TAC *Recommendation Report – Preferred Modeling Alternatives and Impacts to Schedule, Basin Optimization Yield Study*, dated May 9, 2025

The TAC will review and discuss the Watermaster Response Report presented to the Watermaster on June 25, 2025 and attached starting on agenda page 21.

3. Presentation from Watermaster Consultants (Dudek): Basin Optimization Yield Study Modeling Scenario Results

The TAC will receive a presentation from Dudek, the Watermaster's groundwater consultant, providing model scenario results for the simulations included in the Basin Optimization Yield. TAC members will have the opportunity to ask questions and request additional information regarding the model scenario results. TAC members will also consider preparation of a Recommendation Report providing consultation comments to the Watermaster regarding the Basin Optimization Yield model scenario results.

4. Update on Committee Consultation Review Schedule

The TAC will receive an update on the schedule for upcoming committee consultations from the Watermaster Representative. Known current and upcoming consultation are summarized in the table below:

Consultation Description	Expected Request Date	Expected Review Due Date
Presentation of Basin Optimization Yield Study Model Scenario Results by Dudek	7/18/25	TBD
Calleguas ASR Project Operations Plan	TBD	TBD

5. Schedule for Completing Committee Consultations and Related Recommendation Reports

The TAC will discuss the schedule for completing consultation requests from the Watermaster.

G. Items for Future Agenda

Potential items for future agenda will be considered by the TAC

H. Adjourn

Attachment 1

Minutes of the May 6, 2025 TAC Regular Meeting

Las Posas Valley Groundwater Basin
Technical Advisory Committee Regular Meeting

Meeting Minutes
for
May 6, 2025

A. Call to Order

The meeting was called to order by Chair Chad Taylor at 2:00 pm.

B. Roll Call

All voting TAC members were present (via Zoom):

- Vice Chair Tony Morgan - Present
- Chair Chad Taylor – Present
- Dr. Bob Abrams – Present

All non-voting TAC members were present (via Zoom):

- Bryan Bondy – Present
- Kim Loeb – Present

Chair Taylor reported a quorum with all three voting members of the Las Posas Valley Technical Advisory Committee (TAC) present.

C. Agenda Review

Chair Taylor indicated an agenda was published and notified on April 15, 2025 and he opened the meeting for comments on the agenda from TAC members or the public. No comments were presented.

D. Public Comments

Mr. Taylor asked for public comments on items not on the agenda; none were provided.

E. TAC Member Comments

Chair Taylor asked TAC members for comments on items not on the agenda and no comments were presented.

F. Regular Agenda

1. Approve the Minutes of the April 15, 2025 Regular Meeting

Mr. Taylor asked the TAC members for comments on the minutes of the April 15, 2025 regular TAC meeting and Mr. Bondy requested several edits to the draft minutes of the April 15, 2025 meeting, specifically:

- In Item F2, a two-sentence paragraph contains a question and answer presented in the wrong order; he asked that this be corrected.
- On page 3 or 4, the phrase “Mr. Bondy suggested data” should be revised to “TAC members suggested data.”
- The fourth paragraph is missing a period at the end and should be corrected.

- In the seventh paragraph, the phrase “Mr. Bondy indicated” should be revised to “compare with”

MOTION: Vice Chair Morgan moved to approve the April 15, 2025 TAC Meeting minutes
SECOND: Dr. Abrams seconded the motion
VOTE: Unanimously approved

2. Recommendation Report Review – Basin Optimization Yield Study Preferred Modeling Alternative and Impacts to Schedule

Mr. Taylor advanced to discussion of the Basin Optimization Yield Study Preferred Modeling Alternative and Impacts to Schedule Recommendation Report. He noted that the TAC discussed this consultation request in the previous meeting and comments from that discussion were incorporated into the draft Recommendation Report.

Mr. Morgan requested several edits to the draft Recommendation Report, specifically:

- In the introductory paragraph, the first line be revised to state that the report was “prepared” rather than another term.
- In the Background section, editing “owned” to “developed by” and adding that it “is maintained by United Water Conservation District.”
- On page 10 of the agenda package (page 2 of the report), in the line above the comments, add “TAC reviewed” for clarity.

Mr. Morgan also suggested the TAC consider a second recommendation reminding the Watermaster of previous comments on the limitations of using the Coastal Plane model described in the Las Posas Basin Groundwater Sustainability Plan Periodic Evaluation. Those comments focused on changes to how the boundary between the West and East Las Posas Management Areas (WLPMA and ELPMA, respectively) is represented in the Coastal Plane model and how that differs from the model used for the ELPMA. The previous comments from the TAC on this matter included recommendations that the Coastal Plane model not be used for assessing Basin Optimization Yield until the changes to the boundary conditions, comparison to hydrogeologic conceptualizations of presence and flow of groundwater, and effects on water budgets in both management areas was evaluated.

Mr. Taylor noted that the Watermaster previously described the existing model as the best available tool and expected documentation of changes to boundary conditions to be delivered in supplemental reports. Mr. Loeb responded and confirmed that to his knowledge, the report detailing boundary condition modifications had not been developed.

Mr. Morgan expressed concern that continuing the study without addressing known model limitations, especially without updated boundary conditions or recalibration, could invite stakeholder criticism.

Dr. Abrams raised the question of whether United Water Conservation District (UWCD) would permit the Watermaster or their consultants to modify the model, given the legal constraints on file access.

Mr. Bondy questioned whether modified files are under the same legal restrictions, and he also questioned whether the TAC would be able to review files from the model. He asked if input from the Watermaster’s legal counsel was necessary and emphasized that the TAC

review of model output could be limited if model output files cannot be shared with the TAC. Mr. Bondy clarified that the recommendation discussed did not include changing the model but rather asking for more information on how the model represents the hydrogeology at the boundary between the two management areas.

The TAC discussed the uncertainty associated with using a model for which documentation has not been provided that has a boundary condition which differs from the adjoining model and the common hydrogeologic conceptualization of that boundary. They also discussed the inconsistency in the UWCD model representation and measured groundwater elevation difference across the boundary between the two Las Posas Valley Basin (LPVB) management areas. A question of the calibration of the current UWCD model was also raised. TAC members Bondy, Morgan, and Abrams agreed that using a model without documentation which appears to include assumptions that differ from measured groundwater conditions.

Mr. Loeb added that the UWCD model proposed for use to simulate the BOYS scenarios were prepared as future forecasts and the Watermaster has not been provided with simulations representing historical groundwater conditions or calibration information.

Mr. Bondy suggested that relevant recommendations from the October 10, 2024 TAC Recommendation Report be re-iterated and addressed before BOYS scenario modelling.

Further discussion focused on the inconsistency of the current UWCD model representation of the simulated relationship between water levels in the WLPMA and ELPMA compared to the relationship of these conditions as represented by monitored water levels. Chair Taylor, Mr. Bondy, and other members examined model water budget tables from The GSP Periodic Evaluation and noted that flows were modeled from west to east—a result inconsistent with observed head gradients. The implication is that in simulations projects in which water would be introduced in the WLPMA more water would be simulated as lost across the boundary to the east, undermining the intended benefit of such projects. The TAC agreed this was a fundamental issue that needed resolution before proceeding with optimization modeling. These TAC members agreed that the Recommendation Report on this topic should raise these issues.

Mr. Bondy noted the Recommendation Report should also clarify what criteria will be used to assess the projects in the model scenarios. He emphasized separating the model suitability discussion from the question of criteria and suggested also adding a request to refine what data the TAC can request as part of their consultation of model simulated project scenarios.

The TAC agreed on a special meeting on May 9, 2025 to finalize and approve revised recommendations, incorporating concerns about model calibration, boundary condition assumptions, and clarification on the criteria that will be used to define operational yield sustainable yield.

No public comments were received.

3. Update on Committee Consultation Review Schedule

Mr. Taylor asked Mr. Loeb for an update on upcoming committee consultation requests. The committee briefly reviewed the two anticipated consultations: (1) a presentation of Basin Optimization Yield Study model scenario results by Dudek, and (2) the Calleguas ASR Project Operations Plan. Both items remained unscheduled, with target request and review dates still to be determined.

Ms. Loeb noted uncertainty regarding the timeframe for initiating the Calleguas ASR consultations, and Mr. Bondy asked whether the Watermaster Board must approve the participation of Robert Hampson and Dr. Abrams. Mr. Hampson was present and offered a public comment clarifying that the Board already approved his involvement, but Watermaster budget approval would still be necessary to fund the work. Dr. Abrams stated that he would reach out to begin discussions on the status of approval. Mr. Loeb emphasized that neither consultation request was imminent and that substantial work remained before consultations would be ready for review.

No public comments were received.

4. Schedule for Completing Committee Consultations and Related Recommendation Reports

The committee agreed to hold a Special TAC meeting on Friday, May 9, 2025, at 1:00 pm. Mr. Taylor noted that the pending consultation items remained outstanding and reminded attendees that TAC members had expressed a preference for not holding regular meetings unnecessarily. Accordingly, future meetings will be canceled if no discussion topics arise.

No public comments were received.

G. Items for Future Agenda

Mr. Taylor asked for recommendations for items to consider including in future agendas from the TAC and public; none were identified.

H. Adjourn

MOTION: Mr. Taylor moved to adjourn the meeting at 3:12 pm
SECOND: Dr. Abrams seconded the motion
VOTE: Unanimously approved

Attachment 2

Minutes of the May 9, 2025 TAC Special Meeting

Las Posas Valley Groundwater Basin
Technical Advisory Committee Special Meeting

Meeting Minutes
for
May 9, 2025

A. Call to Order

The meeting was called to order by Chair Chad Taylor at 1:00 pm.

B. Roll Call

All voting TAC members were present (via Zoom):

- Vice Chair Tony Morgan - Present
- Chair Chad Taylor – Present
- Dr. Bob Abrams – Present

All non-voting TAC members were present (via Zoom):

- Bryan Bondy – Present
- Kim Loeb – Present

Chair Taylor reported a quorum with all three voting members of the Las Posas Valley Technical Advisory Committee (TAC) present.

C. Agenda Review

Chair Taylor indicated an agenda was published and notified and he opened the meeting for comments on the agenda from TAC members or the public. No comments were presented.

D. Public Comments

Mr. Taylor asked for public comments on items not on the agenda; none were made.

E. TAC Member Comments

Chair Taylor asked TAC members for comments on items not on the agenda.

Mr. Bondy raised a preliminary point regarding basin yield. He suggested that the TAC consider the Epworth Gravels area as a potentially distinct sub-area due to its lack of hydrologic connection with the Fox Canyon area and its relatively stable groundwater levels. Mr. Bondy noted that although pumping in that area is limited, it appears sustainable and could contribute to basin optimization efforts. Chair Taylor acknowledged the comment and made a note for further discussion in the future.

F. Regular Agenda

1. Revised Recommendation Report Review – Basin Optimization Yield Study Preferred Modeling Alternative and Impacts to Schedule

Chair Taylor introduced the main item of the meeting, review and discussion of the revised Recommendation Report on the Basin Optimization Yield Study's preferred modeling alternative. He summarized the report's development, noting that initial comments were discussed on April 15, with the original draft reviewed at the May 6 TAC meeting. Revisions were subsequently made and circulated on Thursday, May 8. Two versions were included in

the agenda, one with tracked changes showing edits since the initial draft and a second without edits.

Chair Taylor invited TAC members to comment on the revised draft.

Dr. Abrams expressed appreciation for the edits and noted that the revised report accurately reflected the committee's prior discussions. He suggested two minor editorial changes:

> On page 4 of the memo, under Section 1.2 ("Technical Rationale for Recommendation"), he proposed modifying a sentence to clarify that groundwater flow "would be" from east to west, rather than stating that it definitively "is," to reflect the uncertainty of the flow.
>
> On page 6, prior to Section 2.1, he recommended replacing the phrase "undesirable conditions" with the more precise "undesirable results," as per the terminology used in regulatory materials.

Mr. Bondy also recommended adding a contextual data point to Section 1 of the memo. He noted that the GSP evaluation model simulates an average annual flow of 832 acre-feet per year from the West Las Posas Management Area to the East Las Posas Management Area during the period 2016 to 2022. Including this figure would help underscore the magnitude of the flow discrepancy and its potential implications. Chair Taylor agreed and proposed adding this information in a new sentence at the end of the first paragraph of Section 1 and referencing it again in the last paragraph to strengthen the rationale for concern.

Dr. Abrams identified another instance where a statement regarding groundwater flow direction should be modified. On the top of page 4, he recommended changing "flow occurs" to "flow would occur" to better reflect the tentative nature of the conclusions.

Mr. Loeb proposed a revision to Section 3.1. He suggested that the phrasing "whether the following types of information can be provided" be changed to avoid limiting the scope of potential future data requests. Chair Taylor agreed to revise the sentence to include the phrase "including but not limited to," which would preserve flexibility in future analyses.

Chair Taylor made these changes to the document during the meeting.

Following these comments and suggested edits, Mr. Taylor invited members of the public to comment on the revised Recommendation Report. No members of the public indicated a desire to speak.

Mr. Taylor called for a motion to approve the revised Recommendation Report, as amended through the TAC's discussion, and to authorize the administrator to submit it to the Watermaster. A motion was made and seconded. All voting members responded in the affirmative, and the motion carried unanimously.

> **MOTION:** Dr. Abrams moved to approve the revised Recommendation Report– Basin Optimization Yield Study Preferred Modeling Alternative and Impacts to Schedule and authorize the TAC Administrator to submit the report to the Watermaster
> **SECOND:** Mr. Morgan seconded the motion
> **VOTE:** Unanimously approved

G. Adjourn

Chair Taylor thanked everyone for their participation and called for a motion to adjourn the meeting. A motion to adjourn was made and seconded. All members voted in favor, and the meeting was adjourned.

MOTION: Mr. Taylor moved to adjourn the meeting at 1:37 pm
SECOND: Dr. Abrams seconded the motion
VOTE: Unanimously approved\

Attachment 1

Final Recommendation Report – Preferred Modeling Alternatives and Impacts to Schedule, Basin Optimization Yield Study

LAS POSAS VALLEY TECHNICAL ADVISORY COMMITTEE

May 9, 2025

REVISED RECOMMENDATION REPORT

To: Las Posas Valley Watermaster

From: Las Posas Valley Watermaster Technical Advisory Committee, prepared by Chad Taylor, Administrator and Chair

Re: Recommendation Report – Preferred Modeling Alternatives and Impacts to Schedule, Basin Optimization Yield Study

The Las Posas Valley Watermaster Technical Advisory Committee (TAC) provides this Recommendation Report regarding the Basin Optimization Yield Study Preferred Modeling Alternatives and Impacts to Schedule. This Recommendation Report was prepared in response to the Las Posas Valley Basin Watermaster (Watermaster) committee consultation request transmitted to the TAC on April 3, 2025.

BACKGROUND

The Watermaster requested TAC consultation on a preferred alternative method to assess basin yield optimization in the BOYS. The Las Posas Valley Adjudication judgment requires preparation of a Basin Optimization Yield Study (BOYS) to evaluate Basin Optimization Yield, set the Operating Yield, and identify the need for and quantification of the rate of pumping rampdown to achieve sustainable groundwater management by 2040. The Watermaster originally planned to use the two groundwater models to simulate conditions related to optimization in the east and west management areas of the Las Posas Valley Basin (LPVB). However, the model for the West Las Posas Management Area (WLPMA) was developed and is maintained by United Water Conservation District (UWCD). The Watermaster attempted to develop an agreement with UWCD to facilitate UWCD's services in applying their model to simulate yield optimization scenarios. The Watermaster has reported that an agreement for this purpose could not be reached and alternatives to the original approach must be implemented.

The Watermaster informed the TAC in a December 23, 2024 memorandum that another technical approach may be required. That memorandum also identified three potential alternatives, which were:

(i) Estimating the Basin Optimization Yield and Rampdown using Groundwater Sustainability Plan (GSP) periodic evaluation model simulations

(ii) Estimating the Basin Optimization Yield and Rampdown using historical groundwater elevation measurements and extraction reports
(iii) Developing a new numerical groundwater flow model for the WLPMA.

In early 2025, the Watermaster removed the new numerical model development alternative (iii above) from consideration due to the associated schedule impacts. The Watermaster and its consultant, Dudek, have also identified an additional alternative, described as estimating the Basin Optimization Yield using the model provided by UWCD as part of the LPVB GSP Periodic Evaluation completed in 2025.

The Watermaster Board of Directors asked Dudek to review and select its preferred modeling alternative and submit its analysis to the LPV Policy Advisory Committee (PAC) and TAC for consultation. Dudek analyzed the modeling alternatives and their respective impacts to the BOYS schedule and identified the recently developed alternative that would use the model scenario provided by UWCD as part of the Periodic Evaluation as the preferred alternative. Dudek has estimated inclusion of this alternative would result in the BOYS being completed in April 2026 for adoption at the May 2026 Watermaster Board of Directors meeting. Dudek presented the alternative BOYS approaches and their preferred alternative in a letter titled *Basin Optimization Yield Study Alternative Approach, Scope, and Schedule Impacts* dated March 31, 2025.

The Watermaster requested the TAC specifically consider and provide consultation on the following topics:

1. Should the Watermaster use the UWCD Periodic Evaluation model files to run scenarios for preparation of the Basin Optimization Yield Study rather than estimating the Basin Optimization Yield and Rampdown (i) using GSP periodic evaluation model simulations or (ii) using historical groundwater elevation measurements and extraction reports?
2. Is the schedule to implement the alternative in (1) and complete the Basin Optimization Yield Study in April 2026 for adoption at the May 2026 Watermaster Board of Directors meeting, approximately four months before the start of Water Year 2026 (October 1, 2026 through September 30, 2027), a reasonable alternative for timely completion of the Basin Optimization Yield Study?

The TAC considered the BOYS preferred modeling alternative and schedule impacts in a regular TAC meeting on April 15, 2025 and again on May 6, 2025. TAC comments on the BOYS preferred modeling alternative and schedule were discussed in those meetings and are summarized in this Recommendation Report.

The TAC reviewed this Recommendation Report and voted to approve it in a special meeting on May 9, 2025.

COMMENTS

The TAC would also like to express gratitude to the Watermaster for working diligently to develop an agreement with UWCD to access and use the current version of the Coastal Plain groundwater model and to Watermaster staff and Dudek for identifying this alternative. The proposed approach preserves the original technical methodology for basin optimization and maintains consistency with the GSP and other analyses that also employed the two models representing the LPVB.

However, the TAC has concerns that the model scenario provided by UWCD as part of the Periodic Evaluation does not accurately represent the conceptual model of the boundary between the WLPMA and East Las Posas Management Area (ELPMA). The TAC is also concerned that criteria for evaluating the project and/or alternative model scenarios have not been described for review by the TAC. The TAC views resolution of the recommendations presented below as critical requirements that should be addressed before BOYS simulations are undertaken.

TAC RECOMMENDATIONS

1. RECOMMENDATION 1: CONSIDER ADDRESSING THE SOMIS FAULT REPRESENTATION IN THE COASTAL PLAIN MODEL BEFORE PERFORMING BASIN OPTIMIZATION YIELD MODEL SIMULATIONS

As described in TAC comments and recommendations on the Draft First Periodic Evaluation, Groundwater Sustainability Plan for the Las Posas Valley Basin (Draft GSP Evaluation) (*TAC Consultation Recommendation Report, Draft First Periodic Evaluation, Groundwater Sustainability Plan for the Las Posas Valley Basin*, dated October 10, 2024), modifications to the version of the Coastal Plain model used in the GSP Evaluation to simulate conditions in the WLPMA included a significant change to the boundary condition used to represent the Somis Fault. This fault, which separates the WLPMA from the ELPMA, was changed from a no-flow boundary condition to a partial general head boundary condition. This change means the Coastal Plain Model used for the Draft GSP Evaluation and proposed for use in the BOYS optimization simulations allows flow from the WLPMA to the ELPMA. The average annual flow rate from the WLPMA to the ELPMA from 2016 to 2022 presented in the GSP Evaluation was 832 acre feet per year, which represents slightly less than 17 percent of the change in groundwater storage in the WLPMA during the period.

As the TAC has noted in our October 10, 2024 Recommendation Report, the Draft GSP Evaluation indicates that the limited groundwater elevation information in this area of the LPVB implies there is little groundwater flow across the Somis Fault. In addition, local groundwater gradients suggest that if flow occurs it would be from ELPMA to WLPMA. In response to this comment, the Watermaster indicated the TAC recommendations were forwarded to UWCD and that:

> "UWCD is currently working on the supplemental documentation to cover the changes made since the GSP. As of the time this response report was prepared, UWCD had not yet provided a date when the supplemental documentation will be made available."

Unfortunately, such supplemental documentation is still not available.

The TAC further recommended in October 2024 that the Watermaster

> "Advance the coordination with UWCD and the TAC to develop agreement on the representation of this boundary in the two models. The coordination of this boundary between the two models should not wait until after the GSP is amended. The analyses in the amended GSP should be consistent with the Basin Optimization Yield Study."

While use of the GSP periodic evaluation model simulations as suggested in the preferred alternative for yield optimization in the WLPMA is consistent with the GSP periodic evaluation, the TAC has significant concerns over the representation of the Somis Fault in that model. The TAC is specifically concerned that the apparent conflict between the groundwater flow direction and magnitude of average annual flow in the GSP periodic evaluation model simulations and the observed water levels and groundwater gradients in this area indicate the model is an inappropriate tool for simulating future conditions with changed management and the addition of projects designed to increase groundwater storage and elevations in the WLPMA.

1.1 Recommendations:

The TAC recommends that Watermaster and their consultant Dudek evaluate and report back to the TAC if the GSP periodic evaluation model simulation files currently in their possession could be used to assess and quantify the potential impacts to available water supply in the WLPMA given the apparent groundwater flow direction discrepancy between the Coastal Plain model and observed local groundwater conditions around the Somis Fault boundary between the WLPMA and ELPMA.

1.2 Technical Rationale for Recommendation:

As stated above, the TAC is concerned that groundwater flow direction in the GSP periodic evaluation model simulations is from the WLPMA to the ELPMA and the observed water levels and groundwater gradients in this area indicate the actual flow, if it occurs, would be from the ELPMA to the WLMPA. Simulating future conditions with projects in the WLPMA intended to increase groundwater elevations and storage in that management area would likely simulate increased flow across the Somis Fault in the model. This would mean that the simulated conditions would show less benefit to water levels and storage in the WLPMA than would be expected in reality. Given the conceptual model and local observations relating to the effect of the Somis Fault on groundwater flow it is likely that increased groundwater elevations and storage in the WLPMA would have little effect on flow between the WLPMA and ELPMA. In fact, if the Somis Fault does present a barrier to horizontal flow

of groundwater it would cause groundwater to mound higher on the western side of the Fault in response to WLPMA projects that increase groundwater elevations and storage.

1.3 Summary of Facts in Support of Recommendation:

- The GSP periodic evaluation model simulations appear to misrepresent the direction of groundwater flow across the Somis Fault at the boundary between the WLPMA and ELPMA.
- Using a model that misrepresents boundary conditions for predictive simulations, optimization of yield, and reduction in pumping allocations is likely to result in significant errors that risk either over or underestimating the effectiveness of projects and changes in groundwater pumping, especially close to the boundary in question.

2. RECOMMENDATION 2: CLARIFY WHAT CRITERIA WILL BE USED TO ASSESS UNDESIRABLE RESULTS IN THE WLPMA WHEN COMPARING BASIN OPTIMIZATION YIELD STUDY PROJECT AND ALTERNATIVE PUMPING SCENARIOS TO THE BASELINE SCENARIO

In the October 10, 2024 Recommendation Report on the Draft GSP Periodic Evaluation, the TAC also commented on the relationship between the Oxnard Subbasin and sustainability in the WLPMA. In that comment, the TAC expressed concern that the methodology used to assess the effects of pumping in the WLPMA on seawater intrusion in the Oxnard Subbasin did not effectively isolate the effects of changes in pumping in WLPMA on conditions in the Oxnard Subbasin. As pointed out in our October 10, 2024 Recommendation Report:

> "The Draft GSP Evaluation presented model scenarios that included simultaneous changes in pumping volumes in the WLPMA, both Oxnard aquifers, and the Pleasant Valley Basin. The results of these simulations were then compared to a baseline scenario and the changes to simulated seawater intrusion in the Oxnard Subbasin were used to evaluate effects on sustainable yield in the WLPMA. However, the changes to pumping volumes in the scenarios appeared to be relatively arbitrary and the TAC is concerned that the resulting sustainable yield estimates for the WLPMA are similarly arbitrary."

The TAC recommended development of model scenarios designed to limit changes between compared simulations to single variables to isolate the impacts of those variables on sustainability. To the TAC's knowledge isolated variable model simulations for this purpose have not been completed to date.

Given this uncertainty, the TAC recommends the Watermaster and Dudek clarify what criteria will be used to assess the presence of undesirable results in the WLPMA when comparing the projects and alternative pumping scenarios to the baseline scenario.

2.1 Recommendations:

Clarify what criteria will be used to assess undesirable results conditions in the WLPMA when comparing the projects and alternative pumping scenarios to the baseline scenario. The TAC is specifically interested in understanding if simulated effects on seawater intrusion conditions in the Oxnard Subbasin will be used as a component of the criteria for assessing undesirable results, or if comparisons of simulated conditions within the WLPMA will be the sole criteria.

2.2 Technical Rationale for Recommendation:

The presentation of the preferred alternative for basin optimization yield estimation indicated:

> "Groundwater budgets, the change in groundwater storage, and groundwater levels at key wells simulated in the projects scenario would be compared to those simulated in the baseline scenario in order to provide a quantitative estimate of Basin Optimization Project benefits."

And

> "If the Basin Optimization Projects do not avoid undesirable results in the WLPMA, up to three additional model scenarios would be evaluated to define a groundwater production rate that avoids undesirable results"

While these statements appear to indicate that the assessment of undesirable results will be limited to conditions in the WLPMA the specific metrics that will be used for assessing undesirable results have not been presented.

2.3 Summary of Facts in Support of Recommendation:

- Previous model scenarios used to estimate available yield in the WLPMA have used simulated seawater intrusion conditions in the Oxnard Subbasin as the metric for assessment of undesirable results and these simulations combined variables making it impossible to evaluate the effects of changes in management of the WLPMA in isolation.
- The presentation of the proposed approach to estimating basin optimization yield in the WLPMA to date has not included details of the proposed methodology for assessing undesirable results.

3. RECOMMENDATION 3: PREEMPTIVELY CONSIDER WHAT INFORMATION FROM THE BASIN OPTIMIZATION MODEL SCENARIOS CAN BE SHARED WITH THE TAC AND OTHER INTERESTED PARTIES

The Watermaster informed the TAC that some information from the model that they and Dudek plan to use for the basin optimization assessments of the West Las Posas Management Area (WLPMA) are subject to a protective order in the Oxnard Subbasin and Pleasant Valley Subbasin (OPV) Adjudication. Specifically:

> Some of the model files that Watermaster will use to prepare the LPV basin optimization yield study (specifically in the West Las Posas Management Area) include files received from United Water Conservation District. These files and the information embedded in them may be subject to a protective order in the OPV Adjudication. Requests for access to or disclosure of those files will be reviewed against that protective order by FCGMA [Fox Canyon Groundwater Management Agency] counsel on a case-by-case basis.

In reviewing the scope of work for the BOYS, the TAC requested additional time and consultation to allow opportunities to receive and review information from the optimization model scenarios. The uncertainty regarding the TAC's ability to review information from the WLPMA optimization modelling concerns the TAC. As a means of avoiding this uncertainty and delays associated with legal review of requests for model information, the TAC proposes to provide test case requests for types of information for Watermaster counsel to review before the optimization modeling of the WLPMA is complete.

3.1 Recommendations:

The TAC specifically recommends that Watermaster staff and legal counsel consider whether information including but not limited to those listed below can be provided from the Coastal Plain model simulations planned for assessing basin optimization yield from the WLPMA.

- Time series datasets showing comparison of model inputs representing simulation of project and alternative pumping scenarios to the baseline scenario.
- Time series of simulated head data at key wells and other important locations for baseline, project, and alternative pumping scenarios.
- Total and zonal water budgets for the entire model area, portions of the model area, boundaries at the edges of the model, and boundaries between specific portions of the model for the baseline, projects, and alternative pumping scenarios.
- Total and zonal water budgets for the WLPMA portion of the model area, zones within the WLPMA portion of the model area, boundaries at the edges of the WLPMA within the model, and boundaries between specific portions of the WLPMA model for the baseline, projects, and alternative pumping scenarios.

3.2 Technical Rationale for Recommendation:

The schedule for completion of the BOYS does not allow for delays and the TAC may require specific technical information from the model scenario simulations planned and completed for testing optimal yield from the WLPMA. Given that some of the information within the Coastal Plain model that includes the WLPMA may be protected under the OPV Adjudication, it is appropriate for Watermaster legal counsel to consider what specific information can and cannot be shared with the TAC before the request for committee consultation is sent to the TAC.

3.3 Summary of Facts in Support of Recommendation:

- The TAC is the technical representative of the Watermaster providing expertise in evaluation of technical and scientific assessments relating to the LPVB.

- Review of comparative groundwater management scenarios simulated using numerical groundwater models typically includes detailed evaluation of model inputs, results, outputs, and statistics.
- In order to provide appropriate technical review and recommendations to the Watermaster, the TAC should know what information it can expect to have access to with as much advanced notice as possible.

TALLY OF COMMITTEE MEMBER VOTES

The TAC voted to approve the content of this Recommendation Report and authorize the TAC Administrator to submit it to the Watermaster in a meeting held May 9, 2025. The vote was unanimous, as shown below.

	Vote			
TAC Member	**Yes**	**No**	**Abstain**	**Absent**
Chad Taylor, Chair	X			
Tony Morgan, East LPV Representative	X			
Bob Abrams, West LPV Representative	X			

REPORT OF BASES FOR MAJORITY AND MINORITY COMMITTEE MEMBER POSITIONS

The TAC vote to present the recommendations above to the Watermaster was unanimous, as indicated above. The bases for the unanimous positions are described for each recommendation above. No minority positions were expressed by voting or non-voting TAC members.

Attachment 3

Watermaster Response Report to Preferred Modeling Alternatives and Impacts to Schedule, Basin Optimization Yield Study

DRAFT LAS POSAS VALLEY WATERMASTER RESPONSE REPORT

Date: June 9, 2025

To: Las Posas Valley Watermaster Board of Directors

From: Kudzai Farai Kaseke, Assistant Groundwater Manager (FCGMA)

Re: Response Report to TAC Consultation Recommendation Report, BOYS Preferred Modeling Alternative and Impacts to Schedule

In a March 31, 2025, memo, the Las Posas Valley Watermaster (Watermaster) consultant outlined three potential approaches to calculating the Basin Optimization Yield (BOY) and described the anticipated schedule impacts for each approach. Of the three approaches outlined in the March 31 memo, Watermaster's consultant recommended calculation of the BOY using the United Water Conservation District (UWCD) model files developed for the Periodic Evaluation of the Groundwater Sustainability Plan for the Las Posas Valley Basin (Periodic Evaluation). Under the schedule proposed in the memo, the development of the Draft BOY Study is anticipated to be completed by December 2025 and the final BOY Study is anticipated to be completed by May 2026.

On April 3, 2025, Watermaster requested consultation from the Las Posas Valley Policy Advisory Committee (PAC) on two topics:

1) Should the Watermaster use the UWCD Periodic Evaluation model files to run scenarios for preparation of the Basin Optimization Yield Study rather than estimating the Basin Optimization Yield and Rampdown (i) using GSP periodic evaluation model simulations or (ii) using historical groundwater elevation measurements and extraction reports?
2) Is the schedule to implement the alternative in (1) and complete the Basin Optimization Yield Study in April 2026 for adoption at the May 2026 Watermaster Board of Directors meeting, approximately four months before the start of Water Year 2026 (October 1, 2026 through September 30, 2027), a reasonable alternative for timely completion of the Basin Optimization Yield Study?

The TAC discussed and developed its recommendation report at April 15, May 6, and May 9, 2025, meetings. TAC's May 9, 2025, recommendation report included three recommendations. Each of these recommendations is listed below followed by Watermaster's response.

Recommendation 1: CONSIDER ADDRESSING THE SOMIS FAULT REPRESENTATION IN THE COASTAL PLAIN MODEL BEFORE PERFORMING BASIN OPTIMIZATION YIELD MODEL SIMULATIONS

As described in TAC comments and recommendations on the Draft First Periodic Evaluation, Groundwater Sustainability Plan for the Las Posas Valley Basin (Draft GSP Evaluation) (*TAC Consultation Recommendation Report, Draft First Periodic Evaluation, Groundwater Sustainability Plan for the Las Posas Valley Basin*, dated October 10, 2024), modifications to the version of the Coastal Plain model used in the GSP Evaluation to simulate conditions in the WLPMA included a significant change to the boundary condition used to represent the Somis Fault. This fault, which separates the WLPMA from the ELPMA, was changed from a no-flow boundary condition to a partial general head boundary condition. This change means the Coastal Plain Model used for the Draft GSP Evaluation and proposed for use in the BOYS optimization simulations allows flow from the WLPMA to the ELPMA. The average annual flow rate from the WLPMA to the ELPMA from 2016 to 2022 presented in the GSP Evaluation was 832 acre-feet per year, which represents slightly less than 17 percent of the change in groundwater storage in the WLPMA during the period.

As the TAC has noted in our October 10, 2024 Recommendation Report, the Draft GSP Evaluation indicates that the limited groundwater elevation information in this area of the LPVB implies there is little groundwater flow across the Somis Fault. In addition, local groundwater gradients suggest that if flow occurs it would be from ELPMA to WLPMA. In response to this comment, the Watermaster indicated the TAC recommendations were forwarded to UWCD and that:

> "UWCD is currently working on the supplemental documentation to cover the changes made since the GSP. As of the time this response report was prepared, UWCD had not yet provided a date when the supplemental documentation will be made available."

Unfortunately, such supplemental documentation is still not available.

The TAC further recommended in October 2024 that the Watermaster

> "Advance the coordination with UWCD and the TAC to develop agreement on the representation of this boundary in the two models. The coordination of this boundary between the two models should not wait until after the GSP is amended. The analyses in the amended GSP should be consistent with the Basin Optimization Yield Study."

While use of the GSP periodic evaluation model simulations as suggested in the preferred alternative for yield optimization in the WLPMA is consistent with the GSP periodic evaluation, the TAC has significant concerns over the representation of the Somis Fault in

that model. The TAC is specifically concerned that the apparent conflict between the groundwater flow direction and magnitude of average annual flow in the GSP periodic evaluation model simulations and the observed water levels and groundwater gradients in this area indicate the model is an inappropriate tool for simulating future conditions with changed management and the addition of projects designed to increase groundwater storage and elevations in the WLPMA.

1.1 Recommendations:
The TAC recommends that Watermaster and their consultant Dudek evaluate and report back to the TAC if the GSP periodic evaluation model simulation files currently in their possession could be used to assess and quantify the potential impacts to available water supply in the WLPMA given the apparent groundwater flow direction discrepancy between the Coastal Plain model and observed local groundwater conditions around the Somis Fault boundary between the WLPMA and ELPMA.

Response to Recommendation 1:
Compliance with SGMA and the need to implement management actions that may impact water supply will be determined by measured groundwater elevations at key wells in the Las Posas Valley Basin. As discussed in the GSP, measured groundwater elevations that remain above the minimum threshold groundwater elevations defined at key wells in the eastern WLPMA are sufficient to avoid undesirable results in this portion of the WLPMA. If groundwater elevations fall below the minimum threshold groundwater elevations, additional management actions, including the potential for demand reduction, may be required. Consistent with historical groundwater measurements, both the Groundwater Sustainability Plan (GSP) and the Periodic Evaluation modeling efforts found that implementation of in-lieu surface water delivery projects in the eastern WLPMA is likely sufficient to avoid undesirable results.

The primary difference between the Project model scenarios in the GSP and the Periodic Evaluation is the change in the model boundary condition in the eastern WLPMA. In order to evaluate the potential impact of the model boundary change on water supplies and the potential need to implement additional management actions in the WLPMA, Watermaster compared the groundwater elevation responses simulated in the GSP to those simulated in the Periodic Evaluation.

Simulated groundwater levels for the GSP and Periodic Evaluation Projects scenarios at Well 02N20W06R01, a key well adjacent to the Somis Fault, are indicative of the influence of the model boundary change on the potential simulated influence of projects in the WLPMA. The two Projects scenarios simulated similar reductions in groundwater production in the WLPMA. In both Projects scenarios, groundwater levels rose above the minimum threshold groundwater elevation prior to 2040 and remained above the minimum threshold groundwater elevation for the remainder of the GSP implementation horizon. Watermaster

notes that groundwater elevations at well 02N20W06R01simulated for the Periodic Evaluation Projects Scenario were consistently lower than simulated groundwater elevations at the same well for the GSP Projects Scenario. This difference indicates that simulated groundwater level recoveries are impacted by the modification to the model boundary conditions, but it does not necessarily indicate that the groundwater elevations simulated for the GSP are more accurate than those simulated for the Periodic Evaluation.

Watermaster also compared the simulated flow across the eastern WLPMA model boundary between the Periodic Evaluation Baseline and Projects model scenarios to better understand the magnitude of change in the simulated flow that would result from Project implementation in the model. As expected, the average annual flow leaving the model boundary to the east increased between the Baseline and Projects scenarios in the Periodic Evaluation. The average annual flow leaving the model domain on the eastern boundary of the WLPMA over the 47-year model period, was 885 AFY in the Baseline simulation that incorporated the 2070 DWR climate factors. In the Projects scenario, the average annual flow across the eastern boundary of the WLPMA increased to 1,920 AFY over the 47-year model period. This increase in flow occurred in response to rising groundwater elevations that resulted from: (1) the simulated delivery of surface water to Ventura County Waterworks District 1, in the eastern portion of the WLPMA in lieu of groundwater extraction, and (2) a simulated reduction in groundwater demands for Zone Mutual Water District. The average annual simulated reduction in groundwater production between the Periodic Evaluation Baseline and Projects scenarios is 1,983 AFY.

Watermaster agrees with TAC that this simulated flow is not consistent with the hydrogeologic conceptual model, but notes that groundwater management decisions will be based on observed water levels. Because the Periodic Evaluation model simulates groundwater elevations in the eastern portion of the WLPMA that rise above the minimum threshold prior to 2040 and remain above the minimum threshold for the duration of the model scenario, use of the UWCD model files developed for the Periodic Evaluation remains the best available option to evaluate the BOY and complete this first BOY study prior to the beginning of the 2027 water year (October 1 2026 – September 30, 2027).

Recommendation 2: CLARIFY WHAT CRITERIA WILL BE USED TO ASSESS UNDESIRABLE RESULTS IN THE WLPMA WHEN COMPARING BASIN OPTIMIZATION YIELD STUDY PROJECT AND ALTERNATIVE PUMPING SCENARIOS TO THE BASELINE SCENARIO

In the October 10, 2024 Recommendation Report on the Draft GSP Periodic Evaluation, the TAC also commented on the relationship between the Oxnard Subbasin and sustainability in the WLPMA. In that comment, the TAC expressed concern that the methodology used to assess the effects of pumping in the WLPMA on seawater intrusion in the Oxnard Subbasin did not effectively isolate the effects of changes in pumping in WLPMA on conditions in the Oxnard Subbasin. As pointed out in our October 10, 2024 Recommendation Report:

> "The Draft GSP Evaluation presented model scenarios that included simultaneous changes in pumping volumes in the WLPMA, both Oxnard aquifers, and the Pleasant Valley Basin. The results of these simulations were then compared to a baseline scenario and the changes to simulated seawater intrusion in the Oxnard Subbasin were used to evaluate effects on sustainable yield in the WLPMA. However, the changes to pumping volumes in the scenarios appeared to be relatively arbitrary and the TAC is concerned that the resulting sustainable yield estimates for the WLPMA are similarly arbitrary."

The TAC recommended development of model scenarios designed to limit changes between compared simulations to single variables to isolate the impacts of those variables on sustainability. To the TAC's knowledge isolated variable model simulations for this purpose have not been completed to date.

Given this uncertainty, the TAC recommends the Watermaster and Dudek clarify what criteria will be used to assess the presence of undesirable results in the WLPMA when comparing the projects and alternative pumping scenarios to the baseline scenario.

2.1 Recommendations:

Clarify what criteria will be used to assess undesirable results conditions in the WLPMA when comparing the projects and alternative pumping scenarios to the baseline scenario. The TAC is specifically interested in understanding if simulated effects on seawater intrusion conditions in the Oxnard Subbasin will be used as a component of the criteria for assessing undesirable results, or if comparisons of simulated conditions within the WLPMA will be the sole criteria.

Response to Recommendation 2:
Consistent with the GSP, Watermaster will use groundwater elevations in the WLPMA to assess whether the WLPMA is meeting the sustainability goal. The minimum threshold and measurable objective groundwater elevations defined in the GSP were found to represent elevations that would not impair the ability of the Oxnard Subbasin to eliminate net seawater intrusion over the SGMA planning and implementation horizon. The simulated groundwater elevations in the model scenarios developed for the Periodic Evaluation were above the minimum threshold groundwater elevations at all the key wells in the WLPMA after 2040. Furthermore, at the majority of the key wells in the WLPMA, the simulated groundwater elevations were above the measurable objectives after 2040. This is the same model that will be used to evaluate groundwater conditions for the BOY Study.

Recommendation 3: PREEMPTIVELY CONSIDER WHAT INFORMATION FROM THE BASIN OPTIMIZATION MODEL SCENARIOS CAN BE SHARED WITH THE TAC AND OTHER INTERESTED PARTIES

The Watermaster informed the TAC that some information from the model that they and Dudek plan to use for the basin optimization assessments of the West Las Posas Management Area (WLPMA) are subject to a protective order in the Oxnard Subbasin and Pleasant Valley Subbasin (OPV) Adjudication. Specifically:

> Some of the model files that Watermaster will use to prepare the LPV basin optimization yield study (specifically in the West Las Posas Management Area) includes files received from United Water Conservation District. These files and the information embedded in them may be subject to a protective order in the OPV Adjudication. Requests for access to or disclosure of those files will be reviewed against that protective order by FCGMA [Fox Canyon Groundwater Management Agency] counsel on a case-by-case basis.

In reviewing the scope of work for the BOYS, the TAC requested additional time and consultation to allow opportunities to receive and review information from the optimization model scenarios. The uncertainty regarding the TAC's ability to review information from the WLPMA optimization modelling concerns the TAC. As a means of avoiding this uncertainty and delays associated with legal review of requests for model information, the TAC proposes to provide test case requests for types of information for Watermaster counsel to review before the optimization modeling of the WLPMA is complete.

3.1 Recommendations:

The TAC specifically recommends that Watermaster staff and legal counsel consider whether information including but not limited to those listed below can be provided from the Coastal Plain model simulations planned for assessing basin optimization yield from the WLPMA.

- Time series datasets showing comparison of model inputs representing simulation of project and alternative pumping scenarios to the baseline scenario.
- Time series of simulated head data at key wells and other important locations for baseline, project, and alternative pumping scenarios.
- Total and zonal water budgets for the entire model area, portions of the model area, boundaries at the edges of the model, and boundaries between specific portions of the model for the baseline, projects, and alternative pumping scenarios.
- Total and zonal water budgets for the WLPMA portion of the model area, zones within the WLPMA portion of the model area, boundaries at the edges of the WLPMA within

the model, and boundaries between specific portions of the WLPMA model for the baseline, projects, and alternative pumping scenarios

Response to Recommendation 3:
Watermaster understands TAC's request to be able to review specific inputs to and outputs from the numerical model simulations to be conducted for the BOY Study. The UWCD model files, including those used to conduct simulations for the Periodic Evaluation, may be subject to a protective order in *OPV Coalition, et al. v. Fox Canyon Groundwater Management Agency, et al.*, Santa Barbara Sup. Ct. Case No. VENCI00555357. To date, UWCD has not agreed to conduct the model simulations for preparation of the BOY Study.

Although Watermaster and legal counsel will review each TAC request prior to providing data to TAC, Watermaster currently understands that:

- Watermaster will be able to provide TAC with groundwater production at each well for the baseline, project, and alternative pumping scenarios. This data was developed by Dudek, after consultation with the TAC, and is based on the allocation tables in the Judgment.
- Watermaster will be able to provide TAC with timeseries of simulated head data at key wells and other locations for baseline, project, and alternative pumping scenarios.
- Watermaster will not be able to provide total and zonal water budgets for the entire model area, portions of the model area, boundaries at the edges of the model, and boundaries between specific portions of the model for the baseline, projects, and alternative pumping scenarios because these areas are outside the Las Posas Valley Basin and, therefore, are outside the scope of the BOY Study for the Las Posas Valley Basin.
- Watermaster will be able to provide total water budgets for the WLPMA portion of the model, including boundaries at the edges of the WLPMA within the model for the baseline, projects, and alternative pumping scenarios. Watermaster will also be able to provide, within reason, zonal water budgets for zones within the WLPMA portion of the model area and boundaries between specific portions of the WLPMA model for the baseline, projects, and alternative pumping scenarios.

Conclusion
Watermaster agrees with TAC that the modeled increase in flow across the eastern boundary of the WLPMA is inconsistent with the hydrogeologic conceptual model. However, Watermaster notes that the model simulations conducted for the Periodic Evaluation generated multiple sustainable groundwater management scenarios in which groundwater elevations rose to and remained above the minimum thresholds during the GSP planning and implementation horizon. After noting the change in the model boundary conditions in both the Periodic Evaluation and the March 31, 2025, memo, Dudek concluded that running

the UWCD Updated Coastal Plain Model used during development of the Periodic Evaluation was the recommended approach to complete this first BOY Study.

Watermaster must prepare a BOY Study "every five years in coordination with the GSP Updates (Wat. Code, §10728.2) or at Watermaster's discretion in response to material changing or changed Basin Conditions" (Judgment § 1.22). This first BOY Study to be prepared under the Judgment is projected to be completed by spring 2026. The BOY Study schedule has already been delayed five months. Further delaying the completion of the first BOY Study beyond spring 2026 jeopardizes Watermaster's ability to implement management actions to ensure Sustainable Groundwater Management by 2040 (Judgment § 4.10.2).

In the absence of additional material changes to groundwater conditions, Watermaster anticipates that preparation of the second BOY Study would begin in 2028, only two years after completion of the first BOY Study, in order to be completed prior to January 2030 in coordination with the GSP Periodic Evaluation, as required by the Judgment. Changes to the modeling approach can be considered for the 2030 BOY Study.

Completion of the first BOY Study in spring 2026 will allow stakeholders and Watermaster to review the management actions undertaken as part of that study and make any necessary adjustments prior to the second BOY Study. Because the Judgment requires Watermaster to prepare the second BOY Study by January 2030 and allows Watermaster to prepare a BOY Study more frequently, if necessary, Watermaster recommends advancing the first BOY Study using the recommended approach provided in the March 31 memo.