

## **Las Posas Valley Groundwater Basin Technical Advisory Committee Special Meeting**

Friday May 9, 2025, 1:00 PM

Via Teams:

<https://www.microsoft.com/en/microsoft-teams/join-a-meeting>

Meeting ID: 247 184 526 872 6

Passcode: 2VE3ZV2Y

### **NOTICE OF MEETING**

NOTICE IS HEREBY GIVEN that the Las Posas Basin Technical Advisory Committee (TAC) will hold a special meeting via Teams at **1 PM on Friday May 9, 2025**.

### **AGENDA**

- A. Call to Order**
- B. Roll Call**
- C. Agenda Review**
- D. Public Comments**
- E. TAC Member Comments**
- F. Regular Agenda**
  - 1. Revised Recommendation Report Review – Basin Optimization Yield Study Preferred Modeling Alternative and Impacts to Schedule**

The TAC reviewed the Basin Optimization Yield Study (BOYS) Preferred Modeling Alternative and Impacts to Schedule regular meetings held on April 15, 2025 and May 6, 2025. The TAC Administrator prepared a draft Recommendation Report distributed with the agenda for the May 6, 2025 regular TAC meeting. In discussion during that meeting, TAC members had significant additional comment and discussion regarding the BOYS Preferred Modeling Alternative and Impacts to Schedule. The TAC Administrator has revised the related Recommendation Report to reflect the comments and additional recommendations from the TAC. The revised Recommendation Report is included without tracked changes in Attachment 1 (agenda page 2) and with tracked changes in Attachment 2 (agenda page 11). The revised Recommendation Report will be discussed by the TAC, feedback will be provided to the TAC Administrator, and the TAC will consider voting to authorize the Administrator to finalize and submit the Recommendation Report to the Watermaster.

- G. Adjourn**

## **Attachment 1**

**Revised Recommendation Report – Preferred Modeling Alternatives and Impacts to Schedule, Basin Optimization Yield Study (no tracked changes)**

# LAS POSAS VALLEY TECHNICAL ADVISORY COMMITTEE

May 7, 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 will review this Recommendation Report and discuss and consider voting 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.

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 is 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 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 direction is from the ELPMA to the WLPMA. 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 conditions 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 the following types of information 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**

[this section will be modified as necessary following discussion and voting by the TAC]

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

**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. [this will be modified as necessary following discussion and voting by the TAC]

## **Attachment 2**

**Revised Recommendation Report – Preferred Modeling Alternatives and Impacts to Schedule, Basin Optimization Yield Study (with tracked changes)**

# LAS POSAS VALLEY TECHNICAL ADVISORY COMMITTEE

May 17, 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

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### 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) ~~is owned~~ 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 ~~that those~~ meetings and are summarized in this Recommendation Report.

The TAC will review this Recommendation Report and discuss and consider voting to approve it in a regular-special meeting on May 6<sup>9</sup>, 2025.

## COMMENTS

In consideration of the options for assessing optimal yield of the WLPMA the TAC agreed that the preferred method identified by Dudek and the Watermaster is the best available approach. 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. The TAC also agreed that the schedule is appropriate and reasonable.

Further, the TAC is grateful 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.

## 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.

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 is 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 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 direction is from the ELPMA to the WLPMA. 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 conditions 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.

### **1.3. RECOMMENDATION 13: 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.

#### **1.13.1 Recommendations:**

The TAC specifically recommends that Watermaster staff and legal counsel consider whether the following types of information 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 portions 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.
- ~~Time series of simulated streamflow by reach for baseline, project, and alternative pumping scenarios.~~

**1.23.2 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.

**1.23.3 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**

[this section will be modified as necessary following discussion and voting by the TAC]

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

**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. [this will be modified as necessary following discussion and voting by the TAC]