

## Memorandum

---

To: Cosumnes Working Group

From: Tom Gohring

Date: February 12, 2019

Subject: Approach to Cosumnes Subbasin Modeling and Coordination with Regional Water Authority

---

At the January Working Group meeting, the Working Group directed the Planning Team to further explore the viability of participating in a regional groundwater model. Working Group members also asked that any further consideration of a regional model clarify issues around cost, subbasin autonomy and schedule implications.

In response to the Working Group guidance, the Water Forum, Regional Water Authority, EKI and Woodward & Curran met to begin sketching a more formal approach. The attached draft document outlines an approach for moving forward with Cosumnes Subbasin model preparation that preserves the independence of the Cosumnes Working Group and maintains the option (without commitment) of using a proposed regional model. This document was jointly developed by EKI, the Regional Water Authority, Woodard & Curran, and the Water Forum.

A key piece to emphasize: The approach described here would provide a window of cooperation through September 2019 that would allow EKI to collect data required for GSP development and model preparation. These “no regrets” activities are required regardless of which model approach is ultimately selected by the Working Group.

As you will see, the approach also calls for the Working Group in October 2019 to choose among four options for model preparation. The collaboration period between now and October should help demonstrate the viability of working with RWA and Woodard & Curran beyond this period.

The Planning Team is bringing forward this approach as further Working Group discussion. That said, as was mentioned at the January Working Group meeting, any of the four groundwater modeling options outlined in the attached memo will support effective groundwater planning.

Please review the attached in preparation for discussion at next week’s Working Group meeting.

**DRAFT**

**Approach to Cosumnes Subbasin Modeling and Coordination with Regional Water Authority**

**Background**

The Cosumnes Working Group has hired EKI Environment & Water, Inc. (EKI) to prepare a Groundwater Sustainability Plan (GSP) and to conduct associated groundwater modeling. The Regional Water Authority has hired Woodard & Curran (W&C) to prepare a regional integrated groundwater and surface water model that would include the Cosumnes Subbasin. Following are ground rules and schedule for developing the modeling input data and parameters that can be mutually shared by the Cosumnes Working Group and the Regional Water Authority.

**Modeling Ground Rules**

- A. Both the regional and Cosumnes Basin groundwater models need to be consistent near the shared mutual boundary of the Cosumnes River.
- B. EKI – under direction of the Cosumnes Working Group – is the lead for GSP-related model development and implementation within the Cosumnes Subbasin.
- C. EKI will provide available Cosumnes Subbasin data and model design specifications to W&C to support regional model input data set development. EKI and W&C will share data and regional modeling files stored on a share drive accessible to both organizations.
- D. Cosumnes Working Group can extricate from collaborative model development at any time, taking with them the model input files as they exist on the extrication date.
- E. The coordination activities described below will not result in added costs to EKI or the Cosumnes Working Group.
- F. Coordination and data sharing activities by EKI through Sep 2019 are not expected to constrain Working Group model selection.

**Proposed Schedule**

<b>Period</b>	<b>Activity</b>	<b>Lead</b>
Now → April 2019	Develop recommendations for Cosumnes model mesh. <ul style="list-style-type: none"><li>• Collaboration between EKI and W&amp;C to project likely model layering and other structural issues.</li><li>• EKI has final decision on Cosumnes Subbasin design relative to the model they utilize for GSP analysis.</li></ul>	EKI
April → Sept 2019	Develop Hydrogeologic Conceptual Model (HCM). Compile and evaluate geology, hydrology, land use, and water supply data. <ul style="list-style-type: none"><li>• Collaboration between EKI and W&amp;C on model calibration period, calibration data, and other model data and parameters.</li><li>• EKI has final decision on Cosumnes Subbasin model development and calibration data and parameters.</li></ul>	EKI
October 2019	Evaluate options for moving forward: report to Working Group The Working group chooses one of the following modeling approaches: <ul style="list-style-type: none"><li>1) EKI continues collaborating with W&amp;C on regional model development into the calibration phase of work.</li><li>2) EKI takes possession of the regional model developed to date to independently calibrate the Cosumnes Subbasin portion of the model.</li><li>3) EKI extracts Cosumnes Subbasin portion from regional model jointly developed through EKI and W&amp;C collaboration, and then EKI utilizes it as the starting point to develop and calibrate a “nested” Cosumnes Subbasin model.</li><li>4) EKI uses available data, some of which could have been developed through EKI and W&amp;C collaboration, to independently develop and calibrate a “nested” Cosumnes Subbasin model.</li></ul>	EKI Working Group
Nov 2019 → Dec 2020	Based on the decision of the Working Group above, EKI will either complete model calibration independently or in collaboration with W&C. Upon completion of calibration, EKI will have full possession of the model to utilize for preparing Cosumnes Subbasin GSP.	EKI