

EKI TECHNICAL PRESENTATION #31

COSUMNES SUBBASIN GSP DEVELOPMENT

18 AUGUST 2021

COSUMNES SUBBASIN WORKING GROUP MEETING

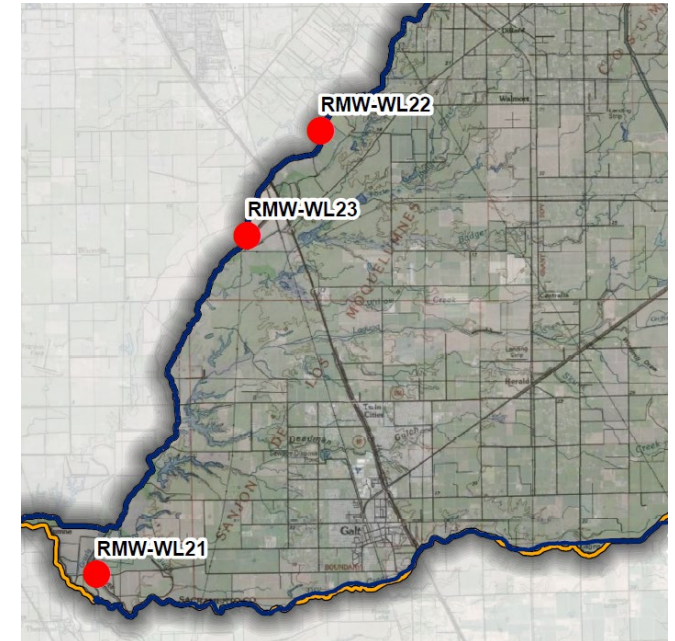
AGENDA ITEM #2

GSP TECHNICAL WORK PROGRESS AND PLANNING

- Prop 68 Work Progress
- GSP Preparation and Adoption
- GSP Public Review Draft
 - Modifications required to ISW Monitoring Network resulting from GDE Verification Study results.
 - Ad-Hoc proposed language on well protection and conservation
 - Reminder: EKI recommended that each GSA have legal counsel review the GSP with regards to GSP regulations, water rights, or other aspects of CA water law (e.g., the Human Right to Water or the Public Trust Doctrine)
- Finalize plans to collect and process public comments on Draft GSP
- Authorize release of Public Review Draft

PROP 68 WORK PROGRESS

- Volunteer well production meters
 - Installation completed 8/09
 - EKI to coordinate with GSAs to visit and read meters last week of September (before end of DWR Water Year)
- Monitoring well installation
 - OHWD to coordinate with LWA to construct SAFCA funded site at RMW-WL22
 - EKI obtain updated well construction costs and driller availability to construct sites at RMW-WL21 and RMW-23

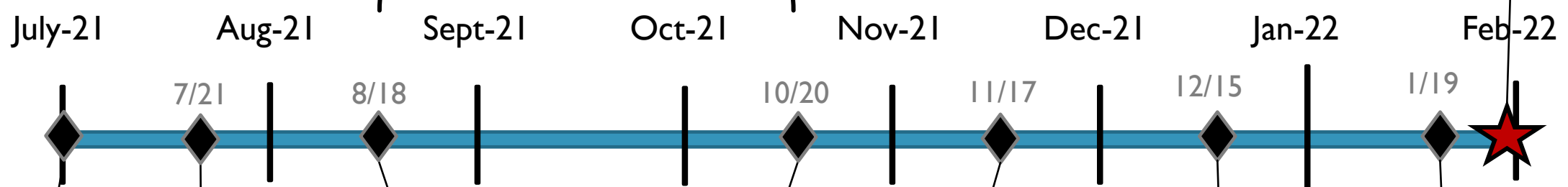


GSP PREPARATION AND ADOPTION (1 OF 2)

2021 look ahead

1/31/22:
FINAL GSP due

60-day public comment period



7/02:
Administrative Draft GSP distributed to WG members

8/18:
Public Draft GSP released at August WG meeting

11/17:
Responses to Public Comments presented to WG meeting

1/19/22:
WG confirm adoption of Final GSP at January WG meeting and begin upload to DWR

7/21:
Working Group comments due by July WG meeting

10/20:
Public Comments due at October WG meeting

12/15:

- Final GSP due to WG at December WG meeting.
- **GSA's start process to adopt GSP before January WG meeting**

GSP Adoption and Noticing Coordination



90 Days Prior to GSP
Adoption Hearing:

Prior to the Public Hearing for adoption or amendment of the GSP, the GSP entities must notify cities and/or counties of geographic area 90 days in advance.



GSP Delivered to GSAs (by EKI):
December 15, 2021



GSP Adopted by GSAs
by: January 19, 2022

5 Week Adoption Window
(over Holiday season)



Do the GSAs want to send out 1 coordinated notice to cities/counties? If yes, need adoption hearing dates by September 15.

DRAFT GSP REFINEMENTS (1 OF 7)

Modifications to Undesirable Results for chronic lowering of groundwater levels

Undesirable Results would be experienced if and when a chronic decline in groundwater levels in the Principal Aquifer negatively affects the long-term viable access to groundwater for urban, domestic, agricultural, industrial, ~~environmental~~ and other beneficial users and uses within the Basin. (Note that Environmental beneficial users are addressed in Section 14.6 Undesirable Results for Depletions of Interconnected Surface Water).

Significant and Undesirable effects associated with Undesirable Results occur when the number of completely dewatered domestic wells exceeds the assumed natural well replacement rate projected to occur over the 20-year implementation horizon.

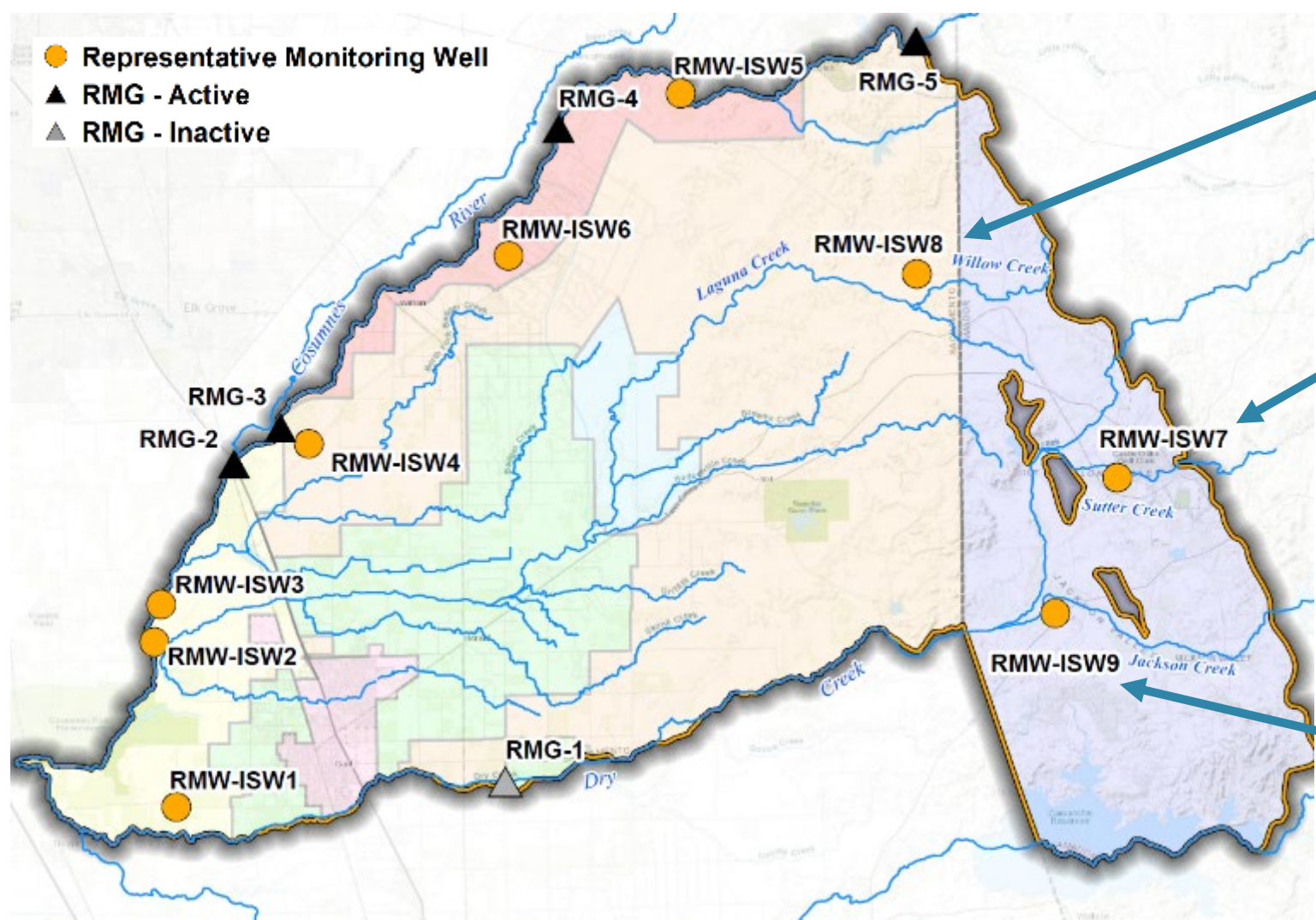
DRAFT GSP REFINEMENTS (2 OF 7)

Ad-Hoc recommended addition on domestic well impact

The domestic well impact analysis suggests that if water levels across the entire Basin reached the proposed MTs, approximately 83 domestic wells (3.5%) could be partially dewatered and 48 domestic wells (2.0%) could be completely dewatered. This condition represents a net increase above 2015 from 65 to 83 partially dewatered wells (a net increase of 18 wells), and 36 to 48 fully dewatered wells (a net increase of 12 wells). These limited projected impacts are not considered to be “significant and unreasonable” since the number of completely and/or partially dewatered domestic wells is well below the 26% of wells that are likely to require replacement based on well age and lifespan. [The Domestic Well Impact Analysis provides a baseline estimate of potential impacts to domestic wells, which the GSAs recognize can be refined by addressing several data gaps \(e.g., well ages and use, verification, and analysis of active wells, and so forth\). Individual GSAs \(or the basin as a whole\) may consider the need for additional studies and possible measures \(depending on need, funding availability and landowner support\) as part of GSP implementation.](#)

DRAFT GSP REFINEMENTS (3 OF 7)

ISW Monitoring network update to accommodate GDE results



Formerly RMW-WL14

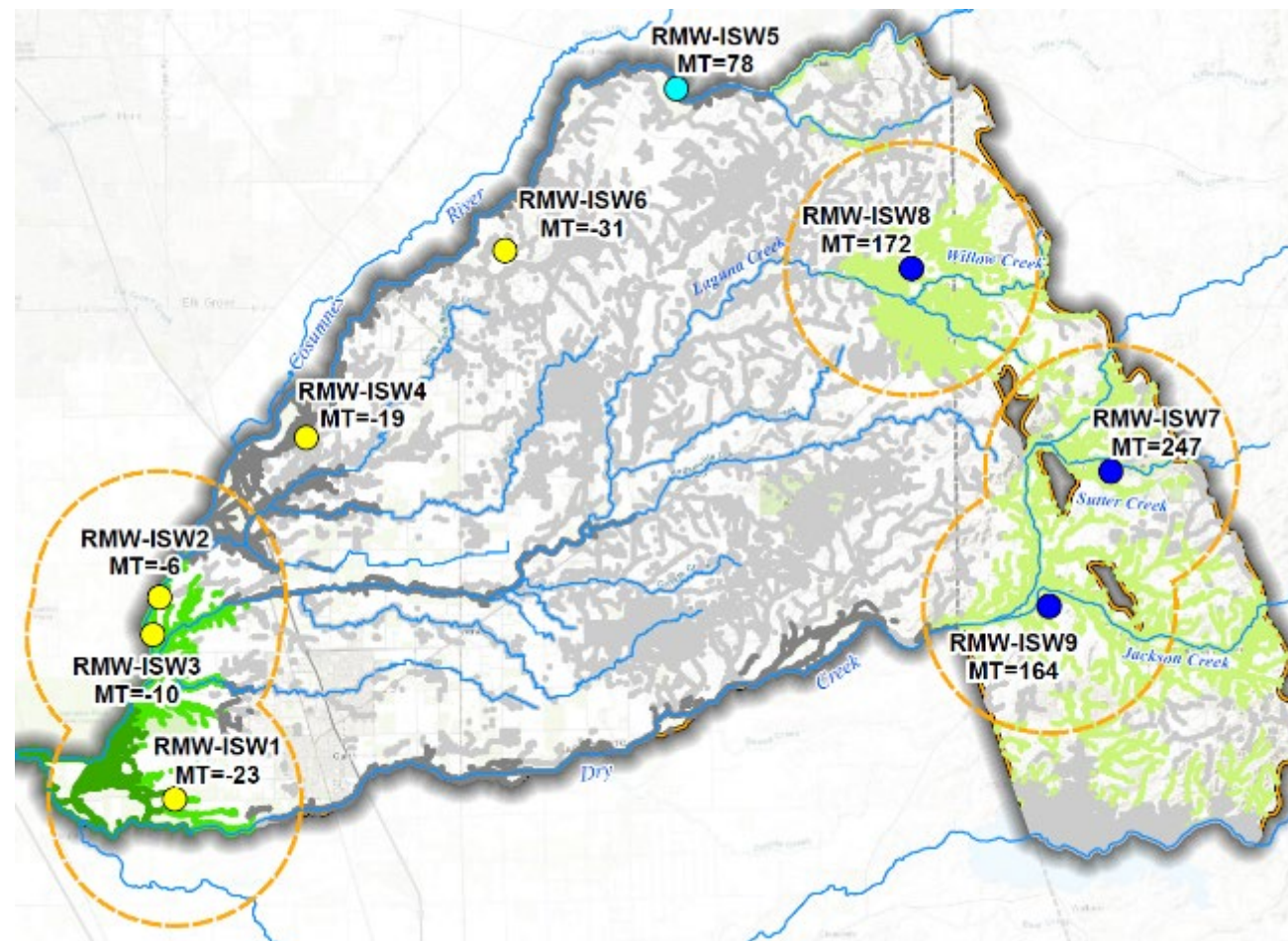
No Change RMW-WL7

Shallow (70 ft deep) Companion Well at RMW-WL20

DRAFT GSP REFINEMENTS (4 OF 7)

GDE Verification Results

- TNC’s guidance considers Natural Communities disconnected from Principal Aquifer where depth to water is greater than 30 ft bgs
 - MTs for ISW-1, 2, and -3 based on historical data (no change)
 - MTs for RMW-ISW7 and RMW-ISW8 set at 20 ft bgs (10 ft above the 30 ft depth)
 - RMW-ISW9 is 15 ft deep well; set at historical low measured water level.
- Most GDE areas represented under TNCs guidance of 3.1 miles from well



GDE Evaluation Results

- Confirmed GDE
 - Assumed Confirmed GDE
 - Unknown (uncertain water table conditions and conservatively assumed GDE)
 - Not GDE (supported by surface water and/ or perched water rather than Principal Aquifer)
 - Not GDE (disconnected from water table)
- 3 Mile Buffer

DRAFT GSP REFINEMENTS (5 OF 7)

Undesirable results for depletions of interconnected surface water

Undesirable Results would be experienced in the Basin when surface water depletions occur because of SGMA-related groundwater management activities such that they negatively impact the urban, domestic, agricultural, industrial, environmental, and other beneficial user and uses of surface water.

Significant and undesirable effects associated with Undesirable Results would include depletions of surface water at a rate greater than the maximum pre-2015 historical rate of depletion during below-average rainfall years, and a reduction in GDE area, vigor and recruitment demonstrated by its correlation with groundwater level trends in the Principal Aquifer.

DRAFT GSP REFINEMENTS (6 OF 7)

Ad-Hoc recommended addition on projects and management actions (PMA)

Other PMAs are also under consideration by the PMA committee, but details are currently insufficient to estimate implementation costs and benefits. For example, consistent with existing law, the GSAs can implement agricultural water conservation and management practices, including conjunctive use, to reduce extraction volumes, increase groundwater recharge, and manage the Basin water budget. To accomplish these goals, the GSAs may develop programs and Best Management Practices (BMPs) to increase water use efficiency. For example, effective BMPs that reduce groundwater consumption could include improved irrigation practices, conversion of land uses from relatively high-water demand to lower water demand crops, improved water tracking and accounting methods, installing higher efficiency irrigation delivery and application systems, employ soil moisture sensor for more precise irrigation scheduling and application volumes, and promote other actions that can help reduce overall groundwater consumption. The GSAs may consider creating incentive or providing funding to promote these improvements in efficiency based upon available financial resources and landowner participation.

DRAFT GSP REFINEMENTS (7 OF 7)

Action plan related to MT exceedances

Recommended plan to investigate MT exceedances, if they occur, is required as part of the Annual Reports and 5-year Reports and now summarized in new section 15.8 “Action Plan Related to Minimum Threshold Exceedances.”:

1. Identify Exceedance and investigate the Representative Monitoring Site (RMS) area.
 - Localized or Regional?
 - Similar trends observed in nearby RMS or supplemental monitoring wells?
 - Investigate potential changes in land use, water use, and so forth.
2. Evaluate Potential for Outside Contributing Factors.
 - Influence from within Basin or from adjacent subbasins?
3. Consider the Need for Increased or Expanded Monitoring.
4. Consider Expanding P/MAs and/or Initiating Other P/MAs as described in Section 18.2.4 “Other P/MAs.”
5. Consider Enforcement Actions, as described in Section 19 “Plan Implementation.”

PUBLIC DRAFT – 18 AUGUST 2021

- EKI scheduled to deliver Public Draft GSP on 18 August 2021
- Process for collecting and reviewing public comments Draft GSP – similar approach as EKI tracking and response to SWAG meeting comments
- **GSA's confirmation of Public Review Draft needed for release**

DRAFT – For Discussion Purposes Only

ID (#)	Date Received	Commenter/ Organization	Chapter or Section Title	Provided Comment	Response to Comment	Revision to GSP
1	8/4/2020	Amelia Vankeuren, Ph.D./ California State University, Sacramento	HCM; 2.3. Physical Characteristics	The median transmissivity value from aquifer testing in the basin plain was 1,900 ft ² /day, while the median value from specific capacity tests was 14,700 ft ² /day. What is the cause of the discrepancy? How does the 7.5x uncertainty in transmissivity affect the application of groundwater model results?	As discussed in Section 2.3.7, <i>Hydrogeologic Conceptual Model Data Gaps</i> , limited well-specific aquifer property data are available. The transmissivity value of 1,900 ft ² /day is a single value from a single test result. The estimated transmissivity from specific capacity is based on 42 tests and an empirical relationship reported in Driscoll (1995). The groundwater model will be calibrated based on the best available data and information. Transmissivity estimates from aquifer tests and specific capacity tests are considered along with other data types and sources (e.g. texture, other models, literature values, etc.) as part of model calibration.	None anticipated. The GSAs are planning to address data gaps as part of GSP implementation. To the extent that additional information is developed as part of GSP implementation and other coordinated efforts, it will be incorporated into future updates of the GSP.
2	8/4/2020	Amelia Vankeuren, Ph.D./ California State University, Sacramento	HCM; 2.3. Physical Characteristics	The base of fresh groundwater for the basin is based on a map from 1973 that was a large-scale study and has relatively few data points within the Cosumnes Subbasin. Also, the base of freshwater could have changed in the last 50 years. Is there more detailed or updated information available? The California Geologic Energy Management Division, US Geological Survey California Water Science Center, and Sacramento State Geology Department have a project determining the depth of the base of freshwater in the southern Central Valley using resistivity logs from well drilling records. A similar method could be applied to recently drilled deep wells in the Cosumnes Subbasin to create a more detailed map, or at least verify that the base of freshwater has not changed.	TM#6 was developed based on the best available data and science [CCR §351(h)]. To the best of our knowledge Berkstresser 1973 represents the best available data for the Basin at this time.	None anticipated. The GSAs are planning to address data gaps as part of GSP implementation. To the extent that additional information is developed as part of GSP implementation and other coordinated efforts, it will be incorporated into future updates of the GSP.

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